

DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU

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FILE COPY

DEC 08 2012

PETER B. CARLISLE
MAYOR



JIRO A. SUMADA
ACTING DIRECTOR

2012/ED-7(KO)

November 26, 2012

Mr. Gary Hooser, Director
Office of Environmental Quality Control
State of Hawaii
State Office Tower, Suite 702
235 South Beretania Street
Honolulu, Hawaii 96813

Dear Mr. Hooser:

Subject: Chapter 343, Hawaii Revised Statutes
Final Environmental Assessment (EA)
Project: 2121 Kuhio
Applicant: PACREP LLC
Agent: Kusao & Kurahashi, Inc. (Keith Kurahashi)
Location: 2121 and 2139 Kuhio Avenue,
and 2100 Kalakaua Avenue – Waikiki
Tax Map Keys: 2-6-18: 10, 42, 43, and 52
Proposal: The construction of a new 37-story, 350-foot high condo-hotel consisting
of 459 dwelling units, a hotel lobby and support services, parking,
commercial uses such as restaurant and retail establishments, and
appurtenant site improvements.
Determination: Finding of No Significant Impact

OFFICE OF ENVIRONMENTAL
QUALITY CONTROL

NOV 28 8:31

RECEIVED

Attached and incorporated by reference is the Final EA 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 next available edition of the Environmental Notice.

We have enclosed a hard copy of the Final EA, as well as a copy on compact disc. Also, we have attached a completed OEQC publication form and project summary, and will submit the same publication form via email. If you have any questions, please contact Kiyomi Oyama of our Urban Design Branch at 768-8034.

Very truly yours,

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

JAS:nw
Enclosures
cc: Keith Kurahashi
Doc. 994030

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

Project Name: 2121 Kuhio, FEA
Island: O'ahu
District: Honolulu
TMK: 2-6-18: 10, 42, 43, and 52
Permits: Waikiki Special District Permit (Major), Surface Encroachment Variance, Subdivision for Pedestrian Easement, Trenching Permit, Grading Permit, Drain Connection, Sewer Connection, Flood Study, Street Usage, Construction Dewatering Permit, National Pollutant Discharge Elimination Permit, Construction Noise Permit, Construction Plan Approval, and Building Permits.

Approving Agency:

Department of Planning and Permitting
650 South King Street, 7th Floor
Honolulu, Hawaii 96813
Kiyomi Oyama (808) 768-8034

Applicant:

PACREP LLC
10880 Wilshire Boulevard, Suite 2222
Los Angeles, California 90024
Jason Grosfeld (310) 500-2955

Consultant:

Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-202
Honolulu, Hawaii 96822
Keith Kurahashi 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 oeqc@doh.hawaii.gov); a 30-day comment period ensues upon publication in the periodic bulletin.
- FEA-FONSI Submit the approving agency notice of determination/transmittal on agency letterhead, a hard copy of the FEA, an OEQC publication form, along with an electronic word processing summary and a PDF copy (send both summary and PDF to oeqc@doh.hawaii.gov); no comment period ensues upon publication in the periodic bulletin.
- FEA-EISPN Submit the approving agency notice of determination/transmittal on agency letterhead, a hard copy of the FEA, an OEQC publication form, along with an electronic word processing summary and PDF copy (you may send both summary and PDF to oeqc@doh.hawaii.gov); a 30-day consultation period ensues upon publication in the periodic bulletin.
- Act 172-12 EISPN Submit the approving agency notice of determination on agency letterhead, an OEQC publication form, and an electronic word processing summary (you may send the summary to oeqc@doh.hawaii.gov). 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:

The 2121 Kuhio Project (Project) involves the construction of a new 37-story, 350-foot high condo-hotel consisting of 459 dwelling units, a hotel lobby and support services, parking, commercial uses (such as restaurant and retail establishments), and appurtenant site improvements. The 3.525-acre project site consists of four joint-developed lots fronting Kuhio Avenue, Kalaimoku Street, and Kalakaua Avenue. Existing development on the site include a retail complex ("2100 Kalakaua," Parcel 10) and a surface parking lot (Parcel 43).

The proposed 350-foot-high building will exceed the 300-foot height limit which requires the adoption of a Resolution by the Honolulu City Council (Council). The Council must determine that the building 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.

Construction-related traffic, air, and noise impacts will be short-term in nature. No significant adverse impacts, cumulative impacts, and secondary impacts are anticipated from the proposed improvements. A Finding of No Significant Impact has been issued.

FINAL ENVIRONMENTAL ASSESSMENT

2121 KUHIO

WAIKIKI, HONOLULU, HAWAII

Tax Map Key: 2-6-18: 10, 42, 43 and 52

PACREP LLC

**10880 Wilshire Boulevard, Suite 2222
Los Angeles, CA 90024**

**Kusao & Kurahashi, Inc.
Planning and Zoning Consultants
2752 Woodlawn Drive, Suite 5-202
Honolulu, Hawaii 96822**

OCTOBER 2012

FINAL ENVIRONMENTAL ASSESSMENT

2121 KUHIO

WAIKIKI, HONOLULU, HAWAII

Tax Map Key: 2-6-18: 10, 42, 43 and 52

PACREP LLC

**10880 Wilshire Boulevard, Suite 2222
Los Angeles, CA 90024**

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Honolulu, Hawaii 96822**

OCTOBER 2012

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**FINAL ENVIRONMENTAL ASSESSMENT
2121 KUHIO, WAIKĪKĪ, HONOLULU, O'AHU, HAWAII**

Tax Map Key: 2-6-18: 10, 42, 43 and 52

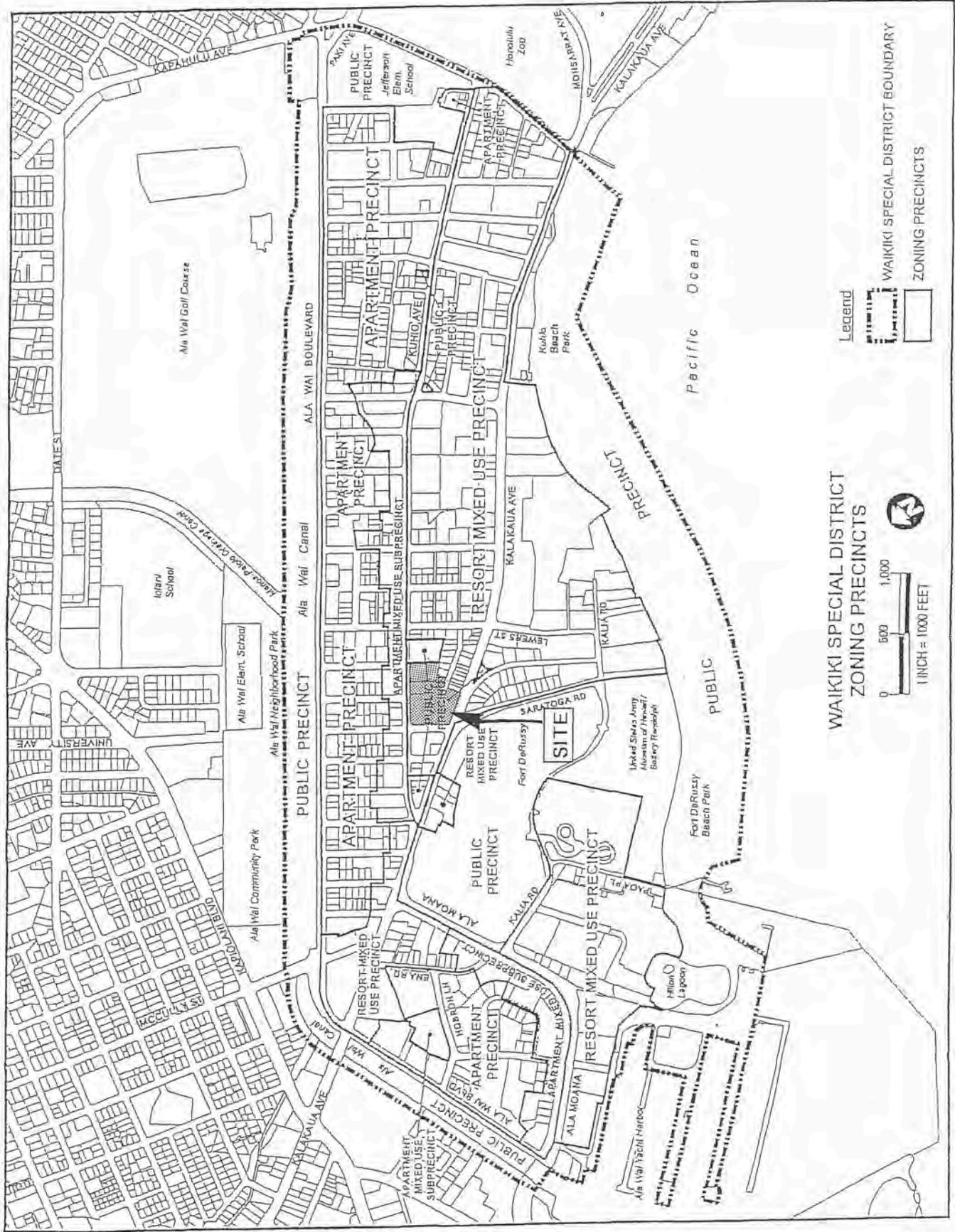
I. INTRODUCTION

The applicant, PACREP LLC, proposes to develop the 2121 Kuhio in Waikīkī, Honolulu, on O'ahu (the "Project"). The Project is located on a 3.525 acre site in Waikīkī, near Fort DeRussy (see Location and Zoning Map, Exhibit 1) at 2121 Kūhiō Avenue that includes the existing retail development at 2100 Kalakaua and the surface parking lot at 2139 Kūhiō Avenue. 2100 Kalakaua is developed on 1.264 acres of the Project site and consists of a three-story, 110,000 square foot structure. No improvements are planned to 2100 Kalakaua. The 2139 Kūhiō Avenue ("Food Pantry") property contains surface parking with 67 stalls on 0.869 acres. The applicant understands that the long range plan for the Food Pantry property is to develop a grocery store in a low-rise structure. Although 2100 Kalakaua and the Food Pantry property are part of the joint developed lot with 2121 Kuhio, the area planned for development under this Final Environmental Assessment ("FEA") is on the 2121 Kuhio property (1.396 acres of vacant land).

A Final Environmental Assessment ("FEA") was completed for an earlier proposed development, Condominium/Timeshare Development at 2121 Kūhiō Avenue ("Previous Proposal") on the same property, under previous ownership. On June 9, 2006, the Department of Planning and Permitting ("DPP") determined that the Previous Proposal would not have significant environmental effects and issued a FONSI ("Finding of No Significant Impact"). The applicant after consultation with DPP decided to process a new Draft Environmental Assessment ("DEA") for the Project, although certain earlier studies are still pertinent and applicable.

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 Waikiki Special District (the "WSD") and the potential use of City lands (Kūhiō Avenue and Kālaimoku Street right-of-ways, improvement to sidewalk areas, roadway and infrastructure within the right-of-ways).

The Project is not anticipated to have a significant impact on the surrounding area in terms of public services and the environment based on the determination of minimal impact by the new studies included in this FEA and the earlier pertinent and applicable studies in the FEA for the Previous Proposal that was granted a FONSI (including the Cultural Impact Assessment and Archaeological Inventory Survey).



Legend

WAIKIKI SPECIAL DISTRICT BOUNDARY
 ZONING PRECINCTS

WAIKIKI SPECIAL DISTRICT ZONING PRECINCTS

 1 INCH = 1000 FEET

LOCATION AND ZONING MAP EXHIBIT 1

II. GENERAL INFORMATION

- A. APPLICANT : PACREP LLC
10880 Wilshire Boulevard, Suite 2222
Los Angeles, CA 90024
Jason Grosfeld
Phone - (310) 500-2955
- B. FEE OWNERS : 2121 Kuhio (parcel 42 & 52)
PACREP LLC
10880 Wilshire Boulevard, Suite 2222
Los Angeles, CA 90024
- 2100 Kalakaua (parcel 10)
HSH 2100 LLC
c/o Metropole Realty Advisors Inc.
520 Madison Avenue, 9th Floor
New York, NY 10022
- 2139 Kūhiō Avenue (parcel 43)
Food Pantry Ltd
c/o Real Estate Department
3536 Harding Avenue, #500
Honolulu, HI 96816
- C. ACCEPTING AGENCY : Department of Planning & Permitting
City and County of Honolulu
650 South King Street, 7th Floor
Honolulu, Hawaii 96813
- D. TAX MAP KEY : 2-6-18: 42 and 52 (2121 Kuhio), 10 (2100 Kalakaua)
and 43 (Food Pantry)
- E. AGENT : Kusao & Kurahashi, Inc.
Planning and Zoning Consultants
2752 Woodlawn Drive, Suite 5-202
Honolulu, Hawaii 96822
- F. LOCATION : 2100 Kalākaua Avenue and 2121 and 2139 Kūhiō
Avenue, Waikīkī, Honolulu, Hawaii
(Exhibit 1, Location and Zoning Map)
- G. LOT AREA : 3.525 acres
(1.264 acres - 2100 Kalākaua Avenue, parcel 10)

(1.392 acres - 2121 Kūhiō Avenue, parcel 42 & 52)
 (0.869 acres - 2139 Kūhiō Avenue, parcel 43)

- H. ZONING : Resort Mixed Use Precinct
(Exhibit 1)
- I. STATE LAND USE : Urban
- J. PRIMARY URBAN CENTER
DEVELOPMENT PLAN
 - Land Use Map : Resort (Exhibit 2)
 - Public Infrastructure
Map : Transit Corridor along Kalākaua Avenue (Exhibit 3)
- K. SPECIAL DISTRICT : Waikiki Special District (Exhibit 1)
- L. EXISTING USE : 2100 Kalakaua - Retail Development
2121 Kūhiō - Vacant
2139 Kūhiō Avenue - Surface parking
- M. AGENCIES CONSULTED
PRIOR TO PREPARATION
OF THE DEA : Department of Planning and Permitting
Urban Design Branch
Wastewater Branch
Board of Water Supply
Waikiki Neighborhood Board Chair and Zoning
Committee Chair
- N. AGENCIES CONSULTED
THROUGH DEA : Federal

Corps of Engineer (U.S. Army Engineer District)
U.S. Department of Interior, Fish & Wildlife Services

State of Hawaii

Department of Business, Economic Development &
Tourism
Energy, Resources & Technology Division
Office of Planning
Department of Education
Department of Health - Environmental Planning Office
Department of Land & Natural Resources

PRIMARY URBAN CENTER
DEVELOPMENT PLAN

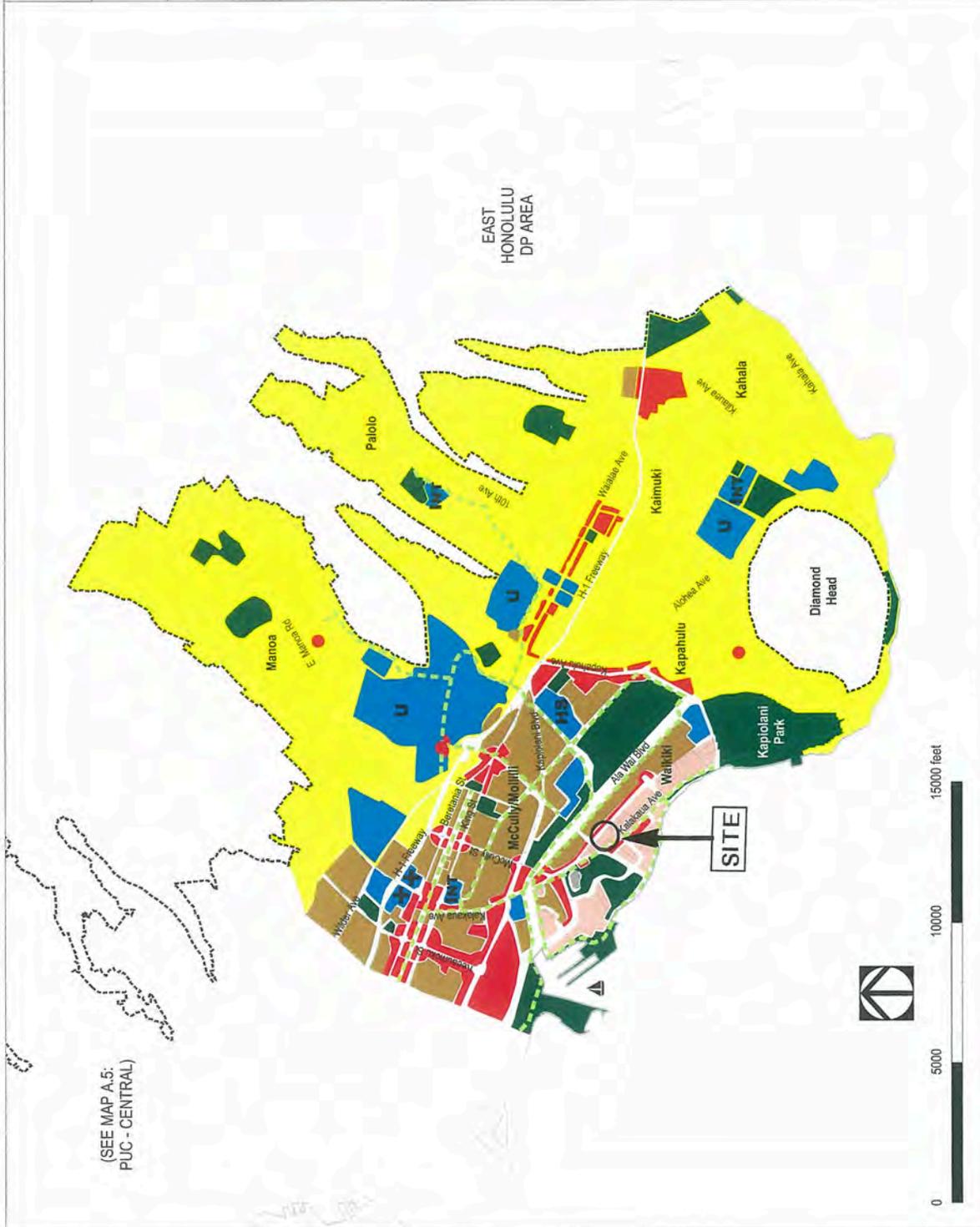
A.6: Land Use Map
PUC - East

- | | |
|-------------------------------------------------------------------------------------|-------------------------------------------------|
|  | 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 |
|  | College/University |
|  | Hospital/Medical Center |
|  | Intermediate School (State) |
|  | High School (State) |
|  | Small Boat Marina |
|  | Harbor |
|  | Airport |



Department of Planning & Permitting
City & County of Honolulu
June 2004

EXHIBIT 2



(SEE MAP A.5:
PUC - CENTRAL)

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

PUBLIC INFRASTRUCTURE MAP PRIMARY URBAN CENTER

LEGEND

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

D ——— D

DRAINAGE SYSTEM

TRANSPORTATION SYSTEMS

ARTERIAL ROADWAY

TRANSIT CORRIDOR

PUBLIC FACILITY

CONCEPTUAL LOCATION

MODIFY EXISTING FACILITY



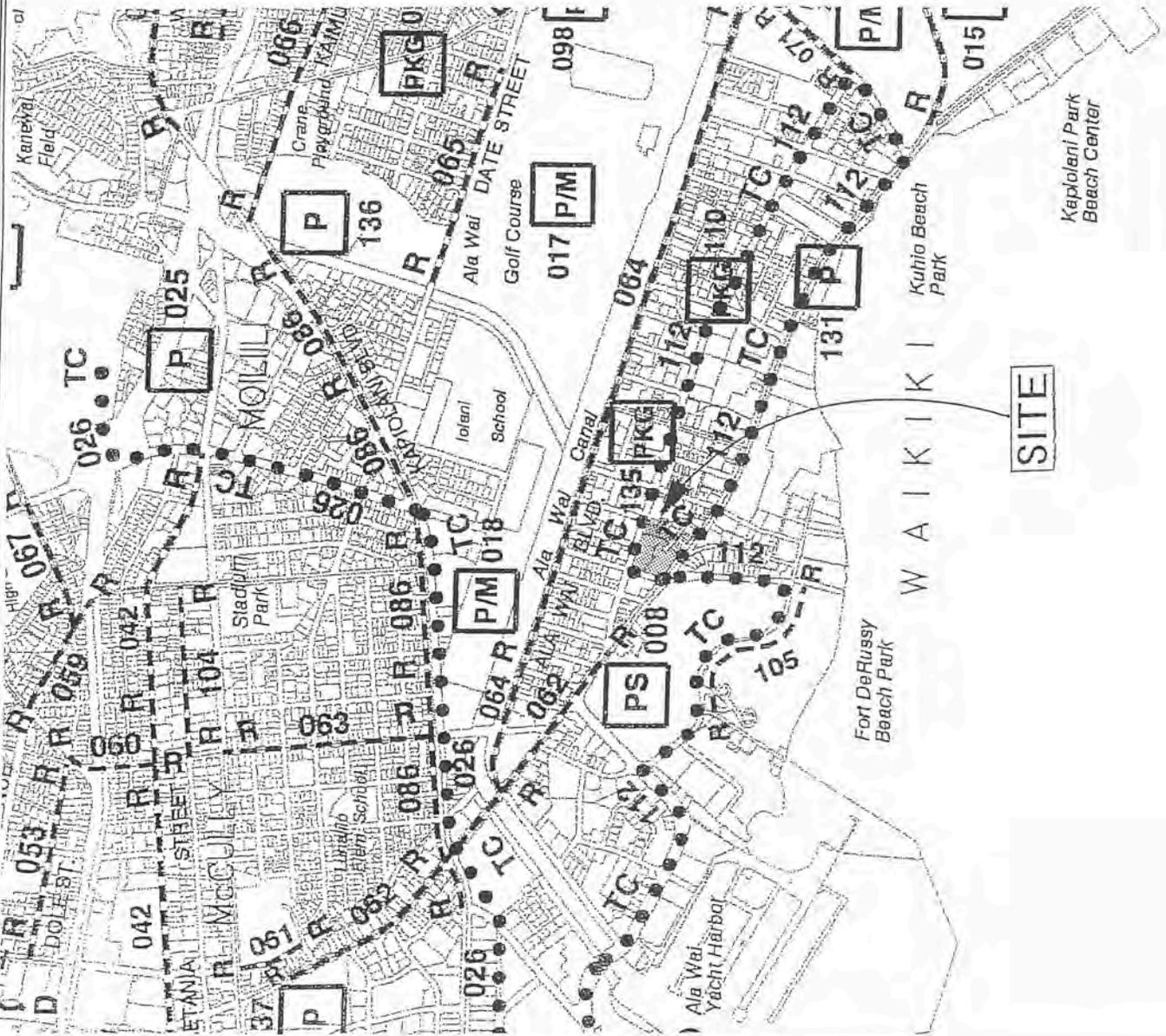
Example: 024 = SYMBOL NO.



SCALE IN FEET

- CY - CORPORATION YARD
- DSP - DESALINATION PLANT
- D - DRAINAGE WAY (OPEN CHANNEL)
- EG - ENERGY GENERATION
- ET - ELECTRIC TRANSMISSION
- FB - FIRE STATION
- GB - GOVERNMENT BUILDING
- GCC - GOLF COURSE
- P - PARK
- PB - POLICE STATION
- PKG - PARKING FACILITY
- RES - WATER RESERVOIR
- SW - SOLID WASTE FACILITY
- TD - TRANSIT CORRIDOR
- R - ARTERIAL & COLLECTOR ROADWAY
- SFS - SEWAGE PUMP STATION
- W - POTABLE WELL
- MFF - MAJOR PUBLIC FACILITY

EXHIBIT 3



Department of Land & Natural Resources
State Historic Preservation Division
Office of Environmental Quality Control
Department of Transportation
Office of Hawaiian Affairs (OHA)
UHM Environmental Center
Office of the Governor
Senator (Brickwood Galuteria)
Representative (Tom Brower)

City and County of Honolulu

Board of Water Supply (BWS)
Department of Design & Construction (DDC)
Department of Environmental Services (ENV)
Department of Facility Maintenance (DFM)
Department of Parks and Recreation (DPR)
Department of Planning & Permitting (DPP)
Urban Design Branch
Civil Engineering Branch
Traffic Review Branch
Wastewater Branch
Community Planning Branch
Development Plans/Zone Changes Branch
Policy Planning Branch
Park Dedication
Subdivision Branch
Department of Transportation Services (DTS)
Honolulu Fire Department (HFD)
Honolulu Police Department (HPD)
Ala Moana Satellite City Hall
Waikiki Neighborhood Board
Office of the Mayor
Members of the City Council

Libraries

Hawaii State Library (Waikiki/Kapahulu Branch)
Main State Library
Municipal Reference & Records Center (MRRC)

Landowners

La Casa
Kalaimoku/Kuhio Dev Corp
WBL Inc.

Gayer, Donna L.
Waikiki Cove
Four Paddle
HK Ma & Associates
Aloha Palms Waikiki LLC
HSH 2100 LLC
Food Pantry Ltd.
PACREP LLC

III. TECHNICAL CHARACTERISTICS

A. HISTORICAL USE

The site was formerly known as the Old Waikiki Market and before that the Kuhio District. The site contained a retail Bazaar and commercial complex, with 75,575 square feet of commercial floor area (including restaurant, retail, offices and personal services) and 17,160 square feet of hotel use (Hotel Honolulu) and prior to development of 2100 Kalakaua a retail cart operation. Two of the better known establishments in the Old Waikiki Market were the Canlis Restaurant and Hula's Bar and Grill.

In 2002, 2100 Kalakaua was developed. 2100 Kalakaua is a retail complex with about 110,000 square feet of retail space situated in a three-story complex. The northern half of the property remains vacant at this time.

In 2000 and 2006, two of the last major structures on the Food Pantry property were demolished. The Food Pantry property presently contains a surface parking lot with 67 stalls.

B. LAND USE PERMITS RELATED TO 2100 KALAKAUA

In November 1998, DPP approved a Finding of No Significant Impact (FONSI) for the Final Environmental Assessment for the then proposed 2100 Kalakaua development which included development across both the 2100 Kalakaua lot and the 2121 Kuhio lot.

In December 1998, DPP approved a minor Waikiki Special District Permit (1998/SDD-508) for the demolition of existing structures and the removal and replacement of 47 trees more than 6 inches in trunk size.

In May 2000, DPP determined that, due to a decrease in the scope of the planned development, a supplemental Environmental Assessment was not required. A minor Waikiki Special District Permit (2000/SDD-25) was issued by DPP for the demolition of an existing non-historic structure on Parcel 34. The applicant submitted a major Waikiki Special District Permit for a 110,000 square foot retail structure and parking.

In July 2000, DPP approved a minor Waikiki Special District Permit (2000/SDD-41) for tree removal on Parcel 34.

In September 2000, DPP approved a Waikiki Special District Permit (2000/SDD-31) for the 2100 Kalakaua Retail Development with a requirement for 139 parking stalls. The project was to provide 64 stalls in a surface parking lot on the Project site and 77 stalls at the King Kalakaua Plaza underground parking structure.

In December 2000 DPP approved a Conditional Use Permit, minor, (2000/CUP-98, as amended) for joint development of parcels 2-6-18: 10, 34, 36, 42, 43, 52, 53, 57, 58, 59, 62, 63, 64 and 75. These parcels have since been consolidated into the areas that are the subject of this FEA (2-6-18: 10, 42 and 52) including the parcel owned by Food Pantry, Inc. 2-6-18: 43.

In August 2002, DPP approved the previous owner's request to delay construction of the 64 on-site parking stalls.

In November 2004, DPP approved a CUP for off-site parking (2004/CUP-72) for 92 stalls at King Kalakaua Plaza underground parking structure.

In December of 2004 the DPP approved a minor modification to 2000/SSD-31 to reduce the required parking for the 2100 Kalakaua development to 92 parking stalls, which recognized the elimination of parking requirements for ground floor uses in Waikīkī. Of the 92 required stalls, 77 were provided at the King Kalakaua Plaza parking garage via a parking agreement and a conditional use permit, 2001/CUP-16 for off-site parking. At the present time, the applicant understands that as a result of King Kalakaua Plaza's foreclosure proceedings in 2009 the off-site parking approvals were extinguished and 2100 Kalakaua has made other arrangements for off-site parking. Based on discussions with the current owner of the King Kalakaua Plaza, they have no intention or obligation to provided required parking on their property.

On April 4, 2012, DPP approved a reduction of the required parking from 92 to 45 stalls, subject to certain conditions. The applicant will provide the 45 stalls within the Project and will meet the conditions of approval.

C. USE CHARACTERISTICS

No improvements are planned to the existing three-story retail complex at 2100 Kalākaua Avenue.

The applicant understands that the long range plan for the Food Pantry property is to develop a grocery store in a low-rise structure. The Food Pantry property presently contains a surface parking lot with 67 stalls.

The Project will include development of 459 condo hotel units, based on keys (may include lock-off units which although are treated as separate units in the 459 unit total may be used as one large unit or used as two separate smaller units, with separate keyed entrances from the corridor).

The units are proposed to be condo-hotel units which we understand DPP treats as hotel units. There are several condo-hotel projects in Waikīkī and similar to those other projects, the individual hotel units will be sold to investors, who are expected to place the units back into the hotel pool. We expect that investors may stay in their unit part of the year and will be offered hotel services during those periods.

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.

The second through fourth floors will contain the parking levels for the Project with about 187 parking stalls.

The fifth floor will include administrative offices, resident screening room, game room, spa and back-of-house support space. The sixth floor will include the hotel lobby, registration desk, administrative offices, a restaurant/lounge area, central kitchen deck with swimming pool and Jacuzzi, exercise room, and back-of-house space.

The seventh through 37th floors will contain the 459 hotel units. Since the Draft EA, three floors have been added within the 350-foot height of the building to reduce the width of the building by about 48 feet, reducing impacts to private views. The width (length) of the building has been reduced by the Applicant based on concerns raised in the Draft EA.

D. PHYSICAL CHARACTERISTICS

The 2100 Kalakaua is an existing retail complex with about 110,000 square feet of retail space situated in a three-story complex located on the southeastern half of the property. The Food Pantry property contains a surface parking lot with 67 stalls.

On the vacant northwestern portion of the property the applicant proposes to develop a 37-story, 350-foot structure. The Project will include a five story podium with the ground floor lobby, three levels of parking and fifth and sixth floor of hotel support uses. Above this podium will be the 32-story tower.

The new structure will contain 409,000 square feet of floor area as follows:

1. Residences - 289,700 square feet
2. Amenity Areas - 10,098 square feet
3. Back-of-House Support Areas - 5,049 square feet
4. Administration, Security, Housekeeping, Facility Maintenance, and Sales Office
6,117 square feet
5. Commercial (ground floor and 6th floor dining, 6th floor bar) - 4,026 square feet
6. Gross Floor Area (walls, columns, circulation, etc) - 94,010 square feet

A preliminary concept plan showing the proposed improvements is provided in **Appendix 1**.

E. CONSTRUCTION CHARACTERISTICS

The applicant plans to utilize Caisson or auger cast in the support system for the foundation. No pile driving is planned. Every effort will be made to stage construction in the open space areas planned for the Project to minimize impacts to Kūhiō Avenue and Kālainmoku Street. Construction activity will be scheduled Monday through Friday 7:00 am – 5:30 pm. Saturday work may be required. Entry into the construction site for deliveries will be off Kūhiō Avenue.

IV. ECONOMIC CHARACTERISTICS

A. EMPLOYMENT

The Project will provide a significant number of short term construction jobs during the 24-month construction period. The applicant will spend approximately \$275 million to stimulate construction and improve a major visitor facility in Waikīkī.

The Project during its operational phase in its first full calendar year is expected to create 475 on-site jobs.

B. GOVERNMENT REVENUES/TAXES

The Project during its sales phase (selling individual condo hotel units to investors) will result in over \$300 million in on-site sales generating about \$2 million in conveyance tax revenues for the State.

The Project upon completion will generate about \$4.5 million per year in annual property tax revenue for the City.

The Project, during its first full calendar year and annually thereafter, is expected to generate income of \$20 to \$30 million in on-site hotel room sales resulting in GET (general excise tax revenue) of \$0.8 to \$1.2 million per year for the State (4%) and between \$100,000 to \$150,000 per year for the City (0.5%). The Project will also generate transient accommodations taxes (9.25%) totaling \$1.9 to \$2.775 million for the State, a portion of which may be shared with the City.

V. SOCIAL CHARACTERISTICS

A. DEMOGRAPHIC IMPACTS

1. Residential Population

The Project will have no impact on the residential population of the area.

2. Visitor Population

The Project will provide 459 additional 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 Project with 459 new hotel units will serve to replace some of the hotel units lost in Waikīkī since 2003, including the Ohana Hobron conversion of 596 hotel rooms to a 181-unit condominium and the net loss of 1,300 hotel rooms at the Waikiki Beach Walk redevelopment, totaling 1,896 hotel units. In addition, the proposed Princess Kaiulani/Diamond Head Tower redevelopment will result in the net loss of 430 hotel units and the International Market Place will result in the loss of an additional 358 hotel units. The total hotel units lost and to be lost will be 2,684 units.

3. Character or Culture of the Neighborhood

The Project with its hotel, restaurant and retail development will conform to the mixed use character of the existing neighborhood where nearby hotel, condominium, restaurant and retail developments can be found.

4. Displacement

The 2121 Kuhio Project site is vacant and no residents or businesses will be displaced.

B. HOUSING IMPACTS

1. Increase Supply

The Project consisting of hotel units will not affect the supply of housing units in Waikīkī.

2. Affordable Units

No housing, market or affordable is planned in the Project.

VI. ENVIRONMENTAL CHARACTERISTICS

A. CLIMATE

Waikīkī has an average temperature of 76.9 degrees and an average rainfall of 23.42 inches per year. The tropical climate of Waikīkī provides a comfortable environment for visitors and residents alike.

B. FLORA

The Project site, with the exception of a large banyan tree, was cleared during the development of 2100 Kalakaua and new landscaping was introduced on the property. None of the trees or plants are considered rare or endangered.

The large signature banyan tree located on the property at the corner of Kūhiō Avenue and Kālainokū Street will remain and will be an integral part of the gathering place open to the public at this corner, which will also include appropriate street furniture to encourage the public to enjoy the open space provided by the applicant.

The Applicant has hired Steve Nimz & Associates Inc. Consulting Arborist Services to prepare a mitigation plan with measures to protect the banyan tree from construction activities. We will follow the recommendations of that plan. This plan will be included in the Waikiki Special District Permit application.

Mature street trees along Kūhiō Avenue which are not reflected in the plan or discussed in this FEA will be retained or relocated on site.

The existing vacant lot has groundcover, but minimal effort in providing landscaping and trees. The net result of the proposed landscape plan will be a significant increase over the existing trees presently on the property.

C. FAUNA

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

VII. TIME FRAME

The applicant hopes to develop the Project over a 24-month period as soon as all necessary permits are approved. The applicant hopes to receive necessary permits by June of next year and plans to begin construction at that time, completing the Project by June of 2015.

VIII. FUNDING SOURCE

The applicant expects to raise approximately \$50 million in equity from individuals and/or corporations for pre-development and development, and sourcing construction debt financing.

The applicant is also pursuing EB-5 financing. EB-5 financing has become an important source of financing for hotel development in the past few years. Hotels have become a favored class of investment for foreign investors seeking to get their green card with the required investment of capital. They attract wealthy foreign investors, who bring fresh

capital into the United States to invest it in building hotels and creating at least 10 jobs for Americans for each investor.

IX. SUMMARY DESCRIPTION OF THE AFFECTED ENVIRONMENT

A. SURROUNDING LAND USES AND STRUCTURES

The Project site is located in Waikīkī, Honolulu, O`ahu, Hawaii and is surrounded by hotel, timeshare, apartment, condominium, commercial developments and park and public uses.

Southwest (makai) of the Project site is Kalākaua Avenue with Fort DeRussy and retail and dining establishments. Northwest of the Project site is Kālaimoku Street. Directly across Kālaimoku Street is the King Kalakaua Plaza development presently vacant (former tenants included Niketown and Banana Republic). Northeast (mauka) of the site is Kūhiō Avenue. Across Kūhiō Avenue are the La Casa Condominium (23-story, 102 units), a lot with a duplex and a single family residence, the Tropic Surf (four-story, 15 units), the Waikiki Cove (seven-story, 23 units) and the Four Paddle Condominium (25-story, 250 units). Southeast of the site are the City and County municipal parking lot and a wastewater pump station.

B. TOPOGRAPHY AND SOIL TYPE

The property is relatively level and since the Project site is located in an urban, fully developed area there are no unusual or unique topographic features on the property.

The southern (makai) half of the site is developed with the 2100 Kalakaua retail commercial development (three-story, 110,000 square feet of floor area). The northeastern portion of the site is developed with parking. The northwestern portion of the site is vacant (Project site).

The site is located about 1,800 feet from the shoreline at Fort DeRussy Beach Park.

According to the United States Department of Agriculture, Soil Conservation Service's "Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii" the site is classified as fill land, mixed (FL).

Fill land occurs mostly near Pearl Harbor and in Honolulu in areas adjacent to the ocean. It consists of areas filled with material dredged from the ocean or hauled from nearby areas, garbage and general material from other sources. This land type is used for urban development.

C. FLOOD PLAIN MANAGEMENT

The Project site is in Zone AO (flood depths of 1 to 3 feet; average depths determined) with a flood depth of 2 feet, according to the Flood Insurance Rate Map of the Federal Emergency Management Agency ("FEMA"), panel 366 of 395, Map Number 15003C0366G, dated January 19, 2011. See Exhibit 4, FEMA Flood Insurance Rate Map.

EXHIBIT 4 - FEMA FLOOD INSURANCE RATE MAP



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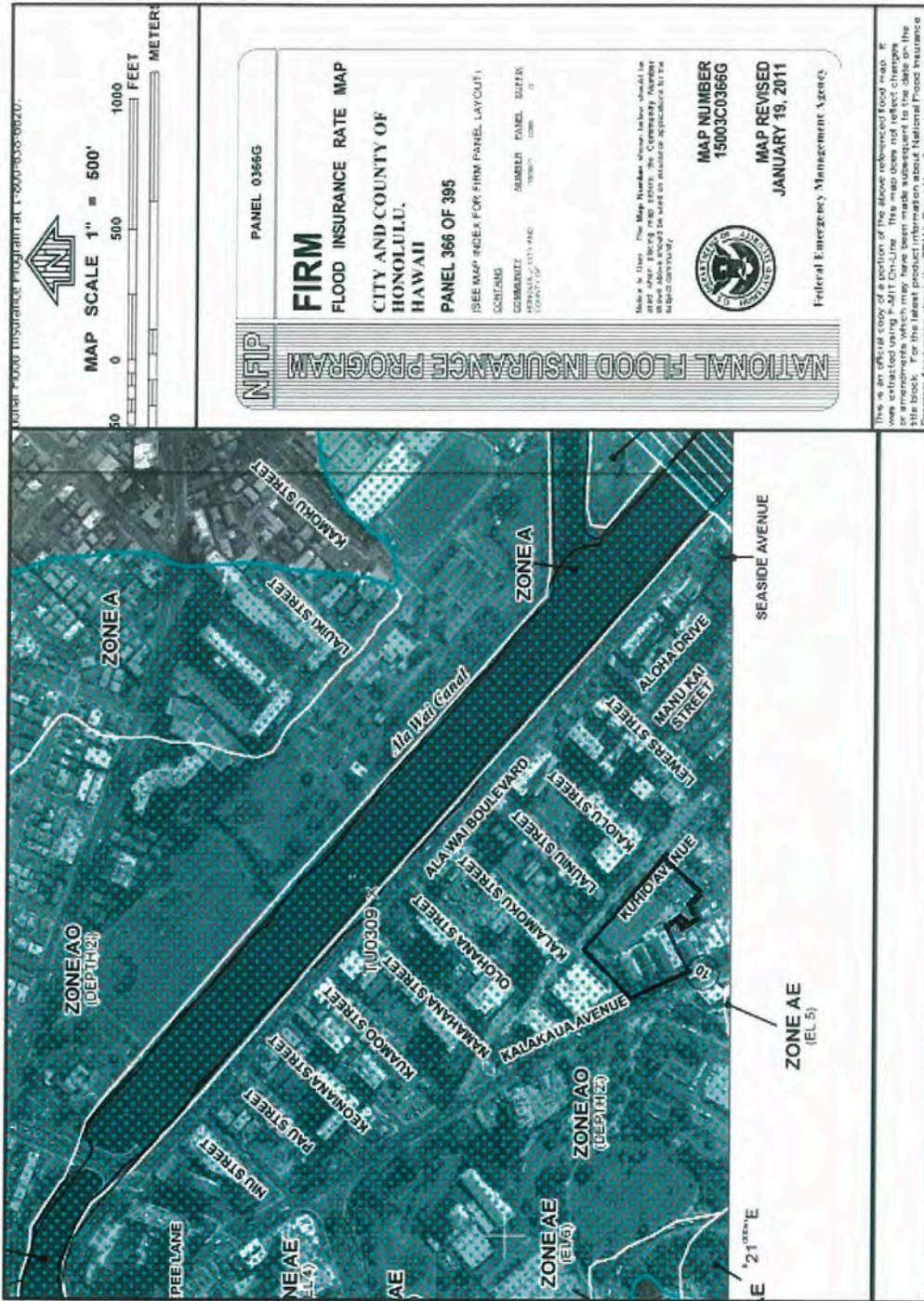


EXHIBIT 4

At a minimum, the proposed finished floor elevation of the new building will be set at least 2 feet above the highest existing grade of building footprint.

The project will comply with flood hazard requirements. Additionally, the applicant plans to elevate all emergency generators above the 2-foot flood depth level.

The project will comply with the rules and regulations of the national flood insurance program presented in title 44 of the code of federal regulations (44cfr). The project will also comply with applicable flood ordinances of the city.

D. HISTORICAL AND ARCHAEOLOGICAL RESOURCES

In April 2000 "An Archaeological Inventory Survey of King Kalakaua Plaza Phase II, Waikīkī ahupua'a, Kona District, Island of O'ahu, Hawai'i" ("AIS") was prepared by Cultural Surveys Hawaii for the Project site. This AIS was accepted as a final report by the State Historic Preservation Division (SHPD), by letter dated July 18, 2000. The AIS and SHPD's acceptance letter is included in **Appendix II**.

The applicant understands that "1950s Buildings in Waikīkī and Honolulu a Photo Essay", a photographic essay on the small single story structures built in Waikīkī circa 1950 was prepared by Mason Architects in 2004 and submitted to the SHPD. In conversations with SHPD staff (Susan Tasaki) in 2006, staff from Kusao & Kurahashi, Inc. was informed that the photo essay satisfied the mitigation requirement in the SHPD letter dated July, 2000.

The AIS Section VIII. Recommendations stated as follows:

"Based on the results of the archaeological inventory survey, no further archaeological work is recommended.

"State site 50-80-14-5796--the prehistoric to historic original wetland ground surface--has been adversely affected by land alteration of the project area. The site is not deemed significant under the criteria of the State and National registers of Historic Places. The single significant historic property in the project area, State Site 50-80-14-4970--a portion of the 'Auwai O Pau, has been adequately documented.

"There is always the possibility of encountering human burials in major excavation projects. Within the current project area the possibility is very low. No beach sand deposits such as those where burials are commonly found were encountered in the project area. If burials are encountered during construction excavations all work in the vicinity must halt and SHPD should be contacted."

In a letter, dated September 26, 2012, commenting on the DEA, The State Historic Preservation Division (Appendix IV) recommended as follows:

"We recommend that ground disturbing activities associated with this project be monitored by a qualified archaeologist. We request that the applicant submit an archaeological

monitoring plan to our office for review and approval prior to construction commencing; the plan should include all information as specified in Hawaii Administrative Rule § 13-279-4. We will notify your office when the plan has been approved and work may proceed.”

The applicant plans to comply with these recommendations.

X. PUBLIC PLANS AND LAND USE POLICIES

A. STATE LAND USE DISTRICT

The site is in the State Urban Land Use District and the Project is consistent with this Urban designation.

B. GENERAL PLAN

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 develop a high quality and safe environment for visitors in a new hotel at the Project site. The applicant will spend approximately \$275 million to develop the hotel facility at 2121 Kuhio.

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

The Project will result in a higher quality visitor product and provide enhanced levels of service to guests. The condo-hotel suites at the Project will provide visitors and residents with residential style accommodations that are currently not readily available in Waikīkī. These suites will meet the requirements of families and extended-stay guests.

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 applicant plans to incorporate the application of LEED standards and strategies, to the extent economically feasible, to achieve sustainable site, utilities and building development. The green principles and strategies currently being considered for the Project include the following:

- Develop an erosion and sedimentation control plan;
- Promote alternative transportation by providing secure bicycle storage and locker room facilities;
- Explore alternatives for energy savings related to building cooling and hot water generation;
- Reduce water usage through use of high efficiency plumbing fixtures;
- Energy Star rated appliances;
- High performance glazing;
- Lighting control systems that reduce light usage;
- Design spaces with views to the exterior and options for natural ventilation;
- Create and implement a Green education program for employees and guests;
- Develop a solid waste management plan during construction and operations; and
- Explore reuse and recycling of demolished materials.

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.

The Board of Water Supply and DPP Wastewater Branch have indicated that water supply and sewage treatment facilities, respectively, are adequate to support the Project.

Additional measures to reduce traffic impacts will be adopted based on the recommendations provided in the Traffic Impact Report prepared by Wilson Okamoto, as discussed in Section XI.A.1. of this FEA. The Traffic Impact Report is attached as **Appendix III**.

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

The Project will not require more supporting services than are available, as discussed in the previous section.

Policy 5 - Provide for more compact development and intensive use of urban lands where compatible with the physical and social character of existing communities.

The Project will incorporate a compact development and intensive use of urban lands in Waikīkī in an area with a mix of intensive urban development and less intensive urban development and the Project will be compatible with the surrounding

developments. The additional height proposed for the Project will allow for a smaller structural footprint and enable additional public open space.

4. Culture and Recreation

General Plan Objective D - To provide a wide range of recreational facilities and services that are readily available to all residents of O‘ahu.

Policy 9 - Require all new developments to provide their residents with adequate recreation space.

Policy 10 - Encourage the private provision of recreation and leisure-time facilities and services.

As part of the Project, the applicant plans to develop a swimming pool, Jacuzzi and deck area and a fitness facility on the sixth floor of the Project for hotel guests. These facilities will be in addition to the ground floor public open space area provided for hotel guests and the general public.

C. PRIMARY URBAN CENTER DEVELOPMENT PLAN

The Project’s compliance with the Primary Urban Center (PUC) Development Plan (DP) is discussed as follows:

1. “2. **The Vision for the PUC’s Future**

.....

2.4 **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 applicant's Project is in keeping with this important vision statement. The Project will provide additional lodging services to help Waikīkī remain the State's largest and most popular visitor destination.

2. “3 **Land Use and Transportation**

.....

3.1.2 **Policies**

.....

- *Preserve panoramic views of natural landmarks and the urban skyline.*

Preserve views of the Koolau and Waianae Mountain Ranges, Punchbowl, Diamond Head, Pearl Harbor and other natural landmarks. Maintain

important view corridors within and across urban Honolulu and keep Downtown as the most prominent feature of the urban skyline. Views along the Pearl Harbor shoreline and the Pearl Harbor Historic Trail toward the mountains, shoreline, significant landmarks, and adjacent communities should be created and maximized wherever possible and appropriate.

.....

3.1.3 Guidelines

.....

3.1.3.3 Urban Skyline and Mauka-Makai Views

- *Maintain the visual prominence of important districts by allowing a greater height and massing of buildings*
- *Apart from Downtown and other central Honolulu locations, promote mid-rise or low-rise scale for new buildings.*
- *Preserve the following panoramic views indicated schematically in Figure 3.1 by establishing building height limits and setbacks that are based on viewplane analyses to determine the sight lines and desired view dimensions and characteristics:*
 - *From Ala Wai Canal Promenade toward the Koolau Range*
 - *From Ala Moana Beach Park toward the Koolau Range*
 - *From Kewalo Basin toward the Koolau Range and Punchbowl*
 - *From Kakaako Waterfront Park toward Punchbowl and the Koolau Range*
 - *From Punchbowl Lookout toward Diamond Head*
- *Preserve and enhance significant mauka or makai view corridors along major collector streets indicated in Figure 3.1 through a combination of zoning controls and streetscape improvements.*
- *Increase line-of-sight opportunities towards Pearl Harbor – particularly the U.S.S. Missouri and the U.S.S. Arizona memorials.*

Guidelines for the protection of views from certain “panoramic views of natural landmarks and the urban skyline” are provided in Section 3.1.3.3 “Urban Skyline and Mauka-Makai Views”. Waikīkī is one of the important districts that should maintain its visual prominence by allowing a greater height and massing of buildings, as has been permitted by the Land Use Ordinance.

The Project will not affect the views from the Ala Wai Canal Promenade toward the Koolau Range; from Ala Moana Beach Park toward the Koolau Range; from Kewalo

Basin toward the Koolau Range and Punchbowl; from Kakaako Waterfront Park toward Punchbowl and the Koolau Range; or from Punchbowl Lookout toward Diamond Head.

The Project will not affect the significant mauka or makai view corridors along major collector streets in Figure 3.1, described as Bishop Street, Cooke Street, Ward Avenue, Piikoi Street, Keeaumoku Street, and McCully Street.

The Project will not affect the line-of-sight towards Pearl Harbor and the two memorials.

“ 3.4.1.2 **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.”

The applicant plans to invest approximately \$275 million to develop the Project. This will be an important investment in Waikīkī's physical plant and will turn a now vacant property into a prime hotel development to support the visitor industry.

“3.5.1.4 **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.”

The applicant plans to improve the pedestrian experience along Kūhiō Avenue with significant public open spaces and greater than required yards to meet height setback requirements. The setback along Kūhiō Avenue will average approximately 51 feet. This far exceeds the yard requirement of 20 feet.

This significant provision of public open space and landscaping along this major thoroughfare will greatly enhance the pedestrian experience through Waikīkī by providing relief from the urban forms that congest the street level experience in Waikīkī.

The existing 2100 Kalakaua development provides a 34.75 foot setback with a wide landscaped setback providing landscape relief for pedestrians along this stretch of Waikīkī.

“3.5.1.5 **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 applicant plans to provide bicycle racks in the Project parking garage on the property to accommodate employees that may bicycle to work, using the new bike lane planned for Kalākaua Avenue.

3. Land Use Map PUC - East

The Project is located in an area designated Resort on the PUC DP Land Use Map (PUC - East) and is consistent with this designation.

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

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

a. Promote a Hawaiian Sense of Place

The Project will significantly enhance the "Hawaiian Sense of Place" of the area. New enhanced landscaping will look to incorporate both native plant species and introduced tropical plants brought to Hawaii including retention of the great Banyan tree at the corner of Kūhiō Avenue and Kālamoku Street.

In addition, the Project will improve the experience of its guests, visitors, and surrounding neighbors, by providing a front plaza larger than most other plazas along Kūhiō Avenue. This plaza will be part of the significant public open space provided on the property.

The Project will provide an average 51-foot setback (to meet height setback requirements), much greater than the required 20-foot yard, on Kūhiō Avenue. The proposed landscaping along the street frontages will add to the tropical ambiance of the Project.

Decorative and varied materials, patterns and landscaping will be integrated into the Project to enhance the streetscape and create a tropical Hawaiian sense of place.

The applicant's design includes significant amounts of articulation which will provide rich visual textures by contrasting light and shadows on surfaces of the buildings to further the Hawaiian sense of place.

The project massing is composed of a five story tower podium and a 6th floor open-air, sky lobby, all of which support the residential tower above. Physical stepping of

the building massing is achieved at the 5th floors of the podium, as well as the 6th floor and roof of the tower.

The tower itself can be defined by its two unique primary facades: the residential 'makai' side and the street fronting 'mauka' side, along Kūhiō Avenue. For the 'makai' facade, the notion of "weaving" together the primary horizontal and vertical massing elements becomes the basis of the concept for exterior articulation.

On a macro scale, this is achieved in the 'makai' facade of the tower through the expression of five vertical piers, which define a primary central massing, flanked by two smaller masses.

On a micro scale, the 'makai' facade - made up entirely of deep set lanais, continues the concept of weaving by articulating the vertical walls between units and the slab edge and lanai railing into a building scale "woven fabric". The woven pattern of the facade, evocative of traditional Hawaiian tapa patterns, becomes a major motif expressed in other scales and materials across the project's exterior.

Composition of the 'mauka' facade follows the massing patterns established on the 'makai' facade. The mass is broken into a series of strong vertical elements, bound together by horizontal accents at key compositional datum which furthers the notion of a "stepped" facade and helps diminish the perceived width of the facade.

The podium planning and design extends the scale and articulation of the adjacent 2100 Kalakaua 'Luxury Row' retail facility. Similar to the individual "storefront" expression of 'Luxury Row', the planning of the podium breaks the mass into five primary volumes - or 'storefronts' - along Kūhiō Avenue.

In total, the design concepts and material articulation proposed for the project meet the goals of the Waikiki Special District design guidelines by providing an appealing inter-active pedestrian environment, with lush landscaping and a building design which utilizes extensive open-air lobby area and a palette of natural building materials, articulated in an manner sensitive to supporting a successful pedestrian scale at grade and to pronouncing the play of light and shadow across it's mass, as the building reacts to its tropical environment.

A full detailed description of the building, articulation, scale, material and color in support of the Hawaiian Sense of Place is provided in Section X.E.2.a.iv. "Articulation, Scale, Material and Color".

b. Optimum Community Benefits

The Project will, through provision of public open space, provide a tropical landscaped plaza area along Kūhiō Avenue that will provide relief from the built environment.

The Project will also provide an increase in tax revenues for both the City and State.

The Project during its sales phase, selling individual condo hotel units to investors will result in over \$300 million in on-site sales generating about \$2 million in conveyance tax revenues for the State.

The Project upon completion will generate about \$4.5 million per year in annual property tax revenue for the City.

The Project during its first full calendar year and annually thereafter is expected to generate income of \$20 to \$30 million in on-site sales resulting in GET (general excise tax revenue) of \$0.8 to \$1.2 million per year for the State (4%) and between \$100,000 to \$150,000 per year for the City (0.5%). The Project will also generate transient accommodations taxes (9.25%) totaling \$1.9 to \$2.775 million for the State, a portion of which may be shared with the City.

c. Variety of Compatible Land Uses

The Project will include a mix of hotel, retail, dining and recreational services for its hotel guests in support of the resort industry in Waikīkī. The retail and dining facilities will also serve the residents of Waikīkī.

d. 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.

It will take advantage of the existing bus facilities that exist along Kūhiō and Kalākaua Avenues. Bike racks will be provided in the Project parking structure to support demand from hotel employees. The applicant intends to implement a Traffic Management Plan ("TMP") which will encourage its employees to use public transit and carpools. The applicant 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.

The applicant will work with DPP and DTS to provide a landscaped buffer between the curb and the sidewalk with breaks at intersections and the existing bus stop. The bus stop area will be improved with a wider paved area for passenger drop off and pick up. Seat walls will be provided, in addition to the existing bench to provide additional seating capacity at the bus stop.

e. Support Visitor and Resident Needs

The Project will provide hotel accommodations and services for visitors and will provide dining and retail for Waikīkī residents and visitors alike. The Project will

provide much needed landscape relief and public open space for this part of Waikīkī to support both visitors and residents.

f. Rejuvenation and Revitalization in the Special District

The Project will take an empty lot and provide a hotel facility with supporting uses to revitalize Kūhiō Avenue and provide a destination that will bring foot traffic into a rather lightly traveled pedestrian area, in the northwestern part of Waikīkī. This improvement could serve as a catalyst for redevelopment of neighboring properties.

g. Hawaii's Tropical Climate and Ambience

The Project will take advantage of Hawaii's tropical climate and ambience with an open air lobby area and a sixth floor outdoor space with a swimming pool, Jacuzzi and deck.

h. Mauka Views and Visual Relationship with the Ocean

The Project will not affect mauka views of the Koolau Range from public viewing areas such as Fort DeRussy and Kalākaua Avenue fronting Fort DeRussy (**Appendix IV**). The Project will also not affect views of the ocean, as experienced from Kalākaua Avenue, Kalia Road and Ala Moana Boulevard.

i. Diamond Head View from Punchbowl

The Project will not affect the view of Diamond Head from the Punchbowl Lookout.

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

The Project, with its lushly landscaped plaza will provide an inviting pedestrian experience onto this public open space.

The walkway/plaza fronting the Project on Kūhiō Avenue will be enhanced with landscaping, open space, and a breezeway through the open hotel lobby.

2. Prominent Views and Historic Properties (Sec. 21-9.890-3)

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

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

- The Project site, located mauka of Kalākaua Avenue at Kālaimoku Street will not affect any of these intermittent ocean views.*
- (2) *Continuous ocean views along Kalakaua Avenue, from Kuhio Beach to Kapahulu Avenue;
Given the Project's location at the west end of Waikiki, it will not affect continuous ocean views at the east end of Waikiki.*
 - (3) *Ocean views from Ala Wai Yacht Harbor;
The Project will not affect this important view.*
 - (4) *Ocean views from Kuhio Beach Park;
The Project will not affect this view at the east end of Waikiki.*
 - (5) *Views of Ala Wai Yacht Harbor from Ala Moana Park (Magic Island Park);
The Project will not affect these views.*
 - (6) *Mauka views from the portions of the following streets mauka of Kuhio Avenue:*
 - (A) *Nohonani Street;*
 - (B) *Nahua Street;*
 - (C) *Kanekapolei Street;*
 - (D) *Kaiolu Street;*
 - (E) *Lewers Street;*
 - (F) *Walina Street; and*
 - (G) *Seaside Avenue;**and*
 - (7) *View of Diamond Head from Ala Wai Boulevard between McCully Street and Kapahulu Avenue."*

The Project will not affect any of these significant public views.

- b. The Project site is vacant and will not affect historic properties or buildings over 50 years old.
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 Section X.D.1.a. "Promote a Hawaiian Sense of Place" and further supported in Section X.E.2.a.iv. "Articulation, Scale, Material and Color".

- a. 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.

Interactive informational displays, if provided, will be developed as part of a Master Signage Plan subject to Zoning Adjustment approval with consideration of the requirements of Section 21-9.80-4.a.(9) of the Land Use Ordinance (the "LUO").

b. Curb Cuts

Curb cuts for driveway openings and sight distances at all intersections will comply with the design standards of the Department of Planning and Permitting. The applicant will retain the existing number of curb cuts with two on Kālainmoku Street and one on Kūhiō Avenue (providing access to Lau'ula Street).

The access on Kālainmoku Street will allow Project traffic to access the property and have valet and drop-off traffic all stage on property to minimize impact to the surrounding streets.

c. Design Guidelines

General Guidelines. The only general guideline described in LUO Exhibit 21-9.15 that affects this Project is the 300-foot height limit. In accordance with Section 21-9.80-4(g)(3) of the WSD, the applicant will be requesting a Resolution from City Council for a determination that the building with the added height (up to 350 feet) would not be visible within the view cones from the Punchbowl Lookouts toward Diamond Head and the horizon line of the ocean or from the Kalākaua Avenue frontage of Fort DeRussy towards the slopes and ridgeline of the Koolau Range.

Yards. The 20-foot front yard required per the development standard under LUO Table 21-9.6(B) will be met on Kūhiō Avenue with an average 20-foot front yard (actual setback will average about 51 feet to meet height setback requirements) and the 15-foot front yards required for Kālainmoku Street and Lau'ula Street will be met, with average front yards of 15 feet (actual setback will be about 48 feet to meet height setback requirements) and a minimum of 15 feet respectively.

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. The applicant 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. The applicant will utilize shading devices, recessed windows and projecting eyebrows in providing articulation and contrast. These architectural elements are intended to promote a Hawaiian sense of place. Building scale, features and articulation were discussed in great detail in Section X.E.2.a.iv. "Articulation, Scale, Material and Color".

Exterior Building Colors. The use of reflective materials will be limited. Exterior colors will contribute to the tropical resort ambiance and complement the landscaping. Generally neutral tones are being considered for the Project with more vibrant and pronounced colors being used for accenting.

Ground Level Features.

- 1) Within the Project, attention will be given to pedestrian-oriented ground level features along the main thoroughfare, Kūhiō Avenue. An open hotel lobby with a breezeway will promote an open air feel to the hotel lobby. Design priority will include a seamless transition between the public sidewalk and public open space along Kūhiō Avenue.
- 2) Building facades at the ground level along open spaces and major streets (including Kalākaua Avenue and Kūhiō Avenue) will include as appropriate open lobbies, arcade entrances, and display windows, and may include outdoor dining where it is permitted. The Project will have an open hotel lobby with a breezeway.
- 3) All commercial uses located at ground level in the Project are subject to paragraph "2)".
- 4) The Project will have an open hotel lobby with a breezeway.
- 5) Although the buildings will not be situated between a street and the shoreline or between a street and open spaces, the ground level pedestrian plaza will provide visual links between the street and the public open space provided.
- 6) Where blank walls occur fronting a street or open space, they shall be screened with heavy landscaping or appropriately articulated exterior surfaces.
- 7) No ground level parking facilities are proposed.

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

d. Landscaping

- 1) No trees six inches or greater in trunk diameter will be removed.
- 2) Trees proposed for removal may be relocated to another landscape area on the Project Site. Mature street trees along Kūhiō Avenue which are not reflected in the plan or discussed in this FEA will be retained or relocated on site.
- 3) The parking structure will be landscaped or articulated with designs to reduce the impact of a solid wall.
- 4) Newly introduced landscape will include fragrant, lush, tropical vegetation and native plant species, where appropriate.
- 5) 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.
- 6) All landscape areas will have an adequate irrigation system.

e. Height Regulations

- 1) Rooftop height exemptions will be required for the Project which is planned at a height of 350 feet, as permitted by the WSD if certain criteria are met.
- 2) Coastal height setbacks are not applicable for this Project which is located 1,800 feet mauka of the shoreline (Fort DeRussy Beach Park).
- 3) The applicant will be requesting a Resolution from City Council for a determination that the building with the added height (up to 350 feet) would not be visible within the view cones from the Punchbowl Lookouts toward Diamond Head and the horizon line of the ocean or from the Kalākaua Avenue frontage of Fort DeRussy towards the slopes and ridgeline of the Koolau Range.

The applicant has provided a photographic simulation of the impact of a 350-foot tower on the view cones from the Punchbowl Lookouts toward Diamond Head and the horizon line of the ocean (**Appendix IV**). The proposed tower does not affect the view of Diamond Head and does not penetrate the horizon line of the ocean.

The applicant has provided a photographic simulation of the impact of a 300-foot tower (currently permitted) versus a 350-foot tower as proposed and finds that the view from the Kalākaua Avenue frontage of Fort DeRussy towards the slopes and ridgeline of the Koolau Range is not affected with the taller tower (**Appendix IV**). Neither tower will affect views of the slopes or ridgeline of the Koolau Range.

The issue of receiving approval for an increase in the maximum building height from 300' to 350' is fundamentally based on an evaluation of the visual impacts of the added height, as seen from key vantage points, most notably the Punchbowl Lookout and Fort DeRussy. In both cases, view analysis confirm that the additional

height has no impact on views of the horizon, slopes of Diamond Head or the Koolau Mountains and as such, should meet the intent of the ordinance.

In addition, the increase of the overall building height from 300' to 350' has a significant positive impact on the massing of the tower. The additional 50' of height translates to 6 additional residential floors, which can support over 64,000 GSF of building area. This allows the 350' tower to be 48' shorter in length than its 300' equivalent, which is equivalent to a 20% reduction in visual bulk and conversely, a 20% increase in sky exposure, light and air to the surrounding area.

To this end, the concept of “building forms which produce narrow towers are preferred” is supported by the Project. The additional height allows the applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kūhiō Avenue with limited open space relief provided by existing developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

f. Parking

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

g. Vending Carts

Vending carts are not presently planned, however, if considered in the future, they will be located at ground level and will be appropriately screened from the street and sidewalks at Kūhiō Avenue and Kālainmoku Street.

4. Resort Mixed Use Precinct (Sec. 21-9.80-6)

a. Permitted Uses

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

b. Development Standards

Development Standard	Resort Mixed Use Precinct	Project
Minimum lot area (square feet)	10,000	153,584
Minimum lot width and depth (feet)	50	Average - 350 width and 350 depth
Yards (Feet) - Front	20 (Kūhiō Avenue)	20 (average)
- Side and rear	15 (Kālainmoku and Lau'ula St.) 0	15 (average) 0
Maximum Density (FAR)	1.0 (plus 1/2 of abutting right-of-way area)	1.0 (191,933 square feet)
Minimum open space (percent of zoning lot)	0.00	55% (2121 Kuhio) 41% (2100 Kalakaua) Pending Future Development (Food Pantry)
Open Space Bonus	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	306,020 square feet 370 square feet 3,969 square feet 49,110 square feet
Max FAR	3.5	2.87
Maximum Height (feet)	300 per zoning map	350
Transitional Height Setback	1 foot for every 10 feet of height over 40 feet	55 feet (average Kūhiō) 34 feet (Kālainmoku) 39 feet (Lau'ula)

Appendix V, LUO Zoning Analysis provides a detailed analysis of the allowable floor area based on the joint development of the four parcels and open space bonuses.

c. Parking

The parking requirement for the Project, based on 459 hotel rooms (no "lock-out" units planned) and accessory uses at one stall per four units is 115 parking stalls plus 45 parking stalls provided to meet the current parking requirements for 2100 Kalakaua, for a total of 160 required parking stalls. The applicant will be providing 187 parking stalls, 27 more stalls than required.

The applicant plans to provide 187 parking stalls, 27 more than required.

d. Loading

The loading requirement based on the 409,000 square feet of hotel floor area (6 loading stalls) and 120,000 square feet of retail and other commercial at the Project and at 2100 Kalakaua (5 loading stalls) will be 11 loading stalls, 6 full size (12' by 35') and 5 smaller loading stalls (8.5' by 19'). The applicant will provide 6 full size stalls and 5 smaller loading stalls.

The site plan shows the location for service truck (loading vehicles) at the end of Lau'ula Street.

E. WAIKIKI SPECIAL DISTRICT GUIDELINES

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

1. Hawaiian Sense of Place

The Project will significantly enhance the “Hawaiian Sense of Place” of the area. New enhanced landscaping will look to incorporate both native plant species and introduced tropical plants brought to Hawaii including retention of the great Banyan tree at the corner of Kūhiō Avenue and Kālainokū Street.

In addition, the Project will improve the experience of its guests, visitors, and surrounding neighbors, by providing a front plaza larger than most other plazas along Kūhiō Avenue. This plaza will be part of the significant public open space provided on the property.

The Project will provide a 51-foot setback (to meet height setback requirements), much greater than the required 20-foot yard, along Kūhiō Avenue. The proposed landscaping along the street frontages will add to the tropical ambiance of the Project.

Decorative and varied materials, patterns and landscaping will be integrated into the Project to enhance the streetscape and create a tropical Hawaiian sense of place.

The applicant's design includes significant amounts of articulation which will provide rich visual textures by contrasting light and shadows on surfaces of the buildings to further the Hawaiian sense of place.

Building scale, features and articulation which support promotion of a Hawaiian sense of place were discussed in great detail in Section X.E.2.a.iv. “Articulation, Scale, Material and Color”.

2. District Guidelines

a. 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 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 large public open space plaza at the ground level to further experience the tropical climate. Also at the ground level the public open space plaza and the open lobby relates well to the human scale.

i. Orientation and Form

As mentioned in the previous section, the Project will not affect any of the significant public views described in the Waikiki Special District Guidelines or in Section 21-9.80-3(a) of the Land Use Ordinance.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalākaua Avenue and from Kūhiō Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian access ways into and through Waikīkī.

The proposed ewa/diamond head building orientation is also sensitive to the need to protect public views from the Gateway to Waikīkī located at Kalākaua Avenue and Ala Moana Boulevard. A volume study on photographs of views from these locations have been prepared comparing the visual impact of two building designs, one with a mauka/makai orientation and one with the proposed building design in an ewa/diamond head orientation. See **Appendix VI Building Orientation - Photographic Analysis**.

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalākaua Avenue and from Kūhiō Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian access ways into and through Waikīkī. This ewa/diamond head orientation is also sensitive to protection of public views from the Gateway to Waikiki located at Kalākaua Avenue and Ala Moana Boulevard. A volume study (**Appendix VI Building Orientation – Photographic Analysis** in the Final EA) on photographs of views from these locations has been prepared comparing the impacts from two building designs (enclosed), one with a mauka/makai building orientation and one with the proposed ewa/diamond head building orientation. The ewa/diamond head building orientation has significantly less visual impact along these important public view corridors except for one view at the corner of Kalākaua Avenue and Kālaimoku Street and two views looking ewa along Kūhiō Avenue. The structure has a narrower face with the ewa/diamond head orientation than with a mauka/makai orientation in all but three of the viewpoints along Kalākaua Avenue and Kūhiō Avenue. The view from the Gateway to Waikiki at Kalākaua Avenue and Ala Moana Boulevard is also less impacted with the ewa/diamond head building orientation.

The viewpoint at the open space at Fort DeRussy shows that the visual impact is greater with the ewa/diamond head orientation.

At the request of DPP the Building Orientation – Photographic Analysis also shows views from Kālaimoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two street corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as significant public views the mauka views at certain other streets located mauka of Kūhiō Avenue.

The ewa/diamond head orientation has also allowed us to provide the widest possible uninterrupted public open space along Kūhiō Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kūhiō Avenue as possible and would have been significantly wider to accommodate a similar amount of floor area.

Vehicular entrance to the site is off of Kālainmoku Street where the existing driveway will be modified to enter into the proposed porte-cochere and follow ramps up to the mezzanine parking level, where vehicle elevators will take vehicles to the 2nd through 4th parking levels.

Building form is discussed in great detail in Section X.E.2.a.iv. “Articulation, Scale, Material and Color”.

The Project provides a significant public open space at the pedestrian level and an open lobby/breezeway through the building.

ii. Open Space

The open space on the Project site is located mainly along the street frontage of the property with most of that open space public open space. This public open space provides an important and significant visual link to the public corridors along Kūhiō Avenue and Kālainmoku Street.

iii. Parking Facilities

In order to maximize open space on the property and to minimize the impact of the parking on the views from the public corridors at Kūhiō Avenue and Kālainmoku Street, the applicant intends to provide three levels of elevated parking to meet the parking requirements for the Project. Vehicular access to the upper parking levels will be from Kālainmoku Street.

iv. Articulation, Scale, Material and Color

The building facade will be varied with articulation as evidenced in the conceptual site plan, elevations and rendering provided in **Appendix I**.

The project massing is composed of a four story tower podium, including a double height ground floor arrival lobby a fifth floor loggia and a 6th floor open-air, sky lobby, all of which support the residential tower above. Physical stepping of the building massing is achieved at the 2nd and 5th floors of the podium, as well as the 6th, 34th and 35th floors of the tower.

The tower itself can be defined by its two unique primary facades: the residential 'makai' side and the street fronting 'mauka' side, along Kūhiō

Avenue. For the 'makai' facade, the notion of "weaving" together the primary horizontal and vertical massing elements becomes the basis of the concept for exterior articulation.

On a macro scale, this is achieved in the 'makai' facade of the tower through the expression of five vertical piers, which define a primary central massing, flanked by two smaller masses. These five piers are then "woven" together with four major horizontal accent bands which define each of the four major residential zones within the vertical mass of the tower. The result is a compositional strategy which helps modulate the scale of the facade and effectively reduces the perceived height and width of the massing through the articulation of multiple smaller elements, both in the vertical and horizontal planes.

On a micro scale, the 'makai' facade - made up entirely of deep set lanais, continues the concept of weaving by articulating the vertical walls between units and the slab edge and lanai railing into a building scale "woven fabric". The depth and distinct woven texture of the facade will enhance the play of light and shadow across its surface. The woven pattern of the facade, evocative of traditional Hawaiian tapa patterns, becomes a major motif expressed in other scales and materials across the project's exterior.

Composition of the 'mauka' facade follows the massing patterns established on the 'makai' facade. The mass is broken into a series of strong vertical elements, bound together by horizontal accents at key compositional datum which furthers the notion of a "stepped" facade and helps diminish the perceived width of the facade. The material palette is comprised of painted stucco over concrete, with projecting slab edges, at the residential ends of the facade. Each of these flanking elements incorporates an adjacent exterior stair core, with a decorative aluminum louvered screened. The center of the composition is demarked by a strong central circulation core, similarly clad in the aluminum louvered screen, although one of a more intricate nature - incorporating the "basket weave" motif expressed in the 'makai' facade. The interstitial vertical surfaces are glazed circulation corridors of a non-reflective type glass, with vertical accent louvers at selected mullions, arranged in an abstracted grid pattern. The resulting composition breaks the overall massing into five distinct vertical elements. While lacking the depth of the 'makai' facade, the 'mauka' facade will offer a distinct range of material palette, texture and patterning and establishes formal and compositional elements which will be carried into the design for the podium.

The podium planning and design extends the scale and articulation of the adjacent 2100 Kalakaua 'Luxury Row' retail facility. Similar to the individual "storefront" expression of 'Luxury Row', the planning of the podium breaks the mass into five primary volumes - or 'storefronts' - along Kūhiō Avenue. These volumes are intentionally misaligned with each other to reinforce their

individuality, however are coordinated with the five primary volumes of the 'mauka' tower facade above. The result is a massing which effectively reduces the scale of its long Kūhiō facade to the "storefront" scale which characterizes 'Luxury Row', while establishing a formal integration of the tower geometry with its supporting podium.

The material palette for the podium and tower draw from the diverse palette of materials utilized in the storefronts of 'Luxury Row', those being: limestone cladding, painted stucco, decorative ironwork/grillage, puka lava tile, timber, steel and glass. For the tower podium, materials are applied to the massing to further the notion of multiple smaller scaled, distinct elements, however also to emphasize the podium's relationship with the tower mass above.

To this end, at grade the five volumes of the podium are clad in alternating limestone, stucco or lava tile, each uniquely rendered as a way of maintaining the desired scale and pedestrian experience. The three parking levels above are clad in continuous "ribbon" of the decorative aluminum louvered screen. The screen framing module and "basket weave" expression is consistent throughout, creating a continuous unifying element which strongly interlocks the tower with the podium. The screen frame is then in-filled with two unique patterns: one a decorative louver screen, similar to the tower screens at the exterior stair and the other one a 3" mesh to support a planted wall. The result is a highly textured surface, articulated in two primary materials: decorative metal and green planting. The "woven" expression of the surface, inspired by the texture of the "makai" facade, similarly becomes a focal design feature, with immediate references to traditional Hawaiian weaving.

In addition to the primary exterior elements, the podium design utilizes a range of secondary design elements, to further modulate scale and enhance function. These include: continuous stucco faced planters on the second floor at the base of the exterior planted screens; a fifth floor loggia with deep set windows and perimeter planters; a planted entry canopy/trellis at the breezeway, framing the Kūhiō lobby entrance; a continuous wood trellis and perimeter shutters at the open-air 6th floor lobby; a continuous perimeter planter at the 6th floor; a decorative cast concrete frieze at the 7th floor railing, demarking the transition of the podium to tower; and a painted steel trellis as the crowning element to both the 'mauka' and 'makai' facades.

In total, the design concepts and material articulation proposed for the project meet the goals of the Waikiki Special District design guidelines by providing an appealing inter-active pedestrian environment, with lush landscaping and a building design which utilizes extensive open-air lobby area and a palette of natural building materials, articulated in a manner sensitive to supporting a successful pedestrian scale at grade and to pronouncing the play of light and shadow across it's mass, as the building reacts to its tropical environment.

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

b. Ground Level Features

i. Entries, Lobbies and Arcades

New enhanced landscaping will look to incorporate both native plant species and introduced tropical plants brought to Hawaii including retention of the great Banyan tree at the corner of Kūhiō Avenue and Kālainmoku Street.

In addition, the Project will improve the experience of its guests, visitors, and surrounding neighbors, by providing a front plaza larger than most other plazas along Kūhiō Avenue. This plaza will be part of the significant public open space provided on the property.

The Project will provide an average 51-foot setback (to meet height setback requirements), much greater than the required 20-foot yard, for Kūhiō Avenue. The proposed landscaping along the street frontages will add to the tropical ambiance of the Project.

Decorative and varied materials, patterns and landscaping will be integrated into the Project to enhance the streetscape and create a tropical Hawaiian sense of place.

The Project will provide an open hotel lobby/breezeway that will flow from the porte-cochere to the Kūhiō Avenue Plaza.

At the corner of Kūhiō Avenue and Kālainmoku Street the applicant intends to provide a gathering place open to the public which may have appropriate street furniture. These elements are in keeping with the recommendations of the “Waikiki Special District Design Guidelines”.

ii. Visual Links

The site plan provides open space and landscaped areas (with water features). These elements provide a visual link for pedestrians and motorists to the hotel structure and breezeway. The applicant is planning to provide about 47% open space over the development parcel, with about 38% of that as public open space.

c. Features in Required Yards

i. Porte-Cocheres

The new porte-cochere is in an area outside of the required front yard. Landscaping will be added to soften the appearance of this area from the public perspective. It is the applicant's intention to create a porte-cochere that will present a pleasant formal open arrival point as well as an off-street drop off and pick up point.

ii. Walls and Fences

The applicant intends to provide significant public open space in the form of a lushly landscaped plaza and no fences are planned to restrict public access to this public open space.

iii. Outdoor Dining

The proposed restaurant on the sixth floor may provide outdoor dining.

iv. Shading Devices

Shading devices such as roof overhangs, eaves and eyebrows are being considered in the design of the building.

v. Roof Design and Equipment Screening

Rooftop machinery, equipment and utility installations may exceed the established height limit as permitted by the LUO, but will be screened from view.

d. Landscaping

The Project will significantly enhance the "Hawaiian Sense of Place" of the area. New enhanced landscaping will look to incorporate both native plant species and introduced tropical plants brought to Hawaii including retention of the great Banyan tree at the corner of Kūhiō Avenue and Kālainmoku Street.

Mature street trees along Kūhiō Avenue which are not reflected in the plan or discussed in this FEA will be retained or relocated on site.

In addition, the Project will improve the experience of its guests, visitors, and surrounding neighbors, by providing a front plaza larger than most other plazas along Kūhiō Avenue. This plaza will be part of the significant public open space provided on the property.

The Project will provide a 51-foot setback (to meet height setback requirements), much greater than the required 20-foot yard, along Kūhiō Avenue. The proposed landscaping along the street frontages will add to the tropical ambiance of the Project. Decorative and varied materials, patterns and landscaping will be integrated into the Project to enhance the streetscape and create a tropical Hawaiian sense of place.

The Project is being designed to direct water runoff from roofs and other large impervious surfaces to the extensive open space system.

The existing vacant lot has groundcover, but minimal landscaping and trees. The proposed landscape plan represents a significant increase in the number of trees presently on the property.

These landscape elements are in keeping with the recommendation of the “Waikiki Special District Design Guidelines”. Greater detail on the proposed landscape concept will be discussed during the processing of the Waikiki Special District Permit.

- Water Features and Artwork

The conceptual site plan provides a water feature and landscaping at ground level. The large public open space may accommodate some form of artwork.

- Sidewalks and Paving

Private walkways will be in compliance with the design standards of the Waikiki Special District. Patterns, textures and layouts will be provided to provide a sense of scale and rhythm appropriate to the surrounding and proposed buildings. Public pedestrian sidewalks will be meandering as has been recommended by the DPP.

- e. Signage

At this time, the applicant has not developed a signage plan and will process signage permits in the future as permitted by the LUO.

- f. Lighting

Lighting will be utilized to contribute to public safety and to enhance the night time ambiance of the outdoor recreational and open space areas on the property. Outdoor lighting will be subdued or shielded so as not to provide spillage onto surrounding properties or public rights-of-way.

3. Urban Design Controls

a. Waikiki Gateways

The closest of the five Waikiki Gateways is the intersection of Kalākaua Avenue and Ala Moana Boulevard. This Gateway provides an important view looking east along both Kūhiō and Kalākaua Avenues. The applicant feels that this is an important public view that provides visitors to these islands a pleasant view, looking into Waikīkī. Through photographic simulation (**Appendix VI**), the applicant has provided a visual analysis of the mauka/makai building orientation versus an east/west building orientation. The view from this Waikiki Gateway as well as the view as you travel into Waikīkī from this Gateway is greatly enhanced by the east/west building orientation. Similarly the public view as you walk or drive along either of the two major thoroughfares (Kūhiō Avenue and Kalākaua Avenue) through Waikīkī is greatly enhanced by an ewa/diamond head orientation, maintaining a slender view of the building.

b. Fort DeRussy

The existing 2100 Kalakaua development which is diagonally across Kalākaua Avenue from Fort DeRussy provides a landscaped open space and plaza area which faces Fort DeRussy and tends to extend the openness on the opposite side of the street.

The Building Orientation – Photographic Analysis shows that the proposed ewa/diamond head building orientation at the open space at Fort DeRussy has a greater impact on this view.

c. Major Streets

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalākaua Avenue and from Kūhiō Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian access ways into and through Waikīkī. This ewa/diamond head orientation is also sensitive to protection of public views from the Gateway to Waikīkī located at Kalākaua Avenue and Ala Moana Boulevard. A volume study (**Appendix VI Building Orientation – Photographic Analysis in the Final EA**) on photographs of views from these locations has been prepared comparing the impacts from two building designs (enclosed), one with a mauka/makai building orientation and one with the proposed ewa/diamond head building orientation. The ewa/diamond head building orientation has significantly less visual impact along these important public view corridors

except for one view at the corner of Kalākaua Avenue and Kālaimoku Street and two views looking ewa along Kūhiō Avenue. The structure has a narrower face with the ewa/diamond head orientation than with a mauka/makai orientation in all but three of the viewpoints along Kalākaua Avenue and Kūhiō Avenue. The view from the Gateway to Waikiki at Kalākaua Avenue and Ala Moana Boulevard is also less impacted with the ewa/diamond head building orientation.

The Project will provide landscaped public open space and possibly a water feature in a large plaza area along Kūhiō Avenue. There will also be a gathering place open to the public at the corner of Kūhiō Avenue and Kālaimoku Street.

d. Waikiki Promenade

The Project site is not in close proximity to the Waikiki Promenade.

e. Coastal Height Setback

The Project is not situated along the shoreline and is not subject to the coastal height setback.

f. Mini Parks

The applicant plans to provide a gathering place open to the public at the corner of Kūhiō Avenue and Kālaimoku Street with appropriate street furniture to encourage the public to enjoy the open space provided by the applicant.

g. Significant Public Views

“...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.

h. Public Pedestrian Access

The Project site is easily accessible to pedestrians via the existing sidewalks which front the property. The applicant also plans a significant amount of lushly landscaped public open space in a wide plaza fronting on Kūhiō Avenue.

i. Historic Structures, Significant Sites and Landmarks

The Project site is vacant and development will not affect historic properties or buildings. The Project will not affect significant sites or landmarks.

F. SPECIAL MANAGEMENT AREA

The Project site is not within the Special Management Area.

G. OTHER PERMITS AND APPROVALS

The Project is anticipated to require a FONSI for the Final Environmental Assessment. The following is a preliminary list of permits, approvals and reviews that are required prior to construction of the proposed project. The following is not an exhaustive list:

City and County of Honolulu

- Waikiki Special District Permit, Major
- Surface Encroachment Variance
- Subdivision for Pedestrian Easement
- Construction Dewatering Permit
- Building Permits
- Trenching Permit
- Grading Permit
- Drain Connection
- Sewer Connection
- Street Usage
- Construction Plan Approval

State of Hawaii

- National Pollutant Discharge Elimination Permit
- Construction Noise Permit

XI. CULTURAL IMPACT ASSESSMENT

Scientific Consultant Services, Inc. (SCS) has completed "A Cultural Impact Assessment on Three Land Parcels Located in Waikī Ahupua'a" for the Project, provided in its entirety in **Appendix VII**.

The SCS cultural impact assessment is summarized as follows:

“The project area has not been used for traditional cultural purposes within recent times. The parcels were originally part of a lagoon/fish pond environment that shifted to banana cultivation and then commercial use in the 1940s. Based on historical research and response from those organizations contacted, it is reasonable to conclude that Hawaiian rights related to gathering, access or other customary activities within the project area will not be affected and there will be no adverse effect upon cultural practices or beliefs. Because there were no activities identified on Parcels 10, 42, and 52 there are no adverse effects.”

XII. IMPACTS AND PROPOSED MITIGATION MEASURES

A. PUBLIC SERVICES

1. Access and Transportation

Kālainmoku Street, a one-way north bound roadway, will serve as the primary access to the Project site. Kūhiō Avenue, an east-west oriented roadway, will serve as the secondary access way for loading service to the Project site. Kalākaua Avenue and Ala Wai Boulevard are both one-way roadways that run parallel to Kūhiō Avenue and collectively form a couplet system providing access routes throughout Waikīkī. It is anticipated that the existing porte-cochere drop-off area located along Kālainmoku Street and straddling both the 2100 Kalakaua and 2121 Kuhio parcels would remain as is or be modified and that the 2121 Kuhio hotel entrance and parking structure would have access from the porte-cochere driveway within the 2121 Kuhio parcel.

The proposed expansion may involve some short term construction disruption of traffic for transportation of construction equipment to and from the site and delivery of building materials to the site. The delays are normally of short duration and will end when the construction is completed.

Wilson Okamoto Corporation, has prepared a “Traffic Impact Report for the Proposed K3 Waikiki Development” and dated March 2012 and Revised September 2012 and October 2012. Please refer to **Appendix III** - Traffic Impact Report.

The Traffic Impact Report Sections VI. Recommendations and VII. Conclusion states as follows:

"VI. RECOMMENDATIONS

The following are the recommendations of this study associated with the project implementation based on the analysis of the traffic data:

1. Provide sufficient turning radii at all project driveways to avoid or minimize vehicle encroachments to oncoming traffic lanes.

2. Provide adequate turn-around area for service, delivery, and refuse collection vehicles to maneuver on the project site to avoid vehicle-reversing maneuvers onto adjacent roadways.
3. Maintain sufficient sight distance for motorists to safely enter and exit all project driveways
4. Provide adequate on-site loading and off-loading service areas and prohibit off-site loading operations.
5. Eliminate or relocate the existing drop-off area along Kalaimoku Street to ensure that buses or trolleys do not block the primary access for the proposed project thereby resulting in vehicular queuing onto the adjacent roadway. If the existing area is relocated on-site, ensure that adequate staging and loading areas are provided to ensure that vehicular queues do not extend onto the adjacent roadway.
6. Restrict turning movements at the secondary access driveway along Kuhio Avenue to right-turn-in and right-turn-out movements only to minimize conflicts with through traffic along Kuhio Avenue.
7. Prepare a Construction Traffic Management Plan to minimize the impact of construction traffic and activities on the surrounding roadway network."

"VII. CONCLUSION

The K3 Waikiki development includes approximately 469 condo-hotel units with a restaurant and parking garage. With the implementation of the proposed recommendations including the elimination or relocation of the existing drop-off area adjacent to the project site, staging and loading areas within and near the project site, traffic operations in the vicinity are anticipated to continue operating at levels of service similar to without project conditions. As such, the K3 Waikiki development is not anticipated to have a significant impact on traffic operations in the project vicinity."

The applicant will implement these recommendations to minimize the traffic impact of the Project. The existing trolley stop will be relocated as shown on the Ground Floor Plan in **Appendix I**. The trolley stop will be relocated to a pull out space off the proposed access drive near the entrance from Kālainoku Street to minimize impact to the access drive. The pull out space will allow the trolley to keep the entry drive clear. The 20-foot width of the entry drive will allow the 2100 Kalakaua valet parking operation to continue, while keeping about 12 feet of the entry drive clear for through traffic. The applicant understands that the 2100 Kalakaua valet averages about 5 to 10 vehicles per day (10:00 am to 10:00 pm), even on weekends. With this minimal activity the valet operation should not adversely affect the entry drive. The

adjacent sidewalk area will be about 14 to 18 feet wide (fronting the trolley stop) which provides for an 8-foot wide sidewalk similar to that provided on Kūhiō Avenue at the present time and an additional 6 to 10 feet for a staging area for loading and unloading of passengers for the trolley that presently stops on the property. This width will comfortably accommodate pedestrians and trolley passengers.

The Project's loading space off of Lau'ula Street will be designed to allow adequate room to maneuver on site so loading vehicles may enter and exit front first. Loading maneuvering diagrams are provided in **Appendix VIII**.

There are two convenient bus stops on the makai and mauka side of Kūhiō Avenue that provides service to the Project Site. On the makai side of Kūhiō Avenue the existing bus stop is located at the mauka/diamond head corner of the Project Site. On the mauka side of Kūhiō Avenue the bus stop is located just diamond head of Launiu Street.

Bus service is provided by TheBus through the following routes, more information can be found at "www.thebus.org":

- Route 2: with service from School-Middle Street to Waikiki-Kapiolani Community College
- Route 8: with service from Ala Moana Center to Waikiki Beach & Hotels
- Route 13: with service from Liliha - Puunui Ave Waikiki - UH Manoa
- Route 19: with service from Airport-Hickam and Downtown-Aala Park to Waikiki Beach & Hotels and Alapai Transit Center
- Route 20: with service from Airport-Pearlridge to Waikiki Beach & Hotels and Alapai Transit Center
- Route 22: with service from Waikiki Beach & Hotels to Diamond Head/Kahala, Hawaii Kai, and Hanauma Bay - Sea Life Park
- Route 23: with service from Waikiki-Beach & Hotels to Hawaii Kai-Sea Life Park, Hawaii Kai-Kalama Valley, Aina Haina and Kahala Mall
- Route 42: with service from Ewa Beach to Waikiki Beach & Hotels /Waipahu Transit Center/ Pearlridge

Paratransit service is provided by the Handi-Van, a public transit service for persons with disabilities who are unable to use the City's bus service, TheBus. TheHandi-Van service is generally available islandwide, Mondays through Sundays from about 4:00 am through 1:00 am. All-day service (24 hours per day) is available in areas located within $\frac{3}{4}$ mile of TheBus Routes 2 and 40. TheHandi-Van fare is \$2.00 per one-way passenger trip. Advanced reservations are required. Passengers are picked up at the nearest and safest point next to the curbside of the public street address requested. They are dropped off at the nearest and safest point next to the curbside of the requested destination address.

2. Water

Existing

The Project site is serviced by the municipal system of the Board of Water Supply (BWS). The BWS system in the vicinity of the Project consists of a looped 16-inch and 8-inch water main located within the adjacent Kūhiō Avenue and Kalākaua Avenue, respectively. Existing water service to the Project site is provided by water lateral connections to the 16-inch water main located in Kūhiō Avenue. The water meters servicing the Project site consist of two 3/4-inch water meter servicing parcel 52 and one 1-1/2-inch meter servicing parcel 42.

Proposed

The Project will likely require a new water lateral connection to the existing 16-inch water main located in Kūhiō Avenue. Based on other similar projects of this size, it is likely that the water flow demand of the Project will qualify for the FM type meter, which would serve both domestic and fire protection service to the Project. The actual meter size and type will need to be confirmed in coordination with the Project Mechanical Engineer during the design phase of the Project. By utilizing the FM type meter, the Project would be required to make only one lateral connection to the existing 16-inch water main for both services rather than two separate water lateral connections for separate domestic and fire protection water service. Other improvements include a new reduced pressure flow preventer.

Mitigation Measures

In a letter dated November 16, 2011, BWS determined that the existing water system is adequate to handle either of two options presented at the time, Option A for 384 hotel condo suites and hotel residences, commercial, restaurant and office space or Option B for 526 hotel condo suites and hotel residences, commercial, restaurant and office space. BWS noted that, when water is made available the applicant will be required to pay the Water System Facilities Charge ("WSFC") for resource development, transmission and daily storage and that on-site fire protection requirements should be coordinated with the Fire Prevention Bureau of the Honolulu Fire Department. The applicant will pay applicable WSFC and will coordinate on-site fire protection requirements with the Fire Prevention Bureau of the Honolulu Fire Department.

3. Wastewater

Existing

The City's off-site sanitary sewer collection system servicing the Project consists of an older 16-inch sewer main and a newer 20-inch sewer main located in Kūhiō Avenue. These sewer mains convey sewage flow in the Diamond Head direction to

the Beachwalk Wastewater Pump Station ("WWPS") located between Kaiolu Street extension and Lewers Street. Sewage flows from the Beachwalk WWPS are transported to the Sand Island Wastewater Treatment Plant for processing.

Proposed

The projected sewer flows from the proposed 459-unit condo hotel development and supporting uses is estimated at 105,941 gpd. The projected sewer flows from the Project will be discharged through a new sewer lateral to the existing 20-inch sewer main in Kūhiō Avenue.

Mitigation Measures

DPP approved a Sewer Connection Application, on January 17, 2012, for the 459-unit condo hotel development conditioned upon the connection to the 20-inch sewer line in Kūhiō Avenue at the owner's expense and construction plans being submitted for review and approval. The estimated Wastewater System Facility Charge is \$1,853.062.90.

Although not part of this Project, the Hilton Hawaiian Village is in the process of upgrading the nearby Fort DeRussy WWPS and eliminating an overflow connection that was installed near the WWPS to divert flow to the Beachwalk WWPS. The overflow connection was needed at the time to free up capacity for the Waikikian timeshare development. The elimination of the overflow will reduce the flow in the existing 20-inch sewer main in Kūhiō Avenue and to the Beachwalk WWPS.

4. Drainage

Existing

Drainage flows from the open landscaped area is minimal.

Proposed

During the design phase of the Project, a Storm Drainage Report will be required to confirm the pre and post storm drainage flows generated by the site including a detailed breakdown of the distribution of the flows to the City's system. The Project will connect to the City's municipal drainage system in Kūhiō Avenue.

Mitigation Measures

The proposed storm drainage flow pattern will be directed toward landscape areas and the water feature to reduce storm water flow to the City's off-site drainage system.

Prior to connection to the City's system, the on-site storm water will be filtered, per the DPP, Rules Relating to Storm Drainage Standards, Storm Water Quality Section,

dated January 2000. A Drain Connection License will be required by DPP for new drain connections required for the Project. The Project will meet the new design criteria of the Rules Related to Storm Drainage Standards.

5. Solid Waste Disposal

Existing

The City Department of Environmental Services 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.

Proposed

The Project will contract its waste management with a private disposal service.

Mitigation Measures

The Project will operate a recycling program targeting bottles, cans, cardboard, and paper.

The City is currently updating its Integrated Solid Waste Management Plan and identifies options for the future of solid waste management. Alternatives being considered include promoting the reduction of waste generation through public outreach, expanding municipal collection of municipal recyclable and green wastes, subsidizing recycling programs for condominiums, expanding the Waimānalo Gulch Landfill, developing a new landfill, expanding the H-POWER plant capacity, and trans-shipping wastes to the mainland.

6. Public Schools

Since no dwelling units are proposed, the Project will not affect the student population in the area.

7. Parks

As indicated in the plans provided in **Appendix I**, recreational amenities will be provided on the sixth floor level of the Project with a proposed swimming pool, Jacuzzi, deck and exercise room.

Recreational activities are also available at Fort DeRussy and at the beach fronting Fort DeRussy Beach Park.

There are a variety of other recreational opportunities located in Waikīkī, including Waikiki Beach, the Ala Wai Golf Course, Kapiolani Park and the Honolulu Zoo. These facilities could provide additional recreational opportunities for the resort hotel guests.

8. Police

The Police Department's Alapai Headquarters is located approximately 2.5 miles away at the intersection of Alapai Street and Beretania Street. The Waikiki Substation is located approximately a mile away on Kalākaua Avenue and residents and visitors can expect a quick response time.

9. Fire

The Pawa Fire Station (Station 2) is located approximately 1 mile away on Makaloa Street. The Waikiki Fire Station (Station 7) is located approximately 1.2 miles away on Kapahulu Avenue.

10. Utilities

a. Electric

The Hawaiian Electric Company has existing power lines serving this area and the applicant will coordinate development of 2121 Kuhio to ensure that the power lines will be adequate to support the proposed condo hotel development.

The applicant is exploring a variety of energy saving measures and plans to incorporate some of them into the Project. The applicant is also exploring the possibility of incorporating LEED standards and strategies, to the extent economically feasible. LEED is a certification program and nationally accepted benchmarks for design, construction and operation of high performance green buildings

b. Telephone

Verizon formally GTE Hawaiian Telephone Company has existing utility service lines in the area. It is expected that these existing lines will be used to service this

Project. The applicant will coordinate with Verizon to determine if new lines will be required. No off-site work is expected.

c. Cable/Satellite Television and High-speed Internet Access

Cable/Satellite television and high-speed internet access service is currently provided to surrounding hotels and condominiums. It is anticipated that these services will be able to accommodate the Project.

B. ENVIRONMENTAL IMPACTS

1. Historical and Archaeological Resources

As mentioned in Section IX.D. Historical and Archaeological Resources of this FEA, in April 2000 "An Archaeological Inventory Survey of King Kalakaua Plaza Phase II, Waikīkī ahupua'a, Kona District, Island of O'ahu, Hawai'i" ("AIS") was prepared by Cultural Surveys Hawaii for the Project site. This AIS was accepted as a final report by the State Historic Preservation Division (SHPD), by letter dated July 18, 2000. The AIS and SHPD's acceptance letter is included in **Appendix II**. The AIS Section VIII. Recommendations are provided in Section IX.D.

2. Cultural Impact Assessment

As mentioned in Section X Cultural Impact Assessment of this FEA, Scientific Consultant Services, Inc. (SCS) has completed a Cultural Impact Assessment for the Project, provided in its entirety in **Appendix VII**. A summary of the Cultural Impact Assessment is provided in Section X.

3. Air Quality

B.D. Neal and Associates completed in March of 2012 an "Air Quality Study for the Proposed K3 Waikiki Development" for the Project, provided in its entirety in **Appendix IX**.

"Section 8.0 Conclusions and Recommendations" of this study, stated 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."

The applicant will follow these recommendations.

4. Noise

Y. Ebisu and Associates completed in March of 2012 an "Acoustic Study for the 2121 Kuhio Project", provided in its entirety in **Appendix X**.

"Chapter VII. Discussion of Project-Related Noise Impacts and Possible Mitigation Measures" of the study is summarized as follows:

Noise impacts from Project related traffic along the surrounding roadways are not expected since traffic noise increases associated with the Project traffic are not significant. Potential impacts from tire squeal within the Project parking structure should be minimized through the use of coarse finishes for the circulation driveway surfaces within the parking structure.

Mitigation of noise impacts due to construction should include the use of properly muffled construction equipment on the job site and incorporation of State Department of Health construction noise limits and curfew times.

The applicant will comply with the mitigation measures recommended.

5. Shadow Study

A Shadow Study has been completed and is included in Appendix XIII.

Based on our shadow study, the Project with an ewa/diamond head orientation during the Equinox will partially shade the Four Paddle barbecue deck area from about 2:00

pm and fully shade the barbecue deck and pool area by 3:00 pm. During the Winter Solstice the Project will partially shade the barbecue deck area from about 3:00 pm and begin to shade a small portion of the pool area from about 4:00 pm. The Four Paddle pool and deck area will not be affected during the Summer Solstice.

This ewa/diamond head orientation affects the block between Kālainoku Street and Launiu Street during the Winter Solstice. The Project will partially shade this area from 12:00 pm and moves across this area fully shading the Kūhiō frontage at about 1:00 pm and partially shading it at 2:00 pm with less shading at 4:00 pm with the shadow clearing the property just after 4:00 pm. This block is not affected during the Equinox and the Summer Solstice.

The Project with an ewa/diamond head orientation will shade a small portion of the northern corner of Ft. DeRussy from before 8:00 am to 9:00 am during the Summer Solstice. These early morning shadows should have minimal impact on Ft. DeRussy and the growth and development of the trees at Ft. DeRussy. Ft. DeRussy is not affected during the Equinox and Winter Solstice.

The mauka/makai orientation during the Equinox will shade the barbecue deck area from about 2:00 pm and will cover most of the barbecue deck and a small portion of the pool area from 3:00 pm, covering most of the barbecue deck and pool area from about 4:00 pm. During the Winter Solstice the Project will shade a small portion of the barbecue area from 4:00 pm. During the Summer Solstice, this orientation will not affect the pool and deck area.

The mauka/makai orientation does not affect the block between Kālainoku Street and Launiu Street during the Summer Solstice and the Equinox. During the Winter Solstice, the Project will shade portions of this block from 12:00 pm until 3:00 pm.

The mauka/makai orientation during the Summer Solstice, similar to the ewa/diamond head orientation will shade a small portion of the northern corner of Ft. DeRussy from before about 8:00 am to 9:00 am. These early morning shadows should have minimal impact on Ft. DeRussy and the growth and development of the trees at Ft. DeRussy. Ft. DeRussy is not affected during the Equinox and Winter Solstice.

6. Impact to Private Views

Impact to Private Views are included in Appendix IV, shows the impact to the views from the Four Paddle (2140 Kūhiō Avenue) and 2121 Ala Wai Boulevard condominiums. The appendix includes a Building Height plan view and cross section that shows the relationship between the Project and Four Paddle (2140 Kūhiō Avenue) and 2121 Ala Wai Boulevard. Direct makai views from the ewa side of Four Paddle will be blocked. Since the Draft EA, three floors have been added within the 350-foot height of the building to reduce the width of the building by about 48 feet, reducing impacts to private views from the Four Paddle. The width (length) of

the building has been reduced by the Applicant based on concerns raised in the Draft EA.

The lower direct makai views for 2121 Ala Wai Boulevard are presently blocked by Four Paddle, however, views between 233 feet and 350 feet will be blocked by the Project.

In Honolulu, public views are sometimes protected but private views are not. Every property owner has certain property rights to develop their property, in accordance with the City's Land Use Ordinance. In many instances development of neighboring properties will impact the view of others.

XIII. ALTERNATIVES CONSIDERED

As mentioned throughout this report the Project is not anticipated to have a significant impact on the surrounding area in terms of public services and the environment.

Positive socio-economic impacts are projected with the development of a hotel complex, with increases in short term construction employment and long term employment in resort services.

A. NO ACTION

This alternative was considered and rejected as the applicant recently purchased this property and will need to develop it to provide a return on investment. The "no action" alternative is not an economically viable alternative.

B. DEVELOPMENT OF CONDOMINIUM UNITS

The applicant considered a development with luxury condominium units as was considered by the previous owner in the earlier FEA. Although the current market does not support the luxury condominium market at this time, at the time of completion this may be a potential market. The applicant in considering this use felt that it would be speculative on the luxury condominium market returning and the risk and carrying cost of this property should this market not return in a timely manner is not an acceptable risk.

C. CONDO HOTEL DEVELOPMENT – EWA/DIAMOND HEAD ORIENTATION

One of the applicant's principals has past experience with a condo hotel and is comfortable with this market, having been involved with the Trump Tower Waikiki located two blocks away on Saratoga Street. Another consideration in pursuing the condo hotel was the significant reduction in hotel units in Waikīkī since 2003 and the potential loss of additional hotel units, based on proposed redevelopment projects in Waikīkī.

As discussed earlier, there is a need for additional hotel product in Waikīkī. Since 2003, there has been a significant reduction in hotel units, including the Ohana Hobron conversion

of 596 hotel rooms to a 181-unit condominium (Windsor) and the net loss of 1,300 hotel rooms at the Waikiki Beach Walk redevelopment, totaling 1,896 hotel units. In addition, the proposed Princess Kaiulani/Diamond Head Tower redevelopment will result in the net loss of 430 hotel units and the International Market Place will result in the loss of an additional 358 hotel units at the Miramar Waikiki hotel. The total hotel units lost and to be lost will be 2,684 units.

The improvements in the Project are geared toward achieving the intent of the WSD. The new public open space at this corner lot will create an area for gathering and an important amenity for visitors and surrounding residents.

The proposed building orientation and design was developed to implement Waikiki Special Design District (WSDD) Guidelines.

The WSDD Guidelines section that includes “Orientation and Form” and establishes the guideline for the mauka/makai orientation is 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 following 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” 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 large public open space plaza

at the ground level to further experience the tropical climate. Also at the ground level the public open space plaza and the open lobby relates well to the human scale.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalākaua Avenue and from Kūhiō Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian access ways into and through Waikīkī. This ewa/diamond head orientation is also sensitive to protection of public views from the Gateway to Waikiki located at Kalākaua Avenue and Ala Moana Boulevard. A volume study (**Appendix VI** Building Orientation – Photographic Analysis in the Final EA) on photographs of views from these locations has been prepared comparing the impacts from two building designs (enclosed), one with a mauka/makai building orientation and one with the proposed ewa/diamond head building orientation. The ewa/diamond head building orientation has significantly less visual impact along these important public view corridors except for one view at the corner of Kalākaua Avenue and Kālainmoku Street and two views looking ewa along Kūhiō Avenue. The structure has a narrower face with the ewa/diamond head orientation than with a mauka/makai orientation in all but three of the viewpoints along Kalākaua Avenue and Kūhiō Avenue. The view from the Gateway to Waikiki at Kalākaua Avenue and Ala Moana Boulevard is also less impacted with the ewa/diamond head building orientation.

A view from the open space at Fort DeRussy shows that the visual impact is greater with the proposed ewa/diamond head orientation.

At the request of the Department of Planning and Permitting (DPP) the Building Orientation – Photographic Analysis also shows views from Kālainmoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as significant public views mauka views at certain other streets located mauka of Kūhiō Avenue.

The ewa/diamond head orientation has also allowed us to provide the widest possible uninterrupted public open space along Kūhiō Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kūhiō Avenue as possible and would have been significantly wider to accommodate a similar amount of floor area and not located above and within the proposed parking podium.

The concept of “building forms which produce narrow towers are preferred” is supported by the Project as well. The additional height allows the applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kūhiō Avenue with limited open space relief provided by existing and proposed developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

D. CONDO HOTEL DEVELOPMENT – MAUKA/MAKAI ORIENTATION

A mauka/makai building orientation was considered, but based on the Waikiki Special District Guidelines and Building Orientation – Photographic Analysis in **Appendix VI** of this Final EA the ewa/diamond head orientation was selected.

As discussed in the previous section, the Waikiki Special District Design Guidelines section that includes “Orientation and Form” are intended to promote a design that responds to climate, relates to human scale and preserves **significant public views** (emphasis added).

The Project under this alternative would not affect any of the significant public views described in the previous section and in Section 21-9.80-3(a) of the Land Use Ordinance.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

A mauka/makai building orientation would not be sensitive to the need to protect public views from Kalākaua Avenue and from Kūhiō Avenue. A mauka/makai orientation would have a greater impact on public views along these two major vehicular and pedestrian access ways into and through Waikīkī. The mauka/makai building orientation would also have greater impact on public views than an ewa/diamond head orientation from the Gateway to Waikiki located at Kalākaua Avenue and Ala Moana Boulevard. A volume study (**Appendix VI** Building Orientation – Photographic Analysis in the Final EA) on photographs of views from these locations has been prepared comparing the impacts from two building designs, one with a mauka/makai building orientation and one with an ewa/diamond head building orientation. The mauka/makai building orientation has a significantly greater visual impact along these important public view corridors except for one view at the corner of Kalākaua Avenue and Kālamoku Street and two views looking ewa along Kūhiō Avenue. The structure has a wider face with the mauka/makai orientation than with an ewa/diamond head orientation in all but three of the viewpoints along Kalākaua Avenue and Kūhiō Avenue.

The view from the Gateway to Waikiki at Kalākaua Avenue and Ala Moana Boulevard is also more impacted with the mauka/makai building orientation.

A view from the open space at Fort DeRussy shows that the visual impact is greater with the proposed ewa/diamond head orientation.

At the request of the Department of Planning and Permitting (DPP) the Building Orientation – Photographic Analysis also shows views from Kālaimoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as significant public views mauka views at certain other streets located mauka of Kūhiō Avenue.

The mauka/makai orientation would not allow us to provide the widest possible uninterrupted public open space along Kūhiō Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kūhiō Avenue as possible and would have required been significantly wider to accommodate a similar amount of floor area.

XIV. CUMULATIVE IMPACTS

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

A. GRAY'S BEACH RESTORATION PROJECT

According to the Environmental Assessment/Environmental Impact Statement Preparation Notice for the "Gray's Beach Restoration Project", filed in August 2008, Kyo-ya Hotels & Resorts is proposing to restore and stabilize a sandy beach fronting the Sheraton Waikiki Hotel property. 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 IV: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. The Gray's Beach Restoration Project has been put on hold, but that permitting for this development could begin again in 2012.

In the event the construction period for the Gray's Beach Restoration Project overlaps with the construction period for the Project, the cumulative impacts from construction activities are expected to be minimal given the scope of the Gray's Beach Restoration Project.

Long term impacts from beach restoration action are not anticipated to result in any cumulative negative impacts with the Project. If anything, it will improve beach recreational activity available for the public and tourists in Waikīkī.

B. PRINCESS KA'IULANI RENOVATION & DEVELOPMENT AND THE REPLACEMENT OF THE MOANA SURFRIDER HOTEL DIAMOND HEAD TOWER WITH A NEW TOWER

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

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

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

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

In the event the construction periods for the Princess Ka'iulani and Diamond Head Tower Redevelopment Projects overlap with the construction period for the Project, the applicant 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 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 the 2121 Kuhio Project, both projects are anticipated to result in minimal impact on the existing level of service of the intersections surrounding these projects. In addition there will be a net reduction in wastewater and water demand at full buildout of for the Kyo-ya Project and an increase in demand for the 2121 Kuhio Project, however based on agency comments, both utilities are adequate to support the 2121 Kuhio Project. 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.

C. 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 0.3 mile from the Project Site; separated by Fort DeRussy. The first timeshare tower is planned to be under construction at roughly the same time as the construction of the Project and there is expected to be an overlap in construction periods; the applicant will communicate with Hilton Hawaiian Village with the goal of minimizing disruption to surrounding streets during the overlapping 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.

Hilton's planned timeshare (should qualify as condo hotel units, with amenities provided) development with 300 units by 2015 and another 250 units by 2021, is anticipated to help to offset the loss of 1,896 existing hotel units and loss of 788 hotel units in the future.

D. 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 should be completed by the year 2013.

This proposed development is located at the far west end of Waikīkī about 0.7 mile from the Project Site. Construction at this site will not result in cumulative construction impacts with the Project. In addition, this project is scheduled for completion (2013) around the time construction is anticipated to begin at the Project Site.

Long term impacts from the Waikiki Landing will result in cumulative impacts to infrastructure and traffic in relation to the impacts of the 2121 Kuhio Project. 2121 Kuhio 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.

E. WAIKIKI BEACH MAINTENANCE

The Waikiki Beach Maintenance project site is located on Waikīkī Beach, along the shoreline of Mamala Bay on the south shore of O'ahu, Hawai'i. The shoreline proposed for

beach maintenance extends approximately 1,700 linear feet from the west end of the Kūhiō Beach crib walls to the existing groin between the Royal Hawaiian and Sheraton Waikiki hotels. Since 1985 the shoreline has been chronically eroding and receding. The purpose of the project by the Department of Land and Natural Resources is to restore and enhance the recreational and aesthetic benefits provided by the beach, as well as maintaining lateral access along the shore. The proposed project will include the following primary components:

- The recovery of up to 24,000 cubic yards of sand from deposits located 1,500 to 3,000 feet offshore in a water depth of about 10 to 20 feet.
- Pumping the sand to an onshore dewatering site to be located in an enclosed basin within the east Kūhiō Beach crib wall.
- Transport of the sand along the shore and placement to the design beach profile.
- The removal of two old deteriorated concrete sandbag groin structures located at the east end of the project area.

The project will consist of an initial nourishment of up to 24,000 cubic yards of sand. The average beach width is anticipated to be increased by 37 feet. A second nourishment of up to 12,000 cubic yards would be accomplished after 7-10 years to further maintain the beach. The two nourishments would maintain the beach for an estimated 20 years.

Although originally planned for completion by Spring 2011, under the revised schedule, the project began in January, 2012 and is expected to be completed by May, 2012. This schedule ensures that this project will not be occurring during the construction period of the Project and there should be no cumulative construction impacts.

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 a major way.

F. INTERNATIONAL MARKET PLACE REVITALIZATION PROJECT

According to the Environmental Impact Statement Preparation Notice for the “International Market Place Revitalization Project” (IMP Project), will be developed on a 5.982 acre site in the center of Waikīkī by TRG IMP LLC and will involve the existing developments commonly known as the International Market Place, the Waikiki Town Center and the Miramar at Waikiki hotel.

The IMP 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 on the ʻEwa side and three levels on the Diamond Head side below five levels of parking (which generally replace the existing parking structures serving the IMP, Town Center and Miramar on the mauka side of the site).

The IMP Project involves the removal of approximately 213,000 square feet (gross floor area) of existing commercial space at IMP and the Town Center sites and approximately 286,000 square feet (gross floor area) of existing space at the Miramar site. With a proposed redevelopment of 390,000 square feet (gross floor area) of new commercial space across the entire site, the IMP Project will result in a net reduction of approximately 109,000 square feet (gross floor area).

XV. GOVERNMENT PERMITS AND APPROVALS REQUIRED

The Project is anticipated to require a FONSI for the Final Environmental Assessment. The following is a preliminary list of permits, approvals and reviews that are required prior to construction of the proposed project. The following is not an exhaustive list:

City and County of Honolulu

- Waikiki Special District Permit, Major
- Surface Encroachment Variance
- Subdivision for Pedestrian Easement
- Construction Dewatering Permit
- Building Permits
- Trenching Permit
- Grading Permit
- Drain Connection
- Sewer Connection
- Street Usage
- Construction Plan Approval

State of Hawaii

- National Pollutant Discharge Elimination Permit
- Construction Noise Permit

XVI. COMMENTS (PRE-DEA)

The applicant received written comments from the Board of Water Supply, DPP and the DPP Wastewater Branch, included in **Appendix XI**.

In a letter dated November 16, 2011, BWS determined that the existing water system is adequate to handle either of two options presented at the time, Option A for 384 hotel condo suites and hotel residences, commercial, restaurant and office space or Option B for 526 hotel condo suites and hotel residences, commercial, restaurant and office space. BWS noted that, when water is made available the applicant will be required to pay the Water System Facilities Charge ("WSFC") for resource development, transmission and daily storage and that on-site fire protection requirements should be coordinated with the Fire Prevention Bureau of the Honolulu Fire Department. The applicant will pay applicable WSFC and will coordinate on-site fire protection requirements with the Fire Prevention Bureau of the Honolulu Fire Department.

In a letter dated May 10, 2012 DPP presented recommendations for amending/revising the preliminary DEA. The applicant has provided the recommended revisions to the DEA. This letter and our response is included in **Appendix XI**.

DPP approved a Sewer Connection Application, on January 17, 2012, for the 459-unit condo hotel development conditioned upon the connection to the 20-inch sewer line in Kūhiō Avenue at the owner's expense and construction plans being submitted for review and approval. The estimated Wastewater System Facility Charge is \$1,853,062.90.

The applicant and his Project team met with Waikiki Neighborhood Board Chair, Mr. Bob Finley and Zoning Committee Chair, Mr. Jeff Merz on February 13, 2012. The Project was described to Mr. Finley and Mr. Merz and conceptual plans were presented. Mr. Finley and Mr. Merz noted that they looked forward to our presentation before the full Neighborhood Board, now scheduled for May 8, 2012. Mr. Finley noted that under the previous proposal for the site, the neighbors were concerned about the impact of the Project on their views. Mr. Merz indicated that he hoped that the project would accommodate bicycle riders and looked forward to our plans for addressing the application of LEED standards and strategies.

The applicant and his Project team met with the Director of DPP and/or his staff from the Urban Design Branch on several occasions, including October 25, 2011 and February 14, 2012. The Project was described and conceptual plans were presented. The permitting process was discussed and DPP reminded the applicant that WSD development standards and guidelines must be addressed.

XVII. AERIAL PHOTO

An aerial photo dated September 28, 2008 is provided in **Appendix XII**.

XVIII. FINDINGS SUPPORTING ANTICIPATED DETERMINATION

A. ANTICIPATED DETERMINATION

Upon review of the significance criteria outlined in Chapter 343, HRS, and Section 11-200, State Administrative Rules, Contents of EA, the proposed action has been determined to not result in significant adverse effects on the natural or human environment. A Finding of No Significant Impact (FONSI) is anticipated.

B. FINDING AND REASONS SUPPORTING THE AGENCY DETERMINATION

The potential impacts of the proposed development at 2121 Kuhio have been examined in this FEA. There are no significant environmental impacts expected as a result of the proposed action. This determination is based on the criteria listed below.

1. *Involve an irrevocable loss or destruction of any natural or cultural resource.*

The property is currently vacant and fenced off in anticipation of future development. An archaeological inventory survey was submitted and accepted as final by the State Historic Preservation Division at the Department of Land and Natural Resources with a determination that no further archaeological work is required. In addition a cultural impact assessment has been completed and found that there will be no adverse effect upon cultural practices or beliefs.

2. *Curtail the range of beneficial uses of the environment.*

The proposed development at 2121 Kuhio will not curtail the range of beneficial uses of the environment. The property presently sits vacant and does not provide any beneficial use to the owners or the public. The proposed 2121 Kuhio development will provide much need hotel room inventory in Waikīkī, with 2,684 hotel units lost or to be lost in Waikīkī since 2003.

The Project will, through provision of public open space, provide a tropical landscaped plaza area along Kūhiō Avenue that will provide relief from the built environment.

The Project will also provide an increase in tax revenues for both the City and State.

The Project during its sales phase, selling individual condo hotel units to investors will result in over \$300 million in on-site sales generating about \$2 million in conveyance tax revenues for the State.

The Project upon completion will generate about \$4.5 million per year in annual property tax revenue for the City.

The Project during its first full calendar year and annually thereafter is expected to generate income of \$20 to \$30 million in on-site sales resulting in GET (general excise tax revenue) of \$0.8 to \$1.2 million per year for the State (4%) and between \$100,000 to \$150,000 per year for the City (0.5%). The Project will also generate transient accommodations taxes (9.25%) totaling \$1.9 to \$2.775 million for the State, a portion of which may be shared with the City.

3. *Conflict with the State's long-term environmental policies or goals and guidelines as expressed in Chapter 344, HRS, and any revisions thereof and amendments thereto, court decisions, or executive orders.*

The proposed development does not conflict with the State's long-term environmental policies or goals as expressed in Chapter 344, HRS. It

represents a productive use of this property provide a beneficial use to the public as noted in the previous section, with minimal impact to the environment.

The proposed development will conform to the State's environmental policy by creating opportunities for the residents of Hawaii to improve their quality of life through diverse economic activities which are stable and in balance with the physical and social environments and establish a development which provides a sense of identity, wise use of land, and aesthetic and social satisfaction in harmony with the natural environment.

The proposed development will not adversely affect the population guidelines of the State and City or flora and fauna. The proposed development will comply with the State and County general plans; provide public open space; encourage improvements for the travel industry in Hawaii which would be in harmony with our environment; and support the visitor destination area in Waikīkī with additional hotel room inventory.

4. *Substantially affects the economic or social welfare of the community or State.*

The Project will provide a significant number of short term construction jobs during the 24 month construction period. The applicant will spend approximately \$275 million to stimulate construction and improve a major visitor facility in Waikīkī.

The Project during its operational phase in its first full calendar year is expected to create 475 on-site jobs.

This employment, short and long-term will benefit the economy of the community and State and will provide employment opportunities for our residents. Employment plays a major role in enhancing the social welfare of our citizens.

The significant economic benefits of this development, including tax revenues for the City and State were discussed in subsection 2.

5. *Substantially affects public health.*

During construction phases, there will be short-term impacts on noise and air quality, which will be mitigated as recommended by the acoustical and air quality consultant. Long-term impacts from increased traffic are expected to be minimal and no mitigation measures were recommended. No other impacts to public health are anticipated.

6. *Involves substantial secondary impacts, such as population changes or effects on public facilities.*

The proposed hotel development will not have substantial secondary impacts such as population changes or effects on public facilities. As described in this FEA, public facilities are adequate and available to support this proposed development. There will be a secondary impact on additional indirect jobs which will have a positive economic impact for the State and County.

7. *Involves a substantial degradation of environmental quality.*

As described in this FEA, the proposed development will not have a significant impact on environmental quality. The primary impact on noise and air quality will be short-term, during construction and mitigative measures will be followed.

8. *Is individually limited but cumulatively has considerable effect upon the environment or involves a commitment for larger actions.*

This is an individual project and action that does result in cumulative effects or commit to additional larger future actions.

9. *Substantially affects a rare, threatened or endangered species, or its habitat.*

The Project site does not contain any rare or endangered flora or fauna. Nor does it contain habitat for rare or endangered fauna or avifauna.

10. *Detrimentially affects air or water quality or ambient noise levels.*

Temporary air quality and noise impacts associated with construction have been identified in this FEA and mitigation measures have also been discussed. The proposed development will not result in significant long-term impact on air quality or noise. The Project site is not over a potable aquifer and is located about 1,800 feet from the shoreline at Fort DeRussy Beach Park and will not adversely impact potable water quality or ocean waters.

11. *Affects or is likely to suffer damage by being located in an environmentally sensitive area such as flood plain, tsunami zone, beach, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal waters.*

The Project site is in Zone AO (flood depths of 1 to 3 feet; average depths determined) with a flood depth of 2 feet, according to the Flood Insurance Rate Map of the Federal Emergency Management Agency ("FEMA"), panel 366 of 395, Map Number 15003C0366G, dated January 19, 2011. See Exhibit 4, FEMA Flood Insurance Rate Map.

At a minimum, the proposed finished floor elevation of the new building will be set at least 2 feet above the highest existing grade of building footprint.

The Project will comply with flood hazard requirements. Additionally, the applicant plans to elevate all emergency generators above the 2-foot flood depth level.

The Project will comply with the rules and regulations of the National Flood Insurance Program presented in Title 44 of the Code of federal Regulations (44CFR). The Project will also comply with applicable flood ordinances of the City. With these precautions, the project is not likely to suffer damage from flooding.

The Project site is not within or affected by a tsunami zone, beach, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal waters.

12. *Substantially affects scenic vistas and view-planes identified in county or state plans or studies.*

The Project will not affect mauka views of the Koolau Range from public viewing areas such as Fort DeRussy and Kalākaua Avenue fronting Fort DeRussy (**Appendix IV**). The Project will also not affect views of the ocean, as experienced from Kalākaua Avenue, Kalia Road and Ala Moana Boulevard.

13. *Require substantial energy consumption.*

The applicant plans to incorporate the application of LEED standards and strategies, to the extent economically feasible, to achieve sustainable site, utilities and building development and reduce energy consumption. The green principles and strategies currently being considered for the Project include the following:

- Develop an erosion and sedimentation control plan;
- Promote alternative transportation by providing secure bicycle storage and locker room facilities;
- Explore alternatives for energy savings related to building cooling and hot water generation;
- Reduce water usage through use of high efficiency plumbing fixtures;
- Energy Star rated appliances;
- High performance glazing;
- Lighting control systems that reduce light usage;
- Design spaces with views to the exterior and options for natural ventilation;
- Create and implement a Green education program for employees and guests;
- Develop a solid waste management plan during construction and operations; and
- Explore reuse and recycling of demolished materials.

XIX. CONSULTED PARTIES – DEA

The following agencies, organizations and public utilities will were provided copies (cd's or hard copies) of the DEA (their timely comments have been included and responded to in **Appendix XIV**):

Federal

Corps of Engineer (U.S. Army Engineer District)
U.S. Department of Interior, Fish & Wildlife Services

State of Hawaii

Department of Business, Economic Development & Tourism
Energy, Resources & Technology Division
Office of Planning
Department of Education
Department of Health - Environmental Planning Office
Department of Land & Natural Resources
Department of Land & Natural Resources
State Historic Preservation Division
Office of Environmental Quality Control
Department of Transportation
Office of Hawaiian Affairs (OHA)
UHM Environmental Center
Office of the Governor
Senator (Brickwood Galuteria)
Representative (Tom Brower)

City and County of Honolulu

Board of Water Supply (BWS)
Department of Design & Construction (DDC)
Department of Environmental Services (ENV)
Department of Facility Maintenance (DFM)
Department of Parks and Recreation (DPR)
Department of Planning & Permitting (DPP)
Urban Design Branch
Civil Engineering Branch
Traffic Review Branch
Wastewater Branch
Community Planning Branch
Development Plans/Zone Changes Branch
Policy Planning Branch
Park Dedication
Subdivision Branch

Department of Transportation Services (DTS)
Honolulu Fire Department (HFD)
Honolulu Police Department (HPD)
Ala Moana Satellite City Hall
Waikiki Neighborhood Board
Office of the Mayor
Members of the City Council

Libraries

Hawaii State Library (Waikiki/Kapahulu Branch)
Main State Library
Municipal Reference & Records Center (MRRC)

Landowners

La Casa
Kalaimoku/Kuhio Dev Corp
WBL Inc.
Gayer, Donna L.
Waikiki Cove
Four Paddle
HK Ma & Associates
Aloha Palms Waikiki LLC
HSH 2100 LLC
Food Pantry Ltd.
PACREP LLC

Comment letters were also received from surrounding residents. Their comments have been included and responded to in **Appendix XIV**.

APPENDIX I

PLANS

2121 Kuhio Tower



EA
PACREP LLC

Honolulu, Hawaii
Oct, 2012

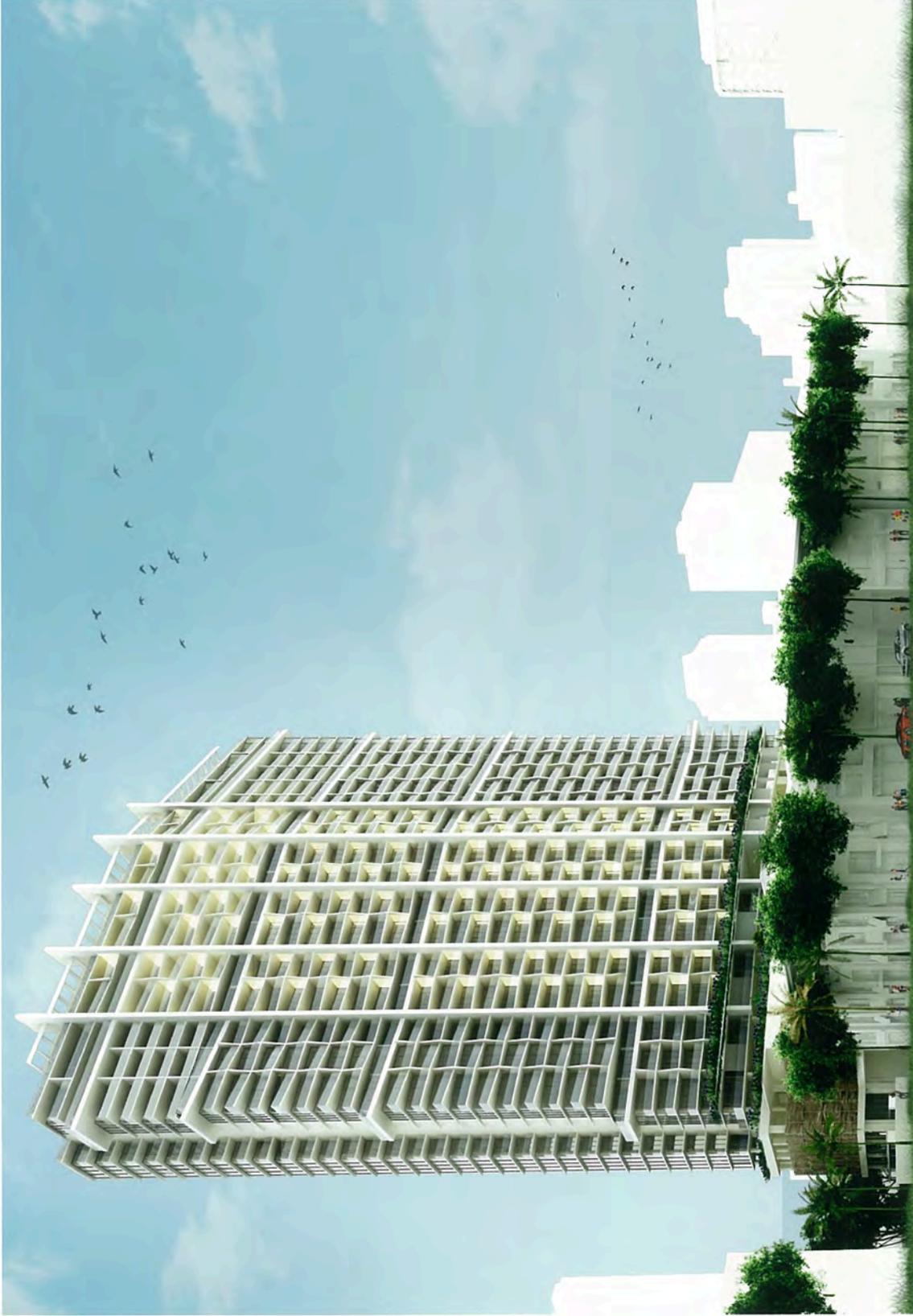
prepared by
GUERIN GLASS ARCHITECTS, PC

2121
KUHIO TOWER

EA
Oct 2012

Perspectives

GUERIN GLASS
ARCHITECTS, PC



PACREP LLC

2121
KUHIO TOWER

EA
Oct 2012

Perspectives

GUERIN GLASS
ARCHITECTS, PC



PACREP LLC



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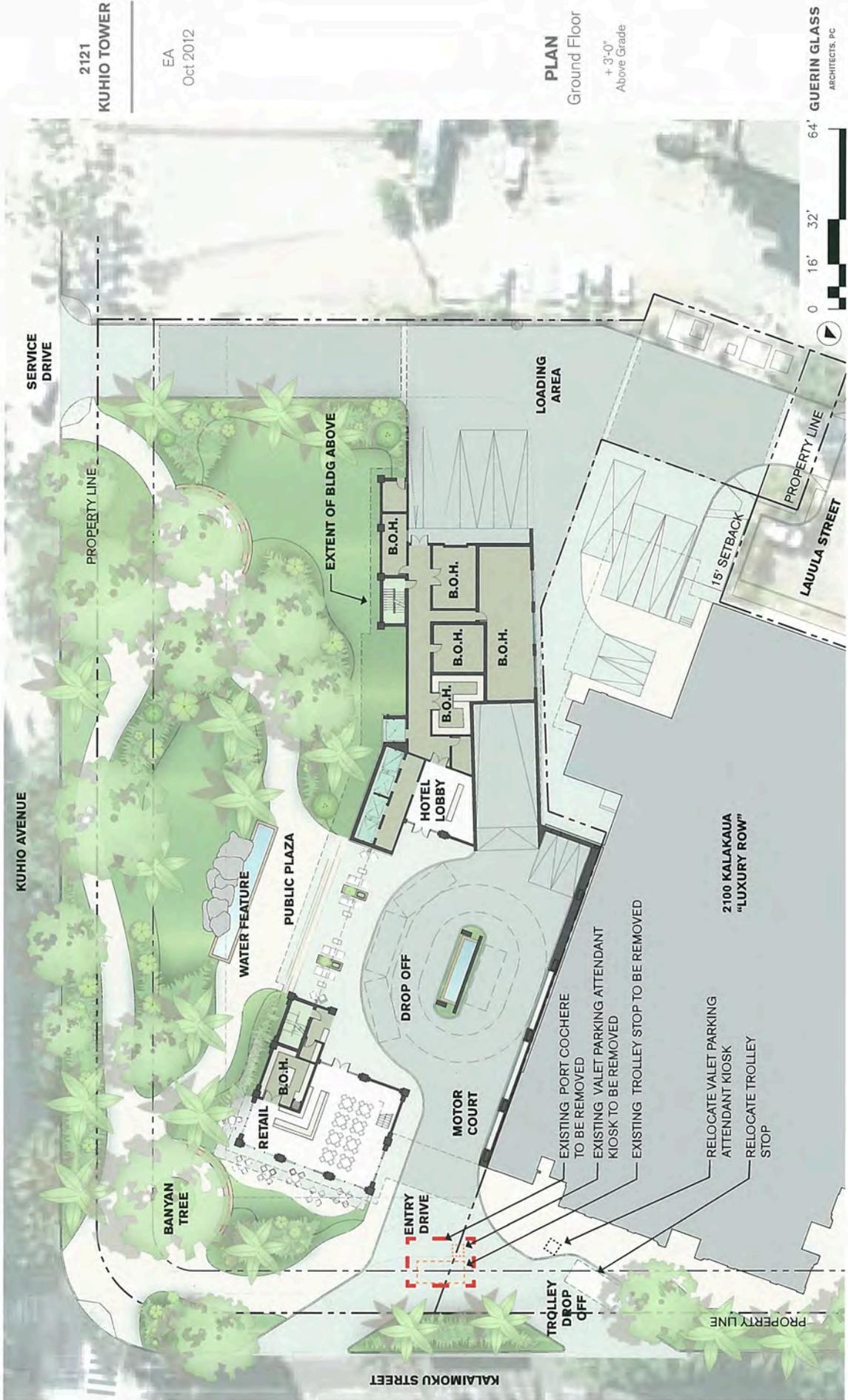
2121
KUHIO TOWER

EA
 Oct 2012

PLAN
 Site Plan

GUERIN GLASS
 ARCHITECTS, PC

PACREP LLC



2121
KUHIO TOWER

EA
 Oct 2012

PLAN
 Ground Floor
 +3'-0"
 Above Grade

64'
 32'
 16'
 0'
GUERIN GLASS
 ARCHITECTS, PC

PACREP LLC

2121
KUHIO TOWER

EA
Oct 2012

PLAN
Mezzanine
+ 15'-0"
Above Grade

0 16' 32'
64 GUERIN GLASS
ARCHITECTS, PC



PACREP LLC

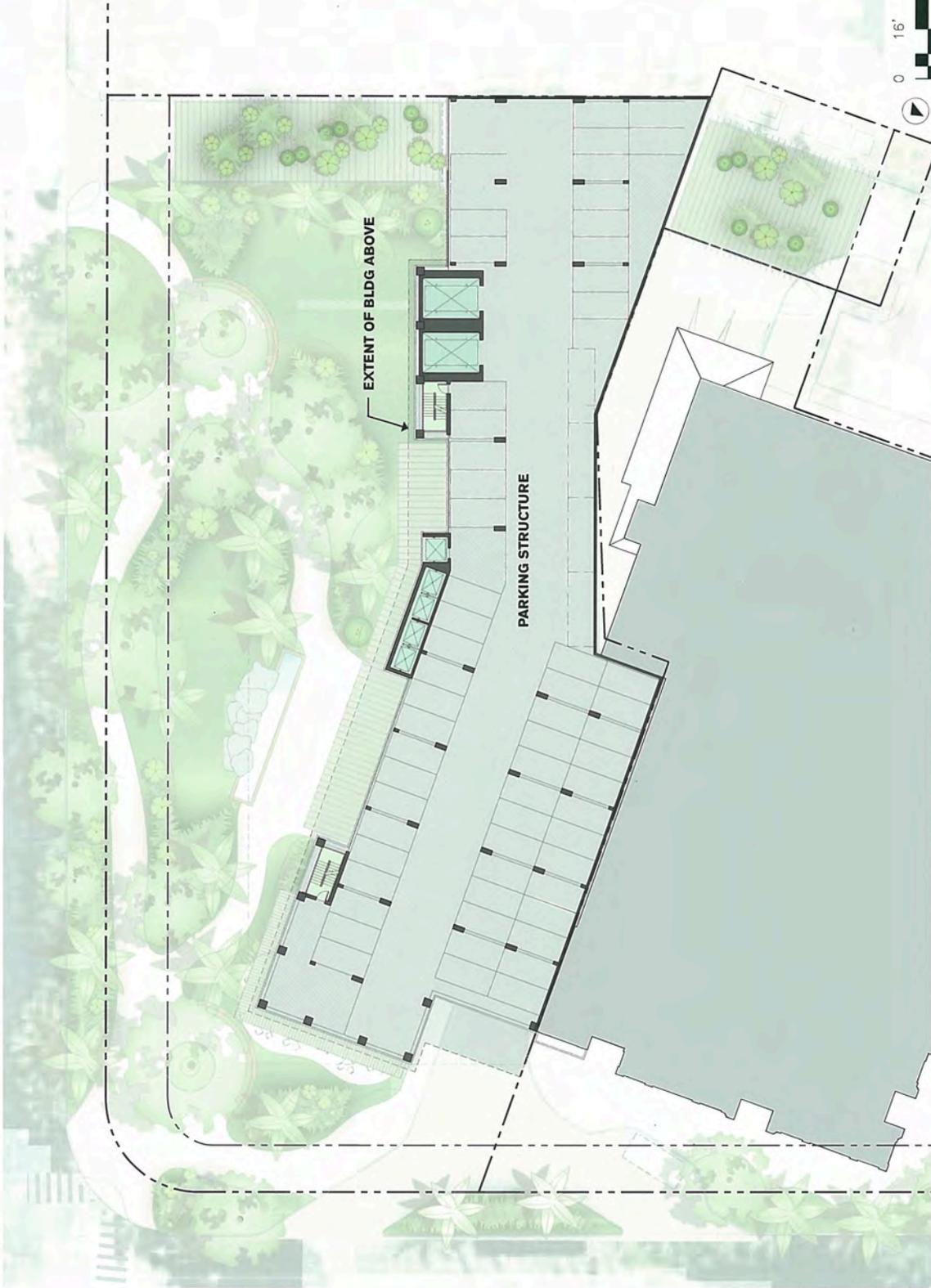
2121
KUHIO TOWER

EA
Oct 2012

PLAN
Parking LVL 2

+ 27'-0"
Above Grade

0 16' 32' 64'
GUERIN GLASS
ARCHITECTS, PC



PACREP LLC

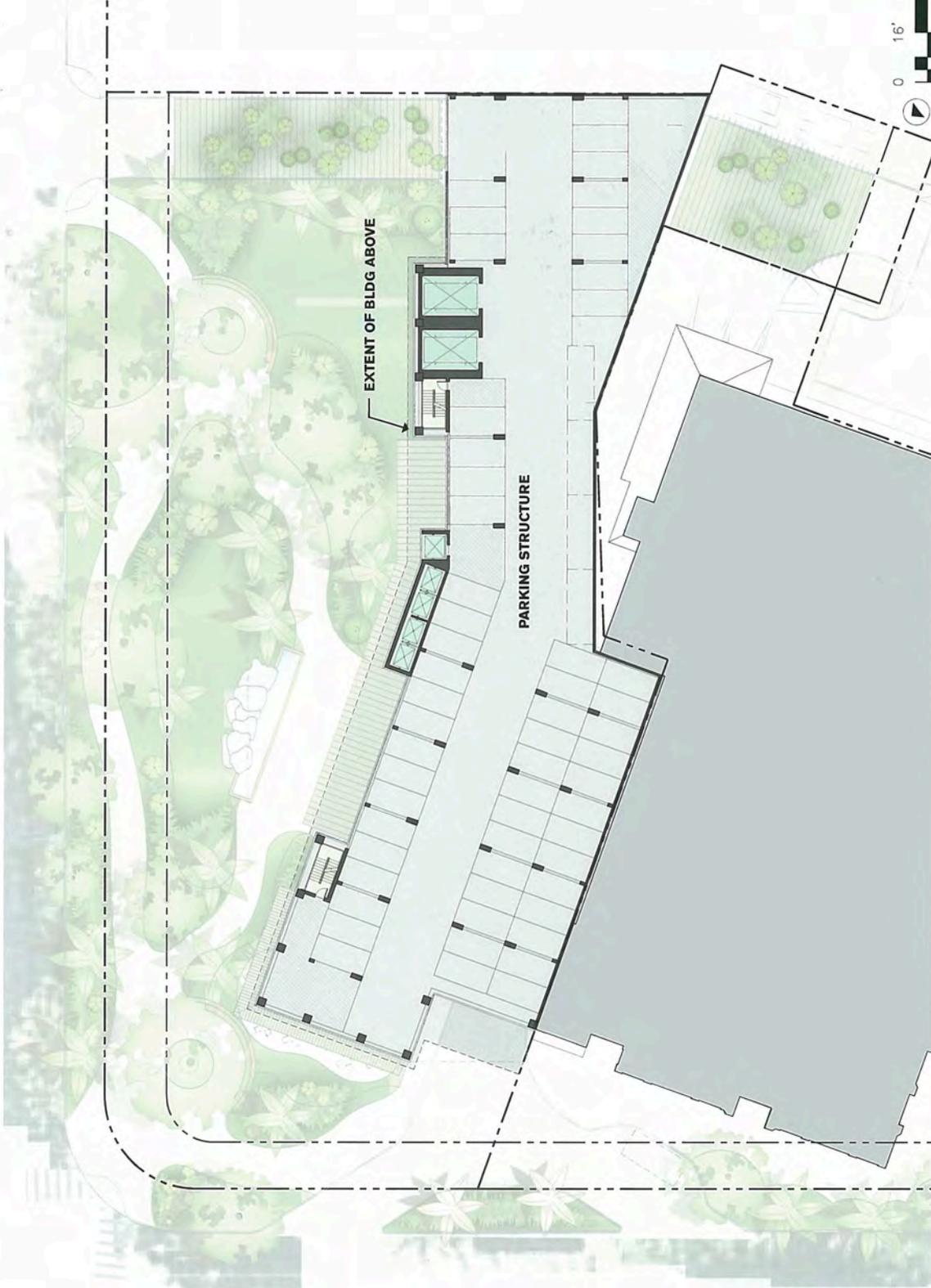
2121
KUHIO TOWER

EA
Oct 2012

PLAN
Parking LVL 3

+35'-2"
Above Grade

64 GUERIN GLASS
ARCHITECTS, PC



PACREP LLC

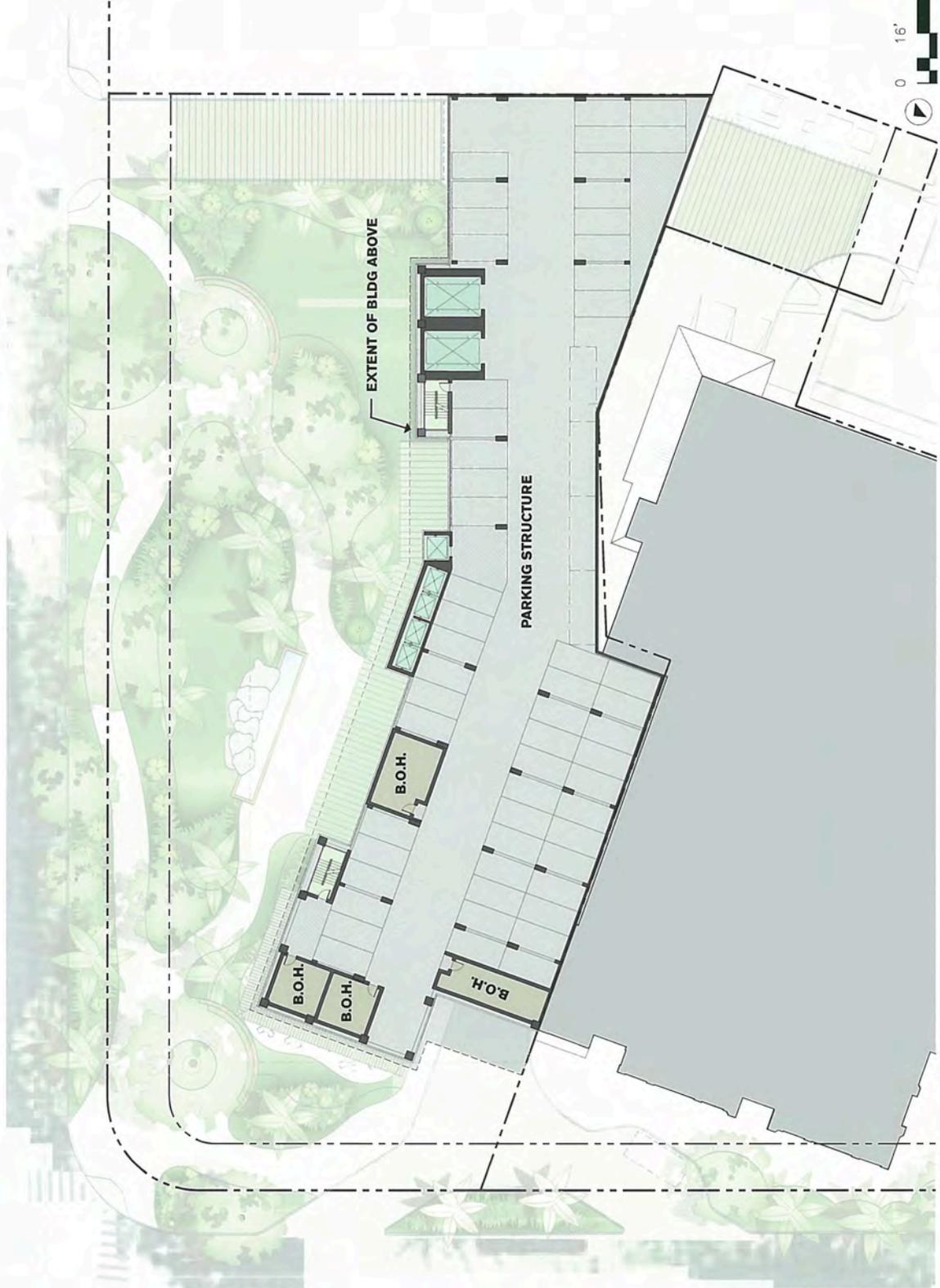
2121
KUHIO TOWER

EA
Oct 2012

PLAN
Parking LVL 4

+ 43'-4"
Above Grade

0 16' 32' 64'
GUERIN GLASS
ARCHITECTS, PC



PACREP LLC

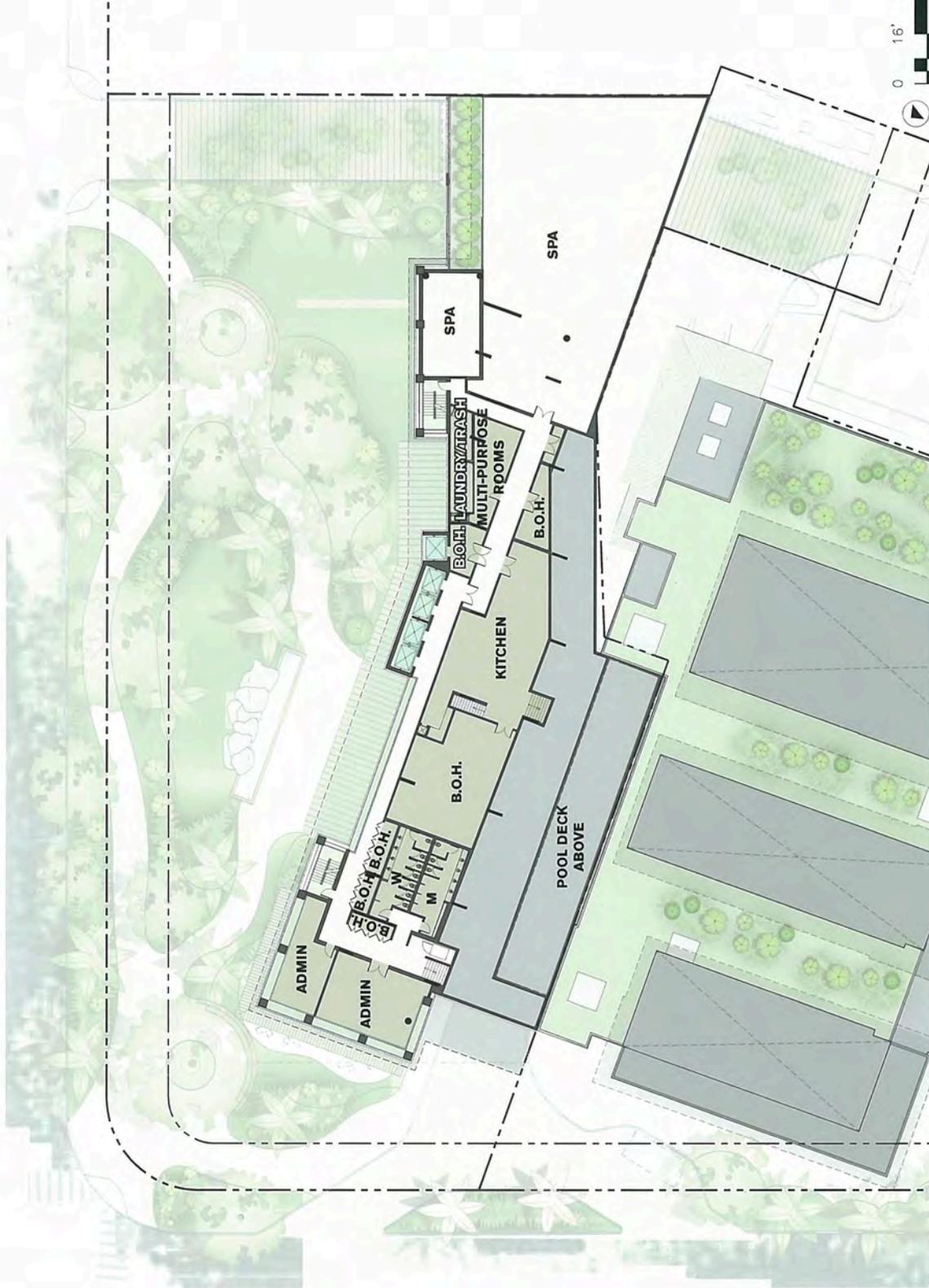
2121
KUHIO TOWER

EA
Oct 2012

PLAN
Admin/
Amenities
LVL 5

+ 54'-10"
Above Grade

0 16' 32' 64'
GUERIN GLASS
ARCHITECTS, PC



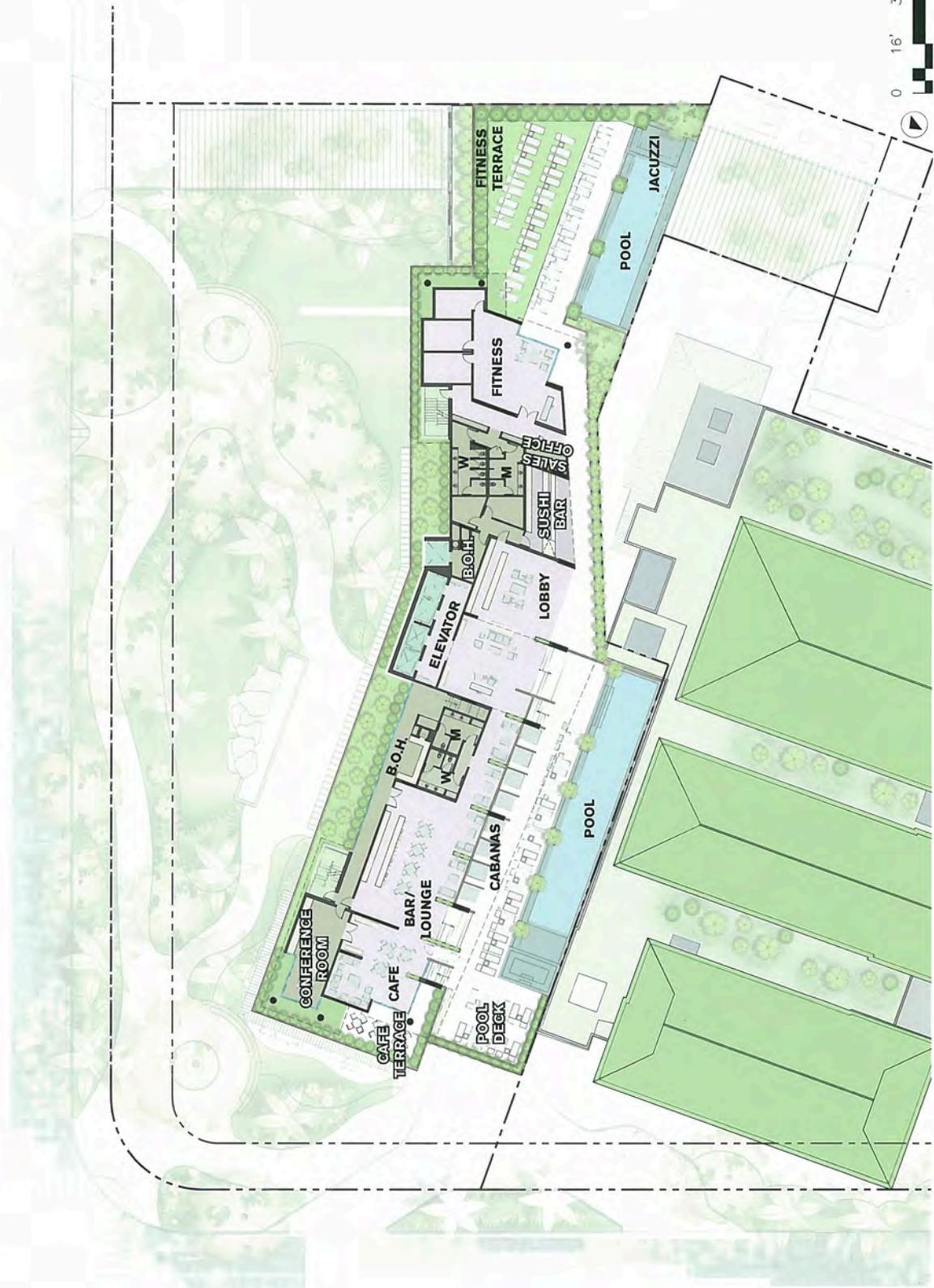
PACREP LLC

2121
KUHIO TOWER

EA
Oct 2012

PLAN
Pool Podium
LVL 6
+ 64'-0"
Above Grade

0 16' 32' 64' GUERIN GLASS
ARCHITECTS, PC



PACREP LLC

2121
KUHIO TOWER

EA
Oct 2012

PLAN
Residence
LVL 7-33
+ 74'-9"
+ 311'-0"
Above Grade

0 16' 32' 64'
GUERIN GLASS
ARCHITECTS, PC



PACREP LLC

2121
KUHIO TOWER

EA
Oct 2012

PLAN
Residence
LVL 34

+ 311'-0"
+ 320'-5"
Above Grade

64' GUERIN GLASS
ARCHITECTS, PC



PACREP LLC

2121
KUHIO TOWER

EA
Oct 2012

PLAN
Residence
LVL 35

+ 320'-5"
+ 329'-10"
Above Grade

64' GUERIN GLASS
ARCHITECTS, PC



PACREP LLC

2121
KUHIO TOWER

EA
Oct 2012

PLAN
Residence
LVL 36-37
+ 329'-10"
Above Grade

64' GUERIN GLASS
ARCHITECTS, PC

0 16' 32'



PACREP LLC

2121
KUHIO TOWER

EA
Oct 2012

PLAN
LVL 38
+ 350'-0"
Above Grade

0 16' 32' 64'
GUERIN GLASS
ARCHITECTS, PC



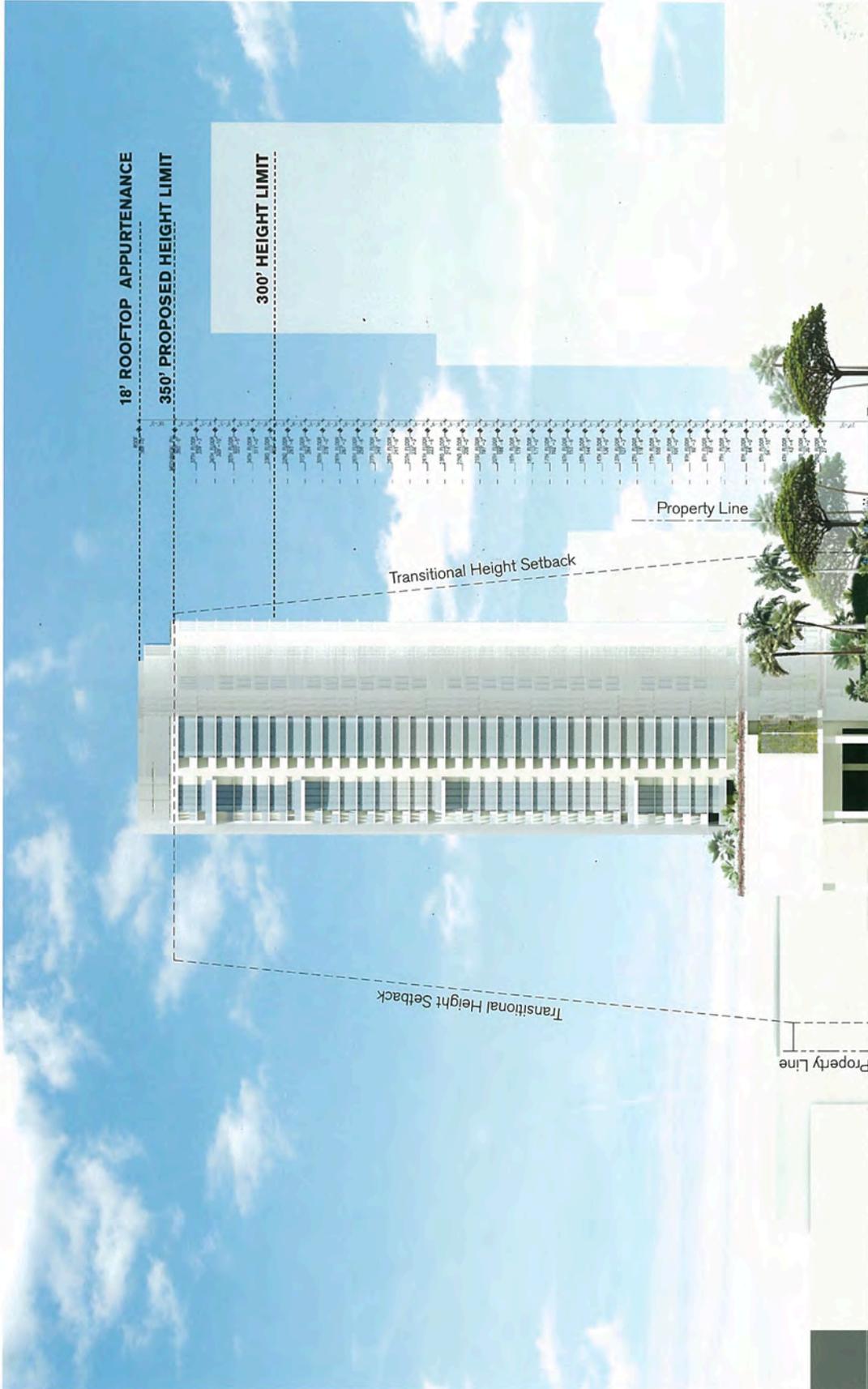
PACREP LLC

2121
KUHIO TOWER

EA
Oct 2012

Elevation
East

GUERIN GLASS
ARCHITECTS, PC



© GUERIN GLASS ARCHITECTS, PC 2012

Kuhio Ave

2121 Kuhio Tower

Laula St

PACREP LLC



2121
KUHIO TOWER

EA
Oct 2012

Elevation
North

GUERIN GLASS
ARCHITECTS, PC

18' ROOFTOP APPURTENANCE

350' PROPOSED HEIGHT LIMIT

300' HEIGHT LIMIT

Transitional Height Setback

Property Line

Property Line

Kalaimoku St

2121 Kuhio Tower

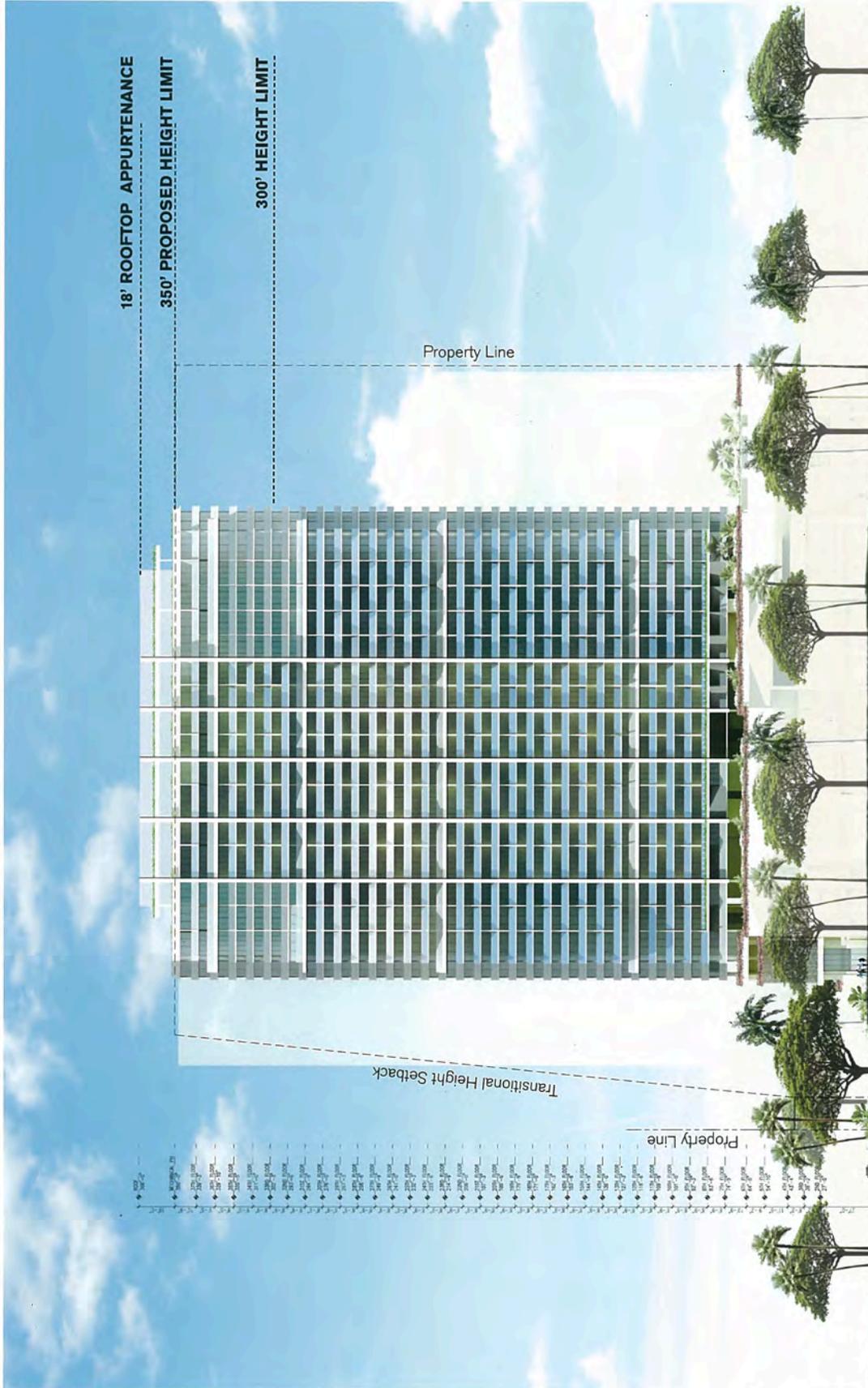
PACREP LLC

2121
KUHIO TOWER

EA
Oct 2012

Elevation
South

GUERIN GLASS
ARCHITECTS, PC



2121 Kuhio Tower

PACREP LLC

Kalamoku St

2121
KUHIO TOWER

EA
Oct 2012

Elevation
West

GUERIN GLASS
ARCHITECTS, PC



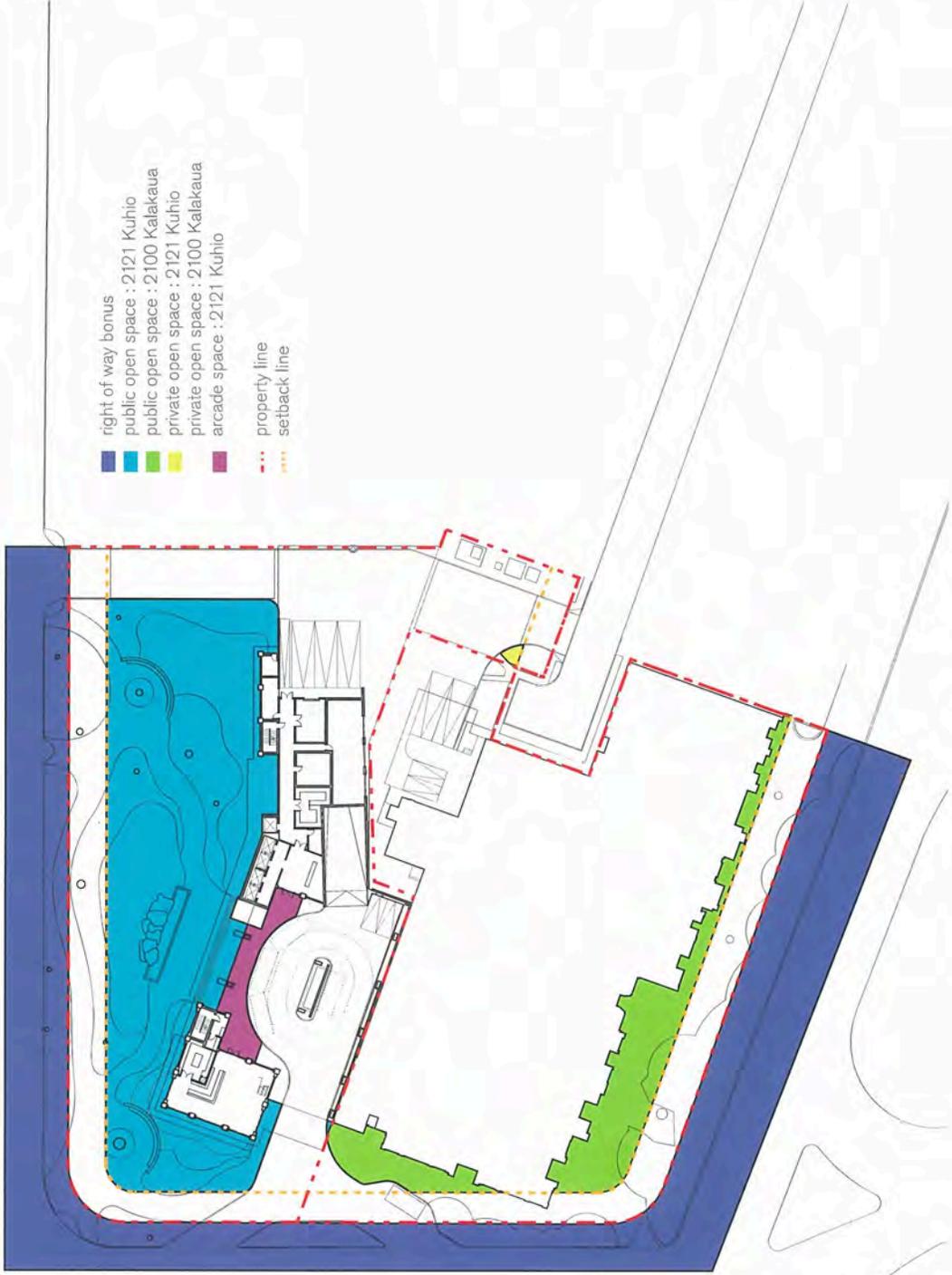
Kalakaua Ave

2121 Kuhio Tower

Kuhio Ave

PACREP LLC

- right of way bonus
- public open space : 2121 Kuhio
- public open space : 2100 Kalakaua
- private open space : 2121 Kuhio
- private open space : 2100 Kalakaua
- arcade space : 2121 Kuhio
- property line
- setback line



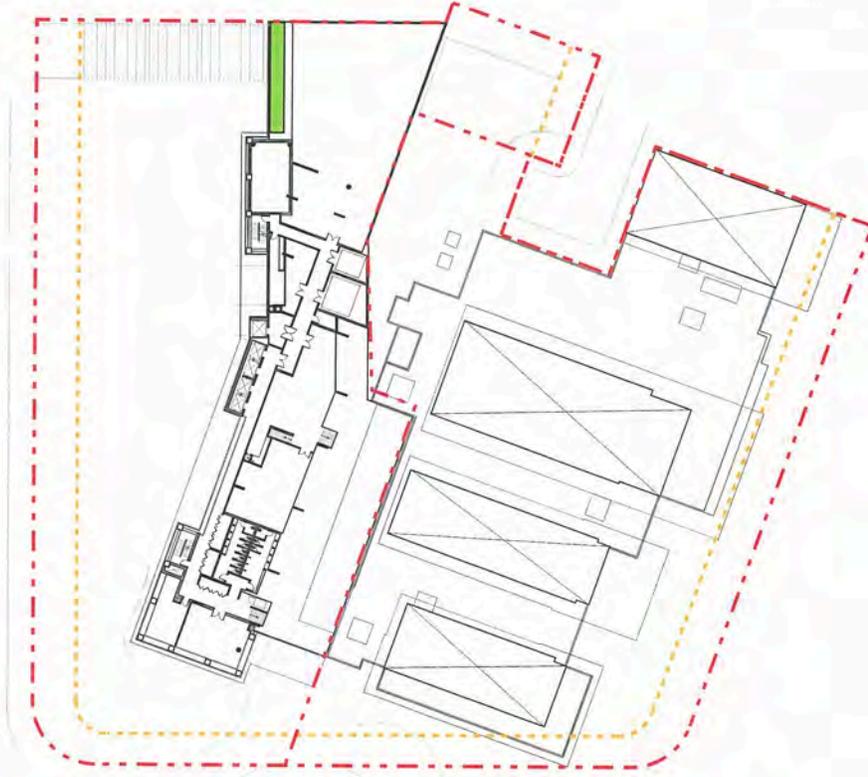
Open Space
Diagrams
Level 1

- rooftop landscape : 2121 Kuhio
- property line
- setback line



Open Space
Diagrams
Level 1.5

- rooftop landscape : 2121 Kuhio
- property line
- setback line



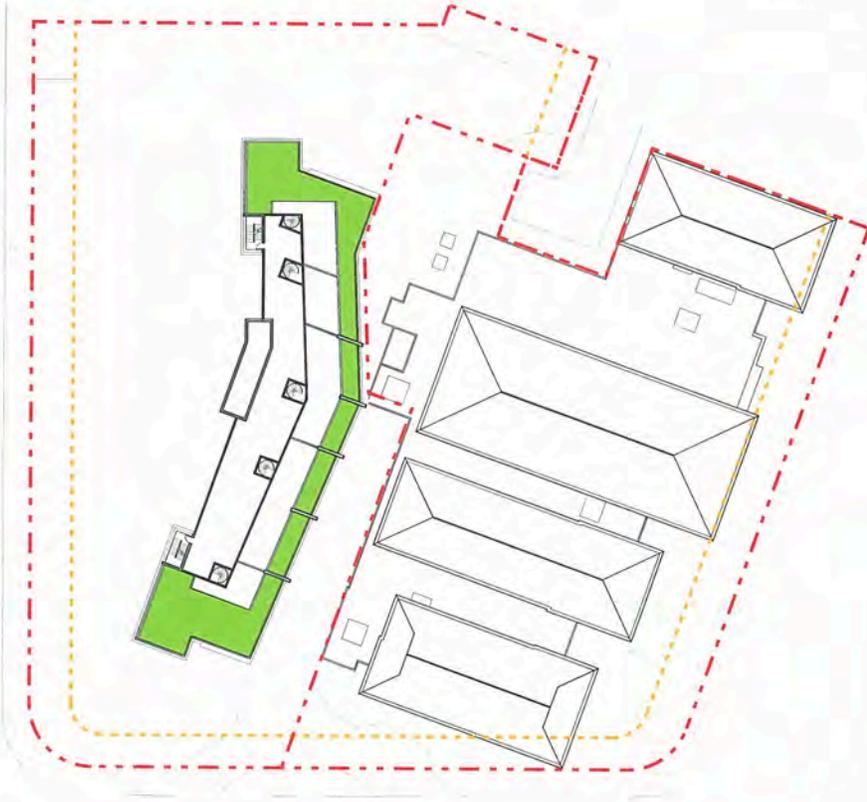
Open Space
Diagrams
Level 5

- rooftop landscape : 2121 Kuhio
- rooftop landscape : 2100 Kalakaua
- property line
- setback line



Open Space
Diagrams
Level 6

rooftop landscape : 2121 Kuhio
property line
setback line



APPENDIX II

AN ARCHAEOLOGICAL INVENTORY SURVEY OF
KING KALĀKAUA PLAZA PHASE II

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-202
HONOLULU, HAWAII 96822

BUS. (808) 988-2231

FAX. (808) 988-1140

E-mail: kkurahashi@hawaii.rr.com

October 26, 2012

Ms. Pua Aiu, Administrator
State Historic Preservation Division
Department of Land and Natural Resources
Land Division
P.O. Box 621
Honolulu, Hawaii 96809

Attention: Ms. Susan A. Lebo
Oahu Lead Archaeologist

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

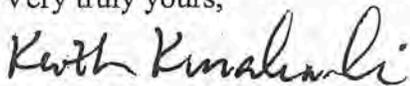
Dear Ms. Aiu:

Thank you for your letter of September 26, 2012 regarding the Draft Environmental Assessment (DEA) for the 2121 Kuhio Avenue Project (Project).

We appreciate your comments and as you have recommended, the Applicant will submit an archaeological monitoring plan to your office for review and approval prior to construction commencing. The plan will include all information as specified in Hawaii Administrative Rule §13-279-4. Ground disturbing activities associated with this Project will be monitored by a qualified archaeologist.

Your letter and this response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

cc: Department of Planning and Permitting
PACREP LLC

NEIL ABERCROMBIE
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

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

PAUL J. CONRY
INTERIM FIRST DEPUTY

WILLIAM M. TAM
DEPUTY DIRECTOR - WATER

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

September 26, 2012

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-202
Honolulu, Hawaii 96822
kkurahashi@hawaii.rr.com

LOG NO: 2012.2076
DOC NO: 1209SL22
Archaeology

Dear Mr. Kurahashi,

**SUBJECT: Chapter 6E-42 Historic Preservation Review–
Draft Environmental Assessment (EA) for 2121 Kūhiō
Waikīki Ahupua‘a, Kona District, Island of O‘ahu
TMK: (1) 2-6-018:010, 042, 043, and 052**

Thank you for the opportunity to review the document titled *Draft Environmental Assessment (EA) 2121 Kūhiō Waikīki, Honolulu, Hawaii Tax Map Key: 2-6-18: 10, 42, 43, and 52* (Kusao & Kurahashi, Inc., July 2012), which was received by our office on July 11, 2012. The applicant, PACREP LLC, proposes to develop 2121 Kūhiō, which is a 3.525 acre site that includes the existing retail development at 2100 Kalākaua and the surface parking lot at 2139 Kūhiō Avenue. The area planned for development under this draft EA is on the 2121 Kūhiō property (1.396 acres of vacant lot). The proposed development will involve construction of 34-story condo-hotel complex, administrative and retail spaces, entry drive and plaza, and landscaping.

The Final EA was completed for an earlier proposed development on the same property, under previous ownership. On June 9, 2006, the Department of Planning and Permitting (DPP) determined that proposal would not have significant effects and issued a Finding of No Significant Impact (FONSI). The current applicant after consultation with DPP decided to process a new draft EA. DPP anticipates issuing a FONSI for this proposed project.

An archaeological inventory survey (AIS) was conducted on the property in 2000. The AIS report (LeSuer et al. 2000) was reviewed and accepted by SHPD on July 18, 2000 (Log No. 25813, Doc. No. 0007SC06). Two historic properties were identified: SIHP 50-80-14-4970 (portion of the 'Auwai O Pau) and 50-80-14-5796 (a subsurface pre-contact to early 20th century cultural layer). SHPD concurred with an assessment that Site 5796 was not significant, while Site 4970 was significant under Hawaii State Register Criterion "d." No further work was recommended for these historic properties. As part of this review, SHPD requested a photographic essay of single-story structures built ca. 1950 in Waikīki, which was conducted by Mason Architects in 2004.

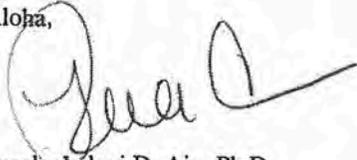
In reviewing the earlier draft EA, SHPD expressed concern that portions of SIHP 5796 and 4970, human remains, as well as other historically-significant sites or features, may still be present in the proposed project area. Based on these concerns, SHPD stated that the proposed undertaking "may have an effect on historic sites which may be present" and that any "adverse affects may be mitigated through archaeological monitoring" (March 10, 2006; Log No. 2006.0595, Doc. No. 0603AJ02). The new draft EA for the proposed development states that "the applicant plans to comply with these recommendations."

In reviewing the current draft EA, SHPD remains concerned that potential exists for historic properties (including burials) to be affected by the proposed work. We recommend that ground disturbing activities associated with this project be monitored by a qualified archaeologist. We request that the applicant submit an archaeological monitoring plan to our office for review and approval prior to construction commencing; the plan should include all information as specified in Hawaii Administrative Rule §13-279-4. We will notify your office when the plan has been approved

Mr. Keith Kurahashi
September 2012
Page 2

and work may proceed. Please contact Susan A. Lebo at (808) 692-8019 or Susan.A.Lebo@hawaii.gov if you have any questions or concerns regarding this letter.

Aloha,

A handwritten signature in black ink, appearing to read "Susan A.", written over a large, faint watermark of the Hawaiian state seal.

Puaalakalani D. Aju, Ph.D.
Administrator, State Historic Preservation Division

LINDA LINGLE
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

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

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SECURITY DIRECTOR - LAND

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CONSERVATION AND COASTAL LAWS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAWAIAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

March 10, 2006

Keith Kurahashi
Kusao & Kurahashi Inc.
2757 Woodlawn Drive, Suite 5-202
Honolulu, Hawai'i 96822

LOG NO: 2006.0595
DOC NO: 0603AJ02
Archaeology

Dear Mr. Kurahashi:

SUBJECT: Chapter 6E-8 Historic Preservation Review [Private] –
Draft EA Review of the 2121 Kuhio Development
Waikiki Ahupua'a, Kona District, Island of O'ahu, Hawai'i
TMK: (1) 2-6-018:010, 042 & 052

Thank you for the opportunity to review the aforementioned project. We received a copy of the Draft Environmental Assessment (EA) and a brief cover letter on October 18, 2005. We apologize for the long delay. The Draft EA is for the proposed development of an approximately 115,716 square foot parcel as either a condominium or timeshare complex.

We are concerned that portions of State Sites -5796 and -4970, a pre-historic cultural layer and a portion of the 'Auwai o Pau, respectively, identified during the archaeological inventory survey of the subject parcel (*LeSuer et. al. 2000, An Archaeological Inventory Survey of King Kalākaua Plaza Phase II, SHPD Rpt No: 0-1838*), as well as other historically-significant sites or features, may still be present in the proposed project area. Additionally, we are concerned that unidentified human remains may also be present within the current project area. The areas adjacent to, and surrounding, the current project location have been shown to have a high potential for containing unidentified human remains (see, e.g., *LeSuer et. al. 2000*).

Ground-altering activities associated with the proposed undertaking may have an effect on historic sites which may be present. We believe that any adverse affects may be mitigated through archaeological monitoring and that the following conditions should be carried out.

- 1) A qualified archaeological monitor shall be present during all ground-altering activities conducted in the project area in order to document any historic properties which may be encountered during the proposed undertaking and to provide mitigation measures as necessary. An acceptable archaeological monitoring plan will need to be submitted to the State Historic Preservation Division for review, prior to the commencement of any ground-altering activities. An archaeological monitoring plan must contain the following nine specifications: (1) The kinds of remains that are anticipated and where in the construction area the remains are likely to be found; (2) How the remains and deposits will be documented; (3) How the expected types of remains will be treated; (4) The archaeologist conducting the monitoring has the authority to halt the construction in the immediate area of the find in order to carry out the plan; (5) A coordination meeting

Mr. Kurahashi
Page. 2

between the archaeologist and construction crew is scheduled, so that the construction team is aware of the plan; (6) What laboratory work will be done on remains that are collected; (7) A schedule of report preparation; (8) Details concerning the archiving of any collections that are made; and (9) An acceptable report documenting the findings of the monitoring activities shall be submitted to the State Historic Preservation Division for review following completion of the proposed undertaking.

2) The State Historic Preservation Division (O'ahu office) shall be notified via facsimile upon the on-set and completion of the proposed undertaking.

Should initial excavation reveal that all of the new digging is in previously-disturbed sediments, the monitoring program may be suspended through consultation with SHPD.

If you have any questions, please call the SHPD Office at 808-692-8015.

Aloha,



Melanie Chinen, Administrator
State Historic Preservation Division

AJ:cmm

LINDA LINGLE
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

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

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KAIKOLA WETLAND RESERVE COMMISSION
LAND
STATE PARKS

March 3, 2006

Mr. Ardis Shaw-Kim
Kusao & Kurahashi, Inc.
Manoa Market Place
2752 Woodlawn Drive, Suite 5-202
Honolulu, Hawaii 96822

LOG NO: 2006.00503
DOC NO: 0603ST06
Architecture

Dear Mr. Shaw-Kim:

SUBJECT: Chapter 6E-42 (HRS) Review
2100 Kalakaua Avenue and 2121 Kuhio Avenue Development, fka
Waikiki Kalakaua Plaza, Phase II, Inventory Survey
Waikiki, Kona, Oahu, Hawaii
TMK: (1) 2-6-018:010, :036, :042, :052, :055, :062-:064, :073, & :074

In response to your letter received February 23, 2006, this is a written confirmation that the required mitigation measure to prepare a photographic essay on small, single-story structures in Waikiki circa 1950 has been satisfied for the above-named site.

Should you have any questions regarding architectural concerns please call Susan Tasaki in our Oahu office at (808) 692-8032.

Aloha,

Melanie A. Chinen, Administrator
State Historic Preservation Division

ST:jen



STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES

HISTORIC PRESERVATION DIVISION
Kakuhihewa Building, Room 555
601 Kamehaha Boulevard
Kapolei, Hawaii 96707

AQUATIC RESOURCES
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CONSERVATION AND RESOURCES
ENFORCEMENT
CONVEYANCES
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
LAND
STATE PARKS
WATER RESOURCE MANAGEMENT

July 18, 2000

Mr. Matt McDermott
Cultural Surveys Hawaii, Inc.
733 N. Kalaheo Avenue
Kailua, Hawaii 96734

LOG NO: 25813 ✓
DOC NO: 0007SC06

Dear Mr. McDermott:

SUBJECT: Chapter 6E-42 Historic Preservation Review of Requested Revisions to a Report for the Waikiki Kalakaua Plaza Phase II Inventory Survey Waikiki, Kona, O'ahu
TMK: 2-6-018: 010, 036, 042, 052, 055, 062-064, 073 & 074

Thank you for the prompt submission of the requested revisions to your archaeological inventory survey report (An Archaeological Inventory Survey of King Kalakaua Plaza Phase II, Waikiki, Waikiki Ahupua`a, Kona District, Island of O`ahu, Hawai`i. [TMK: 2-6-18:10,, 36, 42, 52, 55, 62, 63, 64, 73 & 74. 2000. LeSuer et al.]).

The revisions are acceptable, and we now accept the report as final. We can conclude that the archaeological inventory survey has been successfully executed, and that no further archaeological work is required.

As noted previously, your client still needs to complete a required mitigation action with regard to preparation of a photographic essay on small, single-story structures built in Waikiki circa 1950. Tonia Moy of our Architectural Branch may be contacted at 692-8030 for further information or assistance in this matter.

Should you have any questions about archaeology, please feel free to contact Sara Collins at 692-8026.

Aloha,

A handwritten signature in black ink, appearing to read "Don Hibbard".

DON HIBBARD, Administrator
State Historic Preservation Division

SC:dnm

c: Kalakaua South Seas Owners, LLC
Randall Fujiki, Director, Dept. of Planning and Permitting, City & County of Honolulu



STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES

HISTORIC PRESERVATION DIVISION
Kakuhihewa Building, Room 555
501 Kamehaha Boulevard
Honolulu, Hawaii 96707

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ENFORCEMENT
CONVEYANCES
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
LAND
STATE PARKS
WATER RESOURCE MANAGEMENT

June 29, 2000

Mr. Matt McDermott
Cultural Surveys Hawaii, Inc.
733 N. Kalaheo Avenue
Kailua, Hawaii 96734

LOG NO: 25634 ✓
DOC NO: 0006SC09

Dear Mr. McDermott:

**SUBJECT: Chapter 6E-42 Historic Preservation Review of a Report Documenting the Results of an Archaeological Inventory Survey of the Waikiki Plaza Phase II Project Area
Waikiki, Honolulu, O`ahu
TMK: 2-6-018: 010, 036, 042, 052, 055, 062, 063, 064, 073 & 074**

Thank you for the opportunity to comment on the report documenting the results of an archaeological inventory survey at the project site of the Waikiki Plaza Phase II (An Archaeological Inventory Survey of King Kalakaua Plaza Phase II, Waikiki, Waikiki Ahupua`a, Kona District, Island of O`ahu, Hawai`i. [TMK: 2-6-18:10, 36, 42, 52, 55, 62, 63, 64, 73 & 74]. 2000. LeSuer et al.). Our review is based on historic records, maps, aerial photographs, and reports maintained at the State Historic Preservation Division; in addition, Sara Collins and Elaine Jourdane of our staff made a brief site inspection during the inventory survey in January 2000. We provide the following comments.

The survey covered about 2.5 acres of land in Waikiki; subsurface testing was accomplished through the excavation of 13 backhoe trenches. Subsurface investigations indicated that the subject area was extensively modified through successive filling and grading actions. Two historic sites were located: (1) SIHP No. 50-80-14-4970, a portion of the `Auwai O Pau, which was previously identified through archaeological work in the Fort DeRussy area (Davis 1989); and (2) SIHP No. -5796, a subsurface cultural layer dating from pre-Contact times through the early 20th century. Although SIHP No. 5796 was identified in a number of the test excavations, prior land alteration activities on the subject parcels had adversely affected the site's integrity, leaving only limited stratigraphic and artifactual evidence. As noted, Site -4970 was previously identified and deemed significant under Criterion D. Since, judging from your descriptions, SITE No. 5796 lacks integrity, we therefore believe that it is not significant. Thus, while we concur with the recommendation that no further archaeological work is warranted, we do not concur with the significance assessments as presented on page 81. We request that a revised

Mr. Matt McDermott
Page Two

assessment be made for SIHP no. 5796. When we receive the revised assessment, and it may be submitted on a separate page for inclusion with the report on file at our office, we anticipate accepting the report as final, and concluding that the survey was successfully concluded.

There is, however, an additional mitigation requirement. To our knowledge, the photographic essay on small scale single story structures built in Waikiki circa 1950 has not been completed. The Architectural Branch of our office will gladly assist with the project and looks forward to working on this and the other mitigation measures as noted in the attached correspondence.

Should you have any questions about archaeology, please feel free to contact Sara Collins at 692-8026. Should you have any questions about architecture, please feel free to contact Tonia Moy at 692-8030.

Aloha,



DON HIBBARD, Administrator
State Historic Preservation Division

SC:jk

c: Kalakaua South Seas Owners, LLC
Randall Fujiki, Dept. of Planning & Permitting, City & County of Honolulu

**AN ARCHAEOLOGICAL INVENTORY SURVEY
OF KING KALĀKAUA PLAZA PHASE II,
WAIKĪKĪ, WAIKĪKĪ AHUPUA'A, KONA DISTRICT,
ISLAND OF O`AHU, HAWAII
(TMK 2-6-18:10, 36, 42, 52, 55, 62, 63, 64, 73 & 74)**

by

C. Celeste LeSuer, B.A.
and
Matt McDermott, B.A.
Rodney Chiogioji, B.A.
Hallett H. Hammatt, Ph.D.

Prepared for

Kalakaua South Seas Owners, LLC

Cultural Surveys Hawai'i
April 2000

ABSTRACT

Construction Management & Development, Inc., on behalf of the property owners, Kalakaua Southseas Owners, LLC, hired Cultural Surveys Hawaii, Inc., to conduct an archaeological inventory survey consisting of archival research and sub-surface investigations. The subject parcel (TMK 2-6-18:10, 36, 42, 52, 55, 62, 64, 73, & 74) is located in Waikīkī, Waikīkī *Ahupua`a*, Kona District, O`ahu Island, Hawai`i. The project parcel is located on the `Ewa (NW) end of a block bounded by Kalaimoku, Kalākaua, Kuhio, and Lewers. Field investigations were conducted between January 26 and February 2, 2000.

Historical background research identifies the pre-contact to early 20th century (1920s) Waikīkī area as a lagoonal basin. Native Hawaiians had modified this wetland area into a major irrigation system, supporting an agriculture and aquaculture resource basin, possibly as early as the 1300's. During the current investigations attention was given to locating the upper northeastern reaches of a cultural irrigation ditch—the `Auwai O Pau (assigned state site 50-80-14-4970 in 1989)—and identifying possible adjacent *lo i* (irrigated ponds). Consideration was also given to the possibility of locating an associated pond, which was identified within the project area on a portion of a 1909-1913 U.S. Army Engineers map.

Sub-surface testing located the `Auwai O Pau, and areas of possible fishpond and agricultural cultivation praxis. No habitation areas or human burials were identified during excavation.

The prehistoric to early 20th century wetland ground surface, which runs throughout the project parcel, was assigned as state Site 50-80-14-5796. Research documents the project area from ancient times to the present, and reveals the historic significance for the parcel.

Based on findings, no further historic preservation work is recommended.

ACKNOWLEDGMENTS

Cultural Surveys Hawai'i would like to thank archaeologists Elaine Jourdane and Sara Collins from the State Historic Preservation Division for their helpful comments during their visit to the project site. Dr. Susan Lebo of the University of Hawai'i, Manoa and the Bishop Museum is thanked for her continual support with research materials and with the identification of historic ceramics. Kalākaua Southseas Owners, LLC. and Construction Management & Development are thanked for their support of the archaeological investigations. Cultural Surveys Hawai'i would also like to thank Mr. Mike Matsutani, of Mike's Backhoe Service, for his skillful work with the backhoe.

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I. INTRODUCTION

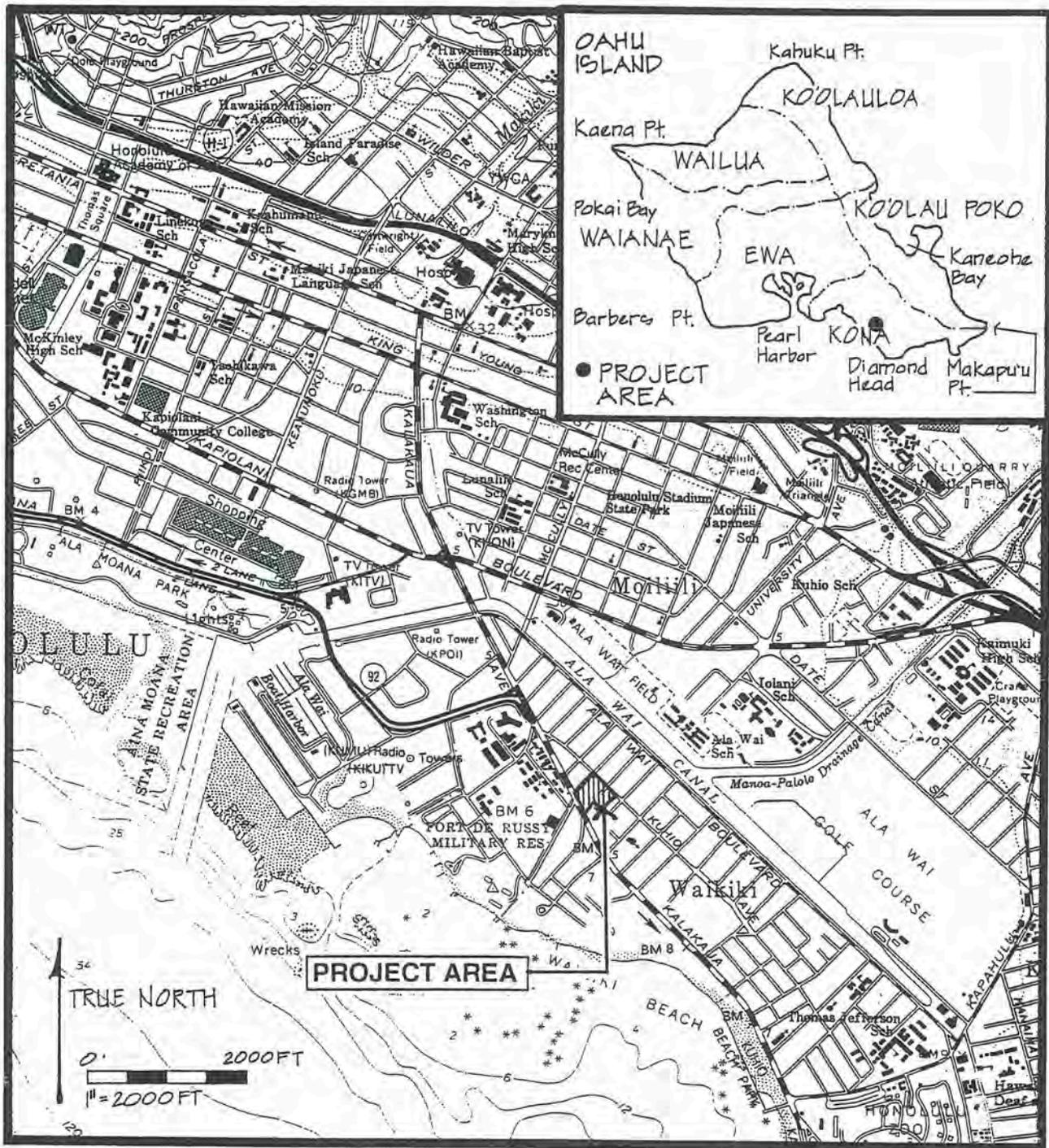
Cultural Surveys Hawai'i has completed an archaeological inventory survey contracted through Construction Management & Development (CM&D). The project area is comprised of a 109,747 square foot parcel (TMK 2-6-18:10, 36, 42, 52, 55, 62, 63, 64, 73 & 74) in Waikiki *Ahupua`a*, Kona District, O'ahu Island, Hawai'i (Map 1).

A. Project Background

The archaeological inventory survey resulted from an applicant action filed by Kalākaua Southseas Owners, LLC., after they acquired the property in 1998. Kalākaua Southseas Owners, LLC. proposed to demolish existing structures, remove existing landscaping, and develop a commercial/retail mixed-use complex—*The King Kalākaua Plaza Phase II*—on the parcel. This complex is proposed as a structure of 3 to 5 stories with an additional single-story structure. Features of the complex will include extensive ground level landscaping, underground parking, and a police “Koban” service housed in the single-story structure. This single story structure is planned to typify and reflect the period structural qualities of the former Canlis Charcoal Broiler Restaurant building.

Cultural Surveys Hawai'i, at the request of Wilson Okamoto & Associates, Inc., conducted an archaeological assessment of the project parcel in August of 1998. The assessment report by Hammatt and Chiogioji (1998) was submitted the same month for inclusion in the Final Environmental Assessment prepared by Wilson Okamoto & Associates, Inc. (1998), for Kalākaua Southseas Owners, LLC. The findings and recommendations of the archaeological assessment state that structures in the project area over fifty years old had not retained their historical integrity. SHPD had, however, expressed concern in a letter dated August 3, 1998 (Okamoto 1998:Appendix) regarding the Canlis Charcoal Broiler building citing “its exceptional significance as one of the few intact examples left in Hawai'i of the once popular restaurant trend and unique building type.” This concern has been addressed in the EA project plans. The police “Koban” structure is to typify the same architectural trends as the former Canlis building. Additional SHPD concerns included the possible presence of human burials.

The archaeological assessment also reported that intact Native Hawaiian pre-contact and early contact historic cultural deposits are likely to be lying undisturbed beneath modern fill layers within the project area. Several studies have recorded the presence of intact cultural deposits within the Waikiki area despite years of massive land alteration and construction activity (Hammatt and Chiogioji 1998:25-26). Historic documents, maps, and previous archaeological evidence show the prior existence of a major *`auwai* (water ditch) which drained through the *`Ewa* side of the current project area. This *`auwai* fed the adjacent *lo'i*, and fishponds in the present Fort DeRussy area. Archaeological documentation of this *`auwai* had it registered in the State Inventory of Historic Places as Site 50-80-14-4970, during an archaeological study on the Fort DeRussy grounds (Davis 1989:28).



Map 1 USGS 7.5 Minute Series Topographical Map, Honolulu Quadrangle, showing project area with state/island inset

The current project area, prior to land-reclamation projects in the early 20th century, is identified as a wetland lagoonal environment. It is located *mauka* of an extensive network of fishponds that once covered the present Fort DeRussy grounds (Hammatt and Chiogioji 1998:25-26). An historic map—a portion of U.S. Army Engineers map, based on military surveys from 1909 to 1913—identifies an associated pond within the project area.

The archaeological assessment recommended an inventory survey comprised of additional archival research and sub-surface testing of the entire project parcel. The resulting inventory survey design focused on locating sub-surface features related to the pre and post-contact Native Hawaiian cultivation activities mentioned above, and historic activity in the area.

B. Project Area Description and Environment

The project area encompasses a 109,747 square foot parcel in the contemporary environs of Waikīkī (Map 2). The parcel is situated on the *ʻEwa* portion of the block bounded by Kalaimoku Street, Kalākaua Avenue, Kuhio Avenue, and Lewers Street. Two additional streets access the internal portion of this block: Kaiʻolu Street runs northeast to southwest off of Kuhio Avenue, and Lauʻula Street accesses the block from Lewers Street in a northwest direction and ending at the southeast boundary of the study area. The project parcel is irregularly shaped with the southeast boundary shifting along the boundary of the buildings that remain standing on the block. All of the standing buildings are outside the project parcel on the *Diamond Head* (SE) end of the block. The project area—which is now cleared of all structures and debris—was recently occupied by a parking lot, the Kuhio Outdoor Flea Market, and several commercial buildings. Well-known community businesses included those which formerly housed the Canlis Charcoal Broiler Restaurant, Hernando's Hideaway Restaurant and Bar, and Hula's Bar and Lei Stand.

The current project parcel is located in an area of Waikīkī that is well documented as a wetland environment, which was culturally modified for agricultural and fishpond cultivation in prehistoric times by Native Hawaiians. These subsistence cultivation continued in the post-contact years, evolving in nature and declining as Hawai'i changed. In the early decades of the 20th century, a massive land-reclamation plan altered the natural environment of Waikīkī.

In the late Pleistocene/early Holocene, the Waikīkī area was characterized by an expansive delta drainage system which flowed from the Koʻolau Mountains to the sea (Ferrall 1976:plate II). Ferrall identifies an ancient stream—the *ancient* Manoa Stream channel—as draining through an adjoining channel which flowed through the east and southeast side of the project area. He postulates that this major channel flow was filled and cut-off by the Sugarloaf eruptions during the interglacial advance to the present sea-level; at which time the Manoa Stream was rerouted to the east, joining the Palolo Stream and draining through a channel further to the southeast. Following this event, the modern reef formed a barrier off-shore creating a lagoon behind it. When the ocean reached the

present sea-level the area filled with both marine and terrigenous sediment deposits, and the area became a lagoonal marshy wetland.

This marshy wetland area provided prehistoric Hawaiians with the environment needed for the cultivation of subsistence crops such as taro and banana, etc. The extensive Hawaiian engineered irrigation system, which was viewed and documented by Westerners during early contact years, continued being utilized into the early 20th century. Following the initial post-contact years, Westerners engaged in new massive economic agricultural ventures. Immigrant workers from Asia were brought to Hawai'i as laborers for these ventures, and as a result *rice* became a major crop in many areas of Hawai'i. The wetlands of Waikiki offered an ideal environment for the cultivation of rice, and the area yielded much of its traditional taro cultivation land to rice production.

The plain of Waikiki is flat and, generally, less than 4.5 m (15 feet) above sea level (Davis 1989:5). Soils in the area are composed solely of Jacus Sand with 0-15% slopes (JaC) (Foote et al.1972:Map 63). Rainfall averages less than 30 inches of rain per year (Armstrong 1983:62); however, the area receives additional water from the Kalia and Palolo Streams, as well as rain showers that drift into the area from the mountains and inland valleys (Cleghorn 1996:3). Northeasterly tradewinds prevail throughout the year, although their frequency varies from more than 90% during the summer months to 50% in January; the average annual wind velocity is approximately 10 miles per hour (Okamoto 1998:2-1). Currently, vegetation in the area of the project parcel includes: 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.

C. Scope of Work

The scope of work for the archaeological inventory survey:

1. Historic background research included early accounts of Western visitors, Native Hawaiian historians, historic maps, written records, Land Commission Award documents, photographs, and other pertinent documents. Research focused on the specific project area with general background on the *ahupua`a* (Waikīkī) and district (Kona). Traditional Hawaiian pre-contact and post-contact land-use patterns for Waikīkī and the environs of the study area were summarized.
2. The area of study was identified on maps and in photographs predating the extensive twentieth century environmental land alterations in the Waikīkī area, including the off-shore and Ala Wai Canal Land-reclamation projects in the 2nd and 3rd decades of the 20th century. These maps and photographs also depict both prehistoric and historic land-use within the study area.
3. Previous archaeological investigation in the *ahupua`a* of Waikīkī were reviewed, and studies documenting archaeological features and human burials near the current project parcel were identified.
4. Sub-surface excavations were conducted to test for the presence of significant archaeological cultural deposits and features. The provenience and quantity of cultural materials encountered were recorded and discussed. Datable sediment samples for chronological and environmental information were collected.
5. The possibility of human burials or archaeologically significant sub-surface deposits in the project area is discussed based on the above research.
6. This survey report includes: a topographic map identifying the current survey area and previous archaeological study areas; historical and archaeological background sections summarizing pre-contact and post-contact land-use as it relates to the project areas sub-surface features; a predictive model; description of archaeological sites encountered with selected photographs, and discussions of function; emphasis on trench profiles and collection of representative samples of materials present; and a summary of site categories and their archaeological and historic significance.
7. Recommendations based on all information specify what steps should be taken to mitigate impact of development on archaeological resources.

D. Methodology

Field inspection of the project area was accomplished in January 2000.

Background research included a review of previous archaeological studies on file at the State Historic Preservation Division of the Department of Land and Natural Resources; a review of geology and cultural history documents at Hamilton Library of the University of Hawai'i, the Hawai'i State Archives, the Mission Houses Museum Library, the Hawai'i Public Library, and the Archives of the Bishop Museum; study of historic photographs at the Hawai'i State Archives and the Archives of the Bishop Museum; and a study of historic maps at the Survey Office of the Department of Land and Natural Resources.

This research provided the environmental, cultural, historic, and archaeological background for the project area. The sources studied were used to formulate a predictive model regarding the expected type and location of sub-surface pre and post-contact historic properties in the project areas.

Sub-surface testing consisted of the excavation of 13 backhoe trenches. These trenches were excavated below the water table to the lower natural sand deposits (the gray coarse marine sand stratum) and/or the lower coral stratum. A 70 cm wide bucket was used on the backhoe, and one bucket width trenches were dug. Trench depth varied between 2-2.55 m, unless the lower coral stratum was encountered at a higher depth. Trenches were placed to test specific questions identified in the background research, as well as provide adequate coverage of all portions of the project parcel.

Four archaeologists were on site to conduct sub-surface investigations. Documentation included scale section profiles, sediment descriptions, and photographs of exposed trench sections. Sediment descriptions included Munsell color designations, texture and sediment size, compactness, structure, inclusions and cultural material present, and lower boundary attributes. Sediment samples and portable cultural materials were collected, inventoried, and catalogued. Artifacts included historic ceramic fragments, a man's shoe, a glass bottle, and two wood fragments. These were identified with historical artifact reference materials (Greer 1981; Lister 1989; Richie 1986; Willetts and Poh 1981; Anderson 1968; Munsey 1970). The ceramics were identified with the assistance of Susan Lebo, Phd., from the Bishop Museum.

II. WAIKĪKĪ AHUPUA`A AND THE PRESENT PROJECT AREA: CULTURAL AND HISTORICAL DOCUMENTATION

This section begins with a review of the available documentary evidence for the general character of the area presently identified as Waikīkī. How this area evolved in the years before Western contact, the later 18th century, is established by traditional cultural sources, early post-contact, and recent historic documentation. Subsequent alteration of Waikīkī lands adjacent to and including the present project area—during the 19th century and into the early 20th century—has been recorded in increasingly detailed documentation. This documentation includes cultural sources, government records, maps, and photographs. Finally, the increasing documentation of Waikīkī allows a more precise focus on development of the project area itself.

A. Pre-contact to 1800s

By the time of the arrival of Europeans in the Hawaiian Islands, during the late eighteenth century, Waikīkī had long been a center of political power with a large population. Martha Beckwith (1940:383), 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. Kamehameha decided to reside there after wresting control of O'ahu by defeating the island's chief, Kalanikupule. John Papa I'i (1959:17)—a nineteenth century Hawaiian historian and a member of the *ali'i*—described the king's Waikīkī residence:

Kamehameha's houses were at Puaaliili, *makai* of the old road, and extended as far as the west side of the sands of Apuakehau. Within it was Helumoa where Kaahumanu *ma* went to while away the time. The king built a stone house there, enclosed by a fence.

I'i further noted that the "place had long been a residence of chiefs. It is said that it had been Kekuapoi's home, through her husband Kahahana, since the time of Kahekili." (I'i 1959:17).

Chiefly residences, however, were only one element of land-use that characterized Waikīkī up to the contact era. Beginning in the fifteenth century, a vast system of irrigated taro fields were constructed, extending across the littoral plain from Waikīkī to lower Manoa and Palolo valleys. This field system—an impressive feat of engineering that is traditionally attributed to the chief Kalamakua (Handy and Handy 1972:481)—took advantage of streams descending from Makiki, Manoa and Palolo valleys. These streams provided ample fresh water for the Hawaiians living in the *ahupua`a* of Waikīkī. Water was also available from springs in nearby Mō'ili'ili and Punahou. Closer to the Waikīkī shoreline, coconut groves, banana cultivation, and fishponds dotted the landscape. A sizeable population developed amidst this Hawaiian-engineered resource 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:I,161-164).

Further details of the exuberant life that must have characterized the Hawaiian's use of the land in 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 luxuriance of its productions. Here and there we met with ponds of considerable size, and besides being well stocked with fish, they swarmed with water fowl of various kinds such as ducks, coots, water hens, bitterns, plovers and curlews. (Menzies 1920:2324)

The traditional Hawaiian focus on Waikīkī as a center of chiefly and agricultural activities was soon to change, disrupted by the same Euro-American contact which produced the first documentation of that traditional life. The *ahupua`a* of Honolulu had the only sheltered harbor on O`ahu, and it became the center for trade with visiting foreign vessels. Numbers of Hawaiians were drawn away from their traditional environments, into the activities of the growing town and Honolulu Harbor. This shift in pre-eminence, from Waikīkī to Honolulu, is evident by the fact that Kamehameha moved his residence from Waikīkī to Honolulu. Indeed, by 1828, Levi Chamberlain 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, in a small way a result of the attractions of Honolulu, but more accurately a result of the devastating effects of European diseases upon the Hawaiian populace. The depopulation of Waikīkī, however, was not complete and

the *ahupuaʻa* continued to sustain Hawaiians living traditionally into the nineteenth century. Land Commission Award records from the 1850s document awardees continuing to maintain fishponds and irrigated and dry-land agricultural plots, though on a greatly reduced scale than had been possible with adequate manpower, previously .

A 1881 map of Waikīkī shows a network of fishponds *makai* of the government road (route of the old Waikīkī Road and the present Kalākaua Avenue) in the present Ft. DeRussy area (Map 3). The map indicates that a stream or *ʻauwai* (ditch)—which fed the fishponds—coursed within the *ʻEwa* side of the project area. This *ʻauwai* was entered on the State Inventory of Historic Places as Site 50-80-14-4970 during archaeological study at Ft. DeRussy; see Section III below. The map also indicates that, at the Māhele, portions of the present project area were awarded to William C. Lunalilo (LCA 8559B:29) and to Kauhao (LCA 6386:7). Documents associated with these awards do not reveal what specific activities or land usages were occurring on these parcels at mid-19th century.

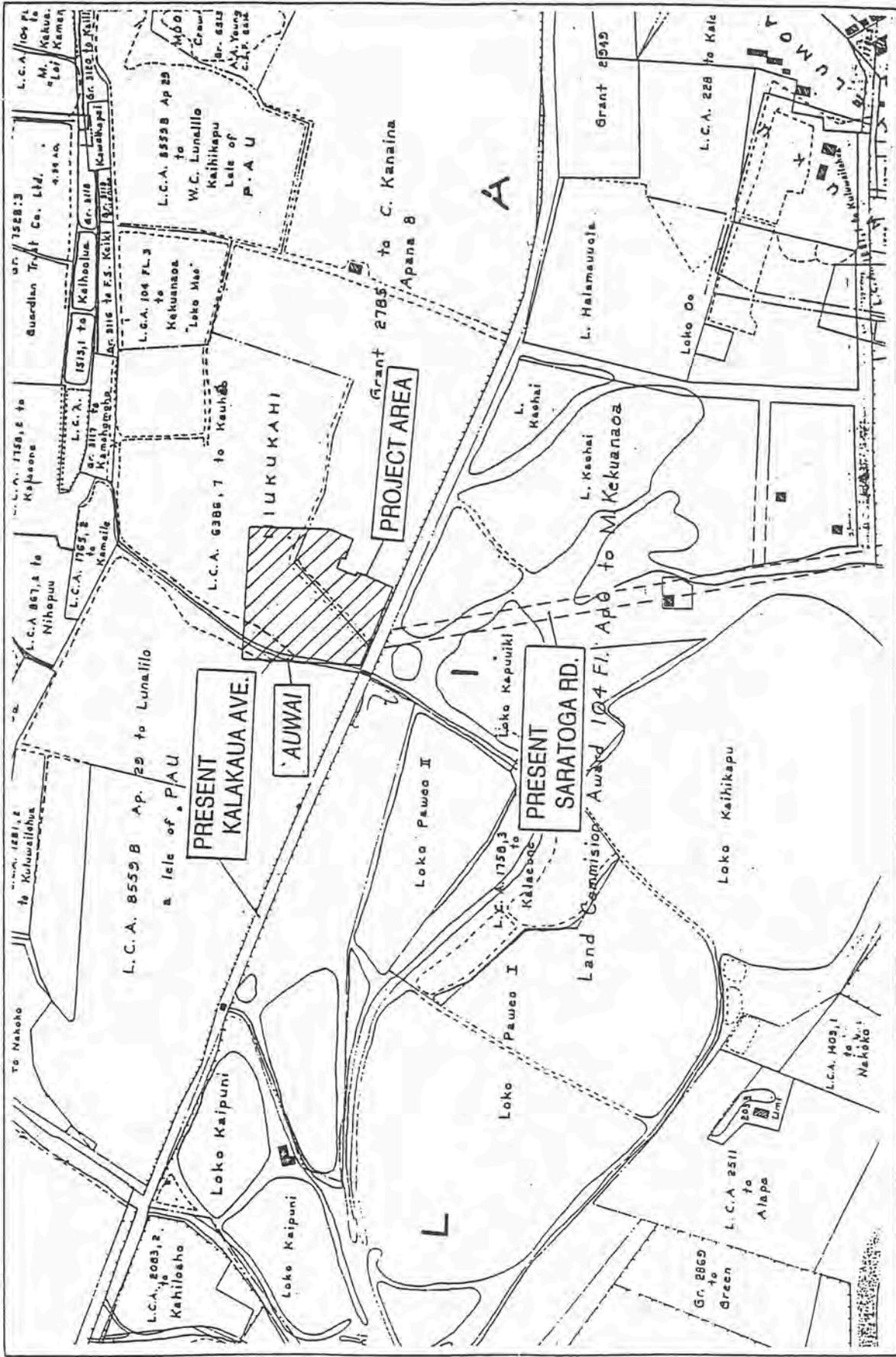
Waikīkī was becoming a popular site among foreigners—mostly American—who had settled on Oʻahu; an 1865 article in the Pacific Commercial Advertiser mentioned a small community that had developed along the beach. The area continued to be popular with the *aliʻi*—the Hawaiian royalty—and several notables had residences there. Other developments during the second half of the nineteenth century—prefiguring the changes that would alter the landscape of Waikīkī during this 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 construction of Kapiʻolani Park.

By the end of the nineteenth century most of the abundant fish ponds had been neglected—as a result of the decrease in population due to disease—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. An 1901 map of Honolulu shows rice fields extending across the plain of Waikīkī, and a banana plantation extending over the current project parcel; the *ʻAuwai O Pau* and its *mauka* path is also depicted, along with the expanding grid of streets surrounding Waikīkī (Map 4). A photograph taken between 1897 and 1901—looking *mauka* from the *makai* side of Waikīkī Road (Kalākaua Avenue)—depicts the area as active with banana agriculture, and characterized with palm trees and property fencing (Photo 1).

B. 1900 to 1920s

During the first decade of the 20th 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 Ft. 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...



Map 3 Portion of 1881 map by S.E. Bishop, with location of present project area

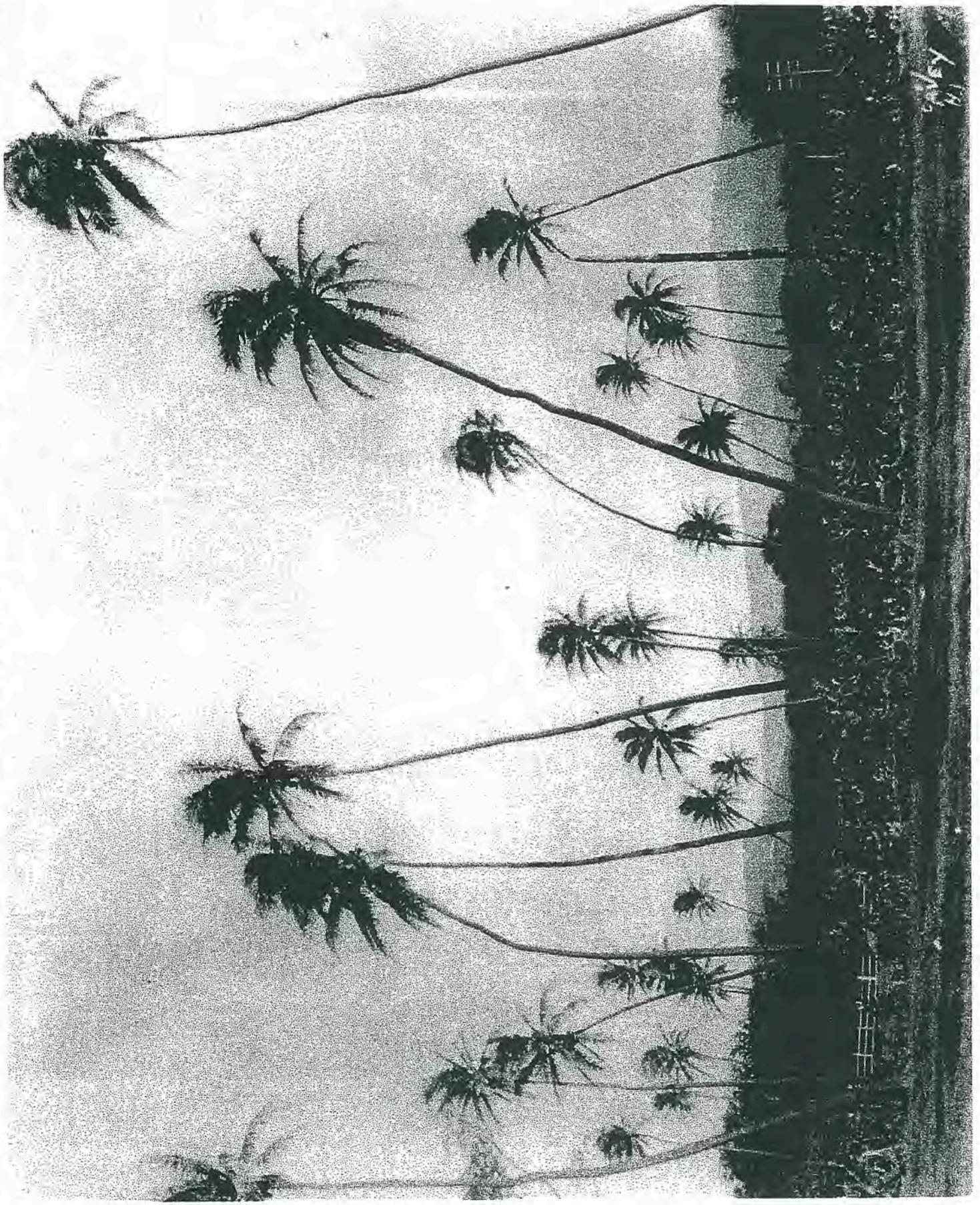


Photo 1 Coconut Palms and Banana Cultivation, taken from Waikiki Road between 1897 and 1901

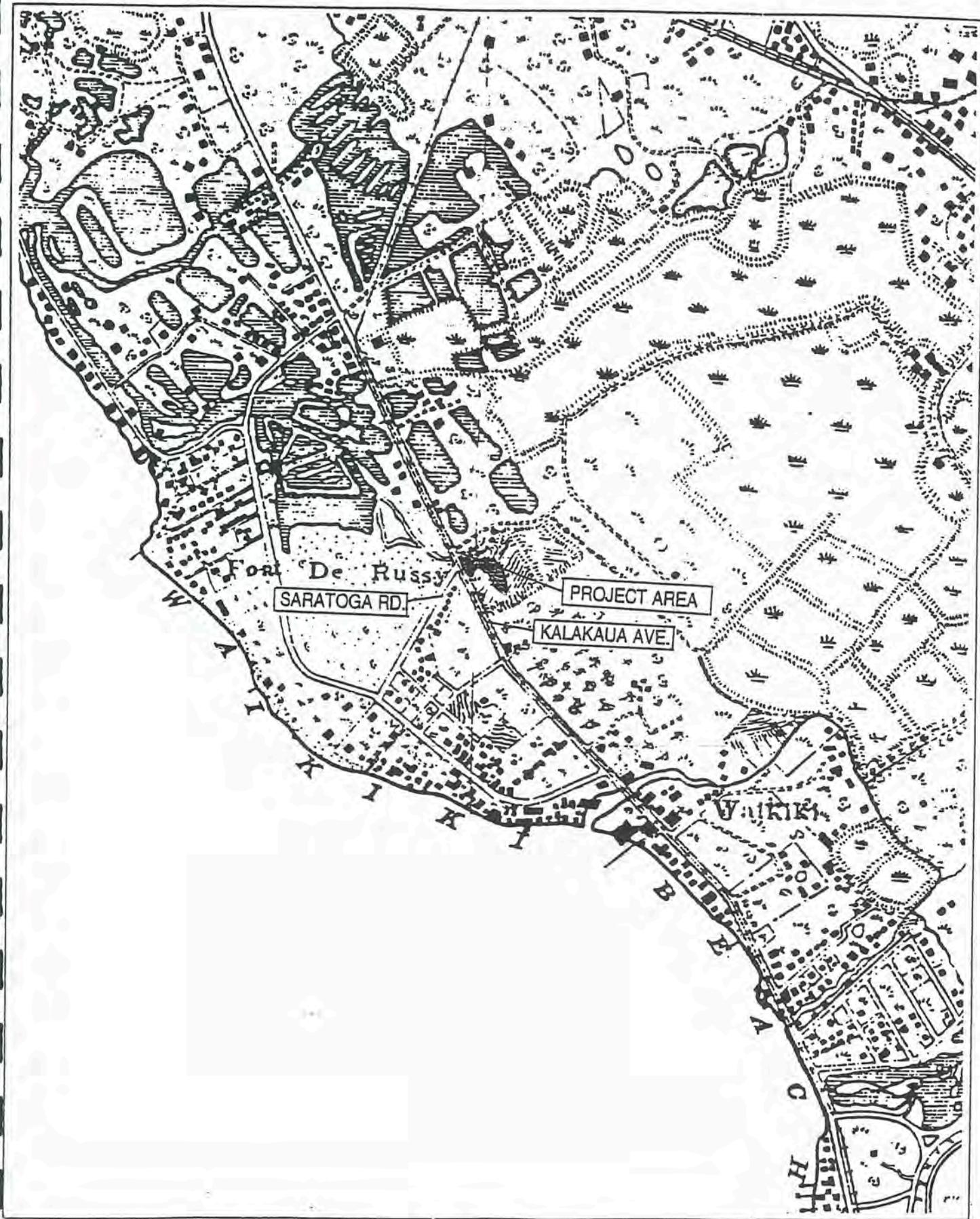
Between 1909 and 1911 the engineers were primarily occupied with mapping the island of O'ahu. At DeRussy other activities also had to be attended to—especially the filling of a portion of the fish ponds which covered most of the Fort. This task fell to the Quartermaster Corps, and they accomplished it 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 map of O'ahu based on military surveys between 1909 and 1913 shows that much of the Kālia land now identified as Ft. DeRussy had been filled-in, and many structures covered the Waikīkī landscape *makai* of Kalākaua Ave (Map 5). The map also presents a more detailed picture of the present project area than that recorded in the earlier maps discussed above. It suggests that, in addition to the *auwai* (ditch) there was a pond and marshy fields located within the project area. This is confirmed with a 1910 photograph taken of a stream or pond and banana cultivation, which according to the photographer was taken in the area between today's 'Olohana and Lewers Streets—the photograph was taken looking *mauka* from Kalākaua Avenue (old Waikīkī Road) (Photo 2). This information places the photographer, almost unmistakably, looking into the project area.

During the 1920s the project area would be transformed. The construction of the Ala Wai Drainage Canal—began in 1921 and completed nine years later—resulted in the draining and filling in of the remaining ponds and irrigated fields of Waikīkī. The canal was one element of a plan to urbanize Waikīkī and the surrounding districts:

The [Honolulu city] planning commission began by submitting street layout plans for a Waikīkī reclamation district. In January 1922 a Waikīkī improvement commission resubmitted these plans to the board of supervisors, which, in turn, approved them a year later. From this grew a wider plan that eventually reached the Kapahulu, Mo`ili`ili, and McCully districts, as well as lower Makiki and Manoa...

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)



Map 5 Portion of U.S. Army Engineers Map, based on military surveys from 1909 to 1913, and showing Fort DeRussey and present project area

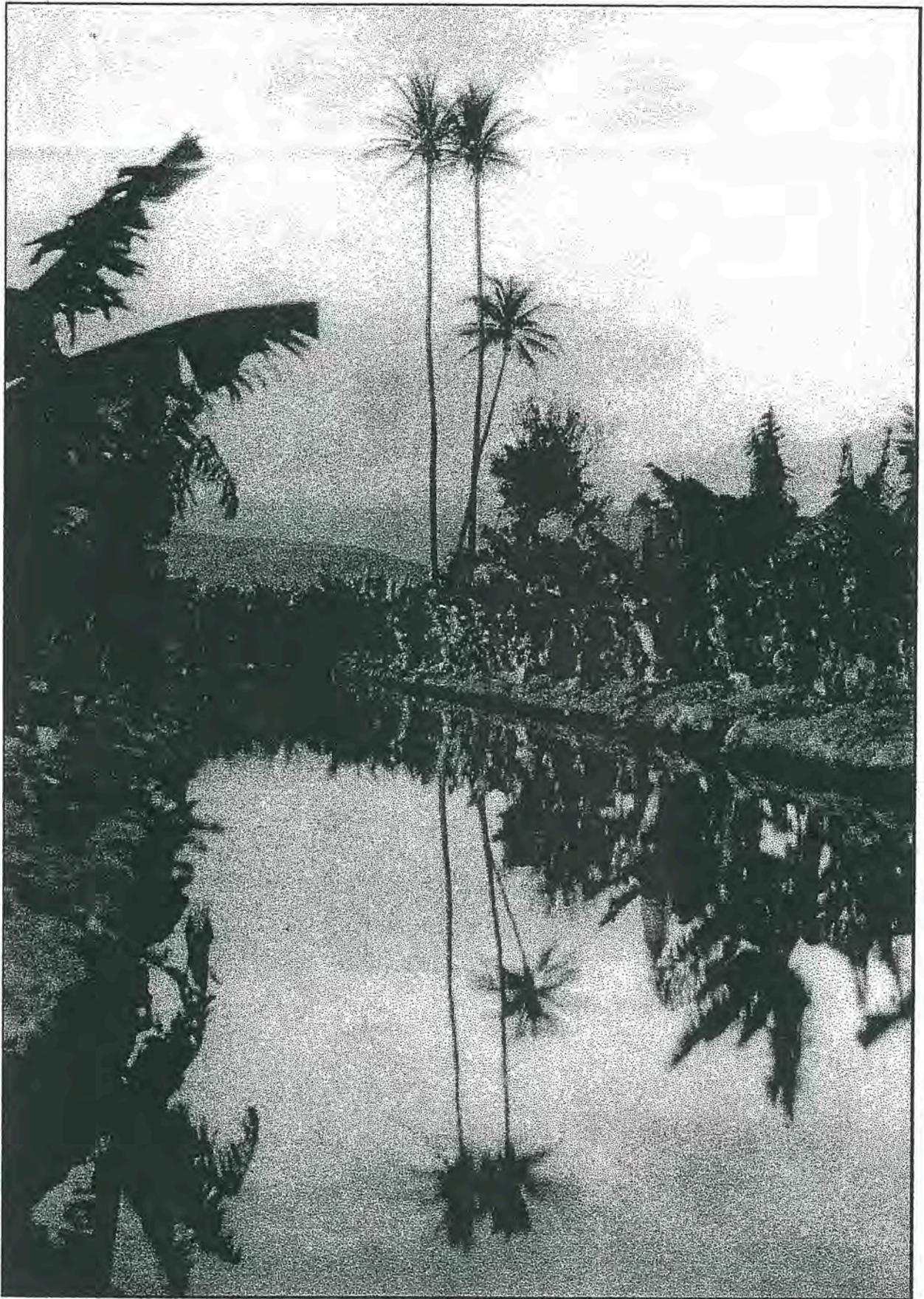


Photo 2 1910 Photograph, banana field and stream from Kalakaua Avenue (Waikiki Road) between 'Olohana and Lewers Streets. Photo by Ray Jerome Baker (Bishop Museum CP 114,153)

Nakamura (1979:85) writes that the government of the Territory of Hawai'i solicited bids, in 1920, for the dredge and fill project planned for the environs of Waikiki. The plan was to create hundreds of acres of urban land—at the expense of wetland agriculture and aquaculture in the area. The advertisement soliciting bids for the project, put forward by Lyman H. Bigelow, masked the significance of the project by stating that “for Dredging a Drainage Canal and Filling and Reclaiming Certain Unsanitary Lands at Waikiki” (Nakamura 1979:85). He further writes that State laws were passed requiring property owners to pay for the filling in of their lands, which apparently was going to be done whether they wanted it or not. A lien would be fixed against their property and if all payment was not made on time, land would be foreclosed on. Nakamura points out that the cost was so high for some of the property owners, that the bank lien could extend into a fifteen year mortgage (Nakamura 1979:89).

Once land that the Territory of Hawai'i government wanted filled in (for state buildings) was complete, any further dredged materials became the property of the dredging company—the Hawaiian Dredging Company—and they in turn could sell the materials to the property owners, who in turn were forced to buy the product. Walter F Dillingham, of the Hawaiian Dredging Company died in 1963. Time magazine, in their article about him and his involvement in the project stated that “...Walter Dillingham used the muck dragged up from the sea to fill in low, marshy areas around Honolulu, over the years created 5,000 acres of solid ground that now holds a full third of the city's population,” (cited in Nakamura 1979:112).

The land surface of modern Waikiki is situated on the result of this decade long dredging and fill project of which the creation of the Ala Wai Canal was included. In Nakamura's (1979:113) “The Story of Waikiki and the “Reclamation” Project” he writes that this land “reclamation” program changed the ecology of Waikiki from a once viable and important agriculture and aquaculture center...destroyed by profit-seeking capitalist entrepreneurs...under the subterfuge of “drainage” and “sanitation.”. Many of the original property owners lost their land or had serious damage to their property as a result of the reclamation activities and/or the costly expense for the mandatory filling in of their properties.

Information about the actual dredging and fill process, and the materials dredged-up and used for fill is minimal. Statements and pictures regarding the event suggest that dredging was done both off-shore, on the ocean bed, and in the area slated for the canal (Photos 3 and 4). As yet, information regarding the filling process of personal properties—with the excess dredge that became the property of the Hawaiian Dredging Company—is unclear. Numerous phases seem to have taken place. In the case of the current project area, its location adjacent to Ft. DeRussy may be relevant to the earlier fill projects in that area; considering that the Army's own off-shore hydraulic dredge and fill of the Ft. DeRussy and adjacent areas took place between 1909 and 1915.

An aerial photograph of the late 1920s shows the new canal and the filled in lands of Waikiki, including the present project area, overlaid with the new gridwork of streets (Photo 5). The photograph indicates that there were no structures on the project area in



Photo 3 Dredging the Ala Wai Canal at Kalākaua Avenue, ca. 1924
(Bishop Museum Archives negative CP 104,362)

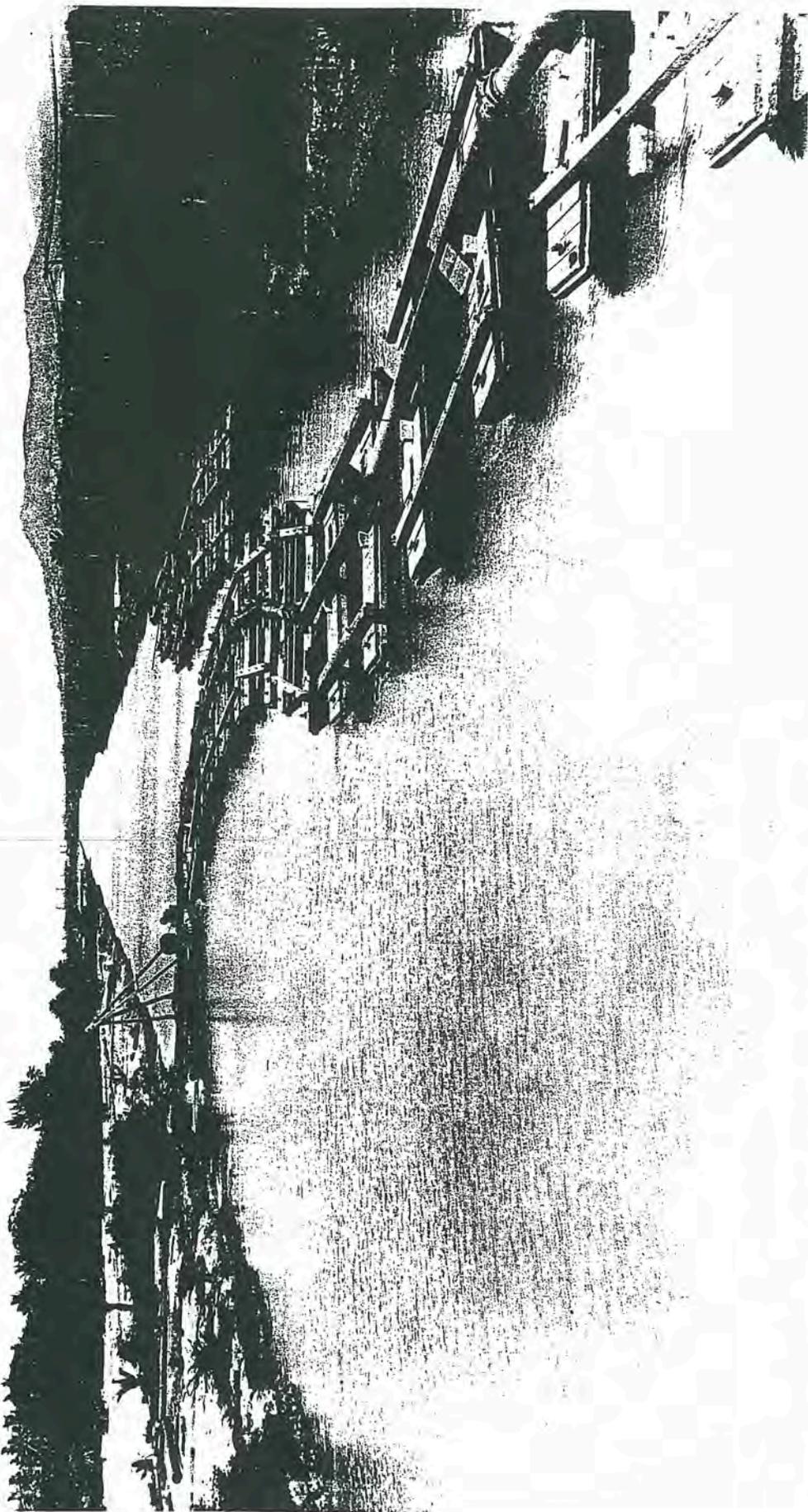


Photo 4 Floating dredge line in the Ala Wai Canal ca. 1924
(Bishop Museum Archives negative CP 73903)



Photo 5 Enlarged portion of aerial photograph, ca. late 1920s, showing location of the project area and possible remnant of the *'Auwai O Pau* (Bishop Museum Archives)

the late 1920s. A line of vegetation shown cutting across the project area is likely a remnant marking the route of the *ʻauwai* (ditch) that formerly drained into the fishponds at Ft. DeRussy.

A 1927 Sanborn Fire Insurance map shows the new block defined by Kalākaua and Kuhio avenues and Kalaimoku and Lewers streets (Map 6). The map confirms that no buildings had yet been constructed within the present project area. The only structure located on the block is a “sewerage pump” located outside the project area.

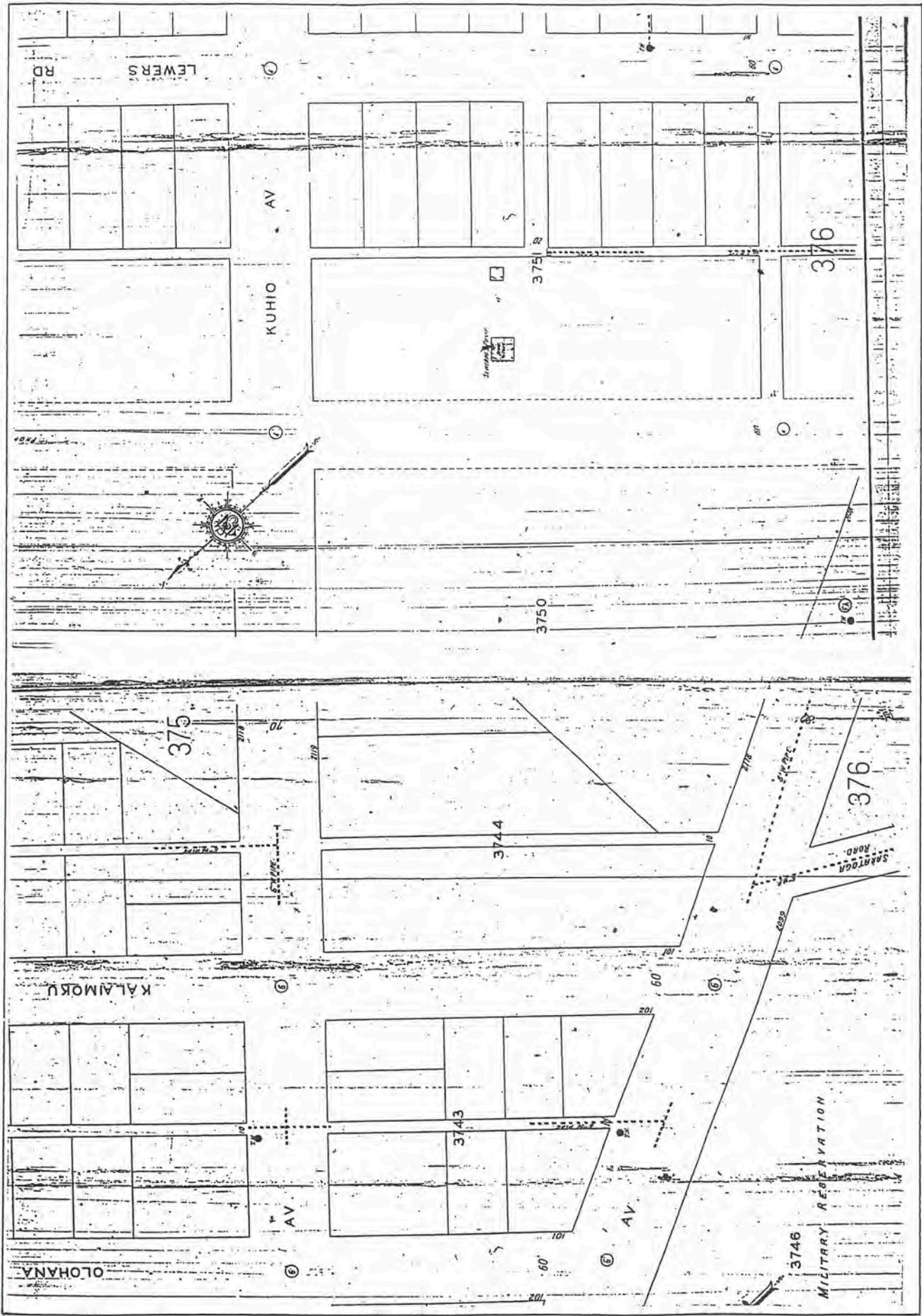
C. Late 1920s to Present - Historic Building Review

By the latter 1940s, following World War II, the portion of Waikīkī which includes the present project area was covered by a mix of commercial and residential buildings. A *ca.* 1945 photograph shows the southwest corner of the project area at Kalaimoku Street and Kalākaua Avenue (Photo 6). This portion of the project area contained, in the 1940s, a parking lot and a taxi stand shelter (shown in the right foreground). Also within the project area are one-story wooden buildings whose roofs are just visible above the fence behind the parking lot. Outside the project area, on the *ʻEwa* side of Kalaimoku Street, is the Kuhio Theater which was constructed in 1942 (*Art-Deco* style building). This theater and the other structures on the property in 1999, were demolished to construct the Kalākaua Plaza. This new shopping plaza now houses Niketown, Banana Republic, and the All Star Cafe.

A 1951 Sanborn Fire Insurance map identifies the buildings and features present on the project area at mid-century (Map 7). The map shows the parking lot and taxi stand, as seen in the previous *ca.* 1945 photograph, on the site of the later Canlis Charcoal Broiler restaurant (no longer extant). Along the portion of the project area fronting Kuhio Avenue are one-story wooden buildings identified as store and dwelling units (at TMK 2-6-18:73, 52 & 55). None of these structures remain.

Two well-known structures and business establishments were added to the project area since the early 1950s when the fire insurance map was drawn. In 1946 the restaurateur Peter Canlis opened the first Canlis Charcoal Broiler in Waikīkī at the Kuhio Beach end of Kalākaua Avenue, on what would later become the site of the Waikīkī Biltmore Hotel (demolished in 1974). Canlis relocated his restaurant to 2100 Kalākaua Avenue—within the present project area—in 1954. The new restaurant was designed by the firm of Wimberley and Cook, at a cost of \$250,000. The restaurant continued in operation until 1989. The Canlis building subsequently served as a Honolulu Police Department sub-station, until the demolition of all the structures on the property (1999).

In 1974, Hula’s Bar & Lei Stand opened at the *makai*-Diamond Head corner of Kuhio Avenue and Kalaimoku Street (at TMK 2-6-18:73). It replaced a laundromat and food stand which were then operating on the parcel. It remained in operation until its closing in 1998.



Map 6 1927 Sanborn Fire Insurance map showing newly-created block bounded by Kalakaua and Kuhio avenues and Kalamoku and Lewers streets

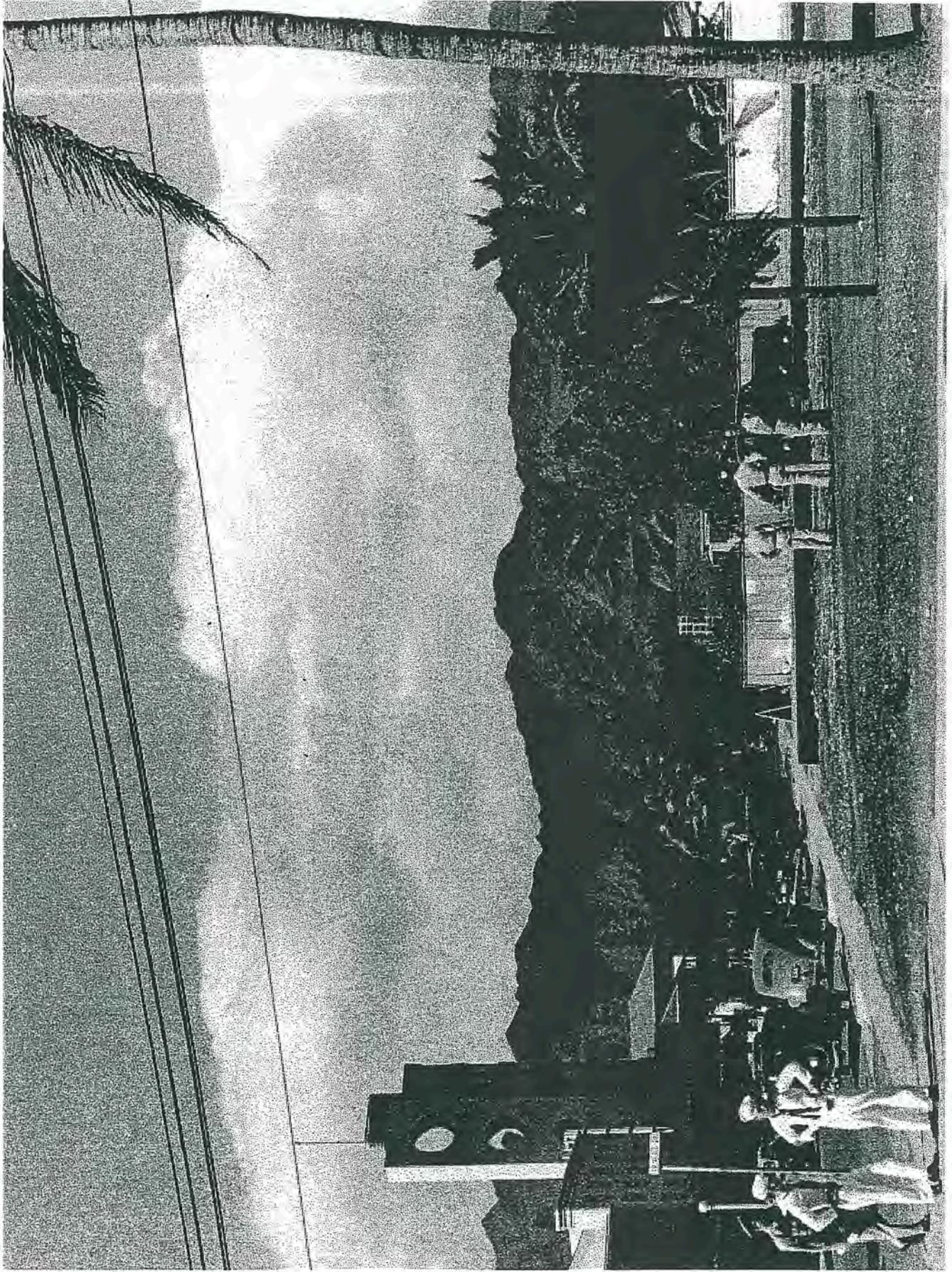


Photo 6 Corner of Kalakaua Avenue and Kalamoku Streets, ca. 1945, (Bishop Museum Archives Negative CP 85935)

As stated in the project background, the concern regarding the demolition of the Canlis Restaurant building was addressed through the redesign of the “koban” police station structure now planned for the property. This structure will typify the same architectural trends of the Canlis building it replaces.

At the present time (April 2000) the project parcel remains fenced. Large trees remain on the property—including an historic Banyan in the NE corner—and are being cared for by the property caretaker. The site is presently being rented out for private functions and use such as preparation grounds for parade organization.

III. PREVIOUS ARCHAEOLOGICAL RESEARCH

Prior to the 1980s, the majority of the information concerning Waikīkī—from archaeological sources—center around the inadvertent excavations of human burials during construction activities. The previous archaeology discussed below—also summarized in the following table and map (Figures 1 and 2)—testifies to the rich cultural resource information which lies beneath Waikīkī, below the land-reclamation fill sediments which preserved them in the archaeological record.

In 1901, while digging a sewer line at the James B. Castle property near Diamond Head (the area of the present Elks Club) the remains of at least four adult Hawaiians were unearthed along with "a number of conical teeth of whale teeth, a number of round glass beads of large size, and a small sized niho-palaoa, such as was generally appropriated to the use of the chiefs" (Emerson 1902:19).

Thrum, in 1916, compiled descriptions of heiau on O'ahu. Information on previously destroyed heiau was gathered from local informants. The study was not systematic, and Thrum did not visit all the heiau he wrote about, however, it is an informative source.

In the 1930's, the first systematic archaeological survey of O'ahu was conducted by J.C. McAllister (1933). He recorded five *heiau* in the vicinity of Waikīkī, four of which were located at the *mauka* reaches of Waikīkī *Ahupua`a* in lower Manoa Valley including Kukaoo *Heiau*, Kawapopo *Heiau*, Hakika/Paliluahine *Heiau*, and Mauoki *Heiau*. The fifth *heiau*—Papaenaena—was located at the foot of Diamond Head crater in the environs of the present Hawai'i School for Girls. Papaenaena Heiau is traditionally associated with Kamehameha I who was said to have visited the Heiau before setting off to battle for Niihau and Kauai in 1804. Five years later, according to John Papa ʻŪi, Kamehameha placed at Papaenaena the remains of an adulterer—"all prepared in the customary manner of that time" (ʻŪi 1959:50-51).

During the 1960s through the 1970s inadvertent burial finds were reported at construction sites stretching from the Fort DeRussy area to the foot of Diamond Head crater. In 1961 a human burial and a nineteenth century trash pit were unearthed during construction on Saratoga Road adjacent to Fort DeRussy. In 1963 human burials were discovered during construction activities at 2431 Prince Edward Street and at the site of the present Outrigger Canoe Club across from Kapi'olani Park. Twenty-five burials were excavated by the Bishop Museum, several of which were interred in flexed (with knees drawn up to the chin) or semi-flexed positions—traditional Hawaiian burial postures.

Sand dune burials—another traditional Hawaiian mortuary practice—were revealed in 1964 as beach sand fronting the Surfrider Hotel shifted and eroded.

The remains of six burials—five of apparent prehistoric or early historic age and one of more recent date—were unearthed in 1976 during construction of the Hale Koa Hotel adjacent to the Hilton Hawaiian Village Hotel.

In 1980, three burials were exposed at the Hilton Hawaiian Village, during construction of the hotel's Tapa Tower. Earl Neller of the State Historic Preservation Program was called in upon discovery of the burials and conducted fieldwork limited to three brief inspections of the project area. Neller's (1980) report noted:

The bones from three Hawaiian burials were partially recovered; one belonged to a young adult male, one a young adult female, and one was represented by a single bone. An old map showed that rapid shoreline accretion had occurred in the area during the 1800s, and that the beach in the construction area was not very old. It is possible the burials date back to the smallpox epidemic of 1853. It is likely that burials will continue to be found in the area. It is also possible that early Hawaiian sites exist farther inland, beneath Mo`ili`ili, adjacent to where the shoreline would have been 1000 years ago. (Neller 1980:5)

Neller also documented the presence of trash pits, including one from the 1890s which contained "a large percentage of luxury items, including porcelain tablewares imported from China, Japan, the United States, and Europe" (*ibid*:5). He further notes:

It is suspected that other important historic archaeological sites exist in the highly developed concrete jungle of Waikīkī, with discrete, dateable trash deposits related to the different ethnic and social groups that occupied Waikīkī over the last 200 years. (*ibid*:5)

Between December 1981 and February 1982, archaeologists from the Bishop Museum, led by Bertell Davis, conducted a program of excavations and monitoring during construction of the new Halekulani Hotel. Six human burials were recovered along with "animal burials [and] cultural refuse from prehistoric Hawaiian firepits, and a large collection of bottles, ceramics, and other materials from trash pits and privies dating to the late 19th century" (Davis 1984:i). Age analysis of volcanic glass recovered from the site led Davis to conclude: "For the first time we can now empirically date...settlement in Waikīkī to no later than the mid-1600s" (*ibid*:i). Just as significant to Davis was the collection of historic era material at the Halekulani site; he states:

[The] Halekulani excavations clearly demonstrate...that there is a definite need to consider historic-period archaeology as a legitimate avenue of inquiry in Hawaiian research. Furthermore, archaeology in the urban context can yield results every bit as significant as in less developed areas. Development in the 19th and early 20th centuries clearly has not destroyed all archaeological resources in Waikīkī, Honolulu, or in any of the other urbanized areas of Hawai'i. (*ibid*:i)

From January through December of 1983, Earl Neller of the State Historic Preservation Office conducted archaeological fieldwork during construction of the Lili'uokalani Gardens condominium on Paoakalani Street. The bones of seven

individuals— all from prehistoric Hawaiian graves—were recovered at the site. Neller's (1984) report noted:

Queen Lili'uokalani had a bungalow at the project site, and broken glass and ceramic were collected that once was used by the Queen and her guests. There is a deeply buried cultural layer at the site that is older than the graves. (Neller 1984:i)

Neller recommended further work to develop a full-scale study of the material collected at the site; unfortunately, no such study was ever produced.

During 1985 and 1986, archaeologists from Paul H. Rosendahl, Ph. D. Inc. conducted archaeological monitoring for the Mechanical Loop Project located at the Hilton Hawaiian Village property in Waikīkī. This project area had been subject to both historic and modern construction and modification disturbance. In 1980, Neller, as mentioned above, had responded to inadvertent burials during one of these construction disturbances; however, no additional burials were unearthed during the latter project. Although, fifteen sub-surface historic trash pit or trench features were documented during archaeological monitoring. The dating analysis of cultural material within these features established feature chronology; all 15 features were reported as post-dating 1881.

Griffin (1987) documented human burials in front of the Moana Hotel at Helumoa, fronting Kalākaua Avenue. In the following year, during additional renovations at the Moana (Simons 1988), human burials were again encountered. In addition, prehistoric and historic site deposits were also recorded.

During 1988 the Moana Hotel Historical Rehabilitation Project (Simmons et. al. 1991) encountered human remains that amounted to at least 17 individuals. Based on stratigraphic association these burials were interred over time as the land form at the site changed. The sediment surrounding these burials yielded traditional midden and artifact assemblages. The burials and human remains were found in the Banyan Court and beneath the hotel itself.

In 1989, Bath and Kawachi reported skeletal remains unearthed during the digging of an electrical line trench, for a new sprinkler system, on the grounds of the Ala Wai Golf Course. The trench had exposed a pit containing two burials, the report suggested that one of the burials may have been previously disturbed during grading for the Territorial Fair Grounds. The osteological analysis included in the report concludes that both sets of remains "appear ancient." (Bath and Kawachi 1989).

Davis' (1989) sub-surface investigations and monitoring work at Fort DeRussy documented substantial sub-surface archaeological deposits—prehistoric, historic, and modern. These recorded deposits included: early historic era fishponds from which buried fishpond sediments were sampled, *auwai* sediments sampling, midden and artifact enriched sediments, habitation deposits with structural remains such as post holes and fire pits, historic trash pits, and a human burial. The fishponds and habitation deposits were

recorded and assigned both state and Bishop Museum site numbers. Davis' (1991) report documents similar findings, and testing dating human activity in the Fort DeRussy beach front area from no later than the mid-16th century to the present.

The work at Fort DeRussy continued in 1992 when BioSystems researchers built upon Davis' work for a data recovery project designed to mitigate adverse effects of the impending construction of a new recreational facility (Simons, et.al. 1995). BioSystems' research further documents the development and expansion of the fishpond and *`auwai* (ditch) system in this area. The *`auwai* system was added to the State Inventory of Historic Places (SHPD) as Site 50-80-14-4970. As indicated on the 1881 map by S.E. Bishop (see Map 3), this *`auwai* enters the Ft. DeRussy grounds through the present project area. Remains of the fishpond and *`auwai* deposits, as well as habitation deposits were documented below modern fill deposits. This research, along with that of Davis (1991), clearly demonstrates that historical document research can be an effective guide to locating late prehistoric/early historic sub-surface deposits, even amidst the development of Waikīkī.

The realignment of Kālia Road at Fort DeRussy in 1993 uncovered approximately 40 human burials. A large majority of these remains were recovered in a large communal burial feature (Carlson *et. al.* 1994). The monitoring and excavations associated with this realignment also uncovered a cultural enriched layer which contained post holes.

On April 28, 1994 an inadvertent burial discovery was made during excavation for a water line at the intersection of Kalākaua Avenue and Kuamo'o Street (just *mauka* of Ft. DeRussy and two blocks northwest of the present project area). These remains represented a single individual (McMahon 1994).

Another inadvertent discovery of human remains occurred in April of 1995 at the site of the Waikīkī Sunset Hotel (Jourdane 1995). The remains appeared to be a single individual.

Hammatt and Shideler (1996) reported radiocarbon dates, prepared by Beta Analytic Inc., for strata from data recovery at the Hawai'i Convention Center Site in Waikīkī. Carbon isotope dating and OXCAL calibrations to correct for the marine carbon reservoir established that the top of a dark greenish gray clay stratum (IV) dated at a conventional radiocarbon age of 570 ± 50 BP and a Marine Reservoir corrected date (95%confidence) of 1715-1950 AD, while the bottom of the same clay layer respectively dated at 810 ± 50 BP and 1520-1950 AD. The overlaid lower layer of Stratum III, described as a fine gray loamy sand registered a conventional radiocarbon age of 2900 ± 100 BP and a Marine Reservoir corrected date of 800 BC-150 BC, and the upper layer dated at 2430 ± 100 BP and 250 BC-400 AD. This stratigraphic sequence denotes a cultural deviation from superposition, and is interpreted by Hammatt and Shideler (1996) as the result of a series of historic land-reclamation fills. It was also reported that no clear evidence of pre-Contact occupation was observed (Hammatt and Shideler 1996).

In 1996 Pacific Legacy, Inc. conducted an archaeological inventory survey of the

block bounded by Kalākaua Avenue, Kuhio Avenue, 'Olohana Street, and Kalaimoku Street. This parcel is located immediately adjacent to, and on the 'Ewa side of, the present project area. The survey included excavation of seven backhoe trenches. The sub-surface testing results reported (Cleghorn 1996:15) inferred that:

...this area was extremely wet and probably marshy. This type of environment was not conducive for traditional economic practices...The current project area appears to have been unused because it was too wet and marshy.

Several peat deposits containing the preserved remains of organic plant materials were discovered and sampled. These deposits have the potential to add paleoenvironmental information to our knowledge of the area.

The report concluded that no further archaeological investigations of the parcel were warranted since "no potentially significant traditional sites or deposits were found" but cautioned of the "possibility, however remote in this instance, that human burials may be encountered during large scale excavations" (Cleghorn 1996:15).

In 1996, a traditional Hawaiian burial was discovered and left in place during test excavations on two lots at Lili'uokalani Avenue and Tusitala Street (McDermott *et al.* 1996). Indigenous Hawaiian artifacts and historic artifacts were also found within the project area.

Beardsley and Kaschko (1997) report findings from a monitoring and data/burial recovery project in 1985 which was conducted concurrently with the construction of a new structure on a corner of the Pacific Beach Hotel Office Annex in Waikīkī. A traditional pre-Contact habitation layer complete with pits, firepits, post molds, artifacts, food debris, and two human burials was documented; this traditional habitation layer was assigned state site number 50-80-14-4224 in 1990. A nineteenth century trash dump feature was also recorded, and it was inferred that it, possibly, associated with the Kapi'olani house which was located in the vicinity. Beardsley and Kaschko reported that radiocarbon dates and dating of volcanic glass established a period of occupation near the end of the pre-Contact period. It was further stated that "the presence of isolated remnants of traditional Hawaiian cultural deposits in the project area demonstrates the potential for discovering similar deposits at other locations in Waikīkī."

In 1997, during archaeological monitoring by Cultural Surveys Hawai'i, for the ongoing Waikīkī Force Main Replacement Project, scattered human bones were encountered on 'Ōhua Street (Wineski and Hammatt 2000 [in prep]). These included the proximal end and mid-shaft of a human tibia, a patella, and the distal end and mid-shaft of a femur. These remains occurred within a coralline sand matrix which had been heavily disturbed by previous construction, and by the on-going construction project. No precise location for the original burial site was identified.

Cultural Surveys Hawai'i, in 1998, completed an archaeological assessment of the

project parcel reported on herein—the inventory survey—and recommended that “It is likely that intact prehistoric and early contact cultural deposits are lying undisturbed beneath modern fill layers within the project area. Also, there is historic evidence indicating the existence of a major *auwai* and possible adjacent *lo i*...Particular attention... (should be given in an inventory survey) to locating the *auwai* (state Site 50-80-14-4970) along the west side of the project area.”(Hammatt and Chiogioji 1998:26).

In April 1999, two human burials were inadvertently encountered near the intersection of Ena Road and Kalākaua Avenue during excavation activities for the Waikīkī Anti-Crime Lighting Improvements Project, Phase I (Perzinski et. al. 1999).

By April of 2000, at least forty human burials with associated cultural deposits have been exposed during excavation for the 16-inch Watermain Installation Project and the related Kuhio Beach Improvements Project, on Kalākaua Avenue along Kuhio Beach between the Moana Hotel and Ōhūa Avenue. This project is ongoing at the present time (April 2000) and a full report by Cultural Surveys Hawai‘i is pending after the project’s completion.

In March 2000, Cultural Surveys Hawai‘i recorded two historical trash pits during the Waikīkī Anti-Crime Lighting Improvements Project. One trash pit was located at the *makai*-Diamond Head corner of Kalākaua Avenue and Ala Moana Boulevard, the NW corner of the current Ft. DeRussy property. The second was located at the *makai*-Diamond Head (SW) corner of Kalākaua Avenue and Saratoga Road. Ceramic fragments, metals, and glass items were recovered from both pits, and a general overview—before lab analysis—dates several of the artifacts to the first half of the 19th century. This report is pending completion of the project.

In summary, past archaeological research has produced evidence that traditional Hawaiian cultural deposits, historic trash deposits, and most notably human burials, do exist throughout the breath of the Waikīkī area.

FIGURE 2 PREVIOUS ARCHAEOLOGY TABLE

Year	Emerson	Excavation	Waikiki	Elks Club area off Kalaheua	Notes	Date	Human Burial	Human Burial
1902	Emerson	Salvage Excavation	Waikiki	Elks Club area off Kalaheua	Remains of at least 4 adult Hawaiians were encountered. A number of conical whale teeth, large round glass beads, and 1 small tinfo-palaoa (generally for Chiefly use) were also recorded.			
1916	Thrum	Heiau Sites recorded		Island of Oahu	Recording of 3 Waikiki Ahupua'a Heiau in lower Manoa Valley; Hipawai (makai of Manoa Church) partially destroyed by 1907, Kawapopo (lower Manoa) destroyed before 1850, and Hakiki (or Paliuahuine) destroyed before 1850.			
1933	McAllister	Reconnaissance Survey (limited)		Island of Oahu	Recording of 5 Waikiki Ahupua'a Heiau: 4 in the mauka reaches of Waikiki are Kawapopo, Kukao, Mauoiki, and Hakiki/Paliuahuine Heiau, and 1 Papaenaena Heiau is at the foot of Diamond Head	50-80-14-3986	Kawapopo Heiau	Oa-A4-1; Oa-A4-2; Oa-A4-5 Kukao Heiau; Mauoiki Heiau
1961	Bishop Museum	Salvage Excavation	Waikiki	331 Saratoga Road	One human burial with associated mandible were encountered. Also recorded were 2 glass bottles, and two nut shell fragments in a layer of charcoal & refuse - 0.6 m deep, a 19th c. trash pit.	50-80-14-3706	Human Burial	Oa-A4-19 Human Burial
1963	Bishop Museum	Salvage Excavation	Waikiki	2431 Prince Edward St and site of present Outrigger Canoe Club	Twenty-five human burials were encountered, 1 with a fish skeleton beside it. Burial positions included extended, flexed and semi-flexed. Other items: charcoal, rusted iron bits, broken bottles, Chinese dishes, cut pig bones, and 1 whole fruit jar (1898).	50-80-14-3707	Human Burial	Oa-A4-23 Human Burial
1964	Bishop Museum	Salvage Excavation	Waikiki	Old Outrigger Canoe Club site (current Surfdrifter Hotel site)	Sand dune human burials were encountered prepared with traditional Hawaiian mortuary practice.	50-80-14-3705	Human Burial	Oa-A4-24 Human Burial
1976	Bishop Museum	Salvage Excavation	Waikiki	Hale Koa Hotel	Six human burials were encountered (5 apparent prehistoric or early historic, 1 more recent).	50-80-14-9500	Human Burial	Oa-A4-25 Human Burial
1980	Neller	Salvage Excavation	Waikiki	Hilton Hawaiian Village Hotel	Three human burials, interpreted as Hawaiian, were encountered: 1 male young adult, 1 female young adult, and 1 single bone.	50-80-14-2870	Human Burial	
1984	Neller	Salvage Excavation	Waikiki	Queen Liliuokalani Gardens Hotel and Condominiums	Seven prehistoric Hawaiian human burials were encountered. Broken glass, ceramics, and a deeply buried cultural layer were also recorded.			
1984	Davis	Salvage Excavation	Waikiki	Halekulani Hotel	Six human burials were encountered. Animal burials, Hawaiian firepits, trash pits, and privies with many bottles, ceramics & other materials dating to late 19th c. were also recorded. Age Analysis of volcanic glass (no later than mid-1600s)	50-80-14-9957	Human Burial	Oa-A4-26 Human Burials
1985	Kaschko	Salvage Excavation / Data Recovery	Waikiki	Pacific Beach Hotel	Human burials were encountered. Prehistoric and historic site deposits were also recorded.			
1987	Griffin	Salvage Excavation / Data Recovery	Waikiki	Kalakaau Avenue (near Moana Hotel)	One human burial was encountered.	50-80-14-3745	Human Burial	
1989	Davis	Subsurface Excavation	Waikiki	Fort DeRussy	One human burial was recorded; And, substantial subsurface prehistoric, historic and modern deposits e.g. fishpond and 'auwai sediments, midden/artifacts, and structural remains e.g. post-holes, fire pits, and historic trash pits. Human activity-1500s-on.			
1989	Bath and Kawachi	Archaeological Monitoring	Waikiki	Ala Wai Golf Course grounds	Two pit human burials were encountered (ancient/osteology analysis)			
1991	Simmons, et.al.	Monitoring / Salvage Excavation	Waikiki	Moana Hotel	At least 17 human burials interred over time (based on stratigraphy) were found in the Banyan Court and beneath the hotel.	50-80-14-9901	Human Burials	Oa-A4-27 Human Burials
1991	Davis	Archaeological Monitoring and Excavations	Waikiki	Fort DeRussy, LCA 1515 Apana 2	Two occupation layers 1 prehistoric likely historic. Other finds: 20 hearths, 15 pits of unknown function, 3 postholes, a burial pit, 15 artifacts (traditional Hawaiian pumice fragment, polished basalt adz fragment, & 3 basalt flakes and historic exotic items)			
1992	Hurlbert, Carter, and Goodfellow	Archaeological Monitoring	Waikiki	Hilton Hawaiian Village (Mechanical Loop Project)	15 historic trash pits or trenches (all post-dating 1681).			
1994	Carlson, et.al.	Archaeological Monitoring / Excavation	Waikiki	Kalia Road at Fort DeRussy	About 40 human burials (many in 1 lg. communal burial feature), were encountered. A cultural enriched layer with post-holes was also recorded.			
1994	McMahon, Nancy	Archaeological Monitoring	Waikiki	Kalakaau Ave and Kuao'o Street	One human burial was encountered.			
1995	Simmons	Data Recovery	Waikiki	Fort DeRussy (work in 1992)	Documentation of the development and expansion of the fishpond and 'auwai (ditch) system, and habitation deposits below modern fill.	50-80-14-4970	Auwai system	
1995	Jourdane	Archaeological Monitoring	Waikiki	Waikiki Sunset Hotel	One human burial was encountered.			
1996	Cleghorn	Inventory Survey	Waikiki	block bounded by Kalakaau Ave, Kuhio Ave, Olohana St., and Kalaimoku St.	Peat deposits with preserved remains of organic plant material recorded with paleoenvironmental findings.			
1997	Beardley and Kaschko	Monitoring and Data/Burial Recovery	Waikiki	Pacific Beach Hotel Office Annex Building Area	Two human burials were encountered. A pre-Contact habitation layer with pits, firepits, post molds, artifacts, and food debris. A 19 th century trash dump feature was found. Radiocarbon dates to late pre-Contact years.	40-80-14-4224	Traditional habitation layer	

IV. PREDICTIVE MODEL

The formulation of the following predictive model is based on previous archaeological findings and traditional Hawaiian historical sources, which provided evidence for prehistoric land-use and settlement pattern for the Waikīkī *Ahupua`a* region. This information is combined with recorded historic and modern development events for the project area and its environs. The predictive model establishes how the archaeological record might reflect the cultural praxis documented for this area, based on the above research.

The prehistoric Hawaiian settlement pattern was based on the system of *ahupua`a* land division. Prior to the *Māhele* of 1848 O`ahu was divided into six *moku* or *kalana* (districts): Ko`olaupoko, Ko`olauloa, Waialua, Wai`anae, `Ewa, and Kona; these are said to be the same divisions established by the *ali`i Ma`ilikukahi* around 1500 A.D. Contained within these six districts were 86 (known) prehistoric *ahupua`a* land divisions (Map 8). The *ahupua`a*, as described by Kirch (1985:2, Chapter 11), ideally, is represented by a pie-shaped slice of an island or region, usually running from the mountains to the sea. Each *ahupua`a*, ideally, contained adequate amounts of all the natural resources a Hawaiian island could provide.

The current project area lies within the *ahupua`a* of Waikīkī in the *moku* (district) of Kona (see Map 8). Waikīkī *Ahupua* deviates somewhat from the usual pie-shape land division in that its sides, the northwest to southeast breath, are wider. It does, however, fit all the other traditional criteria for an ideal *ahupua`a*, as described above both environmentally and in the archaeological record. Within the Waikīkī *Ahupua`a*, the *mauka* to *makai* region relative to the current project area extends from the Ko`olau Mountain range to the lower valleys of Manoa and Palolo, to the dry lowland of Mō`ili`ili and extending on through the inland wetlands (before late historic modifications), and the coastal zone to the sea.

The project area is located in what was the wetland plains of Waikīkī. This area provided ancient Hawaiians with the environment needed for the cultivation of fishponds and subsistence crops such as taro and banana. The features expected from these cultural activities include berms, *lo`i* (pond fields), stream beds, pond banks, and *auwai* levee remnants. Following the initial years of European contact, Westerners engaged in new massive agricultural ventures. Immigrant workers from Asia were brought to Hawai`i to labor in these new agricultural ventures, and as a result *rice* also became a major crop in many areas. The wetlands of Waikīkī was an ideal environment for the cultivation of rice, and the area yielded much of its traditional taro cultivation land to rice production. This is evident on the 1901 Monsarrat Map (4). The same area, in the early 20th century, was altered more intensely for land-reclamation plans; the resulting dredge and fill projects obliterated what remained of traditional Hawaiian cultivation processes, in the wetlands of Waikīkī.

Ideas of land-reclamation, for the wetlands of Waikikī, surfaced in the early decades of the 20th century. The most extensive reclamation project took place in the 1920s, with the off-shore and inland dredging for the creation of the Ala Wai Canal. The wetland plains of Waikikī were filled-in with materials dredged from the sea-floor and the area of the present Ala Wai Canal. The current project area was directly affected by the Ala Wai Canal dredging and land-reclamation program. Drainage from the Ko'olau Mountains was diverted through the new Ala Wai Canal, leaving the rich agricultural land buried below layers of sediment and coral fill.

It appears that the project parcel sat dormant for a period of time with major building beginning in the late 1930s. Various episodes of demolition and rebuilding took place in the final years of the 20th century (see Historical section), until the final demolition and clearing of the project parcel in 1999.

In considering the above discussion, this predictive model anticipates remnants of: the original ground surface for the Native Hawaiian agricultural wetland environment, archaeological evidence confirming historical sources documenting the *ʻAuwai O Pau*, cultural agricultural features, and possibly a pond. Above this original ground the model expects to find evidence of fill episodes from the land-reclamation programs, which include the Ala Wai Canal and off-shore dredging projects. Evidence of late historic construction, demolition, and landscaping activities are expected to overlay the dredged strata.

V. RESULTS FROM SUB-SURFACE TESTING

A. Summary of Trenches

Thirteen backhoe trenches were excavated on the current project parcel. Figure 3 shows the location of these trenches. A combined length of 95.16 meters were excavated with a 70 cm wide backhoe bucket. Based on the predictive model, trench excavations were placed to expose remnants of the ground features expected: an *auwai*, wetland agricultural areas, and a potential pond. The sediments and sub-surface features found are similar to the expectations of the predictive model. The *'Auwai O Pau* was located in the cross-section of Trenches 1, 7 and 8, underlying historic fill layers. Numerous prehistoric/historic agricultural berms—such as those used to form banks and planting surfaces for taro or other wetland crops—were evident in many of the profiles. Evidence for the pond is marginal, no distinct boundary was found. No human burials were encountered.

B. Stratigraphy Overview

Evident in the exposed stratigraphy were three major stratigraphic components: the uppermost, usually layers of Strata I and II, are recent land fill sediments which date to post 1930; the middle stratigraphic components are comprised of various episodes of land-reclamation fill sediments, which took place between 1910 and 1930 (the first decade being military fill projects on and around Ft. DeRussy); the third and final exposed stratigraphic component is the original prehistoric/historic ground surface—an organic stratum now recorded as historic Site 50-80-14-5796—representative of the former Native Hawaiian prehistoric to early 20th century agricultural land surface. The only cultural materials found, other than the debris in the upper recent fills, were a few ceramics, a shoe, and two pieces of wood. These were found in this prehistoric/historic wetland layer. An organic peat layer was also evident at the lower boundary of this stratum, in certain areas. Directly below this prehistoric/historic ground surface is a stratum of gleyed gray calcareous coarse sand. Below this is a layer of coral, which was usually the base of excavation.

The recent fill layers, those in the uppermost strata, vary in texture and color. The deeper land-reclamation fills—those most likely related to the Ala Wai Canal and off-shore dredging projects—were more consistent in texture, color and the amount and size of coral inclusions. However, the lowest of these dredged strata is distinct as a gleyed gray silty clay. Generally, stratigraphy was fairly consistent throughout the project area.

Following is a more in-depth description of the major stratigraphic components.

The uppermost sediments, as mentioned above, are generally comprised of recent fills that include: recent landscape fill, recent construction fill, and re-worked refill materials. These materials are representative of construction, remodeling, and

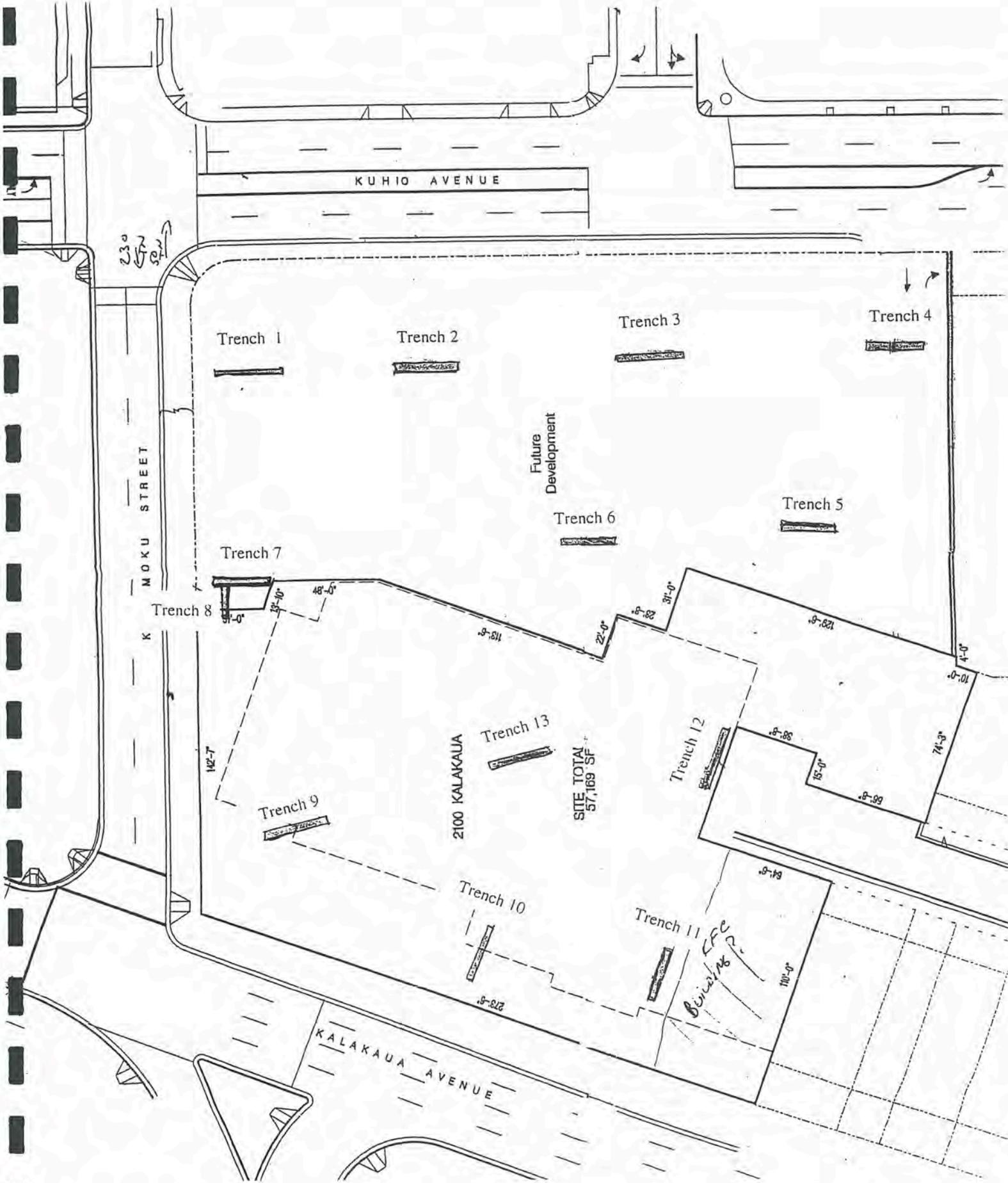


Figure 3 Location of Trenches

development in the project area from the late 1930s to the recent demolition and removal of all structures within the parcel. Landscaping fills, and possibly some of the more recent construction fills, were brought in to the project area for particular building events, accounting for part of the diversity in these upper sediments. It is also evident that previously on site materials disturbed during historic construction or demolition events were re-worked and used to refill the disturbed areas.

These recent fills include sediments of fine to coarse sand or loam that vary in Munsell color from very pale brown to very dark brown. Inclusions recorded include roots and rootlets, charcoal flecking, a black tar like substance, and gravel to cobble size rubble comprised of coral, shell, and basalt. Historic infrastructure debris includes asphalt fragments and layers, cement fragments, metal pipes, PVC pipe, and plastic fragments. Architectural rubbish such as glass, tile, brick fragments were sometimes mixed within the refill materials.

The middle land-reclamation sediments are related to the fill projects that took place in the Waikīkī area between 1910 and 1930. Fill from the Ala Wai Canal and off-shore dredging lies beneath the more recent fills described above. These land-reclamation materials were dredged from the ocean floor (directly off-shore) and from the area of the present route of the Ala Wai Canal. A path moving north and east from the beach at Ala Moana (where the mouth of the canal is located) to just before Kapahulu Avenue was excavated and dredged to a depth of at least twenty feet and a width of two hundred and fifty feet, to construct the Ala Wai Canal. The filling in of the surrounding area was achieved through a combination of hydraulic pumping and truck dumping of materials (see Photos 3 and 4). Occasionally, time lapses occurred between the different episodes of filling a particular property, which may explain the variation in the sediment.

These fill sediments consists of very fine to medium-coarse sands, loamy sands, sandy clay loams, and silty clays. Fine clay lenses are present in some of the predominately sand strata. Some of these sediments contain gravelly to stony coral inclusions from dredging activity. Shell is found from very fine crushed to gravel size fragments, and some small (<1 inch) whole shells. The lower of these land-reclamation fill layers contain clays—initially in sporadic deposits then in layered bands intermixed with sands—and finally in distinct and clear silty clays just above the water table.

Munsell colors for these dredged land-reclamation fills vary from yellowish brown to various shades of browns and grays. In general, the top layers consists primarily of light brown to gray sand. The mid-layers are yellowish to brown sands, loams, and clays; and the lowest layers are a variation of medium to dark gray silty clay. This gleyed gray clay is generally found at or near the water table, sometimes extending below, and in a few cases contains a bluish hue in certain areas (also near the water table). The tan colored silty clay is found above the gray, however, its presence is not consistent throughout the project area. These silty clays are structureless and exhibits moist, sticky, and plastic properties.

The most interesting aspect of these dredged fill sediments is that they often feature microstratigraphy—fine layered bands from 1 mm to 3 cm thick. Generally, the

microstratigraphy occurs in very fine sand sediment in bands of 1 mm to 1 cm thick, in fine sand from 1 mm to 3 mm thick, and in silty clay from 1 to 2 mm thick. In the following photograph (Photo 7), this microstratigraphic layering (banding) is evident in the gleyed gray silty clay. The hue of the gray clay varies slightly from trench to trench, and is interbedded with bands of the relative hue's darker Munsell values and chromas (such as dark grays to black). The tan clay (which is usually above the gray) is a brown (10 YR 5/3), and its bands vary through lighter and darker shades of this color value and chroma. These microstratigraphic lenses of silty clay and fine sands are the result hydraulic dredging episodes during the land-reclamation projects. Photograph 4 shows the pipe lines used in this dredging procedure.

General inclusions for these land-reclamation fills can include charcoal flecking, charcoal lenses, organic materials, landsnails, sporadic deposits of clay, basalt rocks, and rocks. Historic inclusions consists of rusted metals, glass fragments, and one Kukui nut (Trench 3). Also found in these middle sediments are very few to abundant roots and rootlets from very fine (0.075 to 1 mm) to coarse (> 5 mm) diameters. These fill sediments vary from a homogenous composition to various combinations of the inclusions mentioned above. The silty clays are usually homogenous, except for roots and rootlets in particular trenches.

Below the land-reclamation strata is the original ground surface—the prehistoric to early 20th century wetlands (SIHP Site 50-80-14-5796)—which follows the contours of the former land surface, prior to the dredged fills. The sediments that comprise these strata vary between moist sandy loamy clays, sandy clay loams, and clay loams. The compositions are generally consistent, and include organic materials, roots and rootlets, charcoal flecking, and historic artifacts and midden.

The only cultural materials encountered—except for recent historic construction and demolition debris in the upper strata (usually I and II)—were found in this original prehistoric to early 20th century ground strata, mostly in relation to the *auwai* floor. In Trench 1 (Stratum VII), one ceramic fragment, one black shoe, and one piece of milled wood were recorded. One wooden plank fragment was recorded in Trench 2, lodged into Strata IX and X at the NW levee. This wooden fragment is shown in Photograph 10 (50). Five ceramic fragments representing three artifacts were recorded in Trench 7 (Stratum VII). This trench has remnants of the *Auwai O Pau*. One light green glass soda bottle was found in Trench 10 (Stratum II). These items are described in greater detail, with accompanying photographs, within the trench discussions that follow.

This original land surface was culturally modified by Native Hawaiians, as early as the 1300s (Beckwith 1940), into an irrigation system for agricultural and fishpond activities (see historical section). The topography exposed, revealed remnants of the Native Hawaiian irrigation system in the *auwai* and agricultural features (*lo'i*) observed. The overall topography of this original prehistoric/historic ground surface is characterized throughout the project area by a series of berms, levees, and pond banks.

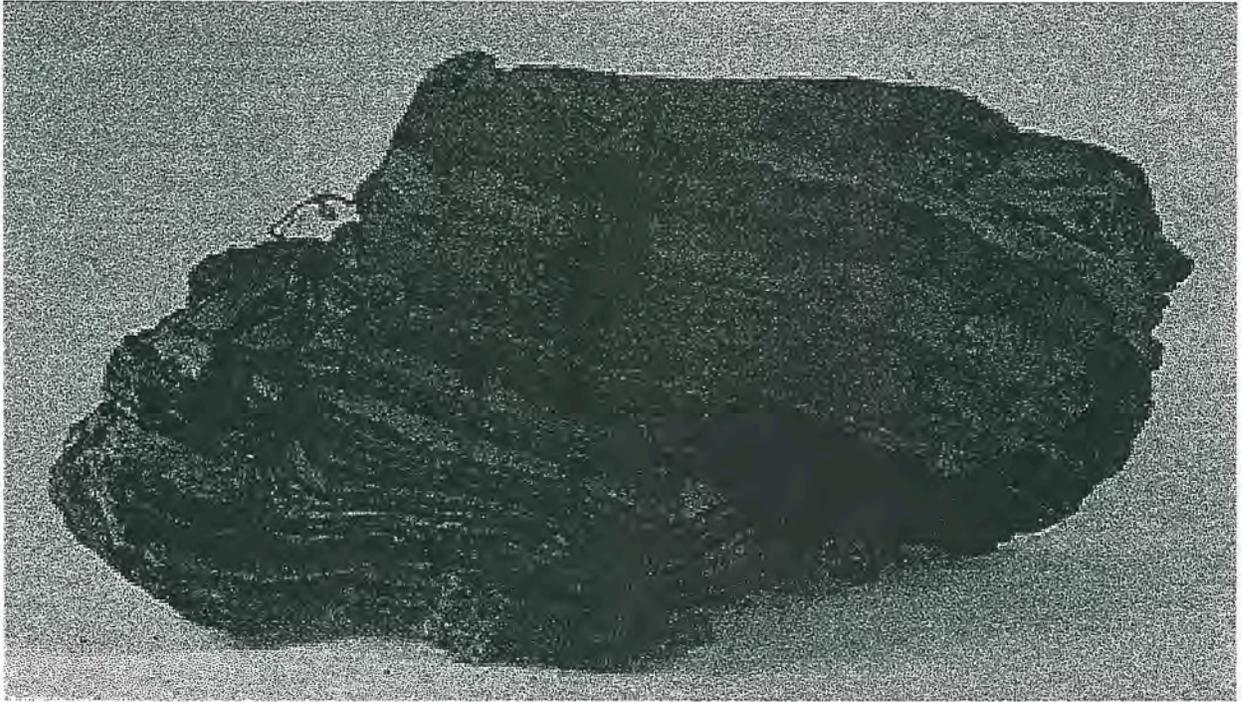


Photo 7 Gray/Black Silty Clay Microstratigraphy found above the prehistoric/historic ground surface

A very distinct submerged organic peat stratum was recorded at the base the original ground surface, described above, in Trench 11 Stratum VII (the SW corner of the parcel). It is a clay loam containing a mass of fine rootlets with landsnails. Adjacent trenches did not contain this pronounced peat stratum, however, landsnails were evident in the original ground strata in three adjacent trenches (10,12 &13), the highest concentration in Trench 10. This section of the project area is depicted as a banana plantation on Monsarrat's 1901 Honolulu map (Map 4). The profile of Trench 11 depicts the original ground surface, as defined above, overlying the peat stratum. It is possible that the profile depicts prehistoric land alteration (creating berms for wetland agricultural boundaries), which covered an organic layer of undermined age.

Beneath the original agricultural ground surface—or the peat layer mentioned above—is a gleyed calcareous coarse sand. This gray sand represents the natural sand deposits occurring during the formation of Waikīkī. Gleying is do to its location at or below the water table. This submerged gray sand has a consistent composition with no inclusions other than basalt cobbles in particular areas. However, the wood plank found in Trench 2 was partially entrenched in this stratum (see profile for Trench 2). Compact coral lies at the base of excavation in most of the trenches.

C. Trench Descriptions and Profiles:

Location, dimensions, and general trench observations are described below, followed by a general strata interpretation, and particular observations. Trench profiles, sediment descriptions, and profile photographs end each trench section.

Trench 1: Northeast and Southwest Walls (See Figures 4 and 5)

Both the north-northeast wall and the south-southwest wall of this trench were profiled, for thorough documentation of the *Auwai O Pau*. Description of the northeast wall, the Kuhio Avenue side of the project area, follows. The water table was encountered at 160 cmbs.

Stratigraphy:

Stratum Ia	Recent construction fill.
Stratum Ib	Construction fill.
Stratum Ic	Agricultural modification fill.
Stratum II	Construction or land-reclamation fill.
Stratum III	1920-1930 Ala Wai land-reclamation fill event
Stratum IV	1920-1930 Ala Wai land-reclamation fill event
Stratum V	1920-1930 Ala Wai land-reclamation fill event
Stratum VIa	1920-1930 Ala Wai land-reclamation fill event.
Stratum VIb	1920-1930 Ala Wai land-reclamation fill event.
Stratum VII	Prehistoric-historic agricultural wetlands (pre 1920s land-reclamation).
Stratum VIII	Natural sand deposits, during the formation of Waikīkī.

Strata Ia, Ib, and II are recent construction or land-reclamation fills consistent in composition with natural fill materials, no cultural items were found in these sediments. The loamy coarse sand of Stratum Ic appears to be a disturbed area, with a few small deposits of the original ground surface mottled in the overall sediment type.

Strata III to V, and VI a and b, are land reclamation fill episodes related to the construction of the Ala Wai Canal. Combined, these fill strata measure to 140 cm below today's ground surface. All of these strata, except Stratum III, exhibit microstratigraphic layers. These finely bedded layers are found in the fine sand, fine loamy sand, and the silty clays of Strata VIa and VIb. The fine sand microstratigraphy of Stratum IV varies from 1 to 3 mm thick. The fine loamy sand microstratigraphy of Stratum V measures from 1 to 2.5 cm thick, with several shades of light brown sediments. The silty clays of Strata VIa and VIb have banding as thin as 1 mm and vary to 3 mm in thickness. The southeast end appears to have lifted as a result of the alteration of Stratum Ic. In the trench's southeast end, in the northeast wall profile, Stratum VIa was lifted as a result of the disturbance that created Stratum Ic. The lowest boundary of the gleyed gray silty clay layer (Stratum VIb), which is generally near the water table throughout the project area, was recorded at 150 cmbs. Thickness for this layer varies between 10-18 cm.

Stratum VII, the lowest surface of the underlying prehistoric/historic wetland stratum—the floor of the *'Auwai O Pau* (state Site 50-80-14-4970)—is located at the same 150 cmbs point. The top of the berm or levee on the NW side measures to 90 cmbs. The levee on the SE side, as explained above for Stratum Ic, has been disturbed (see profile). This prehistoric/historical wetland stratum is a clay loam. The shape revealed in cross-section for Stratum VII is the *'Auwai O Pau*. Sediment samples were collected for each stratum in this trench, and two charcoal samples.

Historic cultural material collected in Stratum VII include a ceramic fragment, a black shoe, and a piece of milled wood—all found in the *'auwai* floor layer. The ceramic fragment is an edge-decorated rim sherd from a pearlwort or early Whitebark British ceramic flatware. It is probably a platter, and dates between 1810 and the 1840s (Hunter and Miller 1994:432-443). The edge of the rim is scalloped, and the top edge surface is cobalt blue with grooves resembling a left parenthetical stroke. The black shoe is a man's left shoe with a nailed sole (round nail). No heel is present and no evidence of having had a heel. The upper and outer sole is intact, and two upper instep style flaps are present (Photo 8). This shoe dates, generally, to post 1860, according to Adrienne Anderson (1968:59) who writes that "As late as 1860 most shoes were formed on "straight" lasts. This meant that the shape of the instep was not considered and no distinction was made between right and left feet." As stated, this is a general rule. The stylistic attributes of the split back of the heel seam (on the outer leather flaps) and the flaps and styling of the upper outer instep flaps, however, suggest an earlier 19th century style. Without a more detailed analysis it is suggested that the shoe dates between 1840 to 1880.

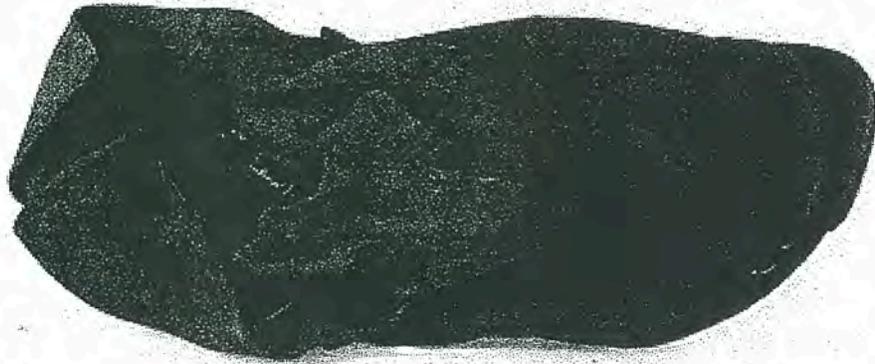


Photo 8 Man's Black Leather Shoe 1840-1880

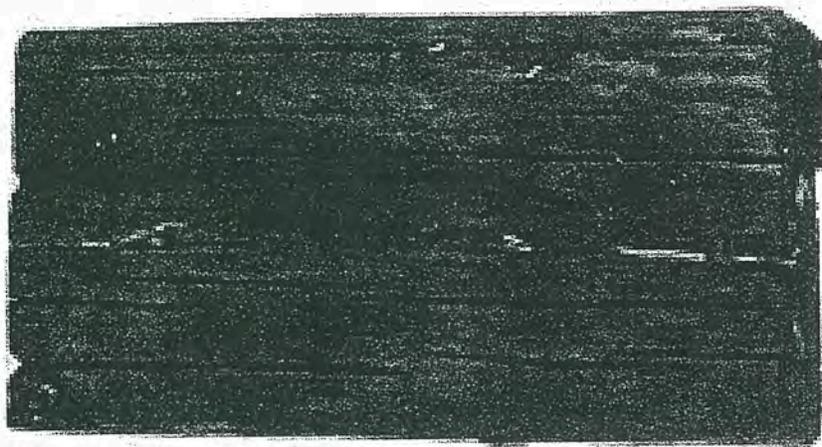
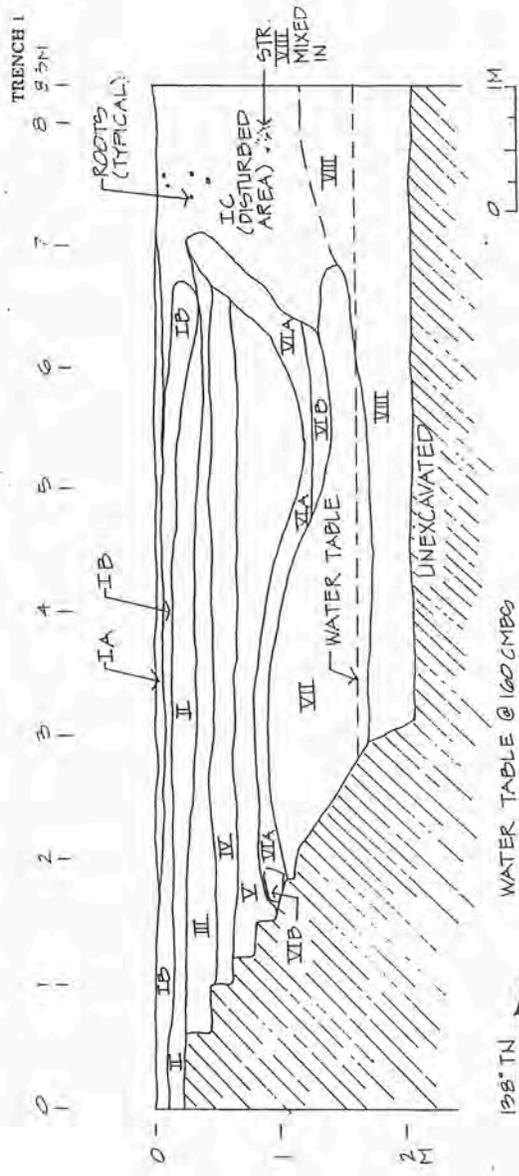


Photo 9 Milled Wood

The milled wood measures 5 7/10ths x 2 8/10ths x 9/10ths inches (14.4 x 7.4 x 2.4 cm)(Photo 9). The artifacts described here are of Western provenance and date to years between 1810 and 1920, and they represent items used and/or available in Hawai'i during those years. The *in situ* provenience—within the prehistoric/historic ground surface (state Site 50-80-14-4970)—of these artifacts demonstrate the continued use of these potentially prehistoric features into the historic period.

The surface of the coarse gray natural sand deposits of Stratum VIII, varies between 110-170 cmbs, with the higher elevation on the SE end; this elevation is similar to a sand berm, however, given the disturbance and the fairly consistent plane of this stratum in the rest of the project area, it is possible that the wet submerged coarse sand raised as a result of the disturbance. The base of the trench is a compact layer of coral.

TRENCH 1 Northeast Wall: length 8 m, depth 207 cmbs, width 82 cm, orientation 138°/318° TN (SE/NW)

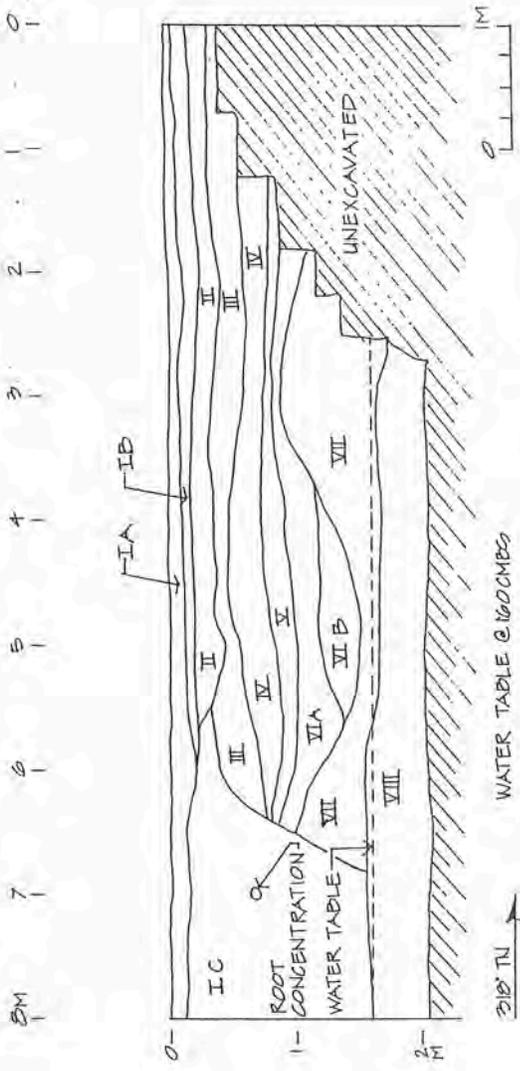


Strata	CMBS	Description
I a	0-7	10 YR 7/3 very pale brown, Sand, loose, structureless, inclusions: gravel pebbles, crushed shell, clear-smooth lower boundary
I b	7-14	10 YR 6/3 pale brown, Sand, slightly compact, structureless, inclusions: roots & rootlets, shell & coral gravels, random large coral cobbles 5-10 cm; abrupt-smooth & discontinuous lower boundary
I c	0-110 @ 7.6m	10 YR 2/2 very dark brown, Loamy Coarse Sand, slightly compact, structureless, inclusions: deposits from strata VII & VIII; abrupt lower boundary
II	14-31	10 YR 3/3 dark brown, Loamy Sand, gravelly, slightly compact, structureless, inclusions: very few roots & rootlets, some basalt cobbles, coral & shell (medium 1-5 cm to large <10 cm); abrupt wavy and discontinuous lower boundary
III	31-41	10 YR 6/2 light brownish gray, Medium-Coarse Sand, gravelly, loose, structureless, inclusions: coral & crushed shell (5-10 cm) at lower boundary; abrupt wavy and discontinuous lower boundary
IV	41-65	10 YR 5/2 - 6/1 gray brown to gray, Fine Sand & Clay Microstratigraphy, slightly compact, structureless, inclusions: very few roots & rootlets; clear smooth and discontinuous lower boundary
V	65-113	10 YR 4/2-5, 5/3-5 dark grayish brown-dark yellowish brown, brown-yellowish brown Loamy Very Fine Sand Microstratigraphy, slightly compact, structureless, no inclusions, very abrupt-wavy & discontinuous lower boundary
VI a	113-124	10 YR 6/3 brown, Silty Clay Microstratigraphy, compact, structureless; moist, sticky, and plastic; no inclusions, very abrupt wavy & discontinuous lower boundary
VI b	124-133	N 4/0, N 2.75/0 dark gray, very dark gray/black, Silty Clay Microstratigraphy, slightly compact, structureless; moist, sticky, and plastic; no inclusions, clear to abrupt smooth & discontinuous lower boundary
VII	133-171	5 GY 4/1 dark greenish gray, Clay Loam, slightly compact, structureless, inclusions: few roots & rootlets, charcoal flecking, a few basalt cobbles, a milled piece of wood, one ceramic sherd, and a black shoe; abrupt smooth & discontinuous lower boundary
VIII	171-207	N 4/0 dark gray Coarse Sand, loose, structureless, no inclusions, abrupt smooth lower boundary



Figure 4 Trench 1 Profile of NE wall, photograph, and sediment description

TRENCH 1 Southwest Wall: length 3 m, depth 207 cmbs, width 92 cm, orientation 138/318 TN 15E/NW



Strata	@ 5m CMBS	Description
I a	0-12	10 YR 7/3 very pale brown, Sand, loose, structureless, inclusions: gravel pebbles, crushed shell; clear-smooth lower boundary
I b	12-19	10 YR 6/3 pale brown, Sand, slightly compact, structureless, inclusions: roots & rootlets, shell & coral gravels, random large coral cobbles 5-10 cm; abrupt-smooth & discontinuous lower boundary
I c	13-110 @ 7m	10 YR 2/2 very dark brown, Loamy Coarse Sand, slightly compact, structureless, inclusions: deposits from strata VII & VIII; abrupt lower boundary
II	19-43	10 YR 3/3 dark brown, Loamy Sand, gravelly, slightly compact, structureless, inclusions: very few roots & rootlets, some basalt cobbles, coral & shell (medium 1.5 cm to large <10 cm); abrupt wavy and discontinuous lower boundary
III	43-58	10 YR 6/2 light brownish gray, Medium-Coarse Sand, gravelly, loose, structureless, inclusions: coral & crushed shell (5-10 cm) at lower boundary; abrupt wavy and discontinuous lower boundary
IV	58-85	10 YR 5/2 - 6/1 gray brown to gray, Fine Sand & Clay Microstratigraphy, slightly compact, structureless, inclusions: very few roots & rootlets; clear smooth and discontinuous lower boundary
V	85-108	10 YR 4/2-5, 6/3-6 dark grayish brown-dark yellowish brown, brown-yellowish brown Loamy Very Fine Sand Microstratigraphy, slightly compact, structureless, no inclusions, very abrupt wavy & discontinuous lower boundary
VI a	108-129	10 YR 5/3 brown, Silty Clay Microstratigraphy, compact, structureless, moist, sticky, and plastic; no inclusions, very abrupt wavy & discontinuous lower boundary
VI b	129-158	N 4/0, N 2.75/0 dark gray, very dark gray/black, Silty Clay Microstratigraphy, slightly compact, structureless; moist, sticky, and plastic; no inclusions, clear to abrupt smooth & discontinuous lower boundary
VII	158-167	5 GY 4/1 dark greenish gray, Clay Loam, slightly compact, structureless, inclusions: few roots & rootlets, charcoal flecking, a few basalt cobbles, a milled piece of wood, one ceramic shard, and a black shoe; abrupt-smooth & discontinuous lower boundary
VIII	167-207	N 4/0 dark gray Coarse Sand, loose, structureless; no inclusions; abrupt-smooth lower boundary

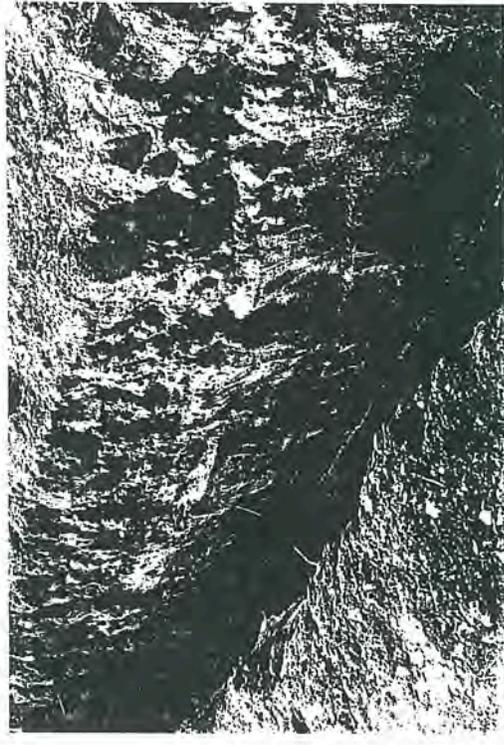


Figure 5 Trench 1 Profile of SW wall, photograph, and sediment description

Trench 2: Southwest Wall (Figure 6)

The south-southwest wall was profiled (the Kalākaua Avenue side of the project area). The water table was encountered at 157 cmbs.

Stratigraphy:

Stratum I	Recent landscape fill.
Stratum II	1920-1930 Ala Wai land-reclamation fill event.
Stratum III	1920-1930 Ala Wai land-reclamation fill event
Stratum IV	1920-1930 Ala Wai land-reclamation fill event
Stratum V	1920-1930 Ala Wai land-reclamation fill event
Stratum VI	1920-1930 Ala Wai land-reclamation fill event.
Stratum VII	1920-1930 Ala Wai land-reclamation fill event
Stratum VIII	Prehistoric-historic agricultural wetlands (pre land-reclamation).
Stratum IX	Prehistoric-historic agricultural wetlands (pre land-reclamation).
Stratum X	Natural sand deposits, during the formation of Waikīkī.

Stratum I is a sandy loam landscape fill. There is a thin layer of beach sand below this layer. Stratum II is a brown loamy sand mottled with gray brown, and contains medium size coral gravels. Strata II through VII are fill sediments from the land-reclamation dredge and fill projects. These sediments vary in texture and color. Sediments in Strata III to VI also vary in microstratigraphy size, as defined in the stratigraphic overview section. Stratum III has very fine sand microstratigraphy 1 mm to 1 cm thick, Stratum IV consists of fine sand with 1 to 3 mm thick banding and 1 or 2 very fine lenses of clay (1 to 2 cm thick) that are visible between the sand layers. Stratum V and VII are silty clays and Stratum VI is a very fine sandy clay loam, each has banding 1 mm to 3 mm thick. Combined, these fill strata measure to a depth of 159 cm below today's ground surface.

There are two strata interpreted as components of the prehistoric/historic wetland surface in Trench 2, Strata VII and IX. Stratum IX is a clay loam. This stratum is concentrated in a berm/levee feature located at the NW end of the trench, recorded at 115 cmbs. It represents a levee or *lo'i* bank. Charcoal flecking and a single *Pipipi* shell was found in this stratum. No sediment samples were collected for this trench. A milled wood plank was found lodged at the levee or *lo'i* bank, mentioned above, extending perpendicular to the orientation of the trench. This wood is the only cultural material recorded that penetrates the lower coarse calcareous sand layer. It extends from Stratum IX, the original ground surface, to the natural coarse gray sand deposits of Stratum X (see Figure 6). This clearly historic plank is proof that this pond or *lo'i* feature, although possibly constructed prehistorically, continued to be used in the historic period. Stratum VIII is an organically enriched silty clay sediment, without microstratigraphic banding, within the *lo'i* or pond. The Stratum VIII silty clay organic layer and the lower gray coarse sand of Stratum X have level surfaces at, respectively, 159 and 179 cmbs. The base of the trench is a compact layer of coral. The berm/levee feature of Stratum IX may correlate with the same type feature in Trench 3, which lies directly SE of Trench 2 (see Figures 6 and 7).

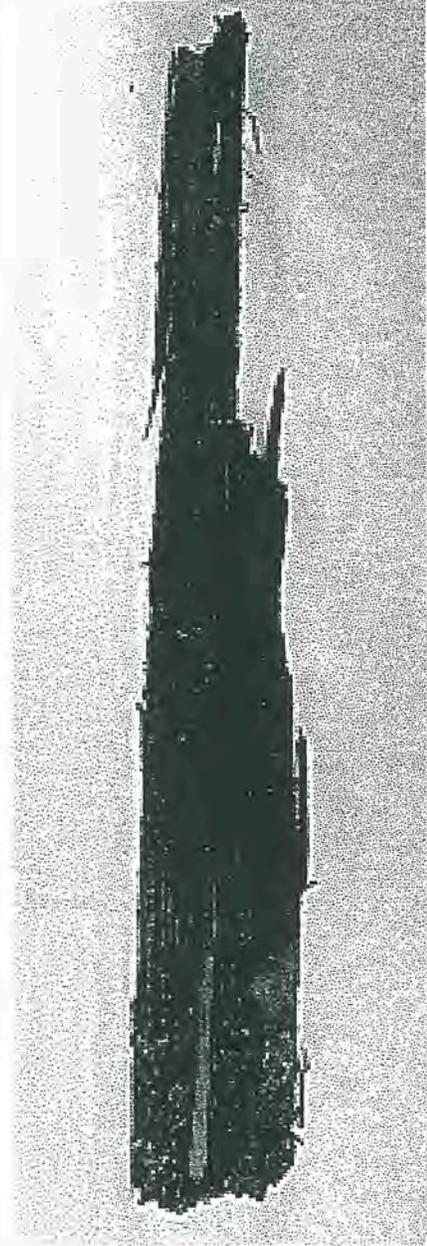


Photo 10

Wood Stake found lodged between Strata IX and X in Trench 2

TRENCH 2 Southwest Wall: length 8 m, depth 187 cms, width 85 cm, orientation 133/213° TN (SE/NW)

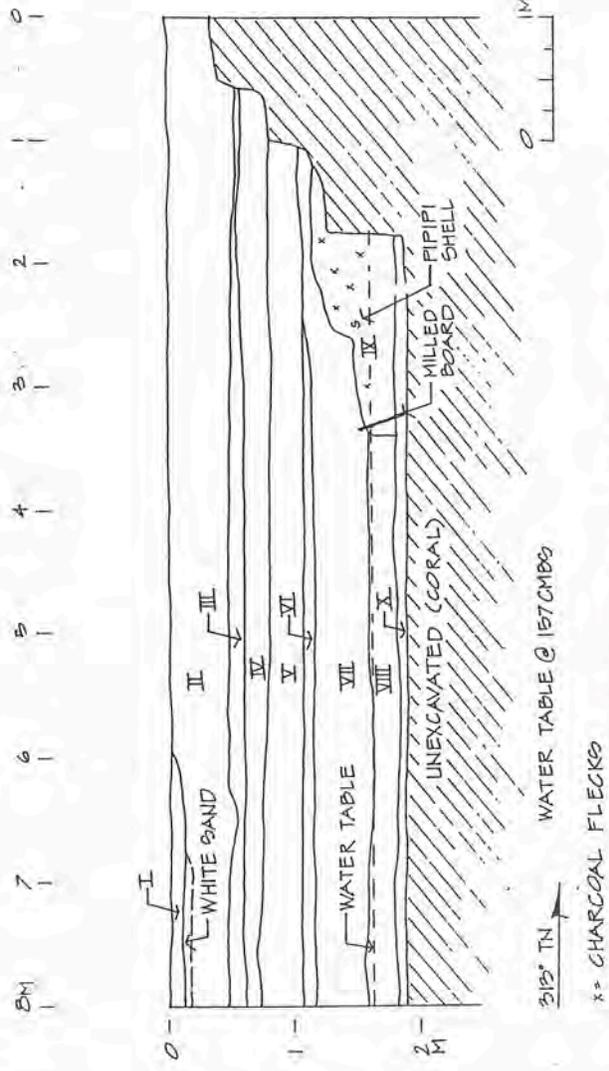


Figure 4: Trench 2 Profile of SW wall, photograph, and sediment description

Strata	@ 7m CMBS	Description
I	0-10	10 YR 2/2 very dark brown, Sandy Loam, gravely, slightly compact, structureless, inclusions: coral pebbles & cobbles; abrupt wavy lower boundary
II	10-46	10 YR 5/4, 5/2 light yellowish brown mottled with gray brown, Loamy Sand, gravely (mostly medium size), slightly compact, structureless, inclusions: few roots & rootlets, abundant coral pebbles & cobbles; abrupt-wavy lower boundary
III	46-58	10 YR 5/2, 6/4, 4/4 gray brown, light yellowish brown, dark yellowish brown, Very Fine Sand Microstratigraphy, loose, structureless, inclusions: few roots & rootlets; very abrupt-smooth discontinuous lower boundary
IV	58-73	10 YR 6/4 light yellowish brown, Fine Sand & Clay Microstratigraphy, slightly compact, structureless, inclusions: few roots & rootlets; very abrupt smooth lower boundary
V	73-104	10 YR 5/3 brown, Silty Clay Microstratigraphy, compact, structureless, inclusions: very few roots & rootlets; very abrupt smooth lower boundary
VI	104-112	10 YR 4/4- 5/2 dark yellowish brown to grayish brown Sandy Clay Loam Very Fine Microstratigraphy, loose- slightly compact, structureless, inclusions: very few roots & rootlets, 2 small charcoal deposits, very abrupt-smooth & discontinuous lower boundary
VII	112-159	N 4/0, N 2.75 dark gray, very dark gray/black Silty Clay Microstratigraphy, slightly compact, structureless inclusions: very few roots & rootlet; very abrupt smooth lower boundary
VIII	159-179	10 YR 3/1 very dark gray, Silty Clay, slightly compact, structureless inclusions: organic material (possibly leaves); very abrupt smooth lower boundary
IX	115-180 @ 2m	5 GY 4/1 dark greenish gray, Clay Loam, slightly compact, structureless inclusions: roots & rootlets, a few basalt cobbles, charcoal flecks, Pippi shells, and a wood plank; abrupt smooth lower boundary
X	179-187	N 5/0 gray, Coarse Sand, loose, structureless, no inclusions, abrupt smooth lower boundary

Trench 3: Southwest Wall (Figure 7)

The south-southwest wall was profiled (Kalākaua Avenue side of the project area). The water table of this trench was encountered at 154 cmbs .

Stratigraphy:

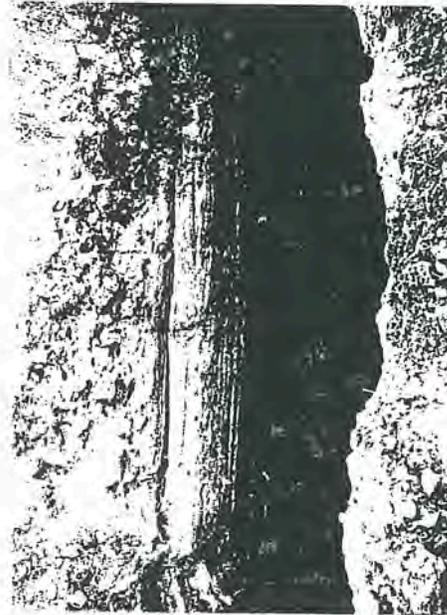
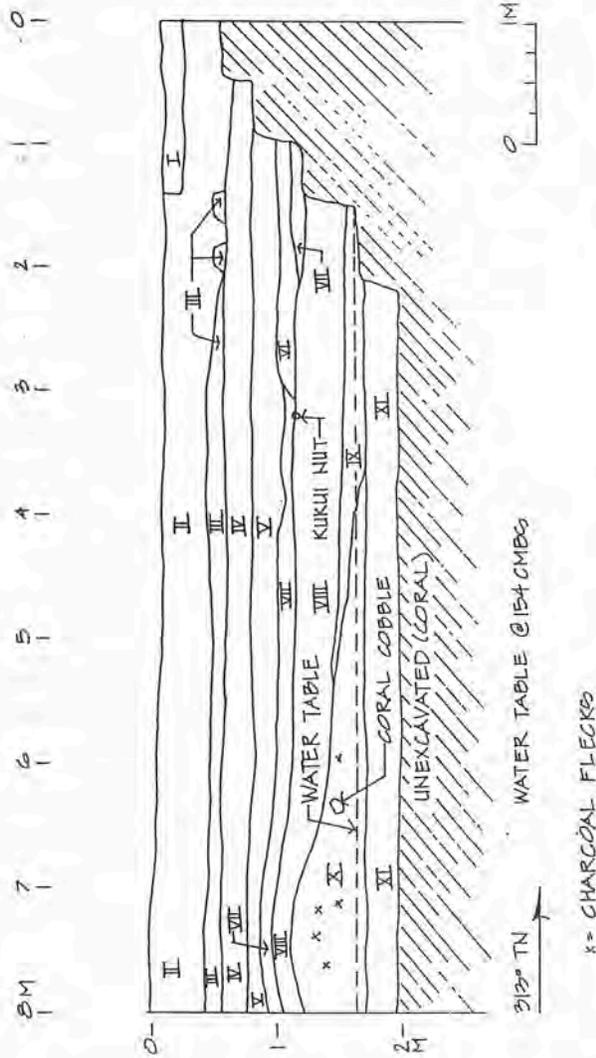
Stratum I	Recent construction or demolition refill.
Stratum II	1920-1930 Ala Wai land-reclamation fill event
Stratum III	1920-1930 Ala Wai land-reclamation fill event
Stratum IV	1920-1930 Ala Wai land-reclamation fill event
Stratum V	1920-1930 Ala Wai land-reclamation fill event
Stratum VI	1920-1930 Ala Wai land-reclamation fill event
Stratum VII	1920-1930 Ala Wai land-reclamation fill event
Stratum VIII	1920-1930 Ala Wai land-reclamation fill event
Stratum IX	Prehistoric-historic agricultural wetlands (pre land-reclamation)
Stratum X	Prehistoric-historic agricultural wetlands (pre land-reclamation)
Stratum XI	Natural sand deposits, during the formation of Waikīkī.

Stratum I is a gravelly sandy clay loam remix that includes asphalt and bottle glass fragments. It is the result of the recent demolition, refill, and leveling of the property. Strata II through VIII are land-fills. No historic cultural materials were found in these fill strata. The uppermost of the fill strata (II) is the only fill without microstratigraphy. It is consistent as a loamy sand with abundant coral gravels and cobbles. Fill strata III through VIII vary in texture and follow the microstratigraphy thickness as explained above. All of these strata contained roots and rootlets, and Stratum VII—a very fine sandy loam with clay bands—also contained a Kukui nut (see profile) and a few small charcoal flecks.

Strata IX and X represent the prehistoric/historic ground surface. Stratum IX is a silty clay with preserved organic material. Its surface is fairly planar and may indicate a prior pond or *lo'i* bed. There is a berm to the SE of this bed, consisting of Stratum X, which may have served as an additional agricultural cultivation surface banking the pond or *lo'i*. This stratum (X) contains charcoal flecking and one large coral cobble. Figures 6 and 7, profiles for Trenches 2 and 3, align in a NW to SE orientation and show a NW bank (berm) and a SE bank bordering a wide planar surface (e.g. that for wetland *lo'i* cultivation). Approximately twenty feet of unexcavated ground lay between these two trenches, and it is probable that this area exhibits a planar surface consistent with that of the interior ends of Trenches 2 and 3. This may be a *lo'i* area or the part of the pond shown in historic maps of the project area and vicinity.

The surface of the lower gray coarse sand stratum is consistent at 160 cmbs, and the base of the trench is a compact layer of coral. Two sediment samples were collected for this trench, one contains the Kukui nut found in Stratum VII, and one contains charcoal from Stratum X.

TRENCH 3 Southwest Wall: length 8 m, depth 165 cmbs, width 85 cm, orientation 133°13' TN (SE/NW)



Strata	@ 5.5m CMBS	Description
I	0-15 @ 1m	2.5 YR 3/4 dark reddish brown, Sandy Clay Loam, gravelly, compact, structureless, inclusions: few roots & rootlets, coral pebbles & cobbles, and some asphalt and bottle glass fragments; abrupt-wavy lower boundary
II	4-33	10 YR 5/4, 5/2 light yellowish brown mottled with gray brown, Loamy Sand, gravelly (mostly medium size), slightly compact, structureless, inclusions: few roots & rootlets, and abundant coral pebbles & cobbles; abrupt-wavy lower boundary
III	33-48	10 YR 5/2, 6/4, 4/4 gray brown, light yellowish brown, dark yellowish brown, Very Fine Sand Microstratigraphy, loose, structureless, inclusions: few roots & rootlets; very abrupt-smooth discontinuous lower boundary
IV	48-69	10 YR 6/4 light yellowish brown, Fine Sand Microstratigraphy with Very Fine Clay Lenses, slightly compact, structureless, inclusions: few roots & rootlets; very abrupt-smooth lower boundary
V	69-80	10 YR 5/3 brown, Silty Clay Microstratigraphy, compact, structureless; moist, sticky & plastic; inclusions: very few roots & rootlets; very abrupt-smooth lower boundary
VI	87-104 @2.5m	10 YR 6/4 light yellowish brown, Fine Sand Microstratigraphy with Very Fine Clay Lenses, slightly compact, structureless, inclusions: few roots & rootlets; very abrupt-smooth lower boundary
VII	90-104	10 YR 4/4 - 5/2 dark yellowish brown to grayish brown, Silty Clay Loam, Very Fine Microstratigraphy, loose to slightly compact, structureless, inclusions: very few roots & rootlets, a few charcoal flecks, and one Kukui nut at base; very abrupt-smooth/discontinuous lower boundary
VIII	104-137	N 4/0, N 2.75/0 dark gray, very dark gray/black Silty Clay Microstratigraphy, slightly compact, structureless; moist, sticky & plastic; inclusions: very few roots & rootlets; very abrupt-smooth lower boundary
IX	137-148	10 YR 3/1 very dark gray, Silty Clay, slightly compact, structureless; moist, sticky & plastic; inclusions: preserved organic material (possibly leaves); abrupt-smooth lower boundary
X	100-160 @ 7.4 m	5 GY 4/1 dark greenish gray Clay Loam, slightly compact, structureless, inclusions: charcoal flecking; abrupt-smooth lower boundary
XI	160-185	N 5/0 gray Coarse Sand, loose, structureless, no inclusions, abrupt-smooth lower boundary

Figure 7 Trench 3 Profile of SW wall, photograph, and sediment description

Trench 4: Northeast Wall (Figure 8)

The northeast wall was profiled, the Kuhio Avenue side of the project area. The water table of this trench was encountered at 204 cmbs.

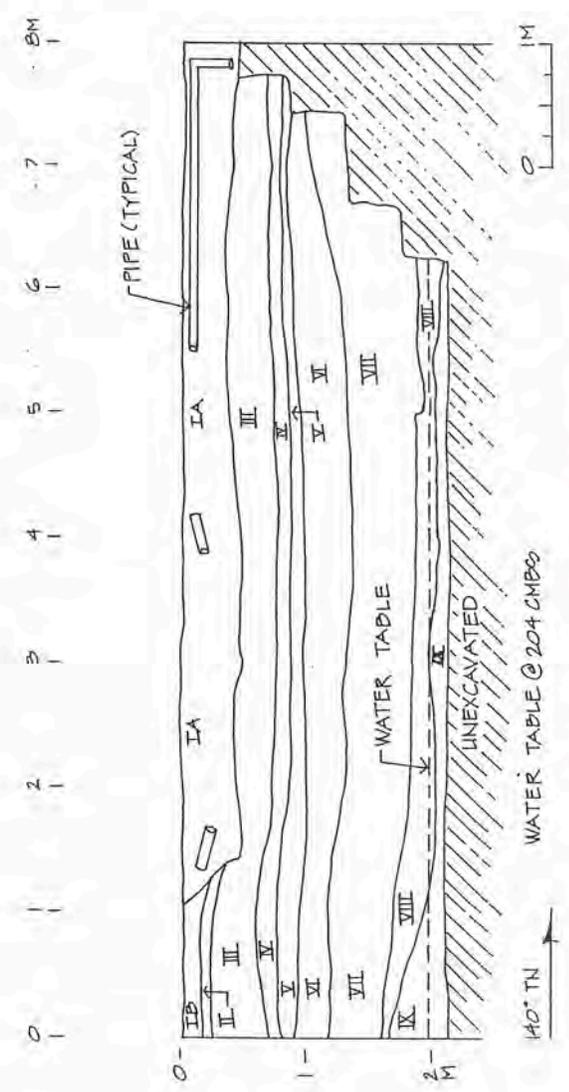
Stratigraphy:

Stratum Ia	Recent construction surface fill.
Stratum Ib	Recent construction/demolition fill.
Stratum II	Construction remix / or Land-reclamation fill
Stratum III	1920-1930 Ala Wai land-reclamation fill event.
Stratum IV	1920-1930 Ala Wai land-reclamation fill event
Stratum V	1920-1930 Ala Wai land-reclamation fill event.
Stratum VI	1920-1930 Ala Wai land-reclamation fill event.
Stratum VII	1920-1930 Ala Wai land-reclamation fill event.
Stratum VIII	Prehistoric-historic agricultural wetlands (pre land-reclamation)
Stratum IX	Natural sand deposits, during the formation of Waikīkī.

Stratum I represents two recent fill events. The absence of historic debris in layer Ia suggest that this layer may represent the end of a fill for a recent modification. Adjacent layer Ib, which contains historic architectural debris, represents refill from grading of the prior construction surface or the recent demolition of structures on the property. Stratum II contains a heavy amount of charcoal flecking; it also contains glass fragments, like Stratum Ib. These fragments may be the result of construction remix, or Stratum II may be the remaining part of an earlier stratum that ran across the recent construction disturbance of Stratum Ib; in which case, there is potential for Stratum II to be a land-reclamation fill surface with prior cultural activity. Strata III through VII are interpreted as land fill events. Combined, these strata measure to a depth of 190 cm below today's ground surface, and exhibit fairly consistent abrupt and smooth lower boundaries. Microstratigraphy is evident in Strata V through VII, and follow the established thickness size for the corresponding sediment texture. The lowest boundary of the gleyed gray clay stratum (VII) is recorded at 190 cmbs.

The most common plane of the prehistoric to historic organic Stratum VIII (Site 50-80-14-5796) is approximately 185 cmbs; there is a small raised area at the NW end of the trench, which may be the beginning of a berm. The lower gray coarse sand stratum (IX) in this trench, varies from previous trenches in that basalt cobbles are intermixed with the sand and the surface of the stratum varies between 155 and 207 cmbs. This naturally deposited sand is elevated at the NW end from the 2 to the 0 meter points. Two sediment samples were collected for this trench, one from Stratum VIII, which possibly contain charcoal and a leaf remnant.

TRENCH 4 Northeast Wall: length 7 m, depth 202 cmbs, width 110 cm, orientation 140/320° TN (SE/NW)



Strata	@ 1m CMBS	Description
I a	0-49 30@ m.	10 YR 4/3 dark brown, Loamy Sand, gravelly, slightly compact, structureless, inclusions: some roots & rootlets, historic architectural rubbish (glass, tile, and metal pipes); abrupt wavy lower boundary
I b	0-19	10 YR 7/3 very pale brown, Sandy Loam, loose, structureless, inclusions: gravel pebbles; clear wavy lower boundary
II	19-28	10 YR 6/2 light brownish gray, Loamy Sand, slightly compact, structureless, inclusions: gravel & coral, charcoal flecking, some roots & rootlets, glass fragments; abrupt wavy lower boundary
III	28-60	10 YR 6/2 light brownish gray, Sand, gravelly, loose, structureless, inclusions: coral cobbles (5-10 cm), and 1 inch of finer crushed sand & coral; abrupt-wavy lower boundary
IV	60-78	10 YR 6/1 gray, Very Fine Sand, slightly compact, structureless, inclusions: roots & rootlets, coral & shell fragments, some basalt rock cobbles; very abrupt to clear lower boundary
V	78-95	10 YR 7/1-8/4 light gray to very pale brown Fine Sand Microstratigraphy, slightly compact, structureless, contains roots & rootlets, abrupt-wavy lower boundary
VI	95-120	10 YR 8/4, 8/6 very pale brown with yellow Very Fine Sand Microstratigraphy, loose, structureless, inclusions of sporadic deposits of clay (10 YR 3/2 grayish brown), very abrupt-smooth to wavy lower boundary
VII	120-170	N 4/0, N 3/0 dark gray, very dark gray, Silty Clay Microstratigraphy, slightly compact, structureless, moist, sticky and plastic, inclusions: very fine rootlets; very abrupt smooth lower boundary
VIII	170-196	7.5 YR 3/1 very dark gray, Sandy Loamy Clay, slightly compact, structureless, inclusions: a few very fine rootlets, shell; irregular to discontinuous lower boundary
IX	196-207	N 5/0 gray, Coarse Sand and basalt gravels and cobbles, loose, structureless, no inclusions, irregular lower boundary



Figure 8 Trench 4 Profile of NE wall, photograph, and sediment description

Trench 5: Northeast Wall (Figure 9)

The northeast wall was profiled, the Kubio Avenue side of the project area. The water table of this trench was encountered at 160 cmbs.

Stratigraphy:

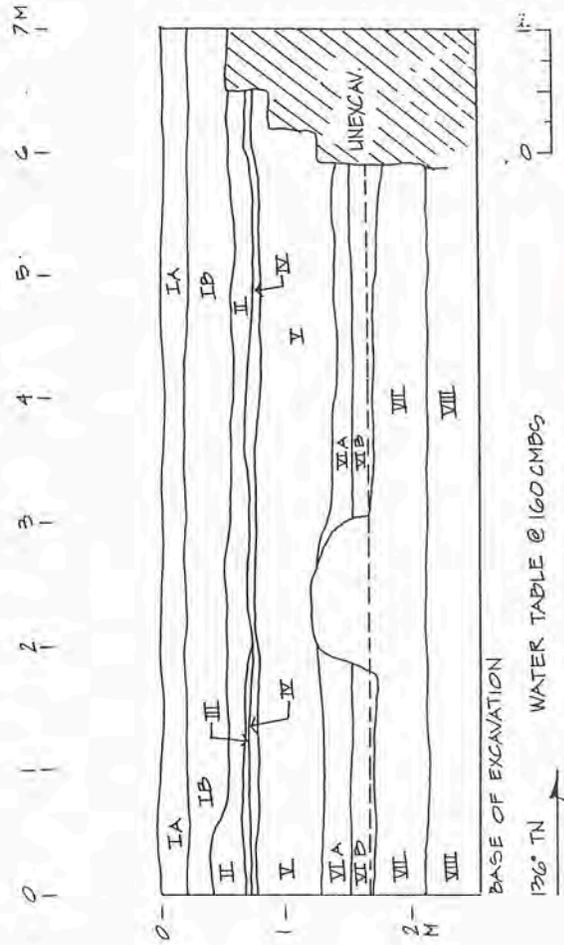
Stratum Ia	Recent landscape or construction fill
Stratum Ib	Recent landscape or construction fill
Stratum II	1920-1930 Ala Wai land-reclamation fill event
Stratum III	1920-1930 Ala Wai land-reclamation fill event
Stratum IV	1920-1930 Ala Wai land-reclamation fill event
Stratum V	1920-1930 Ala Wai land-reclamation fill event
Stratum VIa	1920-1930 Ala Wai land-reclamation fill event
Stratum VIb	1920-1930 Ala Wai land-reclamation fill event
Stratum VII	Prehistoric-historic agricultural wetlands (pre land-reclamation)
Stratum VIII	Natural sand deposits, during the formation of Waikīkī.

The layers of Stratum I contain chunks of cement, suggesting both are recent fill layers. The texture and color connote soils which were brought into the site for landscaping purposes. Strata II through VIb are considered land-reclamation fill events, and they contain no cultural materials. Stratum IV exhibits some clay bands interbedded within the compact fine sands. Sporadic clay deposits within the very fine sandy clay loam of Stratum V are recorded as Munsell color 10 YR 5/3 brown. Strata VI a & b are silty clays with microstratigraphy, in the usual position of brown (VIa) over gleyed gray (VIb). The lowest boundary of the later gleyed gray clay stratum is recorded at 175 cmbs and the thickness of this layer is fairly consistent at 17 cm, fairly consistent with the water table. Both layers of Stratum VI are discontinuous, penetrated by sandy loamy clay from the lower Stratum VII.

Trench 5 lays parallel and *makai* (SW) of Trench 4 (see Figure 3). Stratum VII in Trench 5, the original prehistoric/historic ground surface (50-80-14-5796), exhibits a berm feature at the 2.5 meter mark. The berm appears to be a small bank for a *lo i* or possibly a pond, and may be related with features documented in Trenches 3 and 4. The most common plane of this stratum is at approximately 170 cmbs, and the berm is recorded at 118 cmbs.

The surface of the older lower gray coarse sand is consistent at 210 cmbs, and contains various size waterworn cobbles of basalt. Six sediment samples were collected for this trench, including a sample from the berm.

TRENCH 5 Northeast Wall: length 7 m, depth 210 cmbs, width 71 cm, orientation 136/316° TN (SE/NW)



Strata	@ 1.5m CMBS	Description
I a	0-22	2.5 YR 4/6 red, Loamy Sand, slightly compact, structureless, inclusions: mixed with coral and gravel pebbles & cobbles, and cement chunks; clear lower boundary
I b	22-53	5 YR 3/2 dark reddish brown, Loamy Sand, slightly compact, structureless, inclusions: mixed with coral and gravel pebbles & cobbles, and cement chunks; clear lower boundary
II	53-65	10 YR 6/2 light brownish gray, Loamy Sand, loose-slightly compact, structureless, inclusions: coral pebbles & cobbles; abrupt-wavy lower boundary
III	65-70	10 YR 6/1 gray, Fine Sand, slightly compact, structureless, inclusions: roots & rootlets, coral & shell fragments, some basalt rock cobbles; very abrupt-clear lower boundary
IV	70-75	10 YR 4/2 dark grayish brown, Fine Sand with some banding, slightly compact, structureless, no inclusions, abrupt lower boundary
V	75-126	10 YR 5/3, 2, 1 brown, grayish brown, gray Very Fine Sandy Clay Loam with Clay Deposits, slightly compact, structureless, inclusions: sporadic deposits of clay, roots; abrupt-wavy lower boundary
VI a	126-150	10 YR 5/3 brown, Silty Clay Microstratigraphy, slightly compact, structureless; moist, sticky and plastic; no inclusions, very abrupt-wavy lower boundary
VI b	150-170	N 4/0, N 3/0 dark gray, very dark gray, Silty Clay Microstratigraphy, slightly compact, structureless; moist, sticky and plastic; no inclusions, abrupt-smooth and discontinuous lower boundary
VII	170-215 @ 2.5m	GY 4/1 dark greenish gray, Sandy Loamy Clay, slightly compact, structureless no inclusions, very abrupt-wavy lower boundary
VIII	210-255	N 5/0 gray, Coarse Sand and Basalt Cobbles, loose, structureless, inclusions: basalt gravels and cobbles, very abrupt-smooth lower boundary



Figure 9 Trench 5 Profile of NE wall, photograph, and sediment description

Trench 6: Northeast Wall (Figure 10)

The northeast wall was profiled (the Kuhio Avenue side of the project area). The water table was encountered at 153 cmbs.

Stratigraphy:

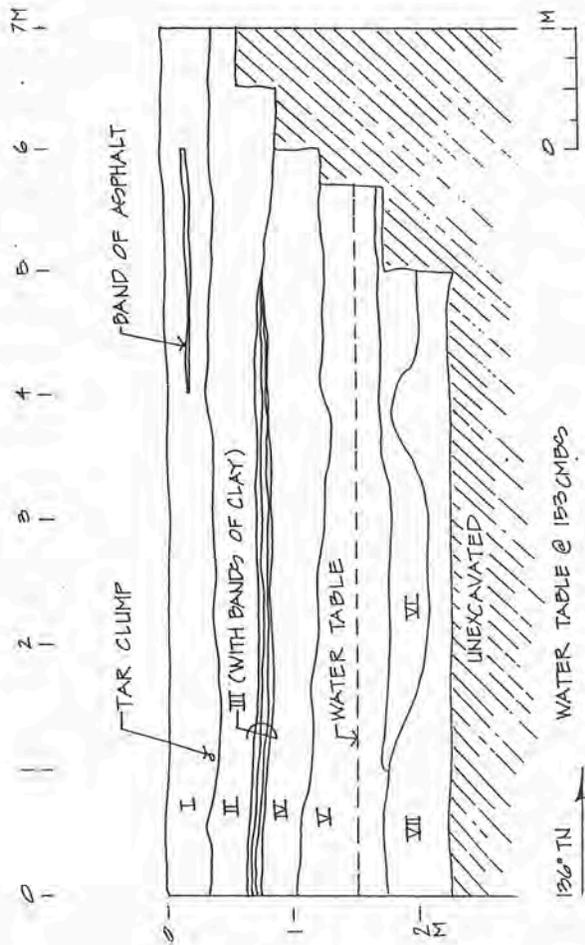
Stratum I	Recent construction/demolition refill.
Stratum II	Recent construction/demolition fill and refill.
Stratum III	1920-1930 Ala Wai land-reclamation fill event
Stratum IV	1920-1930 Ala Wai land-reclamation fill event
Stratum V	1920-1930 Ala Wai land-reclamation fill event
Stratum VI	Prehistoric-historic agricultural wetlands (pre land-reclamation)
Stratum VII	Natural sand deposits, during the formation of Waikīkī.

Strata I and II contain fragments of historic construction/demolition materials. These materials result from the grading of fill sediments after demolition for new construction, remodeling projects, or after the recent property demolition project.

Strata III through V are land-reclamation fills, which contain no historic materials. Stratum III is a very fine sandy clay loam with light gray to very dark brown banding, and a clay band deposit that runs through to meter 5. Stratum IV has the same texture, with mottled colors; it has no definite banding, but exhibits sporadic clay deposits of grayish brown to meter 5. It is evident that these two land-reclamation fill strata (III & IV) have been disturbed by more recent construction activities starting at the 5 meter point and moving southeast. Stratum V, a gray silty clay with black microstratigraphy, extends fairly even over the original ground surface (Stratum VI) and a raised portion of the natural sand deposits (Stratum VII).

Stratum VI—the prehistoric to historic ground surface (Site 50-80-14-5796)—lays in a relatively planar surface over all but the northwest end of the trench (see Figure 10), and appears to suggest a *lo i* feature. The underlying calcareous sand deposit stratum (VII) has one small and one larger natural sand berms, the larger at the northwest end meets the lower boundary of the gray silty clay (Stratum V). This is the only area where the older underlying natural sand deposits meet the land-reclamation fill layers, without the original wetland surface. No coral base layer was encountered.

TRENCH 6 Northeast Wall: length 7 m, depth 225 cms, width 72 cm, orientation 136/316° TN (SE/NW)



Strata	@ 2m CMBS	Description
I	0-37	10 YR 4/3 dark brown, Sand, gravelly, slightly compact, structureless, inclusions: historic fragments of glass, tile, metal pipe, asphalt chunks, a black tar like substance, no roots; abrupt-wavy lower boundary
II	37-72	10 YR 7/3 very pale brown, Loamy Sand, gravelly, slightly compact, structureless, inclusions: large coral cobbles & shell, metal pipe, a black tar like substance, and no roots; smooth lower boundary
III	72-85	10 YR 7/1- 8/4 light gray to very pale brown, Very Fine Sandy Clay Loam with Clay Deposits, slightly compact, structureless, inclusions: very few rootlets (mostly at the north end), deposits of gray clay banding to meter 6; abrupt-wavy lower boundary
IV	85-120	10 YR 8/4, 8/6 very pale brown with yellow, mottled colors, Very Fine Sandy Clay Loam with Clay Deposits, slightly compact, structureless, inclusions: some roots & rootlets; sporadic deposits of clay, abrupt smooth to wavy lower boundary
V	120-177	5 Y 4/1, N 2.75 dark gray, very dark gray/black, Silty Clay Microstratigraphy, slightly compact, structureless; moist, sticky, and plastic; inclusions: no roots or rootlets; abrupt wavy lower boundary
VI	177-208	7.5 YR 3/1 very dark gray, Clay Loam with some sand, slightly compact, structureless, no inclusions, irregular lower boundary
VII	208-227	N 5/0 gray (some bluish tinting), Medium-Coarse Sand, loose, structureless, no inclusions, no lower boundary visible



Figure 10 Trench 6 Profile of NE wall, photograph, and sediment description

Trench 7: Southwest Wall (Figure 11)

The south-southwest wall was profiled, the Kalākaua Avenue side of the project area. The water table of this trench was encountered at 130 cms.

Stratigraphy:

Stratum I	Recent construction/demolition refill.
Stratum II	1920-1930 Ala Wai land-reclamation fill event.
Stratum IIIa	1920-1930 Ala Wai land-reclamation fill event
Stratum IIIb	1920-1930 Ala Wai land-reclamation fill event
Stratum IV	1920-1930 Ala Wai land-reclamation fill event.
Stratum V	Prehistoric-historic agricultural wetlands (pre land-reclamation)
Stratum VI	Prehistoric-historic agricultural wetlands (pre land-reclamation)
Stratum VII	Prehistoric-historic agricultural wetlands (pre land-reclamation)
Stratum VIII	Natural sand deposits, during the formation of Waikīkī.

Stratum I contains historic construction debris, and appears to be a recent fill. It is a loam sediment with an asphalt overlay at the northwest end of the trench. The asphalt likely dates to the 1945 photograph (6), which shows an entry roadway into the project parcel in the area of Trench 7. Strata II through IV are fill events related to land-reclamation. They contain no historic materials. Strata IIIb contains landsnails. Strata IIIa and IV are adjacent except for the northwest intrusion of fill Stratum IIIb, and both exhibit microstratigraphy. Stratum IV is a brown to gray silty clay with sand lenses of the same colors. The lower boundary grades into the gray clay, with a bluish tint just above the water table.

This trench has three prehistoric to historic wetland strata; one is characterized as a clay loam (V) and two are sandy clay loams (VI & VII). The trench is cut perpendicular to Trench 8 at the 1 to 1.8 m points (Figure 12). Strata V and VI form a berm at the SE end of the trench, and overlay agricultural Stratum VII. Stratum V contains charcoal flecking, a charcoal lens (sample taken), and a few basalt cobbles. Stratum VI also contains charcoal flecking. Stratum VII exhibits the same bluish tint recorded for Stratum IV, at the water table boundary at the NW half of the trench profile. Three charcoal samples were collected, one from Stratum V and two from Stratum VI. Ceramic fragments were collected from Stratum VII, at the Strata IV and VII boundary (the area with the bluish tint). Butchered pig bones were also collected from this same boundary area. This portion of the trench is immediately below Stratum IV and has a concentration of faunal refuse, like a butchery trash deposit. The surface of Stratum VII is the floor of the *'auwai* recorded in Trench 1, which is parallel and to the NE of Trench 7 (see Figure 11)

Ceramic fragments representing 3 vessels were recorded in Stratum VII. The first is a single body fragment of an American salt-glazed stoneware dating to pre-1875. This specimen has a gray salt exterior and a brown natural clay slip interior that exhibits horizontal striations characteristic of items made on a potters wheel (Photo 11); the specimen is most likely from a cylindrical holloware jug or jar, made in the northern U.S.,

or possibly the eastern U.S. (Greer 1981). The second item consists of two mendable bowl body and rim sherds of Chinese provenance (Photo 11). It is a porcellaneous stoneware hand painted with a cobalt blue *3-Circles and Dragonfly* (or *Bamboo*) motif (Lister and Lister 1989; Ritche 1986; Willetts and Poh 1981). This item dates, in Hawai'i, from 1850 to the turn of the century. The third specimen consists of two mendable sherds from a Chinese porcellaneous stoneware *Kitchen Ch`ing* plate or dish. *Kitchen Ch`ing* dates to the 1800s, and it was very common in Hawai'i, however, this particular motif has not been previously recorded in Hawai'i (Photo 12). It has a blue, green, and white hand-painted and block-printed *Cavello* motif with a cobalt blue center medallion—the 6 Crowns pattern in the center design is called *Fu* (happiness) (Willetts and Poh 1981:89, vessel 106). The *Kitchen Ch`ing* vessels are not recorded as being on missionary sites, but the type is common on Native Hawaiian sites. This may be due to the size of this line of large plate and dish vessels, which were useful for sauce based foods or foods served communal style. Combined these items date between 1800 and 1875, and signify the availability of both Western and Eastern made product. Together these ceramic items represent a vessel for liquid, a multiple serving size bowl, and a single-serving bowl.

Stratum VIII, the natural coarse calcareous sand, contains an increased density of basalt and coral cobbles and boulders at the northwest end of the trench. These boulders and cobbles, observed at the intersection of Trenches 7 and 8, were below the water table and difficult to see. They are thought to be part of the NW bank of the *'Auwai O Pau* feature (state Site 50-80-14-4970).

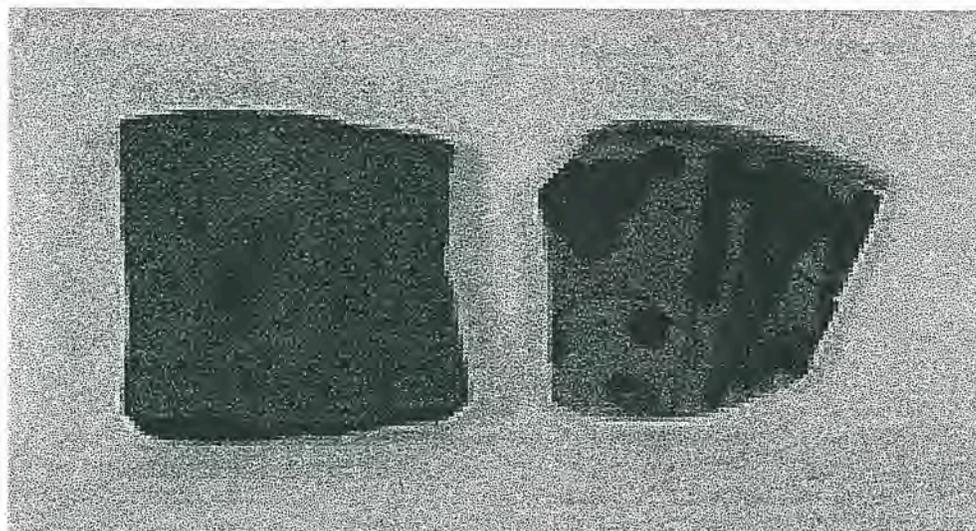


Photo 11 American Salt-Glazed Stoneware, made on a potter's wheel, pre-1875 (a)
Chinese Hand-Painted Stoneware, 3-Circles & Dragonfly (or Bamboo) Motif (b)

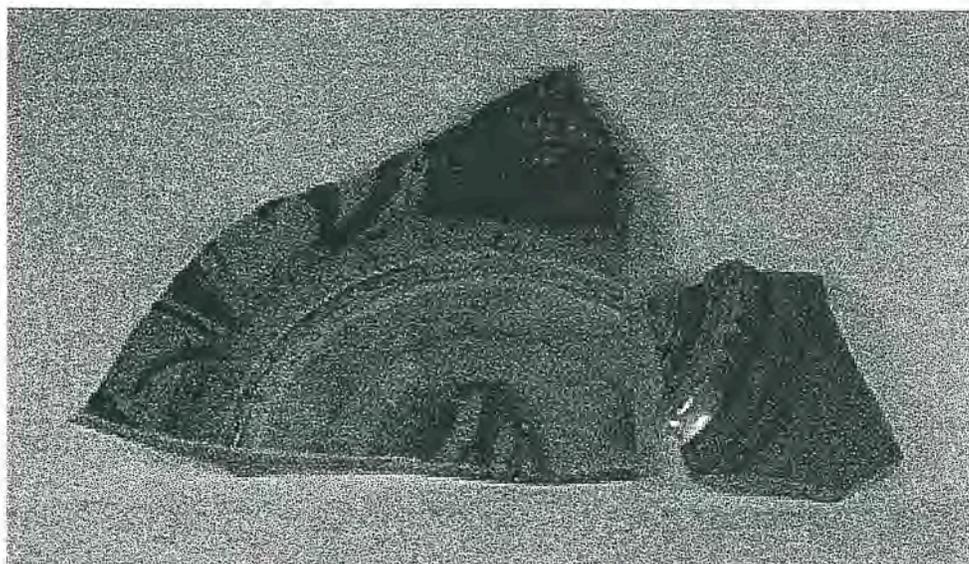
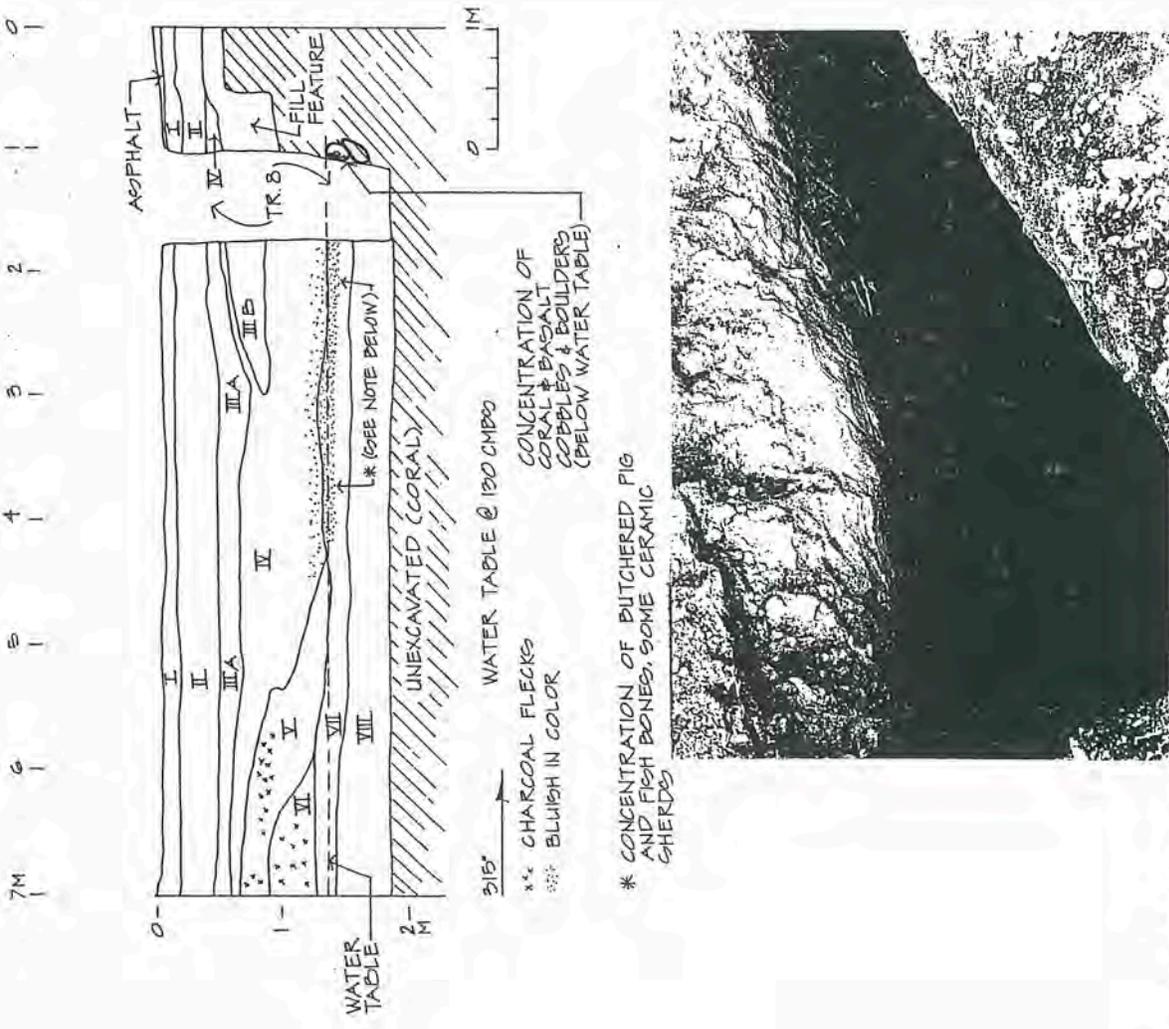


Photo 12 Chinese *Kitchen Ch'ing* Porcellaneous Stoneware, Cavello Motif, 1800s

TRENCH 7 Southwest Wall: length 7 m, depth 179 cms, width 71 cm, orientation 135/315° TN (SE/NW)



Strata	@ 6.5m CMBS	Description
I	0-11	10 YR 3/4 dark yellowish brown, Loam, loose, structureless, inclusions: brick, concrete, and tile fragments; abrupt smooth lower boundary
II	11-40	10 YR 5/4, 5/2 light yellowish brown mottled with gray brown, Loamy Sand, gravelly, slightly compact, structureless, inclusions: abundant coral pebbles & cobbles; abrupt-smooth lower boundary
III a	40-54	10 YR 5/2, 6/4, 4/4 gray brown, light yellowish brown, dark yellowish brown, Fine Sand Microstratigraphy, slightly compact, structureless, inclusions: few roots & rootlets, very abrupt-smooth and discontinuous lower boundary
III b	51-79 @ 2m	10 YR 4/1 dark gray, Sandy Clay Loam, slightly compact, structureless, inclusions: many roots & rootlets, and land snails; abrupt lower boundary
IV	54-63	10 YR 5/3 brown, Silty Clay Microstratigraphy, compact, structureless; moist, sticky, and plastic; gradual lower boundary
V	63-86	5 GY 4/1 dark greenish gray, Clay Loam, slightly compact, structureless, inclusions: few roots & rootlets, charcoal flecking & lens (sample), rusted metal, and few basalt cobbles; abrupt smooth lower boundary
VI	86-120	N 4.5/0 dark gray - gray, Sandy Clay Loam, slightly compact, structureless, inclusions: charcoal flecks, very abrupt smooth boundary
VII	120-135	N 4/0 dark gray, Sandy Clay Loam, slightly compact, structureless, inclusions: many rootlets, charcoal, bones (pig, fish), and ceramic sherds; smooth abrupt boundary
VIII	136-179	N 4/0 dark gray, Medium-Coarse Sand, loose, structureless, an increased density of coral cobbles at the northwest end; abrupt smooth lower boundary

Figure 11 Trench 7 Profile of SW wall, photograph, and sediment description

Trench 8: Southeast Wall (Figure 12)

The southeast wall was profiled, the Lewers Street side of the project area. The water table of this trench was encountered at 130 cmbs.

Stratigraphy:

Stratum I	Recent construction/demolition refill
Stratum II	1920-1930 Ala Wai land-reclamation fill event
Stratum IIIa	1920-1930 Ala Wai land-reclamation fill event
Stratum IIIb	1920-1930 Ala Wai land-reclamation fill event
Stratum IV	1920-1930 Ala Wai land-reclamation fill event
Stratum VII	Prehistoric-historic agricultural wetlands (pre land-reclamation)
Stratum VIII	Natural sand deposits, during the formation of Waikiki.

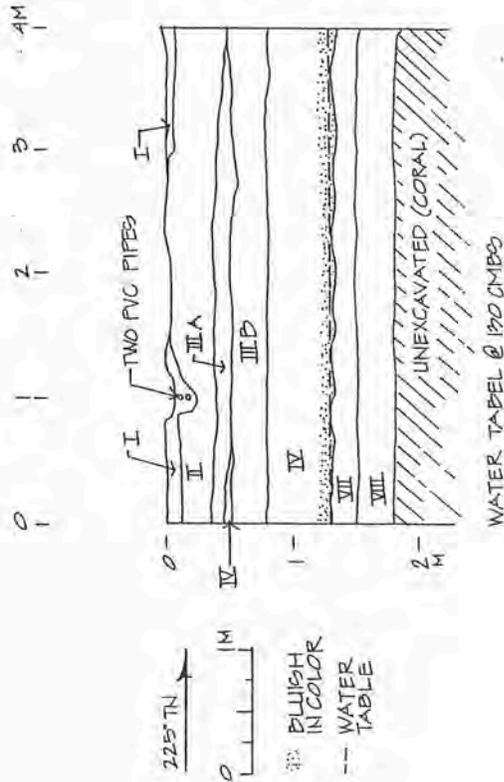
Stratum I contains historic construction debris, and appears to be a recent fill. It is a loam sediment with two PVC pipes near the northeast end of the trench. Strata II through IV are fill events related to land-reclamation. They contain no historic materials. Strata IIIb contains landsnails. Stratum IV is a brown to gray silty clay with sand lenses of the same colors. The lower boundary grades into the gray clay, with a bluish tint just above the water table.

This trench (8) has the lower of the three prehistoric to historic wetland strata observed in Trench 7, Strata VII, a sandy clay loam. The trench is cut perpendicular to Trench 7 at the 0 m point (Figure 12). Strata V and VI, which together form the berm at the SE end of Trench 7, were not observed in Trench 8. Stratum VII exhibits the same bluish tint recorded for Stratum IV, at the water table boundary. Stratum IV, a gray silty clay, is the only sediment that exhibits microstratigraphy.

The *mauka to makai* (NE to SW) orientation of this trench reveals a continuous planar surface at ~130 cmbs, for the prehistoric to historic original ground surface (state Site 50-80-14-5796), designating the floor of the *Auwai O Pau* (state Site 50-80-14-4970).

Stratum VIII, the naturally deposited medium to coarse sand is consistent at 150 cmbs, and is underlaid with compact coral, recorded at 179 cmbs.

TRENCH 8 Northwest Wall: length 4 m, depth 180 cmbs, width 100 cm, orientation 45/225° TN (SW/NE)



Strata	@ .5 CMBS	Description
I	0-10	10 YR 3/4 dark yellowish brown, Loam, loose, structureless, inclusions: two PVC pipes, big concrete chunks, and brick, tile and some plastic fragments; abrupt-smooth lower boundary
II	10-38	10 YR 5/4, 5/2 light yellowish brown mottled with gray brown, Loamy Sand, gravely (mostly medium size), slightly compact, structureless, inclusions: a few roots & rootlets, and abundant coral pebble & cobble inclusions; abrupt-wavy lower boundary
III a	35-49	10 YR 5/2, 6/4, 4/4 gray brown, light yellowish brown, dark yellowish brown, Loamy Sand, gravely (mostly medium size), slightly compact, structureless, inclusions: few roots & rootlets; abrupt-smooth discontinuous lower boundary
III b	52-78	10 YR 4/1 dark gray, Sandy Clay Loam, slightly compact, structureless, inclusions: many roots & rootlets, and land snails; abrupt-lower boundary
IV	49-52 78-130	10 YR 4/1 dark gray, Fine Sand Microstratigraphy, slightly compact, structureless, inclusions: many roots & rootlets, land snails; abrupt lower boundary
VII	130-150	N 4/0 dark gray, Sandy Clay Loam, slightly compact, structureless, inclusions: many rootlets, and charcoal; smooth abrupt lower boundary
VIII	150-180	N 4/0 dark gray, Medium-Coarse Sand, loose structureless, no inclusions, abrupt-smooth-lower boundary



Figure 12 Trench 8 Profile of SE wall, photograph, and sediment description

Trench 9: Northeast Wall (Figure 13)

The north-northeast wall was profiled, the Kuhio Avenue side of the project area. The water table of this trench was encountered at 190 cmbs.

Stratigraphy:

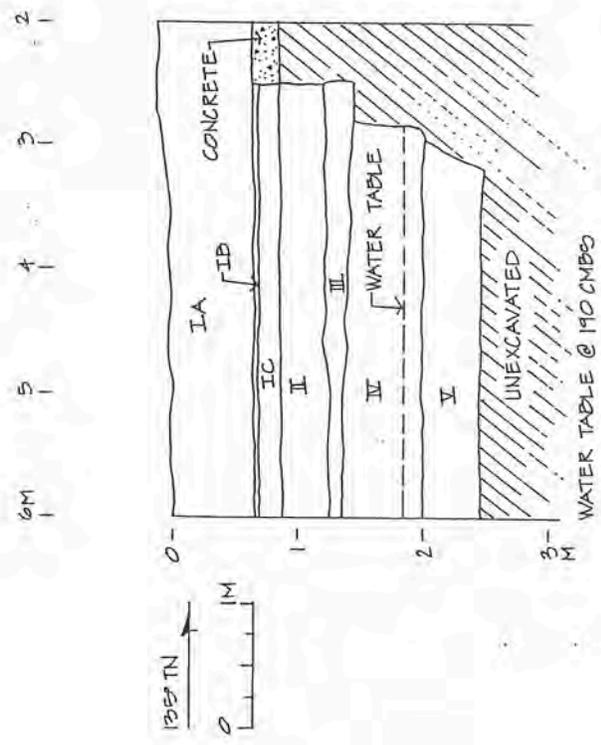
Stratum Ia	Recent construction/demolition refill.
Stratum Ib	A portion of an old road or parking lot layer.
Stratum Ic	A portion of the old road or parking lot base bed fill.
Stratum II	1920-1930 Ala Wai land-reclamation fill event.
Stratum III	1920-1930 Ala Wai land-reclamation fill event
Stratum IV	Prehistoric-historic agricultural wetlands (pre land-reclamation)
Stratum V	Natural sand deposits, during the formation of Waikikī.

Stratum Ia is a modern landscaping soil fill, which contains recent construction demolition debris. This stratum overlays an old asphalt surface (Stratum Ib) that is underlaid with a compacted sandy loam surface bed. These layers are adjacent to a concrete building foundation with rebar, at meters 0-2.5. From the 6 to 8 meter marks the concrete feature is overlaid with the asphalt and the recent landscaping soil fill (not profiled). It appears that a WWII era parking lot, part of the old taxi stand area in the foreground of Photograph 6, was filled over with landscaping soils. The concrete foundation at the SE end of the trench cuts through the old parking lot surface.

Strata II and III are interpreted as dredged land-reclamation fill. Combined, these strata measure to 150 cm below today's ground surface. Stratum III is the only sediment in this trench that exhibits microstratigraphic banding.

The most common plane of the wetland organic Stratum IV (Site 50-80-14-5796) is at 145 cmbs, and there are no berm features evident.

TRENCH 9 North Wall: length 8 m, depth 250 cmbs, width 100 cm, orientation 135/315° TN (SE/NW)



Stratum	@ 6m CMBS	Description
I a	8-70	10 YR 3/4 dark yellowish brown Loam, loose, structureless, inclusions: demolition material (bricks, concrete, & tile fragments); abrupt-smooth lower boundary
I b	70-75	7.5 YR 6/0, 2.5/0 gray and black, Asphalt, no inclusions, abrupt-smooth lower boundary
I c	75-94	10 YR 5/1 gray, Sandy Loam, compacted, structureless, no inclusions, abrupt-smooth lower boundary
II	94-130	10 YR 5/4, 5/2 light yellowish brown mottled with gray brown, Loamy with some sand, gravelly (mostly medium size), slightly compact, structureless, inclusions: few roots & rootlets, abundant coral gravels & cobbles; abrupt smooth lower boundary
III	130-141	10 YR 5/3 brown, Silty Clay Microstratigraphy compact, structureless; moist, sticky, and plastic; inclusions: very few roots & rootlets; abrupt smooth lower boundary
IV	141-206	5 GY 4/1 dark greenish gray, Clay Loam, slightly compact, structureless, inclusions: few roots & rootlets, organics, charcoal flecking & lens (sample); abrupt-wavy lower boundary
V	206-250	N 4/0 dark gray, Course Sand, loose, structureless, no inclusions, smooth abrupt lower boundary



Figure 13 Trench 9 Profile of NE wall, photograph, and sediment description

Trench 10: Northwest Wall (Figure 14)

The northwest-north wall was profiled (the Kalaimoku Street side of the project area). The water table of this trench was encountered at 140 cmbs.

Stratigraphy:

Stratum Ia	Recent landscape fill.
Stratum Ib	Recent reworked fill.
Stratum II	1920-1930 Ala Wai land-reclamation fill event
Stratum III	1920-1930 Ala Wai land-reclamation fill event.
Stratum IV	1920-1930 Ala Wai land-reclamation fill event
Stratum V	1920-1930 Ala Wai land-reclamation fill event
Stratum VI	Prehistoric-historic agricultural wetlands (pre land-reclamation)
Stratum VII	Natural sand deposits, during the formation of Waikīkī.

Stratum Ia is a recent landscape fill that contains historic construction debris and a feature that was probably a hole for a palm tree root ball. This root ball hole feature intrudes into Stratum Ib. Stratum Ib is a reworked fill that contains plastic coated wire at the 3.5 meter point, and abundant rootlets at the lower boundary between the 3.5 and the 4.8 meter points. The dip in this area likely represents an additional hole for a tree later removed.

Strata II through V are interpreted as dredged land-reclamation fill layers. Combined, these strata measure to 155 cm below today's ground surface. Stratum II contained a light green historic glass bottle, found near the upper boundary of the stratum. This is a machine-made bottle dating to post-1904, as indicated by the full-body side seams that continue over the finish lip, and the side ghost seam (Photo 13). Embossed text includes "Sunrise" in script and placed diagonally on the shoulder. "Registered" is printed on the string-rim area, and "REGISTERED NET CONTENTS 6 ½ FLUID OUNCES PAT./10F" is around the low-body heel area. Centered in large letters on the basal surface is the word "SUN".

On the NE end of the trench part of Stratum III is flanked by a portion of Stratum IV, which also contains a deposit of the sediments from Stratum III. Strata III, IV, and V exhibit microstratigraphic banding that corresponds to the texture and thickness pattern described earlier. Stratum V is a gray silty clay that is continuous through the trench, however, it overlays a cultural berm between meters 1 and 3.

This berm is part of the original ground sediment, and consists of a clay loam with a very high organic content. It is dense with landsnails—exhibiting a possible deathbed assemblage at the initial fill boundary. The berm, located near the 2.4 m point, is substantial and exhibits large mottles and marbling. This berm is between 250 and 260 cm wide, 77 cm thick (in height), and its summit is recorded at 87 cmbs. The sediment in this area are also lighter in color than the rest of the stratum. The substantial height of the berm suggests a possible pond bank, and its location could correspond to the pond

identified on historic Map 5, as a SW bank; however, no corresponding bank was found to the NE.

The surface of the lower gray coarse sand stratum is consistent at 165 cmbs, and is underlaid with a compact coral. One sediment sample and one post-1904 bottle, mentioned above, were collected from this trench (Photo 13).

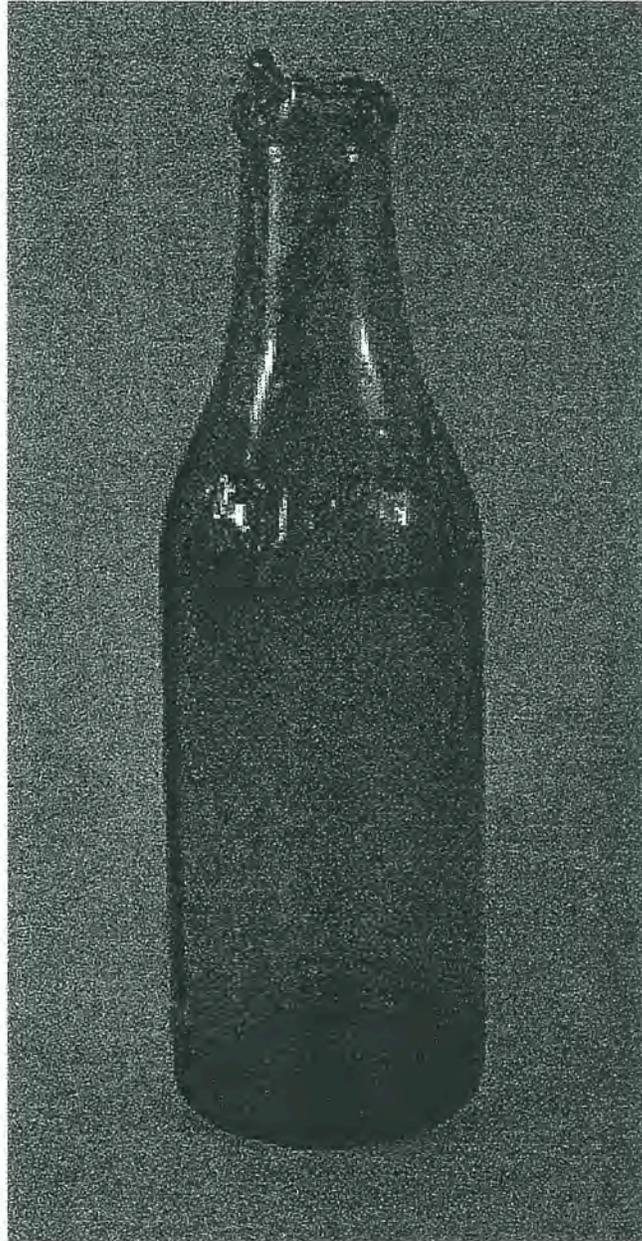
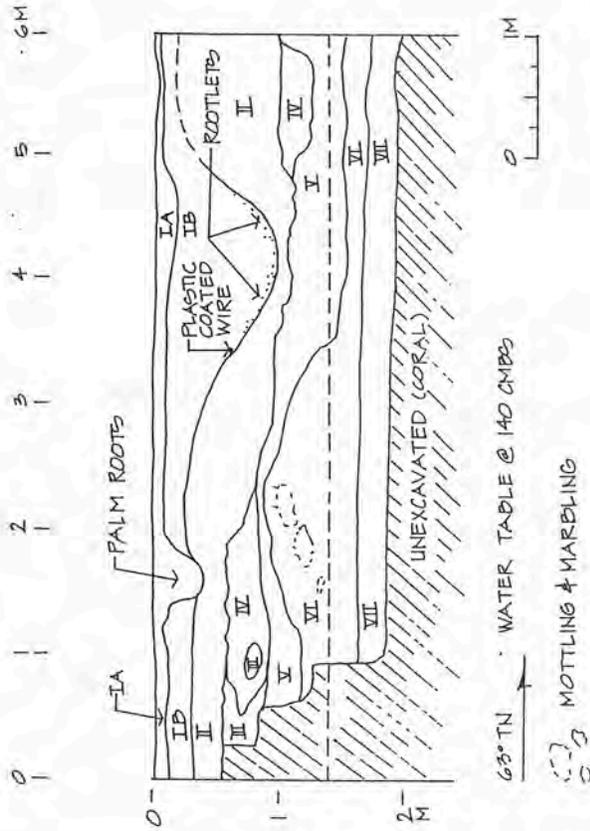


Photo 13 Machine Made Soda Bottle, post-1904

TRENCH 10 Northwest Wall: length 6 m, depth 190 cmbs, width 100 cm, orientation 63/243° TN (SW/W-NE/E)



Strata	@ 1 m CMBS	Description
I a	3-15	10 YR 3/4 dark yellowish brown, Loam, loose, structureless, inclusions: brick, concrete, and tile fragments; abrupt smooth lower boundary
I b	15-34	10 YR 5/4, 5/2 light yellowish brown mottled with gray brown, Loamy Sand, gravelly, slightly compact, structureless, inclusions: plastic covered wire, roots, and abundant coral pebbles & cobbles (slightly darker); very wavy lower boundary
II	34-57	10 YR 5/4, 5/2 light yellowish brown mottled with gray brown, Loamy Sand, gravelly (mostly medium size), slightly compact, structureless, inclusions: no roots, and abundant coral pebbles & cobbles; wavy-irregular lower boundary
III	58-87 @ .5m	10 YR 5/2, 6/4, 4/4 gray brown, light yellowish brown, dark yellowish brown, Fine Sand Microstratigraphy, slightly compact, structureless, inclusions: few roots & rootlets; abrupt-smooth discontinuous lower boundary
IV	57-93	10 YR 5/3 brown, Silty Clay Microstratigraphy, compact, structureless; moist, sticky, and plastic; inclusions: very few roots & rootlets, and coral chunks at upper boundary close to 2 m; very abrupt smooth lower boundary
V	96-114	N 4/0, N 2.75/0 dark gray, very dark gray/black, Silty Clay Microstratigraphy, slightly compact, structureless; moist, sticky, and plastic; inclusions: very few roots & rootlets; very abrupt smooth lower boundary
VI	114-165	10 YR 2/1, 4/2, 3 very dark brown, dark grayish brown, brown, Clay Loam, slightly compact, structureless, inclusions: roots & rootlets, abundant land snails; abrupt-smooth lower boundary
VII	165-187	N 5/0 gray, Coarse Sand, loose, structureless, no inclusions, abrupt-smooth lower boundary



Figure 14 Trench 10 Profile of NW wall, photograph, and sediment description

Trench 11: Southeast Wall (Figure 15)

The southeast-south wall was profiled (the Lewers Street side of the project area). The water table of this trench was encountered at 120 cmbs.

Stratigraphy:

Stratum Ia	Recent construction/demolition refill.
Stratum Ib	Recent reworked fill.
Stratum II	1920-1930 Ala Wai land-reclamation fill event
Stratum III	1920-1930 Ala Wai land-reclamation fill event
Stratum IV	1920-1930 Ala Wai land-reclamation fill event
Stratum V	1920-1930 Ala Wai land-reclamation fill event
Stratum VI	Prehistoric-historic agricultural wetlands (pre land-reclamation)
Stratum VII	Prehistoric submerged agricultural layer.
Stratum VIII	Natural sand deposits, during the formation of Waikīki

Stratum Ia appears to have been a recent fill material with an asphalt inclusion. Stratum Ib also contains historic construction debris, very large concrete chunks, and may be related to the recent demolition activity.

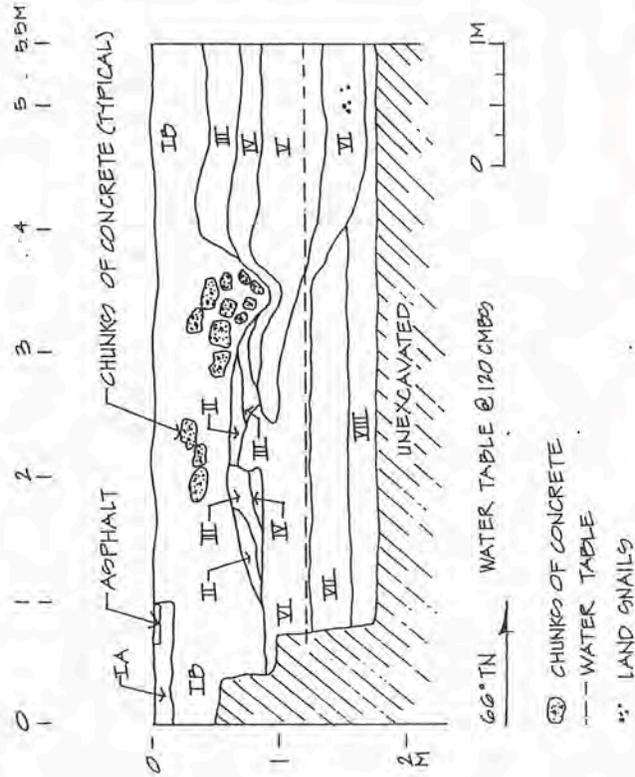
Strata II through V are land-reclamation fills that have also been disturbed. Microstratigraphy is evident in Strata III to V, all of which have roots and rootlets. Stratum V has a bluish tint to the gray silty clay. The base of the gleyed gray clay stratum is recorded at 135 cmbs.

The organic original ground stratum (VI) in this trench (11) is a clay loam, and forms the remnants of a large berm. This berm appears to correspond to the berm in Trench 10, which may have banked the large pond previously discussed, and depicted on Map 5. Stratum VI also contains charcoal flecks, and a high landsnail content (sample taken).

An organic agricultural peat stratum (VII) lays at the lower boundary of the previous organic stratum (VI), in the area beneath the berm. This clay loam consists of a mass of fine rootlets, with tiny shells and snails. The age of this layer is undetermined, but from its position beneath at the lower boundary of the prehistoric/historic berm clearly pre-dates the land fills of the 20th century.

Stratum VIII, the natural coarse sand deposit, is below Strata VI and VII. Compact coral was recorded at the base of excavation. Six charcoal or peat layer sediment samples were collected from this trench.

TRENCH 11 Northwest Wall: length 5.5 m, depth 175 cmbs, width 100 cm, orientation 66/246° TN (SW/W, NE/E)



Strata	@ 2.5 CMBS	Description
I a	2-14 @ 5m	10 YR 3/3 dark brown, Loam, loose, structureless, inclusions: asphalt; abrupt-smooth lower boundary
I b	14-61 @ 5m	10 YR 6/2 light brownish gray, Loamy Sand, slightly compact, structureless, inclusions: abundant coral pebble & cobble inclusions, big concrete chunks mixed in, and some plastic fragments, very wavy lower boundary
II	61-70	10 YR 6/2 light brownish gray, Loamy Sand, gravelly (mostly medium size), slightly compact, structureless, inclusions: roots, and abundant coral pebble & cobble inclusions (slightly darker); very wavy lower boundary
III	70-78	10 YR 5/2, 6/4, 4/4 gray brown, light yellowish brown, dark yellowish brown, Fine Sand Microstratigraphy, slightly compact, structureless, inclusions: few roots & rootlets; very abrupt-smooth discontinuous lower boundary
IV	74-81 @ 3m	10 YR 5/3 brown, Silty Clay Microstratigraphy, compact, structureless, moist, sticky, and plastic; inclusions: very few roots & rootlets; very abrupt smooth lower boundary
V	85-97	N 4/0, N 2.75/0 dark gray, very dark gray/black, Silty Clay Microstratigraphy, slightly compact, structureless; moist, sticky, and plastic; inclusions: very few roots & rootlets; very abrupt discontinuous lower boundary
VI	78-85 97-123	10 YR 2/1 very dark brown, Clay Loam, slightly compact, weak, structureless, inclusions: roots & rootlets, a few basalt cobbles, charcoal flecks, and high land snail content (sample); abrupt-smooth lower boundary
VII	123-153	5 YR 3/2, 3 dark reddish brown, Clay Loam Organic Peat, slightly compact, moderate, inclusions: mass of fine rootlets, and a few tiny shell & snails; abrupt-smooth discontinuous lower boundary
VIII	153-175	N 5/0 gray, Coarse Sand, loose, structureless, no inclusions, abrupt-smooth lower boundary



Figure 15 Trench 11 Profile of SE wall, photograph, and sediment description

Trench 12: Northwest Wall (Figure 16)

The northwest-north wall was profiled, the Kalaimoku Street side of the project area. The water table of this trench was encountered at 145 cmbs.

Stratigraphy:

Stratum Ia	Recent reworked refill
Stratum Ib	Recent reworked refill
Stratum II	1920-1930 Ala Wai land-reclamation fill event
Stratum III	1920-1930 Ala Wai land-reclamation fill event
Stratum IV	Prehistoric-historic agricultural wetlands (pre land-reclamation)
Stratum V	Natural sand deposits, during the formation of Waikīki.

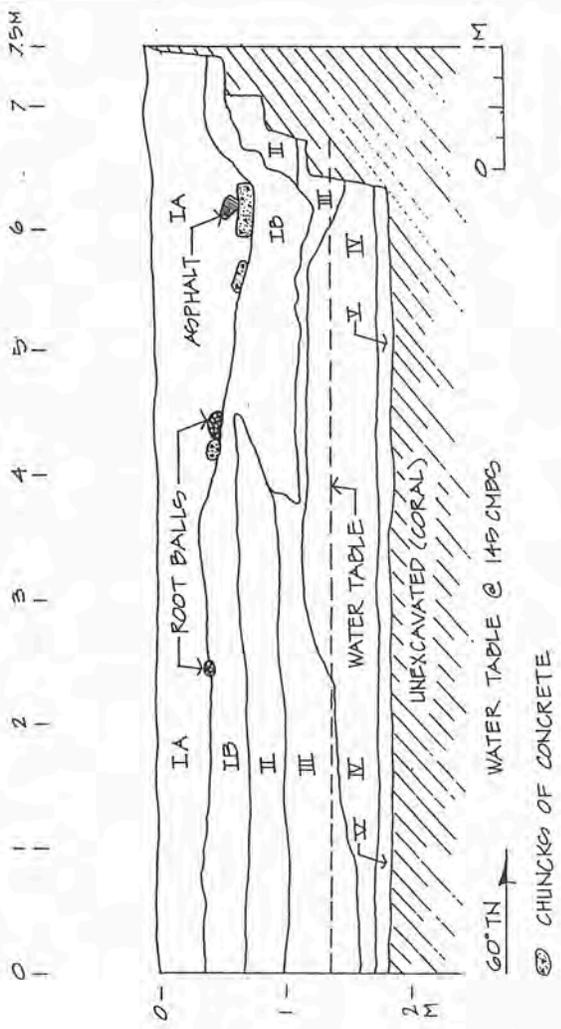
This trench is one of the most disturbed. Stratum Ia and Ib, exhibit modern reworked crushed coral fill related to recent demolition. Inclusions include concrete and asphalt chunks, two root concentrations, and a yellow construction tape found at the base of Stratum Ib. Portions of Stratum II are mixed into areas of Stratum Ib.

Strata II and III are dredged land-reclamation fill layers. Combined, these strata measure to 167 cm below today's ground surface. Stratum II is a sand sediment with microstratigraphy. The top portion of this layer has brown to pale brown bands, and the lower portion grades to grayish banding. The grayish banding is most evident at east *mauka* end. The silty clay microstratigraphy of Stratum III exhibits some bluish hues. The disturbance of Stratum Ib reaches to Stratum III in the NE half of the trench, but it is evident that the previous plain of Stratum III (the gray silty clay) aligns with the gray silty clay (Stratum V) of Trench 11, which is located *makai* to the SW. There is a low and wide berm feature below, in Stratum IV of this trench (12).

The prehistoric to historic wetland stratum (IV) is a clay loam. This stratum forms a berm approximately 55 cm thick, and may be the boundary of a *lo i* or pond. The stratum contains landsnails, but not as high a concentration as in Trenches 10 and 11. The lower rich peat layer in Trench 11 was not observed in this trench.

The surface of the lower naturally deposited gray calcareous coarse sand is consistent at 178 cmbs, and is underlaid with compact coral.

TRENCH 12 Northwest Wall: length 7.5 m, depth 190 cmbs, width 100 cm, orientation 60/240° TN (SW/N-NE/E)



Strata	@ 3m CMBS	Description
I a	5-45	10 YR 3/3 dark brown, Loamy Sand, slightly compact, structureless, inclusions: coral cobbles; wavy clear lower boundary
I b	45-70	10 YR 3/3, 5/2, 6/4, 4/4 dark brown, gray brown, light yellowish brown, dark yellowish brown, Loamy Sand with sand from STR.II, slightly compact, structureless, inclusions: coral cobbles; clear-smooth and irregular lower boundary
II	70-102	10 YR 5/2, 6/4, 4/4 gray brown, light yellowish brown, dark yellowish brown, Sand Microstratigraphy, slightly compact, structureless, no inclusions, clear-discontinuous lower boundary
III	102-123	N 4/0, N 2.75/0 dark gray, very dark gray/black, Silty Clay Microstratigraphy, slightly compact, structureless; moist, sticky, and plastic; inclusions: very few roots & rootlets; abrupt smooth lower boundary
IV	123-178	10 YR 3/2 very dark grayish brown Clay Loam, slightly compact, structureless, inclusions: landsnails; abrupt-smooth lower boundary,
V	178-190	N 5/0 gray Coarse Sand, loose, structureless, no inclusions, abrupt-smooth lower boundary



Figure 16 Trench 12 Profile of NW wall, photograph, and sediment description

Trench 13: North Wall (Figure 17)

The north-northeast wall was profiled, which is on the Kalaimoku and Kuhio Streets side of the project area. The water table of this trench was encountered at 145 cmbs.

Stratigraphy:

Stratum Ia	Recent post-demolition fill.
Stratum Ib	Recent base for the former asphalt layer.
Stratum Ic	Late fill over an older asphalt surface.
Stratum II	1920-1930 Ala Wai land-reclamation fill event
Stratum III	1920-1930 Ala Wai land-reclamation fill event
Stratum IV	1920-1930 Ala Wai land-reclamation fill event
Stratum V	1920-1930 Ala Wai land-reclamation fill event.
Stratum VI	1920-1930 Ala Wai land-reclamation fill event
Stratum VII	1920-1930 Ala Wai land-reclamation fill event.
Stratum VIII	Prehistoric-historic agricultural wetlands (pre land-reclamation)
Stratum IX	Natural sand deposits, during the formation of Waikiki.

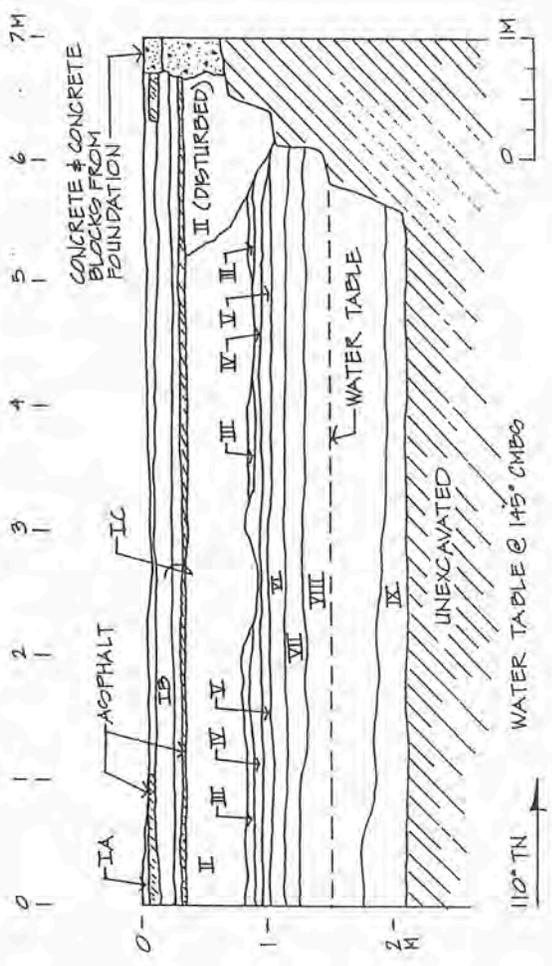
Stratum Ia contains historic reworked materials and represents grading activity following the recent demolition on the property. This layer contains a remnant of a recent asphalt surface. Stratum Ib is a white crushed coral used for the base of the overlying asphalt. Stratum Ic is a compacted sandy loam fill over an older asphalt surface.

Strata II through VII are interpreted as land-reclamation fills. Stratum II is disturbed between meters 5 and 7, which appears related to the concrete blocks and footing foundation just before the 7 meter mark. Strata III through VII, except for Stratum V, exhibit microstratigraphic banding. Stratum V is a loose fine sand that is not finely bedded. These layers are consistent across the trench.

Stratum VIII is the prehistoric to historic wetland surface (Site 50-80-14-5796). This stratum is a clay loam, and contains organics, landsnails, and dispersed charcoal. The upper boundary of this stratum is at 125 cmbs, and it continues to a depth of 180 cmbs. This stratum has the thickest and most consistent planar surface recorded for the original ground surface. It may be a remnant of a taro *lo i*.

The surface of the lower gray coarse sand stratum varies between 172-192 cmbs, raising slightly on the west end. The base of excavation consists of compact coral.

TRENCH 13 North Wall: length 6.8 m, depth 205 cmbs, width 100 cm, orientation 110/290° TN (W/NW-ESE)



Strata	@ 2 m CMBS	Description
I a	0-5	2.5 YR 4/6, 3/2 red, dark reddish brown, Silt Loam, slightly compact, structureless, inclusions: asphalt; clear smooth lower boundary
I b	5-20	5 YR 8/1 white, Silt Loam, gravelly, slightly compact, structureless, inclusions: crushed coral; very abrupt-smooth lower boundary
I c	20-30	5 Y 3/1 very dark gray, Sandy Loam, compact, structureless; over a lower asphalt bed; very abrupt-smooth lower boundary
II	30-75	10 YR 5/4, 5/3 light yellowish brown mottled with gray brown, Loamy Sand, gravelly (mostly medium size), slightly compact, structureless, inclusions: few roots & rootlets, and abundant coral pebbles & cobbles; wavy-irregular lower boundary
III	75-84	10 YR 5/2, 6/4, 4/4 gray brown, light yellowish brown, dark yellowish brown, Fine Sand Microstratigraphy, slightly compact, structureless, inclusions: few roots & rootlets; abrupt-smooth discontinuous lower boundary
IV	84-90	10 YR 5/3 brown, Silty Clay Microstratigraphy compact, structureless; moist, sticky, and plastic; inclusions: very few roots & rootlets; very abrupt smooth lower boundary
V	90-97	10 YR 7/2 light gray, Sand, loose, structureless, no inclusions, abrupt-smooth lower boundary
VI	97-110	10 YR 6/4 light yellowish brown, Fine Sand and Clay Microstratigraphy, slightly compact, structureless, inclusions: few roots & rootlets; very abrupt-smooth lower boundary
VII	110-125	10 YR 6/4 - 4/4 light yellowish brown, dark yellowish brown, Silty Clay Microstratigraphy, compact, structureless; moist, sticky, and plastic; no inclusions, abrupt-smooth lower boundary
VIII	125-180	10 YR 4/1 - 3/2 dark gray, very dark gray, Clay Loam, slightly compact, structureless, no inclusions, very abrupt-smooth lower boundary
IX	180-205	N 5/0 gray, Coarse Sand, loose, structureless, no inclusions, abrupt-smooth lower boundary

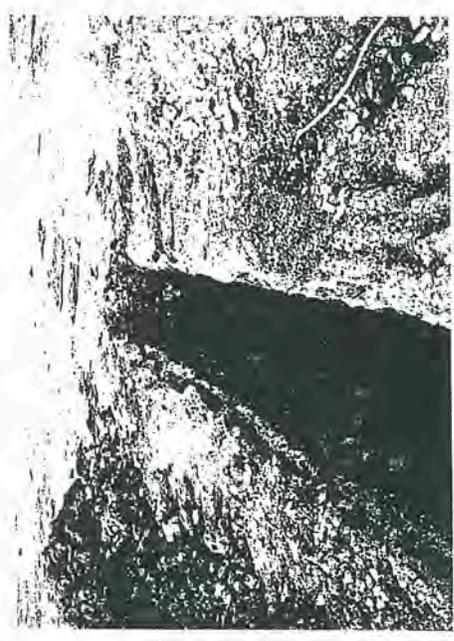


Figure 17 Trench 13 Profile of North wall, photograph, and sediment description

VI. SUMMARY

Cultural Surveys Hawai'i has completed an archaeological inventory survey for a parcel in Waikīkī Ahupua`a, designated as TMK 2-6-18:10, 36, 42, 52, 55, 62, 63, 64, 73 & 74. Extensive archival and historical research was followed by the excavation of 13 back hoe trenches. This work was contracted through Construction Management & Development for Kalākaua Southseas Owners, LLC.

The *ahupua`a* of Waikīkī in the centuries before the arrival of Europeans was a well used locale with abundant natural and cultivated resources. The area featured 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 and desuetude, Waikīkī was reanimated. The new Waikīkī community included Hawaiian *ali`i*, some foreigners, and farmers continuing to work the irrigated field system. Farming continued until the deposition of dredge sediments from the Ala Wai Canal, completed in the late 1920s, drained the remaining ponds and irrigated fields.

Archaeological reports have documented human burials—both pre-contact Hawaiian and historic—throughout the breadth of Waikīkī. Especially relevant to the present project area are several burials encountered within the grounds of Ft. DeRussy and adjacent hotels. A burial encountered at the intersection of Kuamo`o Street and Kuhio Avenue, just two blocks `Ewa of the project area, was also recorded during a water-line excavation.

Numerous studies have recorded the presence within Waikīkī of sub-surface cultural deposits of both pre-contact Hawaiian and historic provenance. These deposits had remained intact despite the years of construction activity that have altered the surface of the entire area. The authors of these studies emphasize that the potential for discovering similar intact deposits elsewhere in Waikīkī cannot be discounted.

The results of the current sub-surface investigations were consistent with the expectations formulated in the predictive model, which was based on archival and historical research. The current land surface of the project parcel consists of landscape, construction, and/or coral and sand fill sediments over clay sediments. Coral, sand, and silty clay fill layers correspond to the land-reclamation dredging and fill projects that took place in Waikīkī during the early decades of the 20th century. These fill episodes preserved the earlier ground surface features as they were at the time of the fill episodes, roughly 1910 to 1930. These fill sediments overlay the original prehistoric to early 20th century ground surface.

Historic maps and photographs included in this report document cultural praxis in the project area. They show that the former prehistoric/historic land surface should contain remnants of agricultural features related to banana cultivation, ponds, *lo`i* and `auwai. The `Auwai O Pau, which was previously documented in the Ft. DeRussy area and recorded as state Site 50-80-14-4970 (Davis 1989), was located in Trenches 1, 7, and 8. The `auwai remnant is visible in cross-section in the profiles for these trenches (see Figures 4, 5

& 11). Evident in the cross-sections of Trenches 7 and 8, are the SE levee and the floor of the *`auwai*. *`Auwai*, such as the *`Auwai O Pau*, were constructed in prehistoric times (documented as early as the 1300s) by Native Hawaiians for the irrigation of agricultural areas, fishponds, and other land-use and cultural needs. In historic times new *`auwai* were constructed and prehistoric *`auwai* continued to be used and modified.

There is a pond depicted in the project area on the 1909-1913 U.S. Army Engineers map (Map 5), which may relate to the two berm features in Trenches 10 and 11; these two berms correlate geographically to each other and to the *makai* (SW) pond boundary depicted on this map. The two berms also correlate in size (height). Berm and levee features in other excavated trenches may also relate to this large pond. Trenches 2 and 3 show berm and/or levee features for *lo i* or pond boundaries (see Figure 6 and 7). Trench 13 is distinct in that it contains the thickest and most consistent level surface of the original prehistoric/historic stratum. This planar surface may indicate a pond or taro *lo i*, the construction of which is described by Handy and Handy (1972:92):

“The new piece of land selected for making a terrace was flooded for several days,...The dimensions, shape, and required degree of terracing were determined by the contour of the land. As described by Kamakau...the men with their *ó ó* (digging sticks) lined up inside the limits of the banks of the projected terrace. Throwing up the earth along the line of the proposed embankment, they dug down until they struck firm subsoil. Sometimes little stakes (*la óla ó la áu*) were put down to hold the bank. After the soil had thus been piled on the banks to the required level, the sides of the embankment facing the water were stamped down with the feet, and edges and lines were straightened. Sugar-cane leaves were then beaten into the surface of these inner faces of the banks with logs (*la áu*) or the butts of coconut leaves (*ku áu*). Coconut leaves were then laid on the surface and pounded in with large flat stones. On this, moist earth was laid and pounded until the surface was smooth; finally the bank was covered with fine soil, on top of which were put trash and leaves to prevent the new bank from drying and cracking in the sun. This completed the making of the earth bank...Some earth banks were reinforced inside by veneering with stones.”

These processes correlate with sub-surface features of the prehistoric/historic surface stratum, as described and depicted within the project area.

A few historic artifacts dating between 1800 and 1920 were found in or on the *`auwai* floor, signifying historic lifeways in Hawai'i that include the availability and use of cultural products from the West and East. Provenance for ceramic fragments associated with this surface site includes England, China, and the United States. The large, milled,

wooden plank found imbedded in the two lowest strata of Trench 2, the original prehistoric/historic land surface (IX) and the underlying coarse gray calcareous sand (X), was wedged in at the bank of the berm. The location of this wooden plank indicates that Western materials were put to use as part of what was presumably a largely indigenous Hawaiian agricultural technology. The man's shoe found in the prehistoric/ historic stratum (VII) of Trench 1 is nearly complete, and the black leather is well preserved, having been buried in this extremely moist environment.

Based on sub-surface observations, the former original prehistoric to historic land surface (state Site 50-80-14-5796) is a thin sediment layer. The thickest (vertical) area recorded measures 78 cm, this is a berm feature in Trench 10; many areas are less than 20 cm thick. Historic and cultural background information, and the *in situ* location of recorded artifacts further suggest the thinness of this land surface. Cultivation and irrigation features were continually formed and reformed, as the wetland ground was lifted to build up berms and levee for irrigation—as explained above by Handy and Handy (1972). It is clear that this surface contains remains of prehistoric and historic land-use, however we have no clearly prehistoric features. The continued reworking of this thin original land surface in the historic period prior to the construction of the Ala Wai Canal had a major impact on the archaeological record. Sediments were displaced and historic cultural materials were introduced. The numerous samples collected from the state Site 50-80-14-5796 land surface, because of this disturbance, will not be particularly informative regarding prehistoric land use and paleoenvironmental reconstruction. These samples were not sent off for palynological or radiocarbon dating analysis.

A single site—assigned state Site 50-80-14-5796—represents the prehistoric to historic (late 1920s) land surface, for the current project parcel. Cultural materials such as architectural construction debris were found in the top two recent fill strata in several of the 13 trenches. The inclusion of these materials are a result of the continual construction, remodeling, and demolition on the property. Mid-fills—those related to the Ala Wai and off-shore land-reclamation projects—contained no historic items or debris, this was as expected and aligns with the findings of the historic research.

VII. SIGNIFICANCE

One new site has been designated as a result of the archaeological inventory survey of the current project area. The following significance evaluation is based on the criteria of the Hawai'i State and National Registers of Historic places (HRS 6E-10 and 6E-5.5), which defines five broad criteria for defining a cultural site as significant:

- A. Site reflects major trends or events in the prehistory or history of the state or nation.
- B. Site is associated with the lives of persons significant in our past.
- C. Site is an excellent example of a site type.
- D. Site has yielded or is likely to yield information important to prehistory or history.
- E. Site has traditional cultural significance to an ethnic group.

State Site #50-80-14-5796 (Prehistoric to historic original agricultural wetlands surface)

This site consists of the original prehistoric to early 20th century land surface, that underlays the dredged fill materials from the Ala Wai Canal and off-shore land-reclamation projects, which took place between 1910 and 1930. Prior land alteration within the project area has adversely affected the historic and cultural integrity of the site. Only limited stratigraphic and artifactual evidence of past land use remain. Accordingly this site is not significant under any of the above criteria.

This former ground surface reveals a portion of the *`Auwai O Pau* (state Site 50-80-14-4970), which was previously evaluated as significant under Criterion D (Davis 1989).

No clearly prehistoric features were identified in the project area, but it is likely that many of the sub-surface features recorded were constructed by Hawaiians in prehistoric times and continued to be used and modified into the early years of the 20th century.

VIII. RECOMMENDATIONS

Based on the results of the archaeological inventory survey, no further archaeological work is recommended.

State Site 50-80-14-5796—the prehistoric to historic original wetland ground surface—has been adversely affected by land alteration of the project area. The site is not deemed significant under the criteria of the State and National Registers of Historic Places. The single significant historic property in the project area, State Site 50-80-14-4970—a portion of the `Auwai O Pau, has been adequately documented.

There is always the possibility of encountering human burials in major excavation projects. Within the current project area the possibility is very low. No beach sand deposits such as those where burials are commonly found were encountered in the project area. If burials are encountered during construction excavations all work in the vicinity must halt and SHPD should be contacted.

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APPENDIX A

SEDIMENT AND ARTIFACT SAMPLE CATALOG

KALAKAUA PLAZA II INVENTORY SURVEY

ARTIFACT & SEDIMENT SAMPLES

Bag #	Trench #	Stratum / Layer	Munsell alpha-numeric	Munsell Color	BAG CONTENTS	Weight in grams
1	1	I	10 YR 6/3	Pale brown	Sand Sediments	58.6
2	1	II	10 YR 3/3	Dark brown	Loamy Sand Sediments	112.7
3	1	III	10 YR 6/2	Light brownish gray	Medium Coarse Sand Sediments	158.8
4	1	IV	10 YR 6/1	Gray	Fine Sand and Clay Sediments	136.1
5	1	V	10 YR 4/2	Dark grayish brown	Loamy Very Fine Sand Sediments	62.1
6	1	VI a	10 YR 5/3	Brown	Silty Clay Sediments	90.7
7	1	VII	5 GY 4/1	Dark greenish gray	Original Ground Clay Loam Sediments	108.1
8	1	VIII	5 Y 5/1	Gray	Coarse Calcareous Sand Sediments	150.9
9	1	VII	5 GY 4/1	Dark greenish gray	Clay Loam Charcoal Lens Sample	30.5
10	1	VII	5 GY 4/1	Dark greenish gray	Clay Loam Charcoal Lens Sample	18.2
11	1	VI b	5 Y 4/1	Dark gray	Silty Clay Sediments	1332.05
12	1	VI a	10 YR 5/3	Brown	Silty Clay Sediments (bulk sample)	1943.75
13	1	VII	5 GY 4/1	Dark greenish gray	Original Ground Clay Loam Sediments with Charcoal Flecking (bulk sample). From culturally disturbed area.	2580.
14	1	VII	5 GY 4/1	Dark greenish gray	Original Ground Clay Loam Sediments	659.05

15	1	VII	5 GY 4/1	Dark greenish gray	Men's Shoe /Original Ground Clay Loam Stratum	285.
16	1	VII	5 GY 4/1	Dark greenish gray	Ceramic Fragment /Original Ground Clay Loam Stratum	4.6
17	1	V	10 YR 4/2	Dark grayish brown	Loamy Very Fine Sand Sediments (colors from banded layer)	400.
18	1	VII	5 GY 4/1	Dark greenish gray	Milled piece of wood /Original Ground Clay Loam Stratum	259.6
19	3	VII	10 YR 4/4 to 10 YR 5/2	Dark yellowish-Grayish brown	Kukui Nut (105 cmbs) in Very Fine Sandy Clay Loam	287.4
20	3	X	5 GY 4/1	Dark greenish gray	Clay Loam Sediments with Charcoal (190 cmbs)	875.
21	4	VII	5 Y 4/1	Dark gray	Silty Clay Sediments	645.
22	4	VIII	2.5 YR 3/1	Very dark gray	Sandy Loamy Clay with possible leaf material and charcoal	760.
23	5	I a	2.5 YR 4/6	Red	Loamy Sand Sediments	135.6
23	5	I b	5 Y 3/2	Dark reddish brown	Loamy Sand Sediments (combined with Bag 23)	
24	5	III	10 YR 6/1	Gray	Fine Sand Sedimentss from along the NW third of the trench	158.2
25	5	IV	10 YR 4/2	Dark grayish brown	Fine Sand Sediments	222.4
26	5	V	10 YR 5/3	Brown	Very Fine Sandy Clay Loam and Clay Deposits	635.
27	5	VII	5 GY 4/1	Dark greenish gray	Sandy Loamy Clay Sediments from raised area of stratum	440.
28	5	VIII	10 YR 3/2	Very dark grayish brown	Coarse Sand and Basalt Cobble Sedimentss	281.2
29	9	IV	5 GY 4/1	Dark greenish gray	Clay Loam Sedimentss with Landsnails and Organic Materials	698.1
30	7	V	5 GY 4/1	Dark greenish gray	Charcoal Sample from Clay Loam Sediments of Original Ground	490.

31-1	7	VI	10 YR 5/3	Brown	Charcoal Flecking from Sandy Clay Loam Sedimentss of Original Ground	870.
31-2	7	VI	10 YR 5/3	Brown	Charcoal Flecking from Sandy Clay Loam Sedimentss of Original Ground	645.
32 a	7	VII	10 YR 4/1	Dark gray	2 Ceramic fragments from Trash Pit (dish/plate, mendable), from Sandy Clay Loam Sedimentss of Original Ground	295.
32 b	7	VII	10 YR 4/1	Dark gray	2 Ceramic fragments from Trash Pit (dish/plate, mendable), of Original Ground	15.
32 c	7	VII	10 YR 4/1	Dark gray	1 Ceramic Stoneware fragment from Trash Pit (dish/plate, mendable), from Sandy Clay Loam Sedimentss of Original Ground	50.
33	7	VII	10 YR 4/1	Dark gray	Pig Bones from Sandy Clay Loam Sedimentss of Original Ground	326.
34	10	VII	N 5	Gray	Coarse Calcareous Sand Sedimentss	3.6
35	10	II		Light green	Soda Bottle: machine made Post-1904; embossed "Sunrise" on shoulder and "SUN" on base, other embossments (regular)	390.
36	11	VI	10 YR 2/2 dry	Very dark brown	Original Ground Clay Loam and Charcoal Sample (120 + cmb)	981.
37	11	VI	10 YR 2/2 dry	Very dark brown	Original Ground Clay Loam and Charcoal Sample (120 + cmb)	720.
38	11	VII	2.5 Y 3/1	Very Dark gray	Prehistoric Sub-merged Agricultural Peat Layer with Charcoal from dark stained area about 130 CMBS	77.9
39	11	VII	2.5 Y 3/1	Very Dark gray	Prehistoric Sub-merged Agricultural Peat Layer with Charcoal from dark stained area about 130 CMBS, in SE corner near water table	130.7
40	11	VII	2.5 Y 3/1	Very Dark gray	Clay Loam Organic Peat (bulk sample) from 135 CMBS	941.
41	11	VIII	5 Y 3/1	Very Dark gray	Coarse Calcareous Sand, bottom sample at 160 CMBS, might contain charcoal	895.
42	2	IX & X	5 GY 4/1 & 5 Y 5/1	Dark greenish gray & Gray	Wood Plank: Clay Loam to Coarse Calcareous Sand Sedimentss, positioned in 2 bottom stratum 150 - 185 CMBS	245.

**ARCHAEOLOGICAL ASSESSMENT
OF KING KALAKAUA PLAZA PHASE II,
WAIKĪKĪ, ISLAND OF O`AHU,
(TMK 2-6-18:10, 36, 42, 52, 55, 62, 63, 64, 73 & 74)**

by

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Prepared for

WILSON OKAMOTO & ASSOCIATES, INC.

Cultural Surveys Hawaii
August 1998

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I. INTRODUCTION

A. Project Description

At the request of Wilson Okamoto & Associates, Inc., Cultural Surveys Hawaii has conducted an archaeological assessment of a 109,747 sq. foot parcel (TMK 2-6-18:10, 36, 42, 52, 55, 62, 63, 64, 73 & 74) in Waikiki, on the island of O`ahu (Figure 1). The parcel is irregularly shaped and comprises the `ewa portion of the block bounded by Kalaimoku Street, Kuhio Avenue, Lewers Street and Kalakaua Avenue. The parcel was formerly occupied by a parking lot, an apartment building, and several commercial buildings - including those which formerly housed the Canlis Charcoal Broiler restaurant and Hula's Bar and Lei Stand.

B. Scope of Work

The scope of the work for the archaeological assessment comprised:

1. Historic background research including study of historic maps, archival documents, previous archaeological and historical studies, Land Commission Award records and other sources for the purpose of identifying existing and potential archaeological and historic sites. Particular emphasis was placed on identifying areas in which archaeological materials could be encountered during future development.
2. Assessment of possible historic buildings on the parcel.
3. Field inspection to document current conditions and existing structures.
4. Preparation of a report which details the results of the historic background research, the building assessment, and fieldwork; and which presents recommendations on archaeological mitigation measures appropriate to future development of the parcel.

C. Work Accomplished

Field inspection of the project area was accomplished on August 23, 1998.

Background research included: a review of previous archaeological studies on file at the State Historic Preservation Division of the Department of Land and Natural Resources; review of documents at Hamilton Library of the University of Hawai`i, the Hawai`i State Archives, the Mission Houses Museum Library, the Hawai`i Public Library, and the Archives of the Bishop Museum; study of historic photographs at the Hawai`i State Archives and the Archives of the Bishop Museum; and study of historic maps at the Survey Office of the Department of Land and Natural Resources.

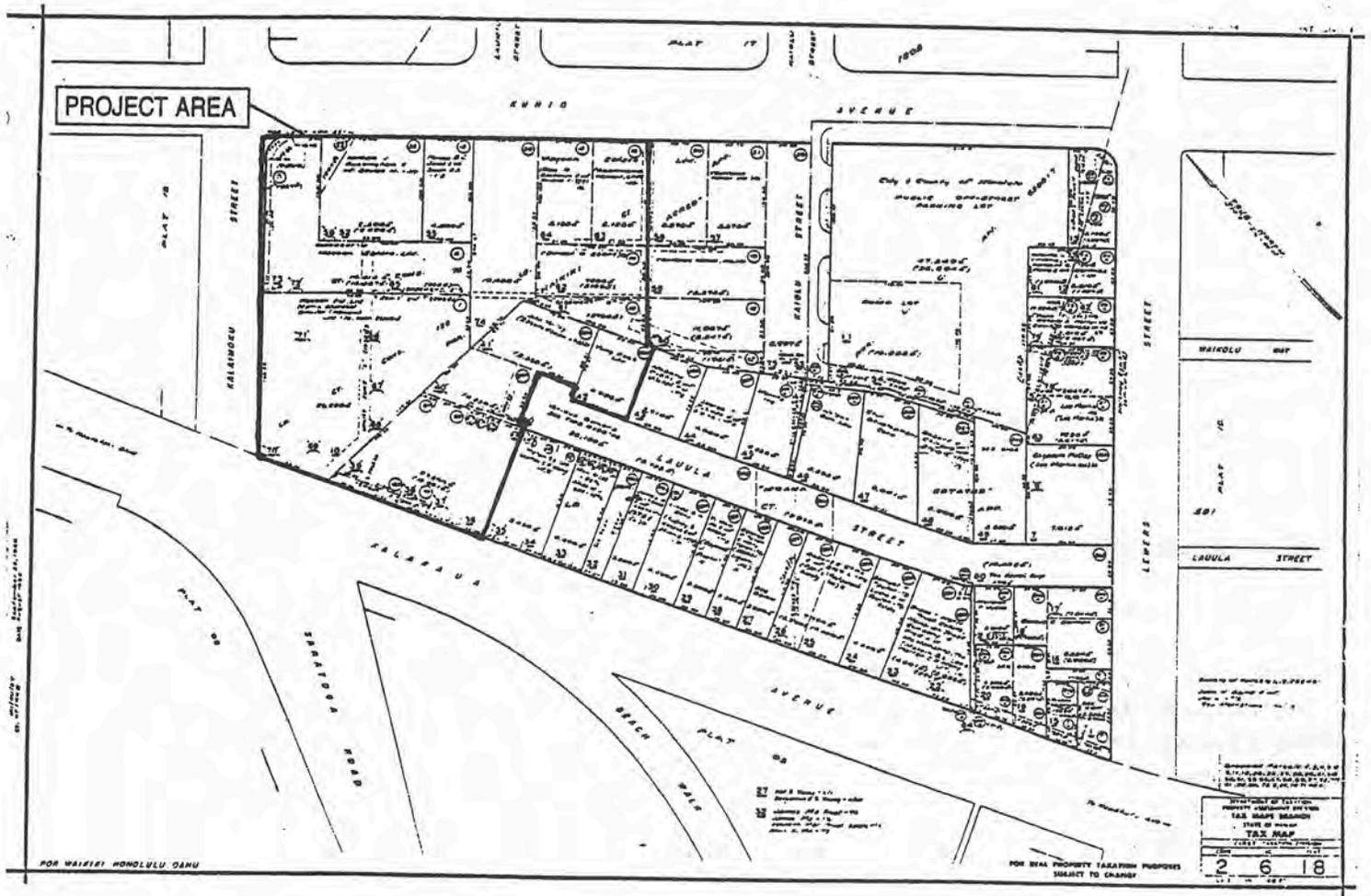


Figure 1 Tax map showing project area (TMK 2-16-18:10, 36, 42, 52, 55, 62, 63, 64, 73 & 74)

II. WAIKĪKĪ AND THE PRESENT PROJECT AREA: CULTURAL AND HISTORICAL DOCUMENTATION

This section begins with a review of the available documentary evidence for the general character of the area presently identified as Waikīkī as it had evolved in the years before western contact in the later 18th century. The development of Waikīkī lands adjacent to and including the present project area during the 19th century and into the early 20th century was recorded in increasingly detailed documentation - including government records and maps. Finally, during subsequent decades of the 20th century, abundant documentation of Waikīkī allows a more precise focus on development of the project area itself.

A. Pre-contact to 1800s

Waikīkī, by the time of the arrival of Europeans in the Hawaiian Islands during the late eighteenth century, had long been a center of population and political power on O`ahu. According to Martha Beckwith (1940), by the end of the fourteenth century Waikīkī had become "the ruling seat of the chiefs of Oahu." The preeminence of Waikīkī continued into the eighteenth century and is betokened by Kamehameha's decision to reside there upon wresting control of O`ahu by defeating the island's chief, Kalanikupule. The nineteenth century Hawaiian historian John Papa ʻŪi (1959), himself a member of the *ali`i*, described the king's Waikīkī residence:

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.

ʻŪi further noted that the "place had long been a residence of chiefs. It is said that it had been Kekuapoi's home, through her husband Kahahana, since the time of Kahekili."

Chiefly residences, however, were only one element of a complex of features - sustaining a 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 Manoa and Palolo valleys. This field system - an impressive feat of engineering the design of which is traditionally attributed to the chief Kalamakua - took advantage of streams descending from Makiki, Manoa and Palolo valleys which also provided ample fresh water for the Hawaiians living in the *ahupua`a*. Water was also available from springs in nearby Mo`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: I, 161-164).

Further details of the exuberant life that must have characterized the Hawaiians use of the lands that included the *ahupua`a* of Waikiki 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 luxuriance of its productions. Here and there we met with ponds of considerable size, and besides being well stocked with fish, they swarmed with water fowl of various kinds such as ducks, coots, water hens, bitterns, plovers and curlews. (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 which 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. The shift in pre-eminence is illustrated by the fact that Kamehameha moved his residence from Waikīkī to Honolulu. Indeed, by 1828, Levi Chamberlain describing a journey into Waikīkī would note:

Our path led us along the borders of extensive plats of marshy ground, having raised banks on one or more sides, and which were once filled with water, and replenished abundantly with esculent fish; but now overgrown with tall rushes waving in the wind. The land all around for several miles has the appearance of having once been under cultivation. I entered into conversation with the natives respecting this present neglected state. They ascribed it to the decrease of population (Chamberlain 1957:26).

Tragically, the depopulation of Waikīkī was not simply a result of the attractions of Honolulu (where, by the 1820s, the population was estimated at 6,000 to 7,000) but also of the European diseases that had devastating effects upon the Hawaiian populace.

The depopulation of Waikiki, however, was not total and the *ahupua`a* continued to sustain Hawaiians living traditionally into the nineteenth century. Land Commission Award records from the 1850s document awardees continuing to maintain fishponds and irrigated and dry-land agricultural plots though on a greatly reduced scale than had been possible previously with adequate manpower.

An 1881 map of Waikīkī shows a network of fishponds *makai* of the government road (route of the present Kalakaua Ave.) in the present Ft DeRussy area (Figure 2). The map indicates that a stream or *`auwai* (ditch)- which fed the fishponds - coursed within the *`ewa* side of the project area. (This *`auwai* was entered on the State Inventory of Historic Places as site 50-80-14-4970 during archaeological study at Ft. DeRussy; see Section III below.) The map also indicates that, at the Mahele, portions of the present project area were awarded to William C. Lunalilo (LCA 8559B:29) and to Kauhao (LCA 6386:7). Documents associated with these awards do not reveal what specific activities or land usages were occurring on these parcels at mid-19th century.

Waikīkī was becoming a popular site among foreigners - mostly American - who had settled on O`ahu; an 1865 article in the Pacific Commercial Advertiser mentioned a small community that had developed along the beach. The area continued to be popular with the ali`i - the Hawaiian royalty - and several notables had residences there. Other developments during the second half of the nineteenth century - prefiguring the changes that would alter the landscape of Waikīkī during this century - include the improvement of the road connecting Waikīkī to Honolulu (the route of the present Kalakaua Ave.), the building of a tram line between the two areas, and the construction of Kapiolani Park.

Traditional land-uses were abandoned or modified. By the end of the nineteenth century most of the fish ponds 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. An 1897 map of Honolulu shows rice fields extending across the plain of Honolulu, and the expanding grid of streets surrounding Waikīkī (Figure 3). The map also indicates that the present project area and the lands immediately surrounding - including the adjacent fishponds - remained undeveloped near the end of the 19th century.

B. 1900 to 1920s

During the first decade of the 20th 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 Ft. 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 fish ponds 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 map of O`ahu based on military surveys between 1909 and 1913 shows that much of the Kālia land, now identified as Ft. DeRussy has been filled, and many structures now cover the Waikīkī landscape *makai* of Kalakaua Ave (Figure 4). The map also presents a more detailed picture of the present project area than that recorded in the earlier maps discussed above. It suggests that, in addition to the *auwai* (ditch) there was a pond and marshy fields located within the project area. These features appeared to have remained intact into the second decade of the 20th century.

However, during the 1920s the project area would be transformed when the construction of the Ala Wai Drainage Canal - begun in 1921 and completed eight years later - resulted in the draining and filling in of the remaining ponds and irrigated fields of Waikīkī. The canal was one element of a plan to urbanize Waikīkī and the surrounding districts:

The [Honolulu city] planning commission began by submitting street layout plans for a Waikiki reclamation district. In January 1922 a Waikiki 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, Moiliili, and McCully districts, as well as lower Makiki and Manoa...

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)

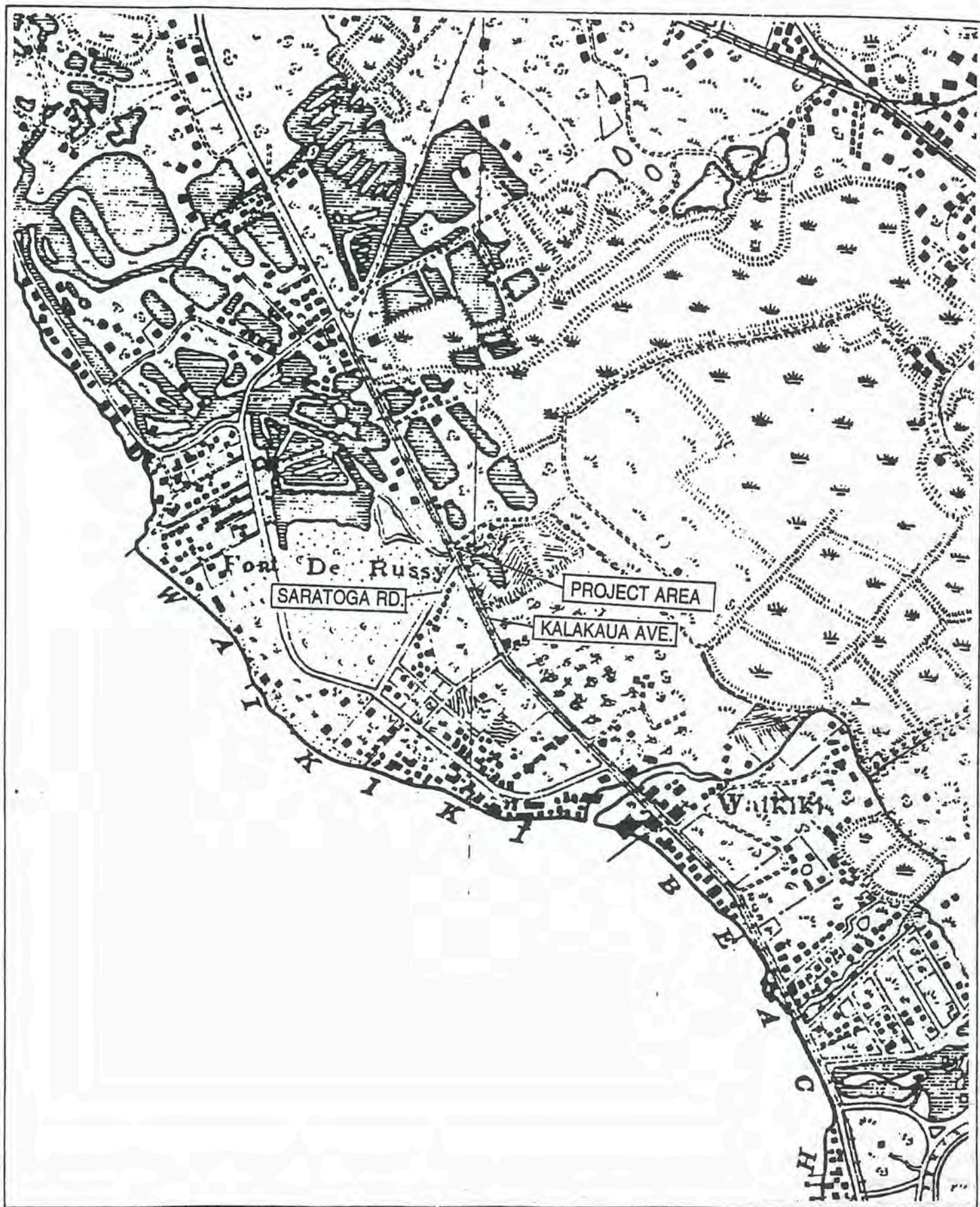


Figure 4 Portion of U.S. Army Engineers map, based on military surveys from 1909 to 1913, showing Fort DeRussy with location of present project area indicated

An aerial photograph of the late 1920s shows the new canal and the filled-in lands of Waikīkī, including the present project area, overlaid with the new gridwork of streets (Figures 5 & 6). The photograph indicates that there were no structures on the project area in the late 1920s. A line of vegetation shown cutting across the project area is likely a remnant marking the route of the *`auwai* (ditch) that formerly drained into the fishponds at Ft. DeRussy.

A 1927 Sanborn Fire Insurance map shows the new block defined by Kalakaua and Kuhio avenues and Kalaimoku and Lewers streets (Figure 7). The map confirms that no buildings had yet been constructed within the present project area. The only structure located on the block is a "sewerage pump" located outside the project area.

C. Late 1920s to Present - Historic Building Review

By the latter 1940s, following World War II, the portion of Waikīkī which includes the present project area was covered by a mix of commercial and residential buildings. A *ca.* 1945 photograph shows the southwest corner of the project area at Kalaimoku St. and Kalakaua Ave. (Figure 8). This portion of the project area contained, in the 1940s, a parking lot and a taxi stand shelter (shown in the right foreground). Also within the project area are one-story wooden buildings whose roofs are just visible above the fence behind the parking lot. Outside the project area, on the *`ewa* side of Kalaimoku St., is the Kuhio Theater which was constructed in 1942.

A 1951 Sanborn Fire Insurance map identifies the buildings and features present on the project area at mid-century (Figure 9). The map shows the parking lot and taxi stand (on the present site of the former Canlis Charcoal Broiler restaurant) seen in the *ca.* 1945 photograph. The map indicates a restaurant on Kalakaua Ave. (at TMK 2-6-18:36) which is no longer extant. Along the portion of the project area fronting Kuhio Ave. are one-story wooden buildings identified as a store and dwelling units (at TMK 2-6-18:73, 52 & 55). None of these structures remain.

Further along Kuhio Ave., in the east portion of the project area are three two-story concrete apartment buildings (at TMK 2-6-18:62, 63 & 64). A fourth two-story concrete apartment building is shown in the project area (at TMK 2-6-18:42), fronting the present Lauulu St. (which is identified on the map as Lauulu Place). These four concrete buildings remain standing in the project area. A review of city and county records indicates that the building on Lauulu St. (TMK 2-6-18:42) was constructed in 1942 and that additions were made in the 1960s. The building fronting Kuhio Ave. (at TMK 2-6-18:64) - identified on the fire insurance map as containing four apartments - was constructed in 1947; additions and renovations were made in 1967 and 1987 when the building was converted to commercial use. The adjacent building on Kuhio Ave. (at TMK 2-6-18:63) - identified on the map as containing 12 apartments - was constructed between 1948 and 1949; additions and renovations were made in 1958, 1962 and 1982 when the building was converted to commercial use. The building between Kuhio Ave. and Lauulu St. (at TMK 2-6-18:62) - identified as containing ten apartments - was constructed in 1947; additions were made in 1983 when the building was converted to commercial use.

Two well-known structures and business establishments were added to the project area since the early 1950s when the fire insurance map was drawn. In 1946 the restaurateur Peter Canlis opened the first Canlis Charcoal Broiler in Waikīkī at the Kuhio Beach end of Kalakaua Avenue, on what would later become the site of the Waikiki Biltmore Hotel (which was demolished in 1974). Canlis relocated his restaurant to 2100 Kalakaua Ave. - within the present project area - in 1954. The new restaurant was designed by the firm of Wimberley and Cook, at



Figure 5 Aerial photograph - *ca.* late 1920s - showing the newly-constructed Ala Wai Drainage Canal (Bishop Museum Archives)



Figure 6 Enlarged portion of aerial photograph - ca. late 1920s - indicating location of the project area and possible remnant of the *auwai* that formerly flowed into the present Ft. DeRussy grounds (Bishop Museum Archives)

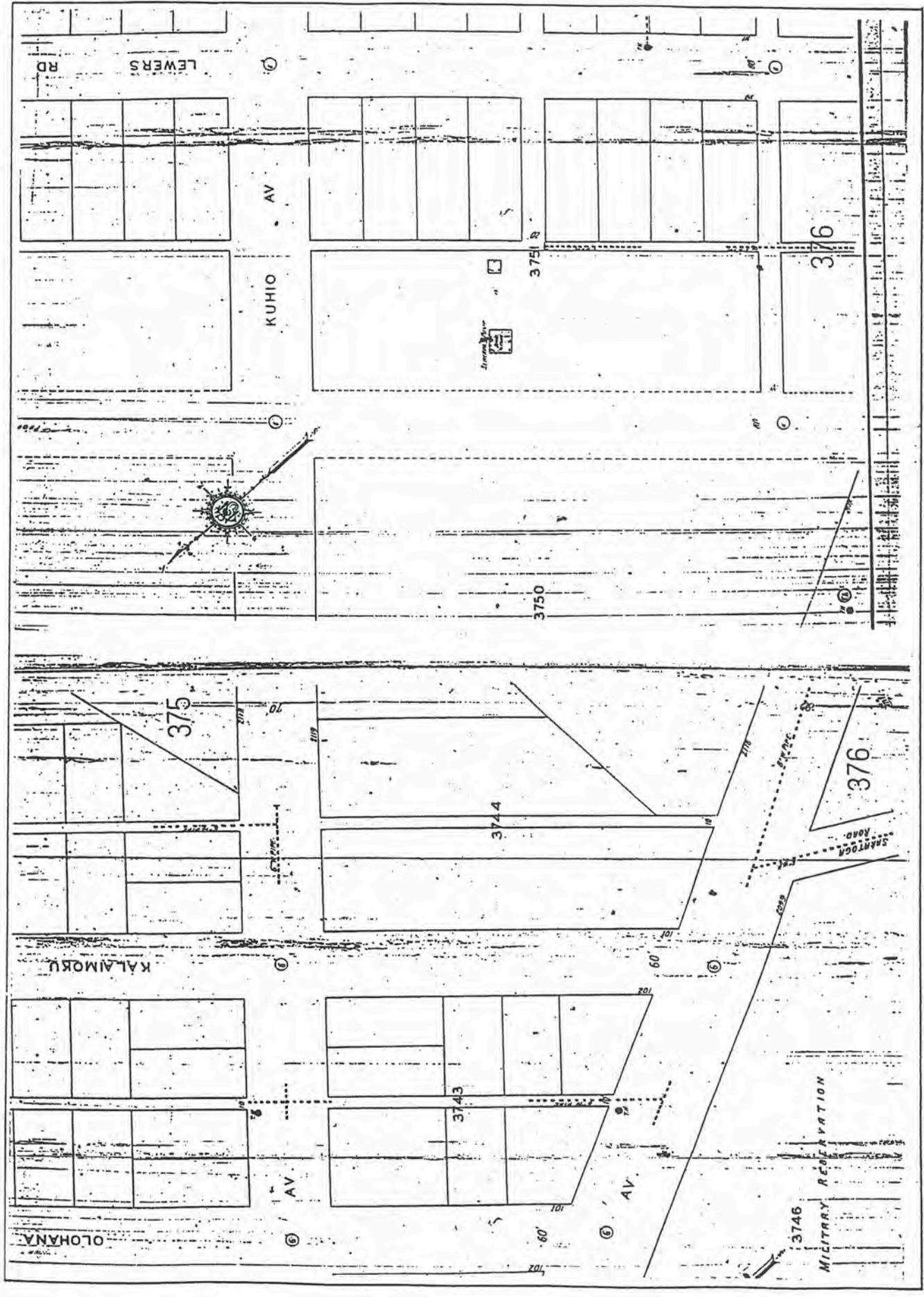


Figure 7 1927 Sanborn Fire Insurance map showing newly-created block bounded by Kalakaua and Kuhio avenues and Kalamoku and Lewers streets

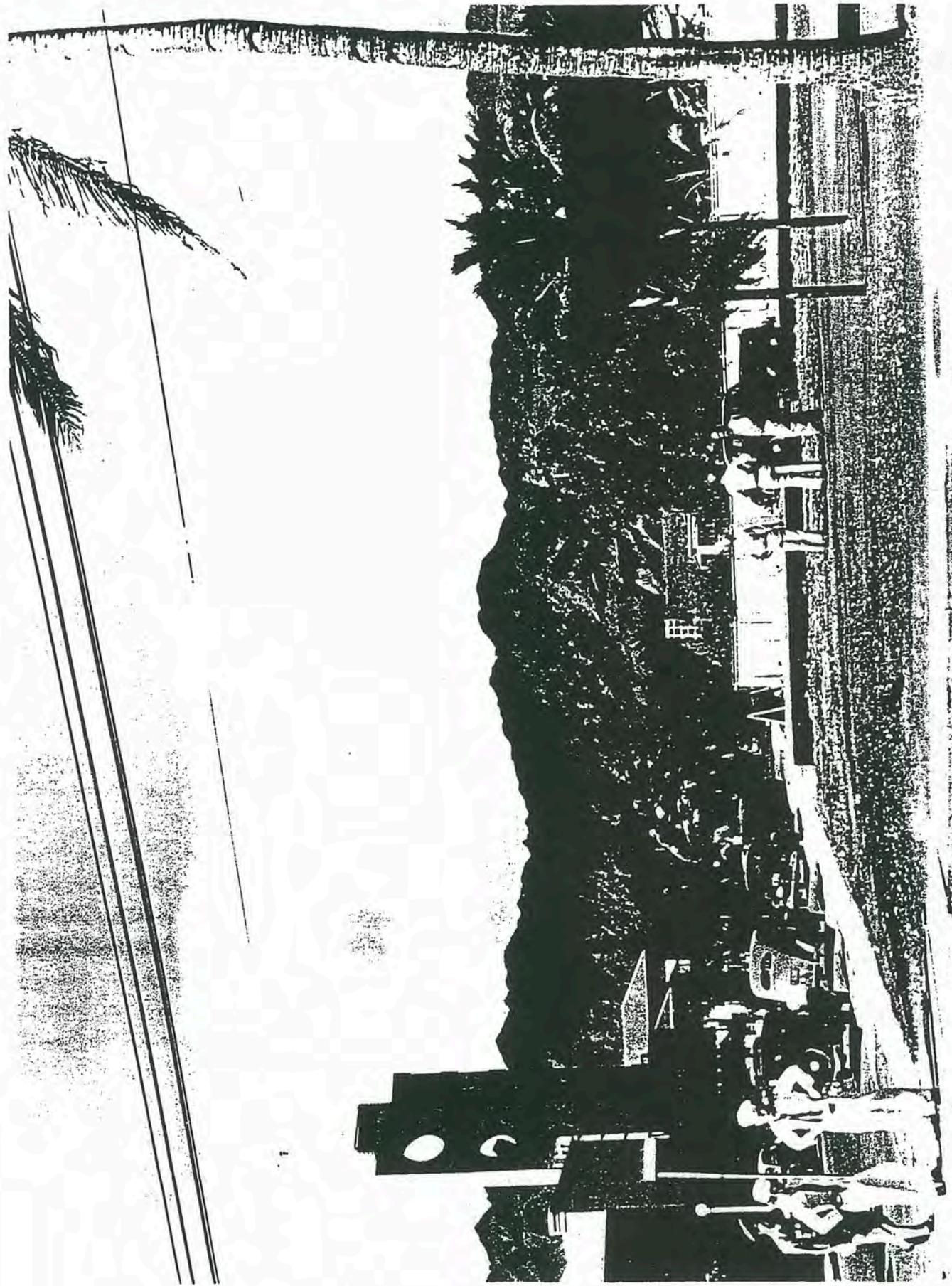


Figure 8 Corner of Kalaimoku St. and Kalakaua Ave., ca. 1945 (Bishop Museum Archives)

a cost of \$250,000. The restaurant continued in operation until 1989. The building subsequently served as a Honolulu Police Department sub-station.

In 1974, Hula's Bar & Lei Stand opened at the *makai*-Diamond Head corner of Kuhio Ave. and Kalaimoku St. (at TMK 2-6-18:73). It replaced a laundromat and food stand which were then operating on the parcel. It remained in operation until its closing this year.

The only structures within the project area that are older than fifty years - and may thus be of historic concern - are the four concrete, former apartment buildings constructed in the 1940s. However, the subsequent additions and renovations to these buildings since their construction may have lessened their historic value.

An additional concern has been raised over the historic status of the Canlis Charcoal Broiler building, though the building itself is less than fifty years old. This concern has been expressed in an August 3, 1998 letter from Don Hibbard, Administrator of the State Historic Preservation Division, to the Department of Planning and Permitting, City and County of Honolulu (see Appendix). The letter notes that the "majority of the structures over 50 years [within the present project area] do not appear to have retained their historic integrity." However, the

Canlis Restaurant Building, while not quite 50 years old, has exceptional significance as one of the few intact examples left in Hawaii of the once popular restaurant trend and unique building type...

According to the Land Use Ordinance 7.80-3(c) "Development should preserve, maintain and enhance historic properties whenever possible." Therefore, we request that the demolition of the Canlis building be deferred until the entire development project is submitted so that we can better ascertain the potential of retaining Canlis.

The letter concludes with the suggestion that "there are other design possibilities where Canlis, with its strong sense of place, can be utilized in the development."

III. PREVIOUS ARCHAEOLOGICAL RESEARCH

Before the 1980s the majority of the information concerning Waikīkī from previous archaeological sources centered on human burials inadvertently excavated during construction activities. In 1901, while digging a sewer line at the James B. Castle property near Diamond Head (in the environs of the present Elks Club), the remains of at least four adult Hawaiians were unearthed along with "a number of conical teeth of whale teeth, a number of round glass beads of large size, and a small sized niho-palaoa, such as was generally appropriated to the use of the chiefs" (Emerson 1902:19).

In the 1920s and 30s the first systematic archaeological survey of O`ahu was conducted by J.C. McAllister (1930). He recorded four heiau, three of which were located at the mauka reaches of Waikīkī *ahupua`a* in lower Manoa Valley. The fourth heiau - Papaenaena - was located at the foot of Diamond Head crater in the environs of the present Hawaii School for Girls. Papaenaena heiau is traditionally associated with Kamehameha I who was said to have visited the heiau before setting off to battle for Niihau and Kauai in 1804. Five years later, according to John Papa ʻŪi, Kamehameha placed at Papaenaena the remains of an adulterer - "all prepared in the customary manner of that time" (ʻŪi 1959:50-51).

During the 1960s through the 1970s inadvertent burial finds were reported at construction sites stretching from the Fort DeRussy area to the foot of Diamond Head crater. In 1961 a human burial and a nineteenth century trash pit were unearthed during construction on Saratoga Road adjacent to Fort DeRussy. In 1963 human burials were discovered during construction activities at 2431 Prince Edward Street and at the site of the present Outrigger Canoe Club across from Kapiolani Park. Among the twenty-five burials - excavated by the Bishop Museum - were several discovered in flexed (with knees drawn up to the chin) or semi-flexed positions, traditional Hawaiian burial postures.

Sand dune burials - another traditional Hawaiian mortuary practice - were revealed in 1964 as beach sand fronting the Surfrider Hotel shifted and eroded.

The remains of six burials - five of apparent prehistoric or early historic age and one of more recent date - were unearthed in 1976 during construction of the Hale Koa Hotel adjacent to the Hilton Hawaiian Village Hotel.

In 1980, three burials were exposed at the Hilton Hawaiian Village itself during construction of the hotel's Tapa Tower. Earl Neller of the (then named) State Historic Preservation Program was called in upon discovery of the burials and conducted fieldwork limited to three brief inspections of the project area. Neller's (1980) report noted:

The bones from three Hawaiian burials were partially recovered; one belonged to a young adult male, one a young adult female, and one was represented by a single bone. An old map showed that rapid shoreline accretion had occurred in the area during the 1800s, and that the beach in the construction area was not very old. It is possible the burials date back to the smallpox epidemic of 1853. It is likely that burials will continue to be found in the area. It is also possible that early Hawaiian sites exist farther inland, beneath Moiliili, adjacent to where the shoreline would have been 1000 years ago. (Neller 1980:5)

Neller also documented the presence of trash pits, including one from the 1890s which contained "a large percentage of luxury items, including porcelain tablewares imported from China, Japan, the United States, and Europe" (*ibid*:5). He further notes:

It is suspected that other important historic archaeological sites exist in the highly developed concrete jungle of Waikiki, with discrete, dateable trash deposits related to the different ethnic and social groups that occupied Waikiki over the last 200 years. (*ibid*:5)

Between December 1981 and February 1982, archaeologists from the Bishop Museum led by Bertell Davis conducted a program of excavations and monitoring during construction of the new Halekulani Hotel (Davis 1984). Six human burials were recovered along with "animal burials [and] cultural refuse from prehistoric Hawaiian firepits, and a large collection of bottles, ceramics, and other materials from trash pits and privies dating to the late 19th century" (*ibid*.:i). Age analysis of volcanic glass recovered from the site led Davis to conclude: "For the first time we can now empirically date...settlement in Waikiki to no later than the mid-1600s" (*ibid*.:i). Just as significant to Davis was the collection of historic era material at the Halekulani site; he states:

[The] Halekulani excavations clearly demonstrate...that there is a definite need to consider historic-period archaeology as a legitimate avenue of inquiry in Hawaiian research. Furthermore, archaeology in the urban context can yield results every bit as significant as in less developed areas. Development in the 19th and early 20th centuries clearly has not destroyed all archaeological resources in Waikiki, Honolulu, or in any of the other urbanized areas of Hawai'i. (*ibid*.:i)

From January through December of 1983, Earl Neller of the State Historic Preservation Office conducted archaeological fieldwork during construction of the Lili'uokalani Gardens condominium on Paoakalani Street. The bones of seven individuals - all from prehistoric Hawaiian graves - were recovered at the site. Neller's report noted:

Queen Lili'uokalani had a bungalow at the project site, and broken glass and ceramic were collected that once was used by the Queen and her guests. There is a deeply buried cultural layer at the site that is older than the graves. (Neller 1984:i)

Neller recommended further work to develop a full-scale study of the material collected at the site; unfortunately, no such study was ever produced.

During 1985 and 1986 archaeologists from Paul H. Rosendahl, Ph. D. Inc. conducted archaeological monitoring at the site of the Mechanical Loop Project at the Hilton Hawaiian Village, Waikiki. Much of this project area was disturbed by historic and modern construction and modification. Fifteen subsurface features were uncovered during the monitoring all of which were determined to be historic trash pits or trenches. The dating of these features was based on dating the artifactual material they contained. All 15 features are thought to post-date 1881 based on this artifact analysis. The 3 partial burials reported by Neller (1980) were found within this project area (see above). No further burials were encountered during the PHRI field work (Hurlbert, et. al. 1992).

In 1987 State Historic Preservation Office archaeologists recovered a human burial at Kalakaua Avenue during renovation work on the Moana Hotel.

During 1988 the Moana Hotel Historical Rehabilitation Project (Simmons et. al. 1991) encountered human remains that amounted to at least 17 individuals. Based on stratigraphic association these burials were interred over time as the land form at the site changed. The sediment surrounding these burials yielded traditional midden and artifact assemblages. The burials and human remains were found in the Banyan Court and beneath the hotel itself.

In 1989 skeletal remains were unearthed on the grounds of the Ala Wai Golf Course during digging of an electrical line trench for a new sprinkler system. The trench had exposed a pit containing two burials (Bath and Kawachi 1989: 2). The report suggests that one of the burials may have been disturbed earlier during grading for the Territorial Fair Grounds. The osteological analysis included in the report concludes that both sets of remains "appear ancient." (*Ibid.*:2)

Davis' (1989, 1991) excavation and monitoring work at Fort DeRussy documented substantial subsurface archaeological deposits--prehistoric, historic, and modern. These deposits included buried fishpond sediments, `auwai sediments, midden and artifact enriched sediments, structural remains such as post holes and fire pits, historic trash pits, and a human burial. Davis' (1991) report documents human activity in the Fort DeRussy beach front area from the 16th century to the present.

The work at Fort DeRussy continued in 1992 when BioSystems researchers built upon Davis' work (Simmons 1995). BioSystems research documents the development and expansion of the fishpond and `auwai (ditch) system in this area. (The `auwai system was entered on the State Inventory of Historic Places (SIHP) as State Site 50-80-14-4970. As indicated on the 1881 map by S.E. Bishop discussed above (see Figure 2), this `auwai enters the Ft. DeRussy grounds through the present project area.) Remains of the fishpond and `auwai deposits, as well as habitation deposits were documented below modern fill deposits. This research, along with that of Davis (1991) clearly demonstrates that historical document research can be an effective guide to locating late prehistoric/early historic subsurface deposits, even amidst the development of Waikiki.

The realignment of Kalia Road at Fort DeRussy in 1993 uncovered approximately 40 human burials. A large majority of these remains were recovered in a large communal burial feature (Carlson et. al. 1994). The monitoring and excavations associated with this realignment uncovered a cultural enriched layer which contained post holes.

On April 28, 1994 an inadvertent burial discovery was made during excavation for a water line at the intersection of Kalakaua Ave. and Kuamo'o St. (just *mauka* of Ft. DeRussy and two blocks northwest of the present project area). These remains represented a single individual (McMahon 1994).

Another inadvertent discovery of human remains occurred in April of 1995 at the site of the Waikiki Sunset Hotel (Jourdan 1995). The remains appeared to be a single individual.

In 1996 Pacific Legacy, Inc. conducted an archaeological inventory survey of the block bounded by Kalakau Ave., Kuhio Ave., Olohana St., and Kalaimoku St. (Cleghorn 1996). This parcel is located immediately adjacent to (on the `ewa side of) the present project area. The survey

included excavation of seven backhoe trenches. The subsurface testing indicated that

...this area was extremely wet and probably marshy. This type of environment was not conducive for traditional economic practices...The current project area appears to have been unused because it was too wet and marshy.

Several peat deposits, containing the preserved remains of organic plant materials were discovered and sampled. These deposits have the potential to add to our knowledge of the paleoenvironment of the area. (Cleghorn 1996:15)

The report concluded that no further archaeological investigations of the parcel were warranted since "no potentially significant traditional sites or deposits were found" but cautioned of the "possibility, however remote in this instance, that human burials may be encountered during large scale excavations" (*Ibid.*:15).

IV. FIELD INSPECTION RESULTS

Field inspection of the project area was accomplished on August 23, 1998. The entire project area was accessible to investigation as all commercial activities have been terminated. Current conditions were documented by field notes and photographs (Figures 10-15).

A. Archaeological Sites

No surface archaeological sites or features were evident within the project area which, as has been documented in this report, comprises entirely landfill material imported during the 1920s. No surface evidence of the *`auwai* (ditch) which, as was also documented in this report, formerly coursed through the *`ewa* side of the project area, and which was recorded as State Site 50-80-14-4970 during archaeological study within the Ft. DeRussy grounds.

B. Building Assessment

The only structures observed within the project which appear on the 1951 Sanborn Fire Insurance map (see Figure 9 above) were four concrete, two-story, former apartment buildings located between Kuhio Ave. and Lauulu St. (TMK 2-6-18:42, 62, 63, & 64). These buildings were constructed between 1942 and 1948 but have all since been added to and renovated for commercial usage (Figures 14 & 15). These additions and renovations have compromised their historical integrity.

The Canlis Charcoal Broiler building, constructed in 1954, continues to occupy the west corner of the project area at the intersection of Kalaimoku St. and Kalakaua Ave. (Figure 12). As was noted above, the restaurant closed in 1989. Though it subsequently served for a period as a police substation, the building was observed to be little changed from its appearance in photographs taken at the height of the restaurant's popularity.



Figure 10 East portion of project area along Kuhio Ave. showing two-story concrete buildings; view west

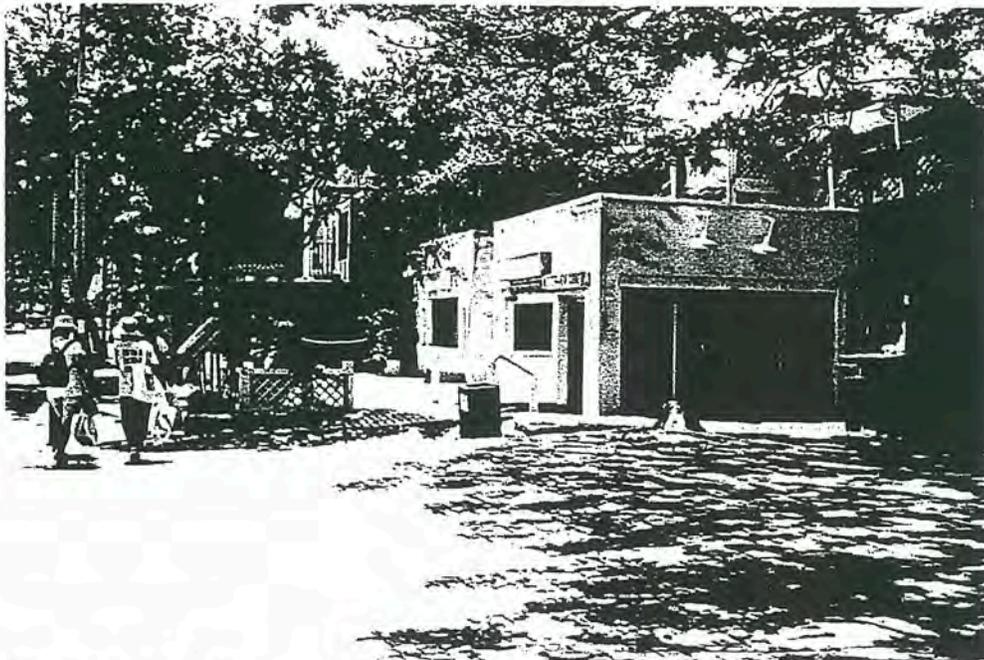


Figure 11 Concrete buildings on Kuhio Ave.; view southeast

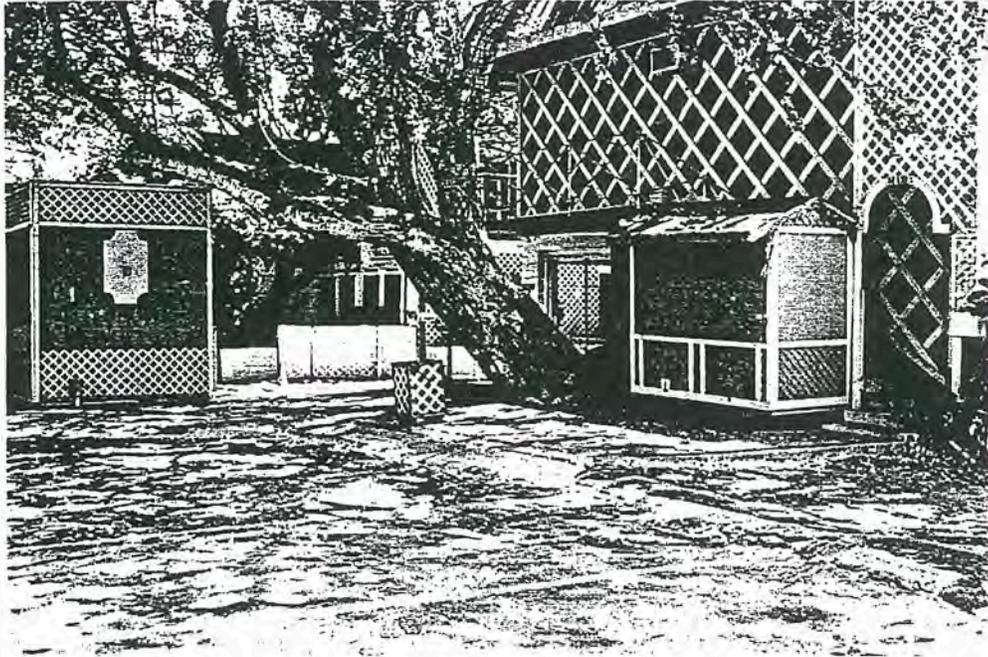


Figure 12 Concrete buildings in east portion of project area; view east

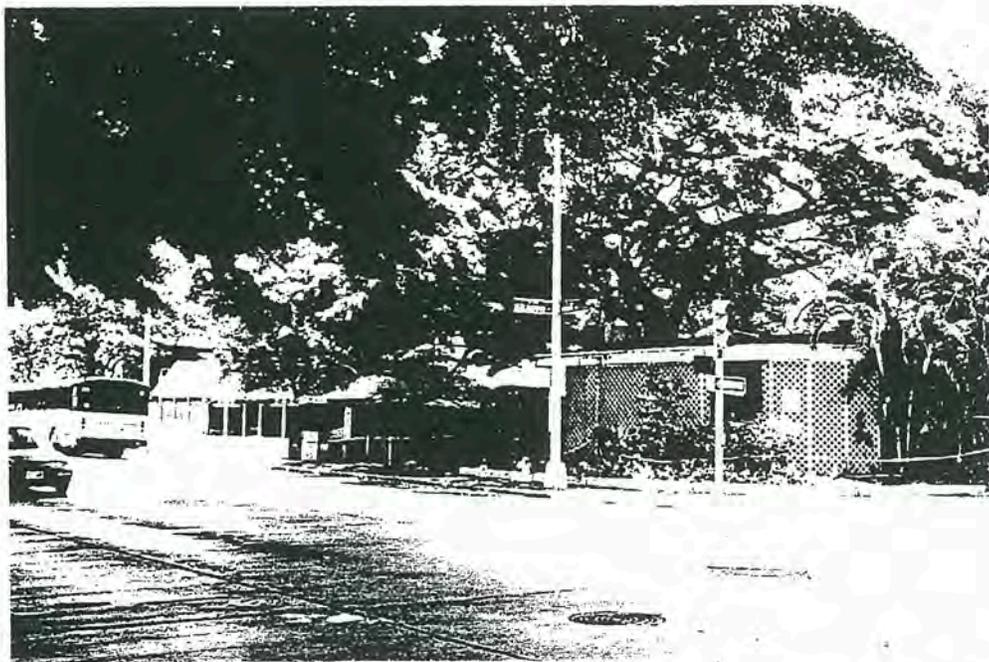


Figure 13 Project area at corner of Kuhio Ave. and Kalaimoku St.; view southeast

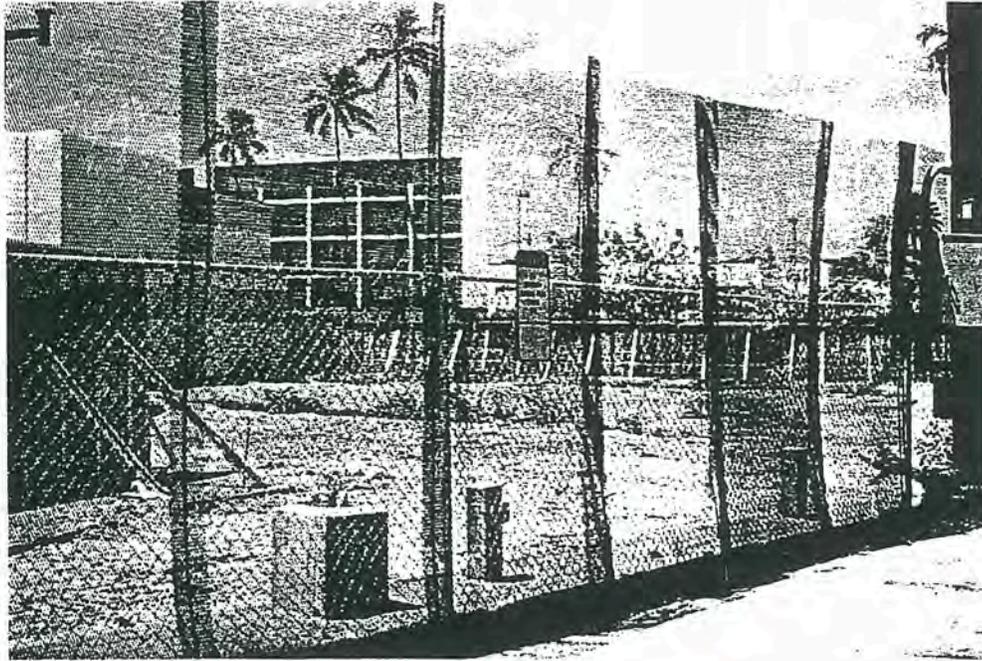


Figure 14 Empty lot (TMK 2-6-18:36) at south corner of project area; view south



Figure 15 Canlis Charcoal Broiler building at west corner of project area; view east

V. SUMMARY AND RECOMMENDATIONS

A. Summary

Archaeological Concerns

The *ahupua`a* of Waikīkī in the centuries before the arrival of Europeans was a well-used locale with abundant natural and cultivated resources - including an expansive system of irrigated taro fields - supporting a large population that included the highest-ranking ali`i. In the nineteenth century, after a period of depopulation and desuetude, Waikīkī was reanimated by the Hawaiian *ali`i* and the foreigners residing there and by the farmers continuing to work the irrigated field system which had been converted from taro to rice. This farming continued up to the first decades of this century until the Ala Wai Canal drained the remaining ponds and irrigated fields.

The present project area comprises land created and filled during the 1920s in conjunction with the construction of the Ala Wai Canal. The land fill operations have obscured all traces of any archaeological features within the project area predating the 1920s. However, historic documents and maps, and previous archaeological research, indicate that the project area was most likely a marshy field (with perhaps an associated pond) located just *mauka* of an extensive network of fishponds that covered the present Ft. DeRussy grounds. An *`auwai* (ditch) that fed the Ft. DeRussy fishponds ran through the *`ewa* side of the project area. (This *`auwai* was entered on the State Inventory of Historic Places as site no. 50-80-14-4970 during archaeological study within the Ft. DeRussy grounds.)

Archaeological reports have documented human burials - both pre-contact Hawaiian and historic - throughout the breadth of Waikiki--as far *mauka* as the Ala Wai Golf Course. Especially relevant to the present project area are several burials that have been encountered within the grounds of Ft. DeRussy and of adjacent hotels. A burial, encountered during excavation for a water line, has also been documented at the intersection of Kuamoo St. and Kuhio Ave., two blocks *`ewa* of the project area.

Several studies have recorded the presence within Waikiki of subsurface cultural deposits of both pre-contact Hawaiian and historic provenance. These deposits had remained intact despite the years of construction activity that have altered the surface of the entire area. The authors of these studies emphasize that the potential for discovering similar intact deposits elsewhere in Waikiki cannot be discounted.

Historic Building Concerns

Only four structures older than fifty years are presently standing within the project area. These four are two-story concrete buildings located between Kuhio Ave. and Lauulu Pl. (TMK 2-6-18:42, 62, 63, & 64). They were formerly apartments constructed between 1942 and 1948 but have all since been added to and renovated for commercial usage. It is suggested that these additions and renovations have compromised the buildings' historical integrity.

Preservation concerns have been expressed over the Canlis Charcoal Broiler building, which was constructed in 1954. The building is discussed in the Recommendations section below.

B. Recommendations

The following recommendations are appropriate to the present project area in Waikīkī:

- 1) It is likely that intact prehistoric and early contact cultural deposits are lying undisturbed beneath modern fill layers within the project area (as has been documented in adjacent areas of Waikīkī). Also, there is historic evidence indicating the prior existence of a major *`auwai* and possible adjacent *lo`i* (irrigated terraces) in the project area. Therefore, an archaeological inventory survey is recommended. This survey would comprise subsurface testing of the entire project area consisting of a series of backhoe trenches. Particular attention would be given to locating the *`auwai* (State site 50-80-14-4970) along the west side of the project area.
- 2) If major findings are encountered during subsurface testing, preparation of a mitigation plan would be appropriate. This plan would be reviewed and approved by the State Historic Preservation Division (SHPD).
- 3) An additional concern is the possible presence of burials. If burials are encountered during the subsurface testing, the Burials Program of the SHPD should be notified to determine appropriate treatment. Provision should also be made for treatment of unanticipated finds during construction excavation.
- 4) Structures in the project area over fifty years old do not appear to have retained their historical integrity, as noted in the SHPD letter of August 3, 1998 (see Appendix) discussed in this report. However, the letter also notes the department's concern with the Canlis Charcoal Broiler building, citing "its exceptional significance as one of the few intact examples left in Hawaii of the once popular restaurant trend and unique building type." Because of this concern, it is recommended that further consultation with the SHPD be pursued before development plans are finalized.

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APPENDIX



DEPUTY
DILSEAT COLOMA-AGARAN

AQUACULTURE DEVELOPMENT
PROGRAM
AQUATIC RESOURCES
CONSERVATION AND
ENVIRONMENTAL AFFAIRS
CONSERVATION AND
RESOURCES ENFORCEMENT
CONVEYANCES
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
DIVISION
LAND MANAGEMENT
STATE PARKS
WATER AND LAND DEVELOPMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION
33 SOUTH KING STREET, 6TH FLOOR
HONOLULU, HAWAII 96813

August 3, 1998

Ms. Jan Naoe Sullivan
Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 7th Floor
Honolulu, Hawaii 96813

LOG NO: 22008
DOC NO: 9808tm01
Architecture

Dear Ms. Sullivan:

SUBJECT: Special District Permit Application
File Number: 98/WSD-21
Demolition of Buildings at 2100 Kalakaua Ave.
Including Former Canlis Restaurant Building
TMK: 2-6-18:10, 42, 52, 55, 62, 63, 64, 73 & 74,
Waikiki, Honolulu, Oahu

Thank you for transmitting the above permit application. While the majority of the structures over 50 years do not appear to have retained their historic integrity, we believe the Canlis Restaurant Building, while not quite 50 years old, has exceptional significance as one of the few intact examples left in Hawaii of the once popular restaurant trend and unique building type. The building was included in the Whitney Museum traveling exhibit to Russia as an exemplary example of American architecture and is a rare example of architecture that displays a sense of place in Hawaii.

According to the Land Use Ordinance 7.80-3(c) "Development should preserve, maintain and enhance historic properties whenever possible." Therefore, we request that the demolition of the Canlis building be deferred until the entire development project is submitted so that we can better ascertain the potential of retaining Canlis. We believe there are other design possibilities where Canlis, with its strong sense of place, can be utilized in the development.

Thank you for the opportunity to comment. Should you have further questions, please feel free to call Tonia Moy at 587-0005.

Aloha

DON HIBBARD, Administrator
State Historic Preservation Division

TM:je

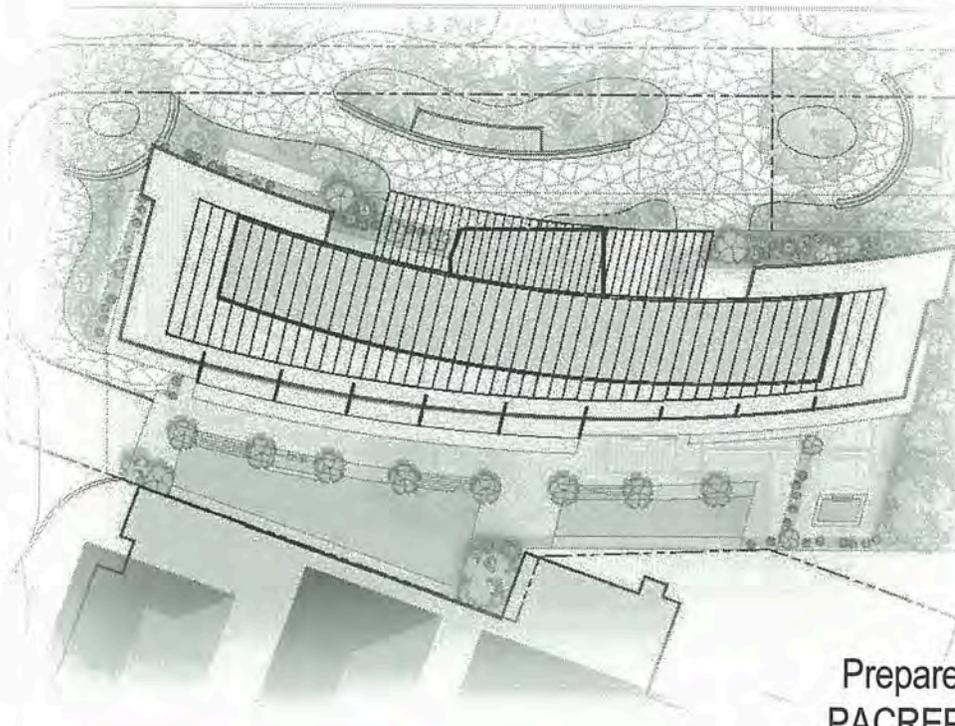
AUG 3- 1998

APPENDIX III

**TRAFFIC IMPACT REPORT FOR THE PROPOSED K3
WAIKIKI DEVELOPMENT**

Traffic Impact Report

2121 Kuhio Avenue Development



Prepared for:
PACREP LLC

Prepared by:
Wilson Okamoto Corporation

March 2012
Revised September 2012
Updated October 2012

TRAFFIC IMPACT REPORT
FOR THE PROPOSED
2121 KUHIO AVENUE DEVELOPMENT

Prepared for:

PACREP LLC

Prepared by:

Wilson Okamoto Corporation
1907 S. Beretania Street, Suite 400
Honolulu, Hawaii 96826
WOC Ref #8296-01

March 2012
Revised September 2012
Updated October 2012

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I. INTRODUCTION

A. Purpose of Study

The purpose of this study is to identify and assess the traffic impacts resulting from the proposed 2121 Kuhio Avenue development in Waikiki on the island of Oahu. The proposed project entails the construction of a new condo-hotel tower adjacent to Kalaimoku Street.

B. Scope of Study

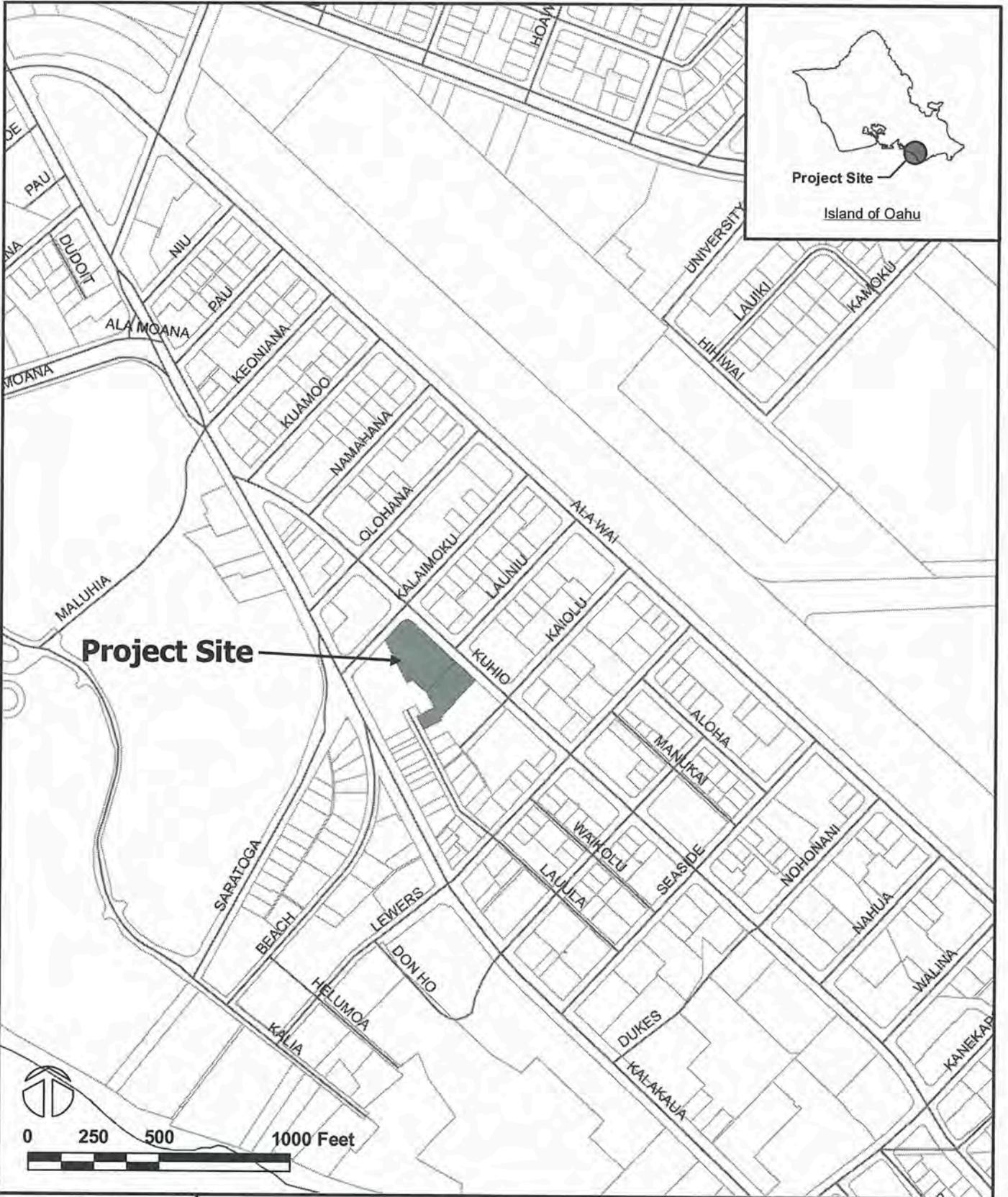
This report presents the findings and conclusions of the traffic study, the scope of which includes:

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 Kalaimoku Street between Kalakaua Avenue and Kuhio Avenue in Waikiki on the island of Oahu (see Figure 1) and is further identified as Tax Map Keys: 2-6-18: 10, 42, and 52. The existing parcels are surrounded by residential apartments to the north and commercial uses to the west and south. Primary access to the project site will be provided via driveways off Kalaimoku Street.




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2121 KUHIO AVENUE DEVELOPMENT

Location Map and Vicinity Map

FIGURE
 1

B. Project Characteristics

The 2121 Kuhio Avenue development will be located on a currently undeveloped site near the intersection of Kalaimoku Street and Kuhio Avenue. The development is expected to include the following:

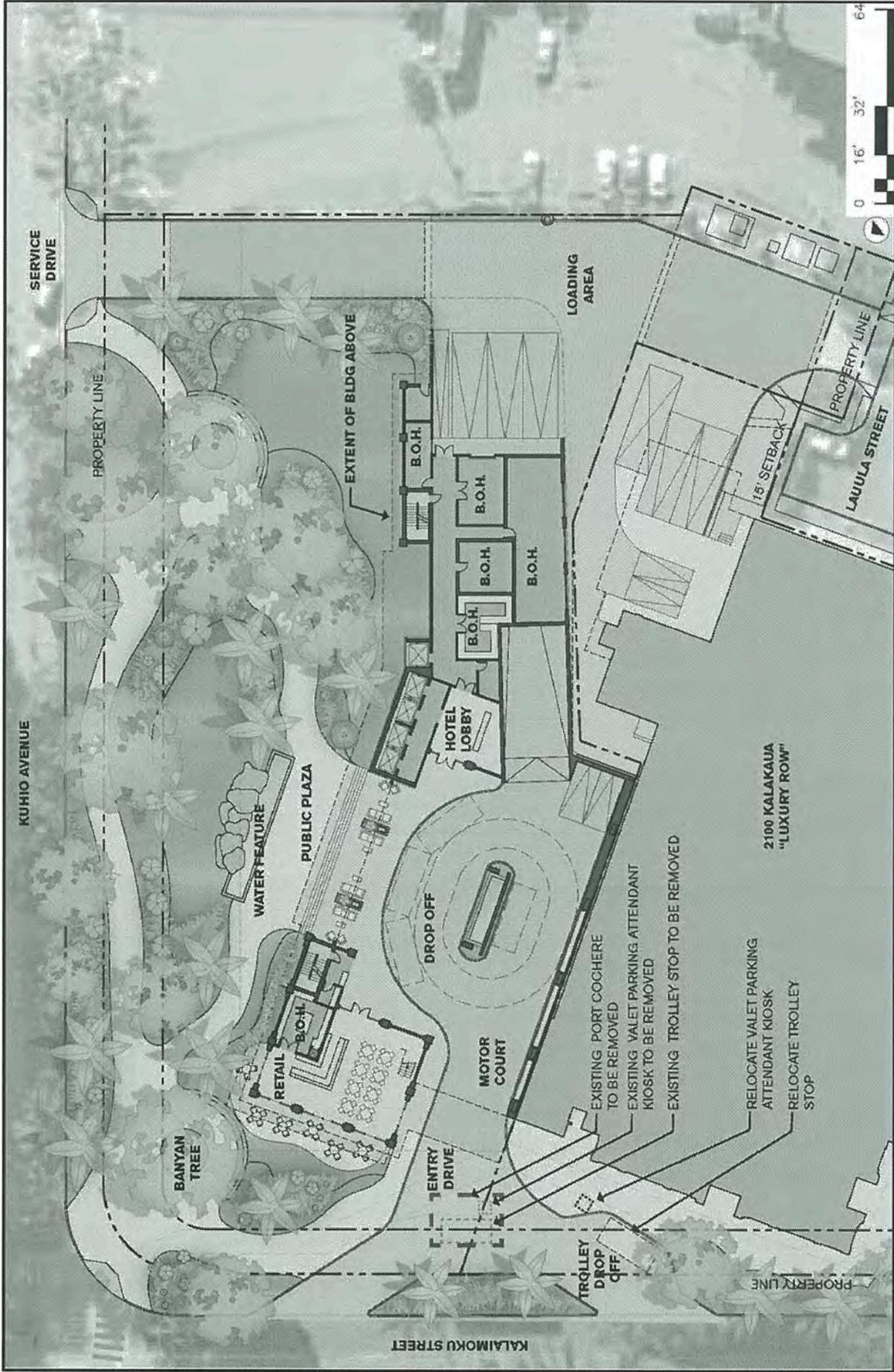
- Approximately 459 condo-hotel units
- Restaurant on the ground floor (~7,500 square feet)
- Sundry/coffee shop on the ground floor (~2,500 square feet)
- Amenities such as recreational areas and a fitness/wellness center
- Parking structure (~211 stalls)

The project is expected to be completed and occupied by the Year 2015 with primary vehicular access provided via driveways off Kalaimoku Street. There is an existing drop-off area along Kalaimoku Street that is assumed to be modified to serve as the primary access for the project. In addition, secondary access will be provided off Kuhio Avenue for maintenance or delivery vehicles. Figure 2 shows the proposed project site plan.

III. EXISTING TRAFFIC CONDITIONS

A. Area Roadway System

The project site is located adjacent to Kalaimoku Street between Kalakaua Avenue and Kuhio Avenue. Kalakaua Avenue is a one-way (eastbound) that with Ala Wai Boulevard forms a couplet system providing east-west access through Waikiki. Southwest of the project site, Kalakaua Avenue intersects Kalaimoku Street and Saratoga Road. At this signalized intersection, Kalakaua Avenue has four eastbound lanes that serve all traffic movements. Kalaimoku Street is a two-lane, one-way roadway generally oriented in the north-south direction between Kalakaua Avenue and Ala Wai Boulevard while Saratoga Road is generally a two-lane, two-way roadway oriented in the north-south direction between Kalia Road and Kalakaua Avenue. At the intersection with Kalakaua Avenue, Saratoga Road has one northbound through lane and two right-turn lanes while Kalaimoku Street has two northbound departure lanes. There are posted signs at the intersection indicating that northbound right-turn movements are prohibited on red.



2121 KUHIO AVENUE DEVELOPMENT

PROJECT SITE PLAN

FIGURE
2

Northeast of the intersection with Kalakaua Avenue, Kalaimoku Street intersects Kuhio Avenue. At this signalized intersection, the northbound approach of Kalaimoku Street has two lanes that serves all traffic movements. Kuhio Avenue is a predominantly four-lane, two-way roadway that runs parallel to Kalakaua Avenue and Ala Wai Boulevard. At the intersection with Kalaimoku Street, the eastbound approach of Kuhio Avenue has a shared left-turn and through lane and one through lane while the westbound approach has one through lane and a shared through and right-turn lane.

Further northeast, Kalaimoku Street intersects Ala Wai Boulevard. At this signalized T-intersection, Kalaimoku Street has two northbound lanes that serve left-turn traffic movements. Ala Wai Boulevard is a predominantly three-lane, one-way (westbound) roadway with a 24-hour parking lane located on the north side of the roadway. At the intersection with Kalaimoku Street, Ala Wai Boulevard has three westbound lanes that serve through traffic movements.

Southeast of the intersection with Kalaimoku Street, Kuhio Avenue intersects Launiu Street. At this signalized T-intersection, both approaches of Kuhio Avenue have two lanes that serve through traffic movements. Launiu Street is a two-lane, one-way (southbound) roadway generally oriented in the north-south direction between Kuhio Avenue and Ala Wai Boulevard. At the intersection with Kuhio Avenue, the Launiu Street approach has exclusive left-turn and right-turn lanes.

Further southeast, Kuhio Avenue intersects Kaiolu Street. At this unsignalized T-intersection, both approaches of Kuhio Avenue have two lanes that serve all traffic movements. Kaiolu Street is a two-lane, one-way (northbound) roadway generally oriented in the north-south direction between Kuhio Avenue and Ala Wai Boulevard. At the intersection with Kuhio Avenue, Kaiolu Street has one northbound departure lane. The northbound approach of the intersection is comprised of an access road to a City and County of Honolulu parking lot and other adjacent properties which has one northbound lane that serves right-turn traffic movements only.

At the east end of the study area, Kuhio Avenue intersects Lewers Street. At this signalized intersection, the eastbound approach of Kuhio Avenue has an exclusive

left-turn lane and two through lanes while the westbound approach has one through lane and a shared through and right-turn lane. Lewers Street is a generally north-south oriented roadway that originates at Kalia Road as a two-lane, one-way (southbound) roadway that it converts to a four-lane, two-way roadway between Don Ho Lane and Kalakaua Avenue. North of Kalakaua Avenue, Lewers Street continues as a two-lane, one-way (northbound) roadway until its terminus at Ala Wai Boulevard. At the intersection with Kuhio Avenue, Lewers Street has two northbound lanes that serve all traffic movements.

Southwest of the intersection with Kuhio Avenue, Lewers Street intersects Kalakaua Avenue. At this signalized intersection, the northbound approach of Lewers Street has one through lane and an exclusive right-turn lane. The Kalakaua Avenue approach of the intersection has four lanes that serves all traffic movements.

Northeast of the intersection with Kuhio Avenue, Lewers Street intersects Ala Wai Boulevard. At this signalized T-intersection, the northbound approach of Lewers Street has two left-turn lanes. The Ala Wai Boulevard approach of the intersection has three lanes that serve through movements.

Northwest of the intersection with Kalaimoku Street, Kuhio Avenue intersects Olohana Street Street. At this signalized intersection, the eastbound approach of Kuhio Avenue has one through lane and a shared through and right-turn lane while the westbound approach has one through lane and an exclusive left-turn lane. Olohana Street is a two-lane, one-way (southbound) roadway generally oriented in the north-south direction between Kalakaua Avenue and Ala Wai Boulevard. At the intersection with Kuhio Avenue, the Olohana Street approach has two southbound lanes that serve all traffic movements.

South of the intersection with Kuhio Avenue, Olohana Street intersects Kalakaua Avenue. At this signalized t-intersection, the southbound approach of Olohana Street has two left-turn lanes. The Kalakaua Avenue approach of this intersection has four through lanes.

Northwest of the intersection with Olohana Street, Kalakaua Avenue intersects the northbound direction of traffic along Ala Moana Boulevard and Pau Street. At

this signalized intersection, the eastbound approach of Kalakaua Avenue has three through lanes and a shared left-turn and through lane while the westbound approach has a shared through and right-turn lane. In the vicinity of the project site, Ala Moana Boulevard is a predominantly six-lane, two-way roadway that, with Kalakaua Avenue, provides access to and from Waikiki. At the intersection with Kalakaua Avenue and Pau Street, the northbound approach of Ala Moana Boulevard has an exclusive right-turn lane and a shared through and right-turn lane. Pau Street is a one-lane, one-way (northbound) roadway between Kalakaua Avenue and Ala Wai Boulevard that forms the northern leg of the intersection.

At the west end of the study area, Kalakaua Avenue intersects Ala Moana Boulevard, and Niu Street. At this signalized intersection, the eastbound approach of Kalakaua Avenue has three through lanes and a shared through and right-turn lane while the westbound approach has one through lane. Niu Street is a three-lane, one-way (southbound) roadway between Kalakaua Avenue and Ala Wai Boulevard. At the intersection with Kalakaua Avenue and the southbound direction of traffic along Ala Moana Boulevard, the Niu Street approach has two through lanes and a shared left-turn and through lane.

B. Traffic Volumes and Conditions

1. General

a. Field Investigation

Field investigations were conducted during January, February, and August 2012 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, Kalaimoku Street, and Saratoga Road
- Kuhio Avenue and Kalaimoku Street
- Ala Wai Boulevard and Kalaimoku Street
- Kuhio Avenue and Launiu Street
- Kuhio Avenue and Kaiolu Street
- Kuhio Avenue and Lewers Street
- Kalakaua Avenue and Lewers Street

- Ala Wai Boulevard and Lewers Street
- Kuhio Avenue and Olohana Street
- Kalakaua Avenue and Olohana Street
- Kalakaua Avenue, Ala Moana Boulevard, and Pau Street
- Kalakaua Avenue, Ala Moana Boulevard, and Niu Street

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 hours of traffic.

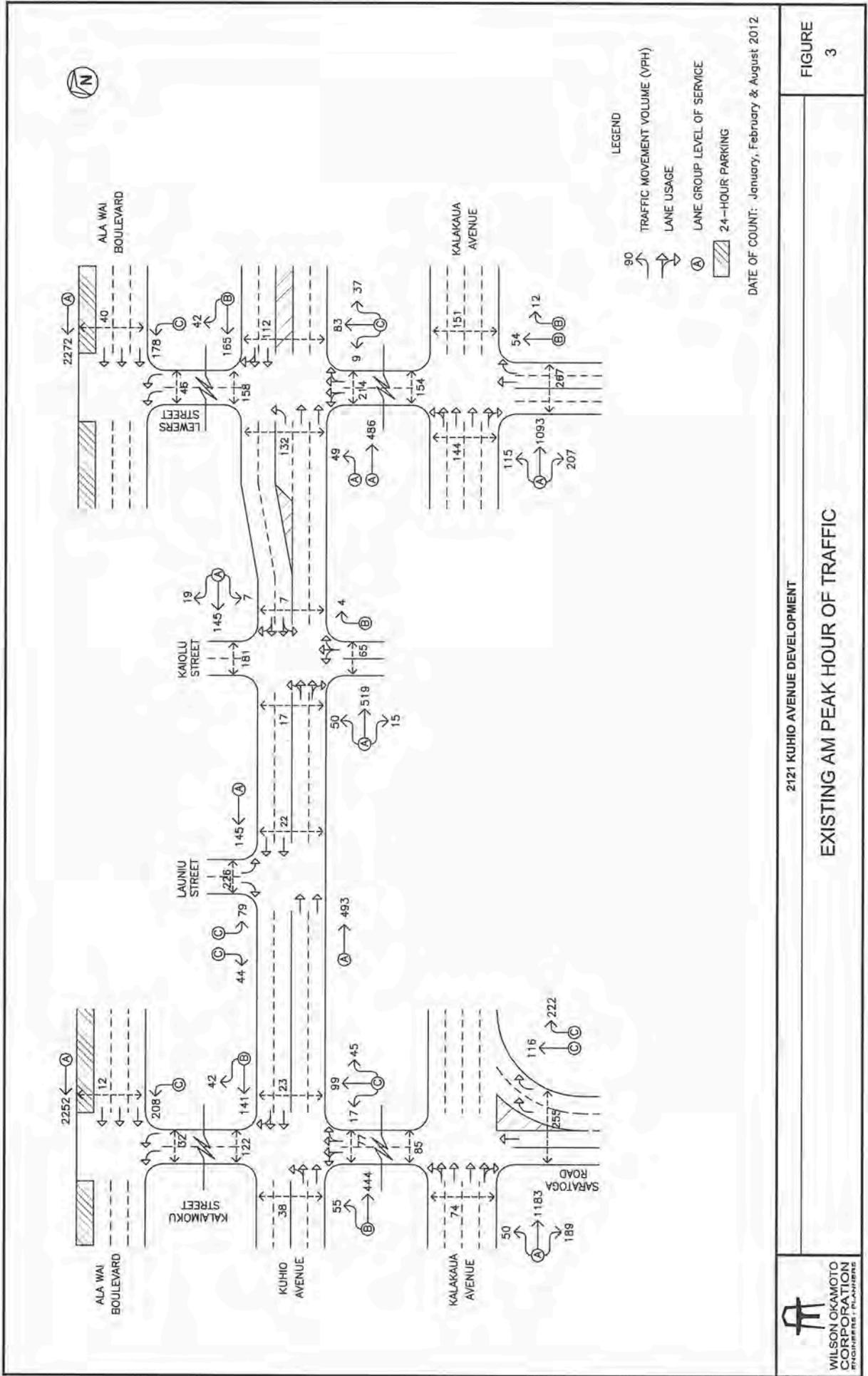
LOS is a quantitative and qualitative assessment of traffic operations. Levels of Service are defined by LOS “A” through “F”; LOS “A” representing ideal or free-flow traffic operating conditions and LOS “F” unacceptable or potentially congested traffic operating conditions.

“Volume-to-Capacity” (v/c) ratio is another measure indicating the relative traffic demand to the road carrying capacity. A v/c ratio of one (1.00) indicates that the roadway is operating at or near capacity. A v/c ratio of greater than 1.00 indicates that the traffic demand exceeds the road’s carrying capacity. The LOS definitions are included in Appendix B.

2. Existing Peak Hour Traffic

a. General

Figures 3 to 6 show the existing AM and PM peak hour traffic volumes and operating traffic conditions. The AM peak hour of traffic generally occurs between 7:15 AM and 8:15 AM in the vicinity of the

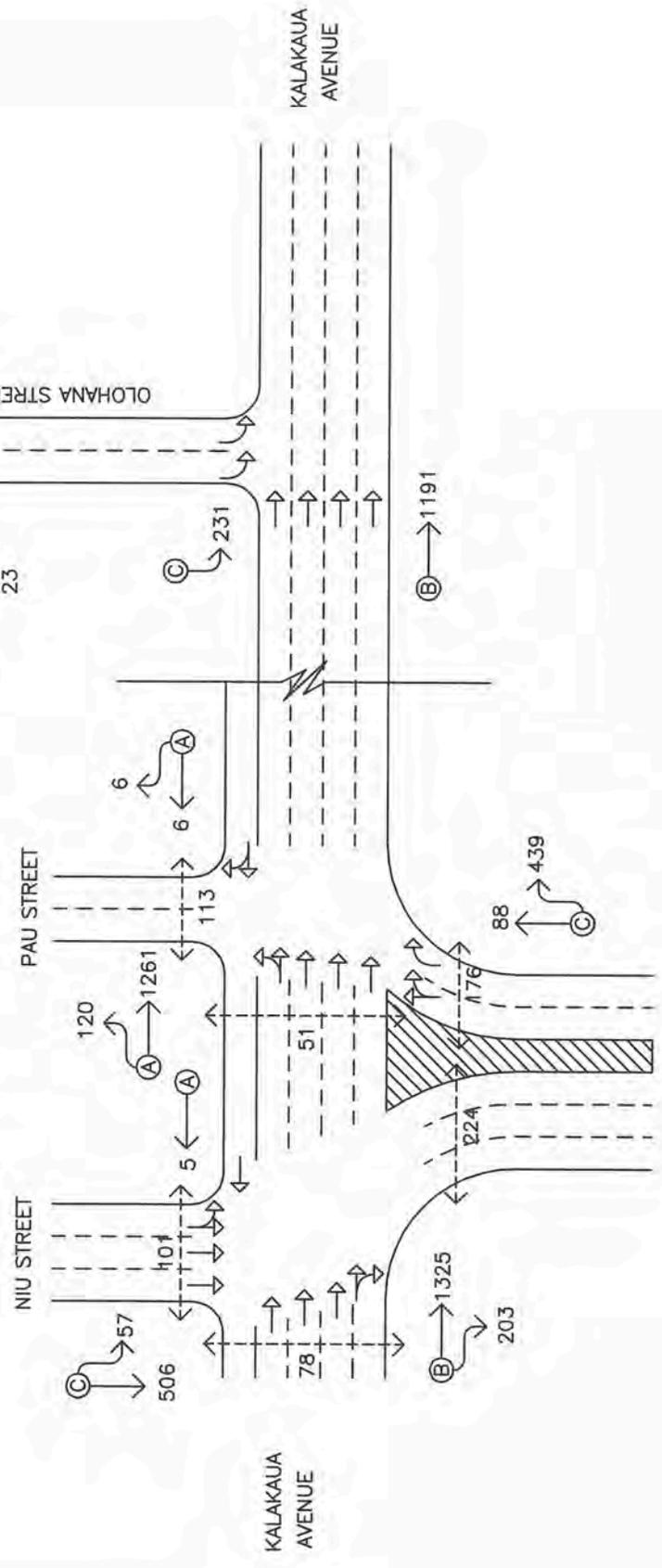




LEGEND

- 90 TRAFFIC MOVEMENT VOLUME (VPH)
- LANE USAGE
- (A) LANE GROUP LEVEL OF SERVICE

DATE OF COUNT: January, February & August 2012

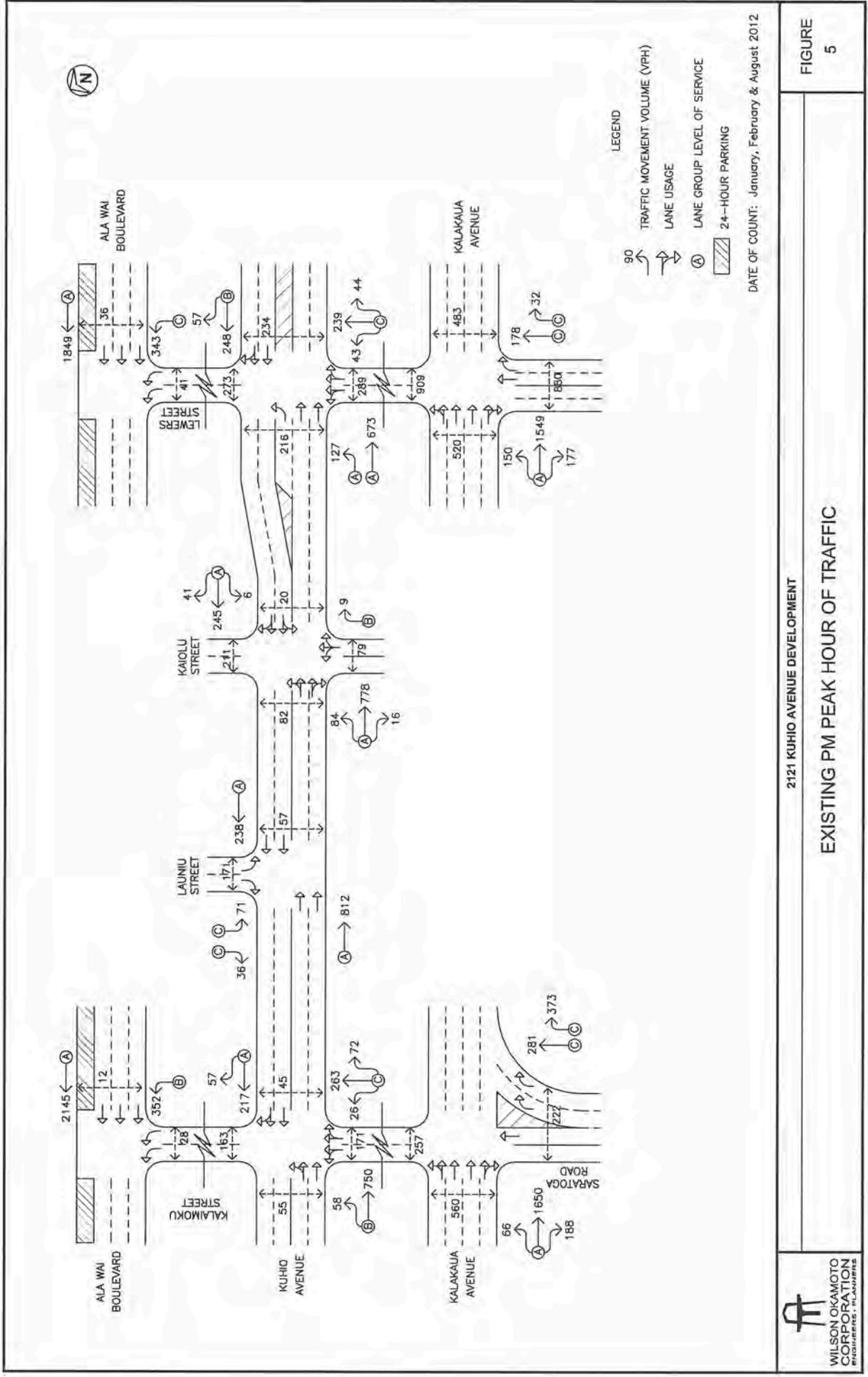


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2121 KUHIO AVENUE DEVELOPMENT

EXISTING AM PEAK HOUR OF TRAFFIC

FIGURE 4



2121 KUHIO AVENUE DEVELOPMENT

EXISTING PM PEAK HOUR OF TRAFFIC

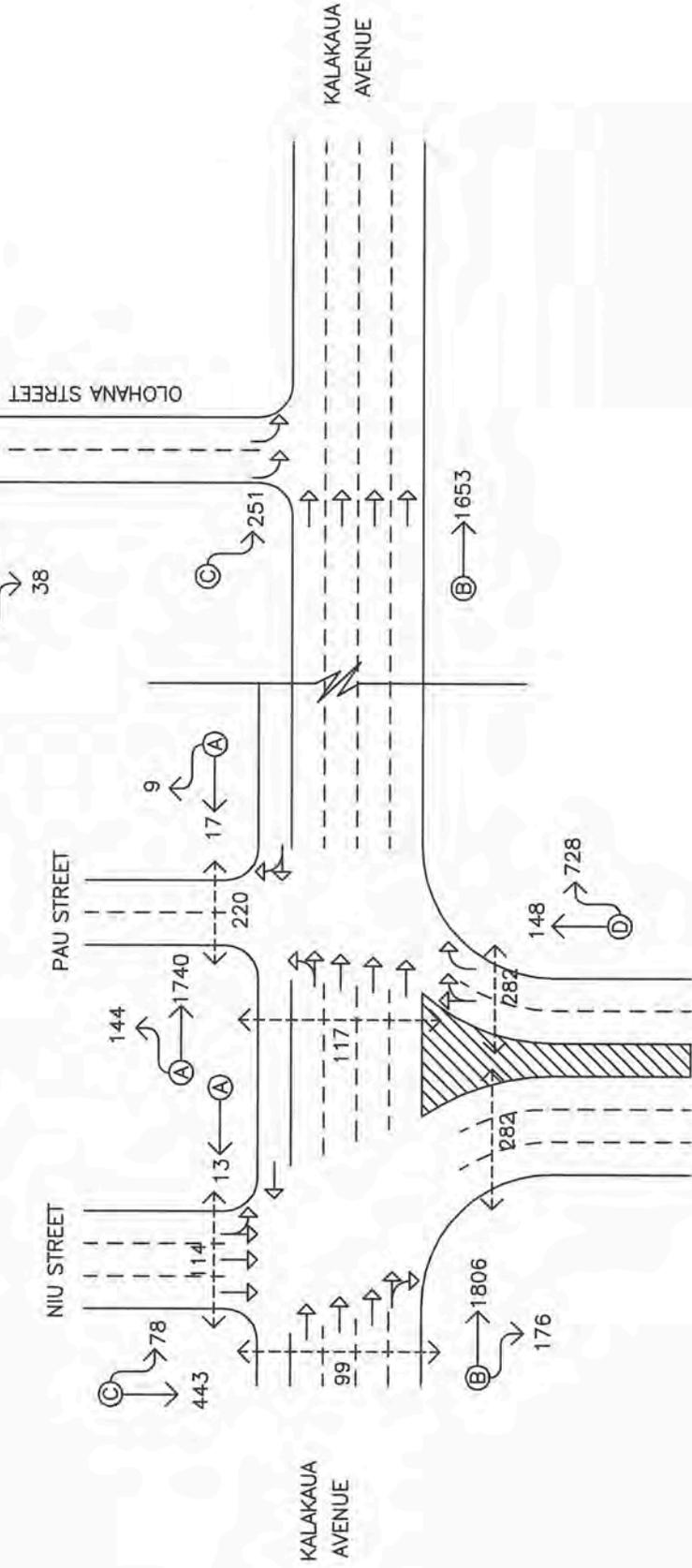
FIGURE 5



LEGEND

- 90 TRAFFIC MOVEMENT VOLUME (VPH)
- LANE USAGE
- (A) LANE GROUP LEVEL OF SERVICE

DATE OF COUNT: January, February & August 2012



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2121 KUHIO AVENUE DEVELOPMENT

EXISTING PM PEAK HOUR OF TRAFFIC

FIGURE
6

proposed project. In the afternoon, the PM peak hour of traffic generally occurs between the hours of 3:45 PM and 4:45 PM. The analysis is based on these peak hour time periods to identify the traffic impacts resulting from the proposed project. The LOS calculations are included in Appendix C.

b. Kalakaua Avenue, Kalaimoku Street, and Saratoga Road

At the intersection with Kalaimoku Street and Saratoga Road, Kalakaua Avenue carries 1,422 vehicles eastbound during the AM peak hour of traffic. During the PM peak hour of traffic, the traffic volume is higher with 1,904 vehicles traveling eastbound. The Kalakaua Avenue approach operates at LOS "A" during both peak hours of traffic. Traffic queues periodically formed on the Kalakaua Avenue approach of the intersection with the most significant queuing occurring during the PM peak period. During this period, average queue lengths of 5-7 vehicles were observed on the approach. These queues were observed to clear the intersection after each traffic signal cycle change.

The Saratoga Road approach of this intersection carries 338 vehicles northbound during the AM peak hour of traffic. During the PM peak hour, the traffic volume is higher with 654 vehicles traveling northbound. The traffic movements on the Saratoga Road approach operate at LOS "C" during both peak hours of traffic. Traffic queues periodically formed on the Saratoga Road approach of the intersection with average queue lengths of 4-5 vehicles observed during both peak periods. These queues were observed to clear the intersection after each traffic signal cycle change.

Pedestrian crossings are provided across Kalakaua Avenue, Saratoga Road, and Kalaimoku Street. 74 pedestrians and 560 pedestrians were observed crossing Kalakaua Avenue on the west side of the intersection during the AM and PM peak periods, respectively.

On the north side of the intersection, 85 pedestrians and 257 pedestrians were observed crossing Kalaimoku Street during the AM and PM peak periods, respectively, while 255 pedestrians and 222 pedestrians were observed crossing Saratoga Road on the south side of the intersection during the AM and PM peak periods, respectively.

c. Kuhio Avenue and Kalaimoku Street

At the intersection with Kalaimoku Street, Kuhio Avenue carries 499 vehicles eastbound and 183 vehicles westbound during the AM peak hour of traffic. During the PM peak hour, traffic volumes are higher with 808 vehicles traveling eastbound and 274 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. Traffic queues periodically formed on the Kuhio Avenue approaches of the intersection with the most significant queuing occurring on the eastbound approach during the PM peak period. During this period, average queue lengths of 5-7 vehicles were observed on this approach. These queues were observed to clear the intersection after each traffic signal cycle change.

The Kalaimoku Street approach of this intersection carries 161 vehicles northbound during the AM peak hour of traffic. During the PM peak hour of traffic, the traffic volume is higher with 361 vehicles traveling northbound. The Kalaimoku Street approach operates at LOS "C" during both peak hours of traffic. Traffic queues periodically formed on the Kalaimoku Street approach of the intersection with the most significant queuing occurring during the PM peak period. During this period, average queue lengths of 3-5 vehicles were observed on the approach. These queues were observed to clear the intersection after each traffic signal cycle change.

Pedestrian crossings are provided across both roadways at this intersection. During the AM peak period, 38 pedestrians and 23 pedestrians were observed crossing Kuhio Avenue on the west and east sides of the intersection, respectively, while 122 pedestrians and 77 pedestrians were observed crossing Kalaimoku Street on the north and south sides, respectively. During the PM peak period, 55 pedestrians and 45 pedestrians were observed crossing Kuhio Avenue on the west and east sides of the intersection, respectively, while 163 pedestrians and 171 pedestrians were observed crossing Kalaimoku Street on the north and south sides, respectively.

d. Ala Wai Boulevard and Kalaimoku Street

At the intersection with Kalaimoku Street, Ala Wai Boulevard carries 2,252 vehicles westbound during the AM peak hour of traffic. During the PM peak hour, the traffic volume is slightly lower with 2,145 vehicles traveling westbound. This approach operates at LOS “A” during both peak hours of traffic. Traffic queues periodically formed on the Ala Wai Boulevard approach of the intersection with average queue lengths of 4-6 vehicles observed during both peak periods. These queues were observed to clear the intersection after each traffic signal cycle change.

The Kalaimoku Street approach of this intersection carries 208 vehicles northbound during the AM peak hour of traffic. During the PM peak hour of traffic, the traffic volumes are higher with 352 vehicles traveling northbound. The Kalaimoku Street approach operates at LOS “C” and LOS “B” during the AM and PM peak hours of traffic, respectively. Traffic queues periodically formed on the Kalaimoku Street approach of the intersection with the most significant queuing occurring during the PM peak period. During this period, average queue lengths of 4-6 vehicles were observed on the approach.

These queues were observed to clear the intersection after each traffic signal cycle change.

Pedestrian crossings are provided across both roadways at this intersection. During the AM peak period, 12 pedestrians were observed crossing Ala Wai Boulevard on the east side of the intersection while 32 pedestrians were observed crossing Kalaimoku Street. During the PM peak period, 12 pedestrians were observed crossing Ala Wai Boulevard on the east side of the intersection while 28 pedestrians were observed crossing Kalaimoku Street.

e. Kuhio Avenue and Launiu Street

At the intersection with Launiu Street, Kuhio Avenue carries 493 vehicles eastbound and 145 vehicles westbound during the AM peak hour of traffic while the Launiu Street approach carries 123 vehicles southbound. During the PM peak hour, traffic volumes are higher with Kuhio Avenue carrying 812 vehicles traveling eastbound and 238 vehicles traveling westbound, and the Launiu Street approach carrying 107 vehicles southbound. The Kuhio Avenue approaches operate at LOS "A" during both peak periods while the traffic movements on the Launiu Street operate at LOS "C" during both peak periods. Traffic queues periodically formed on the approaches of the intersection with average queue lengths of 3-5 vehicles observed on the Kuhio Avenue approaches and 1-2 vehicles observed on the Launiu Street approach during both peak periods. These queues were observed to clear the intersection after each traffic signal cycle change.

Pedestrian crossings are provided across both roadways at this intersection. During the AM peak period, 22 pedestrians were observed crossing Kuhio Avenue on the east side of the intersection while 226 pedestrians were observed crossing Launiu Street. During the PM peak period, 57 pedestrians were observed crossing Kuhio

Avenue on the east side of the intersection while 171 pedestrians were observed crossing Launiu Street.

f. Kuhio Avenue and Kaiolu Street

At the intersection with Kaiolu Street, Kuhio Avenue carries 584 vehicles eastbound and 171 vehicles westbound during the AM peak hour of traffic. During the PM peak hour, traffic volumes are higher with 878 vehicles traveling eastbound and 292 vehicles traveling westbound. Both approaches of Kuhio Avenue operate at LOS “A” during both peak periods.

The northbound approach of this intersection is comprised of an access road for several adjacent properties and carries a relatively low volume of traffic during the peak hours of traffic. This approach carries 9 vehicles and 4 vehicles northbound during the AM and PM peak periods, respectively, and operates at LOS “B” during both peak periods.

Pedestrian crossings are provided across both roadways at this intersection. During the AM peak period, 17 pedestrians and 7 pedestrians were observed crossing Kuhio Avenue on the west and east sides of the intersection, respectively, while 181 pedestrians were observed crossing Kaiolu Street on the north side and 65 pedestrians were observed crossing the access road on the south side. During the PM peak period, 82 pedestrians and 20 pedestrians were observed crossing Kuhio Avenue on the west and east sides of the intersection, respectively, while 211 pedestrians were observed crossing Kaiolu Street on the north side and 79 pedestrians were observed crossing the access road on the south side.

g. Kuhio Avenue and Lewers Street

At the intersection with Lewers Street, Kuhio Avenue carries 535 vehicles eastbound and 207 vehicles westbound during the AM peak hour of traffic. During the PM peak hour of traffic, the traffic

volume is higher with 800 vehicles traveling eastbound and 305 vehicles traveling westbound. The traffic movements on the eastbound approach operate at LOS "A" during both peak periods while the westbound approach operates at LOS "B" during both peak periods. Traffic queues periodically formed on the Kuhio Avenue approaches of the intersection with the most significant queuing occurring during the PM peak period. During this period, average queue lengths of 4-6 vehicles were observed on the approach. These queues were observed to clear the intersection after each traffic signal cycle change.

The Lewers Street approach of this intersection carries 129 vehicles northbound during the AM peak hour of traffic. During the PM peak hour, the traffic volume is higher with 326 vehicles traveling northbound. The Lewers Street approach operates at LOS "C" during both peak hours of traffic. Traffic queues periodically formed on the Lewers Street approach of the intersection with average queue lengths of 2-4 vehicles were observed during both peak periods. These queues were observed to clear the intersection after each traffic signal cycle change.

Pedestrian crossings are provided across both roadways at this intersection. During the AM peak period, 132 pedestrians and 112 pedestrians were observed crossing Kuhio Avenue on the west and east sides of the intersection, respectively, while 214 pedestrians and 158 pedestrians were observed crossing Lewers Street on the south and north sides of the intersection, respectively. During the PM peak period, 216 pedestrians and 234 pedestrians were observed crossing Kuhio Avenue on the west and east sides of the intersection, respectively, while 289 pedestrians and 273 pedestrians were observed crossing Lewers Street on the south and north sides of the intersection, respectively.

h. Kalakaua Avenue and Lewers Street

At the intersection with Lewers Street, Kalakaua Avenue carries 1,415 vehicles eastbound during the AM peak hour of traffic. During the PM peak hour, the traffic volume is higher with 1,876 vehicles traveling eastbound. This approach operates at LOS "A" during both peak hours of traffic. Traffic queues periodically formed on the Kalakaua Avenue approach of the intersection with the most significant queuing occurring during the PM peak period. During this period, average queue lengths of 4-6 vehicles were observed on this approach. These queues were observed to clear the intersection after each traffic signal cycle change.

The Lewers Street approach of this intersection carries 66 vehicles northbound during the AM peak hour of traffic. During the PM peak hour of traffic, the traffic volume is higher with 210 vehicles traveling northbound. The traffic movements on the Lewers Street approach operate at LOS "B" and LOS "C" during the AM and PM peak periods, respectively. Traffic queues periodically formed on the Lewers Street approach of the intersection with average queue lengths of 2-4 vehicles observed during both peak periods. These queues were observed to clear the intersection after each traffic signal cycle change.

Pedestrian crossings are provided across both roadways at this intersection. During the AM peak period, 144 pedestrians and 151 pedestrians were observed crossing Kalakaua Avenue on the west and east sides of the intersection, respectively, while 267 pedestrians and 154 pedestrians were observed crossing Lewers Street on the south and north sides of the intersection, respectively. During the PM peak period, 520 pedestrians and 483 pedestrians were observed crossing Kalakaua Avenue on the west and east sides of the intersection, respectively, while 880 pedestrians and 909 pedestrians were observed

crossing Lewers Street on the south and north sides of the intersection, respectively.

i. Ala Wai Boulevard and Lewers Street

At the intersection with Lewers Street, Ala Wai Boulevard carries 2,272 vehicles westbound during the AM peak hour of traffic. During the PM peak hour, the traffic volume slightly lower with 1,849 vehicles traveling westbound. The Ala Wai Boulevard approach operates at LOS “A” during both peak hours of traffic. Traffic queues periodically formed on the Ala Wai Boulevard approach of the intersection with average queue lengths of 3-5 vehicles were observed during both peak periods. These queues were observed to clear the intersection after each traffic signal cycle change.

The Lewers Street approach of this intersection carries 178 vehicles northbound during the AM peak hour of traffic. During the PM peak hour of traffic, the traffic volume is higher with 343 vehicles traveling northbound. The Lewers Street approach operates at LOS “C” during both peak periods. Traffic queues periodically formed on the Lewers Street approach of the intersection with average queue lengths of 2-4 vehicles observed during both peak periods. These queues were observed to clear the intersection after each traffic signal cycle change.

Pedestrian crossings are provided across both roadways at this intersection. During the AM peak period, 40 pedestrians were observed crossing Ala Wai Boulevard on the east side of the intersection while 46 pedestrians were observed crossing Lewers Street. During the PM peak period, 36 pedestrians were observed crossing Ala Wai Boulevard on the east side of the intersection while 41 pedestrians were observed crossing Lewers Street.

j. Kuhio Avenue and Olohana Street

At the intersection with Olohana Street, Kuhio Avenue carries 509 vehicles eastbound and 162 vehicles westbound during the AM peak hour of traffic. During the PM peak hour, traffic volumes are higher with 815 vehicles traveling eastbound and 220 vehicles traveling westbound. The eastbound approach and westbound left-turn traffic movement on the Kuhio Avenue approaches operate at LOS "B" during both peak periods while the westbound through traffic movement operates at LOS "B" and LOS "A" during the AM and PM peak periods, respectively. Traffic queues periodically formed on the Kuhio Avenue approaches of the intersection with the most significant queuing occurring on the eastbound approach during the PM peak period. During this period, average queue lengths of 4-6 vehicles were observed on this approach. These queues were observed to clear the intersection after each traffic signal cycle change.

The Olohana Street approach of this intersection carries 162 vehicles southbound during the AM peak hour of traffic. During the PM peak hour of traffic, the traffic volume is less with 141 vehicles traveling southbound. The Olohana Street approach operates at LOS "B" and LOS "C" during the AM and PM peak hours of traffic, respectively. Traffic queues periodically formed on the Olohana Street approach of the intersection with average queue lengths of 2-3 vehicles were observed during both peak periods. These queues were observed to clear the intersection after each traffic signal cycle change.

Pedestrian crossings are provided across both roadways at this intersection. During the AM peak period, 97 pedestrians and 99 pedestrians were observed crossing Kuhio Avenue on the west and east sides of the intersection, respectively, while 77 pedestrians and 92 pedestrians were observed crossing Olohana Street on the north and south sides, respectively. During the PM peak period, 38 pedestrians

and 59 pedestrians were observed crossing Kuhio Avenue on the west and east sides of the intersection, respectively, while 124 pedestrians were observed crossing Kalaimoku Street on the north and south sides.

k. Kalakaua Avenue and Olohana Street

At the intersection with Olohana Street, Kalakaua Avenue carries 1,191 vehicles eastbound during the AM peak hour of traffic. During the PM peak hour of traffic, the traffic volume is higher with 1,653 vehicles traveling eastbound. The Kalakaua Avenue approach operates at LOS “B” during both peak hours of traffic. Traffic queues periodically formed on the Kalakaua Avenue approach of the intersection with the most significant queuing occurring during the PM peak period. Average queue lengths of 5-7 vehicles were observed on this approach during that period. These queues were observed to clear the intersection after each traffic signal cycle change.

The Olohana Street approach of this intersection carries 231 vehicles and 251 vehicles southbound during the AM and PM peak hours of traffic, respectively. This approach operates at LOS “C” during both peak hours of traffic. Traffic queues periodically formed on the Olohana Street approach of the intersection with the most significant queuing occurring during the PM peak period. Average queue lengths of 4-6 vehicles were observed on this approach during that period. These queues were observed to clear the intersection after each traffic signal cycle change.

Pedestrian crossings are provided across Kalakaua Avenue and Olohana Street. 83 pedestrians and 89 pedestrians were observed crossing Kalakaua Avenue on the west side of the intersection during the AM and PM peak periods, respectively. On the north side of the intersection, 103 pedestrians and 159 pedestrians were observed crossing Olohana Street during the AM and PM peak periods, respectively.

I. Kalakaua Avenue, Ala Moana Boulevard, and Pau Street

At the intersection with Ala Moana Boulevard and Pau Street, Kalakaua Avenue carries 1,381 vehicles eastbound and 12 vehicles westbound during the AM peak hour of traffic. During the PM peak hour of traffic, the traffic volume is higher with 1,884 vehicles traveling eastbound and 26 vehicles traveling westbound. Both approaches of Kalakaua Avenue operate at LOS "A" during both peak hours of traffic. Traffic queues periodically formed on the Kalakaua Avenue approach of the intersection with the most significant queuing occurring on the eastbound approach during the PM peak period. During this period, average queue lengths of 3-5 vehicles were observed with queues occasionally extending through the upstream intersections with Pau Street and McCully Street. Most of these queues cleared the intersection after each traffic signal cycle change.

The Ala Moana Boulevard approach of this intersection carries 527 vehicles and 876 vehicles northbound during the AM and PM peak hours of traffic, respectively. This approach operates at LOS "C" and LOS "D" during the AM and PM peak hours of traffic, respectively. Traffic queues periodically formed on the Ala Moana Boulevard approach of the intersection with the most significant queuing occurring during the PM peak period. Average queue lengths of 10-15 vehicles were observed on this approach during this period. Most of these queues cleared the intersection after each traffic signal cycle change, but occasionally vehicles had to wait for more than one traffic signal cycle length.

Pedestrian crossings are provided across all three roadways. 51 pedestrians and 117 pedestrians were observed crossing Kalakaua Avenue on the west side of the intersection during the AM and PM peak periods, respectively. On the north side of the intersection, 113 pedestrians and 220 pedestrians were observed crossing Pau Street

during the AM and PM peak periods, respectively. On the south side of the intersection, 176 pedestrians and 282 pedestrians were observed crossing Ala Moana Boulevard during the AM and PM peak periods, respectively.

m. Kalakaua Avenue, Ala Moana Boulevard, and Niu Street

At the intersection with Ala Moana Boulevard and Niu Street, Kalakaua Avenue carries 1,528 vehicles eastbound and 5 vehicles westbound during the AM peak hour of traffic. During the PM peak hour of traffic, the traffic volume is higher with 1,982 vehicles traveling eastbound and 13 vehicles traveling westbound. The eastbound and westbound approaches of Kalakaua Avenue operate at LOS "B" and LOS "A", respectively, during both peak hours of traffic. Traffic queues periodically formed on the Kalakaua Avenue approach of the intersection with the most significant queuing occurring on the eastbound approach during the PM peak period. During this period, average queue lengths of 5-7 vehicles were observed with queues from the downstream intersection with Pau Street periodically extending through this intersection, as well as, the upstream intersection with McCully Street. Most of these queues cleared the intersection after each traffic signal cycle change.

The Niu Street approach of this intersection carries 563 vehicles and 521 vehicles southbound during the AM and PM peak hours of traffic, respectively. This approach operates at LOS "C" during both peak hours of traffic. Traffic queues formed periodically on the Niu Street approach of the intersection with average queue lengths of 1-2 vehicles observed during both peak periods. These queues were observed to clear the intersection after each traffic signal cycle change

Pedestrian crossings are provided across all three roadways. 78 pedestrians and 99 pedestrians were observed crossing Kalakaua Avenue on the west side of the intersection during the AM and PM peak periods, respectively. On the north side of the intersection, 101 pedestrians and 114 pedestrians were observed crossing Niu Street during the AM and PM peak periods, respectively. On the south side of the intersection, 224 pedestrians and 282 pedestrians were observed crossing Ala Moana Boulevard during the AM and PM peak periods, respectively.

IV. PROJECTED TRAFFIC CONDITIONS

A. Site-Generated Traffic

1. Trip Generation Methodology

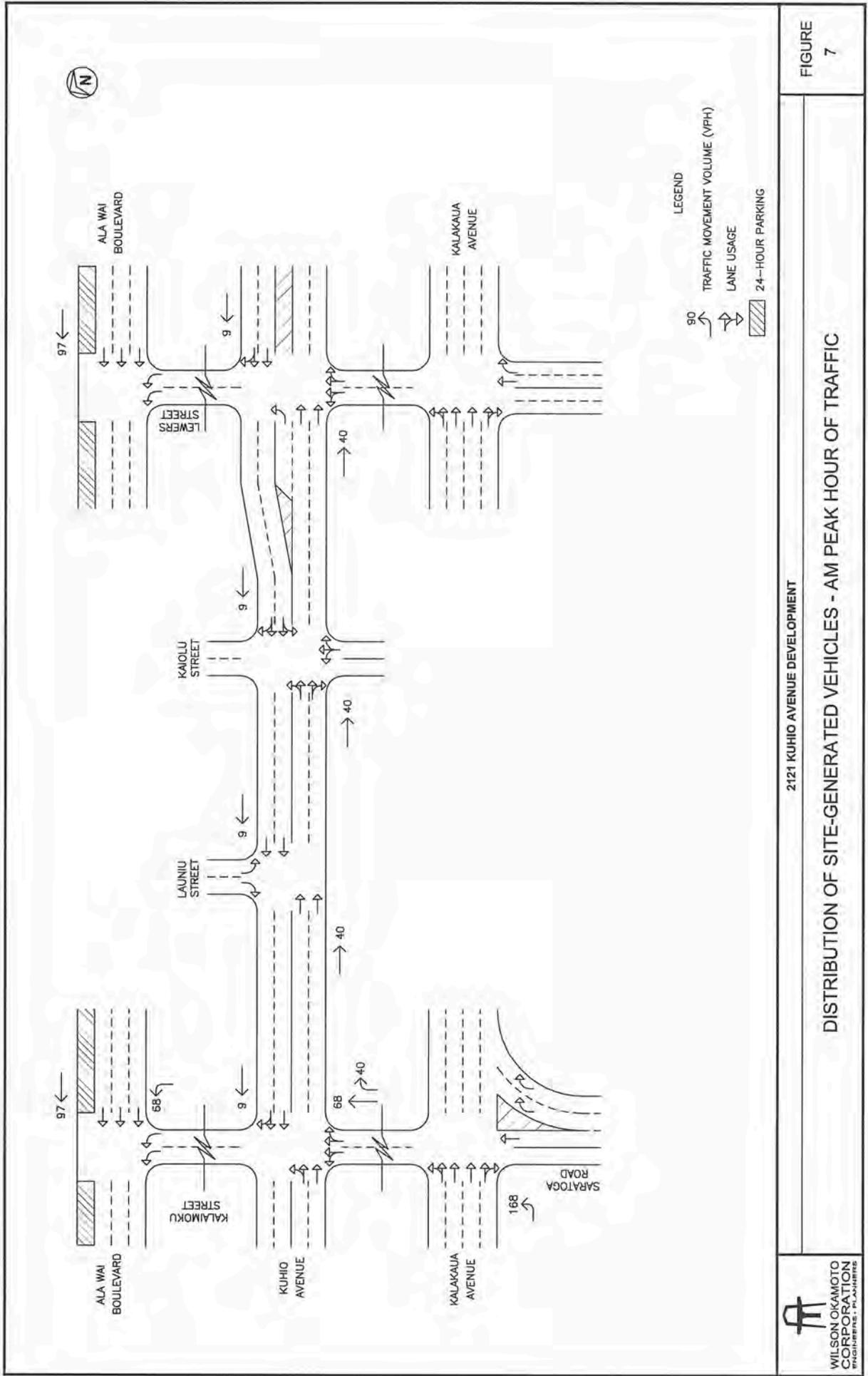
The trip generation methodology used in this study is based upon generally accepted techniques developed by the Institute of Transportation Engineers (ITE) and published in “Trip Generation, 8th Edition,” 2008. The ITE trip generation rates are developed empirically by correlating the vehicle trip generation data with various land use characteristics such as the number of vehicle trips generated per room or 1,000 square feet of development. Since the proposed development will be located in a neighborhood with limited parking, high volumes of pedestrian traffic, and a high density of attractive destinations, residents, guests, and customers destined for the project site may elect to walk rather than drive. However, for the purpose of this report, only a portion of the customers of the restaurant during the PM peak period and all of the customers of the sundry/coffee shop were assumed to walk rather than drive. All other guests were conservatively assumed to utilize their vehicles for all trips. Table 1 summarizes the project site trip generation characteristics applied to the AM and PM peak hours of traffic.

Table 1: Adjusted Peak Hour Trip Generation

HOTEL (CONDO-HOTEL UNITS)		
INDEPENDENT VARIABLE: Rooms = 459		
		PROJECTED TRIP ENDS
AM PEAK	ENTER	165
	EXIT	105
	TOTAL	270
PM PEAK	ENTER	144
	EXIT	127
	TOTAL	271
QUALITY RESTAURANT		
INDEPENDENT VARIABLE: 1,000 Sq. Ft. Development = 7.5		
		PROJECTED TRIP ENDS
AM PEAK	ENTER	3
	EXIT	3
	TOTAL	6
PM PEAK	ENTER	30
	EXIT	15
	TOTAL	45
TOTAL		
		PROJECTED TRIP ENDS
AM PEAK	ENTER	168
	EXIT	108
	TOTAL	276
PM PEAK	ENTER	174
	EXIT	142
	TOTAL	316

2. Trip Distribution

Figures 7 to 10 show the distribution of site-generated vehicular trips at the study intersections during AM and PM peak hours of traffic. Primary vehicular access for the proposed development will be provided via driveways off Kalaimoku Street. The directional distribution of all site-generated vehicles was based upon current distribution of traffic between Kalakaua Avenue and Ala Wai Boulevard. As such, 36.6% of site-generated vehicles were assumed to be headed eastbound and 63.4% were assumed to be headed

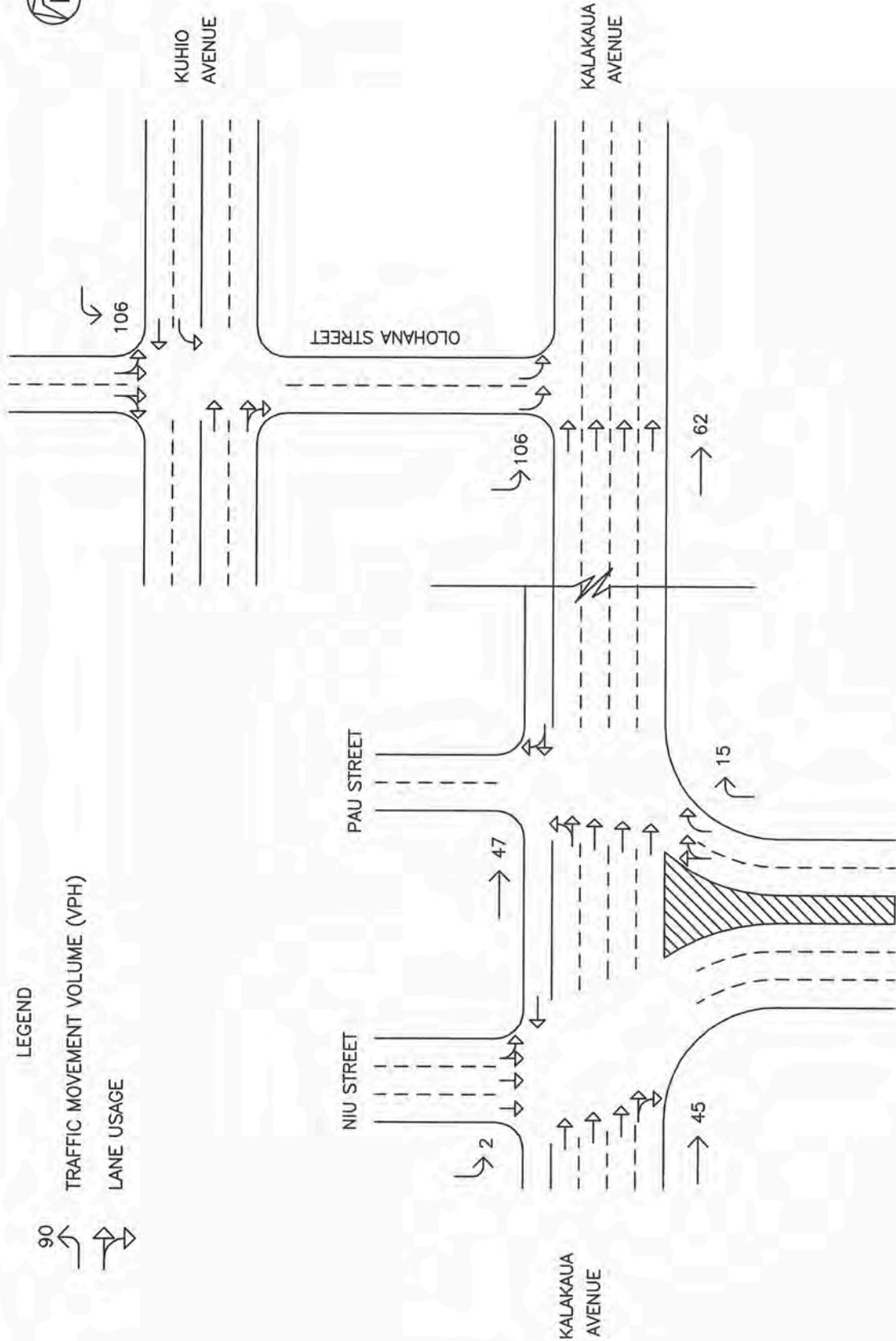




LEGEND

90  TRAFFIC MOVEMENT VOLUME (VPH)

 LANE USAGE



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2121 KUHIO AVENUE DEVELOPMENT

FIGURE
8

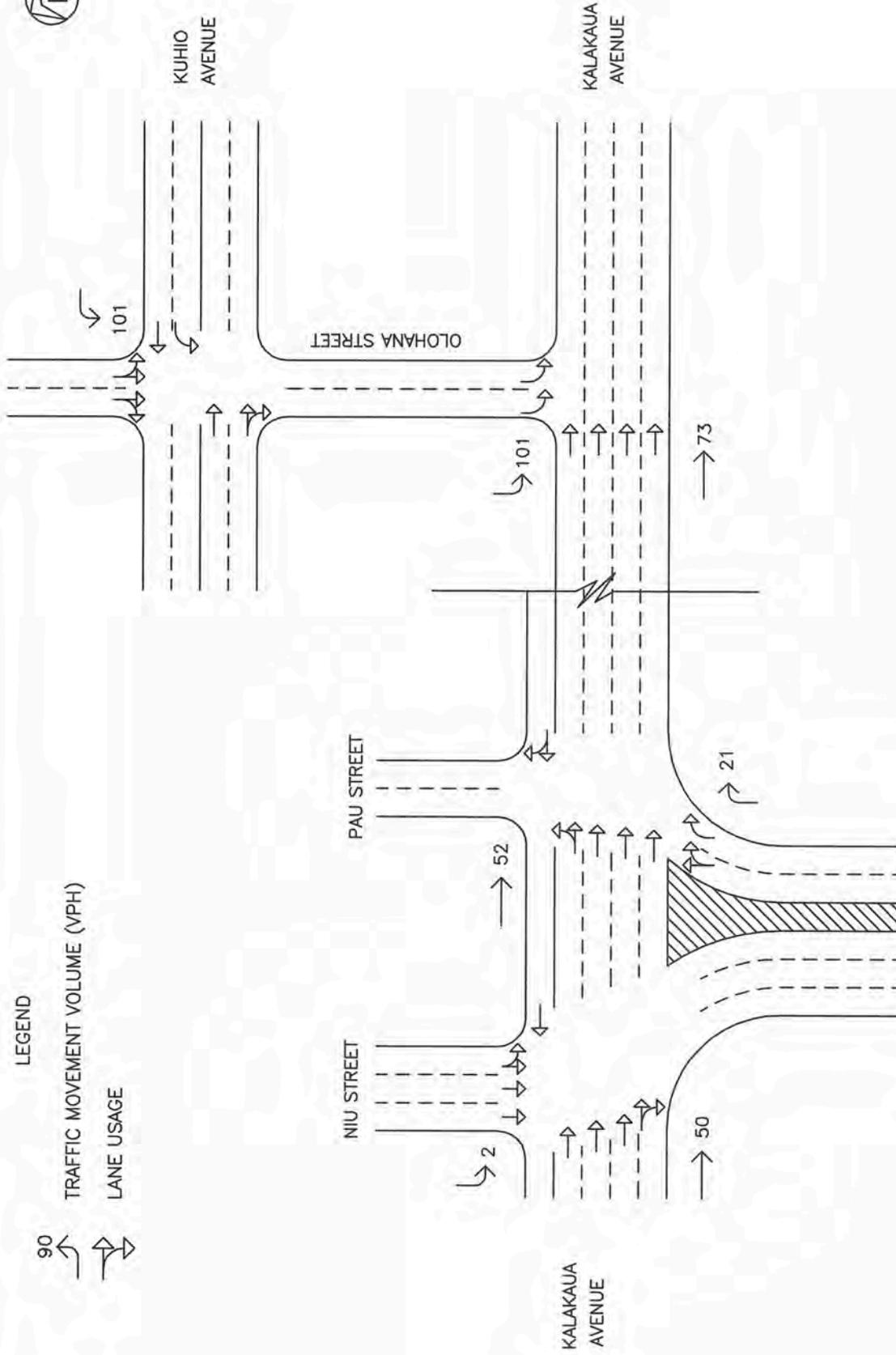
DISTRIBUTION OF SITE-GENERATED VEHICLES - AM PEAK HOUR OF TRAFFIC



LEGEND

TRAFFIC MOVEMENT VOLUME (VPH)

LANE USAGE



WILSON OKAMOTO
CORPORATION
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2121 KUHIO AVENUE DEVELOPMENT

FIGURE
10

DISTRIBUTION OF SITE-GENERATED VEHICLES - PM PEAK HOUR OF TRAFFIC

westbound during the AM peak period. During the PM peak period, 42.2% were assumed to be headed eastbound and 57.8% were assumed to be headed westbound. Entering eastbound vehicles were assumed to utilize Kalakaua Avenue to access the project driveways along Kalaimoku Street while exiting eastbound vehicles were assumed to utilize Kuhio Avenue. Entering westbound vehicles were assumed to utilize either Ala Wai Boulevard or Kuhio Avenue to access Olohana Street, Kalakaua Avenue, and Kalaimoku Street to access the project site. The distribution of site-generated vehicles between Ala Wai Boulevard and Kuhio Avenue was based on the current distribution of vehicles between those roadways. As such, 93.6% of the westbound entering vehicles were assumed to utilize Ala Wai Boulevard and 8.4% were assumed to utilize Kuhio Avenue during the AM peak period. During the PM peak period, 85.8% were assumed to utilize Ala Wai Boulevard and 14.2% were assumed to utilize Kuhio Avenue. All exiting westbound vehicles were assumed to utilize Kalaimoku Street to access Ala Wai Boulevard.

B. Through Traffic Forecasting Methodology

There are no State of Hawaii or City and County of Honolulu traffic count station 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, Kuhio Avenue, and Ala Wai Boulevard to account for ambient growth in traffic. As such, using 2012 as the Base Year, a growth rate factor of 1.06 was applied to the existing through traffic demands along those roadways to achieve the projected Year 2015 traffic demands.

C. Other Considerations

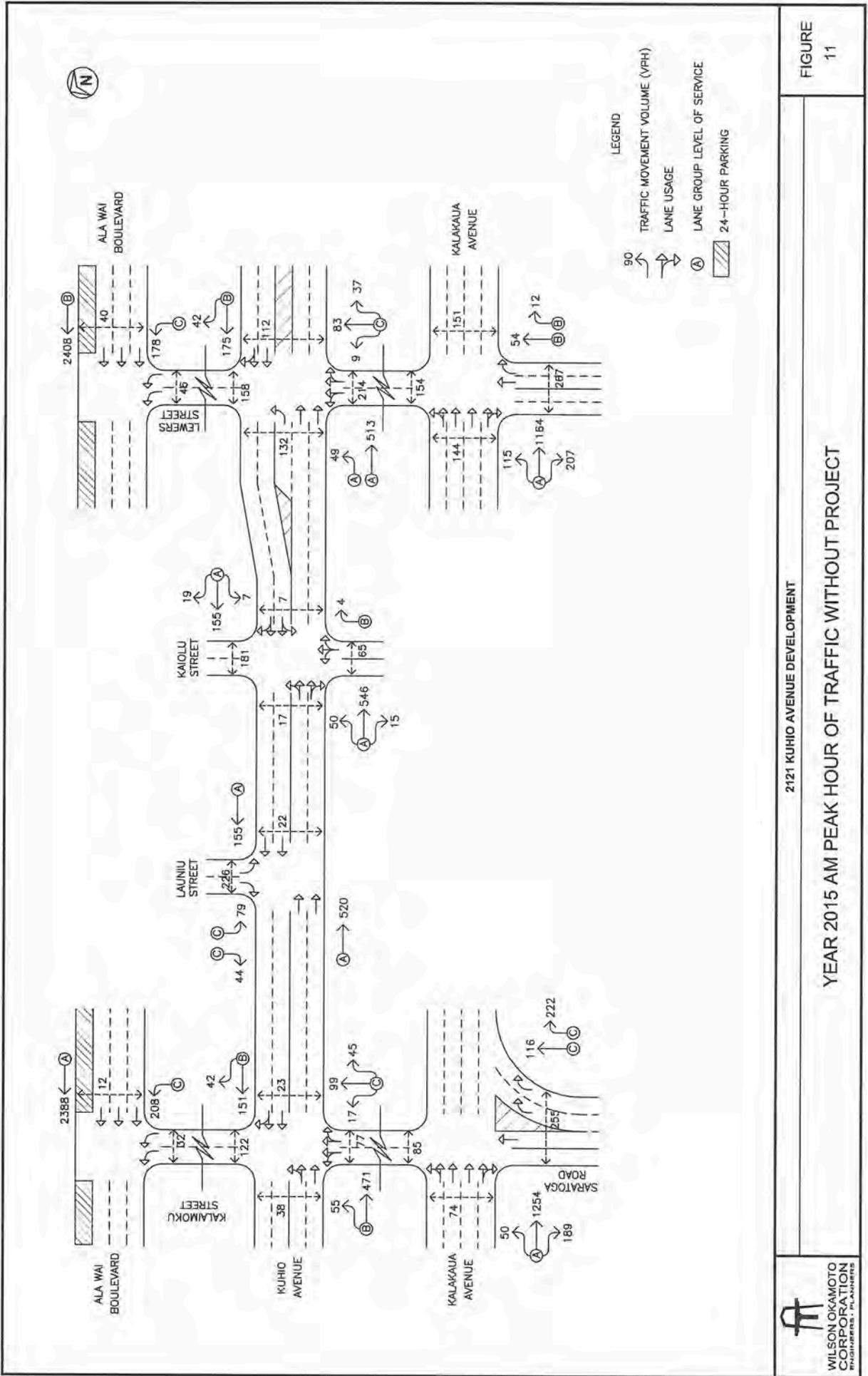
There are two projects currently planned for the Waikiki area in the vicinity of the proposed development. The first project is the Princess Kaiulani renovation and Diamond Head Tower development which entails the renovation of the existing Princess Kaiulani Hotel and replacement of the diamond head wing of the Moana Surfrider Hotel with a new Diamond Head Tower. However, as detailed in the

“Traffic Impact Report for the Princess Kaiulani Renovation & Diamond Head Tower Development” dated April 2009, the proposed hotel project is not anticipated to impact traffic operations in the vicinity of the 2121 Kuhio Avenue development. The second project is the redevelopment of the International Market Place which entails the replacement of the existing shopping area with a new retail complex. However, as detailed in the “Traffic Impact Report for the International Market Place Redevelopment” dated October 2011, the proposed redevelopment project is expected to reduce traffic volumes in the vicinity of the 2121 Kuhio Avenue development. As such, the International Market Place redevelopment was conservatively excluded from the Year 2015 without project conditions.

In addition, the existing King Kalakaua Plaza located across Kalaimoku Street from the project site is currently vacant. The existing commercial building has approximately 85,140 square feet of commercial space and currently leases 92 of the parking stalls within its garage to adjacent businesses until such time as the commercial space is occupied. For the purpose of this report, the existing building is conservatively assumed to be fully occupied by the Year 2015 and, as such, is incorporated into without project conditions.

D. Total Traffic Volumes Without Project

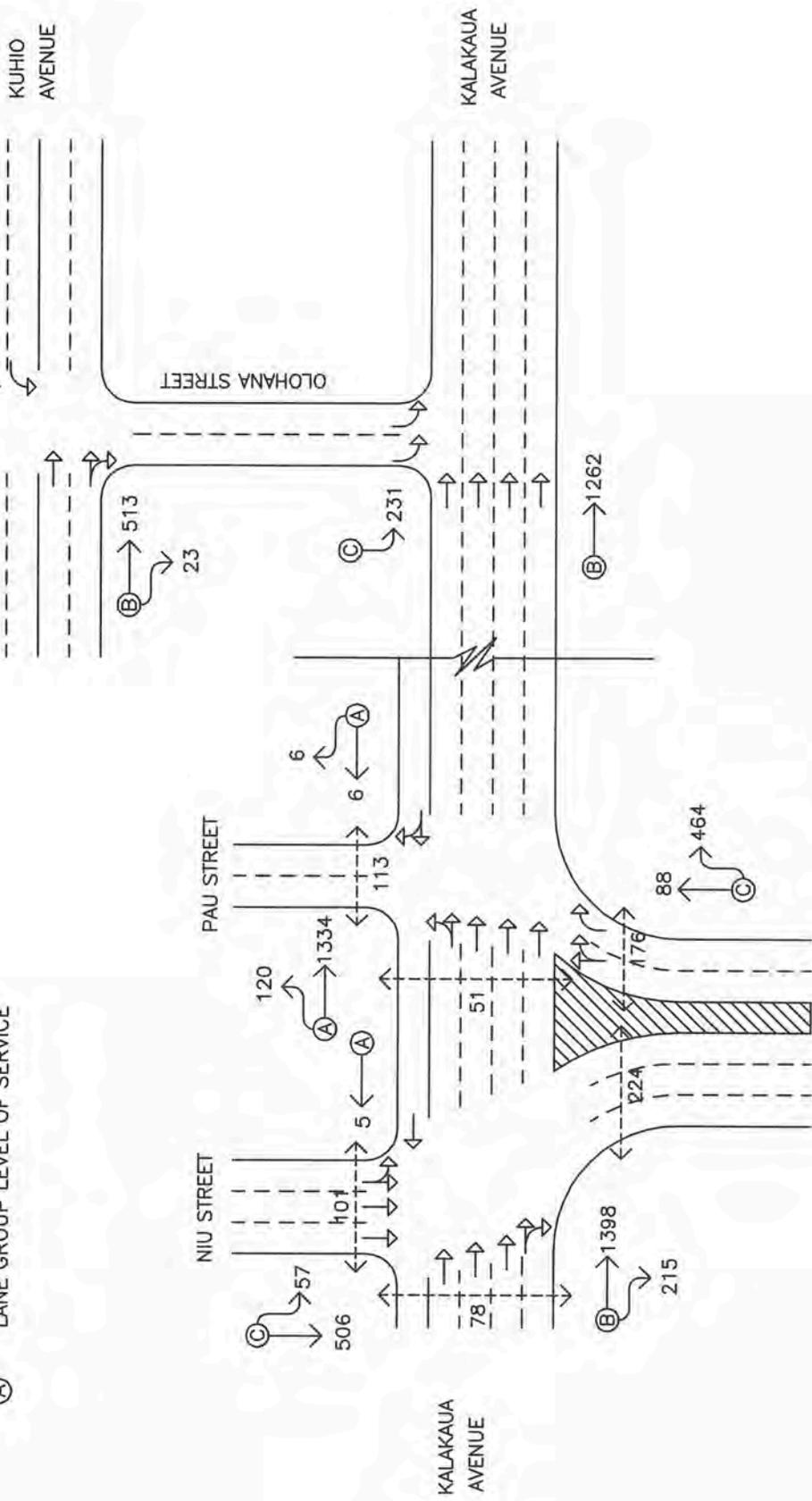
The projected Year 2015 AM and PM peak hour traffic volumes and operating conditions in the project vicinity without the development of the proposed 2121 Kuhio Avenue development are shown on Figures 11 to 14 and summarized in Table 2. The existing and projected (without project) levels of service are included for comparison purposes. LOS calculations are included in Appendix D.



YEAR 2015 AM PEAK HOUR OF TRAFFIC WITHOUT PROJECT



- LEGEND**
- 90 TRAFFIC MOVEMENT VOLUME (VPH)
 - LANE USAGE
 - (A) LANE GROUP LEVEL OF SERVICE

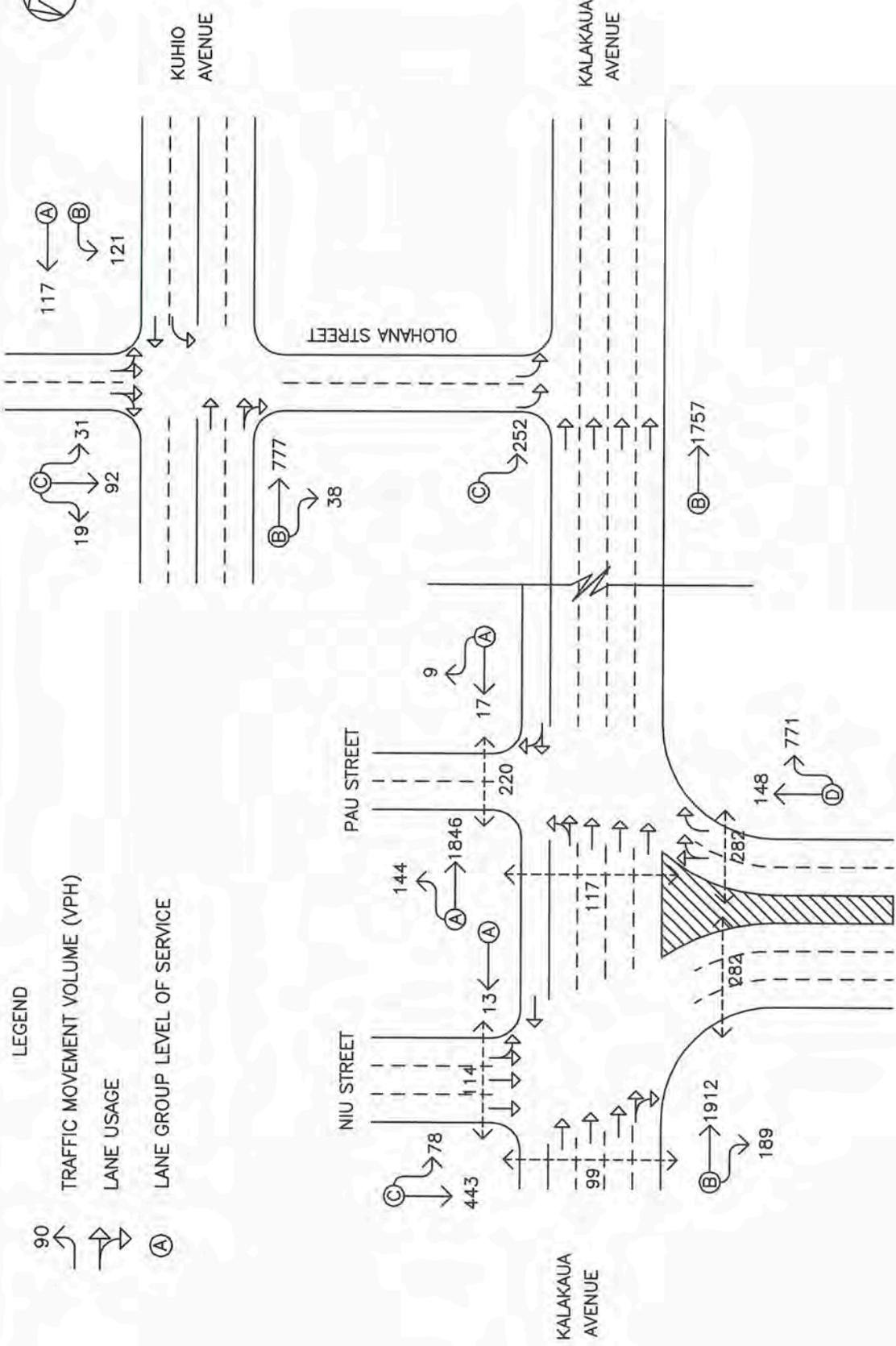


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2121 KUHIO AVENUE DEVELOPMENT

YEAR 2015 AM PEAK HOUR OF TRAFFIC WITHOUT PROJECT

FIGURE
12



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YEAR 2015 PM PEAK HOUR OF TRAFFIC WITHOUT PROJECT

FIGURE 14

Table 2: Existing and Projected (Without Project) Traffic Operating Conditions

Intersection	Traffic Movement		AM		PM	
			Exist	Year 2015 w/out Proj	Exist	Year 2015 w/out Proj
Kalakaua Ave/ Kalaimoku St/ Saratoga Rd	Eastbound	LT-TH-RT	A	A	A	A
	Northbound	TH	C	C	C	C
		RT	C	C	C	C
Kuhio Ave/ Kalaimoku St	Eastbound	LT-TH	B	B	B	C
	Westbound	TH-RT	B	B	A	A
	Northbound	LT-TH-RT	C	C	C	C
Ala Wai Blvd/ Kalaimoku St	Westbound	TH	A	A	A	A
	Northbound	LT	C	C	B	B
Kuhio Ave/Launiu St	Eastbound	TH	A	A	A	A
	Westbound	TH	A	A	A	A
	Southbound	LT	C	C	C	C
		RT	C	C	C	C
Kuhio Ave/ Kaiolu St	Eastbound	LT-TH-RT	A	A	A	A
	Westbound	LT-TH-RT	A	A	A	A
	Northbound	RT	B	B	B	B
Kuhio Ave/ Lewers St	Eastbound	LT	A	A	A	A
		TH-RT	A	A	A	A
	Westbound	TH-RT	B	B	B	B
	Northbound	LT-TH-RT	C	C	C	C
Kalakaua Ave/ Lewers St	Eastbound	LT-TH-RT	A	A	A	A
	Northbound	TH	B	B	C	C
		RT	B	B	C	C
Ala Wai Blvd/ Lewers St	Westbound	TH	A	B	A	A
	Northbound	LT	C	C	C	C

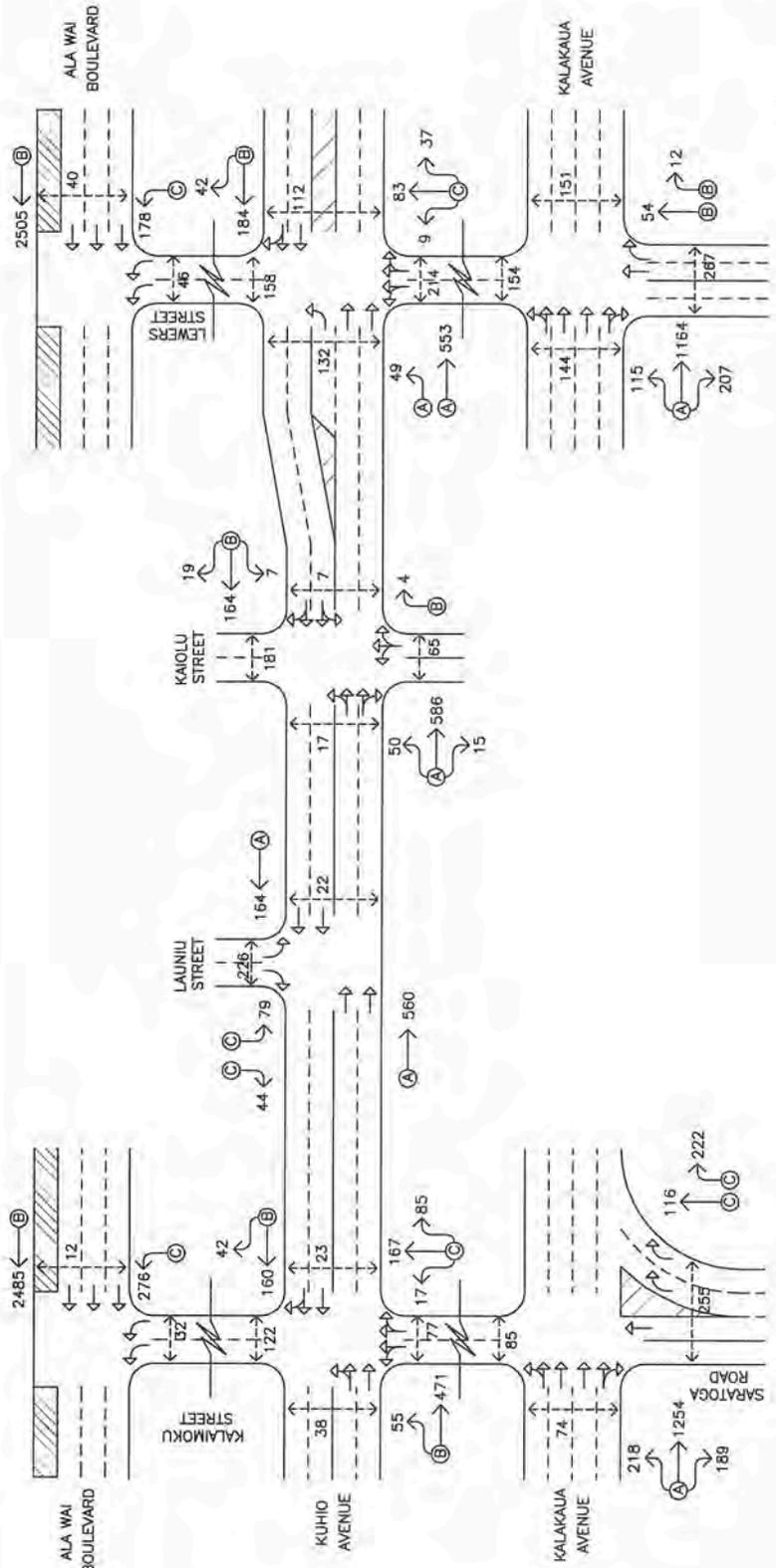
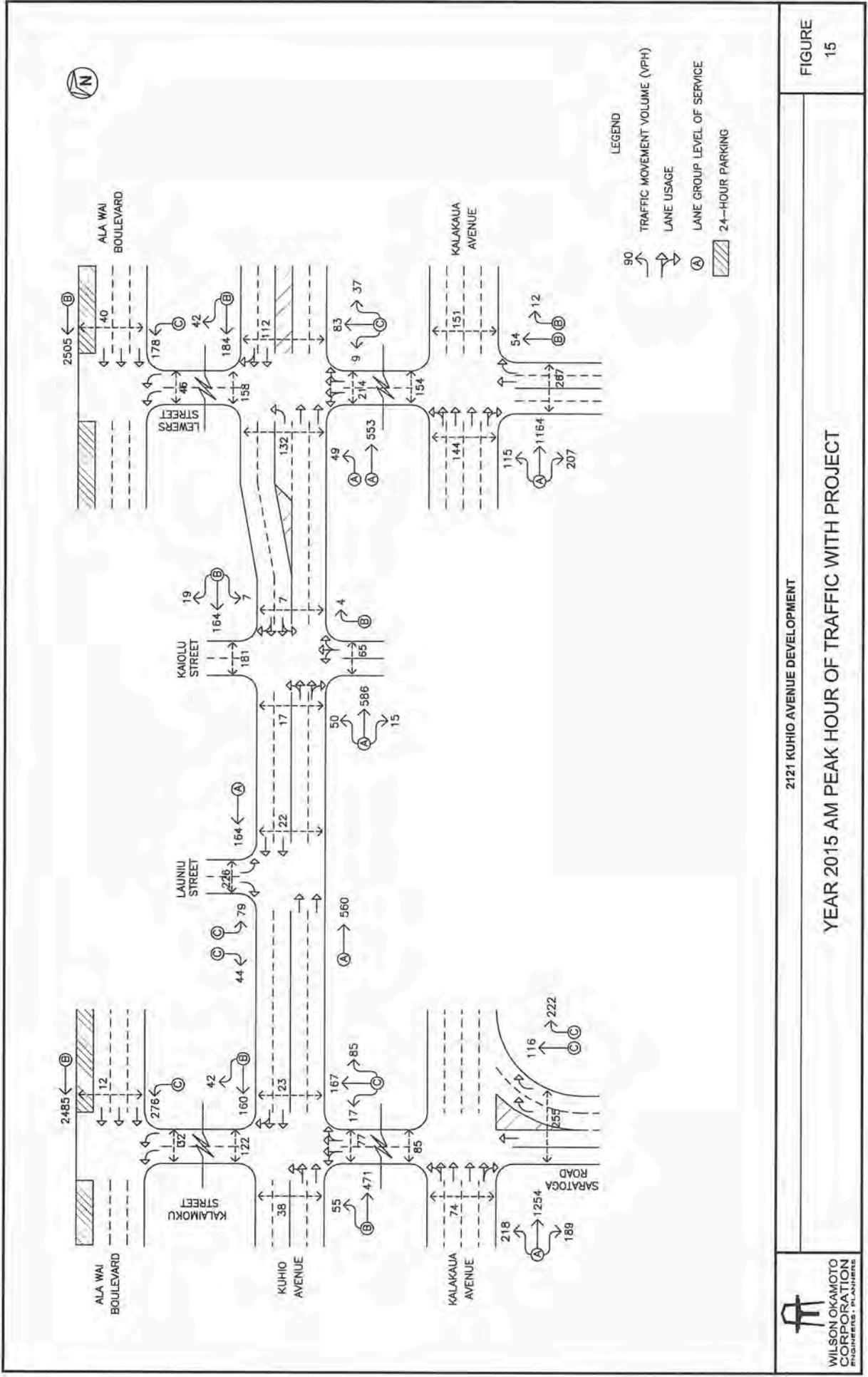
Table 2: Existing and Projected (Without Project) Traffic Operating Conditions (Cont'd)

Intersection	Traffic Movement		AM		PM	
			Exist	Year 2015 w/out Proj	Exist	Year 2015 w/out Proj
Kuhio Ave/ Olohana St	Eastbound	TH-RT	B	B	B	B
	Westbound	LT	B	B	B	B
		TH	B	B	A	A
	Southbound	LT-TH-RT	B	B	C	C
Kalakaua Ave/ Olohana St	Eastbound	TH	C	C	B	B
	Southbound	LT	B	B	C	C
Kalakaua Ave/ Ala Moana Blvd/ Pau St	Eastbound	LT-TH	A	A	B	B
	Westbound	TH-RT	A	A	A	A
	Northbound	TH-RT	C	C	C	C
Kalakaua Ave/ Ala Moana Blvd/ Niu St	Eastbound	TH-RT	B	B	A	A
	Westbound	TH	A	A	A	A
	Southbound	LT-TH	C	C	D	D

Traffic operations under Year 2015 without project conditions are, in general, expected to remain similar to existing conditions despite the anticipated increases in ambient traffic along the surrounding roadways. The westbound approach of Ala Wai Boulevard at the intersection with Lewers Street is expected to deteriorate from LOS “A” to LOS “B” during the AM peak period, while the eastbound approach of Kuhio Avenue at the intersection with Kalaimoku Street is expected to deteriorate from LOS “B” to LOS “C” during the PM peak period. The remaining traffic movements at this intersection, as well as, the other study intersections are expected to continue operating at levels of service similar to existing conditions.

E. Total Traffic Volumes With Project

Figures 15 to 18 show the cumulative AM and PM peak hour traffic conditions resulting from the projected external traffic and the development of the proposed 2121 Kuhio Avenue development. The cumulative volumes consist of site-



YEAR 2015 AM PEAK HOUR OF TRAFFIC WITH PROJECT

2121 KUHIO AVENUE DEVELOPMENT

FIGURE 15



LEGEND

- 90 TRAFFIC MOVEMENT VOLUME (VPH)
- LANE USAGE
- LANE GROUP LEVEL OF SERVICE

KUHIO AVENUE

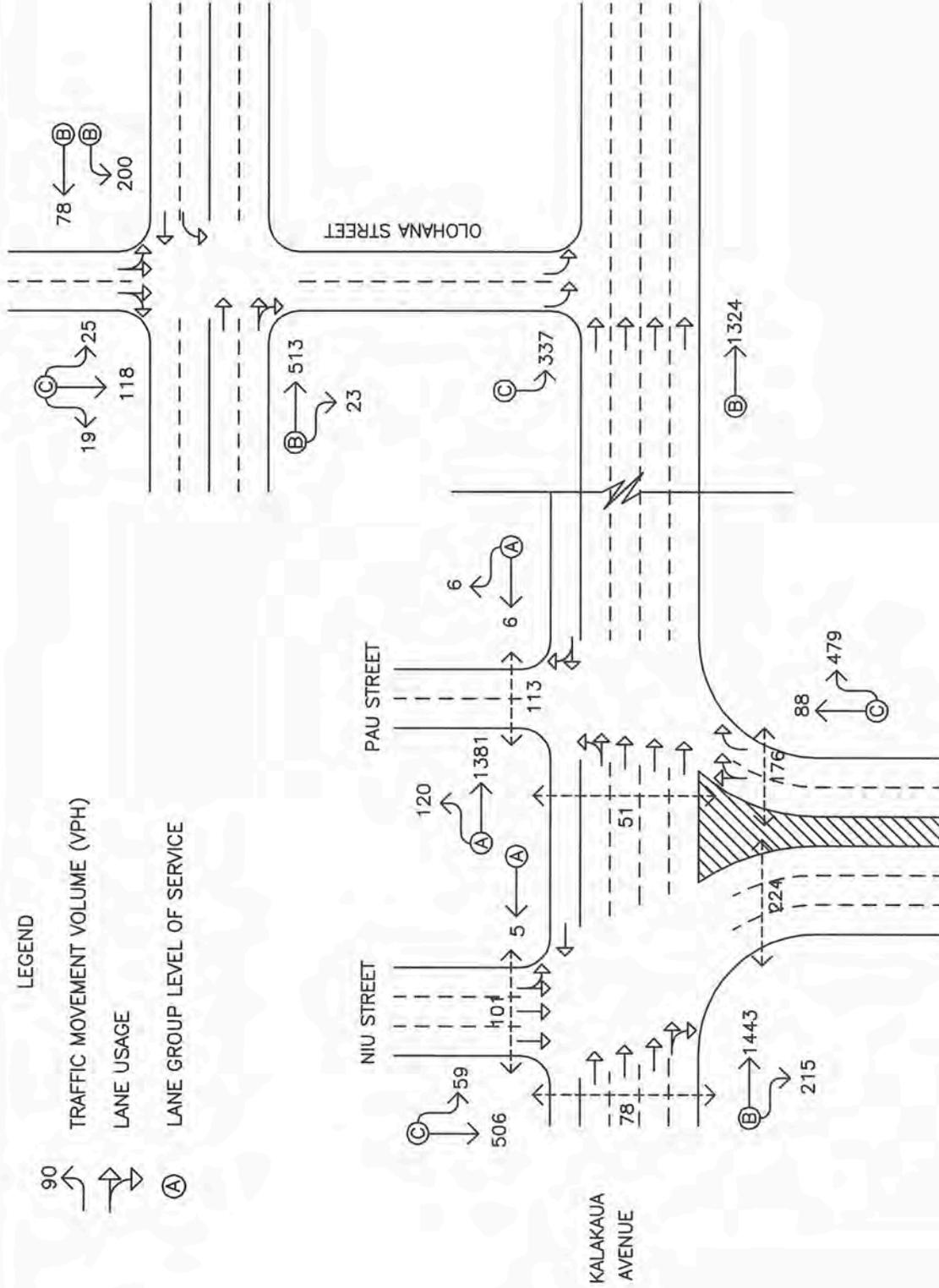
KALAKAUA AVENUE

OLOHANA STREET

PAU STREET

NIU STREET

KALAKAUA AVENUE



2121 KUHIO AVENUE DEVELOPMENT

FIGURE 16

YEAR 2015 AM PEAK HOUR OF TRAFFIC WITH PROJECT



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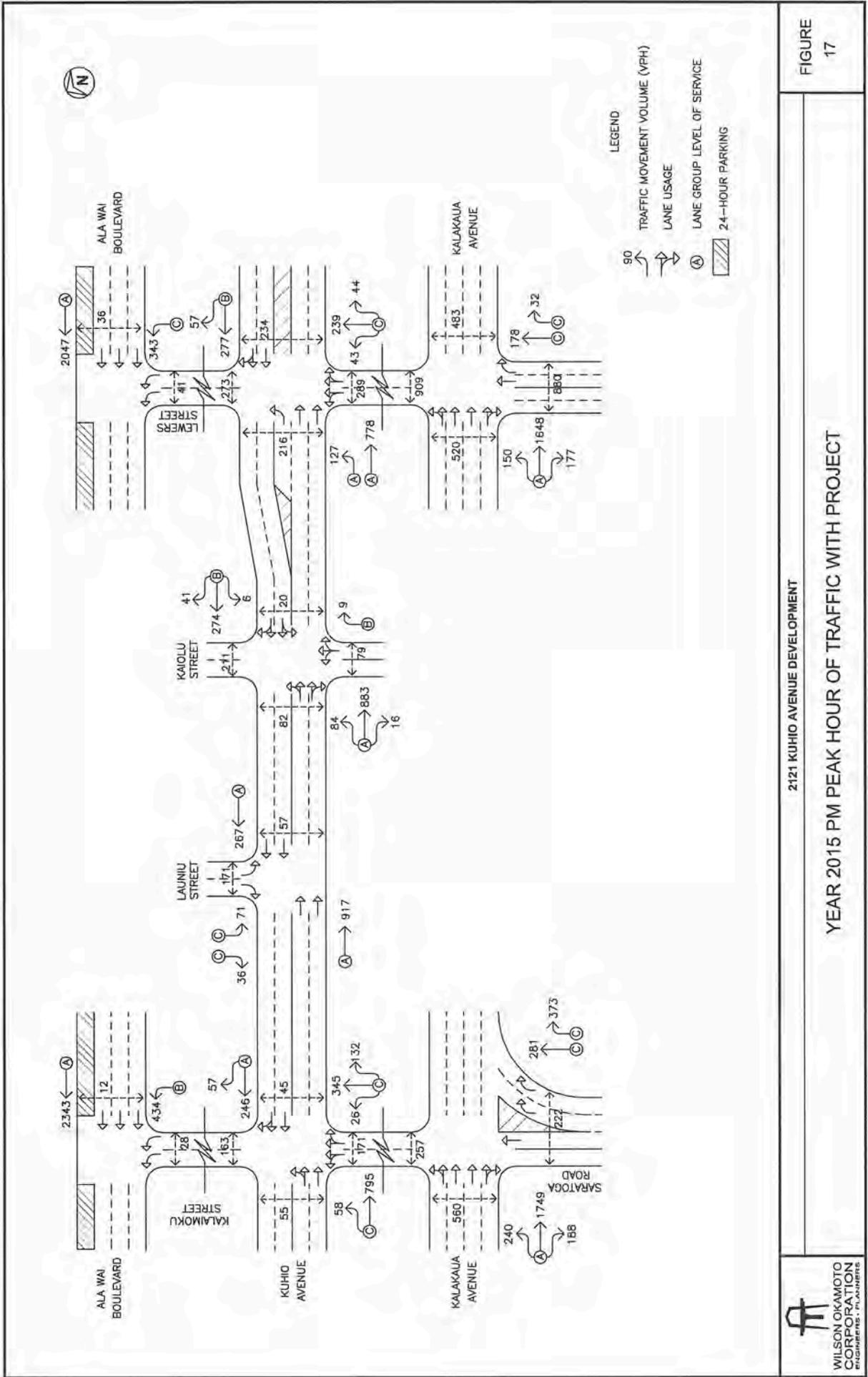
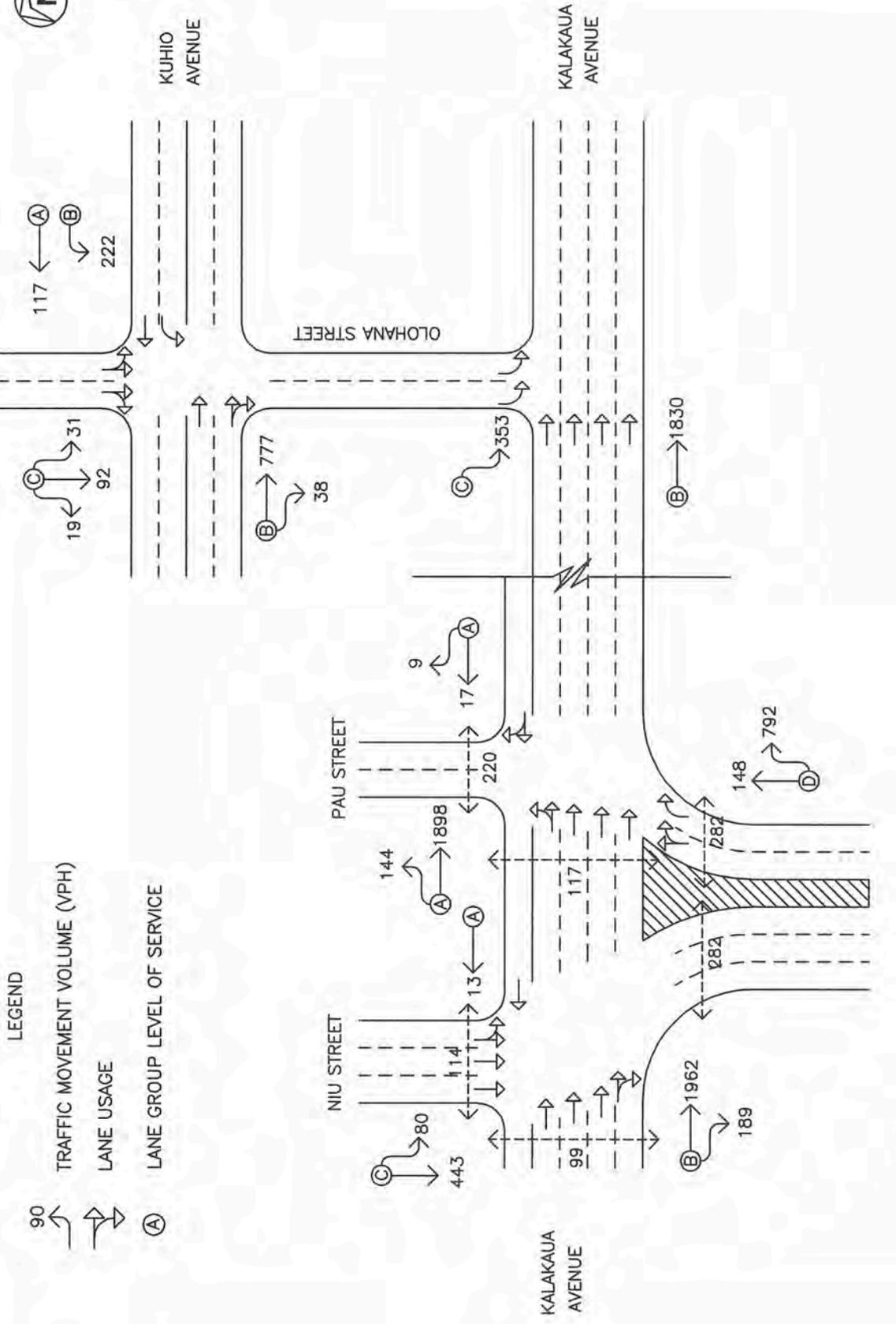


FIGURE 17



2121 KUHIO AVENUE DEVELOPMENT

FIGURE 18

YEAR 2015 PM PEAK HOUR OF TRAFFIC WITH PROJECT



WILSON OKAMOTO CORPORATION ENGINEERS • PLANNERS

generated traffic superimposed over Year 2015 projected traffic demands. The traffic impacts resulting from the proposed project are addressed in the following section.

V. TRAFFIC IMPACT ANALYSIS

The Year 2015 cumulative AM and PM peak hour traffic conditions with the development of the 2121 Kuhio Avenue development are summarized in Table 3. The existing and Year 2015 without project operating conditions are provided for comparison purposes. LOS calculations are included in Appendix E.

Table 3: Existing and Projected (Without and With Project) Traffic Operating Conditions

Intersection	Traffic Movement		AM			PM		
			Exist	Year 2015		Exist	Year 2015	
				w/out Proj	w/ Proj		w/out Proj	w/ Proj
Kalakaua Ave/ Kalaimoku St/ Saratoga Rd	Eastbound	LT-TH-RT	A	A	A	A	A	A
	Northbound	TH	C	C	C	C	C	C
		RT	C	C	C	C	C	C
Kuhio Ave/ Kalaimoku St	Eastbound	LT-TH	B	B	B	B	C	C
	Westbound	TH-RT	B	B	B	A	A	A
	Northbound	LT-TH-RT	C	C	C	C	C	C
Ala Wai Blvd/ Kalaimoku St	Westbound	TH	A	A	B	A	A	A
	Northbound	LT	C	C	C	B	B	B
Kuhio Ave/ Launiu St	Eastbound	TH	A	A	A	A	A	A
	Westbound	TH	A	A	A	A	A	A
	Southbound	LT	C	C	C	C	C	C
		RT	C	C	C	C	C	C
Kuhio Ave/ Kaiolu St	Eastbound	LT-TH-RT	A	A	A	A	A	A
	Westbound	LT-TH-RT	A	A	A	A	A	A
	Northbound	RT	B	B	B	B	B	B
Kuhio Ave/ Lewers St	Eastbound	LT	A	A	A	A	A	A
		TH-RT	A	A	A	A	A	A
	Westbound	TH-RT	B	B	B	B	B	B
	Northbound	LT-TH-RT	C	C	C	C	C	C

Table 3: Existing and Projected (Without and With Project) Traffic Operating Conditions

Intersection	Traffic Movement		AM			PM		
			Exist	Year 2015		Exist	Year 2015	
				w/out Proj	w/ Proj		w/out Proj	w/ Proj
Kalakaua Ave/ Lewers St	Eastbound	LT-TH-RT	A	A	A	A	A	A
	Northbound	TH	B	B	B	C	C	C
		RT	B	B	B	C	C	C
Ala Wai Blvd/ Lewers St	Westbound	TH	A	B	B	A	A	A
	Northbound	LT	C	C	C	C	C	C
Kuhio Ave/ Olohana St	Eastbound	TH-RT	B	B	B	B	B	B
	Westbound	LT	B	B	B	B	B	B
		TH	B	B	B	A	A	A
	Southbound	LT-TH-RT	B	B	C	C	C	C
Kalakaua Ave/ Olohana St	Eastbound	TH	C	C	C	B	B	B
	Southbound	LT	B	B	B	C	C	C
Kalakaua Ave/ Ala Moana Blvd/ Pau St	Eastbound	LT-TH	A	A	A	B	B	B
	Westbound	TH-RT	A	A	A	A	A	A
	Northbound	TH-RT	C	C	C	C	C	C
Kalakaua Ave/ Ala Moana Blvd/ Niu St	Eastbound	TH-RT	B	B	B	A	A	A
	Westbound	TH	A	A	A	A	A	A
	Southbound	LT-TH	C	C	C	D	D	D

With the development of the 2121 Kuhio Avenue project, traffic operations in the project vicinity are generally expected to remain similar to without project conditions despite the addition of site-generated vehicles to the surrounding roadways. Along Kalaimoku Street and Olohana Street, the traffic movements at intersections with Kalakaua Avenue and Kuhio Avenue anticipated to operate at LOS “C” or better during both peak periods while those at the intersection of Kalaimoku Street with Ala Wai Boulevard are expected to continue operating at LOS “C” or better during the AM peak period and LOS “B” or better during the PM peak period. Along Lewers Street, the traffic movements at the intersections with Kuhio

Avenue and Ala Wai Boulevard are expected to continue operating at LOS “C” or better during both peak periods while those at the intersection with Kalakaua Avenue 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. Similarly, the traffic movements at the intersections of Kuhio Avenue with Launiu Street and Kalakaua Avenue with Ala Moana Boulevard and Niu Street are anticipated to continue operating at LOS “C” or better during both peak periods while those at the intersection with Kaiolu Street are anticipated to continue operating at LOS “B” or better during both peak periods. At the intersection of Kalakaua Avenue with Ala Moana Boulevard and Pau Street, the traffic movements are anticipated to continue operating at LOS “C” or better during the AM peak period and LOS “D” or better during the PM peak period.

VI. RECOMMENDATIONS

The following are the recommendations of this study associated with the project implementation based on the analysis of the traffic data:

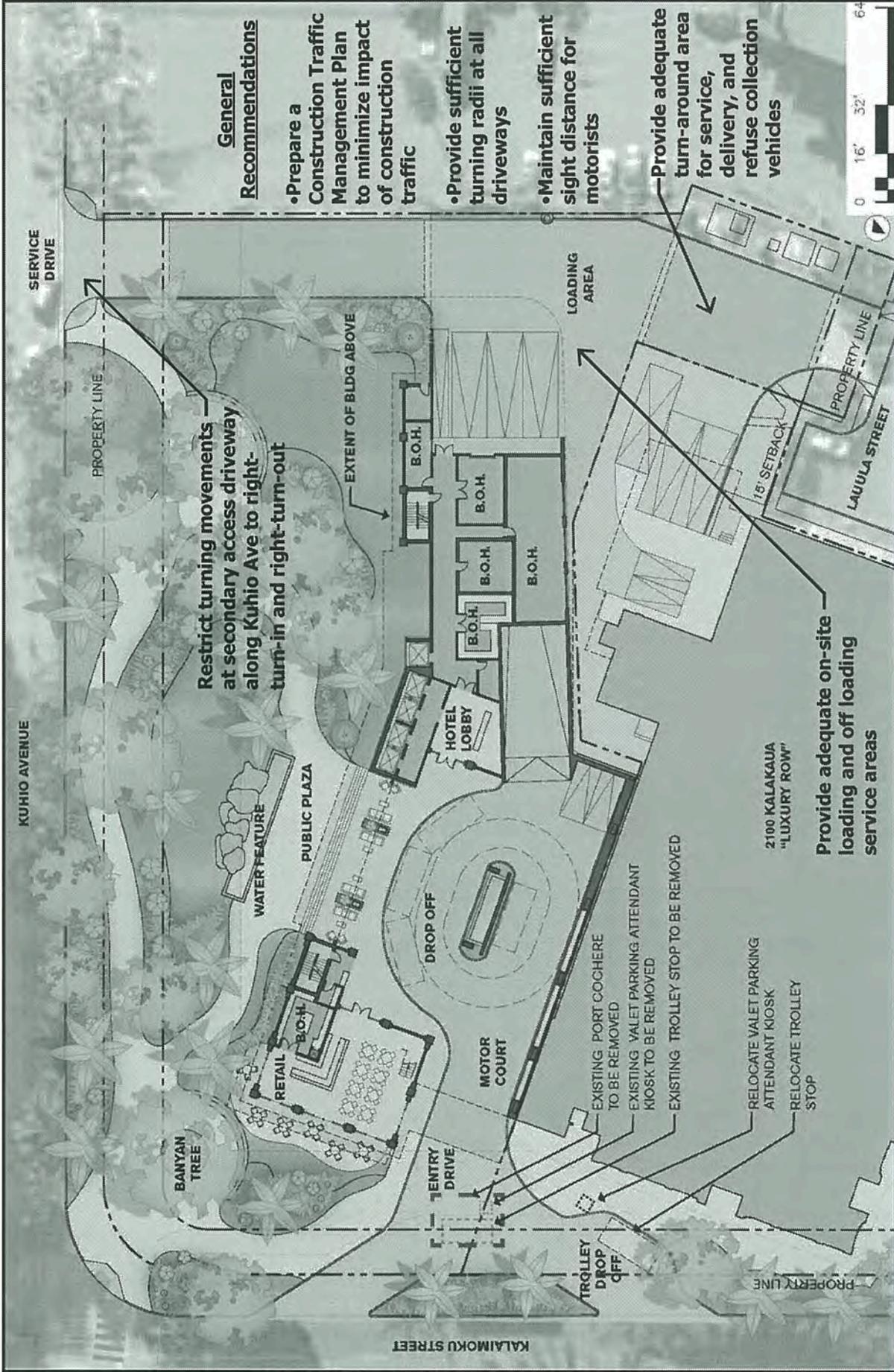
1. Provide sufficient turning radii at all project driveways to avoid or minimize vehicle encroachments to oncoming traffic lanes.
2. Provide adequate turn-around area for service, delivery, and refuse collection vehicles to maneuver on the project site to avoid vehicle-reversing maneuvers onto adjacent roadways.
3. Maintain sufficient sight distance for motorists to safely enter and exit all project driveways
4. Provide adequate on-site loading and off-loading service areas and prohibit off-site loading operations.
5. Eliminate or relocate the existing drop-off area along Kalaimoku Street to ensure that buses or trolleys do not block the primary access for the proposed project thereby resulting in vehicular queuing onto the adjacent roadway. If the existing area is relocated on-site, ensure that adequate staging and loading areas are provided to ensure that vehicular queues do not extend onto the adjacent roadway.
6. Provide sufficient bypass area within the proposed porte cochere area for vehicles to bypass trolleys and valet activities as necessary to avoid vehicular queuing on Kalaimoku Street.

7. Restrict turning movements at the secondary access driveway along Kuhio Avenue to right-turn-in and right-turn-out movements only to minimize conflicts with through traffic along Kuhio Avenue.
8. Prepare a Construction Traffic Management Plan to minimize the impact of construction traffic and activities on the surrounding roadway network.

The recommended roadway improvements are shown in Figure 19.

VII. CONCLUSION

The 2121 Kuhio Avenue development includes approximately 469 condo-hotel units with a restaurant and parking garage. With the implementation of the proposed recommendations including the elimination or relocation of the existing drop-off area adjacent to the project site, staging and loading areas within and near the project site, traffic operations in the vicinity are anticipated to continue operating at levels of service similar to without project conditions. As such, with the recommended improvements, the 2121 Kuhio Avenue development is not anticipated to have a significant impact on traffic operations in the project vicinity.



General Recommendations

- Prepare a Construction Traffic Management Plan to minimize impact of construction traffic
- Provide sufficient turning radii at all driveways
- Maintain sufficient sight distance for motorists
- Provide adequate turn-around area for service, delivery, and refuse collection vehicles

Restrict turning movements at secondary access driveway along Kuhio Ave to right-turn-in and right-turn-out

Provide adequate on-site loading and off loading service areas



2121 KUHIO AVENUE DEVELOPMENT

FIGURE 19

PRIMARY ROADWAY IMPROVEMENTS

APPENDIX A
EXISTING TRAFFIC COUNT DATA

Wilson Okamoto Corporation
 1907 S. Beretania Street, Suite 400
 Honolulu, Hawaii

Counter: D4-3890, TU-0649
 Counted By: GC, RJ
 Weather: Clear

File Name : KaiKaSar AM
 Site Code : 00000001
 Start Date : 1/31/2012
 Page No : 1

Groups Printed- Unshifted

Start Time	Kalaikimoku Street Southbound					Westbound	Saratoga Road Northbound					Kalaikaua Avenue Eastbound					
	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	9	9	0	0	29	30	23	82	7	188	29	6	230	321
06:15 AM	0	0	0	8	8	0	0	24	31	26	81	11	218	38	9	276	365
06:30 AM	0	0	0	10	10	0	0	29	39	17	85	8	237	43	9	297	392
06:45 AM	0	0	0	15	15	0	0	25	49	36	110	10	264	51	21	346	471
Total	0	0	0	42	42	0	0	107	149	102	358	36	907	161	45	1149	1549
07:00 AM	0	0	0	13	13	0	0	25	49	36	110	11	223	39	13	286	409
07:15 AM	0	0	0	17	17	0	0	34	47	40	121	9	285	42	21	357	495
07:30 AM	0	0	0	19	19	0	0	24	43	73	140	16	309	51	17	393	552
07:45 AM	0	0	0	26	26	0	0	27	63	74	164	12	310	52	12	386	576
Total	0	0	0	75	75	0	0	110	202	223	535	48	1127	184	63	1422	2032
08:00 AM	0	0	0	23	23	0	0	31	69	68	168	13	279	44	24	360	551
08:15 AM	0	0	0	39	39	0	0	40	54	80	174	15	368	37	27	437	650
08:30 AM	0	0	0	32	32	0	0	45	72	83	200	14	342	43	51	450	682
08:45 AM	0	0	0	51	51	0	0	47	69	79	195	19	358	48	48	473	719
Total	0	0	0	145	145	0	0	163	264	310	737	61	1337	172	150	1720	2602
Grand Total	0	0	0	262	262	0	0	380	615	635	1630	145	3371	517	258	4291	6183
Approch %	0	0	0	100	100	0	0	23.3	37.7	39	26.4	3.4	78.6	12	6	69.4	
Total %	0	0	0	4.2	4.2	0	0	6.1	9.9	10.3	26.4	2.3	54.5	8.4	4.2	69.4	

Start Time	Kalaikimoku Street Southbound					Westbound	Saratoga Road Northbound					Kalaikaua Avenue Eastbound				
	Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
08:00 AM	0	0	0	0	0	0	0	31	69	69	100	13	279	44	336	436
08:15 AM	0	0	0	0	0	0	0	40	54	54	94	15	358	37	410	504
08:30 AM	0	0	0	0	0	0	0	45	72	72	117	14	342	43	399	516
08:45 AM	0	0	0	0	0	0	0	47	69	69	116	19	358	48	425	541
Total Volume	0	0	0	0	0	0	0	163	264	264	427	61	1337	172	1570	1997
% App. Total	0	0	0	0	0	0	0	38.2	61.8	61.8	91.2	3.9	85.2	11	92.4	92.3
PHF	.000	.000	.000	.000	.000	.000	.000	.867	.917	.917	.912	.803	.934	.696	.924	.923

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

Wilson Okamoto Corporation
 1907 S. Beretania Street, Suite 400
 Honolulu, HI 96826

Counter: D4-3890, TU-0649
 Counted By: GC, RJ
 Weather: Clear

File Name : KalkaSar PM
 Site Code : 00000001
 Start Date : 1/31/2012
 Page No : 1

Groups Printed- Unshifted

Start Time	Kaliimoku Street Southbound					Westbound					Saratoga Road Northbound					Kalakaua Avenue Eastbound					
	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	79	79	0	59	63	110	232	0	13	370	46	49	13	370	46	49	478	789
03:15 PM	0	0	0	72	72	0	65	84	123	272	0	9	401	53	50	9	401	53	50	513	857
03:30 PM	0	0	0	71	71	0	65	75	129	269	0	14	404	50	49	14	404	50	49	517	857
03:45 PM	0	0	0	81	81	0	64	87	162	313	0	15	431	48	54	15	431	48	54	548	942
Total	0	0	0	303	303	0	253	309	524	1086	0	51	1606	197	202	51	1606	197	202	2056	3445
04:00 PM	0	0	0	67	67	0	85	97	127	309	0	11	410	44	58	11	410	44	58	523	899
04:15 PM	0	0	0	61	61	0	78	95	137	310	0	19	398	52	48	19	398	52	48	517	888
04:30 PM	0	0	0	48	48	0	54	94	134	282	0	21	411	44	62	21	411	44	62	538	868
04:45 PM	0	0	0	93	93	0	52	71	108	231	0	17	426	44	49	17	426	44	49	536	860
Total	0	0	0	269	269	0	269	357	506	1132	0	68	1845	184	217	68	1845	184	217	2114	3515
05:00 PM	0	0	0	86	86	0	61	99	115	275	0	16	455	35	51	16	455	35	51	557	918
05:15 PM	0	0	0	69	69	0	56	90	154	300	0	14	446	40	52	14	446	40	52	552	921
05:30 PM	0	0	0	74	74	0	56	94	144	294	0	14	413	49	60	14	413	49	60	536	904
05:45 PM	0	0	0	71	71	0	49	84	156	289	0	10	394	36	64	10	394	36	64	504	864
Total	0	0	0	300	300	0	222	367	569	1158	0	54	1708	160	227	54	1708	160	227	2149	3607
Grand Total	0	0	0	872	872	0	744	1033	1599	3376	0	173	4959	541	646	173	4959	541	646	6319	10567
Approach %	0	0	0	100	100	0	22	30.6	47.4	31.9	0	2.7	78.5	8.6	10.2	2.7	78.5	8.6	10.2	59.8	
Total %	0	0	0	8.3	8.3	0	7	9.8	15.1	31.9	0	1.6	46.9	5.1	6.1	1.6	46.9	5.1	6.1		

Start Time	Kaliimoku Street Southbound					Westbound					Saratoga Road Northbound					Kalakaua Avenue Eastbound						
	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	
03:45 PM	0	0	0	0	0	0	0	64	67	151	0	0	431	48	494	15	431	48	49	494	645	
04:00 PM	0	0	0	0	0	0	85	97	97	182	0	11	410	44	465	11	410	44	44	465	647	
04:15 PM	0	0	0	0	0	0	78	95	173	346	0	19	398	52	469	19	398	52	52	469	642	
04:30 PM	0	0	0	0	0	0	54	94	94	148	0	21	411	44	476	21	411	44	44	476	624	
Total Volume	0	0	0	0	0	0	281	373	654	654	0	66	1650	188	1904	66	1650	188	188	1904	2558	
% App. Total	.000	.000	.000	.000	.000	.000	.826	.961	.961	.698	.000	3.5	86.7	9.8	.964	3.5	86.7	9.8	9.8	.964	.988	
PHF																						

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

Wilson Okamoto Corporation
 1907 S. Beretania Street, Suite 400
 Honolulu, HI 96826

Counter: TU-0651, TU-0652
 Counted By: DY, CY
 Weather: Clear

File Name : KuhKal AM
 Site Code : 00000003
 Start Date : 1/31/2012
 Page No : 1

Groups Printed- Unshifted

Start Time	Kalaïmoku Street Southbound						Kuhio Avenue Westbound						Kalaïmoku Street Northbound						Kuhio Avenue Eastbound					
	Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total	
06:00 AM	0	0	0	4	4		0	21	8	0	29		1	22	10	2	35		2	55	0	0	57	
06:15 AM	0	0	0	13	13		0	26	6	4	36		1	25	9	13	48		3	52	0	7	62	
06:30 AM	0	0	0	11	11		0	30	5	3	38		2	29	7	9	47		11	74	0	2	87	
06:45 AM	0	0	0	15	15		0	27	9	1	37		3	19	7	11	40		5	68	0	3	76	
Total	0	0	0	43	43		0	104	28	8	140		7	95	33	35	170		21	249	0	12	282	
07:00 AM	0	0	0	20	20		0	37	17	4	58		4	30	4	14	52		7	67	0	3	77	
07:15 AM	0	0	0	14	14		0	32	8	3	43		5	30	8	10	53		18	88	0	11	117	
07:30 AM	0	0	0	41	41		0	39	7	10	56		5	20	12	17	54		16	109	0	12	137	
07:45 AM	0	0	0	120	120		0	45	16	3	64		3	20	11	22	56		6	142	0	4	152	
Total	0	0	0	195	195		0	153	48	20	221		17	100	35	63	215		47	406	0	30	483	
08:00 AM	0	0	0	29	29		0	25	11	7	43		4	29	14	28	75		15	105	0	11	131	
08:15 AM	0	0	0	38	38		0	36	11	11	58		4	34	11	28	77		12	112	0	11	135	
08:30 AM	0	0	0	89	89		0	45	12	7	64		4	39	17	49	109		13	121	0	9	143	
08:45 AM	0	0	0	28	28		0	52	12	9	73		2	38	17	41	98		7	150	0	6	163	
Total	0	0	0	184	184		0	158	46	34	238		14	140	59	146	359		47	488	0	37	572	
Grand Total	0	0	0	422	422		0	415	122	62	599		38	335	127	244	744		115	1143	0	79	1337	
Approch %	0	0	0	100	13.6		0	69.3	20.4	10.4	19.3		5.1	45	17.1	32.8	24		8.6	85.5	0	5.9	43.1	
Total %	0	0	0	13.6		0	13.4	3.9	2			1.2	10.8	4.1	7.9			3.7	36.8	0	2.5			

Start Time	Kalaïmoku Street Southbound						Kuhio Avenue Westbound						Kalaïmoku Street Northbound						Kuhio Avenue Eastbound					
	Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total	
08:00 AM	0	0	0	0	0		0	25	11	11	36		4	29	14	14	47		15	105	0	0	120	
08:15 AM	0	0	0	0	0		0	36	11	11	47		4	34	11	11	49		12	112	0	0	124	
08:30 AM	0	0	0	0	0		0	45	12	7	57		4	39	17	17	60		13	121	0	0	134	
08:45 AM	0	0	0	0	0		0	52	12	12	64		2	38	17	17	57		7	150	0	0	157	
Total Volume	0	0	0	0	0		0	158	46	46	204		14	140	59	59	213		47	488	0	0	535	
% App. Total	0.000	0.000	0.000	0.000	0.000		0.000	77.5	22.5	22.5	79.7		6.6	65.7	27.7	27.7	88.8		7.83	81.3	0.000	0.000	85.2	
PHF								.760	.958	.958	.797		.875	.897	.868	.868	.888		.783	.813	.000	.000	.852	

Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 08:00 AM

Wilson Okamoto Corporation
 1907 S. Beretania Street, Suite 400
 Honolulu, HI 96826

File Name : KuhKal PM
 Site Code : 00000003
 Start Date : 1/31/2012
 Page No : 1

Counter:
 Counted By:
 Weather:

Groups Printed- Unshifted

Start Time	Southbound			Westbound			Northbound			Eastbound			App. Total	Int. Total		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right			Peds	
03:00 PM	0	0	0	0	60	9	9	43	16	42	14	167	0	8	189	431
03:15 PM	0	0	0	0	49	14	6	58	18	37	21	177	0	17	215	435
03:30 PM	0	0	0	0	46	12	15	57	10	31	7	188	0	8	203	417
03:45 PM	0	0	0	0	54	12	19	68	15	48	11	173	0	16	200	474
Total	0	0	0	0	208	47	49	226	59	158	53	705	0	49	807	1757
04:00 PM	0	0	0	0	60	14	4	78	17	36	16	200	0	18	234	470
04:15 PM	0	0	0	0	44	17	10	73	21	43	19	186	0	7	212	467
04:30 PM	0	0	0	0	47	11	12	54	20	44	12	200	0	14	226	461
04:45 PM	0	0	0	0	55	13	4	46	18	49	21	184	0	10	215	472
Total	0	0	0	0	206	55	30	241	76	172	68	770	0	49	887	1870
05:00 PM	0	0	0	0	46	12	16	70	12	43	19	234	0	17	270	523
05:15 PM	0	0	0	0	59	14	22	51	12	126	21	185	0	11	217	572
05:30 PM	0	0	0	0	44	13	10	39	15	53	14	205	0	11	230	504
05:45 PM	0	0	0	0	45	14	14	47	16	47	24	200	0	20	244	488
Total	0	0	0	0	194	53	62	207	55	269	78	824	0	59	961	2087
Grand Total	0	0	0	0	608	155	141	62	674	190	199	2299	0	157	2655	5714
Approach %	0	0	0	0	67.3	17.1	15.6	4.1	44.2	12.5	7.5	86.6	0	5.9	46.5	
Total %	0	0	0	0	10.7	2.7	2.5	1.1	11.8	3.3	3.5	40.2	0	2.7		

Start Time	Southbound			Westbound			Northbound			Eastbound			App. Total	Int. Total		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right			Peds	
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour for Entire Intersection Begins at 04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	44	17	61	4	73	21	19	186	0	0	205	364
04:30 PM	0	0	0	0	47	11	58	7	54	20	12	200	0	0	212	351
04:45 PM	0	0	0	0	55	13	68	3	46	18	21	184	0	0	205	340
05:00 PM	0	0	0	0	46	12	58	4	70	12	19	234	0	0	253	397
Total Volume	0	0	0	0	192	53	245	18	243	71	71	804	0	0	875	1452
% App. Total	0	0	0	0	78.4	21.6	9.0	5.4	73.2	21.4	8.1	91.9	0	0	865	914
PHF	.000	.000	.000	.000	.873	.779	.901	.643	.832	.845	.845	.859	.000	.000	.865	.914

Wilson Okamoto Corporation
 1907 S. Beretania Street, Suite 400
 Honolulu, Hawaii

Counter: TU-0650
 Counted By: MM
 Weather: Clear

File Name : AlaKal PM
 Site Code : 00000002
 Start Date : 1/31/2012
 Page No : 1

Groups Printed- Unshifted

Start Time	Southbound				Ala Wai Boulevard Westbound				Kalaaimoku Street Northbound				Eastbound															
	App. Total	Left	Thru	Right	Peds	App. Total	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	481	0	0	486	62	0	0	11	73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	558
03:15 PM	0	0	526	0	3	529	87	0	0	2	89	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	618
03:30 PM	0	0	513	0	6	519	76	0	0	7	83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	602
03:45 PM	0	0	461	0	3	464	92	0	0	10	102	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	566
Total	0	0	1981	0	16	1997	317	0	0	30	347	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2344
04:00 PM	0	0	577	0	4	581	75	0	0	4	79	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	660
04:15 PM	0	0	582	0	0	582	114	0	0	5	119	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	701
04:30 PM	0	0	525	0	5	530	71	0	0	9	80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	610
04:45 PM	0	0	465	0	2	467	79	0	0	3	82	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	549
Total	0	0	2149	0	11	2160	339	0	0	21	360	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2520
05:00 PM	0	0	501	0	4	505	86	0	0	10	96	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	601
05:15 PM	0	0	530	0	7	537	80	0	0	13	93	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	630
05:30 PM	0	0	466	0	2	468	69	0	0	9	78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	546
05:45 PM	0	0	462	0	3	465	80	0	0	3	83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	548
Total	0	0	1959	0	16	1975	315	0	0	35	350	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2325
Grand Total	0	0	6089	0	43	6132	971	0	0	86	1057	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7189
Approach %	0	0	99.3	0	0.7	85.3	91.9	0	0	8.1	14.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total %	0	0	84.7	0	0.6	85.3	13.5	0	0	1.2	14.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Start Time	Southbound				Ala Wai Boulevard Westbound				Kalaaimoku Street Northbound				Eastbound															
	App. Total	Left	Thru	Right	Peds	App. Total	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	
03:45 PM	0	0	461	0	0	461	92	0	0	0	92	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	553
04:00 PM	0	0	577	0	0	577	75	0	0	0	75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	652
04:15 PM	0	0	582	0	0	582	114	0	0	0	114	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	698
04:30 PM	0	0	525	0	0	525	71	0	0	0	71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	596
Total Volume	0	0	2145	0	0	2145	352	0	0	0	352	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2497
% App. Total	.000	.000	.921	.000	.000	.921	.772	.000	.000	.000	.772	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.897
PHF																												

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

Wilson Okamoto Corporation
 1907 S. Beretania Street, Suite 400
 Honolulu, Hawaii

Counter: TU-0653, TU-0654
 Counted By: JL, PA
 Weather: Clear

File Name : KuhLau AM
 Site Code : 00000004
 Start Date : 1/31/2012
 Page No : 1

Groups Printed- Unshifted

Start Time	Lauaiu Street Southbound						Kuhio Avenue Westbound						Kuhio Avenue Eastbound					
	Left	Thru	Right	Peds	App. Total	Int. Total	Left	Thru	Right	Peds	App. Total	Int. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	9	0	6	4	19	0	21	0	1	22	0	70	0	69	0	1	70	111
06:15 AM	6	0	7	15	28	0	28	0	2	30	0	63	0	62	0	1	63	121
06:30 AM	7	0	8	16	31	0	25	0	2	27	0	84	0	82	0	2	84	142
06:45 AM	14	0	10	27	51	0	29	0	11	40	0	87	0	76	0	11	87	178
Total	36	0	31	62	129	0	103	0	16	119	0	304	0	289	0	15	304	562
07:00 AM	13	0	18	20	51	0	33	0	4	37	0	71	0	67	0	4	71	159
07:15 AM	12	0	14	19	45	0	31	0	6	37	0	103	0	97	0	6	103	185
07:30 AM	20	0	7	55	82	0	35	0	6	41	0	126	0	120	0	6	126	249
07:45 AM	22	0	13	116	151	0	49	0	10	59	0	173	0	156	0	17	173	383
Total	67	0	52	210	329	0	148	0	26	174	0	473	0	440	0	33	473	976
08:00 AM	25	0	10	36	71	0	30	0	0	30	0	122	0	120	0	2	122	223
08:15 AM	22	0	10	47	79	0	32	0	7	39	0	129	0	128	0	1	129	247
08:30 AM	17	0	17	99	133	0	39	0	11	50	0	136	0	136	0	0	136	319
08:45 AM	19	0	10	34	63	0	51	0	9	60	0	158	0	158	0	0	158	281
Total	83	0	47	216	346	0	152	0	27	179	0	545	0	542	0	3	545	1070
Grand Total	186	0	130	488	804	0	403	0	69	472	0	1322	0	1271	0	51	1322	2598
Approch %	23.1	0	16.2	60.7	30.9	0	85.4	0	14.6	18.2	0	50.9	0	96.1	0	3.9	50.9	
Total %	7.2	0	5	18.8		0	15.5	0	2.7		0		0	48.9	0	2		

Start Time	Lauaiu Street Southbound						Kuhio Avenue Westbound						Kuhio Avenue Eastbound					
	Left	Thru	Right	Peds	App. Total	Int. Total	Left	Thru	Right	Peds	App. Total	Int. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:45 AM	22	0	13	13	35	0	49	0	0	49	0	156	0	156	0	0	156	240
08:00 AM	25	0	10	10	35	0	30	0	0	30	0	120	0	120	0	0	120	185
08:15 AM	22	0	10	10	32	0	32	0	0	32	0	128	0	128	0	0	128	192
08:30 AM	17	0	17	17	34	0	39	0	0	39	0	136	0	136	0	0	136	209
Total Volume	86	0	50	50	136	0	150	0	0	150	0	540	0	540	0	0	540	826
% App. Total	63.2	0	36.8		.971	0	.765	0	.000	.765	0	.865	0	.865	0	.000	.865	.860
PHF	.860	.000	.735															

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

Wilson Okamoto Corporation
 1907 S. Beretania Street, Suite 400
 Honolulu, HI 96826

Counter: TU-0651, TU-0652
 Counted By: PA, JL
 Weather: Clear

File Name : KuhLau PM
 Site Code : 00000004
 Start Date : 1/31/2012
 Page No : 1

Groups Printed- Unshifted

Start Time	Laiulu Street Southbound						Kuhio Avenue Westbound						Kuhio Avenue Eastbound					
	Left	Thru	Right	Peds	App. Total	Int. Total	Left	Thru	Right	Peds	App. Total	Int. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	19	0	7	50	76	0	54	0	13	67	0	190	0	190	0	0	190	333
03:15 PM	11	0	5	43	59	0	57	0	10	67	0	185	0	185	0	0	185	311
03:30 PM	19	0	8	43	70	0	46	0	15	61	0	195	0	195	0	0	195	326
03:45 PM	25	0	6	41	72	0	61	0	9	70	0	191	0	191	0	0	191	333
Total	74	0	26	177	277	0	218	0	47	265	0	761	0	761	0	0	761	1303
04:00 PM	20	0	13	38	71	0	62	0	19	81	0	209	0	209	0	0	209	361
04:15 PM	16	0	11	53	80	0	47	0	23	70	0	201	0	201	0	0	201	351
04:30 PM	11	0	8	39	58	0	51	0	6	57	0	221	0	221	0	0	221	336
04:45 PM	21	0	15	78	114	0	53	0	18	71	0	199	0	199	0	0	199	384
Total	68	0	47	208	323	0	213	0	66	279	0	830	0	830	0	0	830	1432
05:00 PM	9	0	11	53	73	0	48	0	9	57	0	246	0	246	0	0	246	376
05:15 PM	29	0	8	71	108	0	61	0	14	75	0	206	0	206	0	0	206	389
05:30 PM	20	0	11	98	129	0	41	0	20	61	0	207	0	207	0	0	207	397
05:45 PM	23	0	13	65	101	0	53	0	17	70	0	214	0	214	0	0	214	385
Total	81	0	43	287	411	0	203	0	60	263	0	873	0	873	0	0	873	1547
Grand Total	223	0	116	672	1011	0	634	0	173	807	0	2464	0	2464	0	0	2464	4282
Approach %	22.1	0	11.5	66.5		0	78.6	0	21.4		0	100	0	100	0	0		
Total %	5.2	0	2.7	15.7	23.6	0	14.8	0	4	18.8	0	57.5	0	57.5	0	0	57.5	

Start Time	Laiulu Street Southbound						Kuhio Avenue Westbound						Kuhio Avenue Eastbound					
	Left	Thru	Right	Peds	App. Total	Int. Total	Left	Thru	Right	Peds	App. Total	Int. Total	Left	Thru	Right	Peds	App. Total	Int. Total
05:00 PM	9	0	0	11	20	0	48	0	0	48	0	246	0	246	0	0	246	314
05:15 PM	29	0	0	8	37	0	61	0	0	61	0	206	0	206	0	0	206	304
05:30 PM	20	0	0	11	31	0	41	0	0	41	0	207	0	207	0	0	207	279
05:45 PM	23	0	0	13	36	0	53	0	0	53	0	214	0	214	0	0	214	303
Total Volume	81	0	0	43	124	0	203	0	0	203	0	873	0	873	0	0	873	1200
% App. Total	65.3	0	0	34.7		0	100	0	0	100	0	100	0	100	0	0	100	
PHF	.698	.000	.000	.827	.838	0	.832	.000	.000	.832	.000	.887	.000	.887	.000	.000	.887	.955

Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 05:00 PM

Wilson Okamoto Corporation
 1907 S. Beretania Street, Suite 400
 Honolulu, Hawaii

Counter: D4-5677, D4-3888
 Counted By: MM, DC
 Weather: Clear

File Name : KuhKai AM
 Site Code : 00000004
 Start Date : 2/1/2012
 Page No : 1

Groups Printed- Unshifted

Start Time	Kaiolu Street Southbound						Kuhio Avenue Westbound						Pay Parking Dwy. Northbound						Kuhio Avenue Eastbound																
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		Left		Thru		Right						
	App. Total	Peds	App. Total	Peds	App. Total	Peds	App. Total	Peds	App. Total	Peds	App. Total	Peds	App. Total	Peds	App. Total	Peds	App. Total	Peds	App. Total	Peds	App. Total	Peds	App. Total	Peds	App. Total	Peds	App. Total	Peds	App. Total	Peds					
06:00 AM	0	0	0	0	11	9	3	14	3	29	9	0	2	1	9	7	63	1	71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 AM	0	0	0	4	4	0	2	25	6	33	0	0	3	1	5	4	82	3	89	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 AM	0	0	0	11	11	0	2	14	3	19	0	0	0	2	3	2	87	1	90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM	0	0	0	20	20	0	2	36	2	40	0	0	0	3	8	5	93	2	106	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	46	46	9	9	89	14	121	9	0	5	7	25	18	325	7	356	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 AM	0	0	0	29	29	0	0	37	3	40	0	0	1	1	2	4	98	2	105	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	49	49	0	0	34	4	40	2	0	0	0	29	9	103	3	123	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	23	23	0	0	36	5	41	0	0	0	0	12	12	144	2	164	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	43	43	0	4	39	5	52	4	0	0	1	16	16	140	7	165	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	144	144	0	4	146	17	173	6	0	1	2	59	44	485	14	557	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	66	66	0	3	36	5	45	1	0	0	3	8	10	192	3	219	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	47	47	0	3	34	5	45	3	0	0	6	27	8	145	7	164	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	65	65	0	3	53	4	60	0	0	0	4	29	17	148	6	173	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	43	43	0	3	55	4	63	1	0	0	2	21	5	150	0	158	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	221	221	0	12	178	18	213	5	0	0	15	85	40	575	16	644	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	411	411	0	25	413	49	507	20	0	6	24	169	102	1385	37	1557	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0	0	0	100	100	0	4.9	81.5	9.7	3.9	3.9	0	3	12.1	84.9	6.6	89	2.4	2.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total %	0	0	0	15.4	15.4	0	0.9	15.4	1.8	0.7	0.7	0	0.2	0.9	6.3	3.8	51.8	1.4	1.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Start Time	Kaiolu Street Southbound						Kuhio Avenue Westbound						Pay Parking Dwy. Northbound						Kuhio Avenue Eastbound																
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		Left		Thru		Right						
	App. Total	Peds	App. Total	Peds	App. Total	Peds	App. Total	Peds	App. Total	Peds	App. Total	Peds	App. Total	Peds	App. Total	Peds	App. Total	Peds	App. Total	Peds	App. Total	Peds	App. Total	Peds	App. Total	Peds	App. Total	Peds	App. Total	Peds					
08:00 AM	0	0	0	0	0	0	3	36	5	44	5	0	0	0	3	10	132	3	145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	3	34	5	42	5	0	0	0	6	8	145	7	160	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	3	53	4	60	4	0	0	0	4	17	148	6	171	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	3	55	4	62	4	0	0	0	2	5	150	0	155	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	12	178	18	208	18	0	0	0	15	40	575	16	631	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	5.8	85.6	8.7	8.7	8.7	0	0	100	6.3	91.1	2.5	6.31	91.1	2.5	6.31	0	0	0	0	0	0	0	0	0	0	0	0		
PHF	.000	.000	.000	.000	.000	.000	1.00	.809	.900	.839	.900	.000	.000	.625	.588	.958	.571	.923	.571	.625	.588	.958	.571	.625	.588	.958	.571	.625	.588	.958					

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

Wilson Okamoto Corporation
 1907 S. Beretania Street, Suite 400
 Honolulu, HI 96826

Counter: D4-5677, D4-3888
 Counted By: MM, RIF
 Weather: Clear

File Name : KuhKai PM
 Site Code : 00000004
 Start Date : 2/1/2012
 Page No : 1

Groups Printed- Unshifted

Start Time	Kaiolu Street Southbound						Kuhio Avenue Westbound						Pay Parking Driveway Northbound						Kuhio Avenue Eastbound					
	Left		Right		Peds		Left		Right		Peds		Left		Right		Peds		Left		Right		Peds	
	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total
03:00 PM	0	49	0	49	0	67	2	46	9	10	1	67	1	4	2	14	4	21	11	167	5	2	185	322
03:15 PM	0	65	0	65	1	59	4	48	6	1	59	0	2	6	19	27	16	189	16	189	7	4	216	367
03:30 PM	0	52	0	52	3	78	3	60	12	3	78	0	0	1	21	22	23	181	4	185	4	6	214	366
03:45 PM	0	62	0	62	9	80	5	66	5	9	80	0	0	5	24	29	16	185	4	185	4	5	210	381
Total	0	228	0	228	23	284	9	220	32	23	284	1	6	14	78	99	66	722	20	722	17	17	825	1436
04:00 PM	0	49	0	49	9	92	1	70	12	9	92	0	0	1	8	9	29	185	7	185	7	7	228	378
04:15 PM	0	57	0	57	0	74	4	57	13	0	74	0	0	1	20	21	21	193	2	193	2	9	225	377
04:30 PM	0	43	0	43	2	81	1	67	11	2	81	1	0	2	27	30	16	205	3	205	3	4	228	382
04:45 PM	0	46	0	46	4	70	4	52	10	4	70	0	5	2	17	24	15	211	4	211	4	2	232	372
Total	0	195	0	195	15	317	10	246	46	15	317	1	5	6	72	84	81	794	16	794	22	22	913	1509
05:00 PM	0	70	0	70	7	92	6	72	7	7	92	0	2	4	21	27	24	192	8	192	8	4	228	417
05:15 PM	0	52	0	52	3	59	2	47	7	3	59	0	4	3	36	43	21	175	7	175	7	9	212	366
05:30 PM	0	76	0	76	2	67	4	48	13	2	67	1	2	4	23	30	20	182	9	182	9	2	213	366
05:45 PM	0	67	0	67	4	54	3	42	5	4	54	0	1	1	23	25	15	160	9	160	9	2	186	332
Total	0	265	0	265	16	272	15	208	32	16	272	1	9	12	103	125	80	709	33	709	33	17	839	1501
Grand Total	0	688	0	688	54	873	34	675	110	54	873	3	20	32	253	308	227	2225	69	2225	69	56	2577	4446
Approach %	0	100	0	100	6.2	19.6	0.1	6.5	10.4	82.1	0.1	6.5	10.4	82.1	6.9	8.8	86.3	2.7	86.3	2.7	2.2	2.2	58	
Total %	0	15.5	0	15.5	1.2	19.6	0.1	6.5	10.4	82.1	0.1	6.5	10.4	82.1	6.9	8.8	86.3	2.7	86.3	2.7	1.6	1.3	58	

Start Time	Kaiolu Street Southbound						Kuhio Avenue Westbound						Pay Parking Driveway Northbound						Kuhio Avenue Eastbound					
	Left		Right		Peds		Left		Right		Peds		Left		Right		Peds		Left		Right		Peds	
	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total	Thru	App. Total
04:15 PM	0	0	0	0	0	0	4	57	13	1	74	0	0	1	1	1	21	193	2	193	2	2	216	291
04:30 PM	0	0	0	0	0	0	1	67	11	79	1	0	0	2	3	3	16	205	3	205	3	3	224	306
04:45 PM	0	0	0	0	0	0	4	52	10	66	0	5	2	7	7	7	15	211	4	211	4	4	230	303
05:00 PM	0	0	0	0	0	0	6	72	7	85	0	2	4	6	6	6	24	192	8	192	8	8	224	315
Total Volume	0	0	0	0	0	0	15	248	41	304	1	7	9	17	17	17	76	801	17	801	17	17	894	1215
% App. Total	0	0	0	0	0	0	4.9	81.6	13.5	13.5	5.9	41.2	52.9	6.07	6.07	6.07	8.5	89.6	1.9	89.6	1.9	1.9	972	964
PHF	.000	.000	.000	.000	.000	.000	.625	.861	.788	.894	.250	.350	.563	.607	.607	.607	.792	.949	.531	.949	.531	.531	.972	.964

Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:15 PM

Wilson Okamoto Corporation
 1907 S. Beretania Street, Suite 400
 Honolulu, Hawaii

Counter: D4-5673, D4-5674
 Counted By: GC, RJ
 Weather: Clear

File Name : Kailuw AM
 Site Code : 00000001
 Start Date : 2/1/2012
 Page No : 1

Start Time	Groups Printed- Unshifted												Int. Total								
	Lewers Street Southbound				Kalakaua Avenue Westbound				Lewers Street Northbound					Kalakaua Avenue Eastbound							
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru		Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
06:00 AM	0	0	0	16	16	0	0	0	6	6	0	8	1	22	31	21	156	46	12	235	288
06:15 AM	0	0	0	9	9	0	0	0	16	16	0	9	0	23	32	19	157	59	18	253	310
06:30 AM	0	0	0	28	28	0	0	0	12	12	0	6	0	37	43	16	158	61	24	259	342
06:45 AM	0	0	0	29	29	0	0	0	20	20	0	7	1	52	60	12	199	56	28	295	404
Total	0	0	0	82	82	0	0	0	54	54	0	30	2	134	166	68	670	222	82	1042	1344
07:00 AM	0	0	0	31	31	0	0	0	24	24	0	10	1	47	58	28	192	53	24	297	410
07:15 AM	0	0	0	21	21	0	0	0	21	21	0	4	0	45	49	18	239	50	28	335	426
07:30 AM	0	0	0	22	22	0	0	0	40	40	0	19	6	79	104	30	286	60	27	403	569
07:45 AM	0	0	0	67	67	0	0	0	52	52	0	14	3	69	86	30	311	49	43	433	638
Total	0	0	0	141	141	0	0	0	137	137	0	47	10	240	297	106	1028	212	122	1468	2043
08:00 AM	0	0	0	44	44	0	0	0	38	38	0	17	3	74	94	37	257	48	46	388	564
08:15 AM	0	0	0	46	46	0	0	0	30	30	0	21	1	112	134	40	292	52	45	429	639
08:30 AM	0	0	0	87	87	0	0	0	45	45	0	23	2	112	137	53	273	47	81	454	723
08:45 AM	0	0	0	84	84	0	0	0	56	56	0	16	4	127	147	60	283	40	106	489	776
Total	0	0	0	261	261	0	0	0	169	169	0	77	10	425	512	190	1105	187	278	1760	2702
Grand Total	0	0	0	484	484	0	0	0	360	360	0	154	22	799	975	364	2803	621	482	4270	6089
Approch %	0	0	0	100	100	0	0	0	100	100	0	15.8	2.3	81.9	16	8.5	65.6	14.5	11.3	70.1	
Total %	0	0	0	7.9	7.9	0	0	0	5.9	5.9	0	2.5	0.4	13.1	1.6	6	46	10.2	7.9	70.1	

Start Time	Lewers Street Southbound				Kalakaua Avenue Westbound				Lewers Street Northbound				Kalakaua Avenue Eastbound							
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
	07:30 AM	0	0	0	0	0	0	0	0	0	0	0	19	6	25	30	286	60	376	401
07:45 AM	0	0	0	0	0	0	0	0	0	0	14	3	17	30	311	49	390	407		
08:00 AM	0	0	0	0	0	0	0	0	0	0	17	3	20	37	257	48	342	362		
08:15 AM	0	0	0	0	0	0	0	0	0	0	21	1	22	40	292	52	384	406		
Total Volume	0	0	0	0	0	0	0	0	0	0	71	13	84	137	1146	209	1492	1576		
% App. Total	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.845	15.5	.542	.840	.921	.871	.956	.968		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.856	.921	.871	.956	.968					

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

Wilson Okamoto Corporation
 1907 S. Beretania Street, Suite 400
 Honolulu, Hawaii

Counter: D4-5675, D4-5676
 Counted By: DY, CY
 Weather: Clear

File Name : KuhLew AM
 Site Code : 00000002
 Start Date : 2/1/2012
 Page No : 1

Groups Printed- Unshifted

Start Time	Lewers Street Southbound						Kuhio Avenue Westbound						Lewers Street Northbound						Kuhio Avenue Eastbound											
	Left		Thru		Right		Peds		App. Total		Left		Thru		Right		Peds		App. Total		Left		Thru		Right		Peds		App. Total	
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
06:00 AM	0	0	0	11	11	0	13	10	12	35	8	12	6	21	47	11	57	0	10	78	11	57	0	10	78	171	171	171	171	
06:15 AM	0	0	0	12	12	0	30	6	16	52	5	16	5	20	46	8	65	0	13	86	8	65	0	13	86	198	198	198	198	
06:30 AM	0	0	0	11	11	0	16	7	8	31	0	15	4	19	38	9	83	0	6	98	16	83	0	6	98	178	178	178	178	
06:45 AM	0	0	0	36	36	0	43	6	18	67	1	12	3	23	39	16	87	0	21	124	16	87	0	21	124	266	266	266	266	
Total	0	0	0	70	70	0	102	29	54	185	14	55	18	83	170	44	292	0	50	386	44	292	0	50	386	811	811	811	811	
07:00 AM	0	0	0	20	20	0	35	11	15	61	7	28	5	28	68	11	85	0	19	115	11	85	0	19	115	264	264	264	264	
07:15 AM	0	0	0	31	31	0	38	5	16	59	2	15	5	42	64	10	92	0	35	137	10	92	0	35	137	291	291	291	291	
07:30 AM	0	0	0	38	38	0	39	10	51	100	3	23	9	45	80	14	148	0	26	188	14	148	0	26	188	406	406	406	406	
07:45 AM	0	0	0	39	39	0	47	16	24	87	1	21	13	57	92	8	127	0	23	158	8	127	0	23	158	376	376	376	376	
Total	0	0	0	128	128	0	159	42	106	307	13	87	32	172	304	43	452	0	103	598	43	452	0	103	598	1337	1337	1337	1337	
08:00 AM	0	0	0	50	50	0	41	11	21	73	3	24	10	70	107	17	119	0	48	184	17	119	0	48	184	414	414	414	414	
08:15 AM	0	0	0	62	62	0	43	9	46	98	2	28	6	65	101	19	114	0	39	172	19	114	0	39	172	433	433	433	433	
08:30 AM	0	0	0	100	100	0	58	8	48	114	4	39	12	74	129	16	148	0	47	211	16	148	0	47	211	554	554	554	554	
08:45 AM	0	0	0	95	95	0	57	13	53	123	4	32	14	65	115	18	145	0	34	197	18	145	0	34	197	530	530	530	530	
Total	0	0	0	307	307	0	199	41	168	408	13	123	42	274	452	70	526	0	168	764	70	526	0	168	764	1931	1931	1931	1931	
Grand Total	0	0	0	505	505	0	460	112	328	900	40	265	92	529	926	157	1270	0	321	1748	157	1270	0	321	1748	4079	4079	4079	4079	
Approach %	0	0	0	100	100	0	51.1	12.4	36.4	22.1	4.3	28.6	9.9	57.1	22.7	9	72.7	0	18.4	42.9	9	72.7	0	18.4	42.9					
Total %	0	0	0	12.4	12.4	0	11.3	2.7	8	22.1	1	6.5	2.3	13	22.7	3.8	31.1	0	7.9		3.8	31.1	0	7.9						

Start Time	Lewers Street Southbound						Kuhio Avenue Westbound						Lewers Street Northbound						Kuhio Avenue Eastbound											
	Left		Thru		Right		Peds		App. Total		Left		Thru		Right		Peds		App. Total		Left		Thru		Right		Peds		App. Total	
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total
08:00 AM	0	0	0	0	0	0	41	11	11	52	3	24	10	37	17	119	0	0	136	37	17	119	0	0	136	225	225	225	225	
08:15 AM	0	0	0	0	0	0	43	9	9	52	2	28	6	36	19	114	0	0	133	36	19	114	0	0	133	221	221	221	221	
08:30 AM	0	0	0	0	0	0	58	8	8	66	4	39	12	55	16	148	0	0	164	55	16	148	0	0	164	285	285	285	285	
08:45 AM	0	0	0	0	0	0	57	13	13	70	4	32	14	50	18	145	0	0	163	70	18	145	0	0	163	283	283	283	283	
Total Volume	0	0	0	0	0	0	199	41	41	240	13	123	42	178	178	70	526	0	0	596	178	70	526	0	0	596	1014	1014	1014	1014
% App. Total	0	0	0	0	0	0	82.9	17.1	23.6	.857	7.3	69.1	23.6	.809	11.7	86.3	0	0	.909	.809	9.21	86.3	0	0	.889	.889	.889	.889	.889	
PHF	.000	.000	.000	.000	.000	.000	.858	.788	.750	.857	.813	.788	.750	.809	.809	.921	.889	.000	.909	.809	.921	.889	.000	.000	.909	.889	.889	.889	.889	.889

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

Wilson Okamoto Corporation
 1907 S. Beretania Street, Suite 400
 Honolulu, Hawaii

Counter: D4-5675, D4-5676
 Counted By: DY, CY
 Weather: Clear

File Name : KuhLew PM
 Site Code : 00000002
 Start Date : 2/1/2012
 Page No : 1

Start Time	Groups Printed- Unshifted																				
	Lewers Street Southbound				Kuhio Avenue Westbound				Lewers Street Northbound				Kuhio Avenue Eastbound								
	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	69	69	0	50	11	39	100	7	59	22	63	151	28	140	0	60	228	548
03:15 PM	0	0	0	77	77	0	49	7	30	86	8	57	7	82	154	28	171	0	37	236	553
03:30 PM	0	0	0	57	57	0	67	9	49	125	19	47	10	64	140	26	155	0	42	223	545
03:45 PM	0	0	0	62	62	0	67	11	34	112	6	36	13	64	119	35	155	0	45	235	528
Total	0	0	0	265	265	0	233	38	152	423	40	199	52	273	564	117	621	0	184	922	2174
04:00 PM	0	0	0	70	70	0	63	20	75	158	22	83	14	75	194	29	159	0	75	263	685
04:15 PM	0	0	0	74	74	0	68	12	61	141	11	72	9	59	151	31	167	0	42	240	606
04:30 PM	0	0	0	67	67	0	63	14	64	141	6	48	8	91	153	30	182	0	54	266	627
04:45 PM	0	0	0	75	75	0	61	10	58	129	2	50	17	66	135	29	185	0	65	279	618
Total	0	0	0	286	286	0	255	56	258	589	41	253	48	291	633	119	693	0	236	1048	2536
05:00 PM	0	0	0	100	100	0	72	10	46	128	10	59	18	65	152	32	164	0	61	257	637
05:15 PM	0	0	0	67	67	0	46	9	61	116	8	67	18	82	175	27	155	0	53	235	593
05:30 PM	0	0	0	75	75	0	57	13	66	136	2	55	11	88	156	35	151	0	61	247	614
05:45 PM	0	0	0	76	76	0	47	6	77	130	2	40	15	97	154	27	138	0	95	260	620
Total	0	0	0	318	318	0	222	38	250	510	22	221	62	332	637	121	608	0	270	999	2464
Grand Total	0	0	0	869	869	0	710	132	660	1502	103	673	162	896	1834	357	1922	0	690	2969	7174
Approach %	0	0	0	100	100	0	47.3	8.8	43.9	20.9	5.6	36.7	8.8	48.9	25.6	12	64.7	0	23.2	41.4	
Total %	0	0	0	12.1	12.1	0	9.9	1.8	9.2	20.9	1.4	9.4	2.3	12.5	25.6	5	26.8	0	9.6		

Start Time	Groups Printed- Unshifted																				
	Lewers Street Southbound				Kuhio Avenue Westbound				Lewers Street Northbound				Kuhio Avenue Eastbound								
	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
04:00 PM	0	0	0	0	0	0	63	20	20	83	22	83	14	119	29	159	0	0	188	390	
04:15 PM	0	0	0	0	0	0	68	12	12	80	11	72	9	92	31	167	0	0	198	370	
04:30 PM	0	0	0	0	0	0	63	14	14	77	6	48	8	62	30	182	0	0	212	351	
04:45 PM	0	0	0	0	0	0	61	10	10	71	2	50	17	69	29	185	0	0	214	354	
Total Volume	0	0	0	0	0	0	255	56	56	311	41	253	48	342	119	693	0	0	812	1465	
% App. Total	.000	.000	.000	.000	.000	.000	.938	.700	.706	.837	.466	.762	.706	.718	.960	.936	.000	.000	.949	.939	
PHF																					

Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:00 PM

Wilson Okamoto Corporation
 1907 S. Beretania Street, Suite 400
 Honolulu, Hawaii

Counter: D4-6772, D4-5671
 Counted By: JL, PA
 Weather: Clear

File Name : AlaLew AM
 Site Code : 00000003
 Start Date : 2/1/2012
 Page No : 1

Groups Printed- Unshifted

Start Time	Southbound				Ala Wai Boulevard Westbound				Lewers Street Northbound				Eastbound			
	App. Total	Left	Thru	Right	App. Total	Peds	Thru	Right	Left	Thru	Right	Peds	App. Total	App. Total	Int. Total	
06:00 AM	0	0	207	0	210	3	0	0	26	0	0	3	29	0	239	
06:15 AM	0	0	213	0	214	1	0	0	38	0	0	4	42	0	256	
06:30 AM	0	0	289	0	307	8	0	0	29	0	0	6	35	0	342	
06:45 AM	0	0	319	0	385	66	0	0	28	0	0	3	31	0	416	
Total	0	0	1038	0	1116	78	0	0	121	0	0	16	137	0	1253	
07:00 AM	0	0	492	0	501	9	0	0	49	0	0	6	55	0	556	
07:15 AM	0	0	550	0	580	10	0	0	34	0	0	12	46	0	606	
07:30 AM	0	0	598	0	611	13	0	0	46	0	0	9	55	0	666	
07:45 AM	0	0	581	0	594	13	0	0	45	0	0	12	57	0	651	
Total	0	0	2221	0	2266	45	0	0	174	0	0	39	213	0	2479	
08:00 AM	0	0	543	0	547	4	0	0	53	0	0	13	66	0	613	
08:15 AM	0	0	507	0	527	20	0	0	51	0	0	16	67	0	594	
08:30 AM	0	0	450	0	470	20	0	0	77	0	0	12	89	0	559	
08:45 AM	0	9	478	0	502	15	0	0	34	0	0	10	44	0	546	
Total	0	9	1978	0	2046	59	0	0	215	0	0	51	266	0	2312	
Grand Total	0	9	5237	0	5428	182	0	0	510	0	0	106	616	0	6044	
Approach %	0	0.2	96.5	0	89.8	3.4	0	0	82.8	0	0	17.2	10.2	0	0	
Total %	0	0.1	86.6	0	89.8	3	0	0	8.4	0	0	1.8	10.2	0	0	

Start Time	Southbound				Ala Wai Boulevard Westbound				Lewers Street Northbound				Eastbound			
	App. Total	Left	Thru	Right	App. Total	Peds	Thru	Right	Left	Thru	Right	Peds	App. Total	App. Total	Int. Total	
07:15 AM	0	0	550	0	550	0	0	0	34	0	0	0	34	0	584	
07:30 AM	0	0	598	0	598	0	0	0	46	0	0	0	46	0	644	
07:45 AM	0	0	581	0	581	0	0	0	45	0	0	0	45	0	626	
08:00 AM	0	0	543	0	543	0	0	0	53	0	0	0	53	0	596	
Total Volume	0	0	2272	0	2272	0	0	0	178	0	0	0	178	0	2450	
% App. Total	0.000	0.000	95.0	0.000	95.0	0.000	0.000	0.000	84.0	0.000	0.000	0.000	84.0	0.000	95.1	
PHF	0.000	0.000	95.0	0.000	95.0	0.000	0.000	0.000	84.0	0.000	0.000	0.000	84.0	0.000	95.1	

Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 07:15 AM

Wilson Okamoto Corporation
 1907 S. Beretania Street, Suite 400
 Honolulu, HI 96826

Counter:D4-5671, D4-5672
 Counted By:JI, PA
 Weather:Clear

File Name : AlaLew PM
 Site Code : 00000003
 Start Date : 2/1/2012
 Page No : 1

Groups Printed- Unshifted

Start Time	Southbound				Ala Wai Boulevard Westbound				Lewers Street Northbound				Eastbound	
	App. Total	Left	Thru	Right	App. Total	Peds	Thru	Right	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	0	0	469	0	475	6	0	0	82	0	0	11	83	568
03:15 PM	0	0	468	0	475	7	0	0	73	0	0	13	86	561
03:30 PM	0	0	504	0	508	4	0	0	59	0	0	12	71	579
03:45 PM	0	0	458	0	469	11	0	0	64	0	0	7	71	540
Total	0	0	1899	0	1927	28	0	0	278	0	0	43	321	2248
04:00 PM	0	0	463	0	469	6	0	0	110	0	0	11	121	590
04:15 PM	0	0	484	0	491	7	0	0	98	0	0	12	110	601
04:30 PM	0	0	444	0	456	12	0	0	71	0	0	11	82	538
04:45 PM	0	0	444	0	450	6	0	0	72	0	0	17	89	539
Total	0	0	1835	0	1866	31	0	0	351	0	0	51	402	2268
05:00 PM	0	0	445	0	462	17	0	0	72	0	0	13	85	547
05:15 PM	0	0	458	0	475	17	0	0	70	0	0	14	84	559
05:30 PM	0	0	427	0	438	11	0	0	79	0	0	20	99	537
05:45 PM	0	0	395	0	403	8	0	0	60	0	0	6	66	469
Total	0	0	1725	0	1778	53	0	0	281	0	0	53	334	2112
Grand Total	0	0	5459	0	5571	112	0	0	910	0	0	147	1057	6628
Approch %	0	0	98	0	86.1	2	0	0	86.1	0	0	13.9	15.9	0
Total %	0	0	82.4	0	84.1	1.7	0	0	13.7	0	0	2.2	15.9	0

Start Time	Southbound				Ala Wai Boulevard Westbound				Lewers Street Northbound				Eastbound	
	App. Total	Left	Thru	Right	App. Total	Peds	Thru	Right	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	0	0	504	0	504	0	0	0	59	0	0	0	59	563
03:15 PM	0	0	458	0	458	0	0	0	64	0	0	0	64	522
04:00 PM	0	0	463	0	463	0	0	0	110	0	0	0	110	573
04:15 PM	0	0	484	0	484	0	0	0	98	0	0	0	98	582
Total Volume	0	0	1909	0	1908	0	0	0	331	0	0	0	331	2240
% App. Total	.000	.000	.947	.000	.947	.000	.000	.000	.752	.000	.000	.000	.752	.962
PHF														

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

Wilson Okamoto Corporation
 1907 S. Beretania Street, Suite 400
 Honolulu, HI 96826

Counter: TU-0650, TU-0651
 Counted By: MM, PA
 Weather: Clear

File Name : KalNiu PM 1
 Site Code : 00000003
 Start Date : 1/18/2012
 Page No : 1

Groups Printed- Unshifted

Start Time	Kalakaua Avenue Southbound				Niu Street Westbound				Kalakaua Avenue Northbound				Ala Moana Boulevard Eastbound								
	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	420	41	12	473	13	107	0	30	150	0	3	0	0	3	0	0	0	42	42	668
03:15 PM	0	428	45	25	498	9	113	0	28	151	0	1	0	0	1	0	0	0	84	84	734
03:30 PM	0	450	31	26	507	21	86	0	21	128	0	2	0	0	2	0	0	0	65	65	702
03:45 PM	0	456	54	9	519	17	102	0	22	141	0	1	0	0	1	0	0	0	81	81	742
Total	0	1754	171	72	1997	60	408	0	102	570	0	7	0	0	7	0	0	0	272	272	2846
04:00 PM	0	478	41	24	543	24	87	0	28	139	0	3	0	0	3	0	0	0	59	59	744
04:15 PM	0	470	32	38	540	24	123	0	35	182	0	6	0	0	6	0	0	0	81	81	809
04:30 PM	0	423	49	28	500	14	131	0	29	174	0	3	0	0	3	0	0	0	61	61	738
04:45 PM	0	410	41	20	471	11	129	0	36	176	0	4	0	0	4	0	0	0	72	72	723
Total	0	1781	163	110	2054	73	470	0	128	671	0	16	0	0	16	0	0	0	273	273	3014
Grand Total	0	3535	334	182	4051	133	878	0	230	1241	0	23	0	0	23	0	0	0	545	545	5860
Approach %	0	87.3	8.2	4.5		10.7	70.7	0	18.5		0	100	0	0	0.4	0	0	0	100		
Total %	0	80.3	5.7	3.1	69.1	2.3	15	0	3.9	21.2	0	0.4	0	0	0.4	0	0	0	9.3	9.3	

Start Time	Kalakaua Avenue Southbound				Niu Street Westbound				Kalakaua Avenue Northbound				Ala Moana Boulevard Eastbound									
	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	
03:45 PM	0	456	54	12	519	17	102	0	30	150	0	3	0	0	3	0	0	0	42	42	630	
04:15 PM	0	478	41	25	543	24	87	0	28	151	0	3	0	0	3	0	0	0	84	84	633	
04:30 PM	0	470	32	32	502	24	123	0	32	147	0	6	0	0	6	0	0	0	65	65	655	
04:45 PM	0	423	49	9	472	14	131	0	22	145	0	3	0	0	3	0	0	0	81	81	620	
Total Volume	0	1827	176	78	2003	79	443	0	102	522	0	13	0	0	13	0	0	0	0	272	272	2538
% App. Total	0	91.2	8.8			15.1	84.9	0			0	100	0	0	0.4	0	0	0	0			
PHF	.000	.956	.815		.965	.823	.845	.000		.888	.000	.542	.000	.000	.542	.000	.000	.000	.000	.000	.969	

Peak Hour Analysis From 03:45 PM to 04:30 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 03:45 PM

Wilson Okamoto Corporation
 1907 S. Beretania Street, Suite 400
 Honolulu, Hawaii

Counted By:GC
 Counter:D4-5673
 Weather:Clear

File Name : KaiPao AM
 Site Code : 00000001
 Start Date : 8/27/2012
 Page No : 1

Groups Printed- Unshifted

Start Time	Kaliakaua Avenue Southbound						Pao Street Westbound						Kaliakaua Avenue Northbound						Ala Moana Boulevard Eastbound					
	Left	Thru	Right	Peds	App. Total	Int. Total	Left	Thru	Right	Peds	App. Total	Int. Total	Left	Thru	Right	Peds	App. Total	Int. Total	Left	Thru	Right	Peds	App. Total	Int. Total
	06:00 AM	14	186	0	5	205	0	0	0	0	7	7	0	3	1	1	0	0	4	0	11	59	17	87
06:15 AM	18	234	0	8	260	0	0	0	0	14	14	0	1	1	1	0	0	2	0	8	75	27	110	386
06:30 AM	17	295	0	3	315	0	0	0	0	11	11	0	1	1	1	0	0	2	0	12	82	19	113	441
06:45 AM	17	265	0	4	286	0	0	0	0	15	15	0	1	1	1	0	0	2	0	25	81	30	138	439
Total	66	980	0	20	1086	0	0	0	0	47	47	0	6	4	4	0	10	0	56	297	93	446	1569	
07:00 AM	22	265	0	12	299	0	0	0	0	23	23	0	2	1	1	0	0	3	0	21	94	37	152	477
07:15 AM	25	288	0	9	322	0	0	0	0	25	25	0	2	1	1	0	0	3	0	22	140	47	209	559
07:30 AM	27	400	0	10	437	0	0	0	0	24	24	0	1	3	0	0	0	4	0	18	124	49	191	656
07:45 AM	25	445	0	13	483	0	0	0	0	34	34	0	1	1	1	0	0	2	0	19	139	44	202	721
Total	99	1398	0	44	1541	0	0	0	0	106	106	0	6	6	6	0	12	0	80	497	177	754	2413	
08:00 AM	43	334	0	19	396	0	0	0	0	30	30	0	2	1	1	0	0	3	0	29	108	36	173	602
08:15 AM	31	396	0	17	434	0	0	0	0	76	76	0	3	1	1	0	0	4	0	16	147	39	202	716
08:30 AM	31	390	0	13	434	0	0	0	0	44	44	0	2	1	1	0	0	3	0	20	130	39	189	670
08:45 AM	19	386	0	8	413	0	0	0	0	43	43	0	1	0	0	0	0	1	0	15	157	19	191	648
Total	114	1506	0	57	1877	0	0	0	0	193	193	0	8	3	3	0	11	0	80	542	133	755	2636	
Grand Total	279	3884	0	121	4284	0	0	0	0	346	346	0	20	13	13	0	33	0	216	1336	403	1955	6618	
Approach %	6.5	90.7	0	2.8	64.7	0	0	0	0	100	5.2	0	60.6	39.4	0.2	0	0.5	0	11	68.3	20.6	6.1	29.5	
Total %	4.2	58.7	0	1.8	64.7	0	0	0	0	5.2	5.2	0	0.3	0.2	0	0	0.5	0	3.3	20.2	6.1	29.5		

Start Time	Kaliakaua Avenue Southbound						Pao Street Westbound						Kaliakaua Avenue Northbound						Ala Moana Boulevard Eastbound					
	Left	Thru	Right	Peds	App. Total	Int. Total	Left	Thru	Right	Peds	App. Total	Int. Total	Left	Thru	Right	Peds	App. Total	Int. Total	Left	Thru	Right	Peds	App. Total	Int. Total
	07:45 AM	25	445	0	12	470	0	0	0	0	0	0	0	1	1	1	0	0	2	0	19	139	158	630
08:00 AM	43	334	0	17	377	0	0	0	0	0	0	0	2	1	1	0	0	3	0	28	108	137	517	
08:15 AM	21	396	0	13	417	0	0	0	0	41	41	0	3	1	1	0	0	4	0	16	147	163	584	
08:30 AM	31	380	0	8	421	0	0	0	0	0	0	0	2	1	1	0	0	3	0	20	130	150	574	
Total Volume	120	1565	0	50	1685	0	0	0	0	0	0	0	8	4	4	0	12	0	84	524	608	2305		
% App. Total	7.1	92.9	0	2.8	64.7	0	0	0	0	100	5.2	0	66.7	33.3	0.2	0	0.5	0	13.8	86.2	6.1	29.5		
PHF	.698	.879	.000	.000	.896	.000	.000	.000	.000	.000	.000	.000	.667	1.00	.750	.933	.915	.000	.724	.891	.933	.915		

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

Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400
Honolulu, HI 96826

Counter: TU-0652, TU-0653
Counted By: DY, CY
Weather: Clear

File Name : KaiPao PM
Site Code : 00000004
Start Date : 1/18/2012
Page No : 1

Groups Printed- Unshifted

Start Time	Kalakaua Avenue Southbound						Pao Street Westbound						Kalakaua Avenue Northbound						Ala Moana Boulevard Eastbound					
	Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total	
03:00 PM	24	411	0	12	447		0	0	0	0	45		0	4	1	0	5		0	44	183	40	267	
03:15 PM	32	422	0	16	470		0	0	0	33	33		1	3	1	0	5		0	52	175	84	311	
03:30 PM	36	453	0	23	512		0	0	0	45	45		0	2	2	0	4		0	44	179	65	288	
03:45 PM	34	451	0	28	513		0	0	0	48	48		0	3	2	0	5		0	35	171	83	289	
Total	126	1737	0	79	1942		0	0	0	171	171		1	12	6	0	19		0	175	708	272	1155	
04:00 PM	38	451	0	33	522		0	0	0	57	57		0	5	2	0	7		0	46	167	57	270	
04:15 PM	41	483	0	30	554		0	0	0	64	64		0	6	3	0	9		0	36	205	81	322	
04:30 PM	31	445	0	26	502		0	0	0	51	51		0	3	2	0	5		0	31	223	61	315	
04:45 PM	41	410	0	20	471		0	0	0	47	47		0	5	2	0	7		0	41	198	72	311	
Total	151	1789	0	109	2049		0	0	0	219	219		0	19	9	0	28		0	154	793	271	1218	
Grand Total	277	3526	0	188	3991		0	0	0	390	390		1	31	15	0	47		0	329	1501	543	2373	
Approch %	6.9	88.3	0	4.7	58.7		0	0	0	100	5.7		2.1	66	31.9	0	0.7		0	13.9	63.3	22.9	34.9	
Total %	4.1	51.8	0	2.8	58.7		0	0	0	5.7	5.7		0	0.5	0.2	0	0		0	4.8	22.1	8		

Start Time	Kalakaua Avenue Southbound						Pao Street Westbound						Kalakaua Avenue Northbound						Ala Moana Boulevard Eastbound					
	Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total		Left	Thru	Right	Peds	App. Total	
04:00 PM	38	451	0	0	489		0	0	0	0	0		0	5	2	0	7		0	46	167	0	213	
04:15 PM	41	483	0	0	524		0	0	0	0	0		0	6	3	0	9		0	36	205	0	241	
04:30 PM	31	445	0	0	476		0	0	0	0	0		0	3	2	0	5		0	31	223	0	254	
04:45 PM	41	410	0	0	451		0	0	0	0	0		0	5	2	0	7		0	41	198	0	239	
Total Volume	151	1789	0	0	1940		0	0	0	0	28		0	19	9	0	28		0	154	793	0	947	
% App. Total	7.8	92.2	0	0	926		0	0	0	0	0.7		0	67.9	32.1	0	18.3		0	18.3	83.7	0	932	
PHF	.921	.926	.000	.000	.926		.000	.000	.000	.000	.778		.000	.792	.750	.889	.932		.000	.837	.889	.932	.942	

Peak Hour Analysis From 03:00 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 04:00 PM

Wilson Okamoto Corporation
 1907 S. Beretania Street, Suite 400
 Honolulu, Hawaii

Counted By: D4-5671, D4-5672
 Counter: TC, EV
 Weather: Clear

File Name : KaiOlo AM
 Site Code : 00000003
 Start Date : 8/27/2012
 Page No : 1

Groups Printed- Unshifted

Start Time	Olohana Street Southbound				Westbound				Northbound				Kalakaua Avenue Eastbound								
	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	18	0	0	10	28	0	0	0	0	0	0	0	0	0	0	0	189	0	8	197	225
06:15 AM	26	0	0	10	36	0	0	0	0	0	0	0	0	0	0	0	241	0	9	250	286
06:30 AM	27	0	0	9	36	0	0	0	0	0	0	0	0	0	0	0	279	0	5	284	320
06:45 AM	40	0	0	22	62	0	0	0	0	0	0	0	0	0	0	0	251	0	5	256	318
Total	111	0	0	51	162	0	0	0	0	0	0	0	0	0	0	0	960	0	27	987	1149
07:00 AM	33	0	0	24	57	0	0	0	0	0	0	0	0	0	0	0	268	0	17	285	342
07:15 AM	50	0	0	25	75	0	0	0	0	0	0	0	0	0	0	0	336	0	21	357	432
07:30 AM	62	0	0	32	94	0	0	0	0	0	0	0	0	0	0	0	388	0	29	417	511
07:45 AM	61	0	0	24	85	0	0	0	0	0	0	0	0	0	0	0	448	0	14	462	547
Total	206	0	0	105	311	0	0	0	0	0	0	0	0	0	0	0	1440	0	81	1521	1882
08:00 AM	58	0	0	22	80	0	0	0	0	0	0	0	0	0	0	0	337	0	19	356	486
08:15 AM	40	0	0	45	85	0	0	0	0	0	0	0	0	0	0	0	397	0	12	409	494
08:30 AM	43	0	0	26	69	0	0	0	0	0	0	0	0	0	0	0	400	0	4	404	473
08:45 AM	57	0	0	31	88	0	0	0	0	0	0	0	0	0	0	0	409	0	18	427	515
Total	198	0	0	124	322	0	0	0	0	0	0	0	0	0	0	0	1543	0	53	1596	1918
Grand Total	515	0	0	280	795	0	0	0	0	0	0	0	0	0	0	0	3943	0	161	4104	4899
Approach %	64.8	0	0	35.2	16.2	0	0	0	0	0	0	0	0	0	0	0	96.1	0	3.9	83.8	
Total %	10.5	0	0	5.7		0	0	0	0	0	0	0	0	0	0	0	80.5	0	3.3		

Start Time	Olohana Street Southbound				Westbound				Northbound				Kalakaua Avenue Eastbound								
	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
07:30 AM	62	0	0	0	62	0	0	0	0	0	0	0	0	0	0	0	388	0	0	388	450
07:45 AM	61	0	0	0	61	0	0	0	0	0	0	0	0	0	0	0	446	0	0	446	509
08:00 AM	58	0	0	0	58	0	0	0	0	0	0	0	0	0	0	0	337	0	0	337	395
08:15 AM	40	0	0	0	40	0	0	0	0	0	0	0	0	0	0	0	397	0	0	397	437
Total Volume	221	0	0	0	221	0	0	0	0	0	0	1570	0	0	0	0	1570	0	0	1570	1791
% App. Total	100	0	0	0	891	0	0	0	0	0	0	100	0	0	0	0	876	0	0	876	880
PHF	.891	.000	.000	.000	.891	.000	.000	.000	.000	.000	.000	.876	.000	.000	.000	.000	.876	.000	.000	.876	.880

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

Wilson Okamoto Corporation
 1907 S. Beretania Street, Suite 400
 Honolulu, HI 96826

Counted By: GC, RJ
 Counter: D4-5671, D4-5672
 Weather: Clear

File Name : Kalolo PM
 Site Code : 00000003
 Start Date : 8/27/2012
 Page No : 1

Groups Printed- Unshifted

Start Time	Olohana Street Southbound				Westbound				Northbound				Kalakaua Avenue Eastbound			
	Left	Thru	Right	Peds	App. Total	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total	
03:00 PM	66	0	0	43	66	0	0	0	390	0	23	390	66	456	522	
03:15 PM	60	0	0	38	60	0	0	0	443	0	21	443	59	503	562	
03:30 PM	59	0	0	41	59	0	0	0	475	0	31	475	72	534	606	
03:45 PM	61	0	0	42	61	0	0	0	486	0	25	486	67	547	614	
Total	246	0	0	164	246	0	0	0	1794	0	100	1794	264	2040	2304	
04:00 PM	52	0	0	36	52	0	0	0	458	0	25	458	61	510	571	
04:15 PM	72	0	0	54	72	0	0	0	439	0	28	439	82	511	593	
04:30 PM	66	0	0	27	66	0	0	0	428	0	11	428	38	494	532	
04:45 PM	62	0	0	37	62	0	0	0	422	0	34	422	71	484	555	
Total	252	0	0	154	252	0	0	0	1747	0	98	1747	252	1999	2261	
05:00 PM	52	0	0	33	52	0	0	0	448	0	35	448	68	500	568	
05:15 PM	61	0	0	50	61	0	0	0	458	0	21	458	71	519	590	
05:30 PM	43	0	0	59	43	0	0	0	405	0	21	405	80	448	528	
05:45 PM	44	0	0	38	44	0	0	0	429	0	27	429	65	473	538	
Total	200	0	0	180	200	0	0	0	1740	0	104	1740	284	1940	2224	
Grand Total	898	0	0	498	898	0	0	0	5281	0	302	5281	800	5979	6779	
Approch %	100	0	0	0	100	0	0	0	100	0	0	100	11.8	88.2		
Total %	11.7	0	0	0	11.7	0	0	0	88.3	0	0	88.3				

Start Time	Olohana Street Southbound				Westbound				Northbound				Kalakaua Avenue Eastbound			
	Left	Thru	Right	Peds	App. Total	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total	
03:00 PM to 05:45 PM - Peak 1 of 1	59	0	0	0	59	0	0	0	0	0	0	0	0	475	534	
Peak Hour for Entire Intersection Begins at 03:30 PM	61	0	0	0	61	0	0	0	0	0	0	0	0	486	547	
03:30 PM	52	0	0	0	52	0	0	0	0	0	0	0	0	458	510	
03:45 PM	72	0	0	0	72	0	0	0	0	0	0	0	0	439	511	
04:00 PM	244	0	0	0	244	0	0	0	1858	0	0	1858	0	1858	2102	
04:15 PM	100	0	0	0	100	0	0	0	100	0	0	100	0	100	111	
Total Volume	347	0	0	0	347	0	0	0	956	0	0	956	0	956	1061	
% App. Total																
PHF					.847				.000			.000		.956	.961	

Wilson Okamoto Corporation
 1907 S. Beretania Street, Suite 400
 Honolulu, Hawaii

Counted By: GH
 Counter: D4-3889
 Weather:

File Name : KuhOlo AM
 Site Code : 00000002
 Start Date : 8/27/2012
 Page No : 1

Groups Printed- Unshifted

Start Time	Olohana Street Southbound						Kuhio Avenue Westbound						Olohana Street Northbound						Kuhio Avenue Eastbound												
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		
	App. Total	Peds	App. Total	Peds	App. Total	Peds	App. Total	Peds	App. Total	Peds	App. Total	Peds	App. Total	Peds	App. Total	Peds	App. Total	Peds	App. Total	Peds	App. Total	Peds	App. Total	Peds	App. Total	Peds	App. Total	Peds	App. Total	Peds	
06:00 AM	5	8	5	17	35	12	0	13	0	31	0	0	0	6	0	60	7	11	0	0	68	0	0	0	0	0	0	0	0	0	140
06:15 AM	2	7	4	11	24	16	0	8	0	39	0	0	0	5	0	70	5	6	0	0	81	0	0	0	0	0	0	0	0	149	
06:30 AM	2	14	3	7	28	8	15	6	29	6	0	0	0	12	0	90	3	8	0	0	101	0	0	0	0	0	0	0	0	168	
06:45 AM	6	17	2	4	29	11	15	7	33	0	0	0	0	5	0	65	3	3	0	0	71	0	0	0	0	0	0	0	0	138	
Total	15	46	14	39	114	40	58	34	132	0	0	0	0	28	0	275	18	28	0	0	321	0	0	0	0	0	0	0	0	595	
07:00 AM	13	23	6	17	59	11	13	17	41	0	0	0	0	21	0	97	3	23	0	0	123	0	0	0	0	0	0	0	0	244	
07:15 AM	6	25	4	11	46	24	16	21	61	0	0	0	0	16	0	106	6	15	0	0	127	0	0	0	0	0	0	0	0	250	
07:30 AM	9	34	6	22	71	15	17	29	61	0	0	0	0	25	0	135	5	32	0	0	172	0	0	0	0	0	0	0	0	329	
07:45 AM	5	31	3	18	57	28	19	16	63	0	0	0	0	18	0	133	4	10	0	0	147	0	0	0	0	0	0	0	0	285	
Total	33	113	19	68	233	78	65	83	226	0	0	0	0	80	0	471	18	80	0	0	569	0	0	0	0	0	0	0	0	1108	
08:00 AM	5	28	6	26	65	22	21	33	76	0	0	0	0	33	0	112	8	40	0	0	160	0	0	0	0	0	0	0	0	334	
08:15 AM	1	23	5	9	38	9	18	25	52	0	0	0	0	14	0	163	5	28	0	0	196	0	0	0	0	0	0	0	0	300	
08:30 AM	4	18	3	38	63	15	21	17	53	0	0	0	0	22	0	120	5	23	0	0	148	0	0	0	0	0	0	0	0	286	
08:45 AM	3	24	2	15	44	25	26	26	77	0	0	0	0	28	0	127	8	36	0	0	171	0	0	0	0	0	0	0	0	320	
Total	13	93	16	88	210	71	86	101	258	0	0	0	0	97	0	522	26	127	0	0	675	0	0	0	0	0	0	0	0	1240	
Grand Total	61	252	49	195	557	189	209	218	616	0	0	0	0	205	0	1268	62	235	0	0	1565	0	0	0	0	0	0	0	0	2943	
Approach %	11	45.2	8.8	35	35.4	30.7	33.9	35.4	35.4	0	0	0	0	100	0	81	4	15	0	0	1565	0	0	0	0	0	0	0	0	2943	
Total %	2.1	8.6	1.7	6.6	18.9	6.4	7.1	7.4	20.9	0	0	0	0	7	0	43.1	2.1	8	0	0	53.2	0	0	0	0	0	0	0	0	2943	

Start Time	Olohana Street Southbound						Kuhio Avenue Westbound						Olohana Street Northbound						Kuhio Avenue Eastbound											
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		Left		Thru		Right	
	App. Total	Peds	App. Total	Peds	App. Total	Peds	App. Total	Peds	App. Total	Peds	App. Total	Peds	App. Total	Peds	App. Total	Peds	App. Total	Peds	App. Total	Peds	App. Total	Peds	App. Total	Peds	App. Total	Peds	App. Total	Peds	App. Total	Peds
07:30 AM	9	34	6	34	49	15	17	0	32	0	0	0	0	0	0	135	5	140	0	0	140	0	0	0	0	0	0	0	221	
07:45 AM	5	31	3	31	39	28	19	0	47	0	0	0	0	0	0	133	4	137	0	0	137	0	0	0	0	0	0	0	223	
08:00 AM	5	28	6	28	39	22	21	0	43	0	0	0	0	0	0	112	8	120	0	0	120	0	0	0	0	0	0	0	202	
08:15 AM	1	23	5	23	29	9	18	0	27	0	0	0	0	0	0	163	5	168	0	0	168	0	0	0	0	0	0	0	224	
Total Volume	20	116	20	116	156	74	75	0	149	0	0	0	0	0	0	543	22	565	0	0	565	0	0	0	0	0	0	0	870	
% App. Total	12.8	74.4	12.8	74.4	12.8	49.7	50.3	0	49.7	0	0	0	0	0	0	96.1	3.9	96.1	0	0	96.1	0	0	0	0	0	0	0	870	
PHF	.556	.953	.833	.833	.798	.661	.893	.000	.798	.000	.000	.000	.000	.000	.000	.833	.688	.841	.000	.000	.841	.000	.000	.000	.000	.000	.000	.000	.971	

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

Wilson Okamoto Corporation
 1907 S. Beretania Street, Suite 400
 Honolulu, Hawaii

Counted By: RD, GH
 Counter: D4-3889, D4-3888
 Weather: Clear

File Name : KuhOlo PM
 Site Code : 00000002
 Start Date : 8/27/2012
 Page No : 1

Groups Printed- Unshifted

Start Time	Olohana Street Southbound				Kuhio Avenue Westbound				Olohana Street Northbound				Kuhio Avenue Eastbound								
	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	4	28	3	38	71	26	28	0	9	63	0	0	0	10	10	0	148	9	46	203	347
03:15 PM	5	25	6	28	64	34	36	0	8	78	0	0	0	19	19	0	166	1	29	196	357
03:30 PM	5	31	7	28	71	25	35	0	17	77	0	0	6	6	6	0	169	4	30	203	357
03:45 PM	12	27	4	37	80	16	24	0	20	60	0	0	14	14	14	0	164	8	41	213	367
Total	26	111	20	129	286	101	123	0	54	276	0	0	0	49	49	0	647	22	146	815	1428
04:00 PM	9	23	11	37	80	24	27	0	18	69	0	0	0	38	38	0	166	7	35	210	397
04:15 PM	8	24	2	20	54	39	26	0	10	75	0	0	0	37	37	0	173	11	44	228	394
04:30 PM	2	17	2	30	51	34	30	0	11	75	0	0	0	35	35	0	180	12	39	231	392
04:45 PM	17	30	7	35	89	29	21	0	3	53	0	0	0	28	28	0	189	8	25	222	392
Total	36	94	22	122	274	126	104	0	42	272	0	0	0	138	138	0	710	38	143	891	1575
05:00 PM	6	18	3	38	65	34	28	0	15	77	0	0	0	23	23	0	169	5	51	225	390
05:15 PM	9	17	5	35	66	38	28	0	19	85	0	0	0	38	38	0	212	8	36	256	445
05:30 PM	12	15	6	24	57	23	25	0	14	62	0	0	0	20	20	0	181	3	31	215	354
05:45 PM	8	16	2	26	52	25	35	0	8	68	0	0	0	30	30	0	173	8	6	187	337
Total	35	66	16	123	240	120	116	0	56	292	0	0	0	111	111	0	735	24	124	883	1526
Grand Total	97	271	58	374	800	347	343	0	152	842	0	0	0	288	288	0	2082	84	413	2589	4529
Approach %	12.1	33.9	7.2	46.8	17.7	41.2	40.7	0	18.1	18.6	0	0	0	100	6.6	0	80.8	3.2	16	57.2	
Total %	2.1	6	1.3	8.3	17.7	7.7	7.6	0	3.4	18.6	0	0	0	6.6	6.6	0	46.2	1.9	9.1		

Start Time	Olohana Street Southbound				Kuhio Avenue Westbound				Olohana Street Northbound				Kuhio Avenue Eastbound								
	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
04:30 PM	2	17	2	30	51	34	30	0	11	75	0	0	0	35	35	0	160	12	39	231	392
04:45 PM	17	30	7	35	89	29	21	0	3	53	0	0	0	28	28	0	189	8	25	222	392
05:00 PM	6	18	3	38	65	34	28	0	15	77	0	0	0	23	23	0	169	5	51	225	390
05:15 PM	9	17	5	35	66	38	28	0	19	85	0	0	0	38	38	0	212	8	36	256	445
Total Volume	34	82	17	138	271	135	107	0	48	290	0	0	0	124	124	0	750	33	151	934	1619
% App. Total	12.5	30.3	6.3	50.9	17.7	46.6	36.9	0	16.8	18.6	0	0	0	100	6.6	0	80.3	3.5	16.2		
PHF	.500	.683	.607	.908	.761	.888	.892	.000	.632	.853	.000	.000	.000	.816	.816	.000	.884	.688	.740	.912	.910

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

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.

Level of Service E describes operation with control delay greater than 55 and up to 80 sec per vehicle. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent.

Level of Service F describes operations with control delay in excess of 80 sec per vehicle. This level, considered to be unacceptable to most drivers, often occurs with oversaturation, that is, when arrival flow rates exceed the capacity lane groups. It may also occur at high v/c ratios with many individual cycle failures. Poor progression and long cycle lengths may also contribute significantly to high delay levels.

LEVEL OF SERVICE DEFINITIONS

LEVEL-OF-SERVICE CRITERIA FOR 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

APPENDIX C

**CAPACITY ANALYSIS CALCULATIONS
EXISTING PEAK HOUR TRAFFIC ANALYSIS**

HCM Signalized Intersection Capacity Analysis

3: Saratoga Rd./Kalaimoku St. & Kalakaua Ave.

3/7/2012



Movement	EBL	EBT	EBR	WBE	WBL	WBR	NBL	NET	NBR	SBL	SBT	SBR
Lane Configurations	411B							↑		TT		
Volume (vph)	50	1183	189	0	0	0	0	116	222	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0							5.0		5.0		
Lane Util. Factor	0.86							1.00		0.88		
Flpb, ped/bikes	0.93							1.00		1.00		
Flpb, ped/bikes	1.00							1.00		1.00		
Flt	0.98							1.00		0.85		
Flt Protected	1.00							1.00		1.00		
Satd. Flow (prot)	5795							1863		2787		
Flt Permitted	1.00							1.00		1.00		
Satd. Flow (perm)	5795							1863		2787		
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)	53	1245	199	0	0	0	0	122	234	0	0	0
RTOR Reduction (vph)	0	41	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1456	0	0	0	0	0	122	234	0	0	0
Confl. Peds. (#/hr)	85		255									
Turn Type	Perm	NA						NA	Prot			
Protected Phases	6							4	4			
Permitted Phases	6											
Actuated Green, G (s)	50.0							20.0	20.0			
Effective Green, g (s)	50.0							20.0	20.0			
Actuated g/C Ratio	0.62							0.25	0.25			
Clearance Time (s)	5.0							5.0	5.0			
Lane Grp Cap (vph)	3622							466	697			
v/s Ratio Prot								0.07	0.08			
v/s Ratio Perm	0.25											
v/c Ratio	0.40							0.26	0.34			
Uniform Delay, d1	7.5							24.1	24.6			
Progression Factor	1.00							1.00	1.00			
Incremental Delay, d2	0.3							1.4	1.3			
Delay (s)	7.8							25.4	25.9			
Level of Service	A							C	C			
Approach Delay (s)	7.8		0.0					25.7			0.0	
Approach LOS	A		A					C			A	

Intersection Summary			
HCM Average Control Delay	11.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	38.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

3: Saratoga Rd./Saratoga St. & Kalakaua Ave.

3/7/2012



Approach	SBL	SE	SEB	WSB	WBL	WBR	NBL	NBL	NBR	SBL	SBL	SBR	
Lane Configurations		← ← ←						↑	↑↑				
Volume (vph)	66	1650	188	0	0	0	0	281	373	0	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		5.0						5.0	5.0				
Lane Util. Factor		0.86						1.00	0.88				
Flpb, ped/bikes		0.95						1.00	1.00				
Flpb, ped/bikes		0.99						1.00	1.00				
Frt		0.99						1.00	0.85				
Flt Protected		1.00						1.00	1.00				
Satd. Flow (prot)		5912						1863	2787				
Flt Permitted		1.00						1.00	1.00				
Satd. Flow (perm)		5912						1863	2787				
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	
Adj. Flow (vph)	67	1667	190	0	0	0	0	284	377	0	0	0	
RTOR Reduction (vph)	0	29	0	0	0	0	0	0	0	0	0	0	
Lane Group Flow (vph)	0	1895	0	0	0	0	0	284	377	0	0	0	
Confl. Peds. (#/hr)	257	222											
Turn Type	Perm	NA						NA	Perm				
Protected Phases		6						4					
Permitted Phases	6								4				
Actuated Green, G (s)		50.0						20.0	20.0				
Effective Green, g (s)		50.0						20.0	20.0				
Actuated g/C Ratio		0.62						0.25	0.25				
Clearance Time (s)		5.0						5.0	5.0				
Lane Grp Cap (vph)		3695						466	697				
v/s Ratio Prot								0.15					
v/s Ratio Perm		0.32							0.14				
v/c Ratio		0.51						0.61	0.54				
Uniform Delay, d1		8.3						26.5	26.0				
Progression Factor		1.00						1.00	1.00				
Incremental Delay, d2		0.5						5.8	3.0				
Delay (s)		8.8						32.4	29.0				
Level of Service		A						C	C				
Approach Delay (s)		8.8						0.0	30.5		0.0		
Approach LOS		A						A	C		A		

Intersection Summary			
HCM Average Control Delay	14.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	52.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
6: Kalaimoku St. & Kuhio Ave.

3/7/2012



Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Lane Configurations		↑↑			↑↑			↑↑				
Volume (vph)	55	444	0	0	141	42	17	99	45	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			0.95				
Frpb, ped/bikes		1.00			0.96			0.99				
Flpb, ped/bikes		0.99			1.00			0.99				
Frt		1.00			0.97			0.96				
Flt Protected		0.99			1.00			0.99				
Satd. Flow (prot)		3480			3268			3309				
Flt Permitted		0.90			1.00			0.99				
Satd. Flow (perm)		3133			3268			3309				
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	63	510	0	0	162	48	20	114	52	0	0	0
RTOR Reduction (vph)	0	0	0	0	30	0	0	33	0	0	0	0
Lane Group Flow (vph)	0	573	0	0	180	0	0	154	0	0	0	0
Confl. Peds. (#/hr)	122					122	38		23			
Turn Type	pm+pt	NA			NA		Perm	NA				
Protected Phases	1	6			2			4				
Permitted Phases	6						4					
Actuated Green, G (s)		40.0			30.0			30.0				
Effective Green, g (s)		40.0			30.0			30.0				
Actuated g/C Ratio		0.50			0.38			0.38				
Clearance Time (s)		5.0			5.0			5.0				
Lane Grp Cap (vph)		1588			1226			1241				
v/s Ratio Prot		c0.02			0.06							
v/s Ratio Perm		c0.16						0.05				
v/c Ratio		0.36			0.15			0.12				
Uniform Delay, d1		12.2			16.5			16.4				
Progression Factor		1.00			0.70			2.05				
Incremental Delay, d2		0.6			0.3			0.2				
Delay (s)		12.8			11.8			33.8				
Level of Service		B			B			C				
Approach Delay (s)		12.8			11.8			33.8				0.0
Approach LOS		B			B			C				A

Intersection Summary			
HCM Average Control Delay	16.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	53.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 6: Saratoga St./Kalaimoku St. & Kuhio Ave.

3/7/2012



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑			↑↑				
Volume (vph)	58	750	0	0	217	57	26	263	72	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			0.95				
Flpb, ped/bikes		1.00			0.94			0.98				
Flpb, ped/bikes		0.99			1.00			0.99				
Frt		1.00			0.97			0.97				
Flt Protected		1.00			1.00			1.00				
Satd. Flow (prot)		3491			3227			3339				
Flt Permitted		0.90			1.00			1.00				
Satd. Flow (perm)		3166			3227			3339				
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)	62	798	0	0	231	61	28	280	77	0	0	0
RTOR Reduction (vph)	0	0	0	0	26	0	0	25	0	0	0	0
Lane Group Flow (vph)	0	860		0	266		0	360		0	0	0
Confl. Peds. (#/hr)	163					163	55		45			
Turn Type	pm+pt	NA			NA			Perm		NA		
Protected Phases	1	6			2			4				
Permitted Phases	6						4					
Actuated Green, G (s)		55.0			45.0			25.0				
Effective Green, g (s)		55.0			45.0			25.0				
Actuated g/C Ratio		0.61			0.50			0.28				
Clearance Time (s)		5.0			5.0			5.0				
Lane Grp Cap (vph)		1953			1614			928				
v/s Ratio Prot		0.02			0.08							
v/s Ratio Perm		0.24						0.11				
v/c Ratio		0.44			0.16			0.39				
Uniform Delay, d1		9.3			12.3			26.3				
Progression Factor		1.00			0.54			1.00				
Incremental Delay, d2		0.7			0.2			1.2				
Delay (s)		10.0			6.9			27.5				
Level of Service		B			A			C				
Approach Delay (s)		10.0			6.9			27.5			0.0	
Approach LOS		B			A			C			A	
Intersection Summary												
HCM Average Control Delay		13.8			HCM Level of Service			B				
HCM Volume to Capacity ratio		0.42										
Actuated Cycle Length (s)		90.0			Sum of lost time (s)			10.0				
Intersection Capacity Utilization		61.6%			ICU Level of Service			B				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

5: Kalaimoku St. & Ala Wai Blvd.

3/7/2012



Movement	EBL	EBR	WBL	WBR	NBL	NBR
Lane Configurations				↑↑↑	↑↑	
Volume (vph)	0	0	0	2252	208	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	0	0	2448	226	0
RTOR Reduction (vph)	0	0	0	0	7	0
Lane Group Flow (vph)	0	0	0	2448	219	0
Turn Type				NA	NA	
Protected Phases				2	4	
Permitted Phases						
Actuated Green, G (s)				50.0	20.0	
Effective Green, g (s)				50.0	20.0	
Actuated g/C Ratio				0.62	0.25	
Clearance Time (s)				5.0	5.0	
Lane Grp Cap (vph)				3178	858	
v/s Ratio Prot				c0.48	c0.06	
v/s Ratio Perm						
v/c Ratio				0.77	0.26	
Uniform Delay, d1				10.8	24.0	
Progression Factor				0.68	1.11	
Incremental Delay, d2				1.3	0.7	
Delay (s)				8.6	27.4	
Level of Service				A	C	
Approach Delay (s)	0.0			8.6	27.4	
Approach LOS	A			A	C	

Intersection Summary			
HCM Average Control Delay	10.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	57.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

5: Kalaimoku St. & Ala Wai Blvd.

3/7/2012



Movement	DBT	EBE	WBL	WBRT	NBL	NBR
Lane Configurations				↑↑↑	↑↑	
Volume (vph)	0	0	0	2145	352	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	
Flt Protected				1.00	1.00	
Flt Permitted				1.00	0.95	
Satd. Flow (prot)				5085	3433	
Satd. Flow (perm)				5085	3433	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	2383	391	0
RTOR Reduction (vph)	0	0	0	0	12	0
Lane Group Flow (vph)	0	0	0	2383	379	0
Turn Type				NA	NA	
Protected Phases				2	4	
Permitted Phases						
Actuated Green, G (s)				60.0	20.0	
Effective Green, g (s)				60.0	20.0	
Actuated g/C Ratio				0.67	0.22	
Clearance Time (s)				5.0	5.0	
Lane Grp Cap (vph)				3390	763	
v/s Ratio Prot				c0.47	c0.11	
v/s Ratio Perm						
v/c Ratio				0.70	0.50	
Uniform Delay, d1				9.4	30.6	
Progression Factor				0.65	0.54	
Incremental Delay, d2				1.1	2.2	
Delay (s)				7.1	18.7	
Level of Service				A	B	
Approach Delay (s)	0.0			7.1	18.7	
Approach LOS	A			A	B	

Intersection Summary			
HCM Average Control Delay	8.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	59.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

12: Kuhio Ave. & Launiu St.

3/7/2012



Movement	EBL	EBT	WBT	WBL	SEB	SEB
Lane Configurations		↑↑	↑↑		↵	↵
Volume (vph)	0	493	145	0	79	44
Ideal Flow (vphpl)	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
Frpb, ped/bikes		1.00	1.00		1.00	0.94
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3539	3539		1770	1492
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3539	3539		1770	1492
Peak-hour factor, PHF	0.79	0.79	0.79	0.79	0.79	0.79
Adj. Flow (vph)	0	624	184	0	100	56
RTOR Reduction (vph)	0	0	0	0	0	42
Lane Group Flow (vph)	0	624	184	0	100	14
Confl. Peds. (#/hr)					22	31
Turn Type		NA	NA		NA	Perm
Protected Phases		6	2		8	
Permitted Phases						8
Actuated Green, G (s)		50.0	50.0		20.0	20.0
Effective Green, g (s)		50.0	50.0		20.0	20.0
Actuated g/C Ratio		0.62	0.62		0.25	0.25
Clearance Time (s)		5.0	5.0		5.0	5.0
Lane Grp Cap (vph)		2212	2212		443	373
v/s Ratio Prot		0.18	0.05		0.06	
v/s Ratio Perm						0.01
v/c Ratio		0.28	0.08		0.23	0.04
Uniform Delay, d1		6.8	5.9		23.8	22.7
Progression Factor		0.47	0.44		1.00	1.00
Incremental Delay, d2		0.3	0.1		1.2	0.2
Delay (s)		3.6	2.7		25.0	22.9
Level of Service		A	A		C	C
Approach Delay (s)		3.6	2.7		24.3	
Approach LOS		A	A		C	
Intersection Summary						
HCM Average Control Delay			6.7		HCM Level of Service	A
HCM Volume to Capacity ratio			0.27			
Actuated Cycle Length (s)			80.0		Sum of lost time (s)	10.0
Intersection Capacity Utilization			35.3%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

HCM Signalized Intersection Capacity Analysis
 12: Kuhio Ave. & Launiu St.

3/7/2012



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑	↑
Volume (vph)	0	812	238	0	71	36
Ideal Flow (vphpl)	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
Frbp, ped/bikes		1.00	1.00		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3539	3539		1770	1583
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3539	3539		1770	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	855	251	0	75	38
RTOR Reduction (vph)	0	0	0	0	0	30
Lane Group Flow (vph)	0	855	251	0	75	8
Confl. Peds. (#/hr)					57	
Turn Type		NA	NA		NA	Perm
Protected Phases		6	2		8	
Permitted Phases						8
Actuated Green, G (s)		60.0	60.0		20.0	20.0
Effective Green, g (s)		60.0	60.0		20.0	20.0
Actuated g/C Ratio		0.67	0.67		0.22	0.22
Clearance Time (s)		5.0	5.0		5.0	5.0
Lane Grp Cap (vph)		2359	2359		393	352
v/s Ratio Prot		c0.24	0.07		c0.04	
v/s Ratio Perm						0.01
v/c Ratio		0.36	0.11		0.19	0.02
Uniform Delay, d1		6.6	5.4		28.4	27.4
Progression Factor		0.51	0.66		1.00	1.00
Incremental Delay, d2		0.4	0.1		1.1	0.1
Delay (s)		3.7	3.6		29.5	27.5
Level of Service		A	A		C	C
Approach Delay (s)		3.7	3.6		28.8	
Approach LOS		A	A		C	

Intersection Summary			
HCM Average Control Delay	6.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	34.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
 13: Kaiolu St. & Kuhio Ave.

3/7/2012



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SEB	SEB	SEB	
Lane Configurations	←→			←→			↑						
Volume (veh/h)	50	519	15	7	145	19	0	0	9	0	0	0	
Sign Control	Free			Free			Stop			Stop			
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)	56	577	17	8	161	21	0	0	10	0	0	0	
Pedestrians	17			7			65			181			
Lane Width (ft)	12.0			12.0			12.0			0.0			
Walking Speed (ft/s)	4.0			4.0			4.0			4.0			
Percent Blockage	1			1			5			0			
Right turn flare (veh)													
Median type	None			None									
Median storage (veh)													
Upstream signal (ft)	255			313									
pX, platoon unblocked				0.93			0.93			0.93			
vC, conflicting volume	363				658	874			1140	369	785	1138	289
vC1, stage 1 conf vol													
vC2, stage 2 conf vol													
vCu, unblocked vol	363				493	724			1009	183	629	1006	289
tC, single (s)	4.1				4.1	7.5			6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)													
tF (s)	2.2				2.2	3.5			4.0	3.3	3.5	4.0	3.3
p0 queue free %	95				99	100			100	99	100	100	100
cM capacity (veh/h)	1192				942	251			200	727	309	200	697

Direction/Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	344	305	88	102	10
Volume Left	56	0	8	0	0
Volume Right	0	17	0	21	10
cSH	1192	1700	942	1700	727
Volume to Capacity	0.05	0.18	0.01	0.06	0.01
Queue Length 95th (ft)	4	0	1	0	1
Control Delay (s)	1.7	0.0	0.8	0.0	10.0
Lane LOS	A		A		B
Approach Delay (s)	0.9		0.4		10.0
Approach LOS					B

Intersection Summary	
Average Delay	0.9
Intersection Capacity Utilization	36.4%
ICU Level of Service	A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis

13: Kaiolu St. & Kuhio Ave.

3/7/2012



Movement	EBE	EBT	EBP	WBL	WBT	WBR	NBL	NBT	NBP	SBL	SBT	SBR
Lane Configurations	↔			↔			↑					
Volume (veh/h)	84	778	16	6	245	41	0	0	4	0	0	0
Sign Control	Free			Free			Stop			Stop		
Grade	0%			0%			0%			0%		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	87	802	16	6	253	42	0	0	4	0	0	0
Pedestrians	82			20			79			211		
Lane Width (ft)	12.0			12.0			12.0			0.0		
Walking Speed (ft/s)	4.0			4.0			4.0			4.0		
Percent Blockage	7			2			7			0		
Right turn flare (veh)												
Median type	None			None								
Median storage veh												
Upstream signal (ft)	255			313								
pX, platoon unblocked	0.99			0.90			0.90	0.90	0.90	0.90	0.90	0.99
vC, conflicting volume	506			898			1283	1581	508	1095	1568	440
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	487			654			1054	1385	220	846	1371	421
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	92			99			100	100	99	100	100	100
cM capacity (veh/h)	1064			778			125	109	646	199	111	537

Direction Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	488	418	132	169	4
Volume Left	87	0	6	0	0
Volume Right	0	16	0	42	4
cSH	1064	1700	778	1700	646
Volume to Capacity	0.08	0.25	0.01	0.10	0.01
Queue Length 95th (ft)	7	0	1	0	0
Control Delay (s)	2.3	0.0	0.5	0.0	10.6
Lane LOS	A		A		B
Approach Delay (s)	1.2		0.2		10.6
Approach LOS					B

Intersection Summary	
Average Delay	1.0
Intersection Capacity Utilization	44.5%
ICU Level of Service	A
Analysis Period (min)	15

HCM Signalized Intersection Capacity Analysis

17: Lewers St. & Kuhio Ave.

3/7/2012



Movement	EB	EB	EB	WBL	WCB	WPR	NBL	NB	NBF	SB	SB	SB
Lane Configurations	↖	↖↖			↖↖			↖↖				
Volume (vph)	49	486	0	0	165	42	9	83	37	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	1.00	0.95			0.95			0.95				
Flpb, ped/bikes	1.00	1.00			0.95			0.95				
Flpb, ped/bikes	0.93	1.00			1.00			0.99				
Flt	1.00	1.00			0.97			0.96				
Flt Protected	0.95	1.00			1.00			1.00				
Satd. Flow (prot)	1637	3539			3259			3160				
Flt Permitted	0.53	1.00			1.00			1.00				
Satd. Flow (perm)	922	3539			3259			3160				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	53	528	0	0	179	46	10	90	40	0	0	0
RTOR Reduction (vph)	0	0	0	0	26	0	0	28	0	0	0	0
Lane Group Flow (vph)	53	528	0	0	199	0	0	113	0	0	0	0
Confl. Peds. (#/hr)	158					158	132		112			
Turn Type	pm+pt	NA			NA		Perm	NA				
Protected Phases	1	6			2			4				
Permitted Phases	6						4					
Actuated Green, G (s)	45.0	45.0			35.0			25.0				
Effective Green, g (s)	45.0	45.0			35.0			25.0				
Actuated g/C Ratio	0.56	0.56			0.44			0.31				
Clearance Time (s)	5.0	5.0			5.0			5.0				
Lane Grp Cap (vph)	563	1991			1426			988				
v/s Ratio Prot	0.01	c0.15			0.06							
v/s Ratio Perm	0.05							0.04				
v/c Ratio	0.09	0.27			0.14			0.11				
Uniform Delay, d1	8.1	9.0			13.5			19.6				
Progression Factor	0.63	0.59			1.00			1.28				
Incremental Delay, d2	0.3	0.3			0.2			0.2				
Delay (s)	5.4	5.7			13.7			25.3				
Level of Service	A	A			B			C				
Approach Delay (s)		5.6			13.7			25.3			0.0	
Approach LOS		A			B			C			A	
Intersection Summary												
HCM Average Control Delay	10.5		HCM Level of Service				B					
HCM Volume to Capacity ratio	0.21											
Actuated Cycle Length (s)	80.0		Sum of lost time (s)				10.0					
Intersection Capacity Utilization	42.5%		ICU Level of Service				A					
Analysis Period (min)	15											
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

17: Lewers St. & Kuhio Ave.

3/7/2012



Movement	EB	EB	EBR	WB	WB	WB	NB	NB	NB	SBL	SE	SB
Lane Configurations	↖	↖↗			↖↗			↖↗				
Volume (vph)	127	673	0	0	248	57	43	239	44	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	1.00	0.95			0.95			0.95				
Flpb, ped/bikes	1.00	1.00			0.94			0.96				
Flpb, ped/bikes	0.92	1.00			1.00			0.96				
Frt	1.00	1.00			0.97			0.98				
Flt Protected	0.95	1.00			1.00			0.99				
Satd. Flow (prot)	1623	3539			3223			3157				
Flt Permitted	0.50	1.00			1.00			0.99				
Satd. Flow (perm)	848	3539			3223			3157				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	138	732	0	0	270	62	47	260	48	0	0	0
RTOR Reduction (vph)	0	0	0	0	22	0	0	14	0	0	0	0
Lane Group Flow (vph)	138	732	0	0	310	0	0	341	0	0	0	0
Confl. Peds. (#/hr)	273					273	216		234			
Turn Type	pm+pt	NA			NA		Perm	NA				
Protected Phases	1	6			2			4				
Permitted Phases	6						4					
Actuated Green, G (s)	55.0	55.0			45.0			25.0				
Effective Green, g (s)	55.0	55.0			45.0			25.0				
Actuated g/C Ratio	0.61	0.61			0.50			0.28				
Clearance Time (s)	5.0	5.0			5.0			5.0				
Lane Grp Cap (vph)	561	2163			1612			877				
v/s Ratio Prot	0.01	0.21			0.10							
v/s Ratio Perm	0.14							0.11				
v/c Ratio	0.25	0.34			0.19			0.39				
Uniform Delay, d1	7.6	8.6			12.4			26.3				
Progression Factor	0.70	0.67			1.00			1.00				
Incremental Delay, d2	1.0	0.4			0.3			1.3				
Delay (s)	6.4	6.1			12.7			27.6				
Level of Service	A	A			B			C				
Approach Delay (s)		6.2			12.7			27.6			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM Average Control Delay	12.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	46.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 16: Lewers St. & Kalakaua Ave.

3/7/2012



Movement	EB	EBT	EBB	WB	WB	WBR	NDL	NBT	NBR	SB	SB	SB	
Lane Configurations	← ← ←							↑	↑				
Volume (vph)	115	1093	207	0	0	0	0	54	12	0	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	5.0							5.0	5.0				
Lane Util. Factor	0.86							1.00	1.00				
Frbp, ped/bikes	0.92							1.00	0.77				
Ftpb, ped/bikes	0.98							1.00	1.00				
Frt	0.98							1.00	0.85				
Flt Protected	1.00							1.00	1.00				
Satd. Flow (prot)	5640							1863	1213				
Flt Permitted	1.00							1.00	1.00				
Satd. Flow (perm)	5640							1863	1213				
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	
Adj. Flow (vph)	126	1201	227	0	0	0	0	59	13	0	0	0	
RTOR Reduction (vph)	0	56	0	0	0	0	0	0	9	0	0	0	
Lane Group Flow (vph)	0	1498	0	0	0	0	0	59	4	0	0	0	
Confl. Peds. (#/hr)	154	267		151									
Turn Type	Perm	NA							NA	Perm			
Protected Phases	6							4					
Permitted Phases	6							4					
Actuated Green, G (s)	45.0							25.0	25.0				
Effective Green, g (s)	45.0							25.0	25.0				
Actuated g/C Ratio	0.56							0.31	0.31				
Clearance Time (s)	5.0							5.0	5.0				
Lane Grp Cap (vph)	3173							582	379				
v/s Ratio Prot								0.03					
v/s Ratio Perm	0.27							0.00					
v/c Ratio	0.47							0.10	0.01				
Uniform Delay, d1	10.4							19.5	19.0				
Progression Factor	0.76							1.00	1.00				
Incremental Delay, d2	0.5							0.3	0.1				
Delay (s)	8.4							19.9	19.0				
Level of Service	A							B	B				
Approach Delay (s)	8.4							0.0	19.7	0.0			
Approach LOS	A							A	B	A			

Intersection Summary			
HCM Average Control Delay	8.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	43.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 16: Lewers St. & Kalakaua Ave.

3/7/2012



Movement	SE	EB	EB	WB	WB	WB	NE	NE	NE	SE	SB	SB
Lane Configurations	TTL						↑			↑		
Volume (vph)	150	1549	177	0	0	0	0	178	32	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0						5.0			5.0		
Lane Util. Factor	0.86						1.00			1.00		
Frpb, ped/bikes	0.92						1.00			0.61		
Flpb, ped/bikes	0.96						1.00			1.00		
Frt	0.99						1.00			0.85		
Flt Protected	1.00						1.00			1.00		
Satd. Flow (prot)	5555						1863			967		
Flt Permitted	1.00						1.00			1.00		
Satd. Flow (perm)	5555						1863			967		
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	161	1666	190	0	0	0	0	191	34	0	0	0
RTOR Reduction (vph)	0	39	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1979	0	0	0	0	0	191	34	0	0	0
Confl. Peds. (#/hr)	909	880								483		
Turn Type	Perm	NA							NA	Perm		
Protected Phases	6								4			
Permitted Phases	6									4		
Actuated Green, G (s)	45.0								25.0	25.0		
Effective Green, g (s)	45.0								25.0	25.0		
Actuated g/C Ratio	0.56								0.31	0.31		
Clearance Time (s)	5.0								5.0	5.0		
Lane Grp Cap (vph)	3125								582	302		
v/s Ratio Prot									0.10			
v/s Ratio Perm	0.36										0.04	
v/C Ratio	0.63								0.33	0.11		
Uniform Delay, d1	11.9								21.1	19.6		
Progression Factor	0.68								1.00	1.00		
Incremental Delay, d2	0.9								1.5	0.8		
Delay (s)	9.0								22.6	20.4		
Level of Service	A								C	C		
Approach Delay (s)	9.0		0.0				22.2				0.0	
Approach LOS	A		A				C				A	

Intersection Summary			
HCM Average Control Delay	10.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	50.5%	ICU Level of Service	A
Analysis Period (min)	15		
Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

18: Lewers St. & Ala Wai Blvd.

3/7/2012



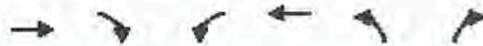
Movement	EBT	EBB	WBL	WBT	NBL	NBF
Lane Configurations				↑↑↑	↑↑	
Volume (vph)	0	0	0	2272	178	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)				5.0	5.0	
Lane Util. Factor				0.91	0.97	
Flt				1.00	1.00	
Flt Protected				1.00	0.95	
Satd. Flow (prot)				5085	3433	
Flt Permitted				1.00	0.95	
Satd. Flow (perm)				5085	3433	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	0	0	0	2553	200	0
RTOR Reduction (vph)	0	0	0	0	9	0
Lane Group Flow (vph)	0	0	0	2553	191	0
Turn Type				NA	NA	
Protected Phases				2	4	
Permitted Phases						
Actuated Green, G (s)				54.0	16.0	
Effective Green, g (s)				54.0	16.0	
Actuated g/C Ratio				0.68	0.20	
Clearance Time (s)				5.0	5.0	
Lane Grp Cap. (vph)				3432	687	
v/s Ratio Prot				c0.50	c0.06	
v/s Ratio Perm						
v/c Ratio				0.74	0.28	
Uniform Delay, d1				8.5	27.1	
Progression Factor				1.00	0.85	
Incremental Delay, d2				1.5	1.0	
Delay (s)				10.0	24.0	
Level of Service				A	C	
Approach Delay (s)	0.0			10.0	24.0	
Approach LOS	A			A	C	

Intersection Summary			
HCM Average Control Delay	11.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	57.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 18: Lewers St. & Ala Wai Blvd.

3/7/2012



Movement	EBT	EBP	WBT	WBP	NB	SB
Lane Configurations				↑↑↑	↑↑	
Volume (vph)	0	0	0	1849	343	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	
Flt Protected				1.00	1.00	
Flt Permitted				1.00	0.95	
Satd. Flow (prot)				5085	3433	
Satd. Flow (perm)				5085	3433	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	0	0	1967	365	0
RTOR Reduction (vph)	0	0	0	0	30	0
Lane Group Flow (vph)	0	0	0	1967	335	0
Turn Type				NA	NA	
Protected Phases				2	4	
Permitted Phases						
Actuated Green, G (s)				60.0	20.0	
Effective Green, g (s)				60.0	20.0	
Actuated g/C Ratio				0.67	0.22	
Clearance Time (s)				5.0	5.0	
Lane Grp Cap (vph)				3390	763	
v/s Ratio Prot				c0.39	c0.10	
v/s Ratio Perm						
v/c Ratio				0.58	0.44	
Uniform Delay, d1				8.2	30.2	
Progression Factor				1.00	0.64	
Incremental Delay, d2				0.7	1.8	
Delay (s)				8.9	21.0	
Level of Service				A	C	
Approach Delay (s)	0.0			8.9	21.0	
Approach LOS	A			A	C	

Intersection Summary			
HCM Average Control Delay	10.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	53.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 11: Kalakaua Ave. & Olohana

9/10/2012



Movement	EBL	EBT	WBT	WBR	SE	SBR
Lane Configurations						
Volume (vph)	0	1191	0	0	231	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	
Lane Util. Factor		0.86			0.97	
Frt		1.00			1.00	
Flt Protected		1.00			0.95	
Satd. Flow (prot)		6408			3433	
Flt Permitted		1.00			0.95	
Satd. Flow (perm)		6408			3433	
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	0	1385	0	0	269	0
RTOR Reduction (vph)	0	0	0	0	53	0
Lane Group Flow (vph)	0	1385	0	0	216	0
Turn Type		NA			NA	
Protected Phases		4			6	
Permitted Phases						
Actuated Green, G (s)		45.0			25.0	
Effective Green, g (s)		45.0			25.0	
Actuated g/C Ratio		0.56			0.31	
Clearance Time (s)		5.0			5.0	
Lane Grp Cap (vph)		3605			1073	
v/s Ratio Prot		c0.22			c0.06	
v/s Ratio Perm						
v/c Ratio		0.38			0.20	
Uniform Delay, d1		9.8			20.2	
Progression Factor		1.00			0.99	
Incremental Delay, d2		0.3			0.4	
Delay (s)		10.1			20.4	
Level of Service		B			C	
Approach Delay (s)		10.1	0.0		20.4	
Approach LOS		B	A		C	
Intersection Summary						
HCM Average Control Delay		11.8		HCM Level of Service		B
HCM Volume to Capacity ratio		0.32				
Actuated Cycle Length (s)		80.0		Sum of lost time (s)		10.0
Intersection Capacity Utilization		32.2%		ICU Level of Service		A
Analysis Period (min)		15				

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

11: Kalakaua Ave. & Olohana

9/10/2012



Movement	EBL	EBT	WBT	WBP	SBL	SBR
Lane Configurations						
Volume (vph)	0	1653	0	0	251	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	
Lane Util. Factor		0.86			0.97	
Frt		1.00			1.00	
Flt Protected		1.00			0.95	
Satd. Flow (prot)		6408			3433	
Flt Permitted		1.00			0.95	
Satd. Flow (perm)		6408			3433	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	1759	0	0	267	0
RTOR Reduction (vph)	0	0	0	0	10	0
Lane Group Flow (vph)	0	1759	0	0	257	0
Turn Type		NA			NA	
Protected Phases		4			6	
Permitted Phases						
Actuated Green, G (s)		45.0			35.0	
Effective Green, g (s)		45.0			35.0	
Actuated g/C Ratio		0.50			0.39	
Clearance Time (s)		5.0			5.0	
Lane Grp Cap (vph)		3204			1335	
v/s Ratio Prot		c0.27			c0.07	
v/s Ratio Perm						
v/c Ratio		0.55			0.19	
Uniform Delay, d1		15.5			18.2	
Progression Factor		1.00			1.48	
Incremental Delay, d2		0.7			0.3	
Delay (s)		16.2			27.3	
Level of Service		B			C	
Approach Delay (s)		16.2	0.0		27.3	
Approach LOS		B	A		C	
Intersection Summary						
HCM Average Control Delay			17.7		HCM Level of Service	B
HCM Volume to Capacity ratio			0.39			
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						

HCM Signalized Intersection Capacity Analysis

21: Olohana & Kuhio Ave.

9/10/2012



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↖	↑						↑↑	
Volume (vph)	0	486	23	89	73	0	0	0	0	25	118	19
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		1.00	1.00						0.95	
Frbp, ped/bikes		0.99		1.00	1.00						0.97	
Fipb, ped/bikes		1.00		0.99	1.00						0.98	
Frt		0.99		1.00	1.00						0.98	
Flt Protected		1.00		0.95	1.00						0.99	
Satd. Flow (prot)		3491		1746	1863						3272	
Flt Permitted		1.00		0.33	1.00						0.99	
Satd. Flow (perm)		3491		598	1863						3272	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	523	25	96	78	0	0	0	0	27	127	20
RTOR Reduction (vph)	0	4	0	0	0	0	0	0	0	0	13	0
Lane Group Flow (vph)	0	544	0	96	78	0	0	0	0	0	162	0
Confl. Peds. (#/hr)			92	92						99		97
Turn Type		NA		pm+pt	NA					Perm	NA	
Protected Phases		4		3	8						6	
Permitted Phases				8						6		
Actuated Green, G (s)		30.0		40.0	40.0						30.0	
Effective Green, g (s)		30.0		40.0	40.0						30.0	
Actuated g/C Ratio		0.38		0.50	0.50						0.38	
Clearance Time (s)		5.0		5.0	5.0						5.0	
Lane Grp Cap (vph)		1309		371	932						1227	
v/s Ratio Prot		c0.16		c0.02	0.04							
v/s Ratio Perm				0.11							0.05	
v/c Ratio		0.42		0.26	0.08						0.13	
Uniform Delay, d1		18.5		11.2	10.4						16.4	
Progression Factor		1.00		1.53	1.50						1.00	
Incremental Delay, d2		1.0		1.7	0.2						0.2	
Delay (s)		19.5		18.9	15.9						16.7	
Level of Service		B		B	B						B	
Approach Delay (s)		19.5			17.5		0.0				16.7	
Approach LOS		B			B		A				B	

Intersection Summary			
HCM Average Control Delay	18.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	45.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

21: Olohana & Kuhio Ave.

9/10/2012



Movement	EBL	EBT	EBF	WBL	WBT	WBF	NBL	NBT	NBF	SBL	SBT	SBR
Lane Configurations		↑↑		↑	↑						↑↑	
Volume (vph)	0	777	38	113	107	0	0	0	0	31	91	19
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		1.00	1.00						0.95	
Flpb, ped/bikes		0.99		1.00	1.00						0.98	
Flpb, ped/bikes		1.00		0.99	1.00						0.98	
Flt		0.99		1.00	1.00						0.98	
Flt Protected		1.00		0.95	1.00						0.99	
Satd. Flow (prot)		3479		1757	1863						3300	
Flt Permitted		1.00		0.24	1.00						0.99	
Satd. Flow (perm)		3479		445	1863						3300	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	793	39	115	109	0	0	0	0	32	93	19
RTOR Reduction (vph)	0	4	0	0	0	0	0	0	0	0	13	0
Lane Group Flow (vph)	0	828	0	115	109	0	0	0	0	0	131	0
Confl. Peds. (#/hr)			124	124						59		38
Turn Type		NA		pm-pt	NA					Perm	NA	
Protected Phases		4		3	8						6	
Permitted Phases				8						6		
Actuated Green, G (s)		45.0		55.0	55.0						25.0	
Effective Green, g (s)		45.0		55.0	55.0						25.0	
Actuated g/C Ratio		0.50		0.61	0.61						0.28	
Clearance Time (s)		5.0		5.0	5.0						5.0	
Lane Grp Cap (vph)		1740		345	1139						917	
v/s Ratio Prot		c0.24		c0.02	0.06							
v/s Ratio Perm				0.19							0.04	
v/c Ratio		0.48		0.33	0.10						0.14	
Uniform Delay, d1		14.8		8.7	7.2						24.4	
Progression Factor		1.00		1.31	1.23						1.00	
Incremental Delay, d2		0.9		2.6	0.2						0.3	
Delay (s)		15.7		14.0	9.0						24.8	
Level of Service		B		B	A						C	
Approach Delay (s)		15.7			11.6			0.0			24.8	
Approach LOS		B			B			A			C	
Intersection Summary												
HCM Average Control Delay			16.0			HCM Level of Service					B	
HCM Volume to Capacity ratio			0.36									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)				15.0		
Intersection Capacity Utilization			55.1%			ICU Level of Service					B	
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
 13: Ala Moana/Niu & Kalakaua

9/10/2012



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	TTT			↑						TTT		
Volume (vph)	0	1325	203	0	5	0	0	0	0	57	506	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0			5.0						5.0		
Lane Util. Factor	0.86			1.00						0.91		
Frbp, ped/bikes	0.96			1.00						1.00		
Flpb, ped/bikes	1.00			1.00						1.00		
Frt	0.98			1.00						1.00		
Flt Protected	1.00			1.00						0.99		
Satd. Flow (prot)	6019			1863						5060		
Flt Permitted	1.00			1.00						0.99		
Satd. Flow (perm)	6019			1863						5060		
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)	0	1506	231	0	6	0	0	0	0	65	575	0
RTOR Reduction (vph)	0	35	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1702	0	0	6	0	0	0	0	0	640	0
Confl. Peds. (#/hr)	224											
Turn Type	NA			NA						Split		NA
Protected Phases	2			6						8		8
Permitted Phases												
Actuated Green, G (s)	45.0			45.0								25.0
Effective Green, g (s)	45.0			45.0								25.0
Actuated g/C Ratio	0.56			0.56								0.31
Clearance Time (s)	5.0			5.0								5.0
Lane Grp Cap (vph)	3386			1048								1581
v/s Ratio Prot	0.28			0.00								0.13
v/s Ratio Perm												
v/c Ratio	0.50			0.01								0.40
Uniform Delay, d1	10.7			7.7								21.6
Progression Factor	1.00			0.42								1.00
Incremental Delay, d2	0.5			0.0								0.8
Delay (s)	11.2			3.2								22.4
Level of Service	B			A								C
Approach Delay (s)	11.2			3.2			0.0					22.4
Approach LOS	B			A			A					C

Intersection Summary			
HCM Average Control Delay	14.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	42.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 13: Ala Moana/Niu & Kalakaua

9/10/2012



Movement	EBL	EBT	EBF	WBL	WBT	WBR	NBL	NBT	NBF	SBL	SBT	SBR
Lane Configurations	TTT						↑			TTT		
Volume (vph)	0	1806	176	0	13	0	0	0	0	78	443	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	0.86			1.00			0.91			0.91		
Flpb, ped/bikes	0.97			1.00			1.00			1.00		
Flpb, ped/bikes	1.00			1.00			1.00			1.00		
Flt	0.99			1.00			1.00			1.00		
Flt Protected	1.00			1.00			0.99			0.99		
Satd. Flow (prot)	6132			1863			5048			5048		
Flt Permitted	1.00			1.00			0.99			0.99		
Satd. Flow (perm)	6132			1863			5048			5048		
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	1862	181	0	13	0	0	0	0	80	457	0
RTOR Reduction (vph)	0	17	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	2026	0	0	13	0	0	0	0	0	537	0
Confl. Peds. (#/hr)	282											
Turn Type	NA			NA			Split			NA		
Protected Phases	2			6			8			8		
Permitted Phases												
Actuated Green, G (s)	50.0			50.0			30.0			30.0		
Effective Green, g (s)	50.0			50.0			30.0			30.0		
Actuated g/C Ratio	0.56			0.56			0.33			0.33		
Clearance Time (s)	5.0			5.0			5.0			5.0		
Lane Grp Cap (vph)	3407			1035			1683			1683		
v/s Ratio Prot	c0.33			0.01			c0.11			c0.11		
v/s Ratio Perm												
v/c Ratio	0.59			0.01			0.32			0.32		
Uniform Delay, d1	13.3			9.0			22.4			22.4		
Progression Factor	1.00			0.38			1.00			1.00		
Incremental Delay, d2	0.8			0.0			0.5			0.5		
Delay (s)	14.0			3.5			22.9			22.9		
Level of Service	B			A			C			C		
Approach Delay (s)	14.0			3.5			0.0			22.9		
Approach LOS	B			A			A			C		
Intersection Summary												
HCM Average Control Delay	15.8			HCM Level of Service			B			B		
HCM Volume to Capacity ratio	0.49											
Actuated Cycle Length (s)	90.0			Sum of lost time (s)			10.0			10.0		
Intersection Capacity Utilization	48.3%			ICU Level of Service			A			A		
Analysis Period (min)	15											
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

14: Ala Moana/Pau & Kalakaua

9/10/2012



Movement	EBL	EBT	EBF	WBL	WBT	WBF	NBL	NET	NBB	SPL	SBT	SBF
Lane Configurations												
Volume (vph)	120	1261	0	0	6	6	0	88	511	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		0.86			1.00			0.95	0.95			
Frbp, ped/bikes		1.00			0.85			1.00	1.00			
Ftpb, ped/bikes		0.98			1.00			1.00	1.00			
Frt		1.00			0.93			0.89	0.85			
Flt Protected		1.00			1.00			1.00	1.00			
Satd. Flow (prot)		6226			1479			1580	1504			
Flt Permitted		0.90			1.00			1.00	1.00			
Satd. Flow (perm)		5621			1479			1580	1504			
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	138	1449	0	0	7	7	0	101	587	0	0	0
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	23	0	0	0
Lane Group Flow (vph)	0	1587	0	0	11	0	0	353	312	0	0	0
Confl. Peds. (#/hr)	113					113						
Turn Type	Perm	NA			NA			NA	Prot			
Protected Phases		2			6			4	4			
Permitted Phases	2											
Actuated Green, G (s)		45.0			45.0			25.0	25.0			
Effective Green, g (s)		45.0			45.0			25.0	25.0			
Actuated g/C Ratio		0.56			0.56			0.31	0.31			
Clearance Time (s)		5.0			5.0			5.0	5.0			
Lane Grp Cap (vph)		3162			832			494	470			
v/s Ratio Prot					0.01			0.22	0.21			
v/s Ratio Perm		0.28										
v/c Ratio		0.50			0.01			0.71	0.66			
Uniform Delay, d1		10.7			7.7			24.3	23.8			
Progression Factor		0.28			1.00			1.00	1.00			
Incremental Delay, d2		0.5			0.0			8.6	7.2			
Delay (s)		3.5			7.7			32.9	31.0			
Level of Service		A			A			C	C			
Approach Delay (s)		3.5			7.7			32.0			0.0	
Approach LOS		A			A			C			A	
Intersection Summary												
HCM Average Control Delay			12.1			HCM Level of Service			B			
HCM Volume to Capacity ratio			0.58									
Actuated Cycle Length (s)			80.0			Sum of lost time (s)			10.0			
Intersection Capacity Utilization			49.5%			ICU Level of Service			A			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

14: Ala Moana/Pau & Kalakaua

9/10/2012



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	4TTL				1			1	1			
Volume (vph)	144	1740	0	0	17	9	0	148	728	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0						5.0		5.0			
Lane Util. Factor	0.86				1.00		0.95		0.95			
Frbp, ped/bikes	1.00				0.81		1.00		1.00			
Flpb, ped/bikes	0.96				1.00		1.00		1.00			
Frt	1.00				0.95		0.90		0.85			
Flt Protected	1.00				1.00		1.00		1.00			
Satd. Flow (prot)	6138				1435		1592		1504			
Flt Permitted	0.90				1.00		1.00		1.00			
Satd. Flow (perm)	5541				1435		1592		1504			
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)	153	1851	0	0	18	10	0	157	774	0	0	0
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	43	0	0	0
Lane Group Flow (vph)	0	2004	0	0	24	0	0	474	414	0	0	0
Confl. Peds. (#/hr)	220				220							
Turn Type	Perm	NA			NA			NA	Prot			
Protected Phases	2				6		4		4			
Permitted Phases	2											
Actuated Green, G (s)	50.0				50.0		30.0		30.0			
Effective Green, g (s)	50.0				50.0		30.0		30.0			
Actuated g/C Ratio	0.56				0.56		0.33		0.33			
Clearance Time (s)	5.0				5.0		5.0		5.0			
Lane Grp Cap (vph)	3078				797		531		501			
v/s Ratio Prot					0.02		0.30		0.28			
v/s Ratio Perm	0.36											
v/c Ratio	0.65				0.03		0.89		0.83			
Uniform Delay, d1	13.9				9.0		28.5		27.6			
Progression Factor	0.24				1.00		1.00		1.00			
Incremental Delay, d2	0.9				0.1		19.9		14.4			
Delay (s)	4.3				9.1		48.4		42.0			
Level of Service	A				A		D		D			
Approach Delay (s)	4.3				9.1		45.3				0.0	
Approach LOS	A				A		D				A	
Intersection Summary												
HCM Average Control Delay	17.2				HCM Level of Service		B					
HCM Volume to Capacity ratio	0.74											
Actuated Cycle Length (s)	90.0				Sum of lost time (s)		10.0					
Intersection Capacity Utilization	65.8%				ICU Level of Service		C					
Analysis Period (min)	15											
c Critical Lane Group												

APPENDIX D

**CAPACITY ANALYSIS CALCULATIONS
PROJECTED YEAR 2015 PEAK HOUR TRAFFIC
ANALYSIS WITHOUT PROJECT**

HCM Signalized Intersection Capacity Analysis

3: Saratoga Rd./Saratoga St. & Kalakaua Ave.

3/7/2012



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBW	SB	
Lane Configurations	←TTT→						↑		↑↑				
Volume (vph)	50	1254	189	0	0	0	0	116	222	0	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	5.0						5.0		5.0				
Lane Util. Factor	0.86						1.00		0.88				
Frbp, ped/bikes	0.93						1.00		1.00				
Flpb, ped/bikes	1.00						1.00		1.00				
Frt	0.98						1.00		0.85				
Flt Protected	1.00						1.00		1.00				
Satd. Flow (prot)	5824						1863		2787				
Flt Permitted	1.00						1.00		1.00				
Satd. Flow (perm)	5824						1863		2787				
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)	53	1320	199	0	0	0	0	122	234	0	0	0	
RTOR Reduction (vph)	0	39	0	0	0	0	0	0	0	0	0	0	
Lane Group Flow (vph)	0	1533	0	0	0	0	0	122	234	0	0	0	
Confl. Peds. (#/hr)	85	255											
Turn Type	Perm	NA						NA	Prot				
Protected Phases	6									4	4		
Permitted Phases	6												
Actuated Green, G (s)	50.0									20.0	20.0		
Effective Green, g (s)	50.0									20.0	20.0		
Actuated g/C Ratio	0.62									0.25	0.25		
Clearance Time (s)	5.0									5.0	5.0		
Lane Grp Cap (vph)	3640									466	697		
v/s Ratio Prot										0.07	c0.08		
v/s Ratio Perm	0.26												
v/c Ratio	0.42									0.26	0.34		
Uniform Delay, d1	7.6									24.1	24.6		
Progression Factor	1.00									1.00	1.00		
Incremental Delay, d2	0.4									1.4	1.3		
Delay (s)	8.0									25.4	25.9		
Level of Service	A									C	C		
Approach Delay (s)	8.0		0.0					25.7			0.0		
Approach LOS	A		A					C			A		
Intersection Summary													
HCM Average Control Delay	11.3		HCM Level of Service				B						
HCM Volume to Capacity ratio	0.40												
Actuated Cycle Length (s)	80.0		Sum of lost time (s)				10.0						
Intersection Capacity Utilization	39.2%		ICU Level of Service				A						
Analysis Period (min)	15												
c Critical Lane Group													

HCM Signalized Intersection Capacity Analysis

3: Saratoga Rd./Saratoga St. & Kalakaua Ave.

9/10/2012



Movement	EBL	EBT	EBP	WBL	WBT	WBR	NBL	NBT	NBP	SBL	SBT	SBR
Lane Configurations	← ← ←						↑			← ←		
Volume (vph)	72	1749	188	0	0	0	0	305	373	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0						5.0			5.0		
Lane Util. Factor	0.86						1.00			0.88		
Frbp, ped/bikes	0.95						1.00			1.00		
Flpb, ped/bikes	0.99						1.00			1.00		
Frt	0.99						1.00			0.85		
Flt Protected	1.00						1.00			1.00		
Satd. Flow (prot)	5931						1863			2787		
Flt Permitted	1.00						1.00			1.00		
Satd. Flow (perm)	5931						1863			2787		
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	73	1767	190	0	0	0	0	308	377	0	0	0
RTOR Reduction (vph)	0	28	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	2002	0	0	0	0	0	308	377	0	0	0
Confl. Peds. (#/hr)	257		222									
Turn Type	Perm	NA					NA	Perm				
Protected Phases	6						4					
Permitted Phases	6								4			
Actuated Green, G (s)	50.0						20.0	20.0				
Effective Green, g (s)	50.0						20.0	20.0				
Actuated g/C Ratio	0.62						0.25	0.25				
Clearance Time (s)	5.0						5.0	5.0				
Lane Grp Cap (vph)	3707						466	697				
v/s Ratio Prot							0.17					
v/s Ratio Perm	0.34								0.14			
v/c Ratio	0.54						0.66		0.54			
Uniform Delay, d1	8.5						27.0		26.0			
Progression Factor	1.00						1.00		1.00			
Incremental Delay, d2	0.6						7.2		3.0			
Delay (s)	9.1						34.1		29.0			
Level of Service	A						C		C			
Approach Delay (s)	9.1				0.0		31.3				0.0	
Approach LOS	A				A		C				A	
Intersection Summary												
HCM Average Control Delay	14.7		HCM Level of Service		B							
HCM Volume to Capacity ratio	0.57											
Actuated Cycle Length (s)	80.0		Sum of lost time (s)		10.0							
Intersection Capacity Utilization	54.7%		ICU Level of Service		A							
Analysis Period (min)	15											
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

6: Saratoga St./Kalaimoku St. & Kuhio Ave.

3/7/2012



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑			↑↑				
Volume (vph)	55	471	0	0	151	42	17	99	45	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			0.95				
Flpb, ped/bikes		1.00			0.96			0.99				
Flpb, ped/bikes		0.99			1.00			0.99				
Frt		1.00			0.97			0.96				
Flt Protected		0.99			1.00			0.99				
Satd. Flow (prot)		3484			3283			3309				
Flt Permitted		0.90			1.00			0.99				
Satd. Flow (perm)		3139			3283			3309				
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	63	541	0	0	174	48	20	114	52	0	0	0
RTOR Reduction (vph)	0	0	0	0	30	0	0	33	0	0	0	0
Lane Group Flow (vph)	0	604	0	0	192	0	0	154	0	0	0	0
Confl. Peds. (#/hr)	122					122	38		23			
Turn Type	pm+pt	NA			NA		Perm	NA				
Protected Phases	1	6			2			4				
Permitted Phases	6						4					
Actuated Green, G (s)		40.0			30.0			30.0				
Effective Green, g (s)		40.0			30.0			30.0				
Actuated g/C Ratio		0.50			0.38			0.38				
Clearance Time (s)		5.0			5.0			5.0				
Lane Grp Cap (vph)		1591			1231			1241				
v/s Ratio Prot		0.02			0.06							
v/s Ratio Perm		0.17						0.05				
v/c Ratio		0.38			0.16			0.12				
Uniform Delay, d1		12.3			16.6			16.4				
Progression Factor		1.00			0.70			2.04				
Incremental Delay, d2		0.7			0.3			0.2				
Delay (s)		13.0			11.9			33.7				
Level of Service		B			B			C				
Approach Delay (s)		13.0			11.9			33.7			0.0	
Approach LOS		B			B			C			A	

Intersection Summary			
HCM Average Control Delay	16.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	53.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
6: Saratoga St./Kalaimoku St. & Kuhio Ave.

9/10/2012



Movement	EBL	EBT	EBP	WBL	WBT	WBP	NBL	NBT	NBR	SBL	SBT	SBP
Lane Configurations		↑↑			↑↑			↑↑				
Volume (vph)	58	795	0	0	232	57	29	291	80	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			0.95				
Frpb, ped/bikes		1.00			0.94			0.98				
Flpb, ped/bikes		0.99			1.00			0.99				
Frt		1.00			0.97			0.97				
Flt Protected		1.00			1.00			1.00				
Satd. Flow (prot)		3494			3243			3339				
Flt Permitted		0.90			1.00			1.00				
Satd. Flow (perm)		3170			3243			3339				
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)	62	846	0	0	247	61	31	310	85	0	0	0
RTOR Reduction (vph)	0	0	0	0	24	0	0	25	0	0	0	0
Lane Group Flow (vph)	0	908	0	0	284	0	0	401	0	0	0	0
Confl. Peds. (#/hr)	163					163	55		45			
Turn Type	pm+pt	NA			NA		Perm	NA				
Protected Phases	1	6			2			4				
Permitted Phases	6						4					
Actuated Green, G (s)		55.0			45.0			25.0				
Effective Green, g(s)		55.0			45.0			25.0				
Actuated g/C Ratio		0.61			0.50			0.28				
Clearance Time (s)		5.0			5.0			5.0				
Lane Grp Cap (vph)		1955			1622			928				
v/s Ratio Prot		c0.03			0.09							
v/s Ratio Perm		c0.26						0.12				
v/c Ratio		0.46			0.18			0.43				
Uniform Delay, d1		9.5			12.3			26.7				
Progression Factor		3.08			0.55			1.00				
Incremental Delay, d2		0.7			0.2			1.5				
Delay (s)		30.0			7.0			28.1				
Level of Service		C			A			C				
Approach Delay (s)		30.0			7.0			28.1			0.0	
Approach LOS		C			A			C			A	

Intersection Summary			
HCM Average Control Delay	25.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	62.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 5: Kalaimoku St. & Ala Wai Blvd.

3/7/2012



Movement	EBT	EBP	WBL	WBT	NBL	NBP
Lane Configurations				↑↑↑	↑↑	
Volume (vph)	0	0	0	2388	208	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	
Flt				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	0	0	2596	226	0
RTOR Reduction (vph)	0	0	0	0	5	0
Lane Group Flow (vph)	0	0	0	2596	222	0
Turn Type				NA	NA	
Protected Phases				2	4	
Permitted Phases						
Actuated Green, G (s)				50.0	20.0	
Effective Green, g (s)				50.0	20.0	
Actuated g/C Ratio				0.62	0.25	
Clearance Time (s)				5.0	5.0	
Lane Grp Cap (vph)				3178	858	
v/s Ratio Prot				c0.51	c0.06	
v/s Ratio Perm						
v/c Ratio				0.82	0.26	
Uniform Delay, d1				11.5	24.1	
Progression Factor				0.71	1.11	
Incremental Delay, d2				1.4	0.7	
Delay (s)				9.5	27.4	
Level of Service				A	C	
Approach Delay (s)	0.0			9.5	27.4	
Approach LOS	A			A	C	

Intersection Summary			
HCM Average Control Delay		10.9	HCM Level of Service B
HCM Volume to Capacity ratio		0.66	
Actuated Cycle Length (s)		80.0	Sum of lost time (s) 10.0
Intersection Capacity Utilization		60.4%	ICU Level of Service B
Analysis Period (min)		15	
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

5: Kalaimoku St. & Ala Wai Blvd.

9/10/2012



Movement	EBL	EBR	WBL	WBT	NBL	NBF
Lane Configurations				↑↑↑	↑↑	
Volume (vph)	0	0	0	2256	380	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	
Flt				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	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	2507	422	0
RTOR Reduction (vph)	0	0	0	0	9	0
Lane Group Flow (vph)	0	0	0	2507	413	0
Turn Type				NA	NA	
Protected Phases				2	4	
Permitted Phases						
Actuated Green, G (s)				60.0	20.0	
Effective Green, g (s)				60.0	20.0	
Actuated g/C Ratio				0.67	0.22	
Clearance Time (s)				5.0	5.0	
Lane Grp Cap (vph)				3390	763	
v/s Ratio Prot				c0.49	c0.12	
v/s Ratio Perm						
v/c Ratio				0.74	0.54	
Uniform Delay, d1				9.9	30.9	
Progression Factor				0.62	0.54	
Incremental Delay, d2				1.2	2.5	
Delay (s)				7.4	19.3	
Level of Service				A	B	
Approach Delay (s)	0.0			7.4	19.3	
Approach LOS	A			A	B	

Intersection Summary			
HCM Average Control Delay	9.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	62.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

12: Kuhio Ave. & Launiu St.

3/7/2012



Movement	EBL	EB	WCB	WBR	SEB	SEF
Lane Configurations		↑↑	↑↑		↗	↖
Volume (vph)	0	520	155	0	79	44
Ideal Flow (vphpl)	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
Frbp, ped/bikes		1.00	1.00		1.00	0.94
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3539	3539		1770	1492
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3539	3539		1770	1492
Peak-hour factor, PHF	0.79	0.79	0.79	0.79	0.79	0.79
Adj. Flow (vph)	0	658	196	0	100	56
RTOR Reduction (vph)	0	0	0	0	0	42
Lane Group Flow (vph)	0	658	196	0	100	14
Confl. Peds. (#/hr)					22	31
Turn Type		NA	NA		NA	Perm
Protected Phases		6	2		8	
Permitted Phases						8
Actuated Green, G (s)		50.0	50.0		20.0	20.0
Effective Green, g (s)		50.0	50.0		20.0	20.0
Actuated g/C Ratio		0.62	0.62		0.25	0.25
Clearance Time (s)		5.0	5.0		5.0	5.0
Lane Grp Cap (vph)		2212	2212		443	373
v/s Ratio Prot		0.19	0.06		0.06	
v/s Ratio Perm						0.01
v/c Ratio		0.30	0.09		0.23	0.04
Uniform Delay, d1		6.9	6.0		23.8	22.7
Progression Factor		0.47	0.42		1.00	1.00
Incremental Delay, d2		0.3	0.1		1.2	0.2
Delay (s)		3.6	2.6		25.0	22.9
Level of Service		A	A		C	C
Approach Delay (s)		3.6	2.6		24.3	
Approach LOS		A	A		C	
Intersection Summary						
HCM Average Control Delay		6.6		HCM Level of Service	A	
HCM Volume to Capacity ratio		0.28				
Actuated Cycle Length (s)		80.0		Sum of lost time (s)	10.0	
Intersection Capacity Utilization		36.0%		ICU Level of Service	A	
Analysis Period (min)		15				
c Critical Lane Group						

HCM Signalized Intersection Capacity Analysis
 12: Kuhio Ave. & Launiu St.

9/10/2012



Movement	EBL	EBT	WBL	WBR	SEL	SBR
Lane Configurations		↑↑	↑↑		↖	↗
Volume (vph)	0	865	253	0	71	36
Ideal Flow (vphpl)	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
Frbp, ped/bikes		1.00	1.00		1.00	1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3539	3539		1770	1583
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3539	3539		1770	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	911	266	0	75	38
RTOR Reduction (vph)	0	0	0	0	0	30
Lane Group Flow (vph)	0	911	266	0	75	8
Confl. Peds. (#/hr)					57	
Turn Type		NA	NA		NA	Perm
Protected Phases		6	2		8	
Permitted Phases						8
Actuated Green, G (s)		60.0	60.0		20.0	20.0
Effective Green, g (s)		60.0	60.0		20.0	20.0
Actuated g/C Ratio		0.67	0.67		0.22	0.22
Clearance Time (s)		5.0	5.0		5.0	5.0
Lane Grp Cap (vph)		2359	2359		393	352
v/s Ratio Prot		c0.26	0.08		c0.04	
v/s Ratio Perm						0.01
v/c Ratio		0.39	0.11		0.19	0.02
Uniform Delay, d1		6.7	5.4		28.4	27.4
Progression Factor		0.67	0.62		1.00	1.00
Incremental Delay, d2		0.4	0.1		1.1	0.1
Delay (s)		4.9	3.4		29.5	27.5
Level of Service		A	A		C	C
Approach Delay (s)		4.9	3.4		28.8	
Approach LOS		A	A		C	
Intersection Summary						
HCM Average Control Delay		6.7		HCM Level of Service		A
HCM Volume to Capacity ratio		0.34				
Actuated Cycle Length (s)		90.0		Sum of lost time (s)		10.0
Intersection Capacity Utilization		36.2%		ICU Level of Service		A
Analysis Period (min)		15				
c Critical Lane Group						

HCM Unsignalized Intersection Capacity Analysis
 13: Kaiolu St. & Kuhio Ave.

3/7/2012



Movement	EBL	EBT	EBF	WBL	WBT	WBP	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		←→			←→				↑			
Volume (veh/h)	50	546	15	7	155	19	0	0	9	0	0	0
Sign Control		Free			Free			Stop			Stop	
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)	56	607	17	8	172	21	0	0	10	0	0	0
Pedestrians		17			7			65			181	
Lane Width (ft)		12.0			12.0			12.0			0.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		1			1			5			0	
Right turn flare (veh)												
Median type		None			None							
Median storage veh												
Upstream signal (ft)		255			313							
pX, platoon unblocked				0.93			0.93	0.93	0.93	0.93	0.93	
vC, conflicting volume	374			688			910	1181	384	811	1179	295
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	374			509			748	1040	181	641	1038	295
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	95			99			100	100	99	100	100	100
cM capacity (veh/h)	1181			923			239	190	725	300	190	692

Direction Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	359	320	94	107	10
Volume Left	56	0	8	0	0
Volume Right	0	17	0	21	10
cSH	1181	1700	923	1700	725
Volume to Capacity	0.05	0.19	0.01	0.06	0.01
Queue Length 95th (ft)	4	0	1	0	1
Control Delay (s)	1.7	0.0	0.8	0.0	10.0
Lane LOS	A		A		B
Approach Delay (s)	0.9		0.4		10.0
Approach LOS					B

Intersection Summary		
Average Delay		0.9
Intersection Capacity Utilization	37.1%	ICU Level of Service A
Analysis Period (min)		15

HCM Unsignalized Intersection Capacity Analysis
 13: Kaiolu St. & Kuhio Ave.

9/10/2012



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NET	NBR	SBL	SBT	SBR
Lane Configurations		←→			←→				↗			
Volume (veh/h)	85	830	16	6	260	41	0	0	4	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	88	856	16	6	268	42	0	0	4	0	0	0
Pedestrians		82			20			79			211	
Lane Width (ft)		12.0			12.0			12.0			0.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		7			2			7			0	
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)		255			313							
pX, platoon unblocked	0.99			0.89			0.89	0.89	0.89	0.89	0.89	0.99
vC, conflicting volume	521			951			1347	1652	535	1140	1639	448
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	488			687			1080	1422	218	849	1408	414
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	92			99			100	100	99	100	100	100
cM capacity (veh/h)	1057			747			118	102	640	196	104	540

Direction Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	515	444	140	176	4
Volume Left	88	0	6	0	0
Volume Right	0	16	0	42	4
cSH	1057	1700	747	1700	640
Volume to Capacity	0.08	0.26	0.01	0.10	0.01
Queue Length 95th (ft)	7	0	1	0	0
Control Delay (s)	2.3	0.0	0.5	0.0	10.7
Lane LOS	A		A		B
Approach Delay (s)	1.2		0.2		10.7
Approach LOS					B

Intersection Summary	
Average Delay	1.0
Intersection Capacity Utilization	46.0% ICU Level of Service A
Analysis Period (min)	15

HCM Signalized Intersection Capacity Analysis

17: Lewers St. & Kuhio Ave.

3/12/2012



Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Lane Configurations	↖	↖↖			↖↖			↖↖				
Volume (vph)	49	513	0	0	175	42	9	83	37	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	1.00	0.95			0.95			0.95				
Frb, ped/bikes	1.00	1.00			0.95			0.95				
Flpb, ped/bikes	0.93	1.00			1.00			0.99				
Frt	1.00	1.00			0.97			0.96				
Flt Protected	0.95	1.00			1.00			1.00				
Satd. Flow (prot)	1641	3539			3272			3160				
Flt Permitted	0.53	1.00			1.00			1.00				
Satd. Flow (perm)	914	3539			3272			3160				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	53	558	0	0	190	46	10	90	40	0	0	0
RTOR Reduction (vph)	0	0	0	0	26	0	0	28	0	0	0	0
Lane Group Flow (vph)	53	558	0	0	210	0	0	113	0	0	0	0
Confl. Peds. (#/hr)	158					158	132		112			
Turn Type	prn+pt	NA			NA		Perm	NA				
Protected Phases	1	6			2			4				
Permitted Phases	6						4					
Actuated Green, G (s)	45.0	45.0			35.0			25.0				
Effective Green, g (s)	45.0	45.0			35.0			25.0				
Actuated g/C Ratio	0.56	0.56			0.44			0.31				
Clearance Time (s)	5.0	5.0			5.0			5.0				
Lane Grp Cap (vph)	560	1991			1432			988				
v/s Ratio Prot	0.01	0.16			0.06							
v/s Ratio Perm	0.05							0.04				
v/c Ratio	0.09	0.28			0.15			0.11				
Uniform Delay, d1	8.1	9.1			13.5			19.6				
Progression Factor	0.63	0.59			1.00			1.27				
Incremental Delay, d2	0.3	0.3			0.2			0.2				
Delay (s)	5.4	5.7			13.7			25.1				
Level of Service	A	A			B			C				
Approach Delay (s)		5.7			13.7			25.1			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM Average Control Delay	10.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.22		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	42.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 17: Lewers St. & Kuhio Ave.

9/10/2012



Movement	EBL	EBT	EBP	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕			↕			↕				
Volume (vph)	128	724	0	0	263	57	43	239	44	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	1.00	0.95			0.95			0.95				
Frpb, ped/bikes	1.00	1.00			0.94			0.96				
Flpb, ped/bikes	0.92	1.00			1.00			0.96				
Frt	1.00	1.00			0.97			0.98				
Flt Protected	0.95	1.00			1.00			0.99				
Satd. Flow (prot)	1629	3539			3238			3157				
Flt Permitted	0.49	1.00			1.00			0.99				
Satd. Flow (perm)	836	3539			3238			3157				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	139	787	0	0	286	62	47	260	48	0	0	0
RTOR Reduction (vph)	0	0	0	0	21	0	0	14	0	0	0	0
Lane Group Flow (vph)	139	787	0	0	328	0	0	341	0	0	0	0
Confl. Peds. (#/hr)	273					273	216		234			
Turn Type	pm+pt	NA			NA		Perm	NA				
Protected Phases	1	6			2			4				
Permitted Phases	6						4					
Actuated Green, G (s)	55.0	55.0			45.0			25.0				
Effective Green, g (s)	55.0	55.0			45.0			25.0				
Actuated g/C Ratio	0.61	0.61			0.50			0.28				
Clearance Time (s)	5.0	5.0			5.0			5.0				
Lane Grp Cap (vph)	555	2163			1619			877				
v/s Ratio Prot	0.01	0.22			0.10							
v/s Ratio Perm	0.14							0.11				
v/c Ratio	0.25	0.36			0.20			0.39				
Uniform Delay, d1	7.6	8.8			12.5			26.3				
Progression Factor	0.15	0.14			1.00			1.00				
Incremental Delay, d2	1.0	0.5			0.3			1.3				
Delay (s)	2.2	1.7			12.8			27.6				
Level of Service	A	A			B			C				
Approach Delay (s)		1.8			12.8			27.6			0.0	
Approach LOS		A			B			C			A	
Intersection Summary												
HCM Average Control Delay			9.8			HCM Level of Service			A			
HCM Volume to Capacity ratio			0.37									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			10.0			
Intersection Capacity Utilization			46.3%			ICU Level of Service			A			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
 16: Lewers St. & Kalakaua Ave.

3/7/2012



Movement	EBL	EBT	EBP	WBL	WBT	WBP	NBL	NBT	NBP	SBL	SBT	SBP	
Lane Configurations	← ← ←						↑			↑			
Volume (vph)	115	1164	207	0	0	0	0	54	12	0	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	5.0						5.0			5.0			
Lane Util. Factor	0.86						1.00			1.00			
Frpb, ped/bikes	0.92						1.00			0.77			
Flpb, ped/bikes	0.98						1.00			1.00			
Frt	0.98						1.00			0.85			
Flt Protected	1.00						1.00			1.00			
Satd. Flow (prot)	5675						1863			1213			
Flt Permitted	1.00						1.00			1.00			
Satd. Flow (perm)	5675						1863			1213			
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	
Adj. Flow (vph)	126	1279	227	0	0	0	0	59	13	0	0	0	
RTOR Reduction (vph)	0	53	0	0	0	0	0	0	9	0	0	0	
Lane Group Flow (vph)	0	1580	0	0	0	0	0	59	4	0	0	0	
Confl. Peds. (#/hr)	154	267								151			
Turn Type	Perm	NA							NA	Perm			
Protected Phases	6								4				
Permitted Phases	6							4					
Actuated Green, G (s)	45.0								25.0	25.0			
Effective Green, g (s)	45.0								25.0	25.0			
Actuated g/C Ratio	0.56								0.31	0.31			
Clearance Time (s)	5.0								5.0	5.0			
Lane Grp Cap (vph)	3192								582	379			
v/s Ratio Prot									0.03				
v/s Ratio Perm	0.28										0.00		
v/c Ratio	0.49								0.10	0.01			
Uniform Delay, d1	10.6								19.5	19.0			
Progression Factor	0.75								1.00	1.00			
Incremental Delay, d2	0.5								0.3	0.1			
Delay (s)	8.5								19.9	19.0			
Level of Service	A								B	B			
Approach Delay (s)	8.5		0.0				19.7				0.0		
Approach LOS	A		A				B				A		
Intersection Summary													
HCM Average Control Delay	9.0		HCM Level of Service				A						
HCM Volume to Capacity ratio	0.35												
Actuated Cycle Length (s)	80.0		Sum of lost time (s)				10.0						
Intersection Capacity Utilization	44.9%		ICU Level of Service				A						
Analysis Period (min)	15												
c Critical Lane Group													

HCM Signalized Intersection Capacity Analysis
 16: Lewers St. & Kalakaua Ave.

9/10/2012



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NBR	SEL	SBT	SBR
Lane Configurations	4111							↑	↗			
Volume (vph)	150	1648	177	0	0	0	0	178	32	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0							5.0	5.0			
Lane Util. Factor	0.86							1.00	1.00			
Frbp, ped/bikes	0.92							1.00	0.61			
Flpb, ped/bikes	0.96							1.00	1.00			
Frt	0.99							1.00	0.85			
Flt Protected	1.00							1.00	1.00			
Satd. Flow (prot)	5596							1863	967			
Flt Permitted	1.00							1.00	1.00			
Satd. Flow (perm)	5596							1863	967			
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	161	1772	190	0	0	0	0	191	34	0	0	0
RTOR Reduction (vph)	0	36	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	2087	0	0	0	0	0	191	34	0	0	0
Confl. Peds. (#/hr)	909		880						483			
Turn Type	Perm		NA				NA		Perm			
Protected Phases	6						4					
Permitted Phases	6								4			
Actuated Green, G (s)	45.0						25.0		25.0			
Effective Green, g (s)	45.0						25.0		25.0			
Actuated g/C Ratio	0.56						0.31		0.31			
Clearance Time (s)	5.0						5.0		5.0			
Lane Grp Cap (vph)	3148						582		302			
v/s Ratio Prot							0.10					
v/s Ratio Perm	0.37								0.04			
v/c Ratio	0.66						0.33		0.11			
Uniform Delay, d1	12.2						21.1		19.6			
Progression Factor	0.67						1.00		1.00			
Incremental Delay, d2	0.9						1.5		0.8			
Delay (s)	9.2						22.6		20.4			
Level of Service	A						C		C			
Approach Delay (s)	9.2				0.0		22.2				0.0	
Approach LOS	A				A		C				A	

Intersection Summary			
HCM Average Control Delay	10.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	51.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 18: Lewers St. & Ala Wai Blvd.

3/7/2012



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations				↑↑↑	↑↑	
Volume (vph)	0	0	0	2408	178	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	
Flt				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	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	0	0	0	2706	200	0
RTOR Reduction (vph)	0	0	0	0	4	0
Lane Group Flow (vph)	0	0	0	2706	196	0
Turn Type				NA	NA	
Protected Phases				2	4	
Permitted Phases						
Actuated Green, G (s)				50.0	20.0	
Effective Green, g (s)				50.0	20.0	
Actuated g/C Ratio				0.62	0.25	
Clearance Time (s)				5.0	5.0	
Lane Grp Cap. (vph)				3178	858	
v/s Ratio Prot				c0.53	c0.06	
v/s Ratio Perm						
v/c Ratio				0.85	0.23	
Uniform Delay, d1				12.0	23.9	
Progression Factor				1.00	0.82	
Incremental Delay, d2				3.1	0.6	
Delay (s)				15.1	20.1	
Level of Service				B	C	
Approach Delay (s)	0.0			15.1	20.1	
Approach LOS	A			B	C	

Intersection Summary			
HCM Average Control Delay	15.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	59.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

18: Lewers St. & Ala Wai Blvd.

3/7/2012



Movement	EBF	EBL	WBL	WB	NB	NBF
Lane Configurations				↑↑↑	↑↑	
Volume (vph)	0	0	0	1960	343	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	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	0	0	2085	365	0
RTOR Reduction (vph)	0	0	0	0	23	0
Lane Group Flow (vph)	0	0	0	2085	342	0
Turn Type				NA	NA	
Protected Phases				2	4	
Permitted Phases						
Actuated Green, G (s)				60.0	20.0	
Effective Green, g (s)				60.0	20.0	
Actuated g/C Ratio				0.67	0.22	
Clearance Time (s)				5.0	5.0	
Lane Grp Cap (vph)				3390	763	
v/s Ratio Prot				c0.41	c0.10	
v/s Ratio Perm						
v/c Ratio				0.62	0.45	
Uniform Delay, d1				8.5	30.2	
Progression Factor				1.00	0.65	
Incremental Delay, d2				0.8	1.8	
Delay (s)				9.3	21.4	
Level of Service				A	C	
Approach Delay (s)	0.0			9.3	21.4	
Approach LOS	A			A	C	

Intersection Summary			
HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

11: Kalakaua Ave. & Olohana

9/10/2012



Movement	EBL	EBT	WBT	WBR	SEB	SEB
Lane Configurations						
Volume (vph)	0	1262	0	0	231	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0				5.0	
Lane Util. Factor	0.86				0.97	
Frt	1.00				1.00	
Flt Protected	1.00				0.95	
Satd. Flow (prot)	6408				3433	
Flt Permitted	1.00				0.95	
Satd. Flow (perm)	6408				3433	
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	0	1467	0	0	269	0
RTOR Reduction (vph)	0	0	0	0	43	0
Lane Group Flow (vph)	0	1467	0	0	226	0
Turn Type	NA				NA	
Protected Phases	4				6	
Permitted Phases						
Actuated Green, G (s)	45.0				25.0	
Effective Green, g (s)	45.0				25.0	
Actuated g/C Ratio	0.56				0.31	
Clearance Time (s)	5.0				5.0	
Lane Grp Cap (vph)	3605				1073	
v/s Ratio Prot	c0.23				c0.07	
v/s Ratio Perm						
v/c Ratio	0.41				0.21	
Uniform Delay, d1	9.9				20.2	
Progression Factor	1.00				1.00	
Incremental Delay, d2	0.3				0.4	
Delay (s)	10.3				20.8	
Level of Service	B				C	
Approach Delay (s)	10.3	0.0			20.8	
Approach LOS	B	A			C	

Intersection Summary			
HCM Average Control Delay	11.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	33.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

11: Kalakaua Ave. & Olohana

9/10/2012



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		TTTT			TT	
Volume (vph)	0	1757	0	0	251	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	
Lane Util. Factor		0.86			0.97	
Frt		1.00			1.00	
Flt Protected		1.00			0.95	
Satd. Flow (prot)		6408			3433	
Flt Permitted		1.00			0.95	
Satd. Flow (perm)		6408			3433	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	1869	0	0	267	0
RTOR Reduction (vph)	0	0	0	0	7	0
Lane Group Flow (vph)	0	1869	0	0	260	0
Turn Type		NA			NA	
Protected Phases		4			6	
Permitted Phases						
Actuated Green, G (s)		45.0			35.0	
Effective Green, g (s)		45.0			35.0	
Actuated g/C Ratio		0.50			0.39	
Clearance Time (s)		5.0			5.0	
Lane Grp Cap (vph)		3204			1335	
v/s Ratio Prot		c0.29			c0.08	
v/s Ratio Perm						
w/c Ratio		0.58			0.19	
Uniform Delay, d1		15.9			18.2	
Progression Factor		1.00			1.52	
Incremental Delay, d2		0.8			0.3	
Delay (s)		16.7			27.9	
Level of Service		B			C	
Approach Delay (s)		16.7	0.0		27.9	
Approach LOS		B	A		C	

Intersection Summary			
HCM Average Control Delay	18.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	41.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

21: Olohana & Kuhio Ave.

9/10/2012



Movement	EB	EB	EBR	WB	WBT	WBR	NB	NB	NBR	SB	SB	SBR
Lane Configurations		↑↑		↖	↑						↖↗	
Volume (vph)	0	513	23	94	78	0	0	0	0	25	118	19
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		1.00	1.00						0.95	
Flpb, ped/bikes		0.99		1.00	1.00						0.97	
Flpb, ped/bikes		1.00		0.99	1.00						0.98	
Frt		0.99		1.00	1.00						0.98	
Flt Protected		1.00		0.95	1.00						0.99	
Satd. Flow (prot)		3494		1749	1863						3272	
Flt Permitted		1.00		0.31	1.00						0.99	
Satd. Flow (perm)		3494		568	1863						3272	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	552	25	101	84	0	0	0	0	27	127	20
RTOR Reduction (vph)	0	4	0	0	0	0	0	0	0	0	13	0
Lane Group Flow (vph)	0	573	0	101	84	0	0	0	0	0	162	0
Confl. Peds. (#/hr)			92	92						99		97
Turn Type		NA		pm+pt	NA					Perm		NA
Protected Phases		4		3	8							6
Permitted Phases				8						6		
Actuated Green, G (s)		30.0		40.0	40.0							30.0
Effective Green, g (s)		30.0		40.0	40.0							30.0
Actuated g/C Ratio		0.38		0.50	0.50							0.38
Clearance Time (s)		5.0		5.0	5.0							5.0
Lane Grp Cap (vph)		1310		358	932							1227
v/s Ratio Prot		c0.16		c0.02	0.05							
v/s Ratio Perm				0.12								0.05
v/c Ratio		0.44		0.28	0.09							0.13
Uniform Delay, d1		18.7		11.3	10.5							16.4
Progression Factor		1.00		1.54	1.50							1.00
Incremental Delay, d2		1.1		2.0	0.2							0.2
Delay (s)		19.8		19.4	15.9							16.7
Level of Service		B		B	B							B
Approach Delay (s)		19.8			17.8		0.0					16.7
Approach LOS		B			B		A					B
Intersection Summary												
HCM Average Control Delay			18.8		HCM Level of Service						B	
HCM Volume to Capacity ratio			0.29									
Actuated Cycle Length (s)			80.0		Sum of lost time (s)					15.0		
Intersection Capacity Utilization			46.2%		ICU Level of Service						A	
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
21: Olohana & Kuhio Ave.

9/10/2012



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↑	↑						↑↑	
Volume (vph)	0	822	38	121	117	0	0	0	0	31	92	19
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		1.00	1.00						0.95	
Frbp, ped/bikes		0.99		1.00	1.00						0.98	
Flpb, ped/bikes		1.00		0.99	1.00						0.98	
Frt		0.99		1.00	1.00						0.98	
Flt Protected		1.00		0.95	1.00						0.99	
Satd. Flow (prot)		3482		1759	1863						3302	
Flt Permitted		1.00		0.22	1.00						0.99	
Satd. Flow (perm)		3482		413	1863						3302	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	839	39	123	119	0	0	0	0	32	94	19
RTOR Reduction (vph)	0	4	0	0	0	0	0	0	0	0	13	0
Lane Group Flow (vph)	0	875	0	123	119	0	0	0	0	0	132	0
Confl. Peds. (#/hr)			124	124						59		38
Turn Type		NA		pm+pt	NA					Perm	NA	
Protected Phases		4		3	8							6
Permitted Phases				8						6		
Actuated Green, G (s)		45.0		55.0	55.0						25.0	
Effective Green, g (s)		45.0		55.0	55.0						25.0	
Actuated g/C Ratio		0.50		0.61	0.61						0.28	
Clearance Time (s)		5.0		5.0	5.0						5.0	
Lane Grp Cap (vph)		1741		327	1139						917	
v/s Ratio Prot		0.25		0.02	0.06							
v/s Ratio Perm				0.21							0.04	
v/c Ratio		0.50		0.38	0.10						0.14	
Uniform Delay, d1		15.0		9.0	7.3						24.4	
Progression Factor		1.00		1.38	1.25						1.00	
Incremental Delay, d2		1.0		3.2	0.2						0.3	
Delay (s)		16.1		15.7	9.3						24.8	
Level of Service		B		B	A						C	
Approach Delay (s)		16.1			12.5			0.0			24.8	
Approach LOS		B			B			A			C	
Intersection Summary												
HCM Average Control Delay			16.4			HCM Level of Service					B	
HCM Volume to Capacity ratio			0.38									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)				15.0		
Intersection Capacity Utilization			56.8%			ICU Level of Service					B	
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

13: Ala Moana/Niu & Kalakaua

9/10/2012



Movement	EBL	EBT	EBR	WBL	WBT	WBF	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑↑			↑						↑↑↑	
Volume (vph)	0	1398	215	0	5	0	0	0	0	57	506	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0						5.0	
Lane Util. Factor		0.86			1.00						0.91	
Frbp, ped/bikes		0.96			1.00						1.00	
Flpb, ped/bikes		1.00			1.00						1.00	
Frt		0.98			1.00						1.00	
Flt Protected		1.00			1.00						0.99	
Satd. Flow (prot)		6018			1863						5060	
Flt Permitted		1.00			1.00						0.99	
Satd. Flow (perm)		6018			1863						5060	
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)	0	1589	244	0	6	0	0	0	0	65	575	0
RTOR Reduction (vph)	0	35	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1798	0	0	6	0	0	0	0	0	640	0
Confl. Peds. (#/hr)			224									
Turn Type		NA			NA					Split	NA	
Protected Phases		2			6					8	8	
Permitted Phases												
Actuated Green, G (s)		45.0			45.0						25.0	
Effective Green, g (s)		45.0			45.0						25.0	
Actuated g/C Ratio		0.56			0.56						0.31	
Clearance Time (s)		5.0			5.0						5.0	
Lane Grp Cap (vph)		3385			1048						1581	
v/s Ratio Prot		0.30			0.00						0.13	
v/s Ratio Perm												
v/c Ratio		0.53			0.01						0.40	
Uniform Delay, d1		10.9			7.7						21.6	
Progression Factor		1.00			0.42						1.00	
Incremental Delay, d2		0.6			0.0						0.8	
Delay (s)		11.5			3.2						22.4	
Level of Service		B			A						C	
Approach Delay (s)		11.5			3.2			0.0			22.4	
Approach LOS		B			A			A			C	
Intersection Summary												
HCM Average Control Delay			14.3			HCM Level of Service					B	
HCM Volume to Capacity ratio			0.49									
Actuated Cycle Length (s)			80.0			Sum of lost time (s)				10.0		
Intersection Capacity Utilization			44.2%			ICU Level of Service				A		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

13: Ala Moana/Niu & Kalakaua

9/10/2012



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SEL	SBT	SBR
Lane Configurations				↑								
Volume (vph)	0	1912	187	0	13	0	0	0	0	78	443	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0			5.0						5.0		
Lane Util. Factor	0.86			1.00						0.91		
Frbp, ped/bikes	0.97			1.00						1.00		
Flpb, ped/bikes	1.00			1.00						1.00		
Frt	0.99			1.00						1.00		
Flt Protected	1.00			1.00						0.99		
Satd. Flow (prot)	6130			1863						5048		
Flt Permitted	1.00			1.00						0.99		
Satd. Flow (perm)	6130			1863						5048		
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	1971	193	0	13	0	0	0	0	80	457	0
RTOR Reduction (vph)	0	18	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	2146	0	0	13	0	0	0	0	0	537	0
Confl. Peds. (#/hr)	282											
Turn Type	NA			NA						Split		NA
Protected Phases	2			6						8		8
Permitted Phases												
Actuated Green, G (s)	50.0			50.0								30.0
Effective Green, g (s)	50.0			50.0								30.0
Actuated g/C Ratio	0.56			0.56								0.33
Clearance Time (s)	5.0			5.0								5.0
Lane Grp Cap (vph)	3406			1035								1683
v/s Ratio Prot	0.35			0.01								0.11
v/s Ratio Perm												
v/c Ratio	0.63			0.01								0.32
Uniform Delay, d1	13.7			9.0								22.4
Progression Factor	1.00			0.38								1.00
Incremental Delay, d2	0.9			0.0								0.5
Delay (s)	14.6			3.5								22.9
Level of Service	B			A								C
Approach Delay (s)	14.6			3.5			0.0					22.9
Approach LOS	B			A			A					C
Intersection Summary												
HCM Average Control Delay	16.2			HCM Level of Service						B		
HCM Volume to Capacity ratio	0.51											
Actuated Cycle Length (s)	90.0			Sum of lost time (s)						10.0		
Intersection Capacity Utilization	50.1%			ICU Level of Service						A		
Analysis Period (min)	15											
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

14: Ala Moana/Pau & Kalakaua

9/10/2012



Movement	EBL	EBT	EBR	WBL	WBT	WBF	NBL	NBF	NBR	SBL	SBT	SBR
Lane Configurations		TTTT			T			T	T			
Volume (vph)	120	1334	0	0	6	6	0	88	464	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		0.86			1.00			0.95	0.95			
Frob, ped/bikes		1.00			0.85			1.00	1.00			
Fpbb, ped/bikes		0.98			1.00			1.00	1.00			
Frt		1.00			0.93			0.90	0.85			
Flt Protected		1.00			1.00			1.00	1.00			
Satd. Flow (prot)		6235			1479			1587	1504			
Flt Permitted		0.90			1.00			1.00	1.00			
Satd. Flow (perm)		5637			1479			1587	1504			
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	138	1533	0	0	7	7	0	101	533	0	0	0
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	19	0	0	0
Lane Group Flow (vph)	0	1671	0	0	11	0	0	325	290	0	0	0
Confl. Peds. (#/hr)	113					113						
Turn Type	Perm	NA			NA			NA	Prot			
Protected Phases		2			6			4	4			
Permitted Phases	2											
Actuated Green, G (s)		45.0			45.0			25.0	25.0			
Effective Green, g (s)		45.0			45.0			25.0	25.0			
Actuated g/C Ratio		0.56			0.56			0.31	0.31			
Clearance Time (s)		5.0			5.0			5.0	5.0			
Lane Grp Cap (vph)		3171			832			496	470			
v/s Ratio Prot					0.01			0.20	0.19			
v/s Ratio Perm		0.30										
v/c Ratio		0.53			0.01			0.66	0.62			
Uniform Delay, d1		10.9			7.7			23.8	23.4			
Progression Factor		0.27			1.00			1.00	1.00			
Incremental Delay, d2		0.5			0.0			6.6	6.0			
Delay (s)		3.5			7.7			30.4	29.4			
Level of Service		A			A			C	C			
Approach Delay (s)		3.5			7.7			29.9			0.0	
Approach LOS		A			A			C			A	
Intersection Summary												
HCM Average Control Delay			10.7			HCM Level of Service				B		
HCM Volume to Capacity ratio			0.57									
Actuated Cycle Length (s)			80.0			Sum of lost time (s)				10.0		
Intersection Capacity Utilization			48.6%			ICU Level of Service				A		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

14: Ala Moana/Pau & Kalakaua

9/10/2012



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NET	NBR	SBL	SBT	SBR
Lane Configurations		4TTL			T			T	T			
Volume (vph)	144	1846	0	0	17	9	0	148	771	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		0.86			1.00			0.95	0.95			
Flpb, ped/bikes		1.00			0.81			1.00	1.00			
Flpb, ped/bikes		0.96			1.00			1.00	1.00			
Frt		1.00			0.95			0.90	0.85			
Flt Protected		1.00			1.00			1.00	1.00			
Satd. Flow (prot)		6152			1435			1589	1504			
Flt Permitted		0.90			1.00			1.00	1.00			
Satd. Flow (perm)		5563			1435			1589	1504			
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)	153	1964	0	0	18	10	0	157	820	0	0	0
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	43	0	0	0
Lane Group Flow (vph)	0	2117	0	0	24	0	0	493	441	0	0	0
Confl. Peds. (#/hr)	220					220						
Turn Type	Perm	NA			NA			NA	Prot			
Protected Phases		2			6			4	4			
Permitted Phases	2											
Actuated Green, G (s)		50.0			50.0			30.0	30.0			
Effective Green, g (s)		50.0			50.0			30.0	30.0			
Actuated g/C Ratio		0.56			0.56			0.33	0.33			
Clearance Time (s)		5.0			5.0			5.0	5.0			
Lane Grp Cap (vph)		3091			797			530	501			
v/s Ratio Prot					0.02			0.31	0.29			
v/s Ratio Perm		0.38										
v/c Ratio		0.68			0.03			0.93	0.88			
Uniform Delay, d1		14.3			9.0			29.0	28.3			
Progression Factor		0.23			1.00			1.00	1.00			
Incremental Delay, d2		1.0			0.1			25.1	19.3			
Delay (s)		4.3			9.1			54.1	47.6			
Level of Service		A			A			D	D			
Approach Delay (s)		4.3			9.1			50.9			0.0	
Approach LOS		A			A			D			A	
Intersection Summary												
HCM Average Control Delay		18.9			HCM Level of Service			B				
HCM Volume to Capacity ratio		0.78										
Actuated Cycle Length (s)		90.0			Sum of lost time (s)			10.0				
Intersection Capacity Utilization		69.1%			ICU Level of Service			C				
Analysis Period (min)		15										
c Critical Lane Group												

APPENDIX E

**CAPACITY ANALYSIS CALCULATIONS
PROJECTED YEAR 2015 PEAK HOUR TRAFFIC
ANALYSIS WITH PROJECT**

HCM Signalized Intersection Capacity Analysis

3: Saratoga Rd./Saratoga St. & Kalakaua Ave.

3/7/2012

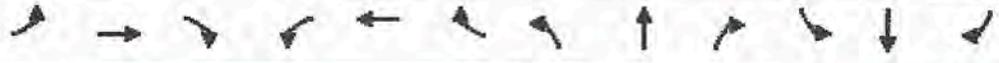


Move/lan	SBL	EBT	EBP	WBL	WB	WBS	NBL	NEP	NBP	SB	SBP	SBE	
Lane Configurations		TTTT							↑	TT			
Volume (vph)	218	1254	189	0	0	0	0	116	222	0	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		5.0							5.0	5.0			
Lane Util. Factor		0.86							1.00	0.88			
Frbp, ped/bikes		0.94							1.00	1.00			
Flpb, ped/bikes		0.98							1.00	1.00			
Frt		0.98							1.00	0.85			
Flt Protected		0.99							1.00	1.00			
Satd. Flow (prot)		5777							1863	2787			
Flt Permitted		0.99							1.00	1.00			
Satd. Flow (perm)		5777							1863	2787			
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)	229	1320	199	0	0	0	0	122	234	0	0	0	
RTOR Reduction (vph)	0	63	0	0	0	0	0	0	0	0	0	0	
Lane Group Flow (vph)	0	1685	0	0	0	0	0	122	234	0	0	0	
Confl. Peds. (#/hr)	85	255											
Turn Type	Perm	NA							NA	Prot			
Protected Phases		6							4	4			
Permitted Phases		6											
Actuated Green, G (s)		50.0							20.0	20.0			
Effective Green, g (s)		50.0							20.0	20.0			
Actuated g/C Ratio		0.62							0.25	0.25			
Clearance Time (s)		5.0							5.0	5.0			
Lane Grp Cap (vph)		3611							466	697			
v/s Ratio Prot									0.07	c0.08			
v/s Ratio Perm		0.29											
v/c Ratio		0.47							0.26	0.34			
Uniform Delay, d1		7.9							24.1	24.6			
Progression Factor		1.00							1.00	1.00			
Incremental Delay, d2		0.4							1.4	1.3			
Delay (s)		8.4							25.4	25.9			
Level of Service		A							C	C			
Approach Delay (s)		8.4		0.0				25.7		0.0			
Approach LOS		A		A				C		A			
Intersection Summary													
HCM Average Control Delay	11.3		HCM Level of Service					B					
HCM Volume to Capacity ratio	0.43												
Actuated Cycle Length (s)	80.0		Sum of lost time (s)					10.0					
Intersection Capacity Utilization	41.7%		ICU Level of Service					A					
Analysis Period (min)	15												
c Critical Lane Group													

HCM Signalized Intersection Capacity Analysis

3: Saratoga Rd./Saratoga St. & Kalakaua Ave.

9/10/2012



Movement	EBL	EBT	EBF	WBL	WBT	WBR	NBL	NBT	NBF	SBL	SBT	SBR	
Lane Configurations	←↑↑↑						↑			↑↑↑			
Volume (vph)	246	1749	188	0	0	0	0	305	373	0	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	5.0						5.0			5.0			
Lane Util. Factor	0.86						1.00			0.88			
Frbp, ped/bikes	0.96						1.00			1.00			
Ftpb, ped/bikes	0.96						1.00			1.00			
Frt	0.99						1.00			0.85			
Flt Protected	0.99						1.00			1.00			
Satd. Flow (prot)	5793						1863			2787			
Flt Permitted	0.99						1.00			1.00			
Satd. Flow (perm)	5793						1863			2787			
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	
Adj. Flow (vph)	248	1767	190	0	0	0	0	308	377	0	0	0	
RTOR Reduction (vph)	0	48	0	0	0	0	0	0	0	0	0	0	
Lane Group Flow (vph)	0	2157	0	0	0	0	0	308	377	0	0	0	
Confl. Peds. (#/hr)	257		222										
Turn Type	Perm		NA					NA		Perm			
Protected Phases	6							4					
Permitted Phases	6									4			
Actuated Green, G (s)	50.0							20.0		20.0			
Effective Green, g (s)	50.0							20.0		20.0			
Actuated g/C Ratio	0.62							0.25		0.25			
Clearance Time (s)	5.0							5.0		5.0			
Lane Grp Cap (vph)	3621							466		697			
v/s Ratio Prot								0.17					
v/s Ratio Perm	0.37									0.14			
v/c Ratio	0.60							0.66		0.54			
Uniform Delay, d1	9.0							27.0		26.0			
Progression Factor	1.00							1.00		1.00			
Incremental Delay, d2	0.7							7.2		3.0			
Delay (s)	9.7							34.1		29.0			
Level of Service	A							C		C			
Approach Delay (s)	9.7				0.0				31.3		0.0		
Approach LOS	A				A				C		A		
Intersection Summary													
HCM Average Control Delay	14.8		HCM Level of Service					B					
HCM Volume to Capacity ratio	0.61												
Actuated Cycle Length (s)	80.0		Sum of lost time (s)					10.0					
Intersection Capacity Utilization	57.3%		ICU Level of Service					B					
Analysis Period (min)	15												
c Critical Lane Group													

HCM Signalized Intersection Capacity Analysis
 6: Saratoga St./Kalaimoku St. & Kuhio Ave.

3/7/2012



Movement	EB	WB	NB	SB
Lane Configurations	↑↑	↑↑	↑↑	↑↑
Volume (vph)	55	471	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0	
Lane Util. Factor	0.95		0.95	
Frbp, ped/bikes	1.00		0.96	
Flpb, ped/bikes	0.99		1.00	
Frt	1.00		0.97	
Flt Protected	0.99		1.00	
Satd. Flow (prot)	3484		3294	
Flt Permitted	0.89		1.00	
Satd. Flow (perm)	3135		3294	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87
Adj. Flow (vph)	63	541	0	0
RTOR Reduction (vph)	0	0	0	0
Lane Group Flow (vph)	0	604	0	0
Confl. Peds. (#/hr)	122		122	38
Turn Type	pm+pt	NA	NA	Perm
Protected Phases	1	6	2	4
Permitted Phases	6			4
Actuated Green, G (s)		40.0	30.0	30.0
Effective Green, g (s)		40.0	30.0	30.0
Actuated g/C Ratio		0.50	0.38	0.38
Clearance Time (s)		5.0	5.0	5.0
Lane Grp Cap (vph)		1589	1235	1238
v/s Ratio Prot		0.02	0.08	
v/s Ratio Perm		0.17		0.08
v/c Ratio		0.38	0.16	0.20
Uniform Delay, d1		12.3	16.6	16.9
Progression Factor		1.00	0.70	1.22
Incremental Delay, d2		0.7	0.3	0.4
Delay (s)		13.0	11.9	21.0
Level of Service		B	B	C
Approach Delay (s)		13.0	11.9	21.0
Approach LOS		B	B	C

Intersection Summary			
HCM Average Control Delay	15.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	53.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 6: Saratoga St./Kalaimoku St. & Kuhio Ave.

9/10/2012



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NEI	NBR	SEL	SBT	SEB
Lane Configurations		←←			←←			←←				
Volume (vph)	58	795	0	0	246	57	29	373	140	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			0.95				
Flpb, ped/bikes		1.00			0.95			0.98				
Flpb, ped/bikes		0.99			1.00			1.00				
Frt		1.00			0.97			0.96				
Flt Protected		1.00			1.00			1.00				
Satd. Flow (prot)		3495			3256			3301				
Flt Permitted		0.90			1.00			1.00				
Satd. Flow (perm)		3165			3256			3301				
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)	62	846	0	0	262	61	31	397	149	0	0	0
RTOR Reduction (vph)	0	0	0	0	23	0	0	38	0	0	0	0
Lane Group Flow (vph)	0	908	0	0	301	0	0	539	0	0	0	0
Confl. Peds. (#/hr)	163					163	55		45			
Turn Type	pm+pl	NA			NA		Perm	NA				
Protected Phases	1	6			2			4				
Permitted Phases	6						4					
Actuated Green, G (s)		55.0			45.0			25.0				
Effective Green, g (s)		55.0			45.0			25.0				
Actuated g/C Ratio		0.61			0.50			0.28				
Clearance Time (s)		5.0			5.0			5.0				
Lane Grp Cap (vph)		1953			1628			917				
v/s Ratio Prot		c0.03			0.09							
v/s Ratio Perm		c0.26						0.16				
v/c Ratio		0.46			0.18			0.59				
Uniform Delay, d1		9.5			12.4			28.0				
Progression Factor		3.07			0.55			1.00				
Incremental Delay, d2		0.7			0.2			2.8				
Delay (s)		29.9			7.1			30.8				
Level of Service		C			A			C				
Approach Delay (s)		29.9			7.1			30.8			0.0	
Approach LOS		C			A			C			A	
Intersection Summary												
HCM Average Control Delay			26.1			HCM Level of Service			C			
HCM Volume to Capacity ratio			0.50									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			10.0			
Intersection Capacity Utilization			66.1%			ICU Level of Service			C			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

5: Kalaimoku St. & Ala Wai Blvd.

3/7/2012



Movement	EBT	EBP	WBL	WBT	NBL	NBP
Lane Configurations				↑↑↑	↑↑	
Volume (vph)	0	0	0	2485	276	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	
Flt				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	0	0	2701	300	0
RTOR Reduction (vph)	0	0	0	0	4	0
Lane Group Flow (vph)	0	0	0	2701	296	0
Turn Type				NA	NA	
Protected Phases				2	4	
Permitted Phases						
Actuated Green, G (s)				50.0	20.0	
Effective Green, g (s)				50.0	20.0	
Actuated g/C Ratio				0.62	0.25	
Clearance Time (s)				5.0	5.0	
Lane Grp Cap (vph)				3178	858	
v/s Ratio Prot				c0.53	c0.09	
v/s Ratio Perm						
v/c Ratio				0.85	0.35	
Uniform Delay, d1				12.0	24.6	
Progression Factor				0.73	0.90	
Incremental Delay, d2				1.6	1.1	
Delay (s)				10.3	23.1	
Level of Service				B	C	
Approach Delay (s)	0.0			10.3	23.1	
Approach LOS	A			B	C	

Intersection Summary			
HCM Average Control Delay		11.6	HCM Level of Service B
HCM Volume to Capacity ratio		0.71	
Actuated Cycle Length (s)		80.0	Sum of lost time (s) 10.0
Intersection Capacity Utilization		64.2%	ICU Level of Service C
Analysis Period (min)		15	

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 5: Kalaimoku St. & Ala Wai Blvd.

9/10/2012



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations				↑↑↑	↑↑	
Volume (vph)	0	0	0	2343	462	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	
Flt				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	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	2603	513	0
RTOR Reduction (vph)	0	0	0	0	7	0
Lane Group Flow (vph)	0	0	0	2603	506	0
Turn Type				NA	NA	
Protected Phases				2	4	
Permitted Phases						
Actuated Green, G (s)				60.0	20.0	
Effective Green, g (s)				60.0	20.0	
Actuated g/C Ratio				0.67	0.22	
Clearance Time (s)				5.0	5.0	
Lane Grp Cap (vph)				3390	763	
v/s Ratio Prot				c0.51	c0.15	
v/s Ratio Perm						
v/c Ratio				0.77	0.66	
Uniform Delay, d1				10.2	31.9	
Progression Factor				0.61	0.48	
Incremental Delay, d2				1.4	3.9	
Delay (s)				7.6	19.3	
Level of Service				A	B	
Approach Delay (s)	0.0			7.6	19.3	
Approach LOS	A			A	B	

Intersection Summary			
HCM Average Control Delay		9.5	HCM Level of Service A
HCM Volume to Capacity ratio		0.74	
Actuated Cycle Length (s)		90.0	Sum of lost time (s) 10.0
Intersection Capacity Utilization		66.8%	ICU Level of Service C
Analysis Period (min)		15	

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

12: Kuhio Ave. & Launiu St.

3/7/2012



Volume (vph)	EB	WB	SB	EB	WB	SB
Lane Configurations		↑↑	↑↑		↑	↑
Volume (vph)	0	560	164	0	79	44
Ideal Flow (vphpl)	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
Frb, ped/bikes		1.00	1.00		1.00	0.94
Fpb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3539	3539		1770	1492
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3539	3539		1770	1492
Peak-hour factor, PHF	0.79	0.79	0.79	0.79	0.79	0.79
Adj. Flow (vph)	0	709	208	0	100	56
RTOR Reduction (vph)	0	0	0	0	0	42
Lane Group Flow (vph)	0	709	208	0	100	14
Confl. Peds. (#/hr)					22	31
Turn Type		NA	NA		NA	Perm
Protected Phases		6	2		8	
Permitted Phases						8
Actuated Green, G (s)		50.0	50.0		20.0	20.0
Effective Green, g (s)		50.0	50.0		20.0	20.0
Actuated g/C Ratio		0.62	0.62		0.25	0.25
Clearance Time (s)		5.0	5.0		5.0	5.0
Lane Grp Cap (vph)		2212	2212		443	373
v/s Ratio Prot		0.20	0.06		0.06	
v/s Ratio Perm						0.01
v/c Ratio		0.32	0.09		0.23	0.04
Uniform Delay, d1		7.0	6.0		23.8	22.7
Progression Factor		0.52	0.40		1.00	1.00
Incremental Delay, d2		0.4	0.1		1.2	0.2
Delay (s)		4.0	2.5		25.0	22.9
Level of Service		A	A		C	C
Approach Delay (s)		4.0	2.5		24.3	
Approach LOS		A	A		C	

Intersection Summary			
HCM Average Control Delay	6.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	37.1%	ICU Level of Service	A
Analysis Period (min)	15		
c - Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 12: Kuhio Ave. & Launiu St.

9/10/2012



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↖	↗
Volume (vph)	0	925	267	0	71	36
Ideal Flow (vphpl)	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
Frbp, ped/bikes		1.00	1.00		1.00	1.00
Fipb, ped/bikes		1.00	1.00		1.00	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3539	3539		1770	1583
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3539	3539		1770	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	974	281	0	75	38
RTOR Reduction (vph)	0	0	0	0	0	30
Lane Group Flow (vph)	0	974	281	0	75	8
Confl. Peds. (#/hr)					57	
Turn Type		NA	NA		NA	Perm
Protected Phases		6	2		8	
Permitted Phases						8
Actuated Green, G (s)		60.0	60.0		20.0	20.0
Effective Green, g (s)		60.0	60.0		20.0	20.0
Actuated g/C Ratio		0.67	0.67		0.22	0.22
Clearance Time (s)		5.0	5.0		5.0	5.0
Lane Grp Cap (vph)		2359	2359		393	352
v/s Ratio Prot		c0.28	0.08		c0.04	
v/s Ratio Perm						0.01
v/c Ratio		0.41	0.12		0.19	0.02
Uniform Delay, d1		6.9	5.4		28.4	27.4
Progression Factor		0.94	0.58		1.00	1.00
Incremental Delay, d2		0.5	0.1		1.1	0.1
Delay (s)		7.0	3.3		29.5	27.5
Level of Service		A	A		C	C
Approach Delay (s)		7.0	3.3		28.8	
Approach LOS		A	A		C	
Intersection Summary						
HCM Average Control Delay			8.0		HCM Level of Service	A
HCM Volume to Capacity ratio			0.36			
Actuated Cycle Length (s)			90.0		Sum of lost time (s)	10.0
Intersection Capacity Utilization			37.8%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

HCM Unsignalized Intersection Capacity Analysis

13: Kaiolu St. & Kuhio Ave.

3/7/2012



Movement	EB1	EB2	WB1	WB2	NB1	NB2	SB1	SB2
Lane Configurations	↔		↔		↑			
Volume (veh/h)	50	586	15	7	164	19	0	0
Sign Control	Free		Free		Stop			Stop
Grade	0%		0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	56	651	17	8	182	21	0	0
Pedestrians	17		7		65			181
Lane Width (ft)	12.0		12.0		12.0			0.0
Walking Speed (ft/s)	4.0		4.0		4.0			4.0
Percent Blockage	1		1		5			0
Right turn flare (veh)								
Median type	None		None					
Median storage (veh)								
Upstream signal (ft)	255		313					
pX, platoon unblocked			0.92		0.92		0.92	0.92
vC, conflicting volume	384		733		959	1235	406	843
vC1, stage 1 conf vol								
vC2, stage 2 conf vol								
vCu, unblocked vol	384		533		780	1080	178	653
tC, single (s)	4.1		4.1		7.5	6.5	6.9	7.5
tC, 2 stage (s)								
tF (s)	2.2		2.2		3.5	4.0	3.3	3.5
p0 queue free %	95		99		100	100	99	100
cM capacity (veh/h)	1171		896		225	178	721	291

Direction, Lane #	EB	EB 2	WB 1	WB 2	NB 1
Volume Total	381	342	99	112	10
Volume Left	56	0	8	0	0
Volume Right	0	17	0	21	10
cSH	1171	1700	896	1700	721
Volume to Capacity	0.05	0.20	0.01	0.07	0.01
Queue Length 95th (ft)	4	0	1	0	1
Control Delay (s)	1.6	0.0	0.8	0.0	10.1
Lane LOS	A		A		B
Approach Delay (s)	0.8		0.4		10.1
Approach LOS					B

Intersection Summary	
Average Delay	0.8
Intersection Capacity Utilization	38.2%
ICU Level of Service	A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis

13: Kaiolu St. & Kuhio Ave.

9/10/2012



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔			↔↔			↑					
Volume (veh/h)	85	890	16	6	274	41	0	0	4	0	0	0
Sign Control	Free			Free			Stop			Stop		
Grade	0%			0%			0%			0%		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	88	918	16	6	282	42	0	0	4	0	0	0
Pedestrians	82			20			79			211		
Lane Width (ft)	12.0			12.0			12.0			0.0		
Walking Speed (ft/s)	4.0			4.0			4.0			4.0		
Percent Blockage	7			2			7			0		
Right turn flare (veh)												
Median type	None			None								
Median storage (veh)												
Upstream signal (ft)	255			313								
pX, platoon unblocked	0.98			0.87			0.88			0.88		
vC, conflicting volume	536			1013			1416			1728		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	490			726			1112			1466		
tC, single (s)	4.1			4.1			7.5			6.5		
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5			4.0		
p0 queue free %	92			99			100			100		
cM capacity (veh/h)	1050			712			111			95		
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1							
Volume Total	546	475	147	184	4							
Volume Left	88	0	6	0	0							
Volume Right	0	16	0	42	4							
cSH	1050	1700	712	1700	634							
Volume to Capacity	0.08	0.28	0.01	0.11	0.01							
Queue Length 95th (ft)	7	0	1	0	0							
Control Delay (s)	2.2	0.0	0.5	0.0	10.7							
Lane LOS	A		A		B							
Approach Delay (s)	1.2		0.2		10.7							
Approach LOS					B							
Intersection Summary												
Average Delay			1.0									
Intersection Capacity Utilization			47.7%		ICU Level of Service		A					
Analysis Period (min)			15									

HCM Signalized Intersection Capacity Analysis

17: Lewers St. & Kuhio Ave.

3/12/2012



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SEL	SBT	SEB
Lane Configurations	↖ ↗			↖ ↗			↖ ↗			↖ ↗		
Volume (vph)	49	553	0	0	184	42	9	83	37	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		5.0			
Lane Util. Factor	1.00	0.95			0.95			0.95		0.95		
Frbp, ped/bikes	1.00	1.00			0.95			0.95		0.95		
Flpb, ped/bikes	0.93	1.00			1.00			0.99		0.99		
Frt	1.00	1.00			0.97			0.96		0.96		
Flt Protected	0.95	1.00			1.00			1.00		1.00		
Satd. Flow (prot)	1644	3539			3283			3160		3160		
Flt Permitted	0.52	1.00			1.00			1.00		1.00		
Satd. Flow (perm)	907	3539			3283			3160		3160		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	53	601	0	0	200	46	10	90	40	0	0	0
RTOR Reduction (vph)	0	0	0	0	25	0	0	28	0	0	0	0
Lane Group Flow (vph)	53	601	0	0	221	0	0	113	0	0	0	0
Confl. Peds. (#/hr)	158				158		132		112			
Turn Type	pm+pt	NA			NA		Perm	NA				
Protected Phases	1	6			2			4				
Permitted Phases	6						4					
Actuated Green, G (s)	45.0	45.0			35.0			25.0				
Effective Green, g (s)	45.0	45.0			35.0			25.0				
Actuated g/C Ratio	0.56	0.56			0.44			0.31				
Clearance Time (s)	5.0	5.0			5.0			5.0				
Lane Grp Cap (vph)	556	1991			1436			988				
v/s Ratio Prot	0.01	0.17			0.07							
v/s Ratio Perm	0.05							0.04				
v/c Ratio	0.10	0.30			0.15			0.11				
Uniform Delay, d1	8.1	9.2			13.6			19.6				
Progression Factor	0.66	0.62			1.00			1.27				
Incremental Delay, d2	0.3	0.4			0.2			0.2				
Delay (s)	5.7	6.1			13.8			25.1				
Level of Service	A	A			B			C				
Approach Delay (s)		6.1			13.8			25.1			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM Average Control Delay	10.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	42.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

17: Lewers St. & Kuhio Ave.

9/10/2012



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕			↕			↕				
Volume (vph)	128	784	0	0	277	57	43	239	44	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	1.00	0.95			0.95			0.95				
Frpb, ped/bikes	1.00	1.00			0.94			0.96				
Flpb, ped/bikes	0.92	1.00			1.00			0.96				
Frt	1.00	1.00			0.97			0.98				
Flt Protected	0.95	1.00			1.00			0.99				
Satd. Flow (prot)	1636	3539			3250			3157				
Flt Permitted	0.48	1.00			1.00			0.99				
Satd. Flow (perm)	823	3539			3250			3157				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	139	852	0	0	301	62	47	260	48	0	0	0
RTOR Reduction (vph)	0	0	0	0	19	0	0	14	0	0	0	0
Lane Group Flow (vph)	139	852	0	0	344	0	0	341	0	0	0	0
Confl. Peds. (#/hr)	273					273	216		234			
Turn Type	pm+pt	NA			NA		Perm	NA				
Protected Phases	1	6			2			4				
Permitted Phases	6						4					
Actuated Green, G (s)	55.0	55.0			45.0			25.0				
Effective Green, g (s)	55.0	55.0			45.0			25.0				
Actuated g/C Ratio	0.61	0.61			0.50			0.28				
Clearance Time (s)	5.0	5.0			5.0			5.0				
Lane Grp Cap (vph)	548	2163			1625			877				
v/s Ratio Prot	0.01	0.24			0.11							
v/s Ratio Perm	0.14							0.11				
v/c Ratio	0.25	0.39			0.21			0.39				
Uniform Delay, d1	7.6	9.0			12.6			26.3				
Progression Factor	0.15	0.14			1.00			1.00				
Incremental Delay, d2	1.1	0.5			0.3			1.3				
Delay (s)	2.2	1.8			12.9			27.6				
Level of Service	A	A			B			C				
Approach Delay (s)		1.9			12.9			27.6			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM Average Control Delay	9.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	46.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

16: Lewers St. & Kalakaua Ave.

3/7/2012



Movement	EBL	EB	EBR	WBL	WB	WBR	NBL	NB	NBR	SEL	SE	SEB		
Lane Configurations	← ← ←							↑	↑					
Volume (vph)	115	1164	207	0	0	0	0	54	12	0	0	0		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900		
Total Lost time (s)	5.0							5.0	5.0					
Lane Util. Factor	0.86							1.00	1.00					
Frpb, ped/bikes	0.92							1.00	0.77					
Flpb, ped/bikes	0.98							1.00	1.00					
Frt	0.98							1.00	0.85					
Flt Protected	1.00							1.00	1.00					
Satd. Flow (prot)	5675							1863	1213					
Flt Permitted	1.00							1.00	1.00					
Satd. Flow (perm)	5675							1863	1213					
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91		
Adj. Flow (vph)	126	1279	227	0	0	0	0	59	13	0	0	0		
RTOR Reduction (vph)	0	53	0	0	0	0	0	0	9	0	0	0		
Lane Group Flow (vph)	0	1580	0	0	0	0	0	59	4	0	0	0		
Confl. Peds. (#/hr)	154	267									151			
Turn Type	Perm	NA						NA	Perm					
Protected Phases	6							4						
Permitted Phases	6								4					
Actuated Green, G (s)	45.0							25.0	25.0					
Effective Green, g (s)	45.0							25.0	25.0					
Actuated g/C Ratio	0.56							0.31	0.31					
Clearance Time (s)	5.0							5.0	5.0					
Lane Grp Cap (vph)	3192							582	379					
v/s Ratio Prot								0.03						
v/s Ratio Perm	0.28							0.00						
v/c Ratio	0.49							0.10	0.01					
Uniform Delay, d1	10.6							19.5	19.0					
Progression Factor	0.76							1.00	1.00					
Incremental Delay, d2	0.5							0.3	0.1					
Delay (s)	8.5							19.9	19.0					
Level of Service	A							B	B					
Approach Delay (s)	8.5							0.0		19.7	0.0			
Approach LOS	A							A		B	A			
Intersection Summary														
HCM Average Control Delay	9.0							HCM Level of Service		A				
HCM Volume to Capacity ratio	0.35													
Actuated Cycle Length (s)	80.0							Sum of lost time (s)		10.0				
Intersection Capacity Utilization	44.9%							ICU Level of Service		A				
Analysis Period (min)	15													
c Critical Lane Group														

HCM Signalized Intersection Capacity Analysis

16: Lewers St. & Kalakaua Ave.

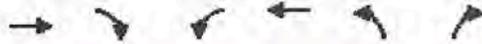
9/10/2012



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		
Lane Configurations	← ↑ →						↑							
Volume (vph)	150	1648	177	0	0	0	0	178	32	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							
Lane Util. Factor	0.86						1.00							
Frbp, ped/bikes	0.92						1.00							
Flpb, ped/bikes	0.96						1.00							
Frt	0.99						1.00							
Flt Protected	1.00						1.00							
Satd. Flow (prot)	5596						1863							
Flt Permitted	1.00						1.00							
Satd. Flow (perm)	5596						1863							
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93		
Adj. Flow (vph)	161	1772	190	0	0	0	0	191	34	0	0	0		
RTOR Reduction (vph)	0	36	0	0	0	0	0	0	0	0	0	0		
Lane Group Flow (vph)	0	2087	0	0	0	0	0	191	34	0	0	0		
Confl. Peds. (#/hr)	909	880								483				
Turn Type	Perm	NA						NA	Perm					
Protected Phases	6						4							
Permitted Phases	6						4							
Actuated Green, G (s)	45.0						25.0							
Effective Green, g (s)	45.0						25.0							
Actuated g/C Ratio	0.56						0.31							
Clearance Time (s)	5.0						5.0							
Lane Grp Cap (vph)	3148						582							
v/s Ratio Prot							0.10							
v/s Ratio Perm	0.37						0.04							
v/c Ratio	0.66						0.33							
Uniform Delay, d1	12.2						21.1							
Progression Factor	0.68						1.00							
Incremental Delay, d2	0.9						1.5							
Delay (s)	9.2						22.6							
Level of Service	A						C							
Approach Delay (s)	9.2						0.0		22.2				0.0	
Approach LOS	A						A		C				A	
Intersection Summary														
HCM Average Control Delay	10.5						HCM Level of Service			B				
HCM Volume to Capacity ratio	0.54													
Actuated Cycle Length (s)	80.0						Sum of lost time (s)			10.0				
Intersection Capacity Utilization	51.8%						ICU Level of Service			A				
Analysis Period (min)	15													
c Critical Lane Group														

HCM Signalized Intersection Capacity Analysis
 18: Lewers St. & Ala Wai Blvd.

3/7/2012



Movement	EBL	EBR	WBL	WBR	NBL	NBR
Lane Configurations				↑↑↑	↗↘	
Volume (vph)	0	0	0	2505	178	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	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	0	0	0	2815	200	0
RTOR Reduction (vph)	0	0	0	0	3	0
Lane Group Flow (vph)	0	0	0	2815	197	0
Turn Type				NA	NA	
Protected Phases				2	4	
Permitted Phases						
Actuated Green, G (s)				50.0	20.0	
Effective Green, g (s)				50.0	20.0	
Actuated g/C Ratio				0.62	0.25	
Clearance Time (s)				5.0	5.0	
Lane Grp Cap (vph)				3178	858	
v/s Ratio Prot				c0.55	c0.06	
v/s Ratio Perm						
v/c Ratio				0.89	0.23	
Uniform Delay, d1				12.6	23.9	
Progression Factor				1.00	0.82	
Incremental Delay, d2				4.1	0.6	
Delay (s)				16.7	20.2	
Level of Service				B	C	
Approach Delay (s)	0.0			16.7	20.2	
Approach LOS	A			B	C	

Intersection Summary			
HCM Average Control Delay	16.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	61.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

18: Lewers St. & Ala Wai Blvd.

3/7/2012



Movement	EBT	EBL	WBE	WBT	NBT	NBP
Lane Configurations				↑↑↑	↑↑	
Volume (vph)	0	0	0	2047	343	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	
Flt				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	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	0	0	2178	365	0
RTOR Reduction (vph)	0	0	0	0	19	0
Lane Group Flow (vph)	0	0	0	2178	346	0
Turn Type				NA	NA	
Protected Phases				2	4	
Permitted Phases						
Actuated Green, G (s)				60.0	20.0	
Effective Green, g (s)				60.0	20.0	
Actuated g/C Ratio				0.67	0.22	
Clearance Time (s)				5.0	5.0	
Lane Grp. Cap. (vph)				3390	763	
v/s Ratio Prot				c0.43	c0.10	
v/s Ratio Perm						
v/c Ratio				0.64	0.45	
Uniform Delay, d1				8.7	30.3	
Progression Factor				1.00	0.65	
Incremental Delay, d2				0.9	1.9	
Delay (s)				9.7	21.5	
Level of Service				A	C	
Approach Delay (s)	0.0			9.7	21.5	
Approach LOS	A			A	C	

Intersection Summary			
HCM Average Control Delay		11.4	HCM Level of Service B
HCM Volume to Capacity ratio		0.60	
Actuated Cycle Length (s)		90.0	Sum of lost time (s) 10.0
Intersection Capacity Utilization		57.7%	ICU Level of Service B
Analysis Period (min)		15	

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 22: Kalakaua Ave. & Olohana

9/10/2012



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	0	1324	0	0	337	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	
Lane Util. Factor		0.86			0.97	
Flt		1.00			1.00	
Flt Protected		1.00			0.95	
Satd. Flow (prot)		6408			3433	
Flt Permitted		1.00			0.95	
Satd. Flow (perm)		6408			3433	
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	0	1540	0	0	392	0
RTOR Reduction (vph)	0	0	0	0	36	0
Lane Group Flow (vph)	0	1540	0	0	356	0
Turn Type		NA			NA	
Protected Phases		4			6	
Permitted Phases						
Actuated Green, G (s)		45.0			25.0	
Effective Green, g (s)		45.0			25.0	
Actuated g/C Ratio		0.56			0.31	
Clearance Time (s)		5.0			5.0	
Lane Grp Cap (vph)		3605			1073	
v/s Ratio Prot		c0.24			c0.10	
v/s Ratio Perm						
v/c Ratio		0.43			0.33	
Uniform Delay, d1		10.1			21.1	
Progression Factor		1.00			1.13	
Incremental Delay, d2		0.4			0.8	
Delay (s)		10.4			24.6	
Level of Service		B			C	
Approach Delay (s)		10.4	0.0		24.6	
Approach LOS		B	A		C	

Intersection Summary			
HCM Average Control Delay		13.3	HCM Level of Service B
HCM Volume to Capacity ratio		0.39	
Actuated Cycle Length (s)		80.0	Sum of lost time (s) 10.0
Intersection Capacity Utilization		37.1%	ICU Level of Service A
Analysis Period (min)		15	

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 22: Kalakaua Ave. & Olohana

9/10/2012



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	0	1830	0	0	353	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	
Lane Util. Factor		0.86			0.97	
Flt		1.00			1.00	
Flt Protected		1.00			0.95	
Satd. Flow (prot)		6408			3433	
Flt Permitted		1.00			0.95	
Satd. Flow (perm)		6408			3433	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	1947	0	0	376	0
RTOR Reduction (vph)	0	0	0	0	6	0
Lane Group Flow (vph)	0	1947	0	0	370	0
Turn Type		NA			NA	
Protected Phases		4			6	
Permitted Phases						
Actuated Green, G (s)		45.0			35.0	
Effective Green, g (s)		45.0			35.0	
Actuated g/C Ratio		0.50			0.39	
Clearance Time (s)		5.0			5.0	
Lane Grp Cap (vph)		3204			1335	
v/s Ratio Prot		c0.30			c0.11	
v/s Ratio Perm						
v/c Ratio		0.61			0.28	
Uniform Delay, d1		16.2			18.8	
Progression Factor		1.00			1.56	
Incremental Delay, d2		0.9			0.5	
Delay (s)		17.0			29.8	
Level of Service		B			C	
Approach Delay (s)		17.0	0.0		29.8	
Approach LOS		B	A		C	

Intersection Summary			
HCM Average Control Delay	19.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	44.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
23: Olohana & Kuhio Ave.

9/10/2012



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↖	↑						↙	
Volume (vph)	0	513	23	200	78	0	0	0	0	25	118	19
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		1.00	1.00						0.95	
Frbp, ped/bikes		0.99		1.00	1.00						0.97	
Fipb, ped/bikes		1.00		0.99	1.00						0.98	
Frt		0.99		1.00	1.00						0.98	
Flt Protected		1.00		0.95	1.00						0.99	
Satd. Flow (prot)		3494		1753	1863						3272	
Flt Permitted		1.00		0.27	1.00						0.99	
Satd. Flow (perm)		3494		504	1863						3272	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	552	25	215	84	0	0	0	0	27	127	20
RTOR Reduction (vph)	0	4	0	0	0	0	0	0	0	0	13	0
Lane Group Flow (vph)	0	573	0	215	84	0	0	0	0	0	162	0
Confl. Peds. (#/hr)			92	92						99		97
Turn Type		NA		pm+pt	NA					Perm	NA	
Protected Phases		4		3	8							6
Permitted Phases				8						6		
Actuated Green, G (s)		25.0		40.0	40.0							30.0
Effective Green, g (s)		25.0		40.0	40.0							30.0
Actuated g/C Ratio		0.31		0.50	0.50							0.38
Clearance Time (s)		5.0		5.0	5.0							5.0
Lane Grp Cap (vph)		1092		408	932							1227
v/s Ratio Prot		0.16		c0.07	0.05							
v/s Ratio Perm				c0.20								0.05
v/c Ratio		0.52		0.53	0.09							0.13
Uniform Delay, d1		22.6		12.5	10.5							16.4
Progression Factor		1.00		1.41	1.34							1.00
Incremental Delay, d2		1.8		4.8	0.2							0.2
Delay (s)		24.4		22.3	14.2							16.7
Level of Service		C		C	B							B
Approach Delay (s)		24.4			20.0			0.0				16.7
Approach LOS		C			C			A				B

Intersection Summary			
HCM Average Control Delay	21.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	52.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

23: Olohana & Kuhio Ave.

9/10/2012



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↙	↑						↘↘	
Volume (vph)	0	513	23	200	78	0	0	0	0	25	118	19
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		1.00	1.00						0.95	
Frbp, ped/bikes		0.99		1.00	1.00						0.97	
Flpb, ped/bikes		1.00		0.99	1.00						0.98	
Frt		0.99		1.00	1.00						0.98	
Flt Protected		1.00		0.95	1.00						0.99	
Satd. Flow (prot)		3494		1749	1863						3272	
Flt Permitted		1.00		0.31	1.00						0.99	
Satd. Flow (perm)		3494		568	1863						3272	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	552	25	215	84	0	0	0	0	27	127	20
RTOR Reduction (vph)	0	4	0	0	0	0	0	0	0	0	12	0
Lane Group Flow (vph)	0	573	0	215	84	0	0	0	0	0	162	0
Confl. Peds. (#/hr)			92	92						99		97
Turn Type		NA		pm+pl	NA					Perm		NA
Protected Phases		4		3	8							6
Permitted Phases				8						6		
Actuated Green, G (s)		30.0		45.0	45.0						25.0	
Effective Green, g (s)		30.0		45.0	45.0						25.0	
Actuated g/C Ratio		0.38		0.56	0.56						0.31	
Clearance Time (s)		5.0		5.0	5.0						5.0	
Lane Grp Cap (vph)		1310		467	1048						1023	
v/s Ratio Prot		0.16		c0.06	0.05							
v/s Ratio Perm				c0.20							0.05	
v/c Ratio		0.44		0.46	0.08						0.16	
Uniform Delay, d1		18.7		9.6	8.0						19.9	
Progression Factor		1.00		1.39	1.30						1.00	
Incremental Delay, d2		1.1		3.2	0.1						0.3	
Delay (s)		19.8		16.6	10.8						20.2	
Level of Service		B		B	B						C	
Approach Delay (s)		19.8			14.9			0.0			20.2	
Approach LOS		B			B			A			C	
Intersection Summary												
HCM Average Control Delay			18.5			HCM Level of Service				B		
HCM Volume to Capacity ratio			0.34									
Actuated Cycle Length (s)			80.0			Sum of lost time (s)				10.0		
Intersection Capacity Utilization			52.1%			ICU Level of Service				A		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

13: Ala Moana/Niu & Kalakaua

9/10/2012



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	TTT>			↑			TTT					
Volume (vph)	0	1443	215	0	5	0	0	0	0	59	506	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0			5.0			5.0					
Lane Util. Factor	0.86			1.00			0.91					
Flpb, ped/bikes	0.96			1.00			1.00					
Flpb, ped/bikes	1.00			1.00			1.00					
Flt	0.98			1.00			1.00					
Flt Protected	1.00			1.00			0.99					
Satd. Flow (prot)	6029			1863			5059					
Flt Permitted	1.00			1.00			0.99					
Satd. Flow (perm)	6029			1863			5059					
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)	0	1640	244	0	6	0	0	0	0	67	575	0
RTOR Reduction (vph)	0	34	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1850	0	0	6	0	0	0	0	0	642	0
Confl. Peds. (#/hr)	224											
Turn Type	NA			NA			Split			NA		
Protected Phases	2			6			8			8		
Permitted Phases												
Actuated Green, G (s)	45.0			45.0			25.0					
Effective Green, g (s)	45.0			45.0			25.0					
Actuated g/C Ratio	0.56			0.56			0.31					
Clearance Time (s)	5.0			5.0			5.0					
Lane Grp Cap (vph)	3391			1048			1581					
v/s Ratio Prot	0.31			0.00			0.13					
v/s Ratio Perm												
v/c Ratio	0.55			0.01			0.41					
Uniform Delay, d1	11.0			7.7			21.7					
Progression Factor	1.00			0.42			1.00					
Incremental Delay, d2	0.6			0.0			0.8					
Delay (s)	11.7			3.2			22.4					
Level of Service	B			A			C					
Approach Delay (s)	11.7			3.2			0.0			22.4		
Approach LOS	B			A			A			C		
Intersection Summary												
HCM Average Control Delay	14.4			HCM Level of Service			B					
HCM Volume to Capacity ratio	0.50											
Actuated Cycle Length (s)	80.0			Sum of lost time (s)			10.0					
Intersection Capacity Utilization	44.9%			ICU Level of Service			A					
Analysis Period (min)	15											
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

13: Ala Moana/Niu & Kalakaua

9/10/2012



Movement	SBL	EBT	EBP	WBL	WBT	WBH	NBL	NBT	NBR	SBL	SEB	SBR
Lane Configurations	TTT			↑						TTT		
Volume (vph)	0	1962	187	0	13	0	0	0	0	80	443	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0			5.0						5.0		
Lane Util. Factor	0.86			1.00						0.91		
Frbp, ped/bikes	0.97			1.00						1.00		
Ftpb, ped/bikes	1.00			1.00						1.00		
Frt	0.99			1.00						1.00		
Flt Protected	1.00			1.00						0.99		
Satd. Flow (prot)	6137			1863						5047		
Flt Permitted	1.00			1.00						0.99		
Satd. Flow (perm)	6137			1863						5047		
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	2023	193	0	13	0	0	0	0	82	457	0
RTOR Reduction (vph)	0	17	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	2199	0	0	13	0	0	0	0	0	539	0
Confl. Peds. (#/hr)	282											
Turn Type	NA			NA						Split		NA
Protected Phases	2			6						8		8
Permitted Phases												
Actuated Green, G (s)	50.0			50.0								30.0
Effective Green, g (s)	50.0			50.0								30.0
Actuated g/C Ratio	0.56			0.56								0.33
Clearance Time (s)	5.0			5.0								5.0
Lane Grp Cap (vph)	3409			1035								1682
v/s Ratio Prot	0.36			0.01								0.11
v/s Ratio Perm												
v/c Ratio	0.64			0.01								0.32
Uniform Delay, d1	13.9			9.0								22.4
Progression Factor	1.00			0.38								1.00
Incremental Delay, d2	1.0			0.0								0.5
Delay (s)	14.8			3.5								22.9
Level of Service	B			A								C
Approach Delay (s)	14.8			3.5			0.0					22.9
Approach LOS	B			A			A					C
Intersection Summary												
HCM Average Control Delay	16.3			HCM Level of Service			B					
HCM Volume to Capacity ratio	0.52											
Actuated Cycle Length (s)	90.0			Sum of lost time (s)			10.0					
Intersection Capacity Utilization	50.8%			ICU Level of Service			A					
Analysis Period (min)	15											
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

14: Ala Moana/Pau & Kalakaua

9/10/2012



Movement	EBL	EBT	EBR	WBL	WBT	WBF	NBL	NBT	NBF	SBL	SBT	SBR
Lane Configurations	← ↑ ↑			↑			↑			↑		
Volume (vph)	120	1381	0	0	6	6	0	88	479	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	0.86			1.00			0.95			0.95		
Flpb, ped/bikes	1.00			0.85			1.00			1.00		
Flpb, ped/bikes	0.98			1.00			1.00			1.00		
Flt Protected	1.00			1.00			0.90			0.85		
Flt Permitted	1.00			1.00			1.00			1.00		
Satd. Flow (prot)	6241			1479			1585			1504		
Satd. Flow (perm)	5647			1479			1585			1504		
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	138	1587	0	0	7	7	0	101	551	0	0	0
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	17	0	0	0
Lane Group Flow (vph)	0	1725	0	0	11	0	0	332	304	0	0	0
Confl. Peds. (#/hr)	113			113			113			113		
Turn Type	Perm		NA		NA		NA		Prot			
Protected Phases	2		6		4		4					
Permitted Phases	2											
Actuated Green, G (s)	45.0		45.0		25.0		25.0					
Effective Green, g (s)	45.0		45.0		25.0		25.0					
Actuated g/C Ratio	0.56		0.56		0.31		0.31					
Clearance Time (s)	5.0		5.0		5.0		5.0					
Lane Grp Cap (vph)	3176		832		495		470					
v/s Ratio Prot			0.01		0.21		0.20					
v/s Ratio Perm	0.31											
v/c Ratio	0.54		0.01		0.67		0.65					
Uniform Delay, d1	11.0		7.7		23.9		23.7					
Progression Factor	0.26		1.00		1.00		1.00					
Incremental Delay, d2	0.6		0.0		7.1		6.7					
Delay (s)	3.5		7.7		31.0		30.4					
Level of Service	A		A		C		C					
Approach Delay (s)	3.5		7.7		30.7						0.0	
Approach LOS	A		A		C						A	
Intersection Summary												
HCM Average Control Delay	10.9			HCM Level of Service			B					
HCM Volume to Capacity ratio	0.59											
Actuated Cycle Length (s)	80.0			Sum of lost time (s)			10.0					
Intersection Capacity Utilization	49.9%			ICU Level of Service			A					
Analysis Period (min)	15											
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

14: Ala Moana/Pau & Kalakaua

9/10/2012



Movement	EBL	EBT	EBF	WBL	WBT	WBF	NBL	NET	NBF	SBL	SBT	SBR
Lane Configurations	← ↑ ↑			← ↑			← ↑			← ↑		
Volume (vph)	144	1898	0	0	17	9	0	148	792	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	0.86			1.00			0.95			0.95		
Frbp, ped/bikes	1.00			0.81			1.00			1.00		
Flpb, ped/bikes	0.96			1.00			1.00			1.00		
Frt	1.00			0.95			0.90			0.85		
Flt Protected	1.00			1.00			1.00			1.00		
Satd. Flow (prot)	6159			1435			1589			1504		
Flt Permitted	0.90			1.00			1.00			1.00		
Satd. Flow (perm)	5572			1435			1589			1504		
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)	153	2019	0	0	18	10	0	157	843	0	0	0
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	43	0	0	0
Lane Group Flow (vph)	0	2172	0	0	24	0	0	494	463	0	0	0
Confl. Peds. (#/hr)	220			220			220			220		
Turn Type	Perm		NA		NA		NA		Prot			
Protected Phases	2		6		4		4					
Permitted Phases	2											
Actuated Green, G (s)	50.0		50.0		30.0		30.0					
Effective Green, g (s)	50.0		50.0		30.0		30.0					
Actuated g/C Ratio	0.56		0.56		0.33		0.33					
Clearance Time (s)	5.0		5.0		5.0		5.0					
Lane Grp Cap (vph)	3096		797		530		501					
v/s Ratio Prot			0.02		0.31		0.31					
v/s Ratio Perm	0.39											
v/c Ratio	0.70		0.03		0.93		0.92					
Uniform Delay, d1	14.6		9.0		29.0		28.9					
Progression Factor	0.23		1.00		1.00		1.00					
Incremental Delay, d2	1.1		0.1		25.4		25.1					
Delay (s)	4.4		9.1		54.5		54.0					
Level of Service	A		A		D		D					
Approach Delay (s)	4.4		9.1		54.2				0.0			
Approach LOS	A		A		D				A			
Intersection Summary												
HCM Average Control Delay	20.0			HCM Level of Service			B					
HCM Volume to Capacity ratio	0.79											
Actuated Cycle Length (s)	90.0			Sum of lost time (s)			10.0					
Intersection Capacity Utilization	70.7%			ICU Level of Service			C					
Analysis Period (min)	15											
c Critical Lane Group												

APPENDIX IV

IMPACT TO DESIGNATED VIEW CORRIDORS

IMPACT TO DESIGNATED VIEW CORRIDORS

Methodology – A photograph from the Punchbowl Lookout, corroborated by a 'line of sight' diagram produced from an aerial photograph, provided the basis for determining which buildings affected/blocked the view of 2121 Kuhio from the lookout.

From these photos, we were able to confirm that four buildings blocked views of the proposed 2121 Kuhio Tower. To confirm the height of these four buildings, as well as the Punchbowl Lookout itself, we reviewed data included in the Google Earth 3D model of Honolulu and the website Emporis.com (a “worldwide database” of construction information).

Emporis.com collects data on buildings of high public and economic value, connects them with involved companies and sets standards for this information. In 2000 the Emporis website was founded as skyscrapers.com, with a focus on collecting information on skyscrapers and high-rise buildings only. Since 2003 Emporis has branched out, widening its database by collecting building information on all construction types. Contributors are located worldwide: data is collected by the editorial community, data researchers and public.

For the purpose of our diagrams we used the data provided by Emporis, which noted the obstructing buildings as being slightly shorter than those shown in google earth. The heights we used are as follows:

Hale Kaheka [930 Kaheka St.]: 337'
Waikiki Landmark [1888 Kalakaua Ave.]: 320'
Century Center [1750 Kalakaua Ave.]: 350'
Maile Sky Court [2058 Kuhio Ave.]: 350'

With this data, using the software '3DS max', we were able to create a computer generated model of the proposed building along with the four obstructing buildings. Then, a camera was placed in the computer model using the location and height of the actual photo taken from the punchbowl lookout. The resulting rendering was then superimposed onto the real photo, using the four obstructing buildings as the common reference point. This allowed us to accurately photo montage a rendering of the proposed massing into the actual photo, thus creating the image presented in the diagrams.

2121 Kuhio Tower

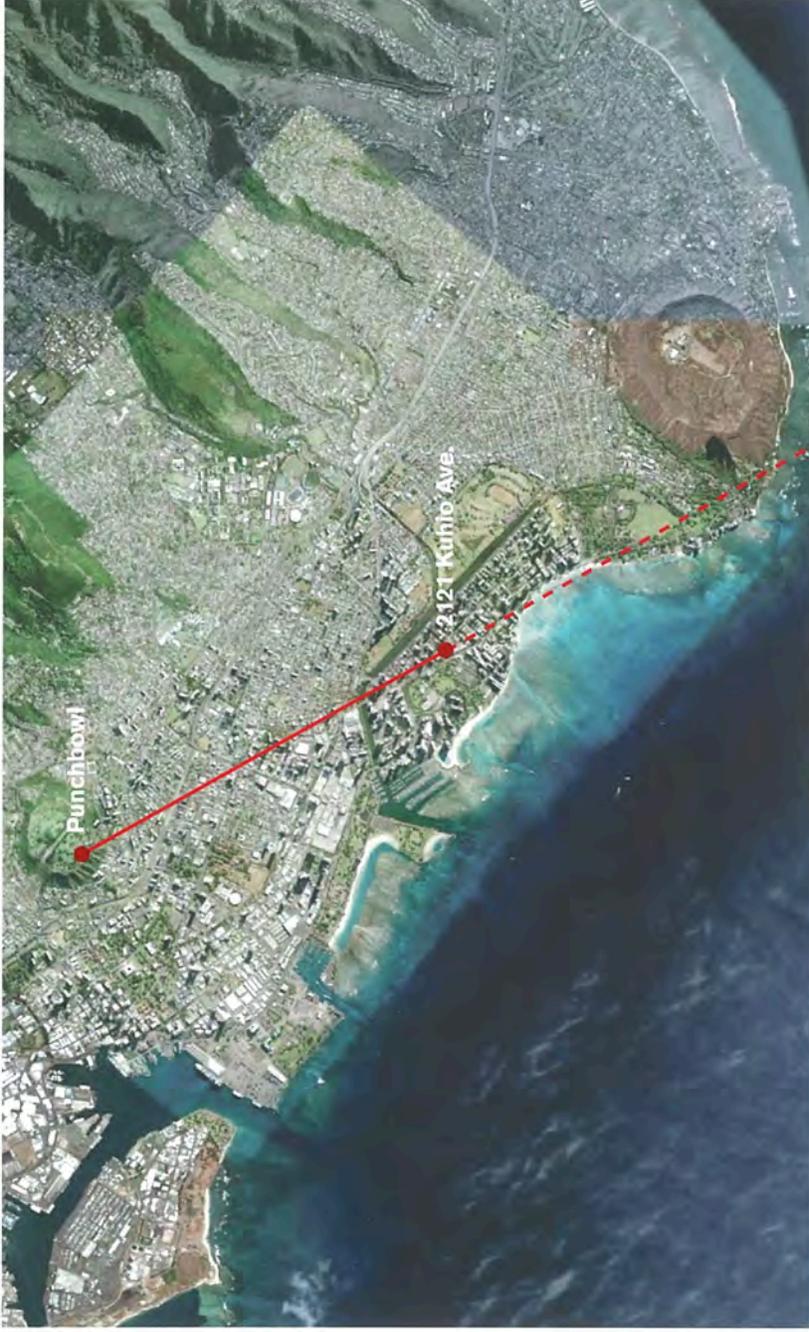


EA Building Height and View Studies

PACREP LLC

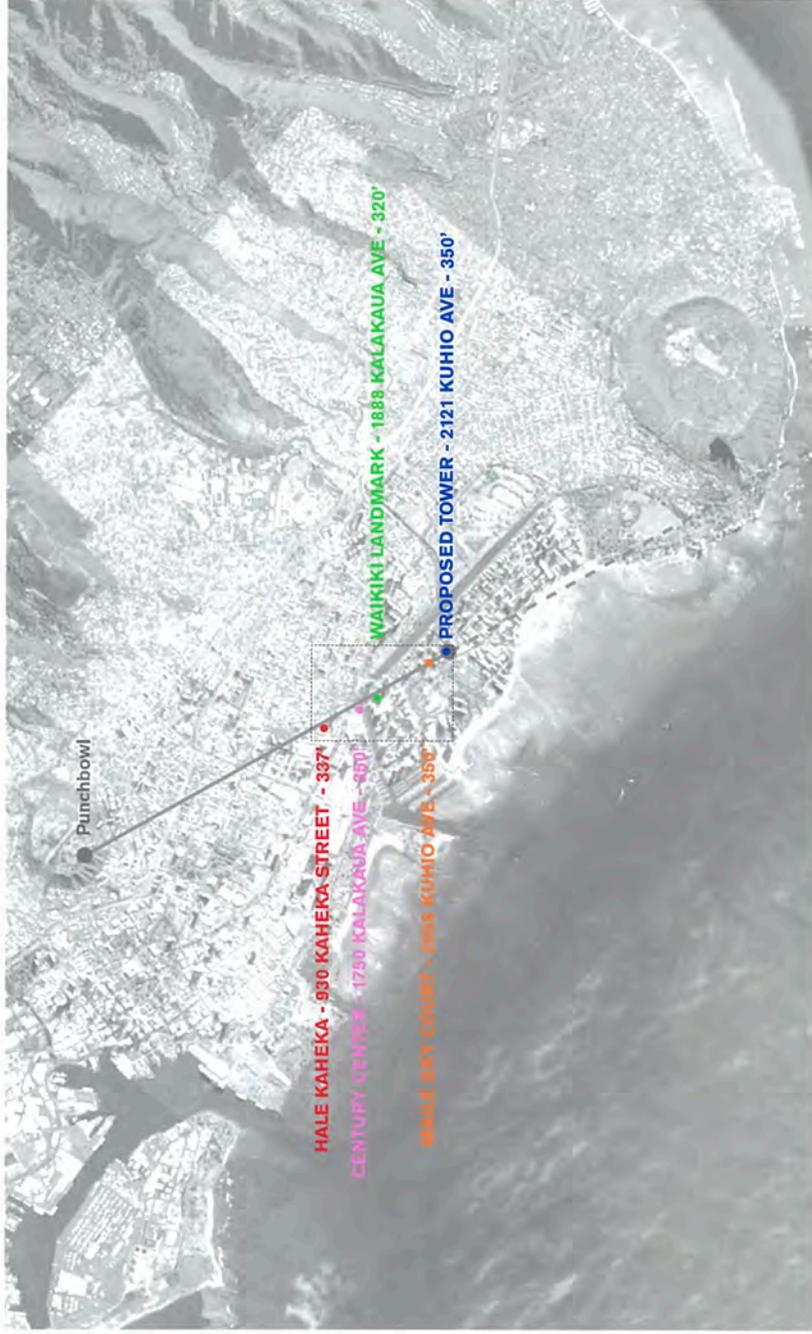
Honolulu, Hawaii
October 18th, 2012

prepared by
GUERIN GLASS ARCHITECTS, PC

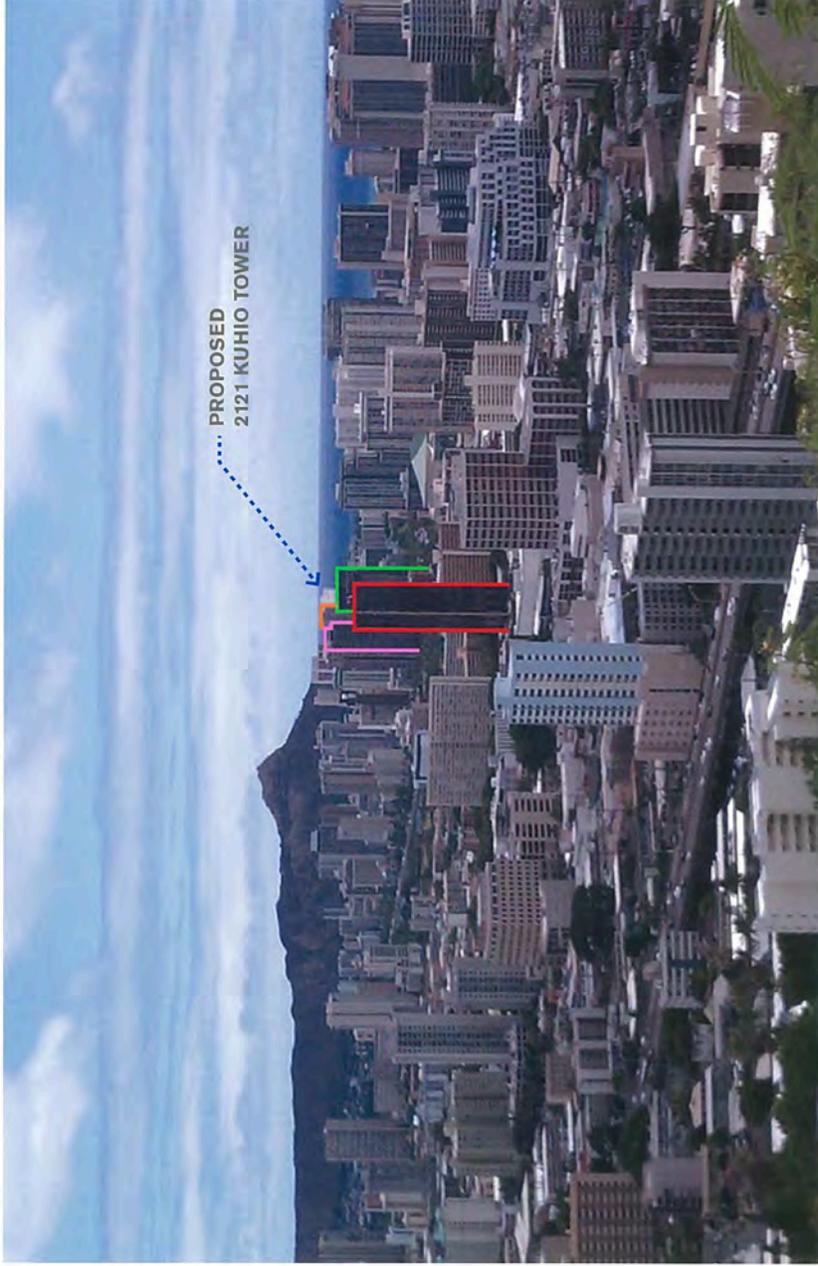


Building
Height
Sightline from
Punchbowl

Building Height
Existing and Proposed Buildings + 300'



PACREP LLC

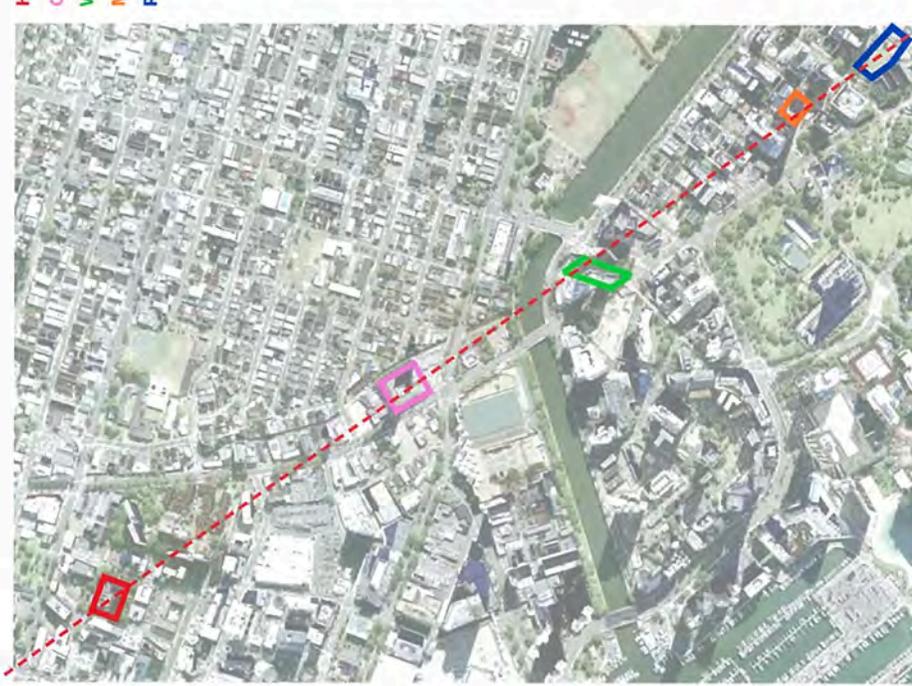


PROPOSED
2121 KUHIO TOWER

- Maile Sky Court - 350'
2058 Kuhio Ave.
- Century Center - 350'
1750 Kalakaua Ave.
- Waikiki Landmark - 320'
1888 Kalakaua Ave.
- Hale Kaheka - 337'
930 Kaheka Street

**Building
Height**
Punchbowl
View

HALE KAHEKA - 930 KAHEKA STREET - 337'
CENTURY CENTER - 1750 KALAKAUA AVE - 350'
WAIKIKI LANDMARK - 1888 KALAKAUA AVE - 320'
MAILE SKY COURT - 2058 KUHIO AVE - 350'
PROPOSED TOWER - 2121 KUHIO AVE - 350'



PACREP LLC

2121
KUHIO TOWER

Enlarged Section: 1/500
350' Proposal

HALE KAHEKA
930 KAHEKA STREET
337' Height*

CENTURY CENTER
1750 KALAKAUA AVE
350' Height*

WAIKIKI LANDMARK
1888 KALAKAUA AVE
320' Height*

MAILE SKY COURT
2058 KUHIU AVE
350' Height*

PROPOSED TOWER
2121 KUHIU AVE
350' Height



Ala Wai Canal

Building
Height

Cross Section
(Plan View 1)

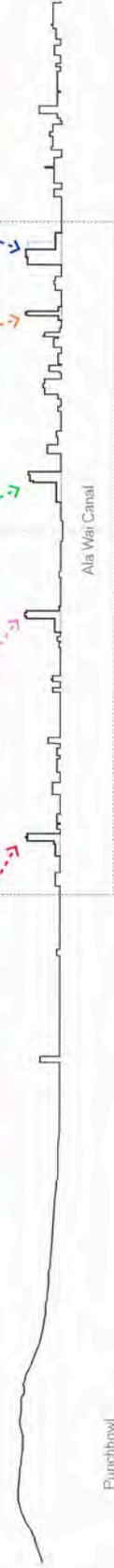
PROPOSED TOWER
2121 KUHIU AVE
350' Height

MAILE SKY COURT
2058 KUHIU AVE
350' Height*

WAIKIKI LANDMARK
1888 KALAKAUA AVE
320' Height*

CENTURY CENTER
1750 KALAKAUA AVE
350' Height*

HALE KAHEKA
930 KAHEKA STREET
337' Height*



Ala Wai Canal

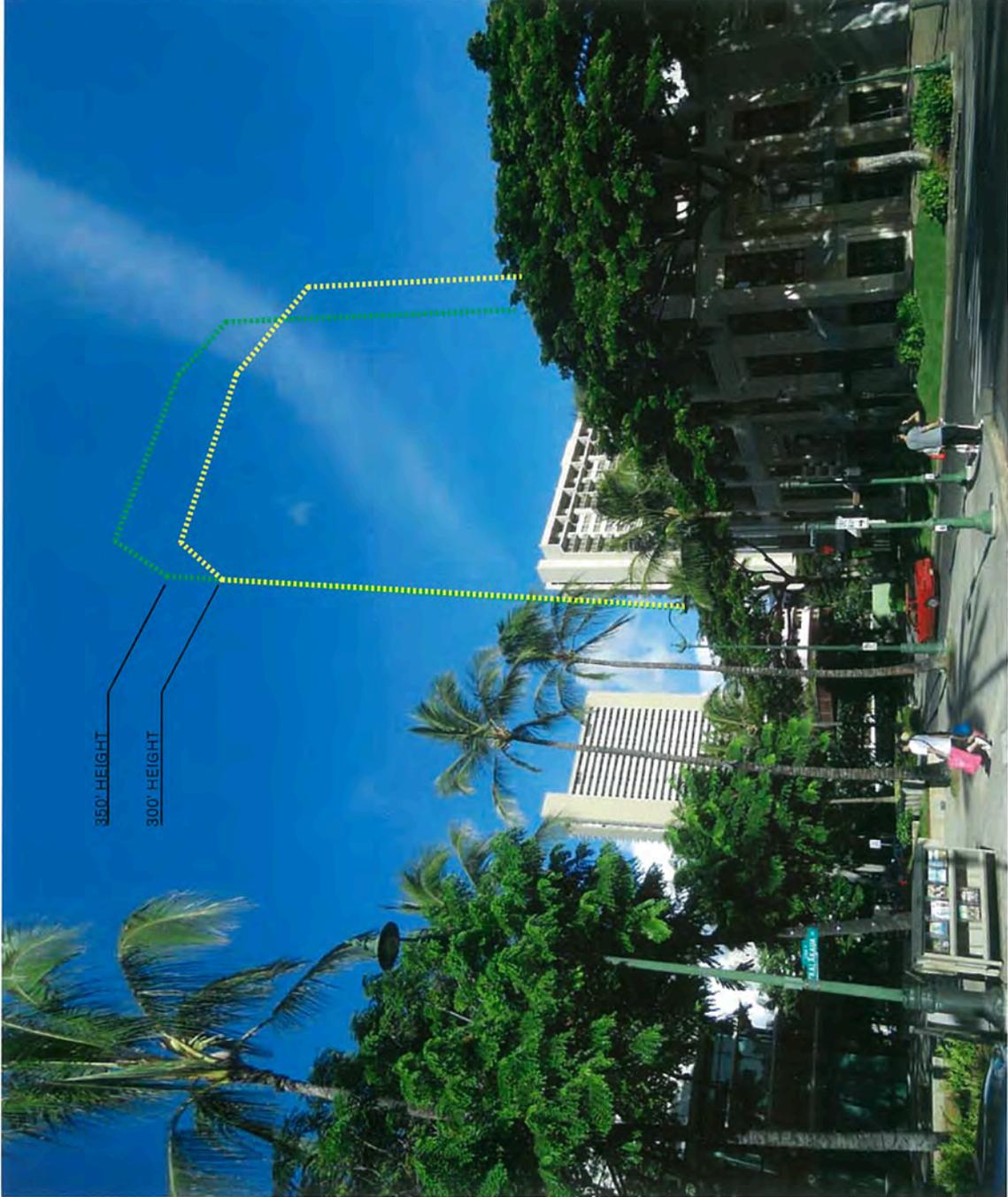
Punchbowl

*All height figures for existing buildings from www.emporis.com

2121
KUHIO TOWER

View
Analysis
Fort Derussy
300' & 350'
Height

GUERIN GLASS
ARCHITECTS, PC



PACREP LLC

2121 Kuhio Tower



View Analysis

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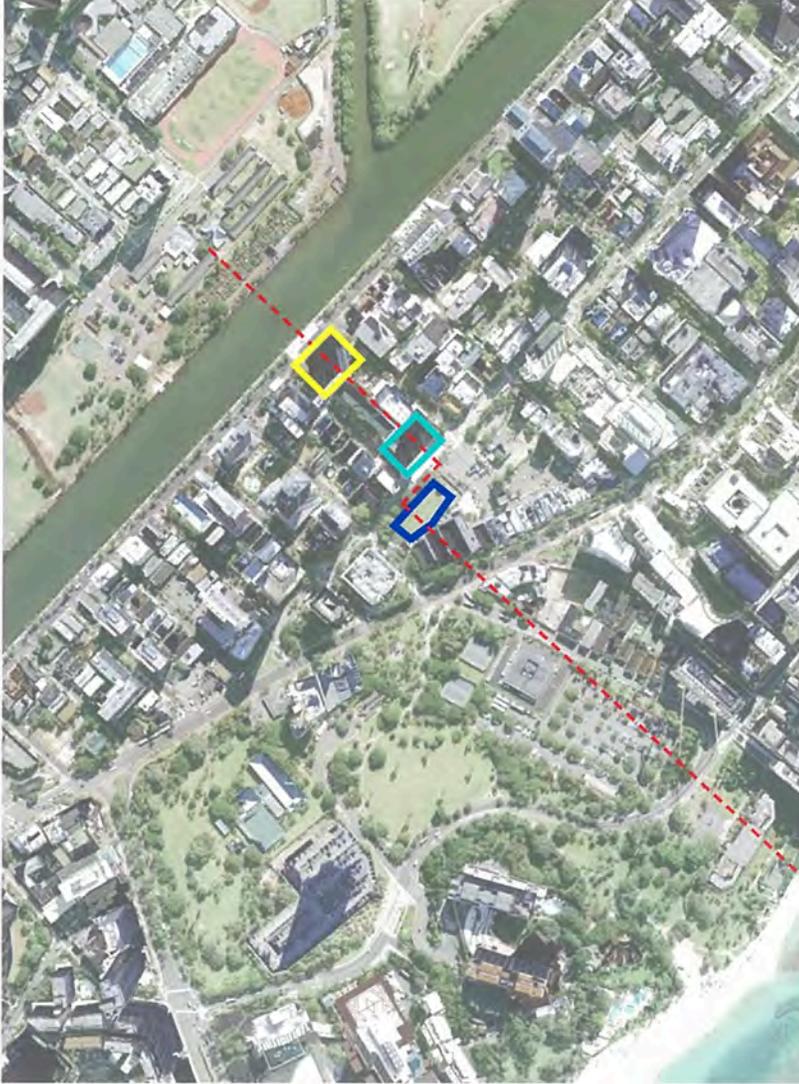
Honolulu, Hawaii
October 24, 2012



prepared by
GUERIN GLASS ARCHITECTS, PC

2121
KUHIO TOWER

2121 ALA WAI BLVD - 347'
FOUR PADDLE - 2140 KUHIO AVE - 230'
PROPOSED TOWER - 2121 KUHIO AVE - 350'

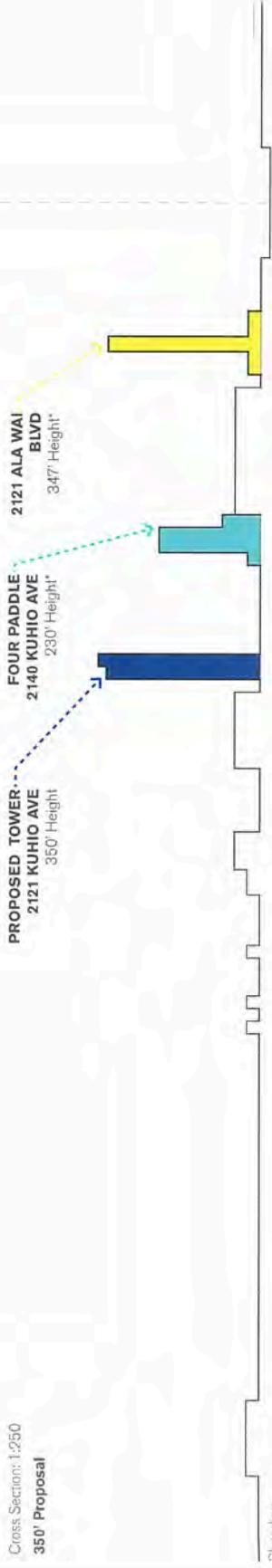


Building
Height
Plan View
2

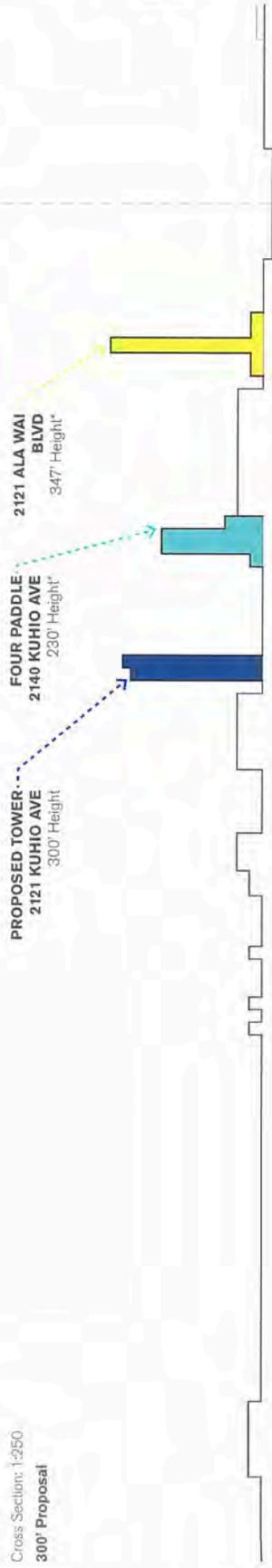
GUERIN GLASS
ARCHITECTS, PC

PACREP LLC

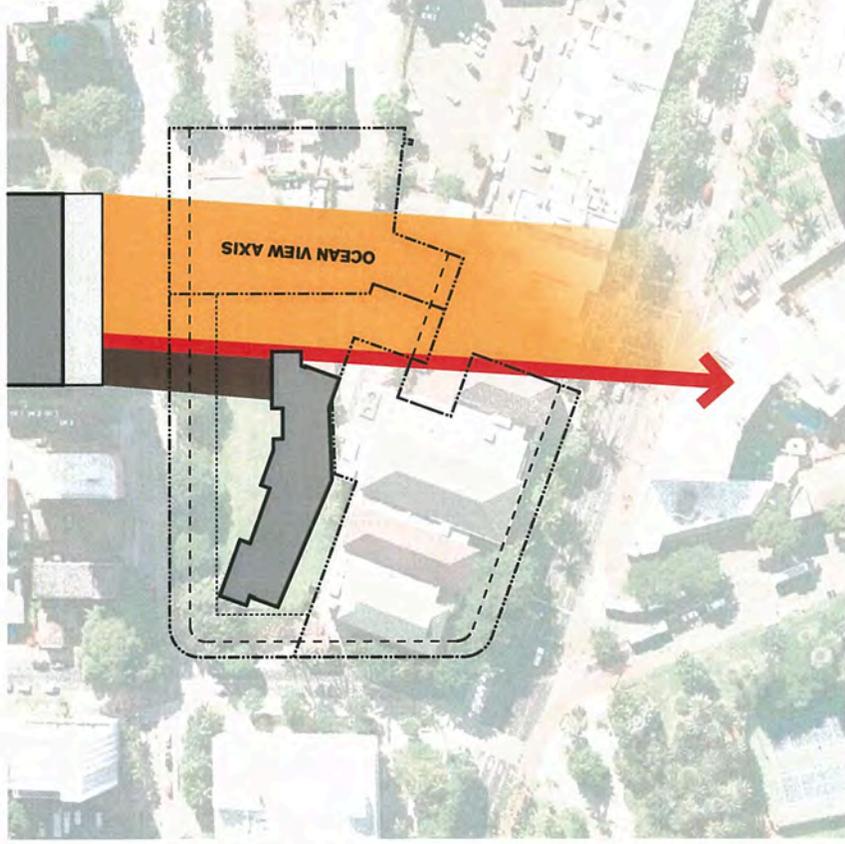
2121
KUHIO TOWER



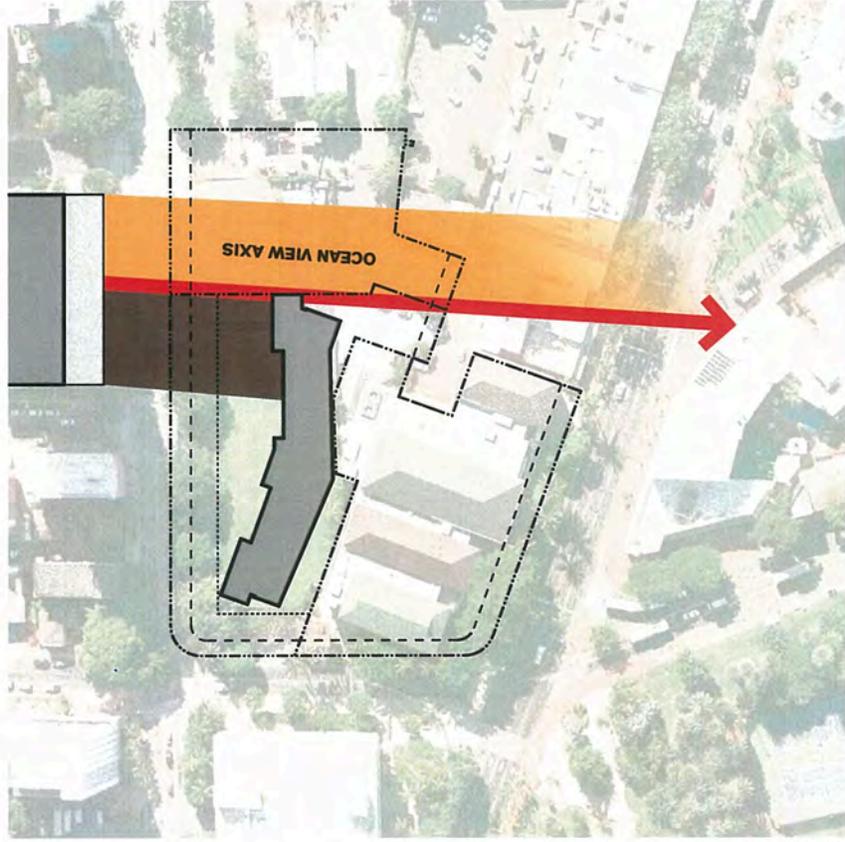
Building
Height
Cross Section
(Plan View 2)



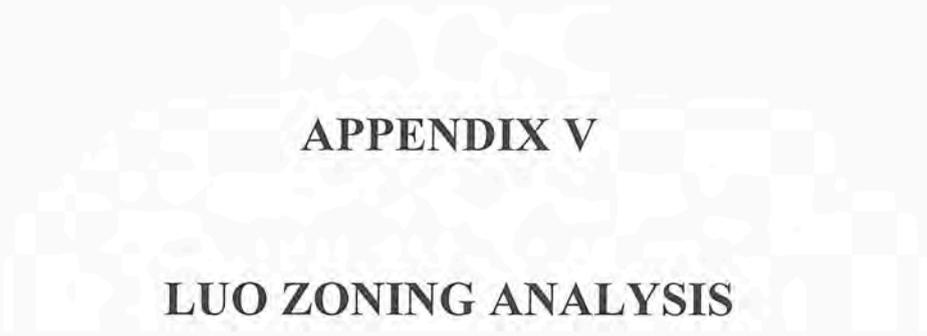
*All height figures for existing buildings from www.wemportis.com



350' Height



300' Height



APPENDIX V

LUO ZONING ANALYSIS

1.0 Zoning: Waikiki Special District (WSD) - Planned Development Resort Mixed Use (PD-R)

2.0 Zoning Lot Area:

2.1 Lot Area
2121 Kuhio
Lot 26018052
Lot 26018042
2100 Kalakaua Development
Lot 26018010
Food Pantry
Lot 26018043
Total Lot Area

Required/Allowed	Proposed
38,457 SF	
22,195 SF	
55,064 SF	
37,868 SF	
153,584 SF	

Honolulu Land Information System (HOLIS)

HOLIS

HOLIS

3.0 Permissible Floor Area

3.1 Floor Area (as-of right)
Total Lot Area

Right-of-way Bonus
1/2 Kalakaua
1/2 Kalaimoku
1/2 Kuhio (2121 Kuhio)
1/2 Kuhio (Food Pantry)

153,584 SF	
9,066 SF	
10,509 SF	
13,600 SF	
5,174 SF	
191,933 SF	
1.00	
191,933 SF	

HOLIS

Land Use Ordinance (LUO) Table 21-9.6 (B) Footnote 8
WATG Analysis dated 09-Mar-04
WATG Analysis dated 09-Mar-04
WATG Analysis dated 09-Mar-04
HOLIS Plat Map - lot footprint; Survey - Road Width

LUO Table 21-9.6 (B)

3.2 Open Space Bonuses

Public: 2121 Kuhio
Public: 2100
Private: At Grade, 2121 Kuhio
Private: At Grade, 2100
Arcade: 2121 Kuhio
Roof-top Landscaping: Podium, 2121 Kuhio
Roof-top Landscaping: Tower Roof, 2121
Roof-top Landscaping: Roof 2100
Roof-top Landscaping: Covered Drive, 2

Total Open Space
Additional Floor Area Allowed

247,100 SF	
58,920 SF	
370 SF	
0 SF	
3,969 SF	
4,554 SF	
5,200 SF	
34,888 SF	
4,468 SF	
359,469 SF	

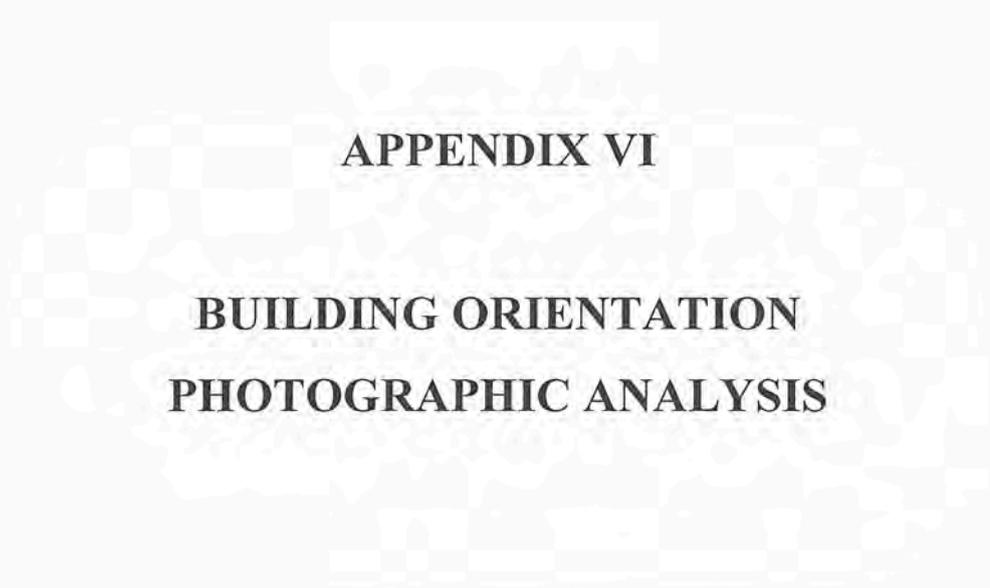
Multippliers: LUO Section 21-9.80-6 (c) (1)

3.3 Total LUO Floor Area
Maximum FAR

551,402 SF	2.87
3.5	

LUO Table 21-9.6 (B)
LUO Table 21-9.6 (B)

<p>2100 Kalakaua Development - Existing Construction Food Pantry - Future Construction (Deeded Density)</p> <p>2121 Kuhio Available Floor Area</p>	<p>110,000 SF 32,400 SF 409,002 SF</p>	<p>110,000 SF 32,400 SF 409,000 SF</p>
<p>4.0 Maximum Height Allowed (350 Ft.): Tower Maximum Mechanical Appurtenances / Roof Forms above Maximum Hgt.</p>	<p>300 FT 18 / 12 FT</p>	<p>350 FT 18 FT</p>
<p>5.0 Yard Requirements up to 40 Ft. Building Height: Kuhio Avenue Kalakaua Avenue Kalaïmoku Street Lauula Street (Private)</p>	<p>20 FT 20 FT 15 FT 15 FT</p>	<p>80 FT 50 FT 200 FT 74 FT</p>
<p>5.1 Total Yard and Transitional Height Setbacks: Kuhio Avenue Setback at Height of 350 20' Yard + 31' Hgt. Setback = Kalakaua Avenue Setback at Height of 350 20' Yard + 31' Hgt. Setback = Kalaïmoku Street Setback at Height of 350 15' Yard + 31' Hgt. Setback = Lauula Street Setback at Height of 350 15' Yard + 31' Hgt. Setback =</p>	<p>51 FT 51 FT 46 FT 46 FT</p>	<p>75 FT 190 FT 54 FT 59 FT</p>
<p>6.0 Minimum Open Space Required 2121 Kuhio Owned Open Space Provided Percentage Open Space Total Open Space Provided (2100 Kalakaua + 2121 Kuhio) Total Percentage Open Space</p>	<p>0 SF 115 45 160</p>	<p>33,237 55% 47,088 SF 41%</p>
<p>7.0 Parking Required: Hotel Units K3 Parking Stalls: 1 per 4 Hotel Units 2100 Kalakaua Stalls Total Parking Stalls</p>	<p>459 139 45 184</p>	<p>8453 SF 7959 SF 2121 Kuhio required yard 2100 Kalakaua required yard</p>
<p>7.1 Accessible Parking Stall Requirements: 150-200 total spaces requires six Accessible Van-accessible parking spaces (one for every eight or fraction thereof) Accessible parking spaces</p>	<p>6 3 3 5 3 2 11</p>	<p>ADAAG Section 4.1.2 (5) (e)</p>
<p>8.0 Loading Required: 2121 Kuhio Required Loading Stalls 12'-0" x 35'-0" x 14'-0" Clear Height (50% of spaces) 8'-6" x 19'-0" x 10'-0" Clear Height 2100 Kalakaua Required Loading Stalls 12'-0" x 35'-0" x 14'-0" Clear Height (50% of spaces) 8'-6" x 19'-0" x 10'-0" Clear Height Total Loading Stalls</p>	<p>6 3 3 5 3 2 11</p>	<p>100 Section 21-6-100 3 for first 50,000 - 100,000 sf 1 per each additional 100,000 sf or major fraction 4 for first 40,000 - 60,000 sf 1 per each additional 50,000 sf or major fraction</p>



APPENDIX VI

**BUILDING ORIENTATION
PHOTOGRAPHIC ANALYSIS**

ORIENTATION – PHOTOGRAPHIC ANALYSIS

This photographic analysis compares the applicant's proposed diamond head/ewa (or ewa/diamond head) building orientation with an alternative mauka-makai building orientation.

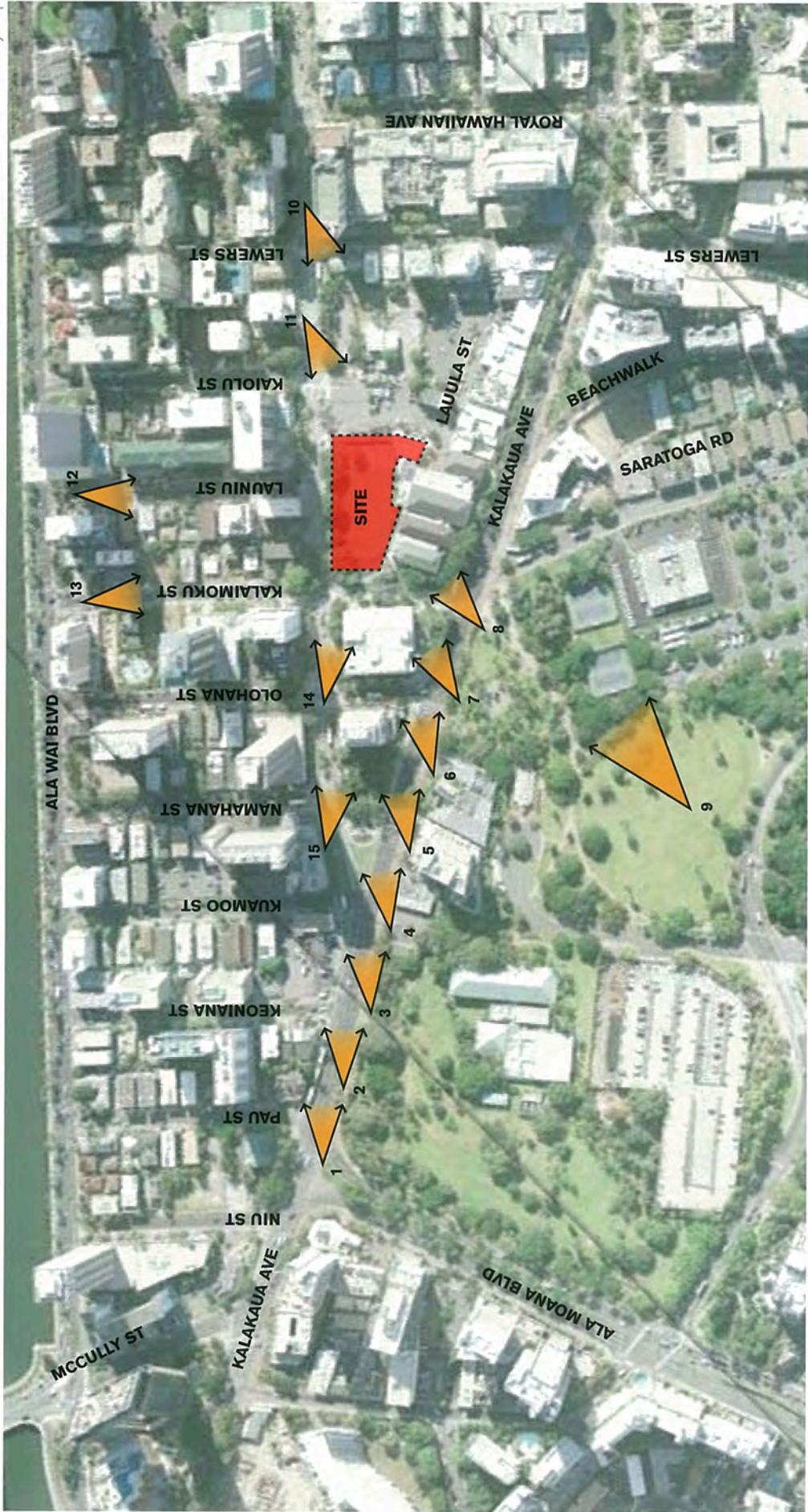
The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalākaua Avenue and from Kūhiō Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian access ways into and through Waikiki. This ewa/diamond head orientation is also sensitive to protection of public views from the Gateway to Waikiki located at Kalākaua Avenue and Ala Moana Boulevard. The ewa/diamond head building orientation has significantly less visual impact along these important public view corridors except for one view at the corner of Kalākaua Avenue and Kālaimoku Street and two views looking ewa along Kūhiō Avenue. The structure has a narrower face with the ewa/diamond head orientation than with a mauka/makai orientation in all but three of the viewpoints along Kalākaua Avenue and Kūhiō Avenue. The view from the Gateway to Waikiki at Kalākaua Avenue and Ala Moana Boulevard is also less impacted with the ewa/diamond head building orientation.

The viewpoint at the open space at Fort DeRussy shows that the visual impact is greater with the ewa/diamond head orientation.

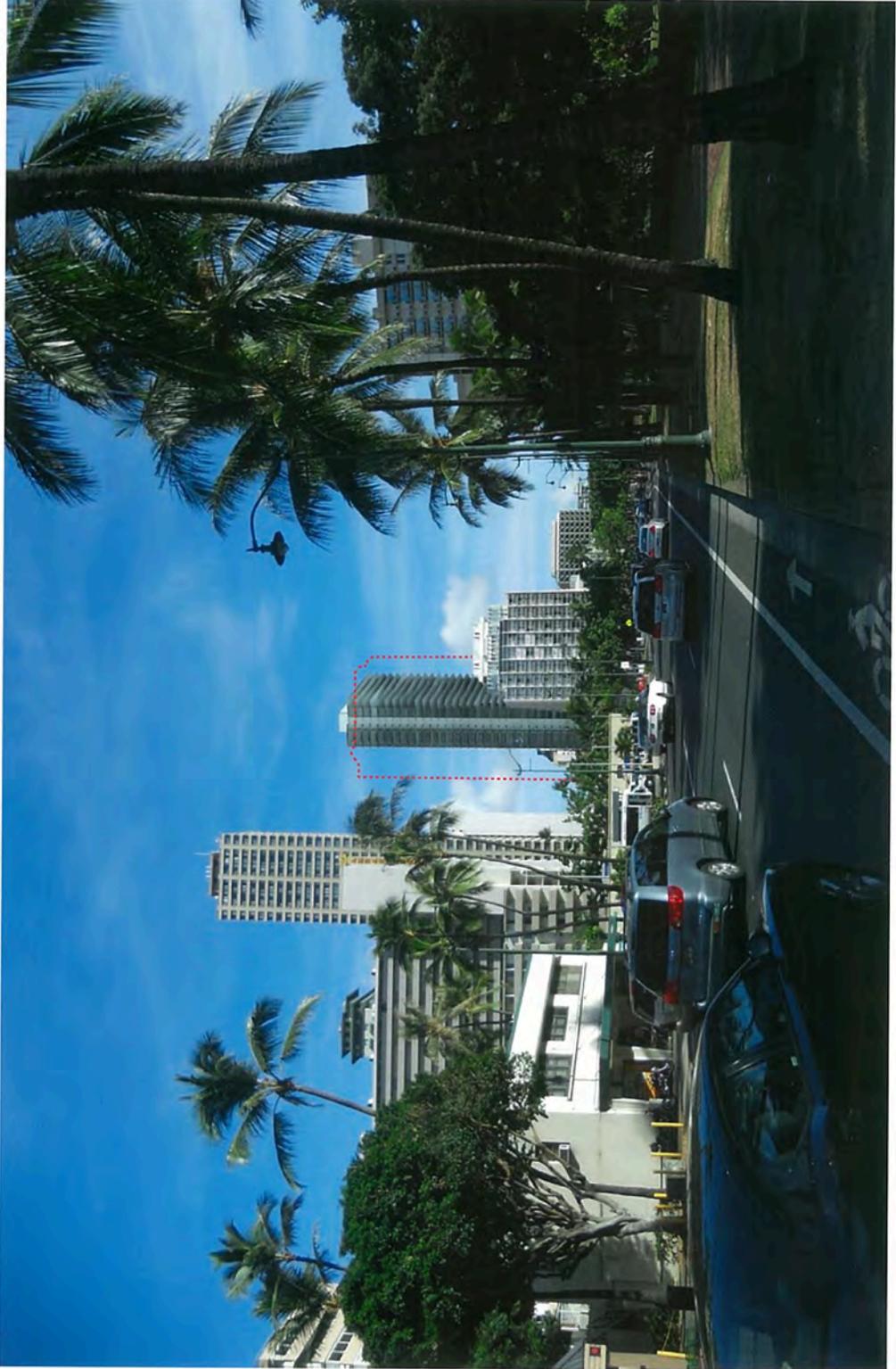
At the request of DPP the Building Orientation – Photographic Analysis also shows views from Kālaimoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two street corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as significant public views the mauka views at certain other streets located mauka of Kūhiō Avenue.

Gateway Views

Key Map



Gateway Views
Diamond Head/Ewa Building Orientation - View 1



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Irongate

Gateway Views

Mauka/Makai Building Orientation - View 1



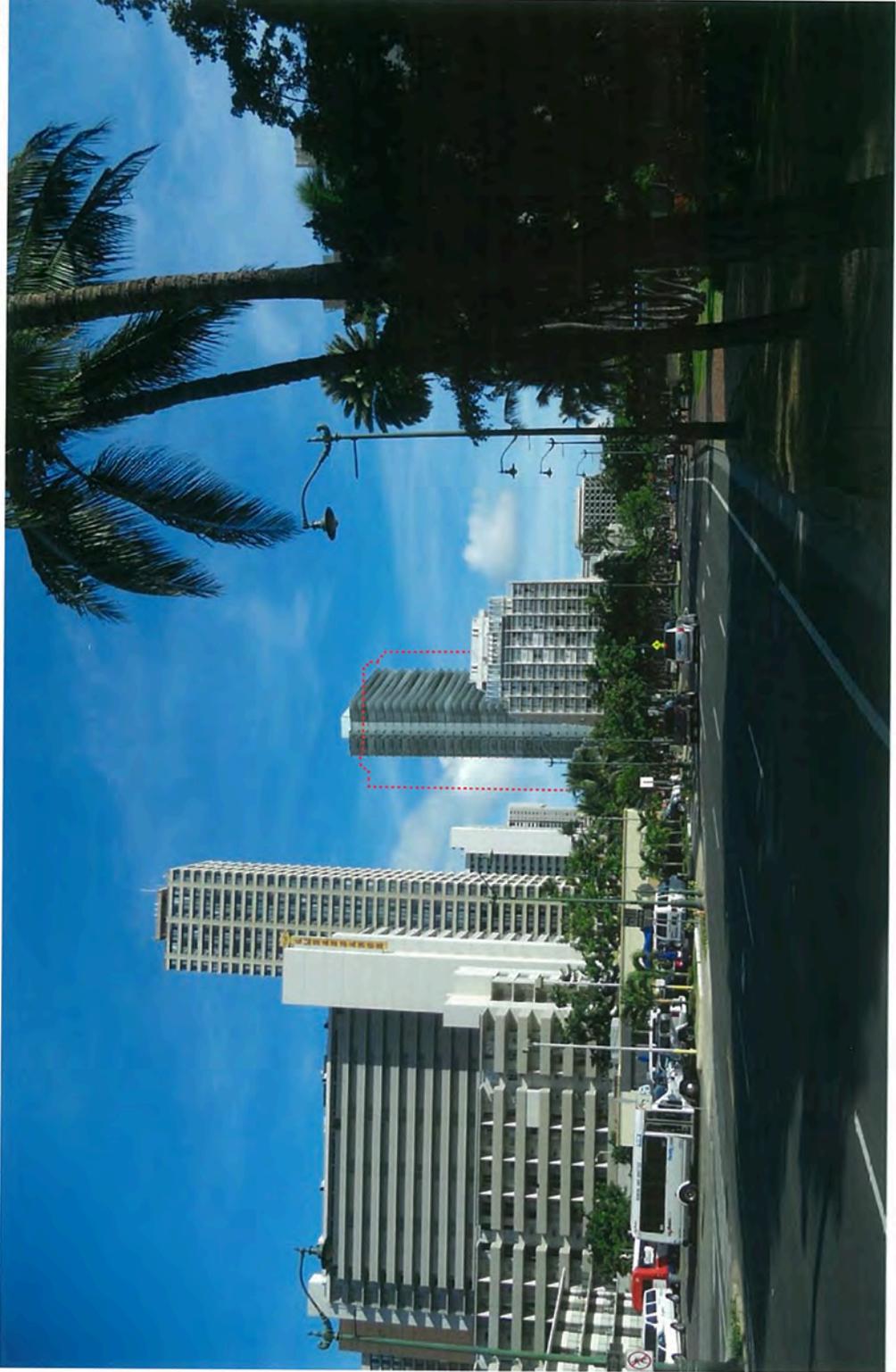
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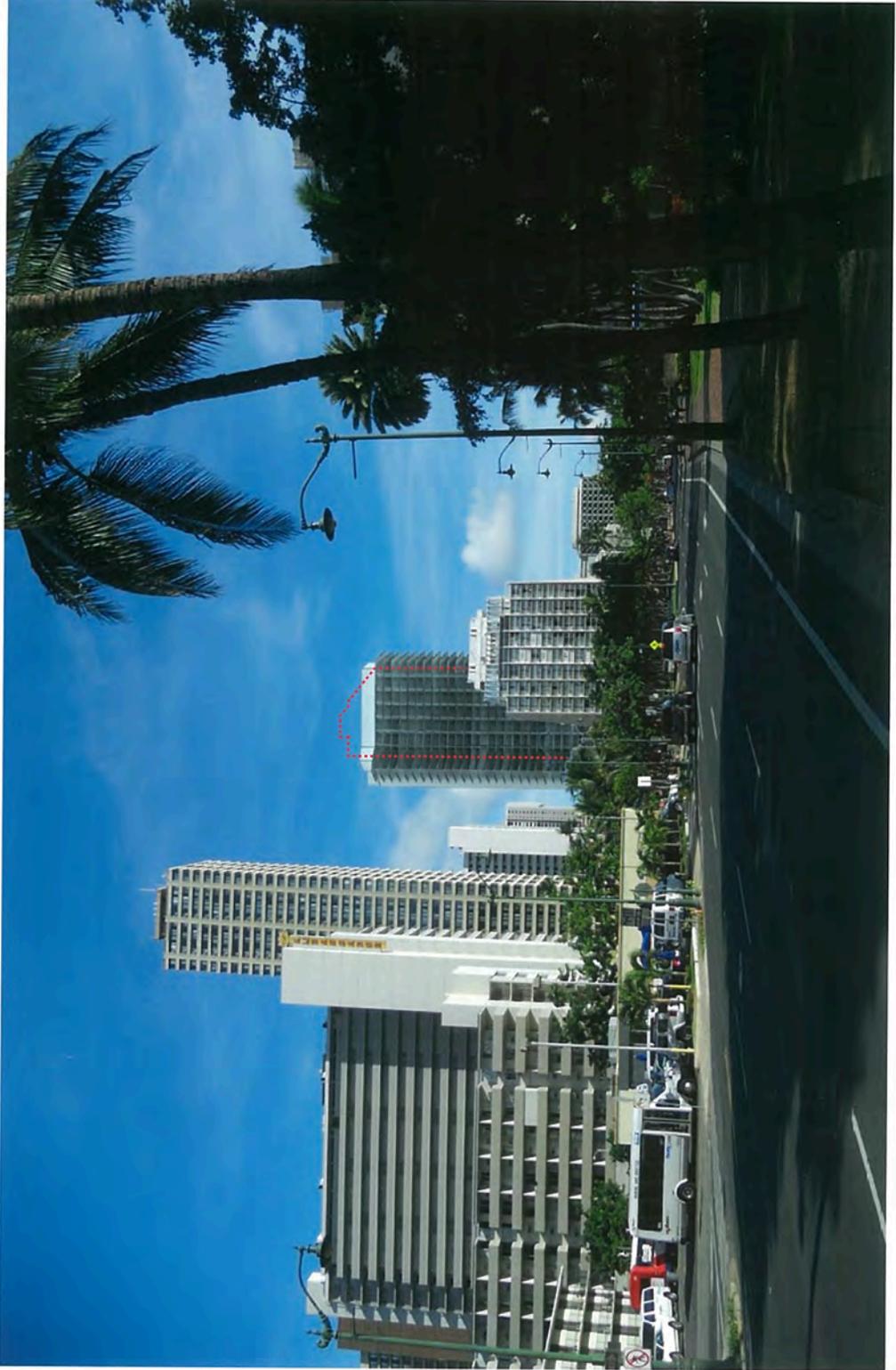
Gateway Views

Diamond Head/Ewa Building Orientation - View 2



Gateway Views

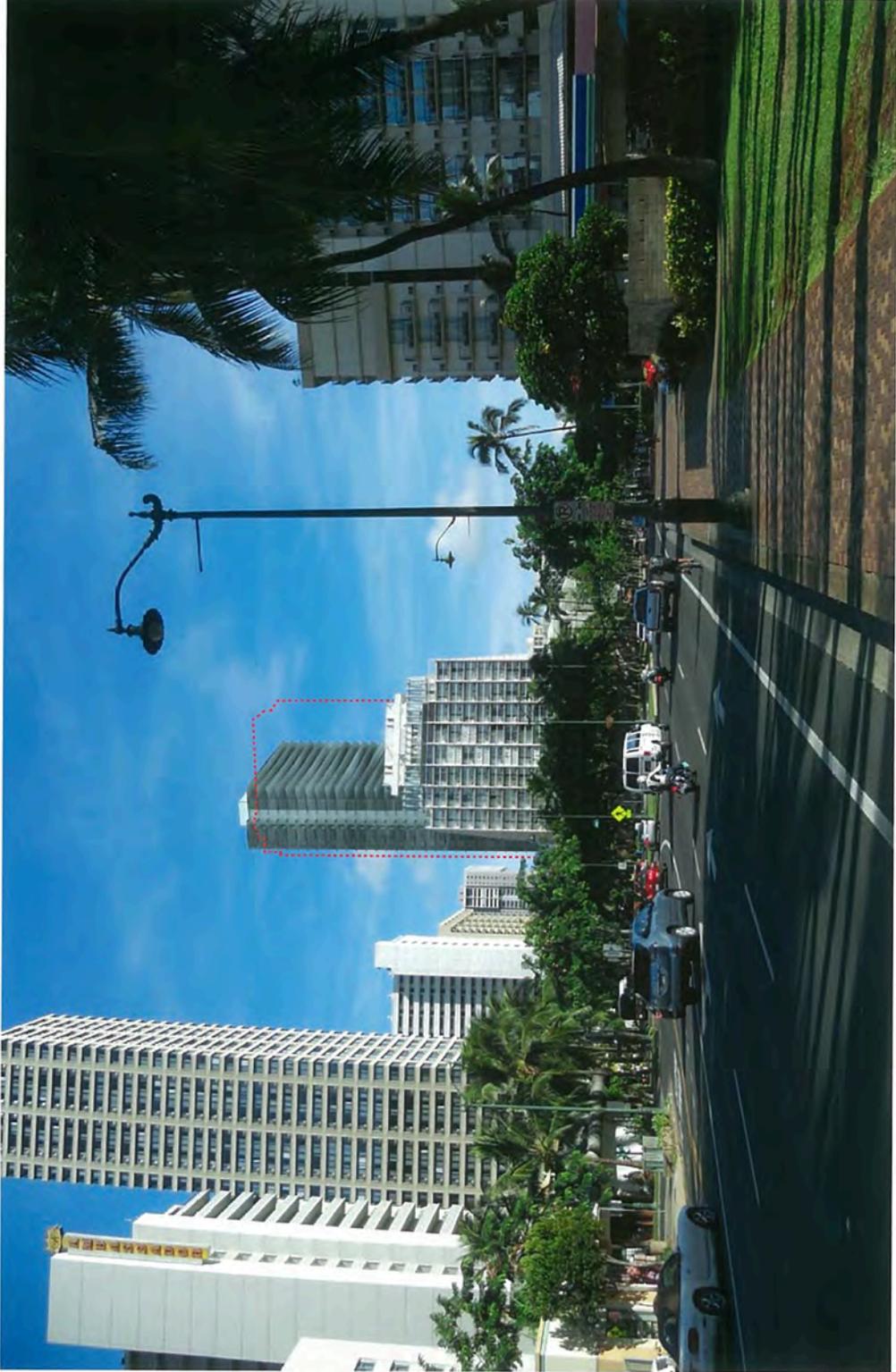
Mauka/Makai Building Orientation - View 2



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Gateway Views

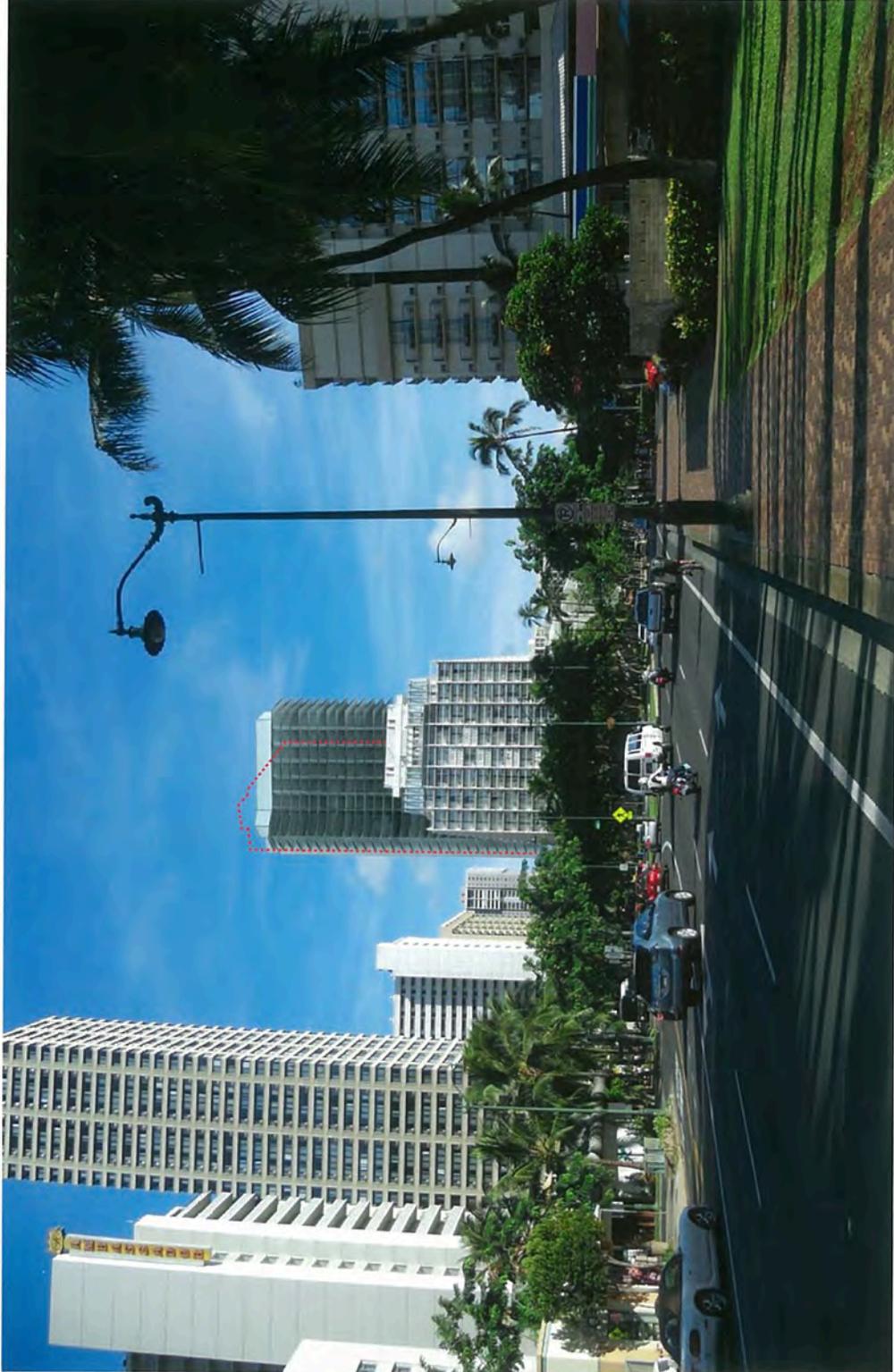
Diamond Head/Ewa Building Orientation - View 3



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Gateway Views

Mauka/Makai Building Orientation - View 3



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Gateway Views
Diamond Head/Ewa Building Orientation - View 4



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Gateway Views

Mauka/Makai Building Orientation - View 4



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Gateway Views
Diamond Head/Ewa Building Orientation - View 5



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Gateway Views

Mauka/Makai Building Orientation - View 5



Gateway Views

Diamond Head/Ewa Building Orientation - View 6



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Gateway Views
Mauka/Makai Building Orientation - View 6



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Gateway Views

Diamond Head/Ewa Building Orientation - View 7

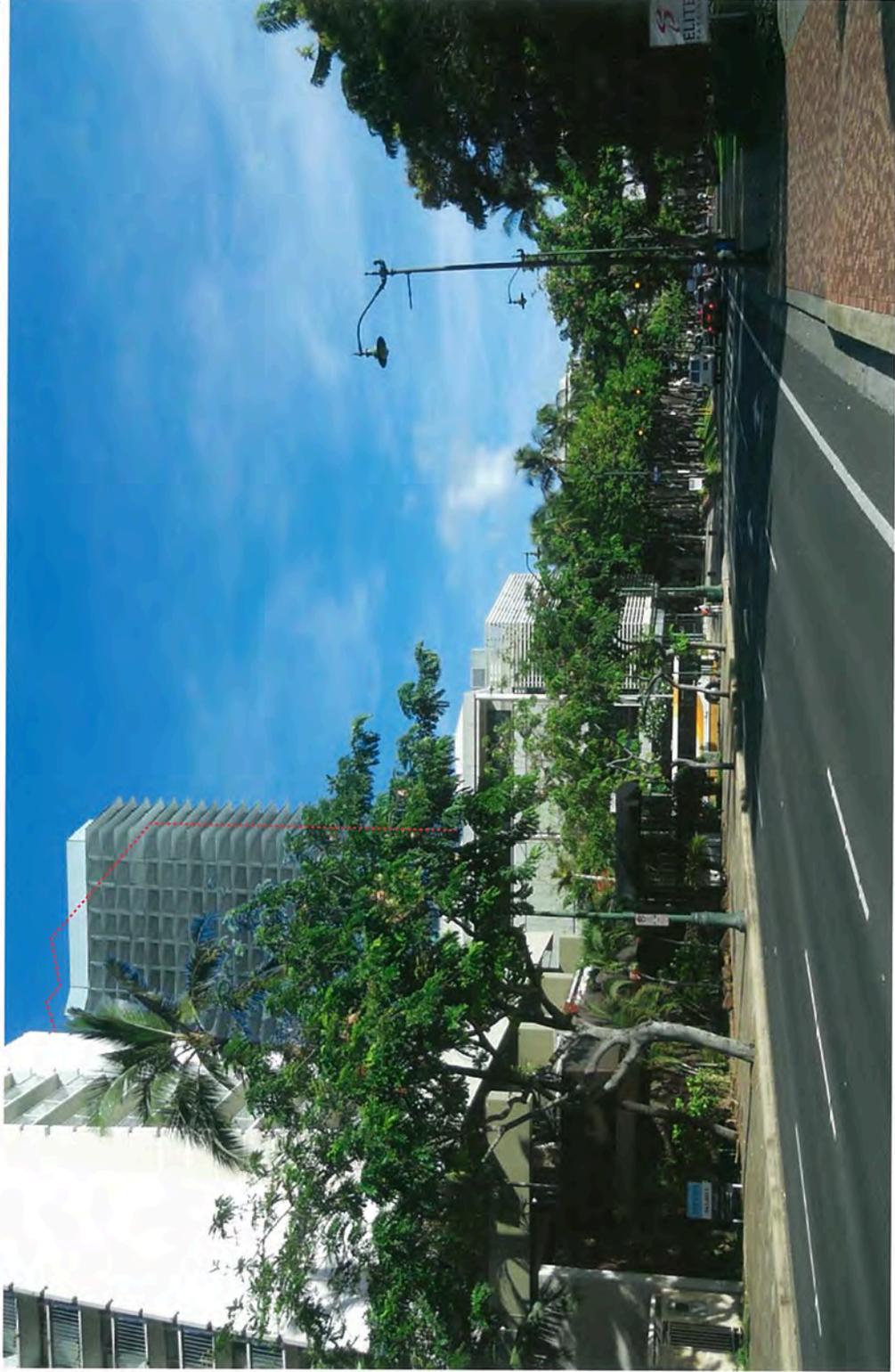


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Gateway Views
Mauka/Makai Building Orientation - View 7



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Gateway Views
Diamond Head/Ewa Building Orientation - View 8



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Gateway Views
Mauka/Makai Building Orientation - View 8

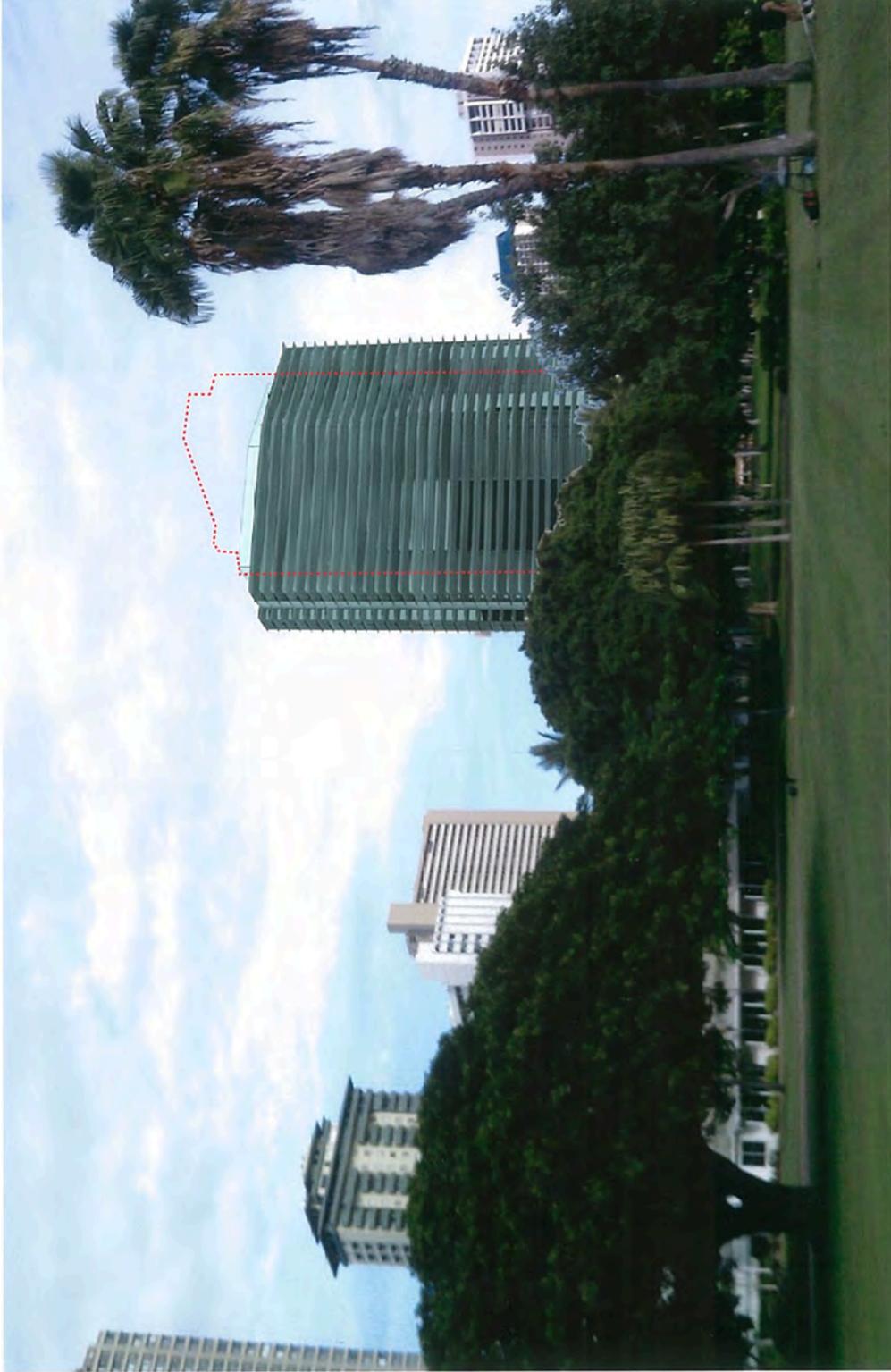


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Gateway Views
Diamond Head/Ewa Building Orientation - View 9



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Gateway Views

Mauka/Makai Building Orientation - View 9



Irongate

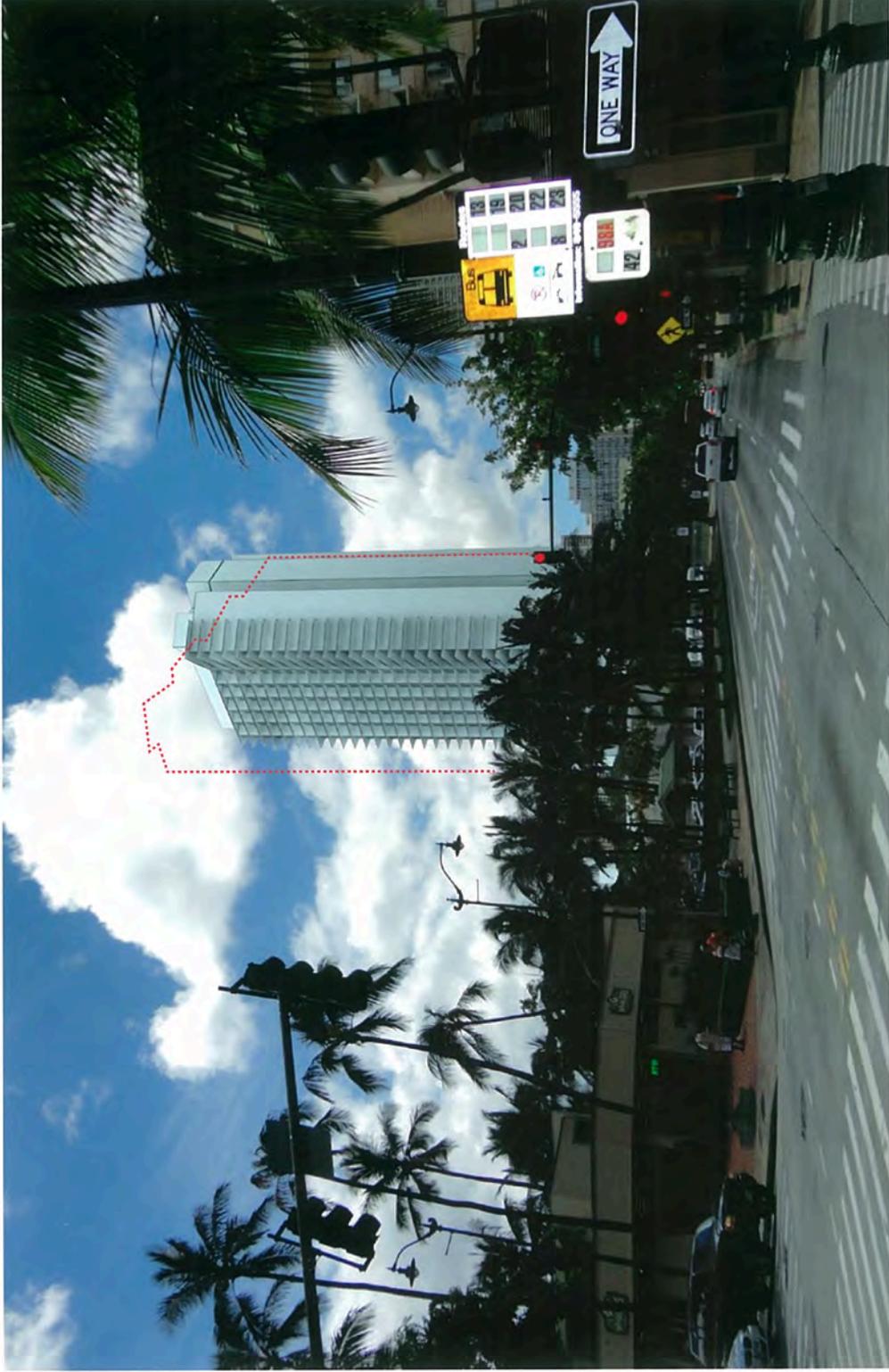
Gateway Views

Diamond Head/Ewa Building Orientation - View 10



Gateway Views

Mauka/Makai Building Orientation - View 10



Gateway Views

Diamond Head/Ewa Building Orientation - View 11



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Gateway Views

Mauka/Makai Building Orientation - View 11



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Gateway Views

Diamond Head/Ewa Building Orientation - View 12



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Gateway Views

Mauka/Makai Building Orientation - View 12



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Gateway Views
Diamond Head/Ewa Building Orientation - View 13



Gateway Views

Mauka/Makai Building Orientation - View 13



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Gateway Views
Diamond Head/Ewa Building Orientation - View 14



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Gateway Views

Mauka/Makai Building Orientation - View 14



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Gateway Views

Diamond Head/Ewa Building Orientation - View 15



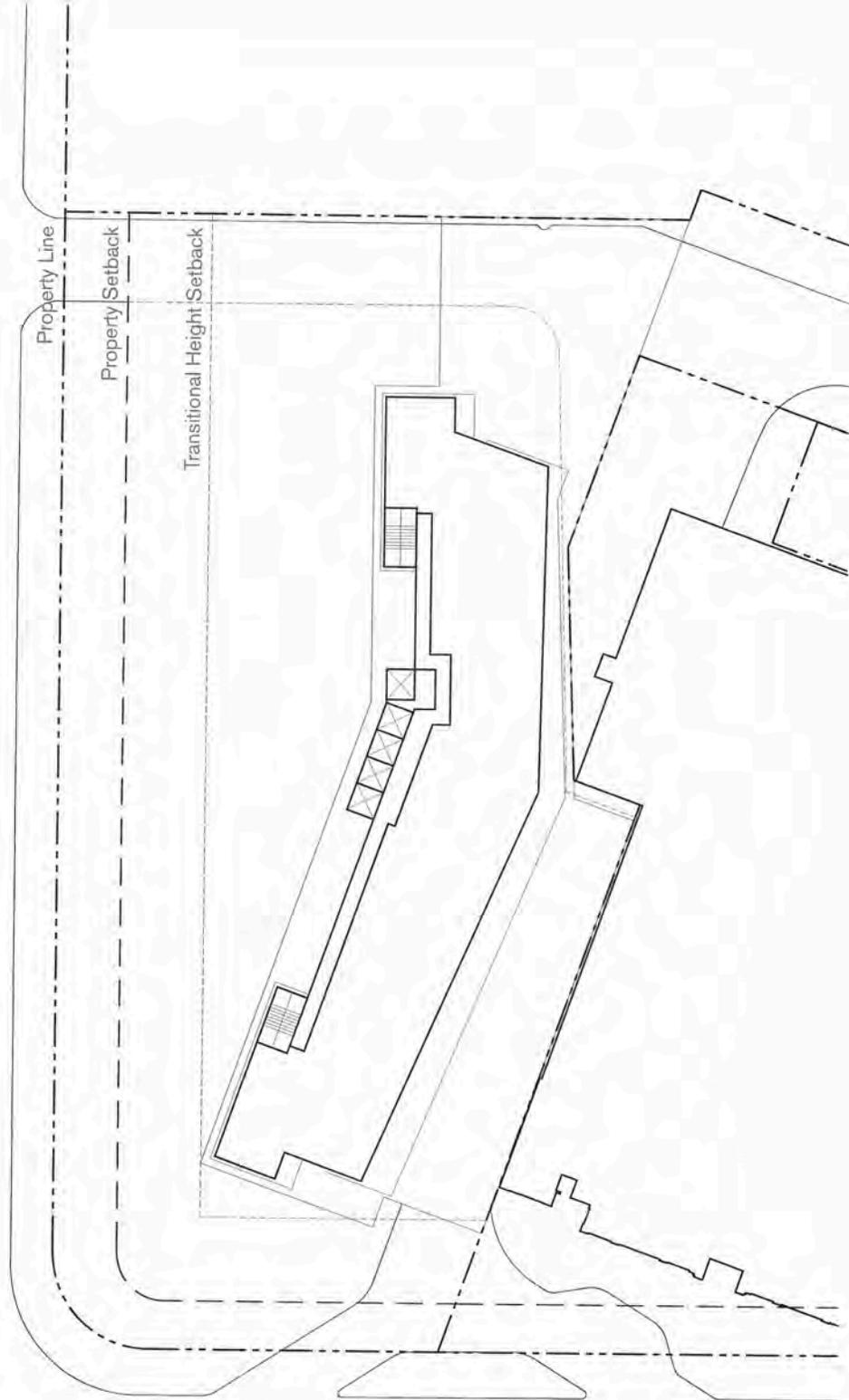
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Gateway Views
Mauka/Makai Building Orientation - View 15



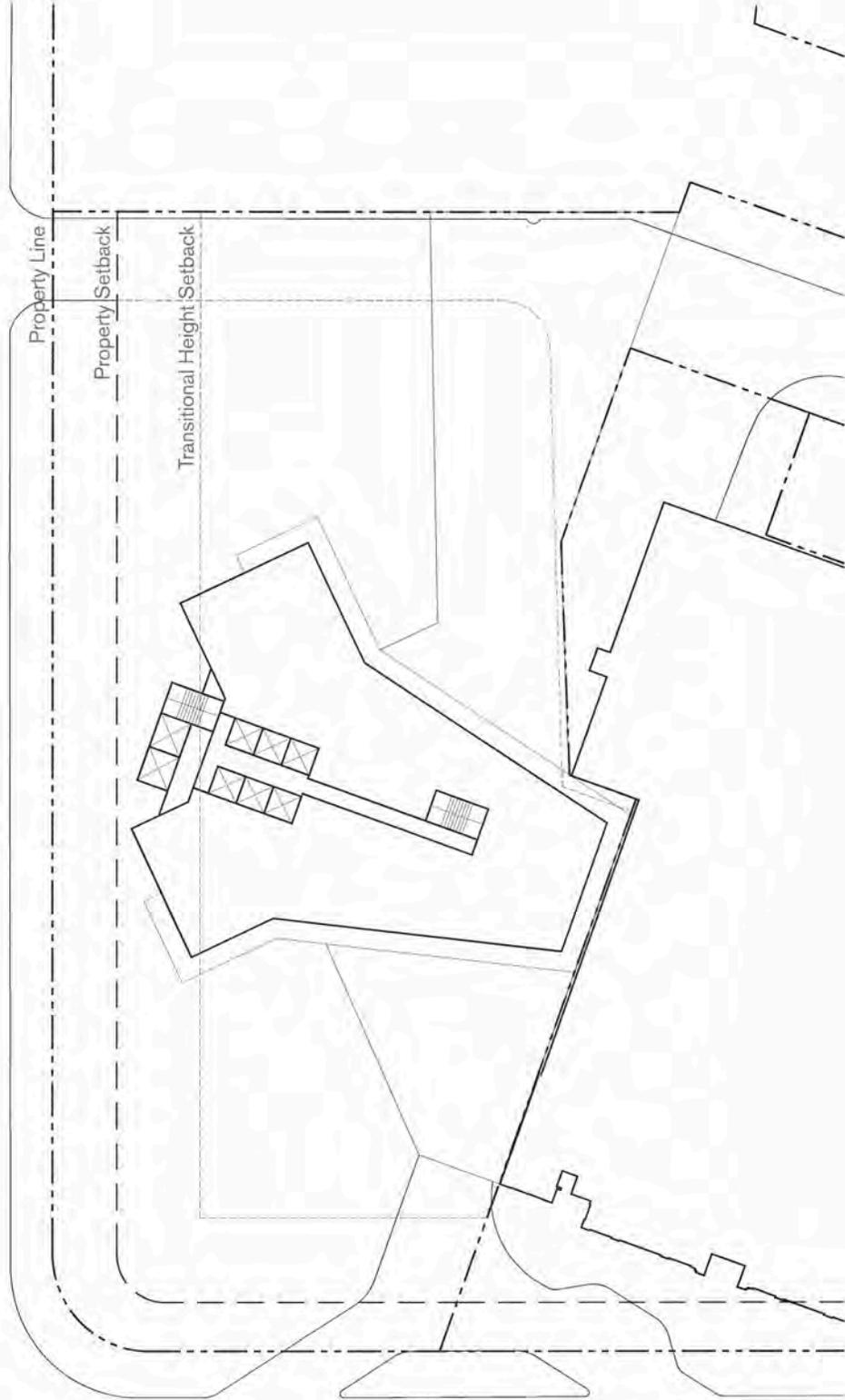
Gateway Views

Diamond Head/Ewa Building Orientation - Typical Floor Plan



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Gateway Views
Mauika/Mekai Building Orientation - Typical Floor Plan



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APPENDIX VII

**A CULTURAL IMPACT ASSESSMENT ON THREE
LAND PARCELS LOCATED IN WAIKĪKĪ AHUPUA'A**

**A CULTURAL IMPACT ASSESSMENT
ON THREE LAND PARCELS
LOCATED IN WAIKĪKĪ AHUPUA`A,
KONA DISTRICT, O`AHU ISLAND, HAWAII
TMK: 2-06-018:10, 42, AND 52]**

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INTRODUCTION

Scientific Consultant Services (SCS), Inc. has been contracted by CMD-Hawaii, LLC to conduct a Cultural Impact Assessment on three land parcels located in Waikīkī Ahupua`a, Kona District, O`ahu Island, Hawai`i [TMK: 2-06-018:10, 42, and 52] (Figure 1). Documents provided by the developer propose Commercial Mixed Use and Residential/Time Share for these lots.

The Constitution of the State of Hawai`i clearly states the duty of the State and its agencies is to preserve, protect, and prevent interference with the traditional and customary rights of native Hawaiians. Article XII, Section 7 requires the State to “protect all rights, customarily and traditionally exercised for subsistence, cultural and religious purposes and possessed by ahupua`a tenants who are descendants of native Hawaiians who inhabited the Hawaiian Islands prior to 1778” (2000). Beginning in 1850 with establishment of Hawai`i Revised Statutes (HRS) 7-1, native Hawaiians were given access rights to undeveloped private property and waterways in order to gather specific natural resources for customary uses. In 1992, the State of Hawai`i Supreme Court, reaffirmed HRS 7-1 and expanded it to include, “native Hawaiian rights...may extend beyond the ahupua`a in which a native Hawaiian resides where such rights have been customarily and traditionally exercised in this manner” (Pele Defense Fund v. Paty, 73 Haw.578, 1992).

Act 50, enacted by the Legislature of the State of Hawaii (2000) with House Bill 2895, relating to Environmental Impact Statements, proposes that:

...there is a need to clarify that the preparation of environmental assessments or environmental impact statements should identify and address effects on Hawaii’s culture, and traditional and customary rights...[H.B. No. 2895].

Act 50 requires state agencies and other developers to assess the effects of proposed land use or shoreline developments on the “cultural practices of the community and State” as part of the HRS Chapter 343 environmental review process (2001). Its purpose has broadened, “to promote and protect cultural beliefs, practices and resources of native Hawaiians [and] other ethnic groups, and it also amends the definition of ‘significant effect’ to be re-defined as “the sum of effects on the quality of the environment including actions that are...contrary to the State’s environmental policies...or adversely affect the economic welfare, social welfare, or

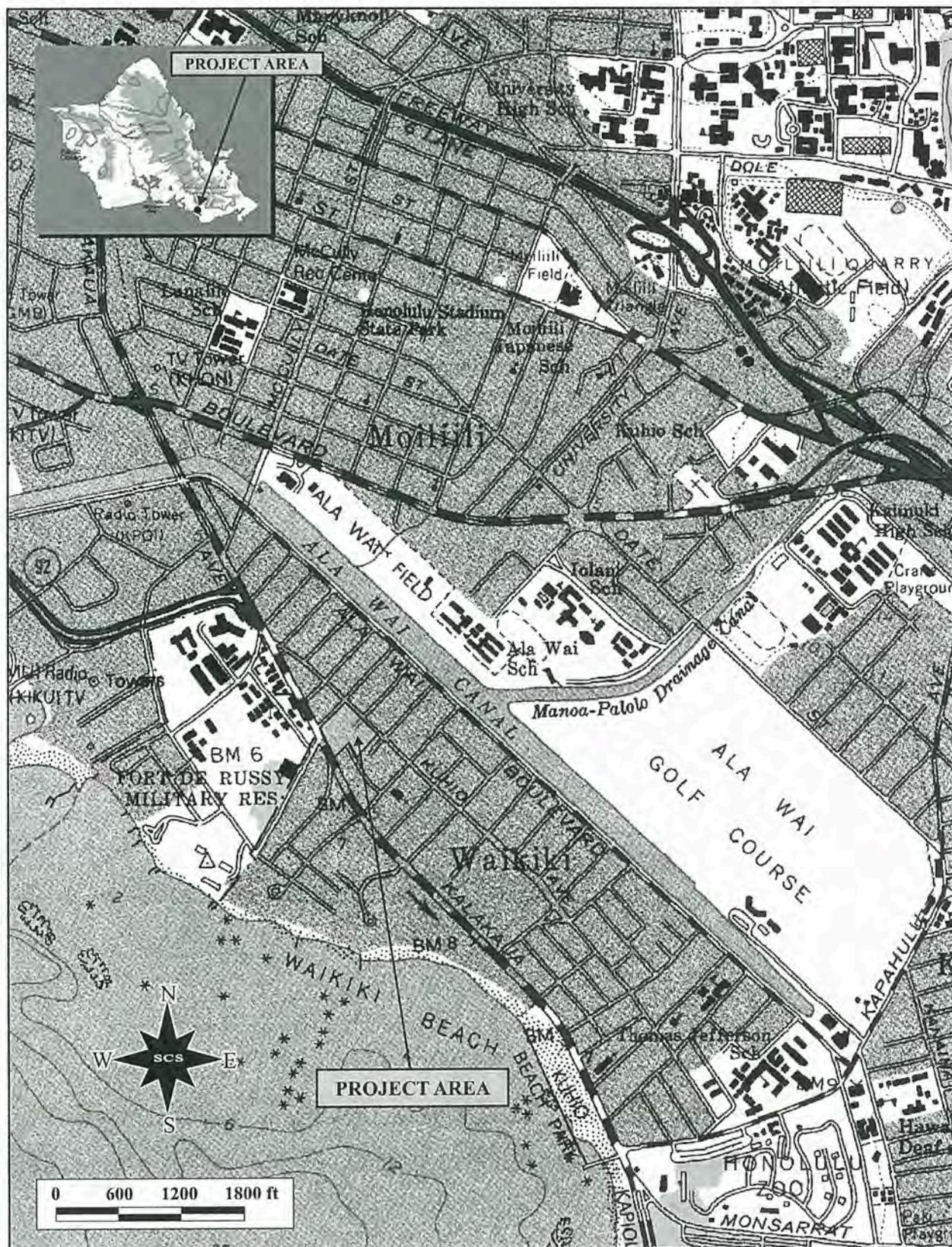


Figure 1: Honolulu Quad Showing Project Area.

cultural practices of the community and State” (H.B. 2895, Act 50, 2000). Thus, not only are properties evaluated for impact to Native Hawaiians, but also for other ethnic groups as well.

Act 50 requires an assessment of cultural practices to be included in the Environmental Assessments and the Environmental Impact Statements, and to be taken into consideration during the planning process. The concept of geographical expansion is recognized by using, as an example, “the broad geographical area, e.g. district or *ahupua`a*” (OEQC 1997). It was decided that the process should identify ‘anthropological’ cultural practices, rather than ‘social’ cultural practices. For example, *limu* (edible seaweed) gathering would be considered an anthropological cultural practice, while a modern-day marathon would be considered a social cultural practice.

According to the Guidelines for Assessing Cultural Impacts established by the Hawaii State Office of Environmental Quality Control (OEQC 1997):

The types of cultural practices and beliefs subject to assessment may include subsistence, commercial, residential, agricultural, access-related, recreational, and religions and spiritual customs. The types of cultural resources subject to assessment may include traditional cultural properties or other types of historic sites, both manmade and natural which support such cultural beliefs.

This Cultural Impact Assessment involves evaluating the probability of impacts on cultural values and rights within the project area and its vicinity.

METHODOLOGY

This Cultural Impact Assessment was prepared in accordance with the methodology and content protocol provided in the Guidelines for Assessing Cultural Impacts (OEQC 1997). In outlining the “Cultural Impact Assessment Methodology”, the OEQC state:

...information may be obtained through scooping, community meetings, ethnographic interviews and oral histories...[1997].

This report contains archival and documentary research, as well as communication with organizations having knowledge of the project area, its cultural resources, and its practices and beliefs. This Cultural Impact Assessment was prepared in accordance with the methodology and content protocol provided in the Guidelines for Assessing Cultural Impacts (OEQC 1997). The

assessment concerning cultural impacts should address, but not be limited to, the following matters:

- (1) a discussion of the methods applied and results of consultation with individuals and organizations identified by the preparer as being familiar with cultural practices and features associated with the project area, including any constraints or limitations which might have affected the quality of the information obtained;
- (2) a description of methods adopted by the preparer to identify, locate, and select the persons interviewed, including a discussion of the level of effort undertaken;
- (3) ethnographic and oral history interview procedures, including the circumstances under which the interviews were conducted, and any constraints or limitations which might have affected the quality of the information obtained;
- (4) biographical information concerning the individuals and organizations consulted, their particular expertise, and their historical and genealogical relationship to the project area, as well as information concerning the persons submitting information or interviewed, their particular knowledge and cultural expertise, if any, and their historical and genealogical relationship to the project area;
- (5) a discussion concerning historical and cultural source materials consulted, the institutions and repositories searched, and the level of effort undertaken, as well as the particular perspective of the authors, if appropriate, any opposing views, and any other relevant constraints, limitations or biases;
- (6) a discussion concerning the cultural resources, practices and beliefs identified, and for the resources and practices, their location within the broad geographical area in which the proposed action is located, as well as their direct or indirect significance or connection to the project site;
- (7) a discussion concerning the nature of the cultural practices and beliefs, and the significance of the cultural resources within the project area, affected directly or indirectly by the proposed project;
- (8) an explanation of confidential information that has been withheld from public disclosure in the assessment;
- (9) a discussion concerning any conflicting information in regard to identified cultural resources, practices and beliefs;
- (10) an analysis of the potential effect of any proposed physical alteration on cultural resources, practices or beliefs; the potential of the proposed action to isolate cultural resources, practices or beliefs from their setting; and the potential of the proposed action to introduce elements which may alter the setting in which cultural practices take place, and;

- (11) the inclusion of bibliography of references, and attached records of interviews which were allowed to be disclosed.

Based on the inclusion of the above information, assessments of the potential effects on cultural resources in the project area and recommendations for mitigation of these effects can be proposed.

ARCHIVAL RESEARCH

Archival research focused on a historical documentary study involving both published and unpublished sources. These included legendary accounts of native and early foreign writers; early historical journals and narratives; historic maps and land records such as Land Commission Awards, Royal Patent Grants, and Boundary Commission records; historic accounts, and previous archaeological project reports.

INTERVIEW METHODOLOGY

When appropriate, interviews are conducted in accordance with Federal and State laws and guidelines. Individuals and/or groups who have knowledge of traditional practices and beliefs associated with a project area or who know of historical properties within a project area are sought for consultation. Individuals who have particular knowledge of traditions passed down from preceding generations and a personal familiarity with the project area are invited to share their relevant information. Often people are recommended for their expertise or can be located by visiting the area. Organizations, such as Hawaiian Civic Clubs, the Island Branch of Office of Hawaiian Affairs, historical societies, Island Trail clubs, and Planning Commissions are invited to contribute their input and suggest further avenues of inquiry, as well as specific individuals to interview.

When interviewees are identified, a standard procedure follows. Personal interviews are taped and then transcribed. These draft transcripts are returned to each of the participants for their review and comments. After corrections are made, each individual signs a release form, making the information available for this study. Key topics discussed with the interviewees vary from project to project, but usually include: personal association to the *ahupua`a*, land use in the project's vicinity; knowledge of traditional trails, gathering areas, water sources, religious sites; place names and their meanings; stories that were handed down concerning special places or events in the vicinity of the project area; evidence of previous activities identified while in the project vicinity.

In this case, the project area had been a lagoonal basin until the early 20th century when it was used for banana cultivation into the 1940s. Commercial activities were housed along Kalākaua, Kalanimoku, and Kūhi`ō Avenues until 1999. Letters, briefly outlining the development plans along with maps of the project area, were sent to organizations whose jurisdiction includes knowledge of the area with an invitation for consultation. Consultation was sought from Lance Foster, the Director of Native Rights, Land and Culture, at the Office of Hawaiian Affairs and the State Historic Preservation Division. Based on this research, an assessment of the potential effects on cultural resources in the project area and recommendations for mitigation of these effects can be proposed.

PROJECT AREA AND VICINITY

The parcels are located on the `ewa to middle portion of the block bounded by Kalaimoku Street, Kalākaua Avenue and Kūhi`ō Avenue, and Lewers (Figure 2). In 1999, all structures were removed from the parcels and it presently stands vacant. Previous commercial activities in the vicinity, or on the parcels included a parking lot, Kuhio Outdoor Flea Market, Canlis Charcoal Broiler Restaurant, Hernando's Hideaway Restaurant and Bar, and Hula's Bar and Lei Stand.

CULTURAL HISTORICAL CONTEXT

The island of O`ahu ranks third in size of the eight main islands in the Hawaiian Archipelago. The Wai`anae and Ko`olau mountain ranges were formed by two volcanoes. Through the millennia the constant force of water carved fertile amphitheater-headed valleys and rugged passes eroded at lower elevations providing access from one side of the island to another (Macdonald and Abbott 1970). The region where the project area is located was created by delta drainage from the Ko`olau Mountains. As the modern reef formed offshore, a barrier was created leaving the drainage from the mountains to form a lagoon behind it.

PAST POLITICAL BOUNDARIES

Traditionally, the division of Oahu's land into districts (*moku*) and sub-districts was said to be performed by a *Mā`ilikukahi* who was chosen by the chiefs to be the *mō`īho`oponopono o ke aupuni* (administrator of the government; Kamakau 1991:53–55). Cordy places *Mā`ilikukahi* at the beginning of the 16th century (2002). *Mā`ilikukahi* created six districts and six district chiefs (*Ali`i`ai moku*). Land was considered the property of the king or *Ali`i`ai moku* (the *Ali`i* who eats the island/district), which he held in trust for the gods. The title of *Ali`i`ai moku* ensured rights and responsibilities to the land, but did not confer absolute ownership. The king kept the parcels he wanted; his higher chiefs received large parcels from him and, in turn,

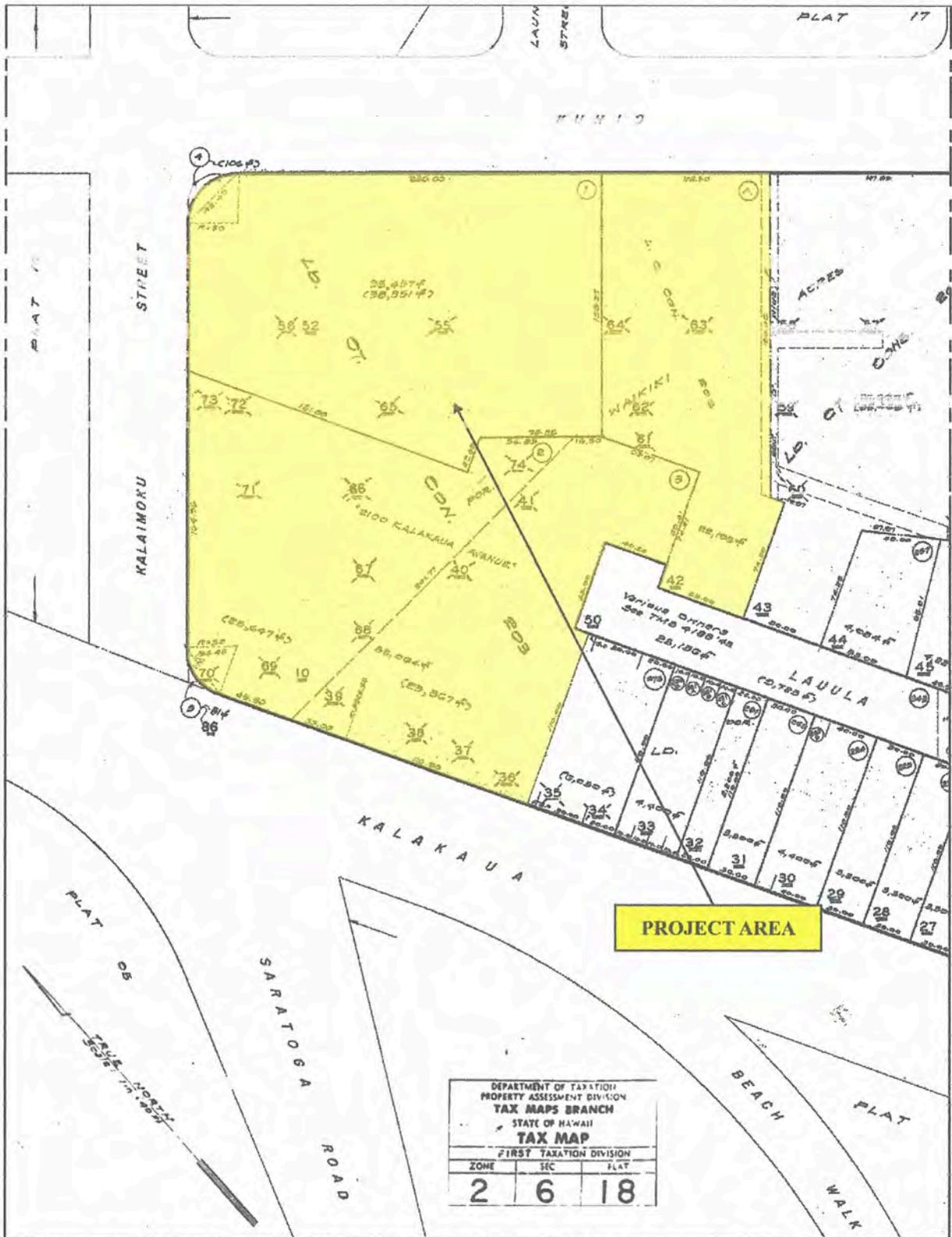


Figure 1: Tax Map Key [TMK 2-06-018 por.10, 42, and 52] Showing Project Area.

distributed smaller parcels to lesser chiefs. The *maka`āinana* (commoners) worked the individual plots of land. It is said that Mā`ilikukahi gave land to *maka`āinana* (commoners) all over the island of O`ahu (*ibid*).

In general, several terms, such as *moku*, *ahupua`a*, *`ili* or *`ili`āina* were used to delineate various land sections. A district (*moku*) contained smaller land divisions (*ahupua`a*) that customarily continued inland from the ocean and upland into the mountains. Extended household groups living within the *ahupua`a* were therefore able to harvest from both the land and the sea. Ideally, this situation allowed each *ahupua`a* to be self-sufficient by supplying needed resources from different environmental zones (Lyons 1875:111). The *`ili`āina* or *`ili* were smaller land divisions next to importance to the *ahupua`a* and were administered by the chief who controlled the *ahupua`a* in which it was located (Lyons 1875:33; Lucas 1995:40). The *mo`o`āina* were narrow strips of land within an *`ili*. The land holding of a tenant or *hoa`āina* residing in a *ahupua`a* was called a *kuleana* (Lucas 1995:61). The project area is located in the Waikīkī Ahupua`a. Waikīkī means literally “spouting water” and is said to be named for the swamps (Pukui *et al.* 1974:223).

TRADITIONAL SETTLEMENT PATTERNS

The Hawaiian economy was based on agricultural production and marine exploitation, as well as raising livestock and collecting wild plants and birds. Extended household groups settled in various *ahupua`a*. During pre-Contact times, there were primarily two types of agriculture, wetland and dry land, both of which were dependent upon geography and physiography. River valleys provided ideal conditions for wetland *kalo* (*Colocasia esculenta*) agriculture that incorporated pond fields and irrigation canals. Other cultigens, such as *kō* (sugar cane, *Saccharum officinarum*) and *mai`a* (banana, *Musa* sp.), were also grown and, where appropriate, such crops as *`uala* (sweet potato, *Ipomoea batatas*) were produced. This was the typical agricultural pattern seen during traditional times on all the Hawaiian Islands (Kirch and Sahlins 1992, Vol. 1:5, 119; Kirch 1985). Agricultural development on the windward side of O`ahu was likely to have begun early (AD 1100–1300) during what is known as the Expansion Period (Kirch 1985). Fisheries were included in Waikīkī Ahupua`a, supplementing the productive agricultural plots.

WAHI PANI (LEGENDARY PLACES)

Waikīkī's abundance of water and inland ponds associated it closely to stories of the *mo`o* god, Kamō`ili`ili. Sterling and Summers have related the legend of Hi`iaka, Pele's sister, her companion, Wahineomao, and Lohiau as they traveled back to Hawai`i Island from Kaua`i

(1978). They left their canoe at Waikīkī and walked inland towards Mo`ili`ili. When they got close to that place, a strong gust of wind blew and Wahineomao and Lohiau felt invisible hands pulling their ears back. When they called to Hi`iaka for help, she realized it was the *mo`o* god Kamō`ili`ili. Hi`iaka knew he wanted to fight, so she told her companions to stay behind her.

A short distance away, they met Kamoiliili...She removed her outside skirt, which held forks of lightning and smote him with it. His body was cut to pieces and the pieces turned into a low hill in the neighborhood of the old Hawaiian Church. The place is still call Kamoiliili [Mo`ili`ili] to this day. The long, low hill (across from Kuhio School is said to be the body of this lizard god. [1978:281]

Kumulae Spring (Willows Restaurant) is the only remnant of the fresh water ponds to survive until today and is the subject of an old legend (Kanahele 1995; Sterling and Summers 1978).

The area of the springs was considered sacred by the Hawaiians as it had been the bathing place of a princes of such a high rank that "...it was evil for men's eyes to gaze [upon her]" (Sterling and Summers 1978:282). Because of her importance, she had a retinue of beautiful maidens to guard her.

The princess loved the waters of Kumulae spring. From time to time she would go to the spring by night and there bathe in the water, while her maidens chanted songs of love to the pulsating rhythm of gourds. [*ibid.*]

The cool, clean water in the otherwise arid plain was said to have healing properties and was full of fish, making it inviting to others not of such a high rank. Artifacts recovered from the region included stone lamps, possibly used during night bathing, *`ulu maika* stones used for recreation along its banks, and small stone anchors used to set bait.

Another pond, Kānewai, with similar healing powers was located underground along what is now called King Street. Hawaiians believed:

...wise fish from the sea used to swim up to this pool, overhear the plans of the native fishermen who frequented the vicinity and then float back to the ocean to warn their finny friends" in Waikīkī. [Sterling and Summers 1978:285]

Kamakau relates that:

“Waikīkī sits proudly in the calm of the Ka`ao breeze... Waikīkī was a land beloved of the chiefs and there many of them lived from remote times to the time of Kalaikūpule. Board surfing could be indulged in there, and for this reason the chiefs liked the place very much. At Waikīkī are the surfs of Ka-lehua-wehe, `Aiwohi, Maihiwa, and Kapuna. [1991:44]

Places of importance to the *kama`āina* of this place were many. Religious structures, included Mau`oki Heiau, reportedly built by *menehune* and dedicated to the worship of Lono the god of harvest, Papa`ena Heiau, a *luakini* (human sacrifice) where in 1809 Kamehameha sacrificed his foster son for breaking a *kapu* with Ka`ahumanu, Kamehameha's favorite wife, Āpuakēhau, Hale Kumukalaha, Kupalaha, Kapua (*luakini*), Kulanihakoi, and Makahuna dedicated to Kanaloa the god of the sea (Kanahale 1995). The number of *heiau* attests to the importance of Waikīkī.

An ancient story speaks of four visitors who arrived from Tahiti before the 12th century (Kanahale 1995). Their names were Kapaemahu, who was the leader, Kahaloa, Kapuni, and Kinohi. They were soothsayers from the Tahitian court and were powerful healers. They settled in Waikīkī and became famous throughout the land. When it was time for them to return to Tahiti, they asked the people to erect four monuments of stone so that they would be remembered and future generations could see the gratitude of those they had helped. Stone was brought from a bell rock in Kaimukī to their residence at Ulukou where their favorite bathing spots were. It is said that the rocks were so heavy it took thousands of people to transport the rocks to their resting place. The dedication ceremony lasted a month and included a human sacrifice whose body was placed beneath one of the stones. With this ceremony, the healers had transferred their names and *mana* to the stones before they disappeared, never to be seen again. These stones still stand at Kūhō`o Beach to this day (*ibid.*).

SETTLEMENT PATTERNS

In Hawai`i, much of the coastal lands were preferred for chiefly residence. Easily accessible resources such as offshore and onshore fish ponds, the sea with its fishing and surfing—known as the sports of kings, and some of the most extensive and fertile wet taro lands were located in the area (Kirch and Sahlins, 1992 Vol. 1:19). Inland resources necessary for subsistence, could easily be brought to the *Ali`i* residences on the coast from nearby inland plantations. The majority of farming was situated in the lower portions of stream valleys where there were broader alluvial flat lands or on bends in the streams where alluvial terraces could be

modified to take advantage of the stream flow. Dry land cultivation occurred in colluvial areas at the base of gulch walls or on flat slopes (Kirch 1985; Kirch and Sahlins 1992, Vol. 2:59).

One of the most extensive terrace areas for taro was the level land between what is now Kalākaua Avenue, Kapi'olani Park and Mo'ili'ili (Handy 1940). They were watered by Palolo and Mānoa Stream and fresh water ponds (*loko wai*) were formed as the water meandered to the sea. Tradition says this vast garden was developed by Chief Kalamakua –a-Kaipūhōlua (16th century Fornander 1969).

Farming was one of the principal duties of the chiefs, and the land [in Waikiki] was rich under cultivation. It was planted from the upper part to its entering the coconut grove [along the shore]... Water courses were made throughout the land, thereby feeding the taro patches and fishponds. A good chief was Kalamakua, who was well known for his farming. He constructed the large taro *lo'ì* of Keokea. Kalamanamana, Kualualu and others at Waikiki. [*Ka Nupepa Kuokoa*, Aug 12, 1865]

Most of the ponds in Waikīkī were *loko pu'uone*, those isolated inshore ponds formed by the development of a barrier beach that created a single, elongated sand dune parallel to the coast. These were modified for agricultural use by the occupants who deepened them, built up the banks and constructed *'auwai* (canals) to allow water and small fish to flow in and out. The majority of *pu'uone* were located in the *'ili* of Kālia near the Pi'inaio Stream and its estuary. A portion of an *'auwai* connecting to Pi'inaio Stream runs through the present project area and was identified during archaeological work conducted in 2000 (Figure3; LeSuer *et al.* 2000). Fish commonly raised in the ponds included *'ama'ama* (mullet) and *awa* (milkfish; Kanahale 1995). Trails extended from the coast to the mountains, through the taro ponds, linking them for economic and social reasons.

Because of its fine beach and rich agricultural lands, the ruling chiefs of Hawai'i chose this area for the seat of government in very early times (Handy and Handy 1972). The *Ali'i Nui*, Mā'ilikukahi, transferred the government from Waialua to Waikīkī in the 1400s, thus making it one of the main political and economic centers of O'ahu for the next 400 years (Kamakau 1991; Kanahale 1995). Chiefs of O'ahu, including Kuamanuia, Ka'ihikapuamanuia whose large fishpond is under Fort DeRussy, Kakuhihewa and Ka'ihikapuakakuhihewa his son, chose to live in Waikīkī, at least part of the time (Kanahale 1995).

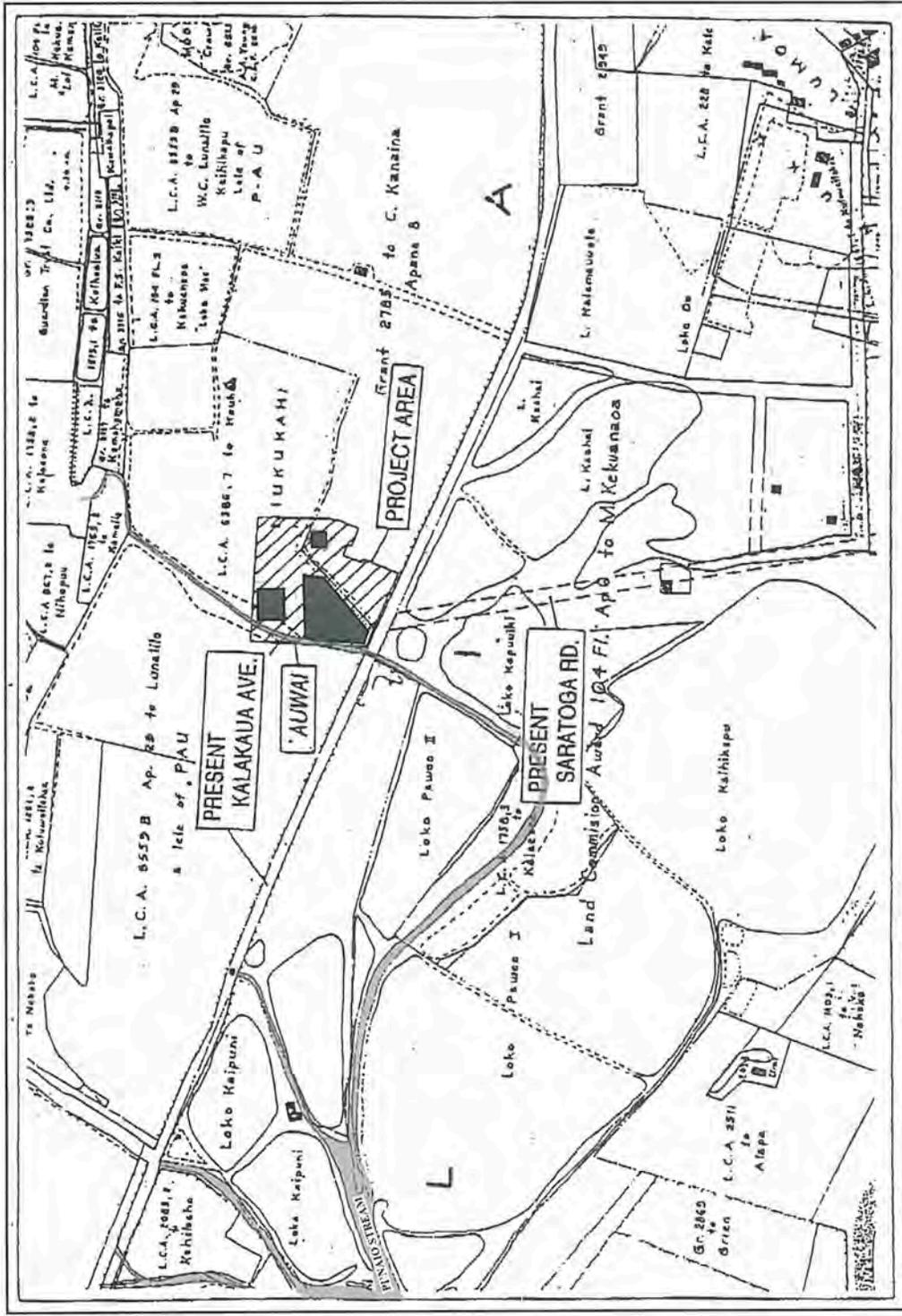


Figure 3: Portion of 1881 Map by S.E. Bishop with Location of the Project Area and Auwai (From Lesuer et.al. 2000).

In 1783, Kahekili, a Maui chief, invaded O`ahu landing in Waikīkī. It was said his fleet of war canoes extended from Ka`alawai, near Leahi (Diamond Head) to Kawehewehe, the location of the Halekūlani Hotel. The struggle to arrest O`ahu from his nephew Kahahana took a total of five years, but resulted in Kahekili's brief rule over Moloka`i, Maui, and O`ahu. Kahekili died in Waikīkī in Ulukou (near the Moana Hotel) in 1794 leaving his kingdom to his son, Kalanikupule (*ibid.*). Kamehameha was to be Kalanikupule's downfall, when in 1795 he decisively won O`ahu in the Battle of Nu`uanu.

WESTERN CONTACT

Early records, such as journals kept by explorers, travelers and missionaries, Hawaiian traditions that survived long enough to be written down, and archaeological investigations have assisted in the understand of past cultural activities. In 1792, Vancouver visited Waikīkī and recorded:

On the shores [of the bay] the villages appeared numerous and in good repair; and the surrounding country pleasingly interspersed with deep, though not extensive valleys; which with the plains near the seaside, presented a high degree of cultivation and fertility... To the northward through the village... an exceedingly well made causeway, about twelve feet broad, with a ditch on either side. This opened to our view a spacious plain, which ... had the appearance of the open common fields of England; but on advancing, the major part appeared 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 ... Near a mile from the beach ... 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 ... At the termination of the causeway the paths of communication with the different fields or plantations were on these narrow stone walls; very rugged and where one person only could pass at a time ... The sides of the hills, which were at some distance, seemed rocky and barren; the intermediate valleys, which were all inhabited, produced some large trees, and made a pleasing appearance. The plains, however, if we may judge for the labor bestowed on their cultivation, seem to afford the principal proportion of the different vegetable productions on which the inhabitants depend for their subsistence... [1984:455-456]

The ship's naturalist and surgeon, Menzies, was with Vancouver and added his description:

... 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 ... We

pursued a pleasing path back into 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 species of *Draccena* 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 supply the most distant fields at pleasure, and the soil seems to repay the labor and industry of these people by the luxuriance of its production. [Menzies 1920:23-24]

After the conquest of O`ahu by Kamehameha I in 1795, Waikīkī became the capitol of the Hawaiian Kingdom until it moved to Honolulu in 1809. His residence was called Kūihelani and was situated in the area of what is the Moana Hotel, known as Āpuakēhau and the present Royal Hawaiian Hotel, or Helumoa. This coastal section was called Pua`ali`ili`i and had been long known to be a favorite dwelling site for the chiefs (Kanahale 1995). The access trails passed *makai* of the project area and is described by John I`i:

The trail . . . which led to lower Waikīkī went along Kaananiau, into the coconut grove at Pawa`a, the coconut grove of Kuakuaka, then down to Pi`inaio [stream]; along the upper side of Kahanaumaikai's coconut grove, along the border of Ka`ihikapu pond, into Kawehewehe; then through the center of Helumoa of Pua`ali`ili`i, down to the mouth of the Āpuakēhau stream; along the sandy beach of Ulukou to Kapuni, where the surfs roll in; thence to the stream of Kuekaunahi; to Waialua and to Pali`iki, Kamanawa's house site. [1973: 92]

Kamehameha built a stone house and enclosed it with a fence. He also constructed a shrine (a *puaniu* house) to receive offerings for the *mo`o* goddess Kihawahine, as he had promised her before the war with Kalanikupule. At first, western ships anchored at Waikīkī, but with the discovery of Honolulu Harbor (then known as Kou), the only sheltered harbor on O`ahu and as western visits became more frequent Waikīkī was favored less and less. The lure of exotic goods and lifestyles encouraged a shift in residence from Waikīkī to Honolulu, the new center of activities. Eventually, even Kamehameha moved his entourage from Waikīkī to the vicinity of the harbor where he could control activities. This shift in residence coupled with the depopulation due to introduced diseases, took its toll on the vast agricultural fields of Waikīkī (Chamberlain 1957).

THE GREAT MĀHELE

In the 1840s, traditional land tenure shifted drastically with the introduction of private land ownership based on western law. While it is a complex issue, many scholars believe that in order to protect Hawaiian sovereignty from foreign powers, Kamehameha III was forced to establish laws changing the traditional Hawaiian economy to that of a market economy (Kame`eleihiwa 1992:169-70, 176; Kelly 1983:45, 1998:4; Daws 1962:111; Kuykendall 1938 Vol. I: 145). The Great Māhele of 1848 divided Hawaiian lands between the king, the chiefs, the government, and began the process of private ownership of lands. The subsequently awarded parcels were called Land Commission Awards (LCAs). Once lands were thus made available and private ownership was instituted, the *maka`āinana* (commoners), if they had been made aware of the procedures, were able to claim the plots on which they had been cultivating and living. These claims did not include any previously cultivated but presently fallow land, *ʻokipū* (on O`ahu), stream fisheries, or many other resources necessary for traditional survival (Kelly 1983; Kame`eleihiwa 1992:295; Kirch and Sahlins 1992). If occupation could be established through the testimony of two witnesses, the petitioners were awarded the claimed LCA and issued a Royal Patent after which they could take possession of the property (Chinen 1961:16). There were about 250 claims for land in Waikīkī Ahupua`a. The present project area was awarded to William C. Lunalilo (LCA 8559B:29) and to Kauhao (LCA 6386:7).

HISTORIC LAND USE

In spite of being primarily agricultural, there was a small community of foreigners who began to build new homes along the beach in the 1860s. Also, Waikīkī continued to be popular with the *Ali`i*. Coconut groves once sheltering the chiefs of old Hawai`i, now shaded western homes built mainly by foreigners. Honolulu merchants realized the potential for land speculation early on and clamored to have the road to Waikīkī widened and improved (Nakamura 1979). With easier access came more building along the beach providing an ideal bedroom suburb for Honolulu town. In 1876, the Kapi`olani Park Association was formed, resulting in a park, a race track and landscaped drives next to which more large homes were built (Figure 4). An Omnibus ran from Honolulu to Waikīkī until 1889 when a tramcar line extended its service to the area (*ibid.*). The development of roads as well as the many houses would prove to be obstacles to the drainage of fresh water flowing through the agricultural plots to the sea. Labeled “unsanitary” because of the damned waters, these changes would lead to the complete destruction of agriculture and aquaculture in Waikīkī in the early 20th century (*ibid.*).

The lack of tenants in the taro field, the neglected fishponds, alterations to the main road and Kapi`olani Park, and construction of a tramline seriously impacted the agricultural

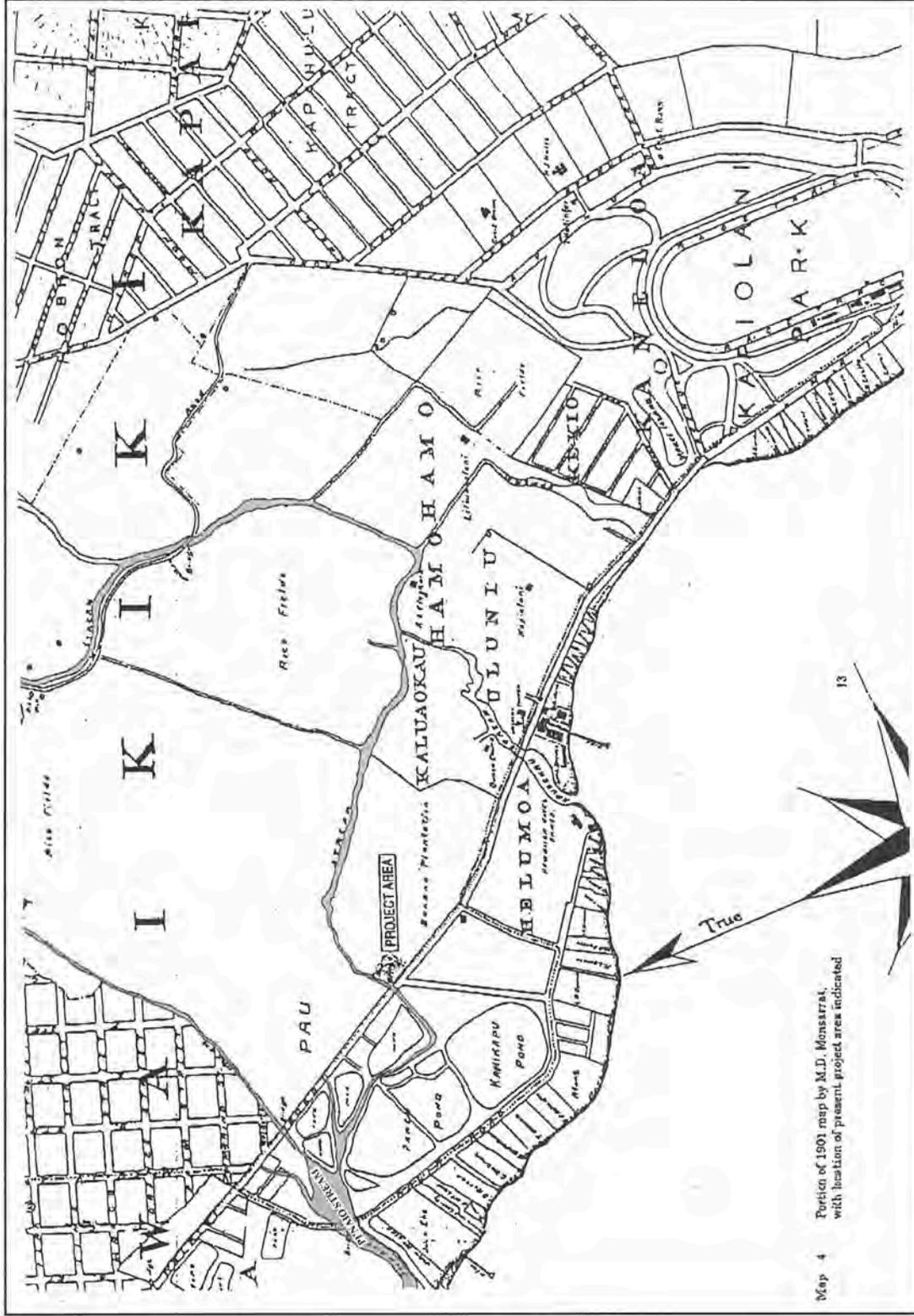


Figure 4: Portion of 1901 Map by M.D. Monsarrat with Location of the Project Area and Encroaching Development (From LeSuer et.al. 2000).

environment. An effort was made by King Kamehameha IV in 1863 to renew the agricultural fields:

Our King's project at Keokea, in Waikiki, is successful. The work in his taro parch, Keokea, was commenced the first of June, last, and finished on the 22nd of October, just passed. The taros are thriving from up at Keokea down to the shore, a pleasing sight to the eyes. The leaves are green and much admired by every one here in Waikiki. Our King had cultivated these huge taro patches before in years past. Many commoners and chiefs worked in them. All of this patch has not been worked in because of the great size and the toughness of the bulrushes...[*Ku'oko'a* in Handy and Handy 1972:481]

A massive amount of labor was needed in order for the burgeoning sugar industry to thrive in Hawai'i in the mid to late 1800s. The paucity of Hawaiians due to disease and other factors gave way to the importation of immigrants from other lands to labor in the fields. Most came from China and Japan and rice became more and more important as a food supply. The abandoned taro patches in Waikīkī and elsewhere were easily converted to rice cultivation (Nakamura 1979). By 1892, about 542 acres of pond fields previously producing taro, were producing rice and Waikīkī had become one of the most important rice growing districts on O'ahu (*ibid*).

There were still 15 ponds in use in Kalia and Waikīkī even as late as 1901 but early in the 20th century, the U. S. War Department obtained a large section of Waikīkī *makai* of the project area which required the filling of a portion of the fish ponds with fill from the ocean (Handy and Handy 1972). This took a year to complete and began the transformation of Waikīkī from wetlands to solid ground (LeSuer 2000). The project area remained in agriculture, as it supported banana cultivation at this time.

It became obvious that urbanization of Waikīkī was increasing, causing a conflict with agriculture and aquaculture. Development was continuing and had begun to adversely affect the natural drainage of surface water flowing to the sea. Nakamura suggests that after the annexation of Hawai'i in 1898, those in power manipulated land use to maintain and expand their control in Hawai'i (1979). Agriculture and aquaculture were still viable and successful activities at the beginning of the 20th century. In 1896, Act 61 of the Session Laws laid the basis for filling in of low-lying lands and owners of wet lands had to create dry, fastland, if the Board of Health judged their lands to be injurious to the public, or unsanitary. If a landowner did not want to fill in his lands or could not afford to do so, the government would do the filling at the

expense of the owner. If the owner failed to repay the costs, a lien was attached to the land and the government proceeded to auction it off and they would lose their land.

Eugene Pinkham, President of the Board of Health from 1904 to 1906 stated that Waikīkī was indeed unsanitary and deleterious to the public health and with reclamation could be turned into an attractive urban environment (*ibid.*). Nakamura states: “. . . sanitation was merely a cover for “reclamation” and take-over of land from people who could not afford the costs of “improvement”. . . “ (1979:68). In his 1906 report, Pinkham stated:

. . . Waikiki, to the extent of the beach front will permit, is the choice part of the city of Honolulu, for it offers the close attraction of the sea. The land bordering on the sea commands high prices and little can be secured. Other than a few lots on Kalakaua Avenue there are in the Waikiki district hundreds of acres that could be made, at comparatively small cost, exceedingly attractive and desirable by a comprehensive plan under governmental control . . . [In Nakamura 1979:54]

Pinkham went on to state that the land in Waikīkī would “otherwise remain of only agricultural value for rice and banana culture or valueless . . .” (*ibid.*:53).

Already individual entrepreneurs were buying and filling pond fields and fishponds in Waikīkī and selling the land at large profits. But by mid-1920, the Hawaiian government had acquired the acreage necessary to dredge a drainage canal. In turn, the dirt from the dredged canal was sold to the landowners to fill in the remaining productive pond fields and fishponds as required by the government. Thus, Hawaiian Dredging Company owned by Walter Dillingham, who was awarded the contract, had it both ways, adding to the Dillingham fortune (*ibid.*). During the years it took to dredge the Ala Wai Canal, viable fish ponds and agricultural plots were irreparably impacted by its construction, releasing more land to be developed and sold by “entrepreneurial capitalists” (*ibid.*:99).

The completion of the Ala Wai Drainage Canal in 1928, finished the draining and filling in of the remaining ponds and irrigated fields in Waikīkī opening the way to commercial enterprises (*ibid.*). The project area was used for banana cultivation until the 1940s when various commercial activities were housed along Kalākaua, Kalaimoku, and Kūhiʻō Avenues. In 1999, all structures were removed from the parcels that presently stand vacant.

SUMMARY AND CULTURAL ASSESSMENT

As suggested in the “Guidelines for Assessing Cultural Impacts” (OEQC 1997), CIAs incorporating personal interviews should include ethnographic and oral history interview procedures, circumstances attending the interviews, as well as the results of this consultation. It is also permissible to include organizations with individuals familiar with cultural practices and features associated with the project area.

The “level of effort undertaken” (OEQC 1997) has not been officially defined and is left up to the investigator. To SCS, a good faith effort means contacting agencies by letter, interviewing people who may be affected by the project or who know its history, researching sensitive areas and previous land use, holding meetings in which the public is invited to testify, notifying the community through the media, and other appropriate strategies based on the type of project being proposed and its impact potential. In the case of the present parcel that has been under development for 40 years and was traditionally a pond field, letters of inquiry were sent to organizations whose expertise would include the project area. Consultation was sought from Lance Foster, the Director of Native Rights, Land and Culture, at the Office of Hawaiian Affairs and the State Historic Preservation Division.

Additionally, historical and cultural source materials were also consulted, extensively used, and can be found listed in the References Cited portion of the report. Such scholars as Thrum (1908, 1916 1917), Fornander (1919, 1969), Walker (1930), Kuykendall (1938), Beckwith (1940), Chinen (1961), Handy and Handy (1972), Puku`i *et al.* (1974), Kelly (1983, 1998), and Kame`eleihiwa (1992) have contributed, and continue to contribute, to our knowledge and understanding of Hawai`i, past and present. The works of these and other authors were consulted and incorporated in the report where appropriate. Land use document research was supplied by the Waihona `Aina Data base (2005).

Analysis of the potential effect of the project on cultural resources, practices or beliefs, the potential to isolate cultural resources, maintain practices or beliefs in their original setting, and the potential of the project to introduce elements that may alter the setting in which cultural practices take place is a requirement of the OEQC (No. 10, 1997). The project area has not been used for traditional cultural purposes within recent times. The parcels were originally part of a lagoon/fish pond environment that shifted to banana cultivation and then commercial use in the 1940s. Based on historical research and response from those organizations contacted, it is reasonable to conclude that Hawaiian rights related to gathering, access or other customary

activities within the project area will not be affected and there will be no adverse effect upon cultural practices or beliefs. Because there were no activities identified on Parcels 10, 42, and 52 there are no adverse effects.

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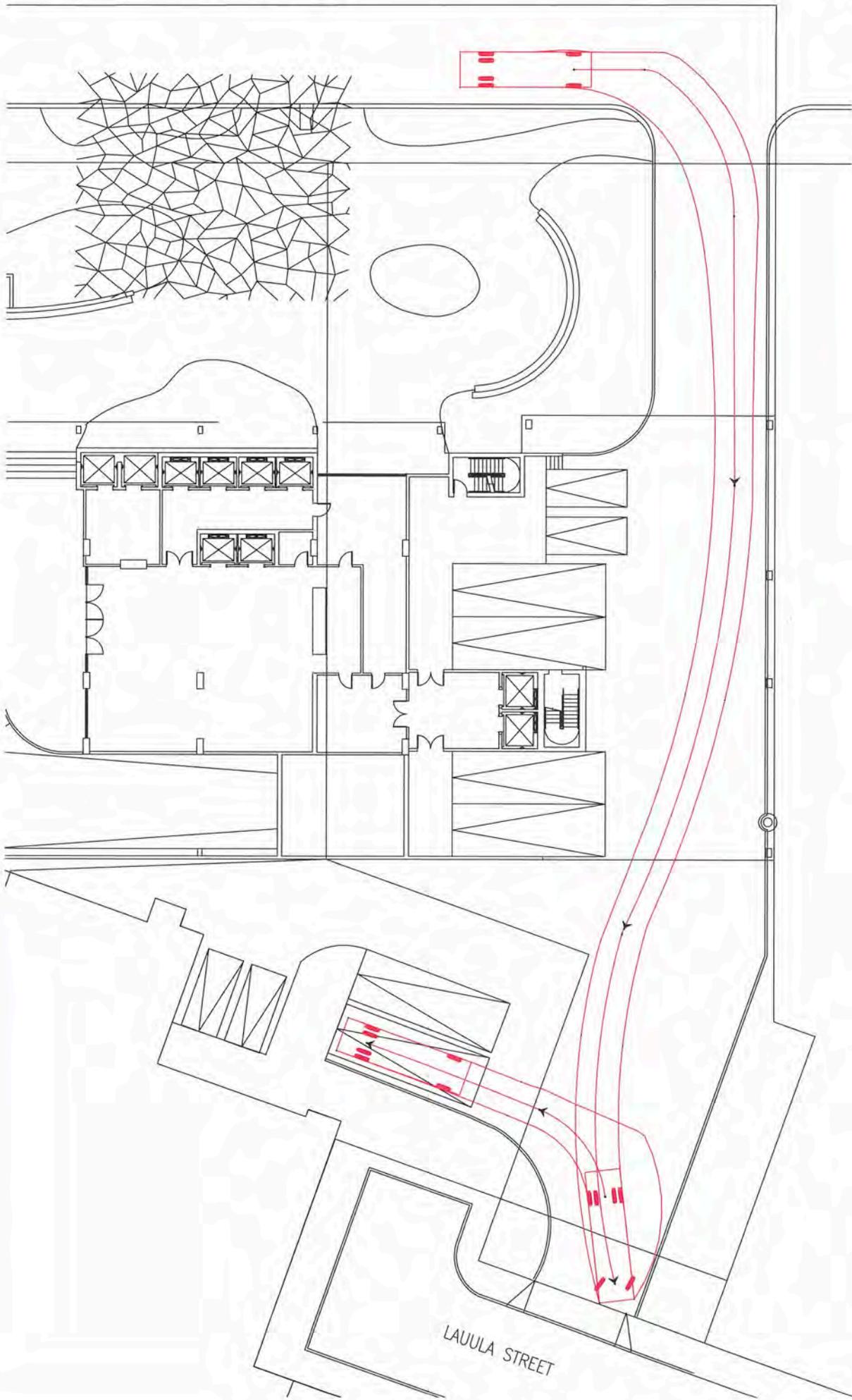
APPENDIX VIII

LOADING MANEUVERING DIAGRAMS

KUHIO

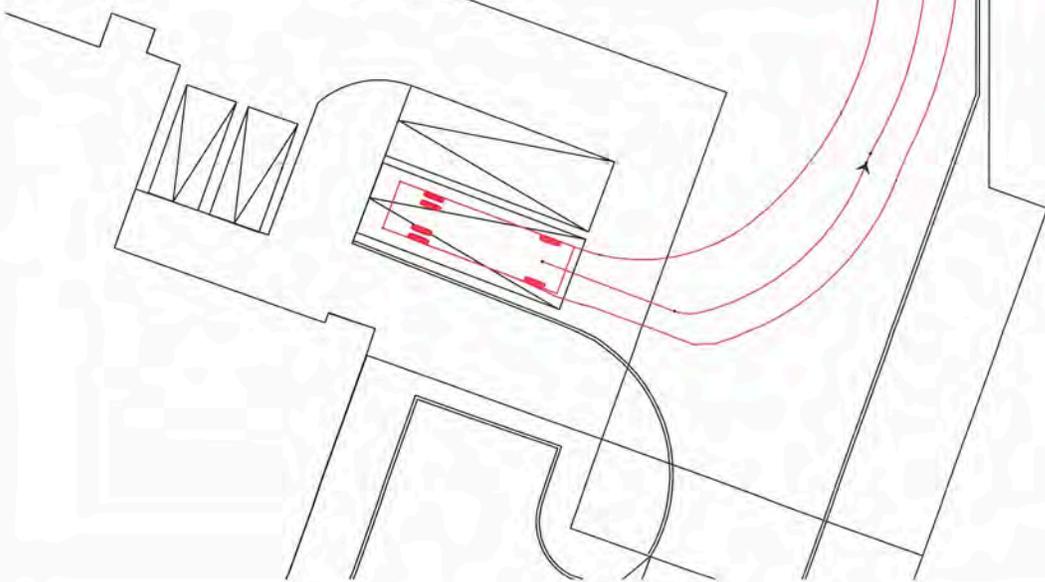
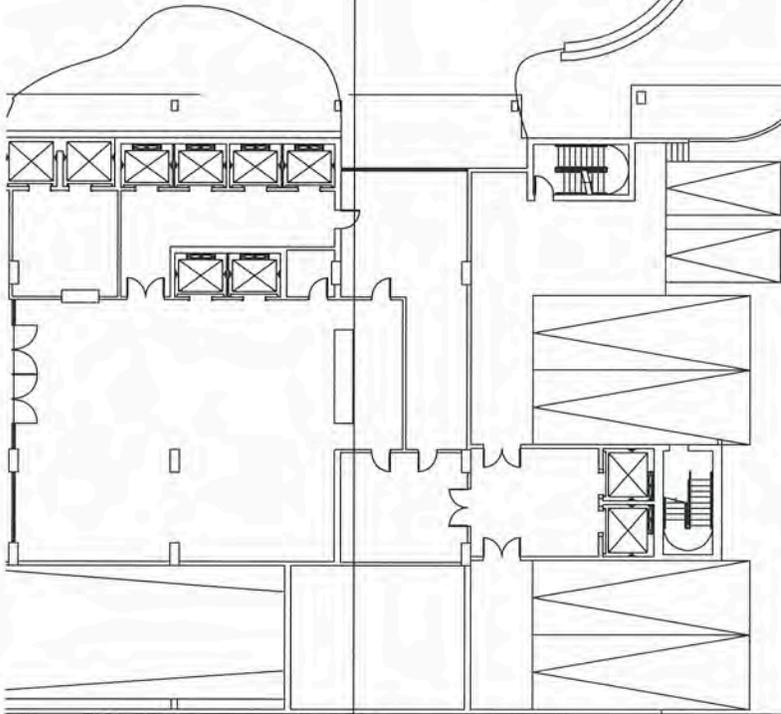
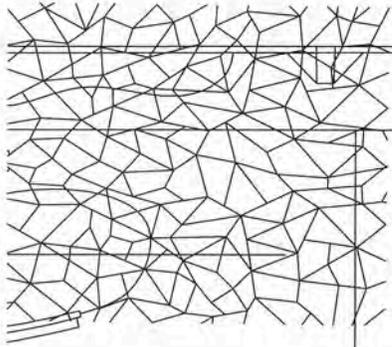
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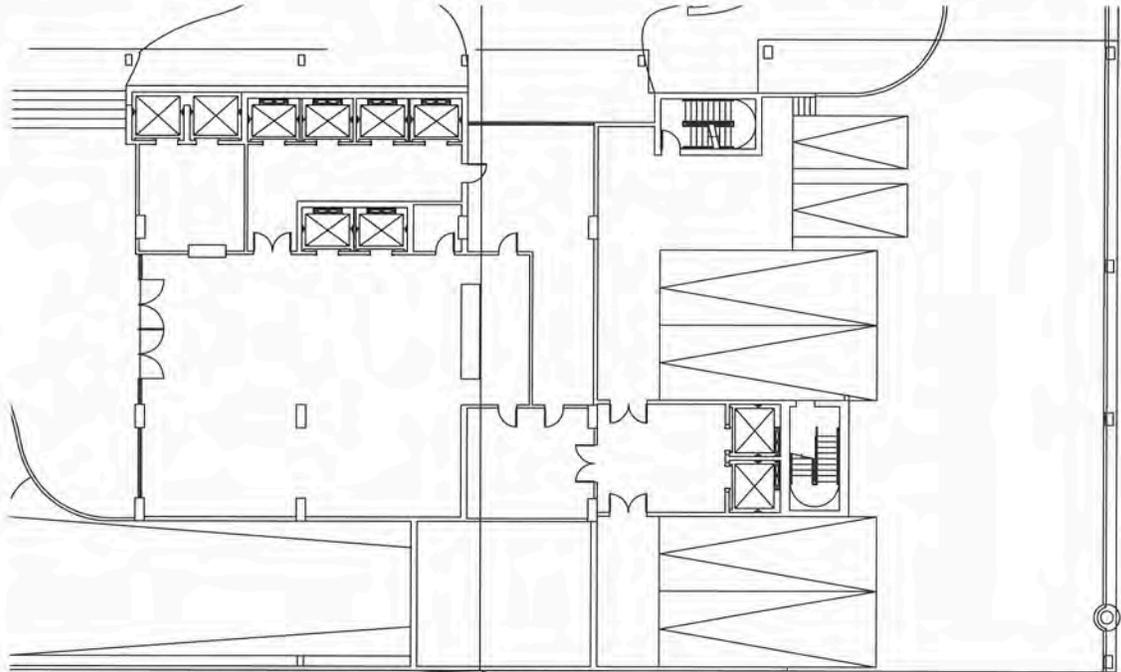
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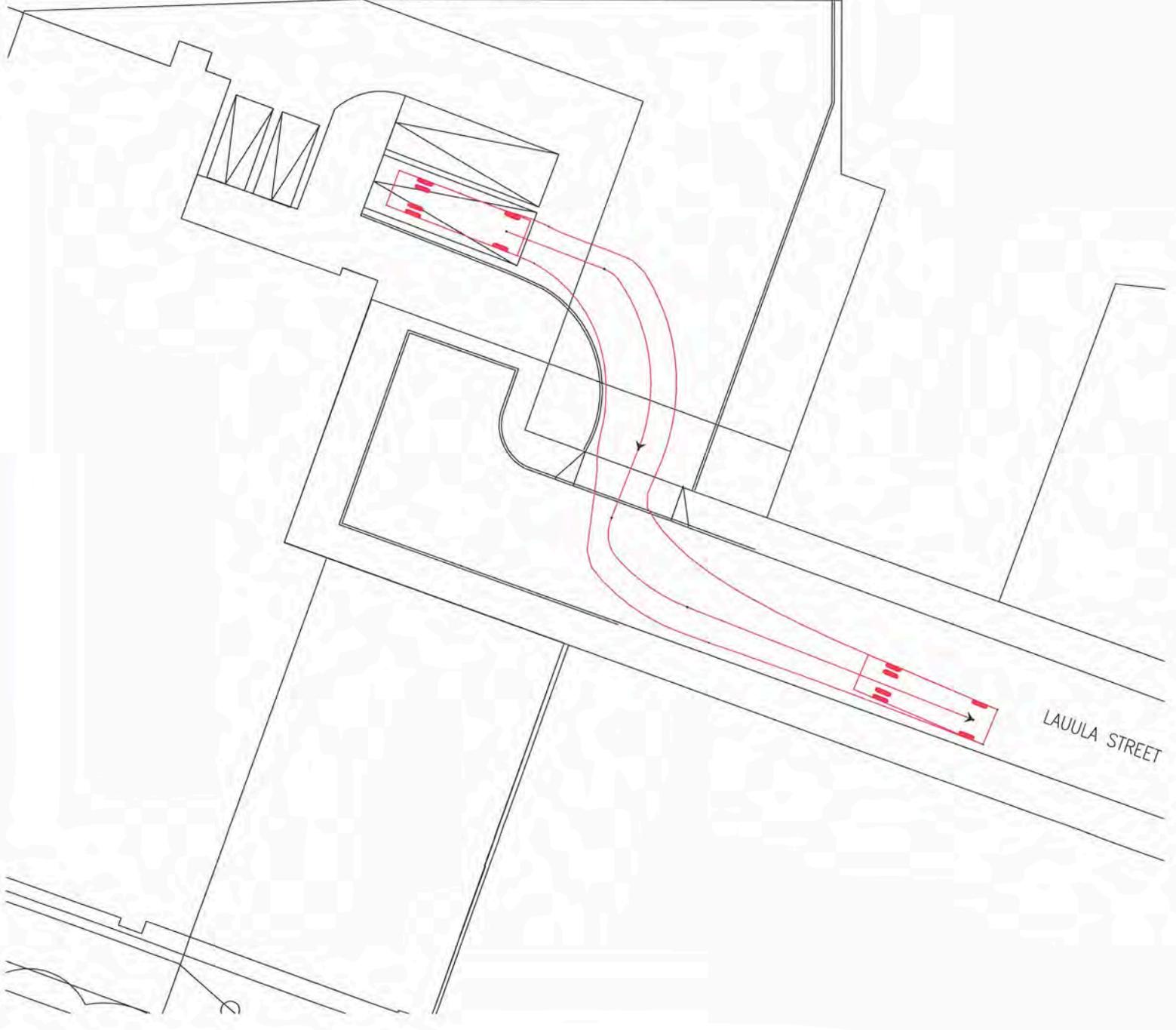
KUHIO AVENUE

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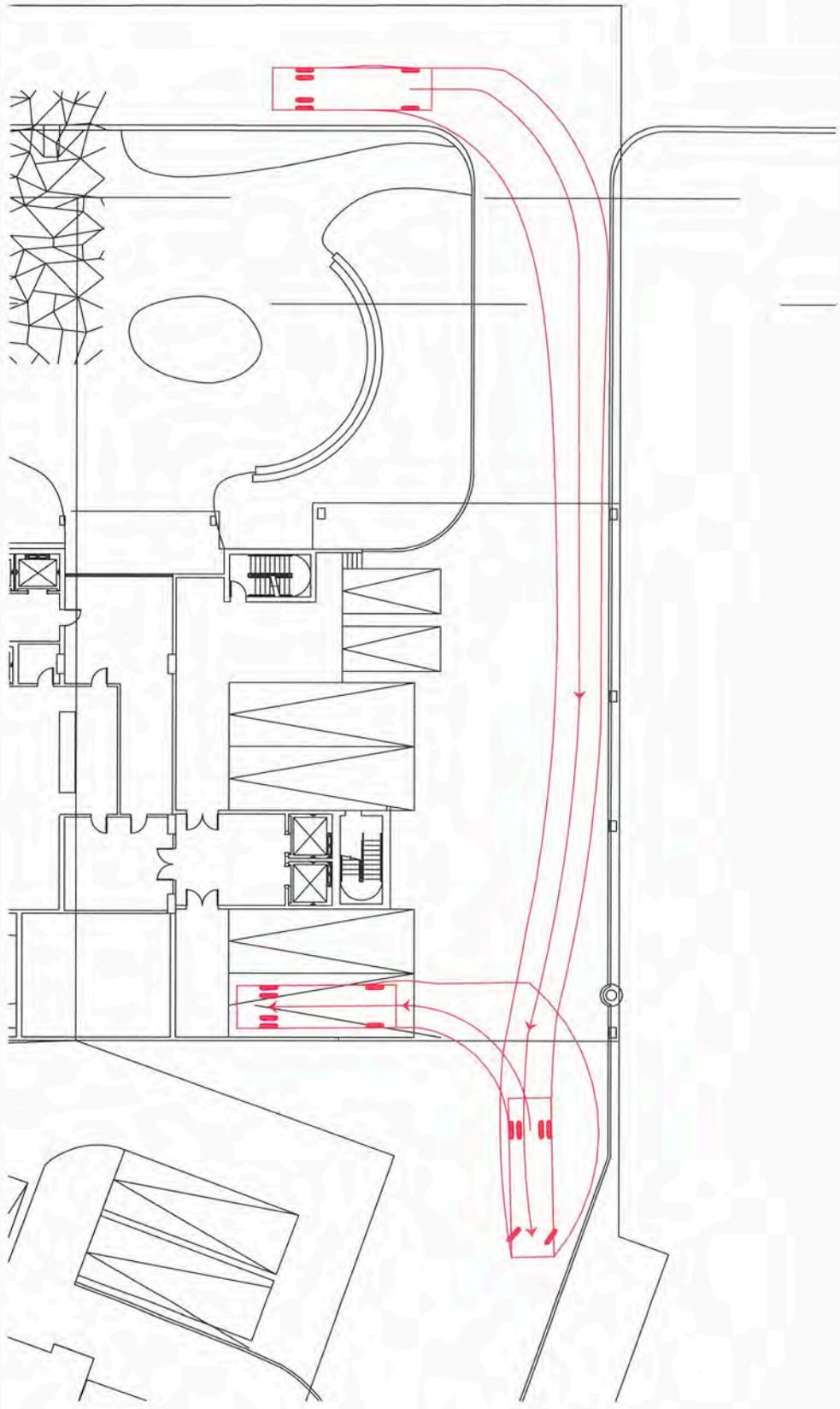


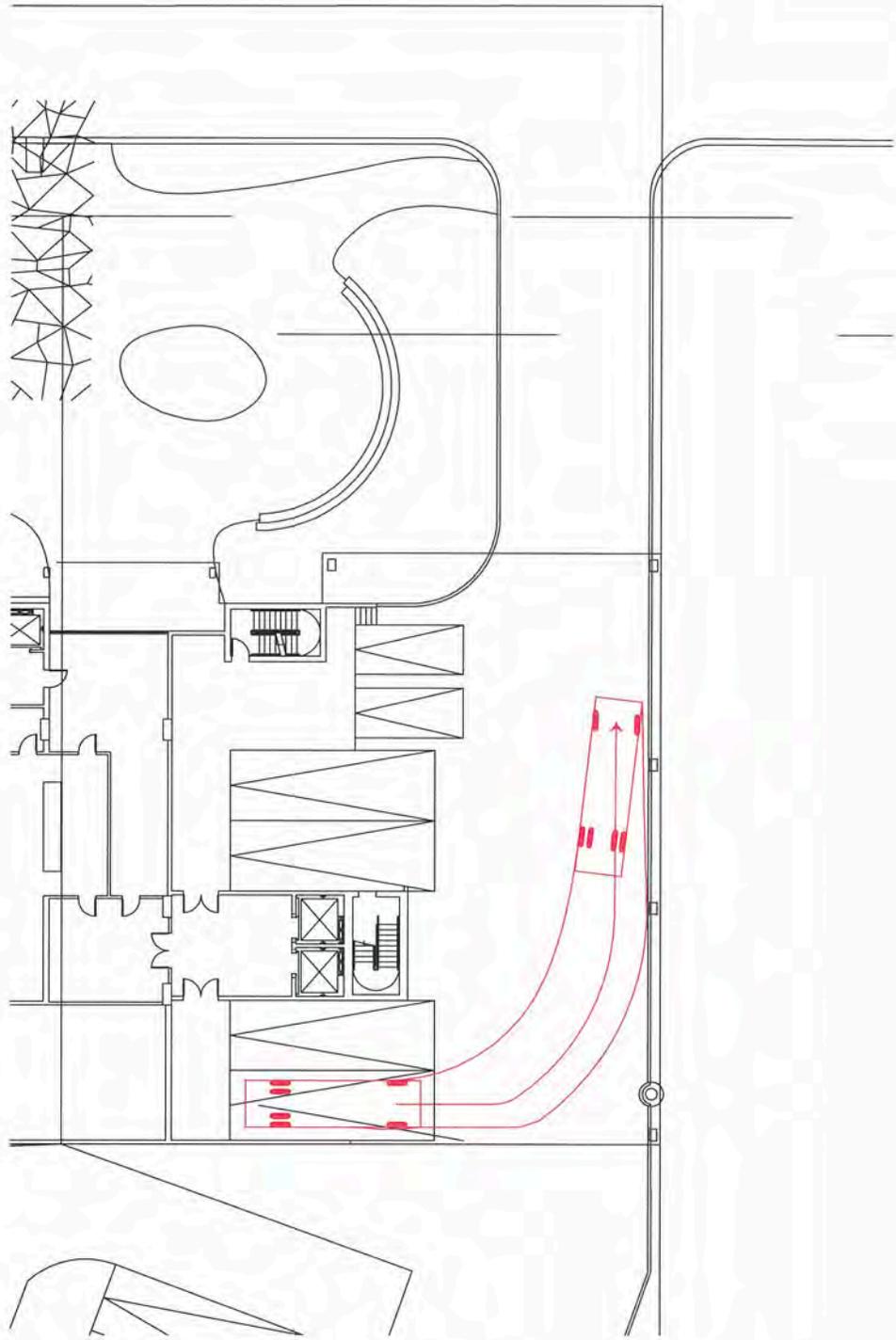


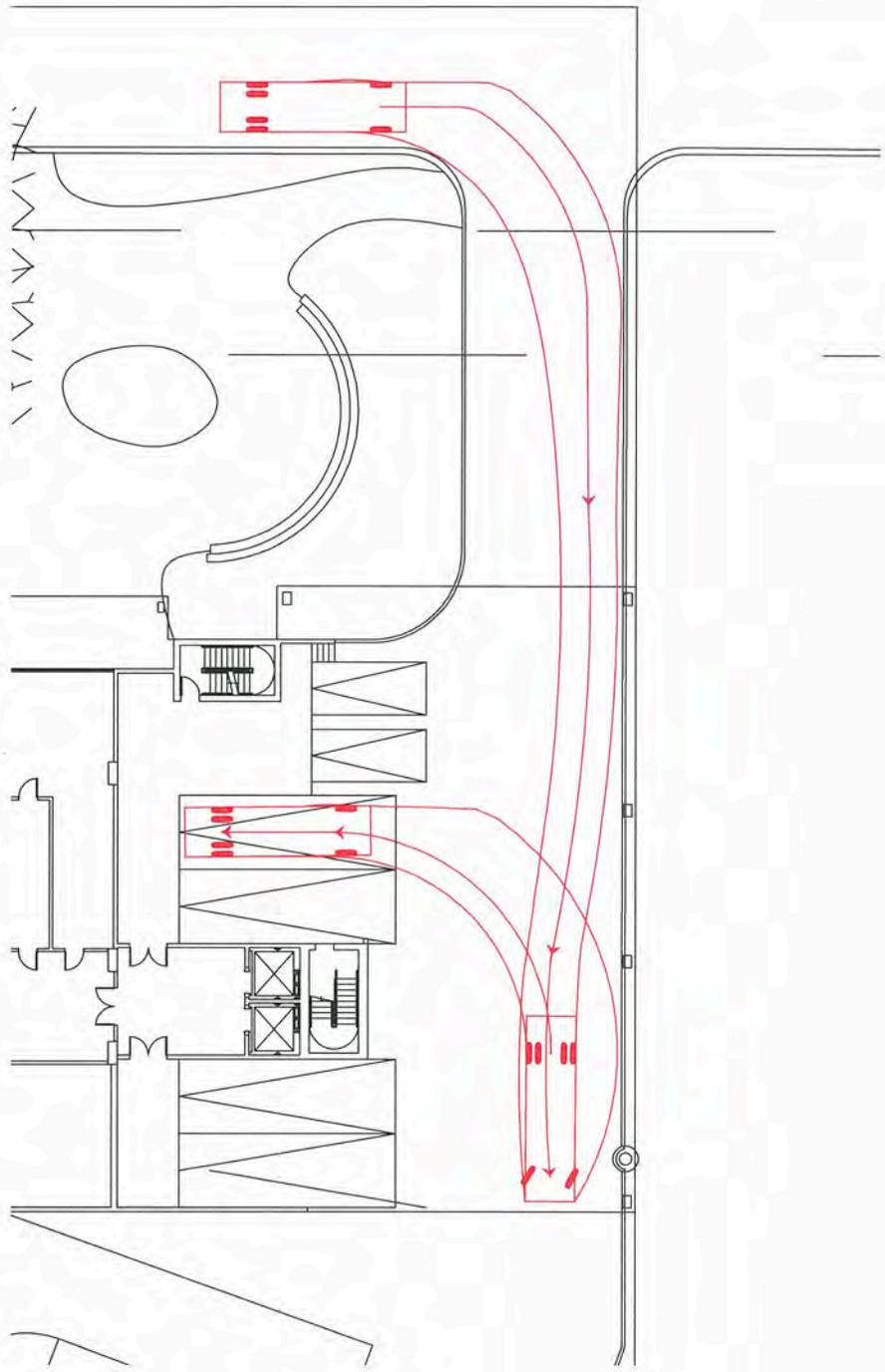
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Scale: 1 in. = 30 ft.

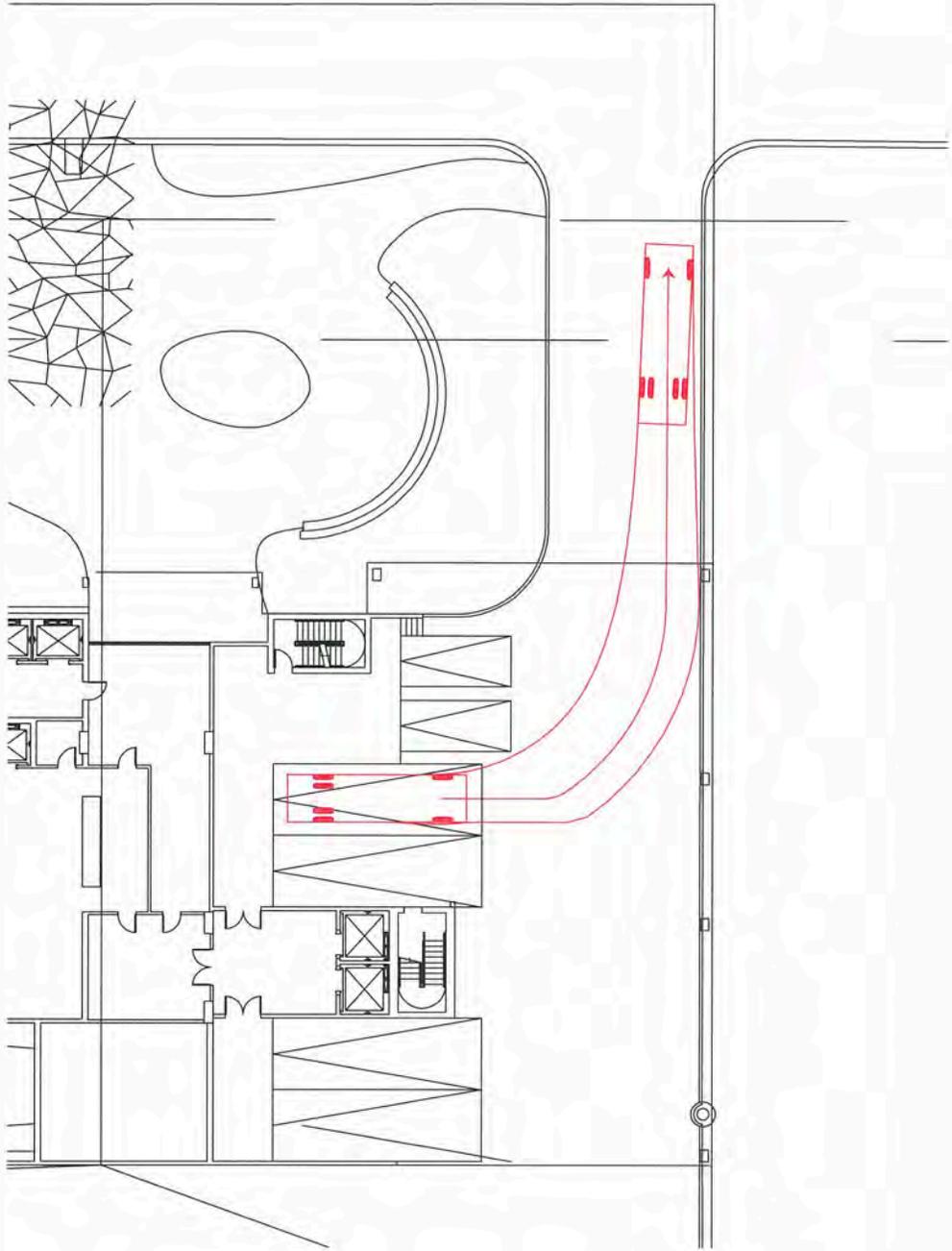


LAUULA STREET



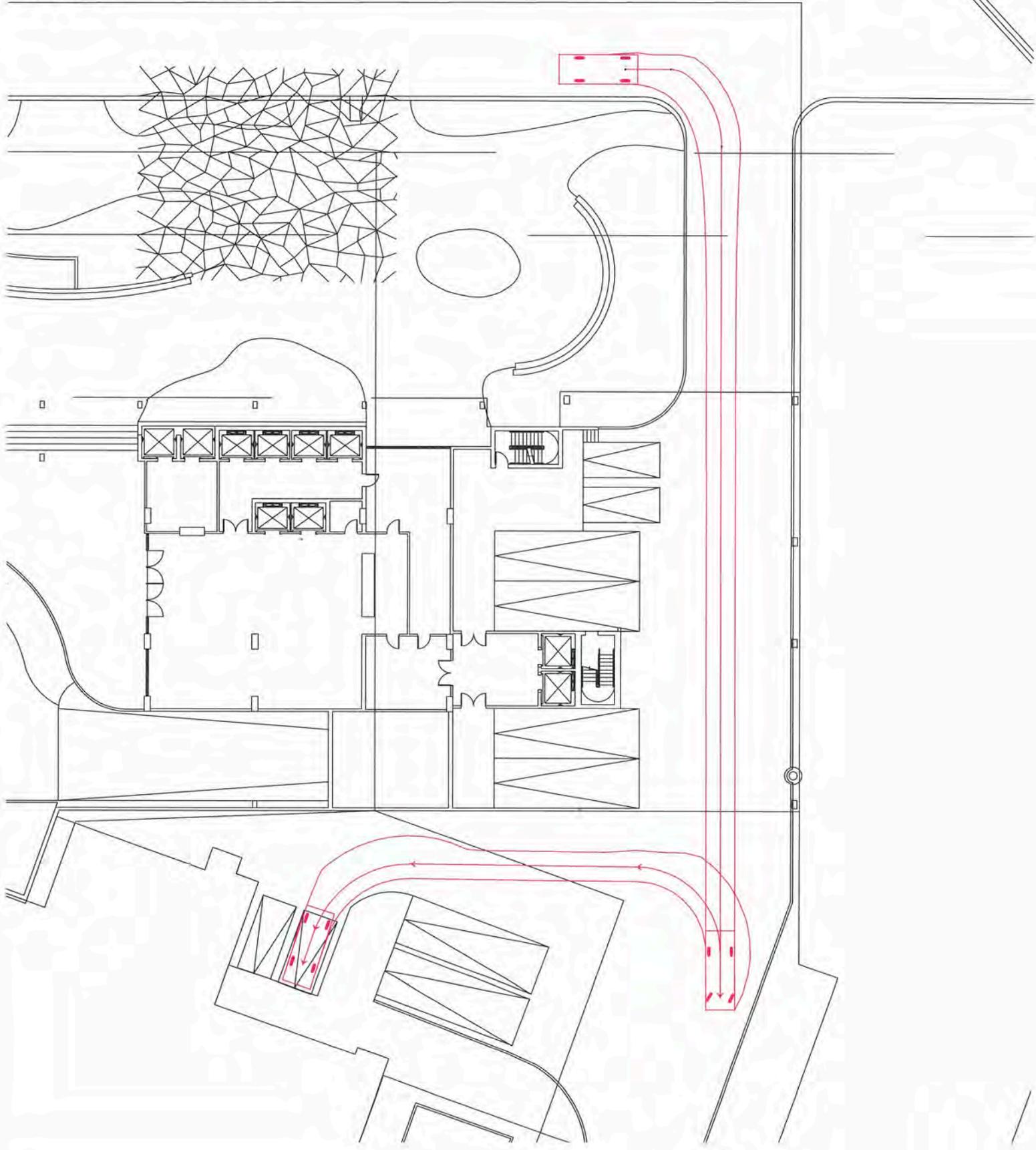






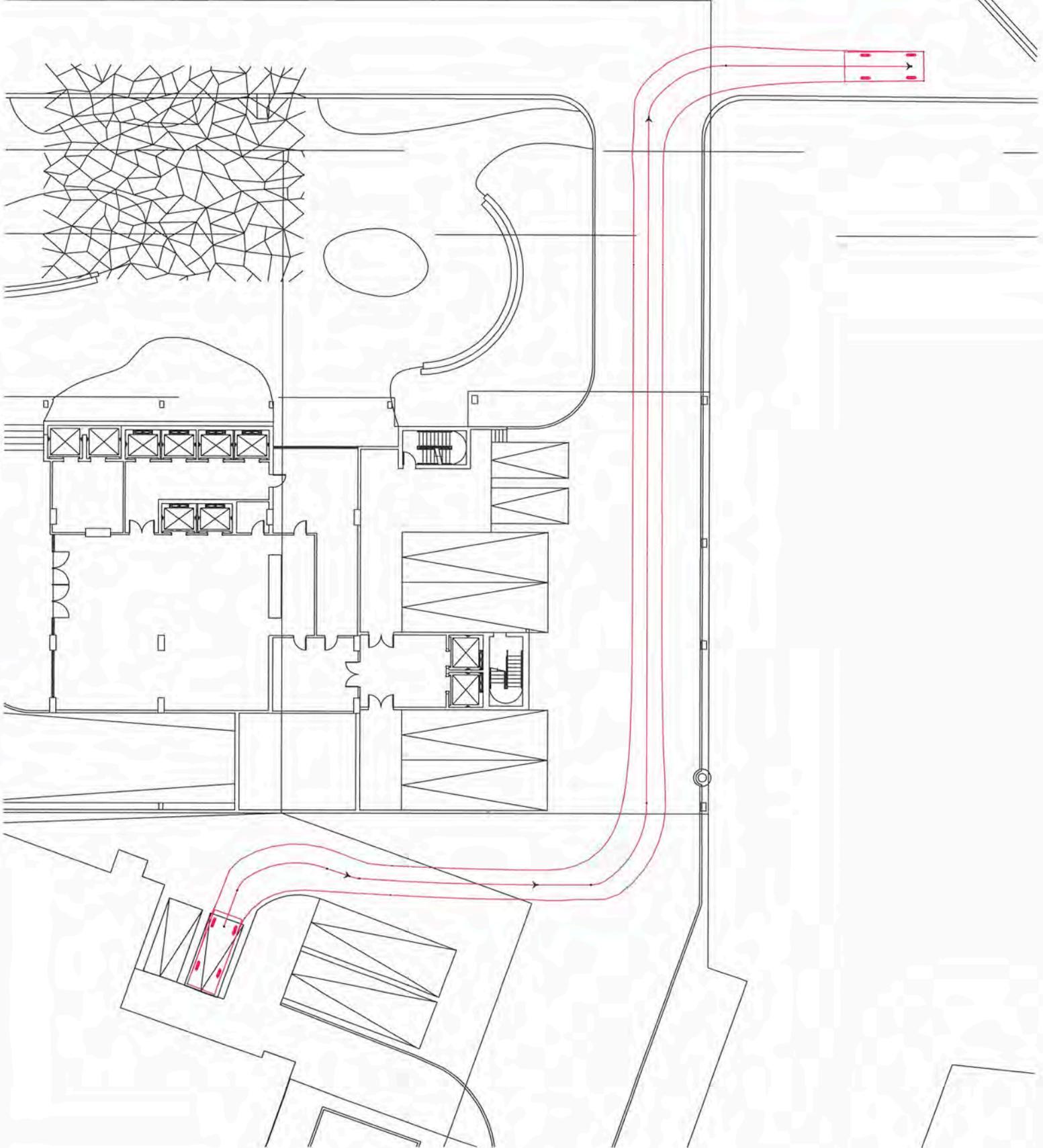
KUHIO AVENUE

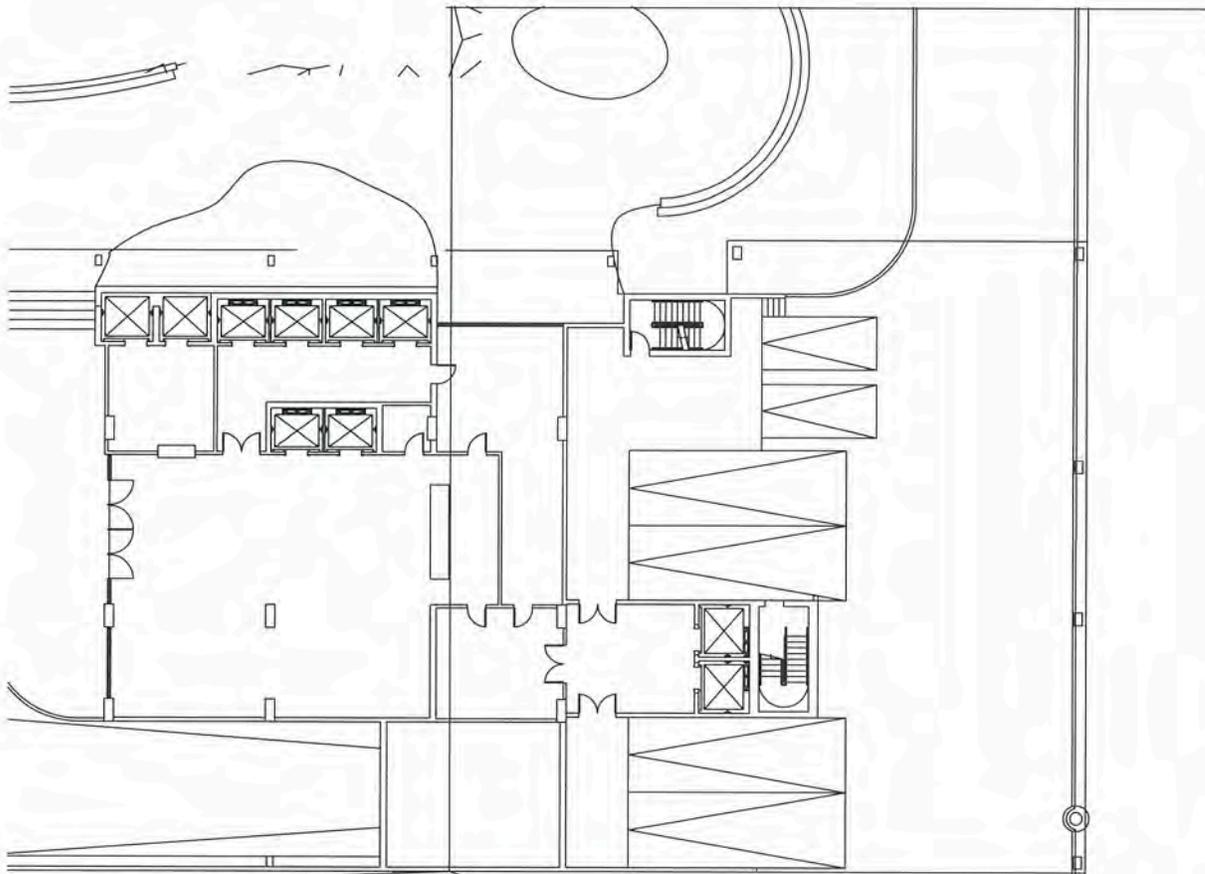
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Scale: 1 in. = 30 ft.



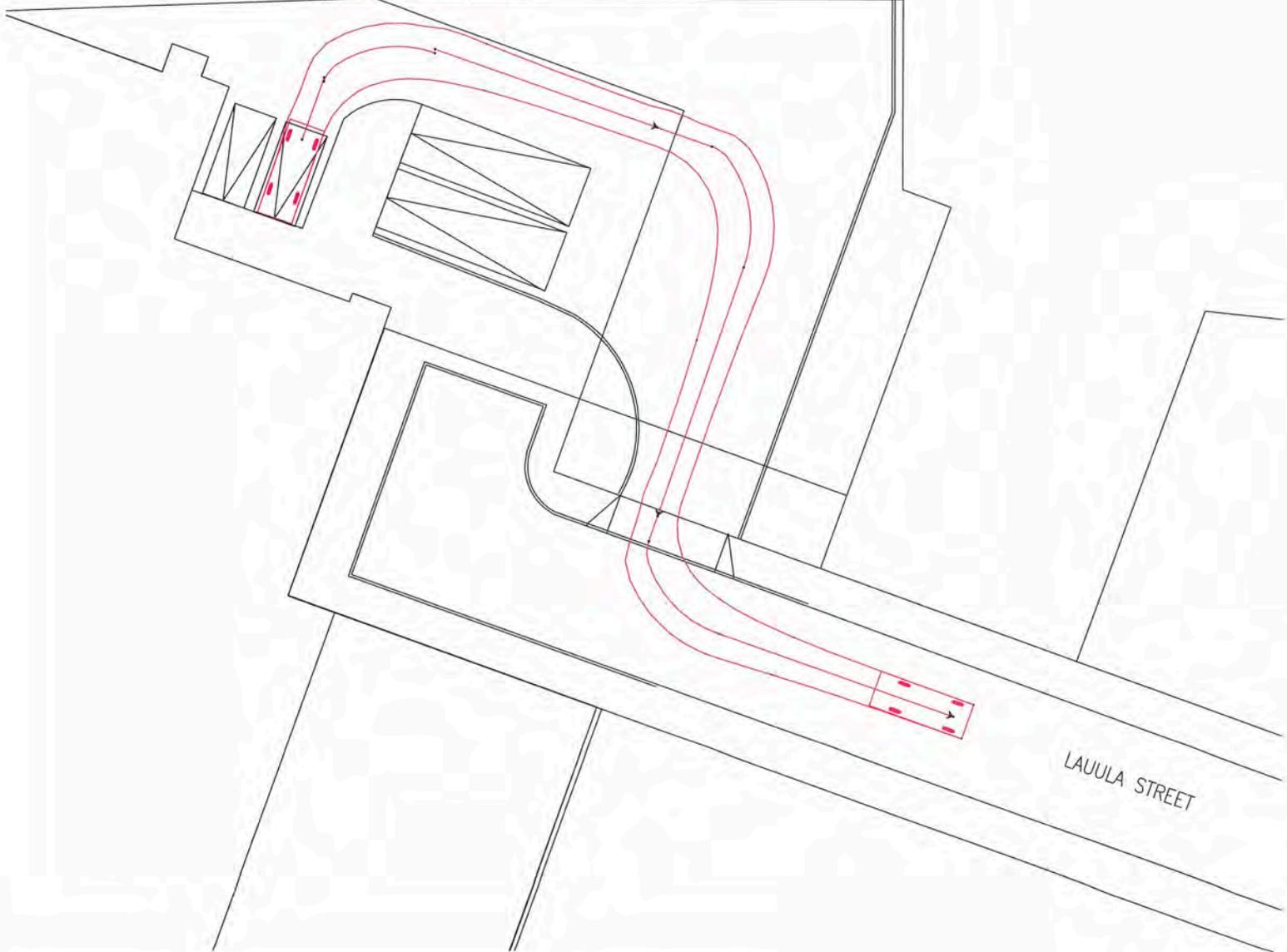
KUHIO AVENUE

TRUE NORTH
Scale: 1 in. = 30 ft.





TRUE NORTH
Scale: 1 in. = 30 ft.



LAUULA STREET

APPENDIX IX

**AIR QUALITY STUDY FOR THE PROPOSED K3
WAIKIKI DEVELOPMENT**

**AIR QUALITY STUDY
FOR THE PROPOSED
K3 WAIKIKI DEVELOPMENT**

WAIKIKI, OAHU, HAWAII

**Prepared for:
PACREP, LLC**

March 2012



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1.0 SUMMARY

PACREP, LLC is proposing the K3 Waikiki Development in Waikiki on the island of Oahu. The proposed project will consist of condominium/hotel units, retail/commercial space, parking facilities and other associated 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 national 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 2015 without the project, worst-case carbon monoxide concentrations were predicted to remain nearly unchanged or increase slightly, and concentrations would remain well within standards. With the project in the year 2015, estimated worst-case carbon monoxide concentrations indicated only minimal 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

PACREP, LLC is proposing the K3 Waikiki Development Project in Waikiki on the island of Oahu (see Figure 1 for project location). The project site is located near the heart of Waikiki along Kuhio Avenue between Kalaimoku Street and Kaiolu Street. The proposed project is expected to include approximately 459 condo-hotel units, amenities such as recreational areas and a fitness/wellness center, 10,000 square feet of commercial space, and a parking structure with 211 stalls. Project construction would begin in 2013 and be completed by 2015.

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 east 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 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 2006 through 2010. These are the most recent data that are currently available.

During the 2006-2010 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 0.011 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 data pertaining to the revised standards have not yet been reported.

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 23 to 57 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) between 2006 and 2010. Average annual concentrations ranged from 12 to 14 $\mu\text{g}/\text{m}^3$. 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 1.5 to 1.8 ppm. The annual second-highest 8-hour concentrations ranged from 0.8 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 0.004 to 0.005 ppm, safely inside the state and national AAQS. A new 1-hour standard for nitrogen dioxide was implemented during 2010. Data pertaining to this new standard have not yet been reported.

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 2006 through 2010 ranged between 0.033 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 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 roadway improvements by motor vehicle traffic could potentially cause long-term impacts on ambient air quality in the project area. Motor vehicles with gasoline-powered engines are significant sources of carbon monoxide. They also emit nitrogen oxides and other contaminants.

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 2011 with present conditions, (2) year 2015 without the project, and (3) year 2015 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, four of the key intersections identified in the traffic study were also selected for air quality analysis. These included the following intersections:

- Kalakaua Avenue at Saratoga Road
- Kuhio Avenue at Kalaimoku Street
- Ala Wai Boulevard at Kalaimoku Street
- Kuhio Avenue at Launiu Street.

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.

The EPA computer model MOBILE6.2 [6] was used to calculate vehicular carbon monoxide emissions for each year studied. One of the key inputs to MOBILE6.2 is vehicle mix. Unless very detailed information is available, national average values are typically assumed, which is what was used for the present study. Based on national average vehicle mix figures, the present vehicle mix in the project area was estimated to be 34.2% light-duty gasoline-powered automobiles, 52.9% light-duty gasoline-powered trucks and vans, 3.6% heavy-duty gasoline-powered vehicles, 0.2% light-duty diesel-powered vehicles, 8.6% heavy-duty diesel-powered trucks and buses, and 0.5% motorcycles. For the future scenarios studied,

the vehicle mix was estimated to change slightly with fewer light-duty gasoline-powered automobiles and more light-duty gasoline-powered trucks and vans.

Ambient temperatures of 59 and 68 degrees F were used for morning and afternoon peak-hour emission computations, respectively. These are conservative assumptions since morning/afternoon ambient temperatures will generally be warmer than this, and carbon monoxide emission estimates given by MOBILE6.2 generally have an inverse relationship to the ambient temperature.

After computing vehicular carbon monoxide emissions through the use of MOBILE6.2, 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 MOBILE6.2 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 6 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 2011. Although increased traffic is expected to occur within the project area within the next several 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 2011 with existing traffic, year

2015 without the project and year 2015 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 (2011) case was 5.3 ppm. This was projected to occur during the morning peak traffic hour near the intersection of Ala Wai Boulevard at Kalaimoku Street. Concentrations at other locations and times studied were 4.0 ppm or lower. Predicted worst-case 1-hour concentrations at all locations studied for the 2011 scenario were well within both the national AAQS of 35 ppm and the state standard of 9 ppm.

In the year 2015 without the proposed project, the highest worst-case 1-hour concentration was predicted to continue to occur during the morning at the intersection of Ala Wai Boulevard and Kalaimoku Street. A value of 5.6 ppm was predicted to occur at this location and time. Peak-hour worst-case values at the other locations and times studied for the 2015 without project scenario ranged between 2.0 and 3.9 ppm. Compared to the existing case, predicted concentrations for the year 2015 without the project remained mostly unchanged or increased slightly at all locations, and worst-case concentrations remained well within the state and national standards.

Predicted 1-hour worst-case concentrations for the 2015 with project scenario remained nearly unchanged OR increased slightly at the study intersections. Similar to the 2015 without project case, the maximum concentration was predicted to occur during the

morning at the intersection of Ala Wai Boulevard at Kalaimoku Street, increasing slightly compared to the without project scenario at a concentration of 5.8 ppm. Other concentrations ranged between 2.1 and 4.1 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 0.2 and 0.6 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 2011 scenario, the estimated worst-

case 8-hour carbon monoxide concentrations for the four locations studied ranged from 1.1 to 2.6 ppm, with the highest concentration occurring at the intersection of Ala Wai Boulevard and Kalaimoku Street. 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 2015 without project scenario, worst-case concentrations ranged between 1.2 and 2.8 ppm, with the highest concentration occurring at the intersection of Ala Wai Boulevard and Kalaimoku Street. All predicted concentrations were within the standards.

For the 2015 with project scenario, worst-case concentrations remained nearly unchanged compared to the without project case, indicating minimal 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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Figure 1 - Project Location



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)	$\mu\text{g}/\text{m}^3$	Annual	-	-	50
		24 Hours	150 ^a	150 ^a	150 ^b
Particulate Matter (<2.5 microns)	$\mu\text{g}/\text{m}^3$	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	$\mu\text{g}/\text{m}^3$	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: Climatology 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 K3 WAIKIKI DEVELOPMENT

Parameter / Location	2006	2007	2008	2009	2010
Sulfur Dioxide / Downtown Honolulu					
3-Hour Averaging Period:					
No. of Samples	1138	2827	2876	2858	2869
Highest Concentration (ppm)	0.016	0.021	0.011	0.023	0.010
2 nd Highest Concentration (ppm)	0.014	0.018	0.011	0.021	0.010
No. of State AAQS Exceedances	0	0	0	0	0
24-Hour Averaging Period:					
No. of Samples	146	359	363	360	365
Highest Concentration (ppm)	0.005	0.007	0.004	0.005	0.004
2 nd Highest Concentration (ppm)	0.002	0.005	0.004	0.004	0.003
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	141	344	343	351	365
Highest Concentration ($\mu\text{g}/\text{m}^3$)	25	33	33	34	63
2 nd Highest Concentration ($\mu\text{g}/\text{m}^3$)	23	29	31	34	57
No. of State AAQS Exceedances	0	0	0	0	0
Annual Average Concentration ($\mu\text{g}/\text{m}^3$)	13	14	14	13	12
Carbon Monoxide / Downtown Honolulu					
1-Hour Averaging Period:					
No. of Samples	3612	8627	8732	8628	8699
Highest Concentration (ppm)	2.5	2.0	2.1	1.6	1.8
2 nd Highest Concentration (ppm)	1.7	1.6	1.8	1.6	1.5
No. of State AAQS Exceedances	0	0	0	0	0
8-Hour Averaging Period:					
No. of Samples	3610	8635	8735	8627	8731
Highest Concentration (ppm)	1.1	1.1	1.0	0.9	0.8
2 nd Highest Concentration (ppm)	1.0	1.0	1.0	0.9	0.8
No. of State AAQS Exceedances	0	0	0	0	0
Nitrogen Dioxide / Kapolei					
Annual Average Concentration (ppm)	0.005	0.005	0.004	0.004	0.003
Ozone / Sand Island					
8-Hour Averaging Period:					
No. of Samples	8591	357	305	341	8730
Highest Concentration (ppm)	0.042	0.036	0.050	0.049	0.052
2 nd Highest Concentration (ppm)	0.042	0.035	0.048	0.048	0.048
4th Highest Concentration (ppm)	0.042	0.033	0.043	0.048	0.047
No. of State AAQS Exceedances	0	0	0	0	0

Source: State of Hawaii Department of Health, "Annual Summaries, Hawaii Air Quality Data, 2006 - 2010"

Table 5

ESTIMATED WORST-CASE 1-HOUR CARBON MONOXIDE CONCENTRATIONS
ALONG ROADWAYS NEAR K3 WAIKIKI DEVELOPMENT
(parts per million)

Roadway Intersection	Year/Scenario					
	2011/Present		2015/Without Project		2015/With Project	
	AM	PM	AM	PM	AM	PM
Kalakaua Avenue at Saratoga Road	4.0	3.6	3.9	3.3	4.1	3.5
Kuhio Avenue at Kalaimoku Street	2.8	2.8	2.8	2.6	2.9	2.7
Ala Wai Boulevard at Kalaimoku Street	5.3	3.2	5.6	3.4	5.8	3.4
Kuhio Avenue at Launiu Street	2.2	2.0	2.3	2.0	2.3	2.1

Hawaii State AAQS: 9
National AAQS: 35

Table 6

ESTIMATED WORST-CASE 8-HOUR CARBON MONOXIDE CONCENTRATIONS
ALONG ROADWAYS NEAR K3 WAIKIKI DEVELOPMENT
(parts per million)

Roadway Intersection	Year/Scenario		
	2011/Present	2015/Without Project	2015/With Project
Kalakaua Avenue at Saratoga Road	2.0	2.0	2.0
Kuhio Avenue at Kalaimoku Street	1.4	1.4	1.4
Ala Wai Boulevard at Kalaimoku Street	2.6	2.8	2.9
Kuhio Avenue at Launiu Street	1.1	1.2	1.2

Hawaii State AAQS: 4.4
National AAQS: 9

APPENDIX X

ACOUSTIC STUDY FOR THE 2121 KUHIO PROJECT

**ACOUSTIC STUDY FOR THE
2121 KUHIO PROJECT
WAIKIKI, OAHU, HAWAII**

Prepared for:

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MARCH 2012

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CHAPTER I. SUMMARY

The existing and future traffic noise levels in the vicinity of the proposed 2121 Kuhio 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, or Kalakaua Avenue as a result of project plus non-project traffic following project build-out by CY 2015. Moderate increases in the relatively low traffic noise levels along Kalaimoku Street are predicted to occur as a result of project traffic 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 west and north faces of the project's proposed residential / hotel tower, and on the upper floor units on the east and south faces of the tower. Noise mitigation measures in the form of closure and air conditioning are recommended for the affected units.

Project traffic will add less than 0.5 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 increases in future traffic noise levels resulting from project generated traffic are not considered to be significant.

Larger increases in traffic noise levels of 0.9 and 1.6 DNL are predicted to occur along Kalaimoku Street following the proposed 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 without the project.

Unavoidable, but temporary, noise impacts may occur during the excavation and construction 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.

CHAPTER II. PURPOSE

The primary objective of this study was to describe the existing and future noise environment in the environs of the proposed 2121 Kuhio 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 residential / hotel 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. 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.

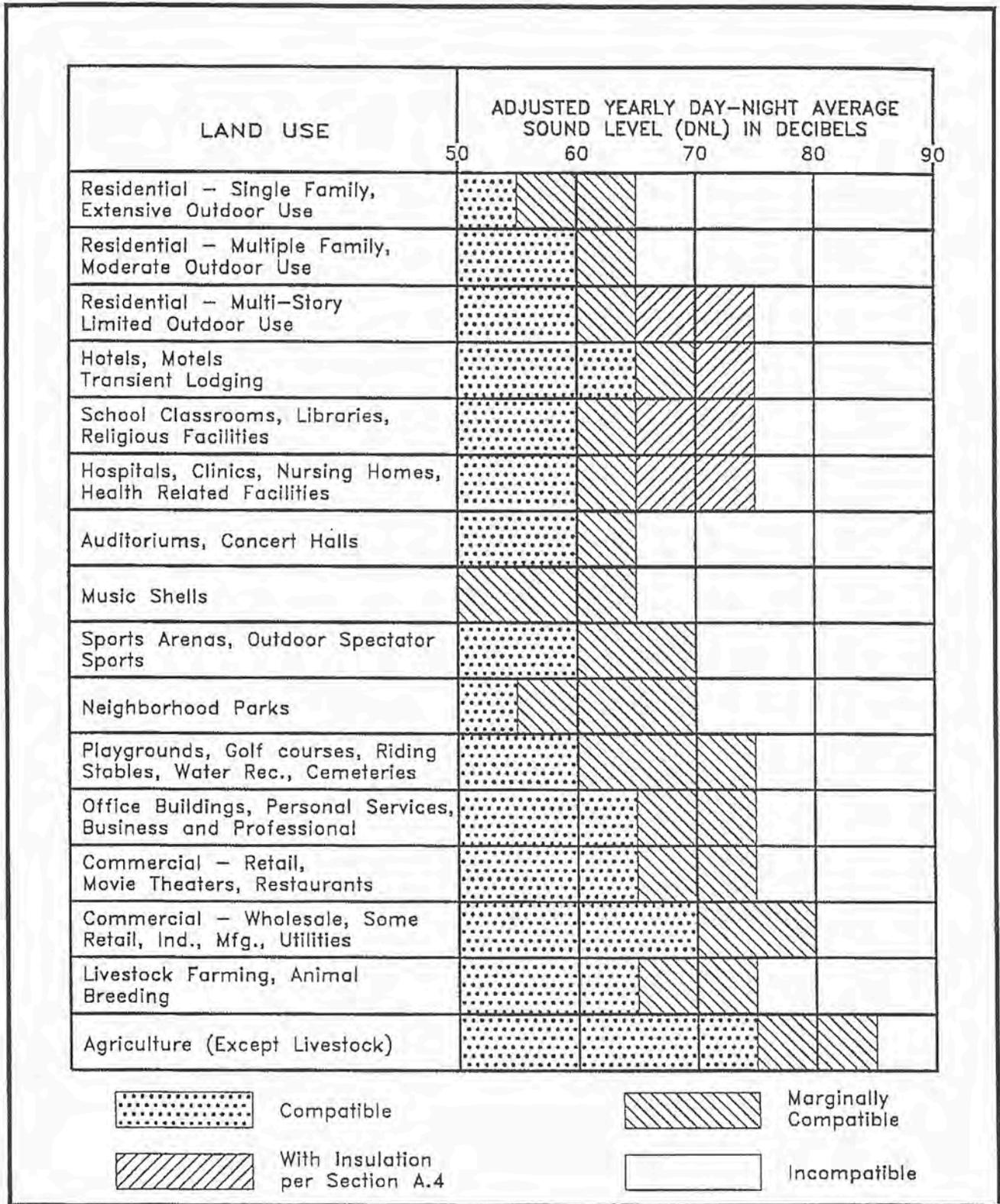
TABLE 1

**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 May 2011, January 2012, and March 2012. These readings were used to provide a basis for describing the existing noise environment in the project environs. Traffic noise measurements along Kuhio Avenue and Kalalaua Avenue were obtained at Luana and Location A as shown in Table 2. The locations of these two measurement sites and measurement locations Gateway and Malia are shown in Figure 1. Location A was at ground level on the adjacent lot east of the project site. Location Luana was on the third floor lanai of the Outrigger Luana Waikiki Hotel, Location Gateway was on the fourteenth floor lanai of the Waikiki Gateway Hotel, and Location Malia was on the fifteenth floor lanai of the Ohana Waikiki Malia Hotel.

Traffic noise calculations for the existing conditions as well as noise predictions for CY 2015 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 2012 and 2015 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 2 dB less than the 24-hour DNL along Kalakaua Avenue; equal to the 24-hour DNL along Kuhio Avenue; and 1 dB less than the 24-hour DNL along Ala Wai Boulevard. Along Ala Wai Boulevard, the 24-hour DNL was also equal to the AM peak hour Leq . 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 5.

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 project, and noise impact risks evaluated. The relative contributions of non-project and project traffic to the total noise levels were also calculated, and an evaluation of possible traffic noise impacts was made.

Calculations of average exterior and interior noise levels from construction activities were performed for typical naturally ventilated and air conditioned dwellings. Predicted noise levels were compared with existing background ambient noise levels, and the potential for noise impacts was assessed.

TABLE 2
TRAFFIC AND BACKGROUND NOISE MEASUREMENT RESULTS

<u>LOCATION</u>	Time of Day		Ave. Speed		Hourly Traffic Volume			Measured		Predicted
	<u>(HRS)</u>	<u>(MPH)</u>	<u>AUTO</u>	<u>M.TRUCK</u>	<u>H.TRUCK</u>	<u>Leq (dB)</u>	<u>Leq (dB)</u>			
A. 75 FT from the center-line of Kuhio Avenue (3/13/12)	1559	32	1,005	10	95	68.3	68.7			
	TO 1659									
Luana. 71 FT from the center-line of Kalakaua Avenue (1/24/12)	1600	32	1,664	23	17	70.5 *	70.6			
	TO 1700					74.0 **				
Luana. 71 FT from the center-line of Kalakaua Avenue (1/25/12)	0700	32	1,284	51	27	70.4	69.6			
	TO 0800									

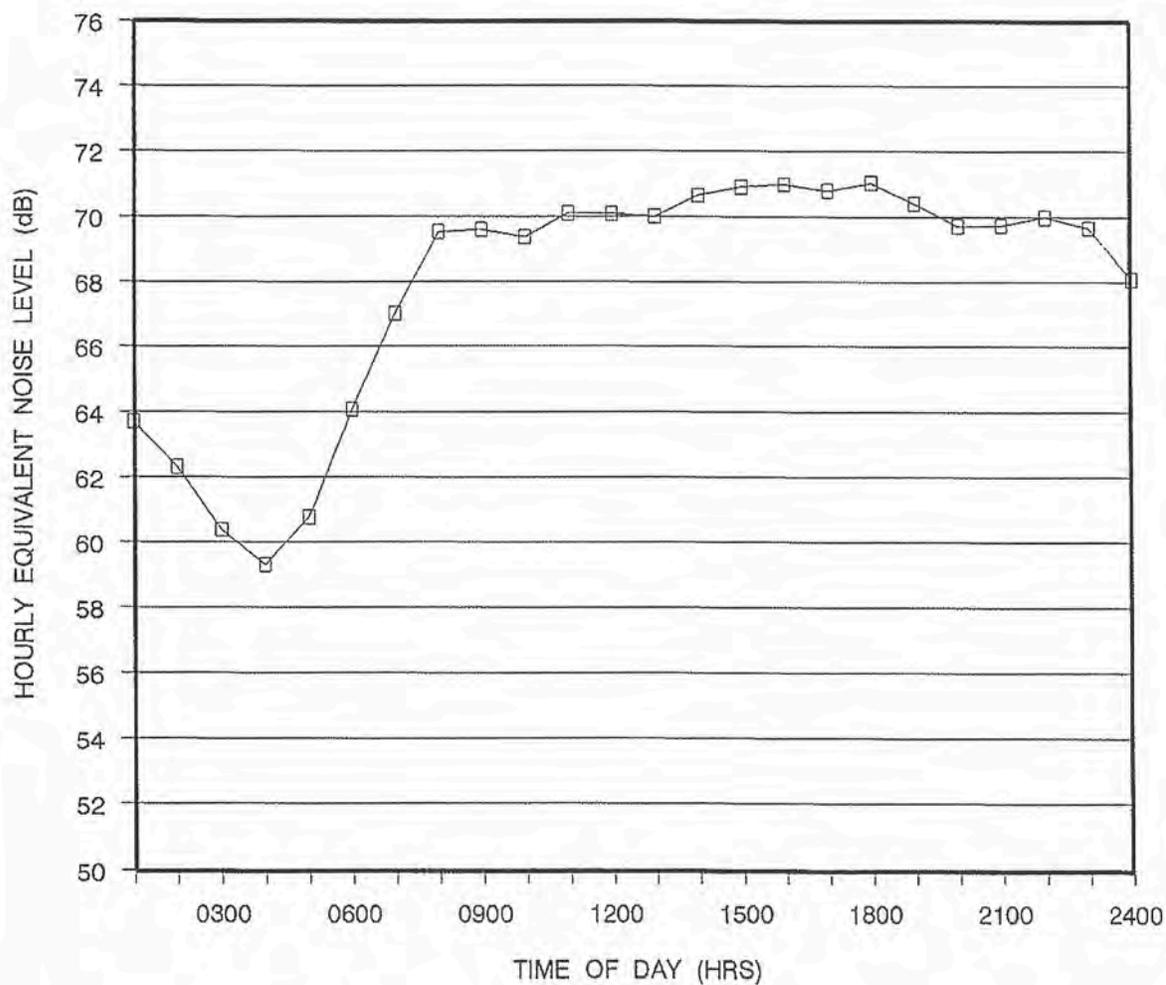
Notes:

* Without Sirens

** With Sirens

FIGURE 3

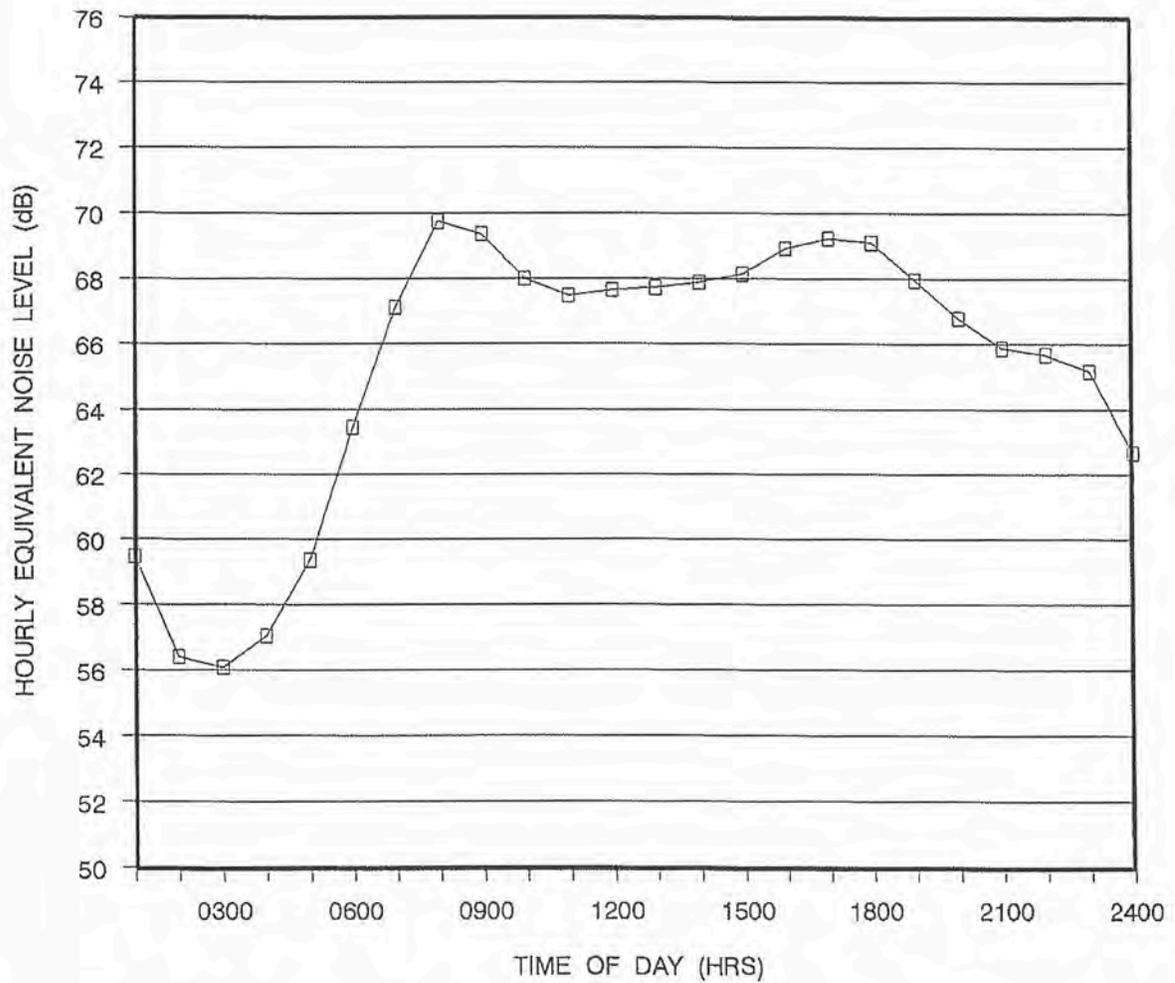
HOURLY VARIATIONS OF TRAFFIC NOISE LEVELS
AT 50 FEET FROM THE CENTERLINE OF
KALAKAUA AVENUE BETWEEN LEWERS AND
BEACHWALK (FEBRUARY 4, 2011)



□ 72.9 DNL at 50 feet from centerline

FIGURE 4

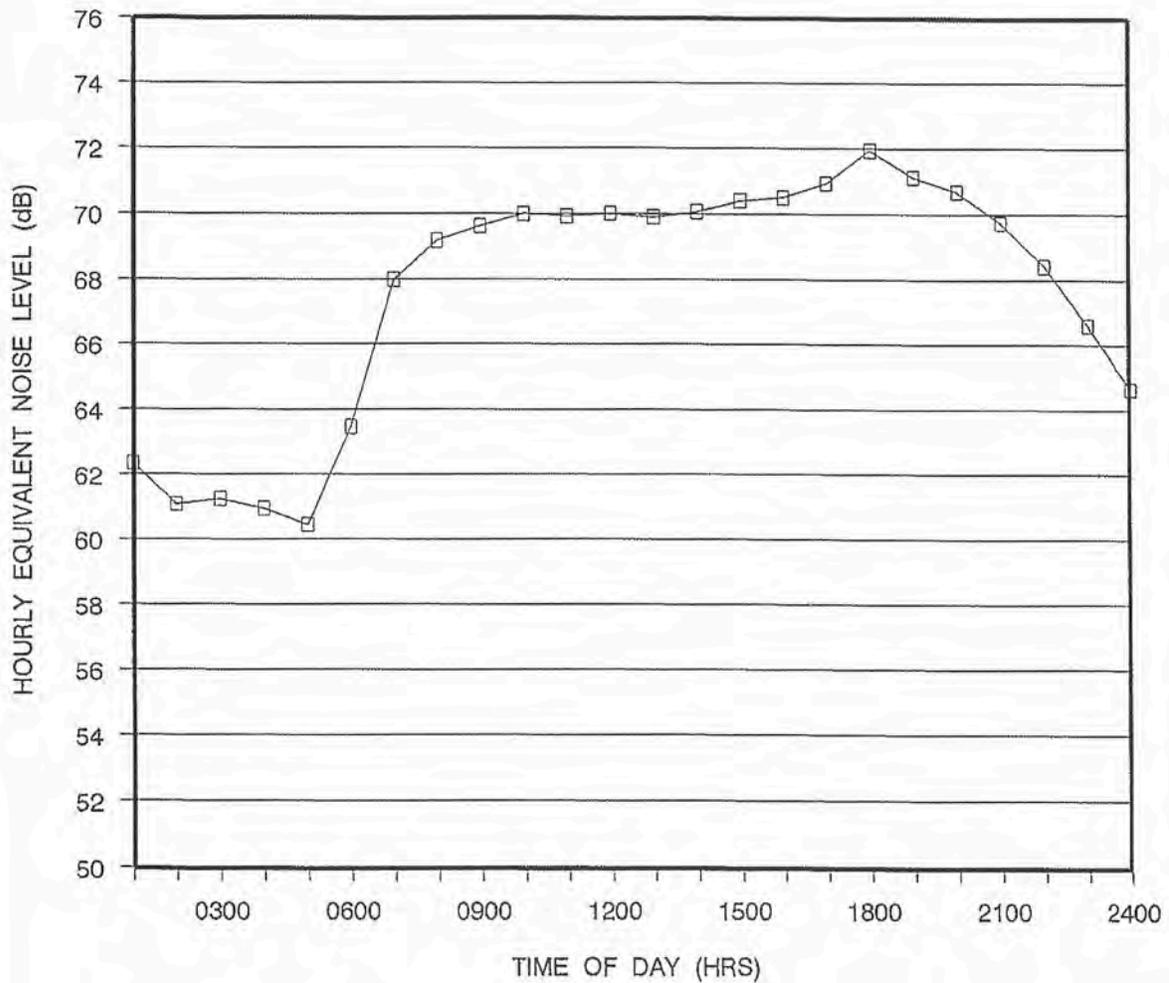
HOURLY VARIATIONS OF TRAFFIC NOISE LEVELS
AT 50 FEET FROM THE CENTERLINE OF
ALA WAI BOULEVARD BETWEEN OHUA AND
LILIUOKALANI (APRIL 22, 2010)



□ 70.2 DNL at 50 feet from centerline

FIGURE 5

HOURLY VARIATIONS OF TRAFFIC NOISE LEVELS
AT 50 FEET FROM THE CENTERLINE OF
KUHIO AVENUE BETWEEN NAHUA AND WALINA
(MAY 5, 2010)



□ 72.1 DNL at 50 feet from centerline

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. Sample strip charts of the louder noise events which were recorded at noise measurement Location Luana during the early morning and evening periods are shown in Figures 6, 7, and 8. These louder noise events can range from 90 to 105 dBA, and are clearly audible above the other background ambient noise sources.

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. Figures 9, 10, and 11 present measured hourly variations of traffic noise levels along Kalakaua and Kuhio Avenues, with the large peaks associated with non-traffic sources, such as emergency sirens.

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 Kalaimoku 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 four faces of the proposed residential / hotel tower building for various receptor ear elevations up to 305 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

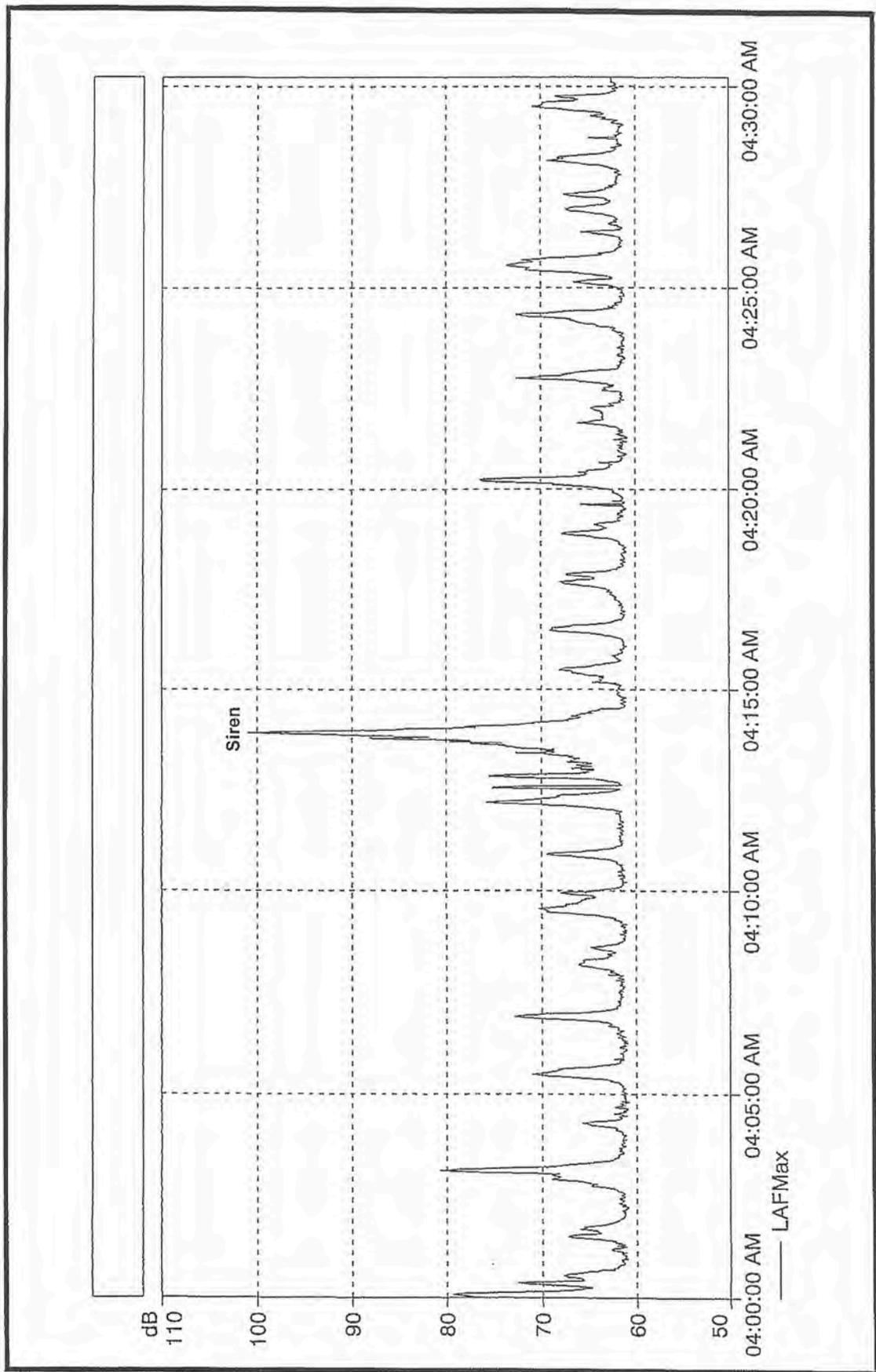


FIGURE 6

MAXIMUM SOUND LEVEL VS. TIME MEASURED AT LOCATION "LUANA" (4:15 AM, JANUARY 25, 2012)

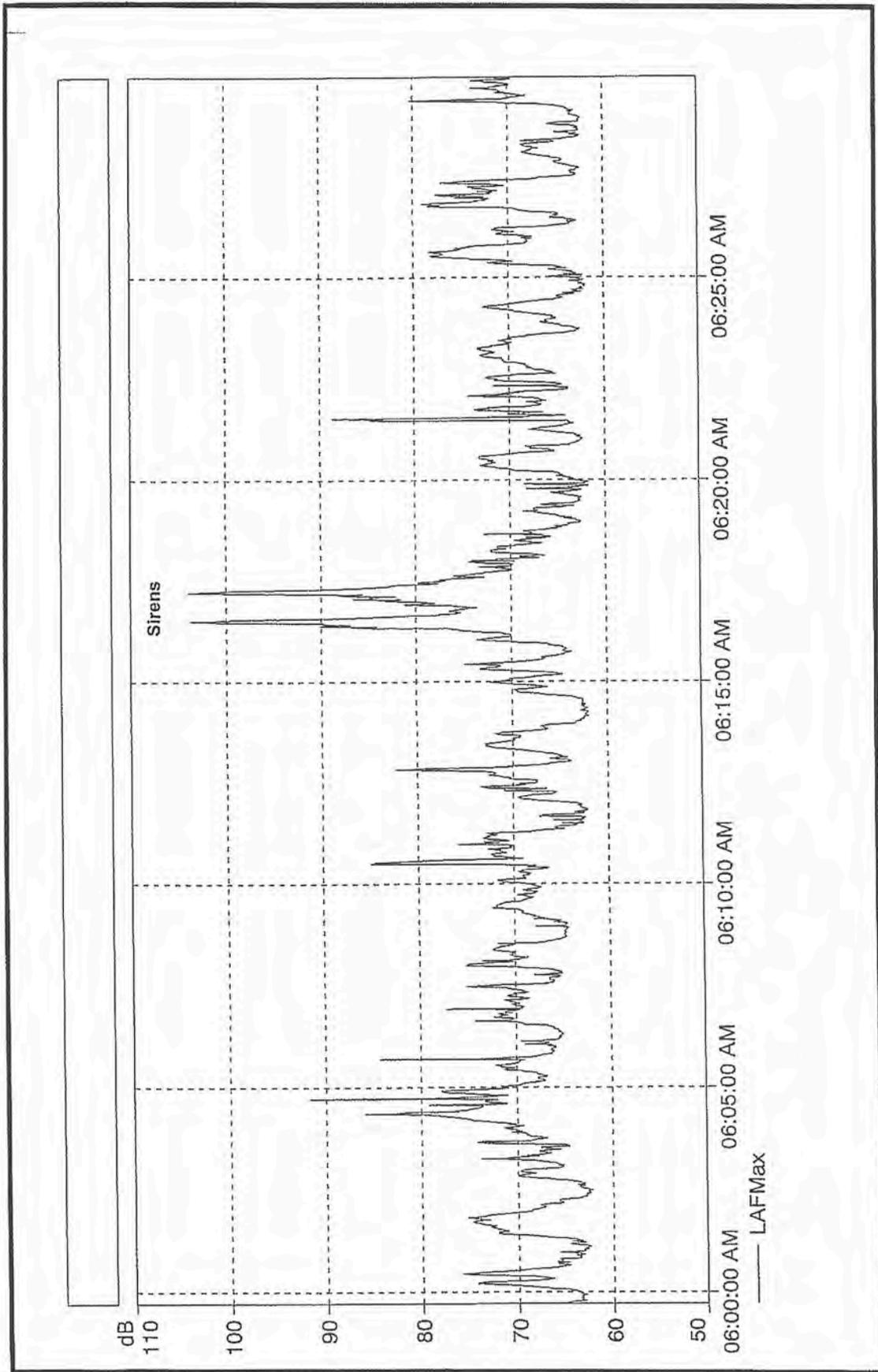


FIGURE 7

MAXIMUM SOUND LEVEL VS. TIME MEASURED AT LOCATION "LUANA" (6:15 AM, JANUARY 25, 2012)

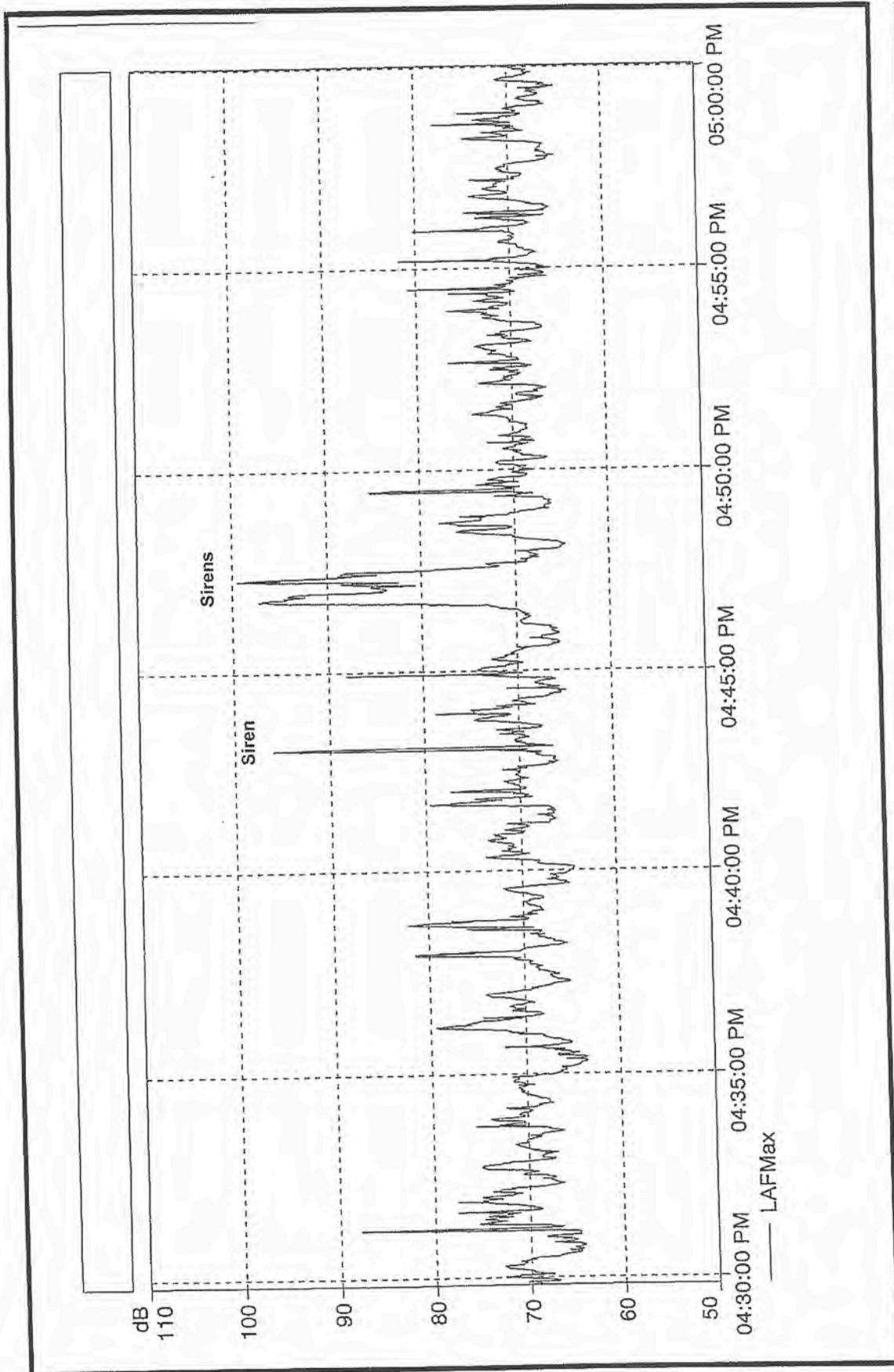


FIGURE 8

MAXIMUM SOUND LEVEL VS. TIME MEASURED AT LOCATION "LUANA" (4:45 PM, JANUARY 25, 2012)

FIGURE 9

MEASURED TRAFFIC NOISE LEVELS AT 144 FT
SLANT DISTANCE FROM THE CENTERLINE OF
KUHIO AVENUE AT OHANA WAIKIKI MALIA HOTEL
(MAY 11 - 12, 2011)

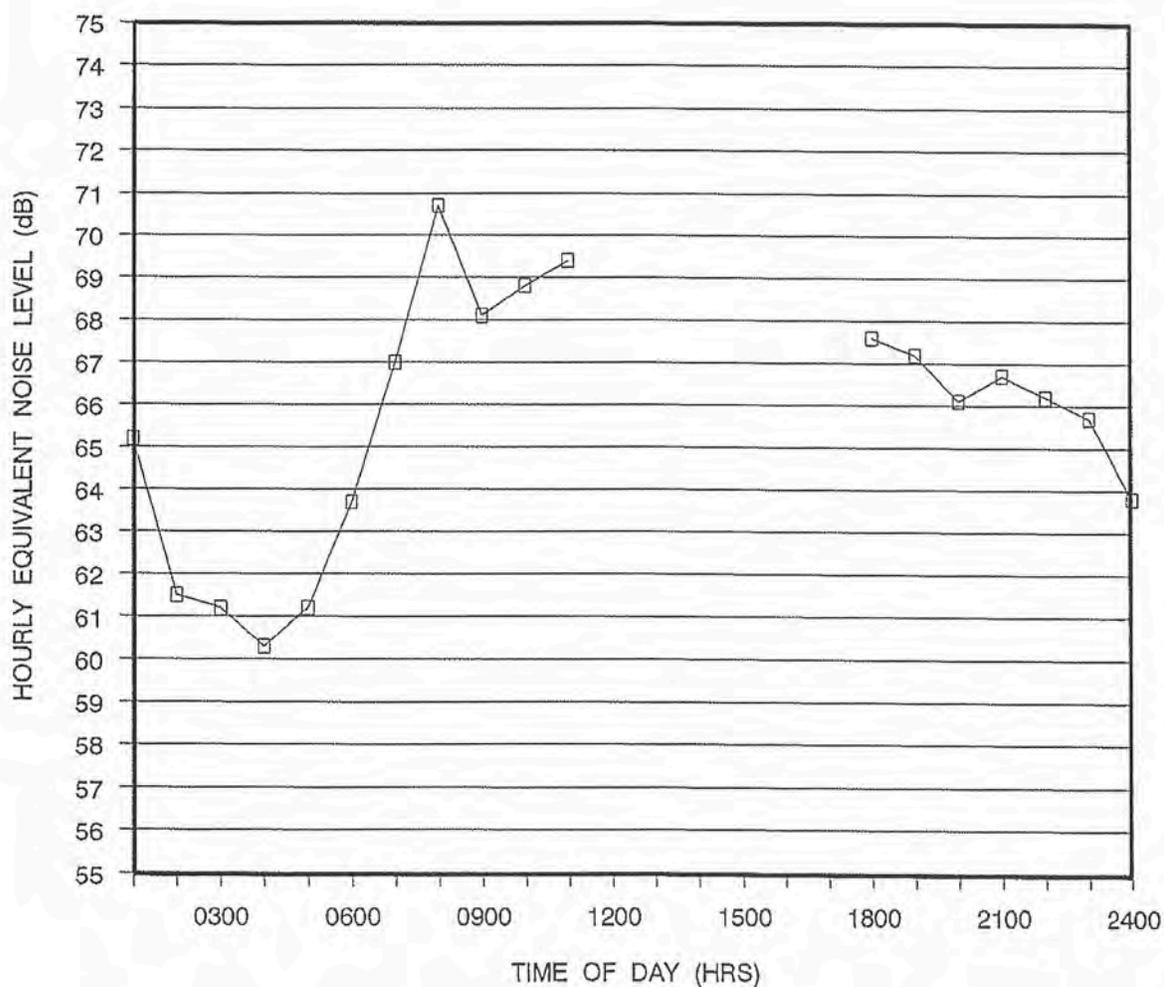


FIGURE 10

MEASURED TRAFFIC NOISE LEVELS AT 119 FT
SLANT DISTANCE FROM THE CENTERLINE OF
KUHIO AVENUE AT WAIKIKI GATEWAY HOTEL
(MAY 12 - 13, 2011)

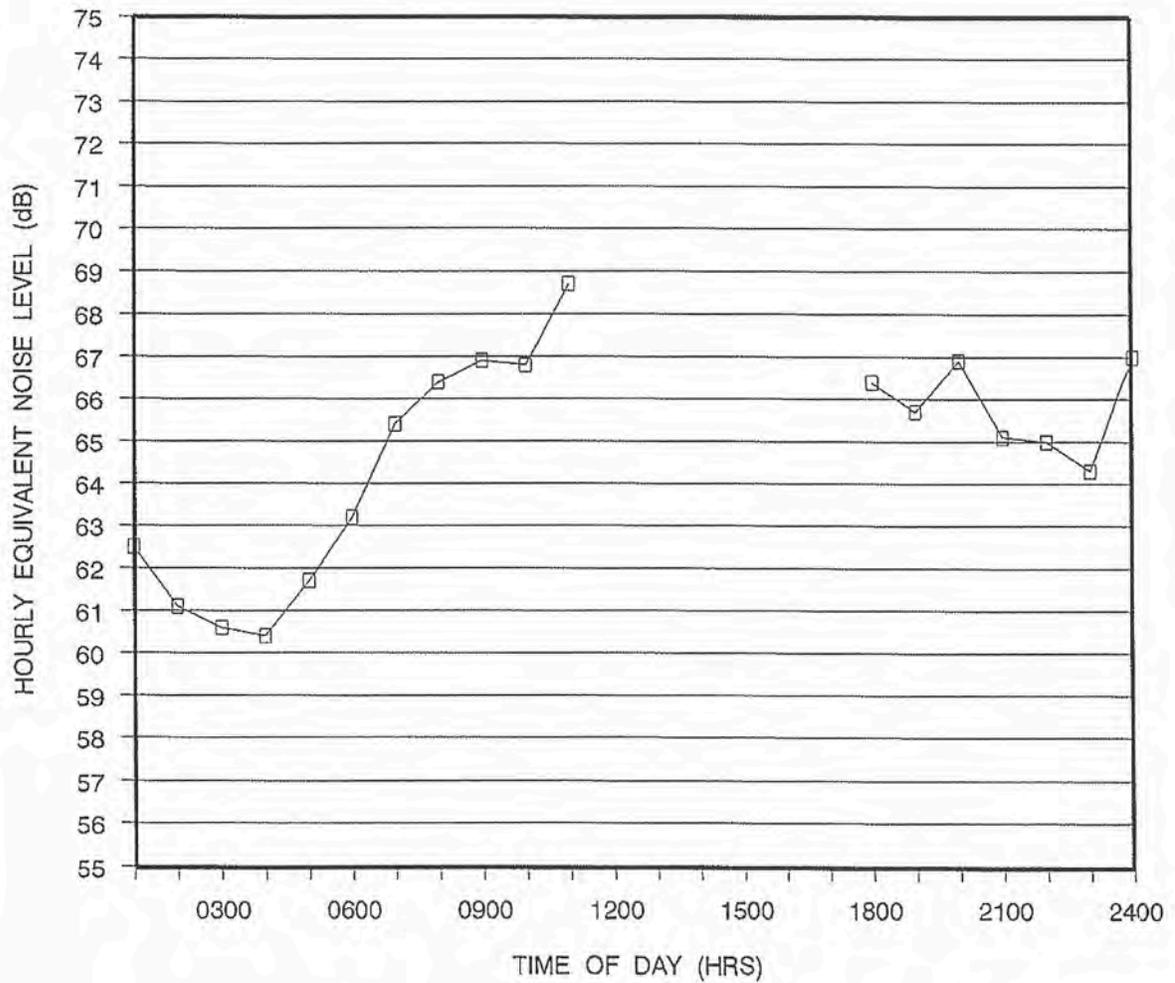
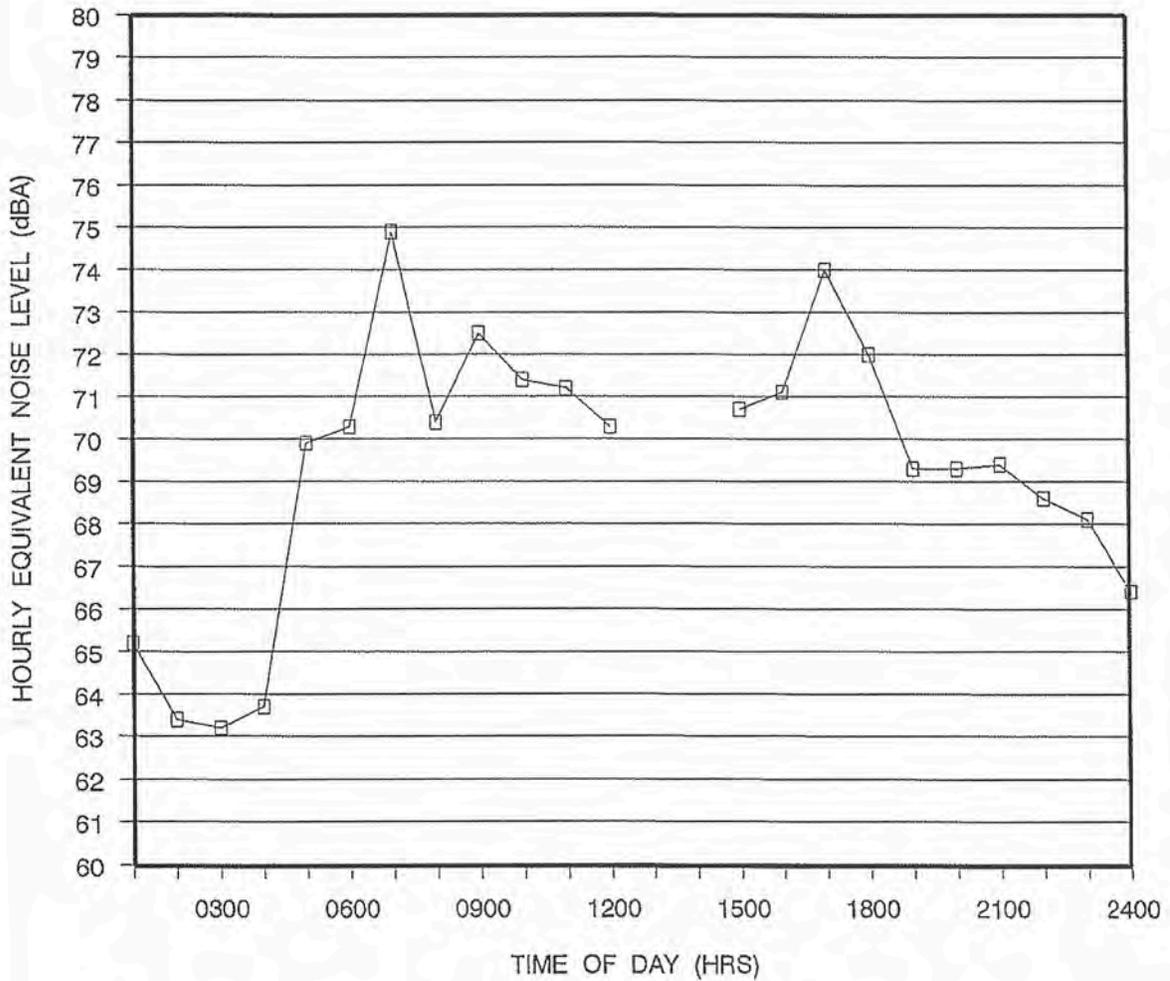


FIGURE 11

MEASURED TRAFFIC NOISE LEVELS AT 87 FT
SLANT DISTANCE FROM THE CENTERLINE OF
KALAKAUA AVENUE AT LUANA WAIKIKI HOTEL
(JANUARY 24 – 25, 2012)



□ 87 FT from Roadway Centerline (Approx. 75.8 DNL)

TABLE 3

EXISTING (CY 2012) TRAFFIC VOLUMES AND NOISE LEVELS
ALONG ROADWAYS IN PROJECT AREA
(AM OR PM PEAK HOUR)

LOCATION	SPEED (MPH)	TOTAL VPH	***** VOLUMES (VPH) *****			50' Leg	75' Leg	100' Leg
			AUTOS	M TRUCKS	H TRUCKS			
Ala Wai Blvd. W. of Kalaimoku St., PM	30	2,497	2,435	42	20	70.8	68.7	67.3
Ala Wai Blvd. E. of Kalaimoku St., AM	30	2,252	2,196	38	18	70.3	68.2	66.9
Ala Wai Blvd. W. of Lewers St., AM	30	2,450	2,388	42	20	70.7	68.6	67.2
Ala Wai Blvd. E. of Lewers St., AM	30	2,272	2,215	39	18	70.4	68.3	67.9
Kuhio Ave. W. of Kalaimoku St., PM	32	1,051	904	42	105	71.0	69.1	67.7
Kuhio Ave. Between Kalaimoku & Launiu, PM	32	1,091	938	44	109	71.2	69.2	67.9
Kuhio Ave. Between Launiu & Kaiolu, PM	32	1,122	965	45	112	71.3	69.3	68.0
Kuhio Ave. Between Kaiolu & Lewers, PM	32	1,085	933	43	109	71.2	69.2	67.9
Kuhio Ave. E. of Lewers St., PM	32	1,022	879	41	102	70.9	68.9	67.6
Kalakaua Ave. W. of Saratoga Rd., PM	32	1,904	1,811	55	38	71.0	69.0	67.7
Kalakaua Ave. E. of Saratoga Rd., PM	32	2,023	1,924	59	40	71.2	69.3	68.0
Kalakaua Ave. W. of Lewers St., PM	32	1,876	1,784	54	38	70.9	69.0	67.7
Kalakaua Ave. E. of Lewers St., PM	32	1,581	1,503	46	32	70.2	68.2	66.9
Kalaimoku St. Between Kalakaua & Kuhio, PM	25	354	342	8	4	57.4	55.6	54.4
Kalaimoku St. Between Kuhio & Ala Wai, PM	25	365	353	8	4	57.5	55.7	54.5

TABLE 4

EXISTING AND CY 2015 DISTANCES TO 65, 70,
AND 75 DNL CONTOURS

STREET SECTION	65 DNL SETBACK (FT)		70 DNL SETBACK (FT)		75 DNL SETBACK (FT)	
	EXISTING	CY 2015	EXISTING	CY 2015	EXISTING	CY 2015
Ala Wai Blvd. W. of Kalaimoku St.	197	232	71	76	27	29
Ala Wai Blvd. E. of Kalaimoku St.	152	166	53	58	20	23
Ala Wai Blvd. W. of Lewers St.	157	171	57	62	22	24
Ala Wai Blvd. E. of Lewers St.	805	160	54	58	21	22
Kuhio Ave. W. of Kalaimoku St.	174	199	62	66	21	24
Kuhio Ave. Between Kalaimoku & Launiu	190	212	64	71	23	26
Kuhio Ave. Between Launiu & Kaiolu	194	212	65	71	24	26
Kuhio Ave. Between Kaiolu & Lewers	190	212	64	71	23	26
Kuhio Ave. E. of Lewers St.	178	203	60	68	22	25
Kalakaua Ave. W. of Saratoga Rd.	283	323	92	104	33	38
Kalakaua Ave. E. of Saratoga Rd.	302	316	99	103	34	36
Kalakaua Ave. W. of Lewers St.	283	296	93	97	32	33
Kalakaua Ave. E. of Lewers St.	237	253	78	83	28	30
Kalaimoku St. Between Kalakaua & Kuhio	< 12	15	< 12	< 12	< 12	< 12
Kalaimoku St. Between Kuhio & Ala Wai	12	13	< 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 2015 TRAFFIC NOISE LEVELS
(VARIOUS ELEVATIONS, DNL)**

<u>RECEPTOR LOCATION</u>	<u>SETBACK DIST. FROM EXIST. C/L</u>	<u>RECEPTOR ELEVATION</u>	<u>EXISTING (CY 2012) DNL</u>	<u>FUTURE (CY 2015) BUILD DNL</u>
Mauka 1	82 FT from Kuhio Ave.	83 FT Above Ground	69	69
Mauka 1	82 FT from Kuhio Ave.	92 FT Above Ground	69	68
Mauka 1	82 FT from Kuhio Ave.	111 FT Above Ground	69	69
Mauka 1	82 FT from Kuhio Ave.	155 FT Above Ground	69	69
Mauka 1	82 FT from Kuhio Ave.	205 FT Above Ground	69	69
Mauka 1	82 FT from Kuhio Ave.	305 FT Above Ground	69	69
Mauka 2	90 FT from Kuhio Ave.	83 FT Above Ground	68	68
Mauka 2	90 FT from Kuhio Ave.	92 FT Above Ground	68	68
Mauka 2	90 FT from Kuhio Ave.	111 FT Above Ground	68	68
Mauka 2	90 FT from Kuhio Ave.	155 FT Above Ground	68	68
Mauka 2	90 FT from Kuhio Ave.	205 FT Above Ground	68	68
Mauka 2	90 FT from Kuhio Ave.	305 FT Above Ground	68	68
Mauka 3	110 FT from Kuhio Ave.	83 FT Above Ground	67	67
Mauka 3	110 FT from Kuhio Ave.	92 FT Above Ground	67	67
Mauka 3	110 FT from Kuhio Ave.	111 FT Above Ground	67	67
Mauka 3	110 FT from Kuhio Ave.	155 FT Above Ground	67	68
Mauka 3	110 FT from Kuhio Ave.	205 FT Above Ground	67	68
Mauka 3	110 FT from Kuhio Ave.	305 FT Above Ground	68	68
DH	154 FT from Kuhio Ave.	83 FT Above Ground	66	62
DH	154 FT from Kuhio Ave.	92 FT Above Ground	66	62
DH	154 FT from Kuhio Ave.	111 FT Above Ground	66	63
DH	154 FT from Kuhio Ave.	155 FT Above Ground	66	66
DH	154 FT from Kuhio Ave.	205 FT Above Ground	66	66
DH	154 FT from Kuhio Ave.	305 FT Above Ground	67	66

TABLE 5 (CONTINUED)

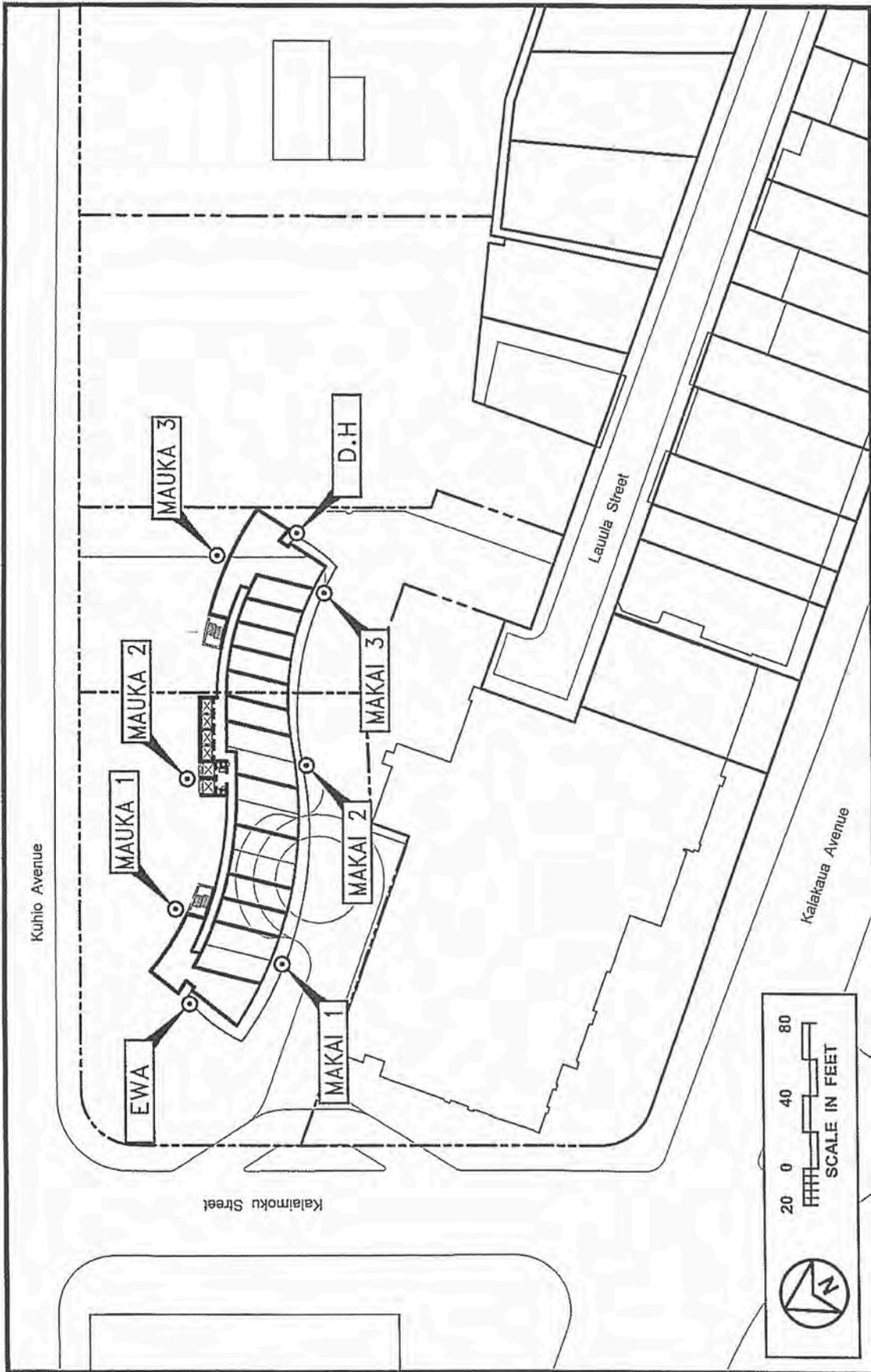
**EXISTING AND 2015 TRAFFIC NOISE LEVELS
(VARIOUS ELEVATIONS, DNL)**

<u>RECEPTOR LOCATION</u>	<u>SETBACK DIST. FROM EXIST. C/L</u>	<u>RECEPTOR ELEVATION</u>	<u>EXISTING (CY 2012) DNL</u>	<u>FUTURE (CY 2015) BUILD DNL</u>
Makai 1	270 FT from Kalakaua Ave.	83 FT Above Ground	67	61
Makai 1	270 FT from Kalakaua Ave.	92 FT Above Ground	67	61
Makai 1	270 FT from Kalakaua Ave.	111 FT Above Ground	67	63
Makai 1	270 FT from Kalakaua Ave.	155 FT Above Ground	67	65
Makai 1	270 FT from Kalakaua Ave.	205 FT Above Ground	67	66
Makai 1	270 FT from Kalakaua Ave.	305 FT Above Ground	68	66
Makai 2	293 FT from Kalakaua Ave.	83 FT Above Ground	66	58
Makai 2	293 FT from Kalakaua Ave.	92 FT Above Ground	66	58
Makai 2	293 FT from Kalakaua Ave.	111 FT Above Ground	66	60
Makai 2	293 FT from Kalakaua Ave.	155 FT Above Ground	66	64
Makai 2	293 FT from Kalakaua Ave.	205 FT Above Ground	67	65
Makai 2	293 FT from Kalakaua Ave.	305 FT Above Ground	67	65
Makai 3	315 FT from Kalakaua Ave.	83 FT Above Ground	66	56
Makai 3	315 FT from Kalakaua Ave.	92 FT Above Ground	66	57
Makai 3	315 FT from Kalakaua Ave.	111 FT Above Ground	66	61
Makai 3	315 FT from Kalakaua Ave.	155 FT Above Ground	66	65
Makai 3	315 FT from Kalakaua Ave.	205 FT Above Ground	66	65
Makai 3	315 FT from Kalakaua Ave.	305 FT Above Ground	67	66
EWA	310 FT from Kalaimoku St.	83 FT Above Ground	68	68
EWA	310 FT from Kalaimoku St.	92 FT Above Ground	68	68
EWA	310 FT from Kalaimoku St.	111 FT Above Ground	68	68
EWA	310 FT from Kalaimoku St.	155 FT Above Ground	69	68
EWA	310 FT from Kalaimoku St.	205 FT Above Ground	69	68
EWA	310 FT from Kalaimoku St.	305 FT Above Ground	69	68

predictions shown in Table 5. Figure 12 depicts the various receptor locations of Table 5 in relationship to the planned residential / hotel tower building of the project.

As indicated in Table 5, the existing noise levels at the faces of the proposed tower building are higher on the Kuhio Avenue (mauka face) and Kalaimoku Street (Ewa face) sides, and are lower on the DH and makai faces. 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.



**FIGURE
12**

**LOCATIONS WHERE TRAFFIC NOISE LEVEL CALCULATIONS
WERE MADE ON FACES OF PROPOSED
RESIDENTIAL / HOTEL BUILDING**

CHAPTER VI. FUTURE NOISE ENVIRONMENT

Predictions of future traffic noise levels were made using the traffic volume assignments of Reference 6 for CY 2015 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 2015 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 2015 under the Build Alternative. Future average vehicle speeds and traffic mixes along all roadways were assumed to be identical to those used for CY 2012 (see Table 3).

In CY 2015, 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. Traffic noise levels along Kalaimoku Street between Kalakaua Avenue and Ala Wai Boulevard will remain relatively low (between 55 DNL to 65 DNL) 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 2015. Except for the 0.9 and 1.6 dB (or DNL) increase in traffic noise along Kalaimoku Street attributable to project traffic, the predicted increases in traffic noise from project traffic should be less than 0.5 dB. Along Kalaimoku Street west of the project site, future traffic noise levels should remain below 60 DNL at 50 feet setback distance from the roadway's centerline.

Calculations of future traffic noise levels following project build-out in CY 2015 and at the faces of the proposed residential / hotel tower building were performed as shown in Table 5. The receptor locations where the calculations were performed are shown in Figure 12. As indicated in Table 5, traffic noise levels at the lower floors of the proposed residential / hotel tower building on the DH and makai faces should decrease (by 4 to 10 DNL) due to the traffic noise shielding effects of the proposed building. At the upper floors of the DH and makai faces, future traffic noise levels are predicted to decrease slightly (by 1 or 2 DNL) due to the noise shielding effects of the proposed building.

As indicated in Table 5, future traffic noise levels at all of the residential / hotel units on the mauka (Kuhio Street) and Ewa (Kalaimoku Street) faces will exceed the 65 DNL FHA/HUD noise standard. On the makai (Kalakaua Avenue) and DH (Diamond Head) faces, future traffic noise levels are predicted to exceed the 65 DNL standard only at the higher elevations.

The dominant traffic noise sources in the project area will continue to be traffic noise from Kuhio Avenue and Kalakaua Avenue. As indicated in Table 5, residential /

TABLE 6

FUTURE (CY 2015) TRAFFIC VOLUMES AND NOISE LEVELS
ALONG ROADWAYS IN PROJECT AREA
(AM OR PM PEAK HOUR, BUILD)

<u>LOCATION</u>	<u>SPEED</u> (MPH)	<u>TOTAL</u> <u>VPH</u>	***** VOLUMES (VPH) *****			<u>50' Leg</u>	<u>75' Leg</u>	<u>100' Leg</u>
			<u>AUTOS</u>	<u>M TRUCKS</u>	<u>H TRUCKS</u>			
Ala Wai Blvd. W. of Kalaimoku St., PM	30	2,777	2,708	47	22	71.2	69.1	67.8
Ala Wai Blvd. E. of Kalaimoku St., AM	30	2,485	2,423	42	20	70.8	68.6	67.3
Ala Wai Blvd. W. of Lewers St., AM	30	2,683	2,616	46	21	71.1	69.0	67.6
Ala Wai Blvd. E. of Lewers St., AM	30	2,505	2,442	43	20	70.8	68.7	67.3
Kuhio Ave. W. of Kalaimoku St., PM	32	1,125	967	45	113	71.4	69.4	68.1
Kuhio Ave. Between Kalaimoku & Launiu, PM	32	1,225	1,053	49	123	71.7	69.7	68.4
Kuhio Ave. Between Launiu & Kaiolu, PM	32	1,221	1,050	49	122	71.7	69.7	68.4
Kuhio Ave. Between Kaiolu & Lewers, PM	32	1,219	1,048	49	122	71.7	69.7	68.4
Kuhio Ave. E. of Lewers St., PM	32	1,156	994	46	116	71.5	69.5	68.2
Kalakaua Ave. W. of Saratoga Rd., PM	32	2,177	2,070	63	44	71.6	69.6	68.3
Kalakaua Ave. E. of Saratoga Rd., PM	32	2,122	2,018	62	42	71.4	69.5	68.2
Kalakaua Ave. W. of Lewers St., PM	32	1,975	1,878	57	40	71.1	69.2	67.9
Kalakaua Ave. E. of Lewers St., PM	32	1,680	1,597	49	34	70.5	68.5	67.2
Kalaimoku St. Between Kalakaua & Kuhio, PM	25	512	495	11	6	59.0	57.3	56.0
Kalaimoku St. Between Kuhio & Ala Wai, PM	25	447	432	10	5	58.4	56.7	55.4

TABLE 7

**CALCULATIONS OF PROJECT AND NON-PROJECT
TRAFFIC NOISE CONTRIBUTIONS (CY 2015)
(PEAK HOUR LEQ OR DNL)**

<u>STREET SECTION</u>	<u>NOISE LEVEL INCREASE DUE TO: NON-PROJECT TRAFFIC</u>	<u>PROJECT TRAFFIC</u>
Ala Wai Blvd. W. of Kalaimoku St.	0.2	0.2
Ala Wai Blvd. E. of Kalaimoku St.	0.3	0.2
Ala Wai Blvd. W. of Lewers St.	0.2	0.2
Ala Wai Blvd. E. of Lewers St.	0.2	0.2
Kuhio Ave. W. of Kalaimoku St.	0.3	0.1
Kuhio Ave. Between Kalaimoku & Launiu	0.2	0.3
Kuhio Ave. Between Launiu & Kaiolu	0.1	0.3
Kuhio Ave. Between Kaiolu & Lewers	0.2	0.3
Kuhio Ave. E. of Lewers St.	0.2	0.4
Kalakaua Ave. W. of Saratoga Rd.	0.2	0.4
Kalakaua Ave. E. of Saratoga Rd.	0.2	0.0
Kalakaua Ave. W. of Lewers St.	0.2	0.0
Kalakaua Ave. E. of Lewers St.	0.3	0.0
Kalaimoku St. Between Kalakaua & Kuhio	0.0	1.6
Kalaimoku St. Between Kuhio & Ala Wai	0.0	0.9

hotel units on the north (mauka) and west (Ewa) faces of the tower building are 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, residential / hotel units located on the lower floors at the south (makai) and east (Diamond Head) faces of the proposed tower building are predicted to experience traffic noise levels less than 65 DNL due to the beneficial shielding effects of the project's new building.

Aircraft noise levels over the project site should not change significantly between CY 2008 and 2015, 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

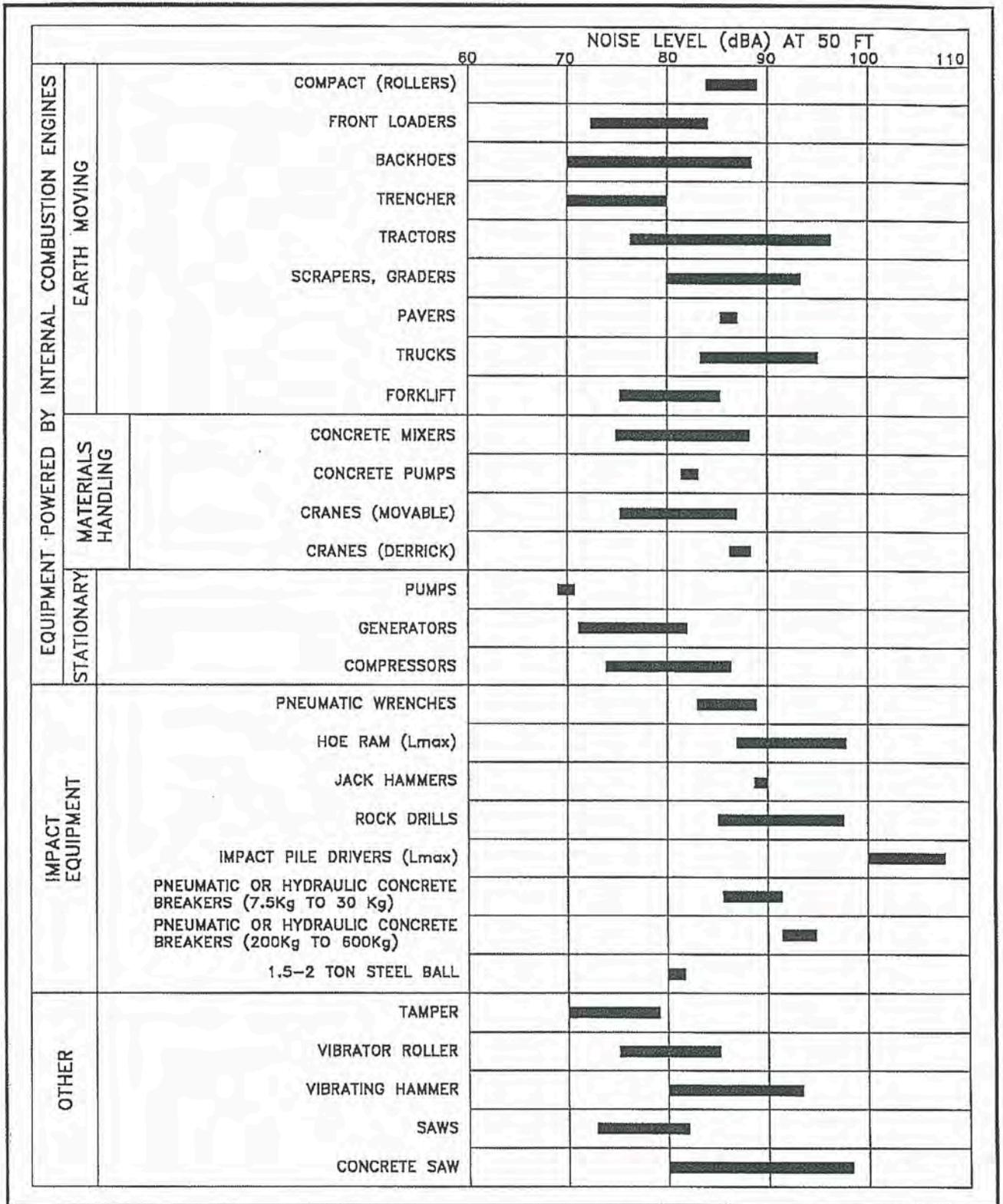
Traffic Noise. Noise impacts from project related traffic along the surrounding roadways which are expected to service the project are not expected since traffic noise increases associated with project traffic are not significant. Along Kalaimoku Street, where project related traffic noise level increases are greatest, total project plus non-project traffic noise levels should be less than 60 DNL at 50 feet from the centerline due to the relatively low traffic volumes along that roadway. At most of the residential / hotel units in the proposed residential / hotel tower building of the project, predicted traffic noise levels exceed the 65 DNL FHA/HUD standard for residences, and traffic noise mitigation measures are recommended. The primary contributors to these high traffic noise levels are existing and future traffic along Kuhio Avenue and Kalakaua Avenue.

Traffic noise mitigation measures are recommended for all proposed residential / hotel units on the north and west faces of the tower building, and for those units on the upper floors of the south and east faces. Traffic noise mitigation measures in the form of closure and air conditioning of the residential and 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.

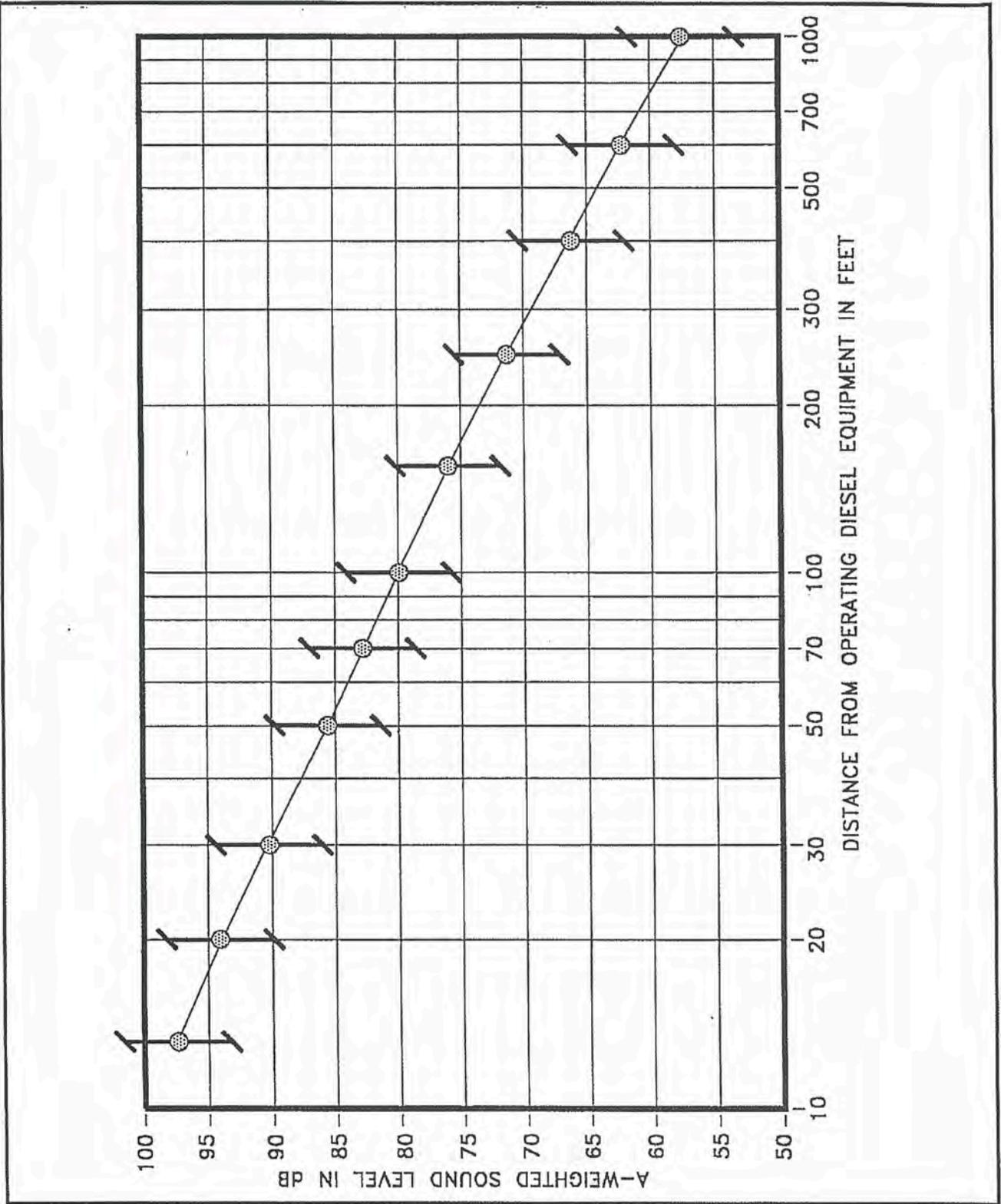
General Construction Noise. Audible construction noise will probably be unavoidable during the entire project construction period. The total time period for construction of the project is not known. It is expected that actual construction work will be moving from one location on the project site to another 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 13 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 14. Impact driving of concrete piles should not be required during construction since other quieter methods will be used. Figure 14 is useful for predicting exterior noise levels at short distances (within 100 feet) from the work when visual line of sight exists between the construction equipment and the receptor. Direct line-of-sight distances from the construction equipment to existing resort, residential, and commercial buildings will range from 10 feet to 600+ feet, with corresponding average noise levels of 100 to 62 dBA (plus or minus 5 dBA). For receptors along a cross-street, the construction noise



RANGES OF CONSTRUCTION EQUIPMENT NOISE LEVELS

FIGURE 13



ANTICIPATED RANGE OF CONSTRUCTION NOISE LEVELS VS. DISTANCE

FIGURE 14

level vs. distance curve of Figure 14 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 14.

Noise sensitive receptors who are predicted to experience the highest noise levels during construction activities are located at the La Casa, Tropic Surf, Waikiki Cove, and Four Paddle across Kuhio Avenue. Predicted construction noise levels at these buildings during the site preparation phase of the work ranged from 78 to 84 dBA (plus or minus 5 dBA). The highest noise levels during construction are expected to occur at the existing commercial buildings on the adjacent lot south of the project site, where buffer distances are very small (in the order of 10 to 20 feet). At the north walls of these commercial buildings, construction noise levels could intermittently exceed 95 dBA. Interior noise levels at these commercial buildings should be less than 60 dBA if their north walls are solid without windows or 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 15 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.

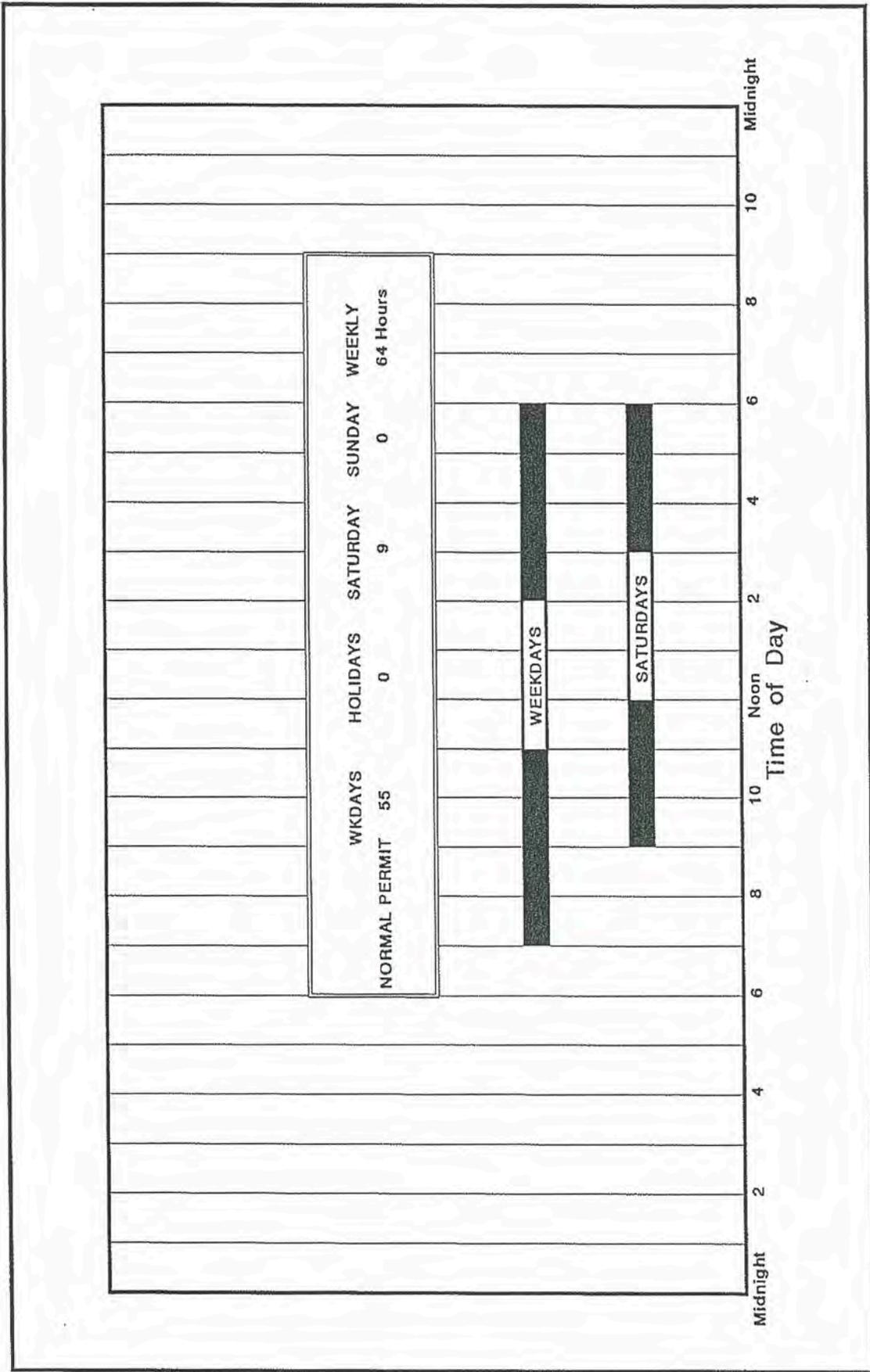


FIGURE 15

AVAILABLE WORK HOURS UNDER DOH PERMIT PROCEDURES FOR CONSTRUCTION NOISE

APPENDIX A. REFERENCES

- (1) "Guidelines for Considering Noise in Land Use Planning and Control;" Federal Interagency Committee on Urban Noise; June 1980.
- (2) "Environmental Criteria and Standards, Noise Abatement and Control, 24 FR, Part 51, Subpart B;" U.S. Department of Housing and Urban Development; July 12, 1979.
- (3) "Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety;" Environmental Protection Agency (EPA 550/9-74-004); March 1974.
- (4) "Title 11, Administrative Rules, Chapter 46, Community Noise Control;" Hawaii State Department of Health; September 23, 1996.
- (5) "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) Existing and Future AM and PM Peak Hour Traffic Turning Movements for the 2121 Kuhio Project; Transmittal from Wilson Okamoto & Associates, Inc. dated March 12, 2012.
- (7) Hourly traffic counts at Station #B72761200109, Kalakaua Avenue Between Lewers and Beachwalk; 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 22, 2010.
- (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).

APPENDIX B (CONTINUED)

TABLE I
A-WEIGHTED RECOMMENDED DESCRIPTOR LIST

<u>TERM</u>	<u>SYMBOL</u>
1. A-Weighted Sound Level	L_A
2. A-Weighted Sound Power Level	L_{WA}
3. Maximum A-Weighted Sound Level	L_{max}
4. Peak A-Weighted Sound Level	L_{Apk}
5. Level Exceeded x% of the Time	L_x
6. Equivalent Sound Level	L_{eq}
7. Equivalent Sound Level over Time (T) ⁽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,

APPENDIX B (CONTINUED)

TABLE II RECOMMENDED DESCRIPTOR LIST

<u>TERM</u>	<u>A-WEIGHTING</u>	<u>ALTERNATIVE⁽¹⁾ A-WEIGHTING</u>	<u>OTHER⁽²⁾ WEIGHTING</u>	<u>UNWEIGHTED</u>
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 $L_{eq(1)}$). Time may be specified in non-quantitative terms (e.g., could be specified as $L_{eq(WASH)}$ to mean the washing cycle noise for a washing machine.

APPENDIX C

SUMMARY OF BASE YEAR AND YEAR 2015
TRAFFIC VOLUMES DURING AM AND PM PEAK HOURS

ROADWAY LANES	***** CY 2012 *****		CY 2015 (NO BUILD)		*** CY 2015 (BUILD) ***	
	AM	PM	AM	PM	AM	PM
Ala Wai Blvd. W. of Kalaimoku St. (WB)	2,460	2,497	2,598	2,608	2,761	2,777
Ala Wai Blvd. E. of Kalaimoku St. (WB)	2,252	2,145	2,388	2,256	2,485	2,343
Ala Wai Blvd. W. of Lewers St. (WB)	2,450	2,192	2,586	2,303	2,683	2,390
Ala Wai Blvd. E. of Lewers St. (WB)	2,272	1,849	2,408	1,960	2,505	2,047
Kuhio Ave. W. of Kalaimoku St. (EB)	499	808	526	853	526	853
Kuhio Ave. W. of Kalaimoku St. (WB)	158	243	168	258	177	272
Two-Way	657	1,051	694	1,111	703	1,125
Kuhio Ave. Btwn. Kalaimoku & Launiu (EB)	491	817	518	862	558	922
Kuhio Ave. Btwn. Kalaimoku & Launiu (WB)	186	274	196	289	205	303
Two-Way	677	1,091	714	1,151	763	1,225
Kuhio Ave. Btwn. Launiu & Kaiolu (EB)	578	881	566	890	606	950
Kuhio Ave. Btwn. Launiu & Kaiolu (WB)	145	242	155	257	164	271
Two-Way	723	1,122	721	1,147	770	1,221
Kuhio Ave. Btwn. Kaiolu & Lewers (EB)	529	794	556	839	596	899
Kuhio Ave. Btwn. Kaiolu & Lewers (WB)	173	292	178	307	192	321
Two-Way	702	1,085	734	1,145	788	1,219
Kuhio Ave. E. of Lewers St. (EB)	523	717	550	762	590	822
Kuhio Ave. E. of Lewers St. (WB)	207	305	207	320	226	334
Two-Way	730	1,022	757	1,082	816	1,156
Kalakaua Ave. W. of Saratoga Rd. (EB)	1,422	1,904	1,493	2,003	1,661	2,177
Kalakaua Ave. E. of Saratoga Rd. (EB)	1,405	2,023	1,476	2,122	1,476	2,122
Kalakaua Ave. W. of Lewers St. (EB)	1,415	1,876	1,486	1,975	1,486	1,975
Kalakaua Ave. E. of Lewers St. (EB)	1,105	1,581	1,176	1,680	1,176	1,680
Saratoga Rd. S. of Kalakaua Ave. (NB)	338	654	338	654	338	654
Saratoga Rd. S. of Kalakaua Ave. (SB)	189	188	189	188	189	188
Two-Way	527	842	527	842	527	842
Kalaimoku St. Btwn. Kalakaua & Kuhio (NB)	164	354	164	354	302	512
Kalaimoku St. Btwn. Kuhio & Ala Wai (NB)	202	365	202	365	270	447
Launiu St. N. of Kuhio Ave. (SB)	123	107	123	107	123	107
Kaiolu St. N. of Kuhio Ave. (NB)	69	125	69	125	69	125

APPENDIX C (CONTINUED)

SUMMARY OF BASE YEAR AND YEAR 2015
TRAFFIC VOLUMES DURING AM AND PM PEAK HOURS

ROADWAY LANES	***** CY 2012 *****		CY 2015 (NO BUILD)		*** CY 2015 (BUILD) ***	
	AM	PM	AM	PM	AM	PM
Lewers St. S. of Kalakaua Ave. (NB)	66	210	66	210	66	210
Lewers St. S. of Kalakaua Ave. (SB)	207	177	207	177	207	177
Two-Way	273	387	273	387	273	387
Lewers St. Btwn. Kalakaua & Kuhio (NB)	149	327	149	327	149	327
Lewers St. Btwn. Kuhio & Ala Wai (NB)	176	383	176	383	176	383



APPENDIX XI

PRE-DEA COMMENTS

MF

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843



November 16, 2011

PETER B. CARLISLE, Mayor

RANDALL Y. S. CHUNG, Chairman
DENISE M. C. DE COSTA, Vice Chair
THERESIA C. McMURDO
DUANE R. MIYASHIRO
ADAM C. WONG

WESTLEY K.C. CHUN, Ex-Officio
GLENN M. OKIMOTO, Ex-Officio

DEAN A. NAKANO
Acting Manager



Mr. Michael M. Fujita, Project Manager
Wilson Okamoto Corporation
1907 South Beretania Street
Artesian Plaza, Suite 400
Honolulu, Hawaii 96826

Dear Mr. Fujita:

Subject: Your Letter Dated November 7, 2011 Requesting the Availability of Water and Flow and Pressure Data to the Proposed K-3 Development in Waikiki, TMK: 2-6-18: 42, 52, 43

Thank you for your letter on the proposed hotel condo, hotel residential, commercial, restaurant, and office development.

The existing water system is adequate to accommodate the proposed Option A (384 hotel condo suites and hotel residences, commercial, restaurant, and office space), and Option B (526 hotel condo suites and hotel residences, commercial, restaurant, and office space) 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 your building permit application. The final decision on the availability of water will be confirmed when the building permit application is submitted for approval.

When water is made available, the applicant will be required to pay our Water System Facilities Charges for resource development, transmission and daily storage.

The on-site fire protection requirements should be coordinated with the Fire Prevention Bureau of the Honolulu Fire Department.

We have suspended fire flow tests on fire hydrants as a water conservation measure. However, you may use the following calculated flow data for Fire Hydrant Nos. M-1046, M-3687, and M-3688 on Kuhio Avenue:

Mr. Michael M. Fujita
November 16, 2011
Page 2

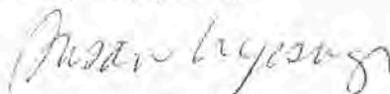
<u>Fire Hydrant Number</u>	<u>Location</u>	<u>Static Pressure (psi)</u>	<u>Residual Pressure (psi)</u>	<u>Flow (gpm)</u>
M-1046	Kuhio Avenue	75	55	4000
M-3687	Kuhio Avenue	75	55	4000
M-3688	Kuhio Avenue	75	55	4000

The data are based on the existing water system, and the static pressure represents the theoretical pressure at the point of calculation with the reservoir full and no demands on the water system. The static pressure is not indicative of the actual pressure in the field. Therefore, in order to determine the flows that are available to the site, you will have to determine the actual field pressure by taking on-site pressure readings at various times of the day and correlating that field data with the above hydraulic design data.

Attached is a map showing the location of the fire hydrants.

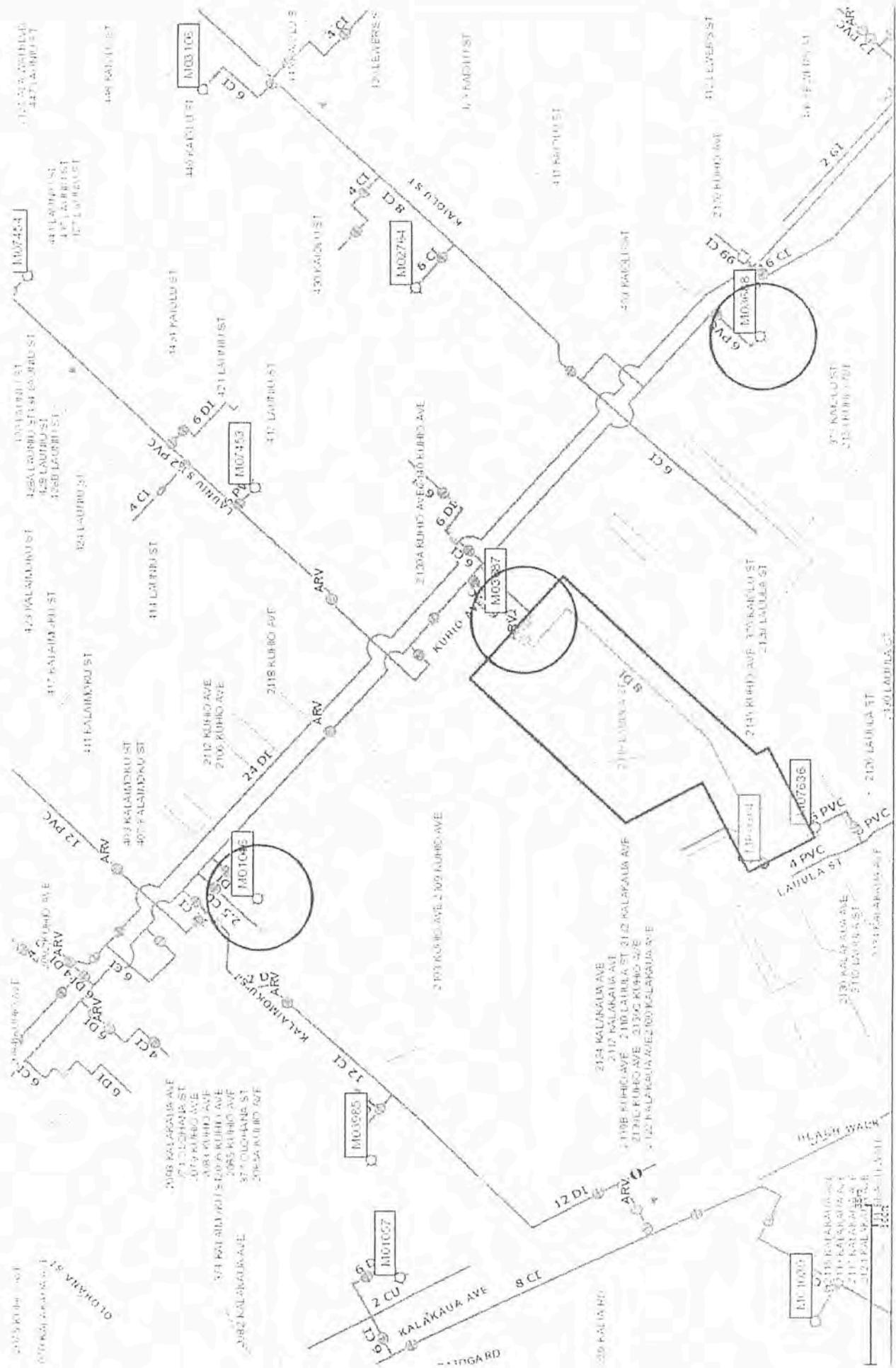
If you have any questions, please contact Robert Chun at 748-5443.

Very truly yours,



SUSAN UYESUGI
Program Administrator
Customer Care Division

Attachment



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DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET * HONOLULU, HAWAII 96813
 Phone: (808) 768-8209 * Fax: (808) 768-4210

EYK

SEWER CONNECTION APPLICATION

APPLICATION NO.: 2012/SCA-0003 STATUS: Approved with conditions
 DATE RECEIVED: 12/20/2011 IWDP APP. NO.:
 PROJECT NAME: 2012/SCA-0003 K3 Development

\$1,853,062.90
Estimated Wastewater System Facility Charge*

LOCATION:

Zone	Section	Plat	Parcel
2	6	018	042
Zone	Section	Plat	Parcel
2	6	018	052

22,195 Sq. Ft.

JAN 18 2012

38,457 Sq. Ft.

WILSON OKAMOTO & ASSOCIATES, INC.

SPECIFIC LOCATION: Corner of Kalaimoku Street and Kuhio Avenue

APPLICANT: Wilson Okamoto & Associates, Inc.
 Attn: Eric Kadooka, P. E.
 1907 South Beretania St., #400
 Honolulu, HI 96825

DEVELOPMENT TYPE: Hotel SEWER CONNECTION WORK DESIRED: New

OTHER USES: Retail/Commercial, 2,500 SF
 Restaurant, 107 seats per day

NON-RESIDENTIAL AREA: s.f. APPROXIMATE DATE OF CONNECTION:

PROPOSED UNITS	EXISTING UNITS	UNITS TO BE DEMOLISHED
No. of New Units: 459	No. of Existing Units: 0	No. of Units to be Demolished: 0
Studios: 210	Studios:	Studios:
1-Bedroom: 155	1-Bedroom:	1-Bedroom:
2-Bedroom: 55	2-Bedroom:	2-Bedroom:
3-Bedroom: 39	3-Bedroom:	3-Bedroom:
4-Bedroom:	4-Bedroom:	4-Bedroom:
5-Bedroom:	5-Bedroom:	5-Bedroom:
6-Bedroom:	6-Bedroom:	6-Bedroom:

REMARKS Approval conditioned on connection to the 20-inch sewer line in Kuhio Avenue at owner's expense. Submit construction plans for review and approval.

APPROVAL DATE: 01/17/2012

*Valid 2-years after approval date. Construction plans shall be completed and approved within this 2-year period. Construction shall commence within 1-year after approval of plans.
 * Applicable WSFC shall be collected at the prevailing rate in accordance with ROH 1990, Chapter 14, Sections 14-10.3, 14-10.4, 14-10.5 and Appendix 14-D.*

EXPIRATION DATE: 01/16/2014

REVIEWED BY: Tessa Ching

Tessa Ching

Site Development Division, Wastewater Branch

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.honolulu.gov • CITY WEB SITE: www.honolulu.gov

PETER B. CARLISLE
MAYOR



DAVID K. TANOUÉ
DIRECTOR

JIRO A. SUMADA
DEPUTY DIRECTOR

2012/ELOG-741(js)
2012/ED-7

May 10, 2012

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-202
Honolulu, Hawaii 96822

Dear Mr. Kurahashi:

Subject: Chapter 343, Hawaii Revised Statutes
Draft Environmental Assessment - Preliminary Review
Project: 2121 Kuhio
Applicant: PACREP LLC
Agent: Kusao & Kurahashi, Inc.
Location: 2121 and 2139 Kuhio Avenue; 2100 Kalakaua Avenue - Waikiki
Tax Map Key: 2-6-18: 10, 42, 43 and 52

We have reviewed the above Draft Environmental Assessment (DEA). Prior to its distribution to other agencies and community groups, please amend/revise the DEA in accordance with the following:

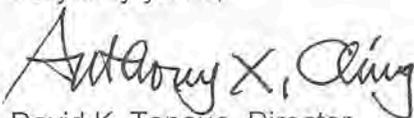
1. Please provide the name and phone number of a contact person for the Applicant.
2. The Recorded Fee Owner of Parcel 43 (K3 Owners LLC) shall be included in Section II. If the Land Use Permits Division Master Application Form is included in the DEA, please include all Recorded Fee Owners on the form.
3. The DEA shall include an Agency submittal letter. The letter shall include the anticipated determination.
4. Provide a plan showing the site (all parcels) and the 2121 Kuhio project (Project) boundary (Parcels 42 and 52).
5. The units are proposed to be condo hotel units, however, the required parking is based on hotel use. Describe in greater detail the ownership and/or use of the 459 units.
6. Required parking spaces shall be assessed for all lodging and dwelling units, including "lock-out" units.

Mr. Keith Kurahashi
May 10, 2012
Page 2

7. Confirm that the Project will comply with the Resort Mixed Use Precinct maximum permitted density. Please provide the maximum permitted density (floor area), existing developed floor area and proposed floor area.
8. Discuss how the proposal is consistent with the Primary Urban Center Development Plan.
9. Include the Pre-DEA agency comment letters and applicant responses.
10. Discuss the findings and reasons which support the anticipated determination.
11. Show the 300-foot height limit on all building elevations.
12. Show the transitional height setback on east building elevation. Show the transitional height setback from Kalakaua Avenue on the west building elevation.
13. Show and discuss how the proposed high-rise tower would not be visible within the view cones from the Punchbowl lookouts towards Diamond Head and the horizon line of the ocean and from the Kalakaua Avenue frontage of Fort Derussy towards the slopes and ridgeline of the Koolau Range.
14. Discuss in more detail how the proposed high-rise tower meets the objectives of the Waikiki Special District regarding views.
15. Remove the side property line from the north, west and south elevations.
16. Include a plan in Appendix IV which shows the location from where each photograph was taken.
17. Traffic/pedestrian related comments:
 - Does the motor court accommodate tour busses and trolleys?
 - Show the delivery truck circulation pattern.
 - Show the existing porte cochere for 2100 Kalakaua and how the proposed entry drive will impact its design and pedestrian flow.
 - Will valet service be offered for the Project? Will 2100 Kalakaua offer valet service?
 - Indicate any proposed changes to the existing bus or trolley stops.

Should you have any questions, please contact Joyce Shoji of our staff at 768-8032.

Very truly yours,

FOR 
David K. Tanoue, Director
Department of Planning and Permitting

DKT:nw
cc: HSH 2100 LLC
Food Pantry Ltd
K3 Owners LLC

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

MANDA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-202
HONOLULU, HAWAII 96822

BUS. (808) 988-2231
FAX. (808) 988-1140
E-Mail: kkurahashi@hawaii,rr.com

June 15, 2012

Mr. David K. Tanoue, Director
Department of Planning and Permitting
City and County of Honolulu
650 So. King Street, 7th Floor
Honolulu, Hawaii 96813

Attention: Ms. Joyce Shoji, Senior Planner
Urban Design Branch

Dear Mr. Tanoue,

Subject: Chapter 343, Hawaii Revised Statutes
Draft Environmental Assessment - Preliminary Review
Project: 2121 Kuhio
Applicant: PACREP LLC
Agent: Kusao & Kurahashi, Inc.
Location: 2121 and 2139 Kuhio Avenue; 2100 Kalakaua Avenue - Waikiki
Tax Map Key: 2-6-18: 10, 42, 43 and 52

Thank you for your preliminary review of the Draft Environmental Assessment (DEA) for the 2121 Kuhio development. We will revise the DEA as you have recommended and noted below:

1. We will add the name of the contact person, Mr. Jason Grosfeld, and his phone number, (310) 500-2955, in Section II of the revised DEA.
2. As discussed with Ms. Shoji, the Recorded Fee Owner of Parcel 42 will be included in Section II. The Land Use Permits Division Master Application Form will not be included in the revised DEA.
3. The revised DEA will include an Agency submittal letter with the anticipated determination.
4. A plan showing the site (all parcels) and the 2121 Kuhio project boundary (Parcels 42 and 52) will be provided in the revised DEA.
5. The units are proposed to be condo-hotel units which we understand DPP treats as hotel units. There are several condo-hotel projects in Waikiki and similar to those other projects, the individual hotel units will be sold to investors, who are expected to place the units back into the hotel pool. We expect that investors may stay in their units part of the year and will be offered hotel services during those periods. This discussion will be included in the revised DEA.

6. The revised DEA will note that required parking spaces will be assessed for all hotel dwelling units (459 units, no "lock-out" units planned at this time). If lock-out units are proposed in the future, total number of units, including lock-out, will not exceed 459.
7. The Project will comply with the Resort Mixed Use Precinct maximum permitted density. The calculation for the maximum permitted density for existing developed floor area and proposed floor area is provided in Appendix V, LUO Zoning Analysis, in the revised DEA.
8. The proposal's consistency with the Primary Urban Center Development Plan will be provided in the revised DEA.
9. The Pre-DEA comment letters and the applicant's responses will be provided in the revised DEA.
10. The revised DEA will provide a discussion of the findings and reasons which support the anticipated determination.
11. The 300-foot height limit will be shown on all building elevations in the revised DEA.
12. The transitional height setback on the east building elevation will be shown. The transitional height setback from Kalakaua Avenue on the west building elevation will also be shown in the revised DEA.
13. The applicant will provide in the revised DEA photo simulations and a discussion on how the proposed high-rise tower would not be visible within the view cones from the Punchbowl lookouts towards Diamond Head and the horizon line of the ocean and from the Kalakaua Frontage of Fort DeRussy towards the slopes and ridgeline of the Koolau Mountain Range.
14. A more detailed discussion on how the proposed high-rise tower meets the objectives of the Waikiki Special District regarding views will be provided in the revised DEA.
15. The side property lines from the north, west and south elevations will be removed in the revised DEA.
16. Appendix IV of the revised DEA will include a legend showing where each photograph was taken.
17. Traffic/pedestrian related comments:
 - The motor court will accommodate trolleys.
 - The delivery truck circulation diagrams will be provided in the revised DEA.

Mr. David K. Tanoue

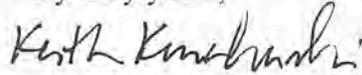
Page 3

- The revised DEA will show the existing porte cochere for 2100 Kalakaua and how the proposed entry drive will impact its design and pedestrian flow.
- Valet service for both 2121 Kuhio and 2100 Kalakaua will be provided by the applicant.
- The revised DEA will show proposed changes to the existing trolley stop.

We have provided two copies of the revised DEA for your review and will provide additional copies for distribution upon your acceptance of the document for processing.

Please call our office if you have any questions or concerns about this revised DEA.

Very truly yours,



Keith Kurahashi

cc: PACREP LLC

APPENDIX XII

AERIAL PHOTO



APPENDIX XIII

SHADOW STUDY

2121 Kuhio Tower

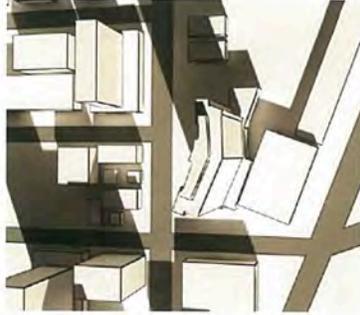


Shadow Studies

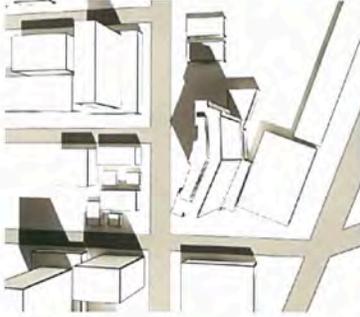
PACREP LLC

Honolulu, Hawaii
October 18, 2012

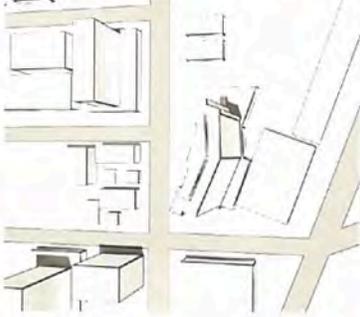
prepared by
GUERIN GLASS ARCHITECTS, PC



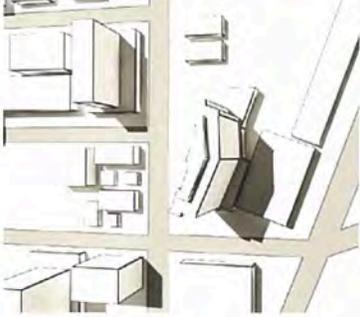
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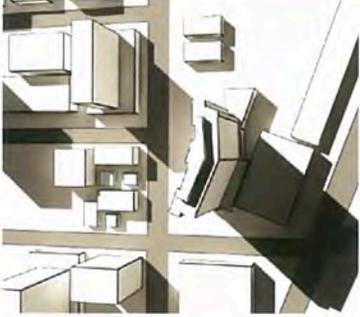
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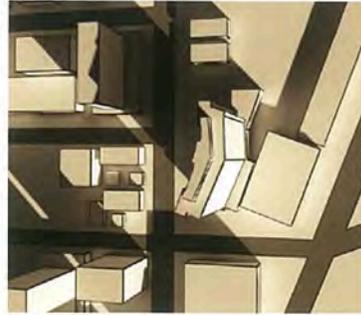


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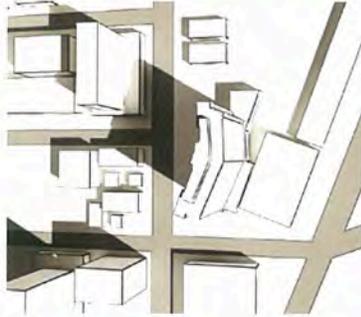


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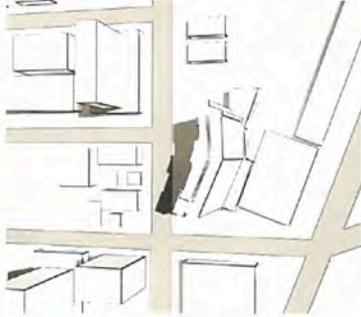
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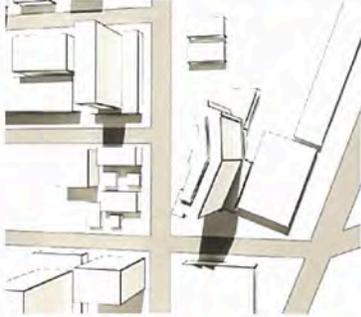
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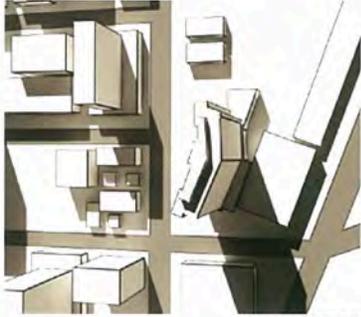
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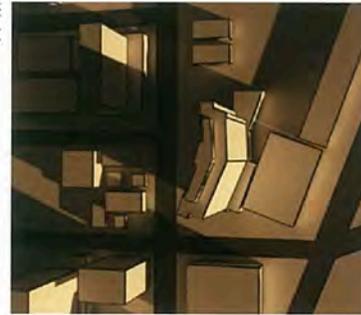


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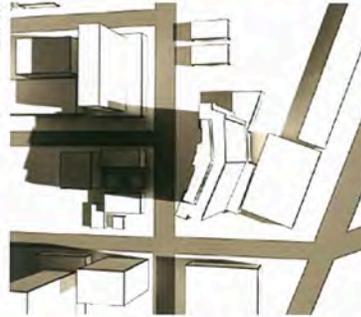
EQUINOX
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Shadow
Studies

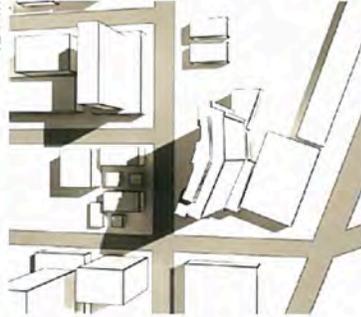
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Head
Orientation



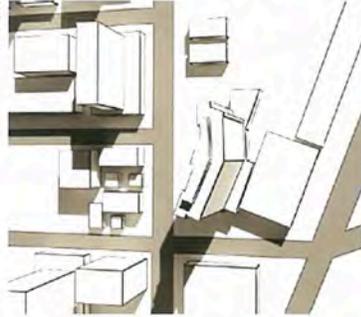
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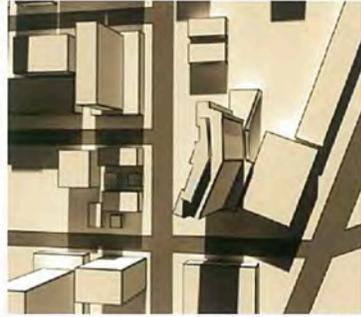
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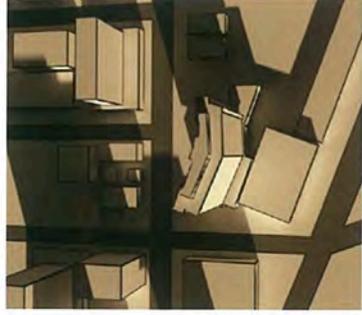
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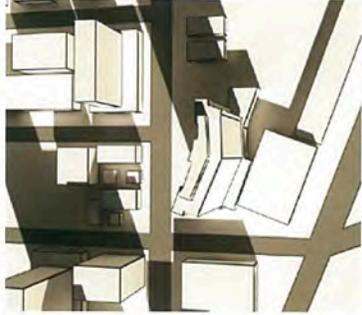
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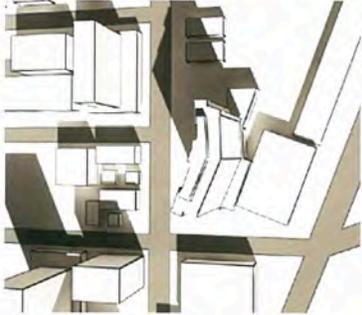
PACREP LLC



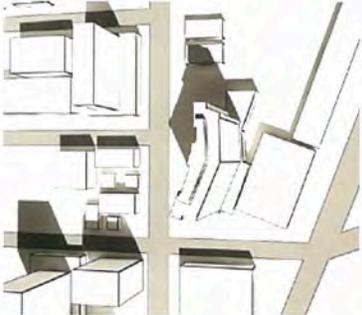
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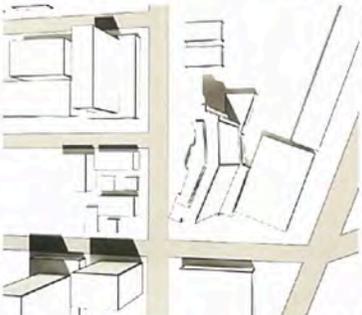
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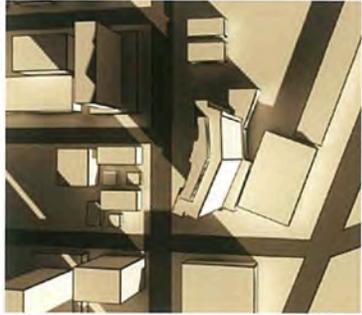


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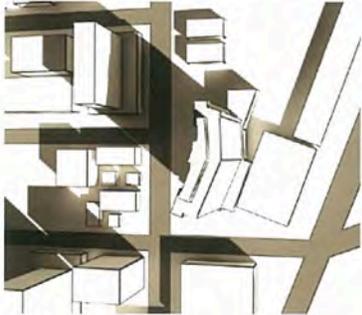
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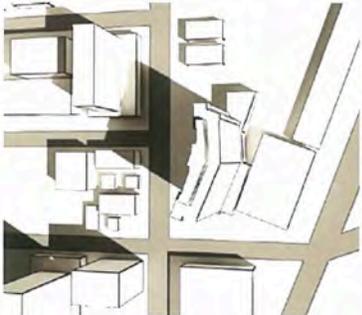
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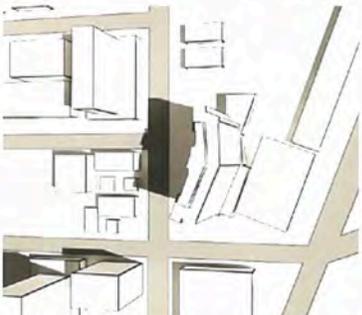
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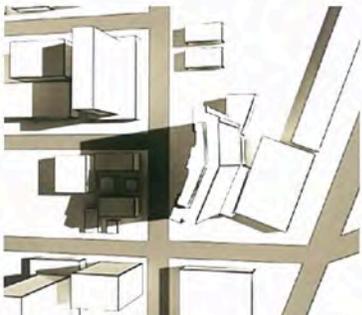
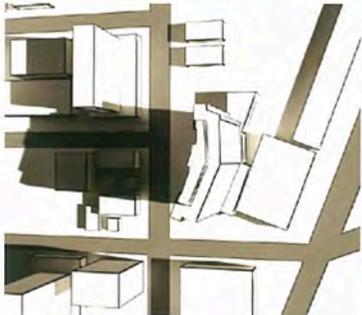
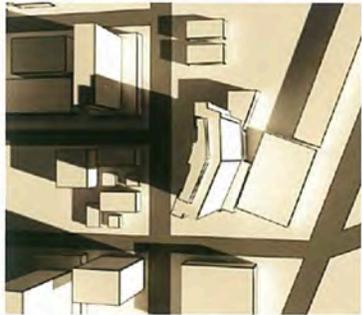
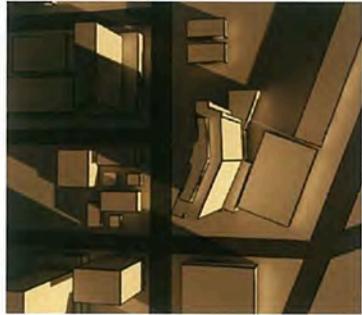


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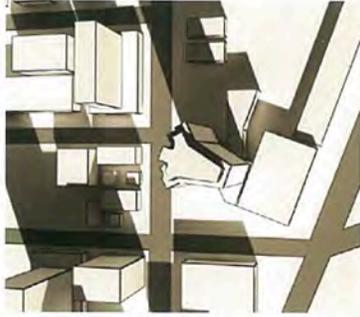
Eva/Diamond
Head
Orientation
1pm - 5pm



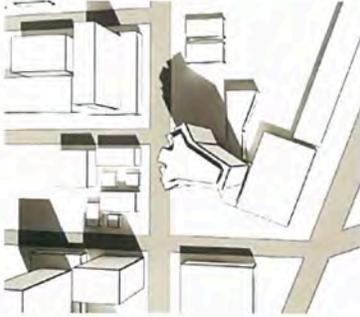
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PACREP LLC

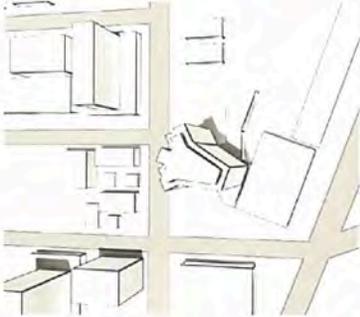
2121
KUHIO TOWER



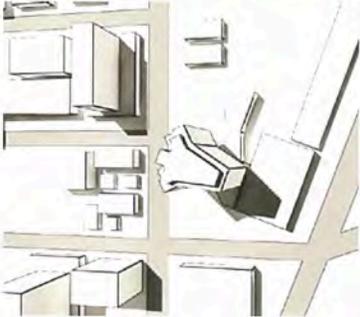
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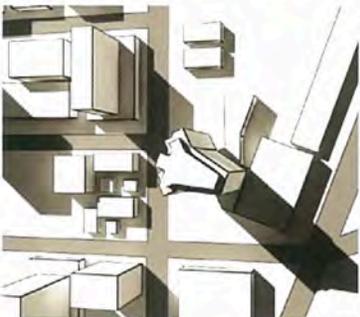
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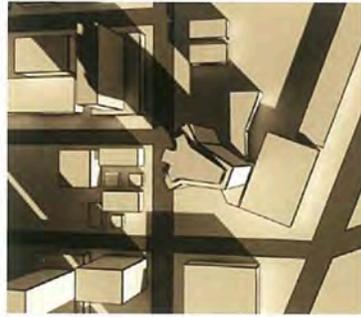


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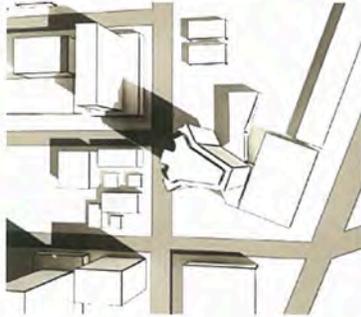


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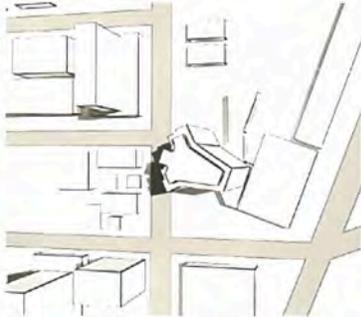
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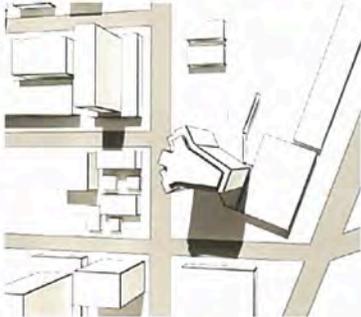
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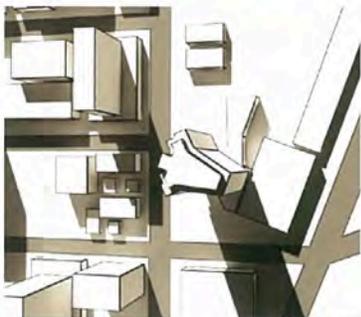
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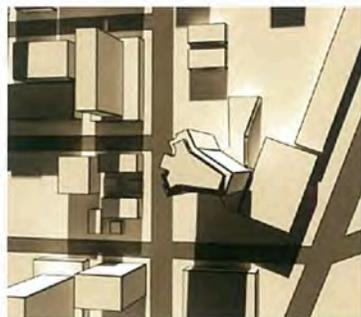
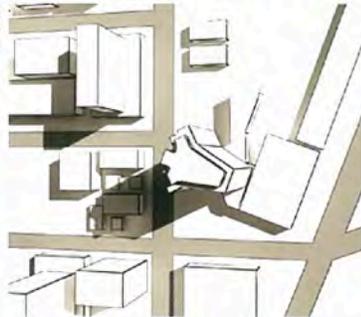
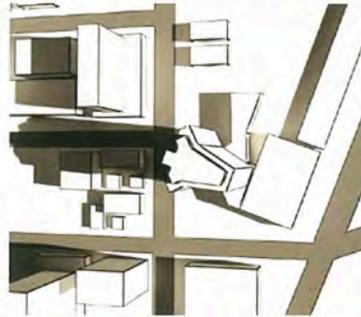
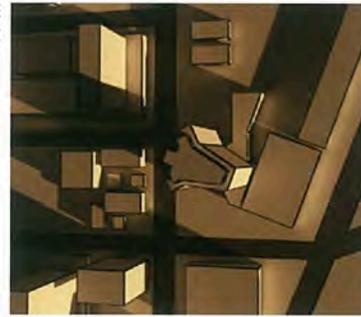


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09.22 / 03.20

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Studies

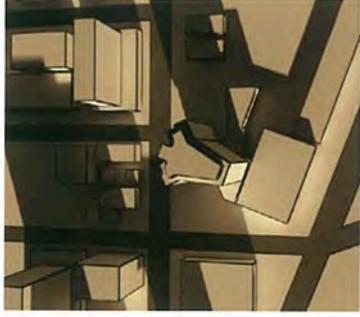
Mauka/Makai
Orientation



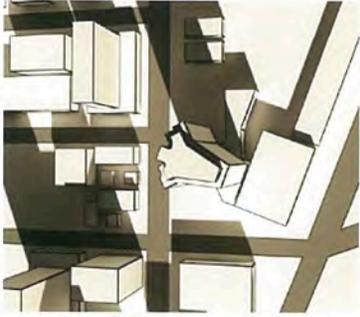
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GUERIN GLASS
ARCHITECTS, PC

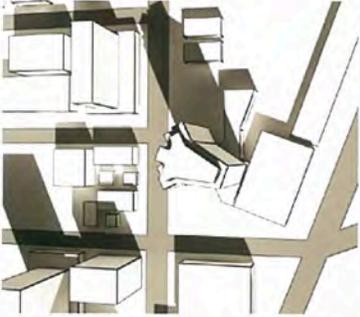
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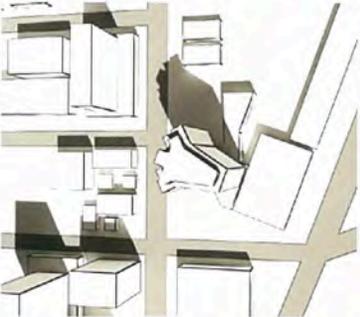
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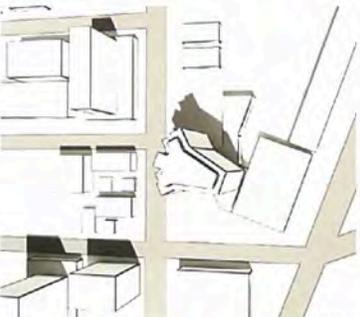
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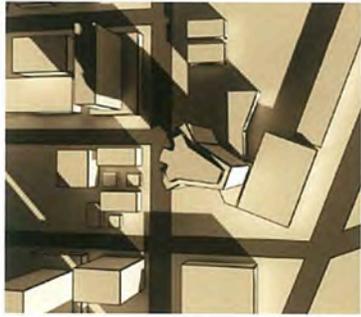


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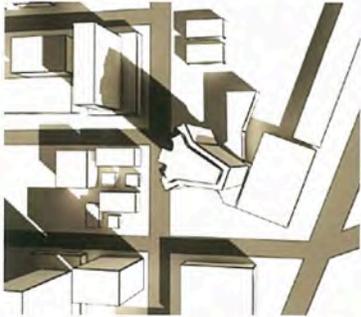
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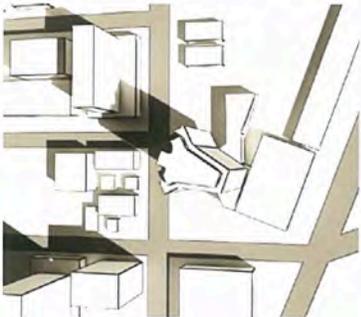
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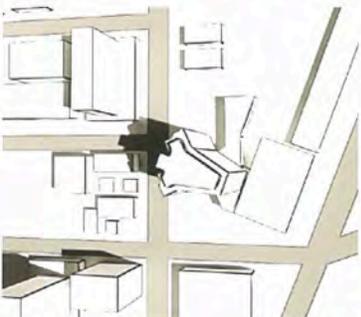
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EQUINOX
09.22 / 03.20

Shadow
Studies

Mauka/Makai
Orientation

1 pm - 5pm

GUERIN GLASS
ARCHITECTS, PC



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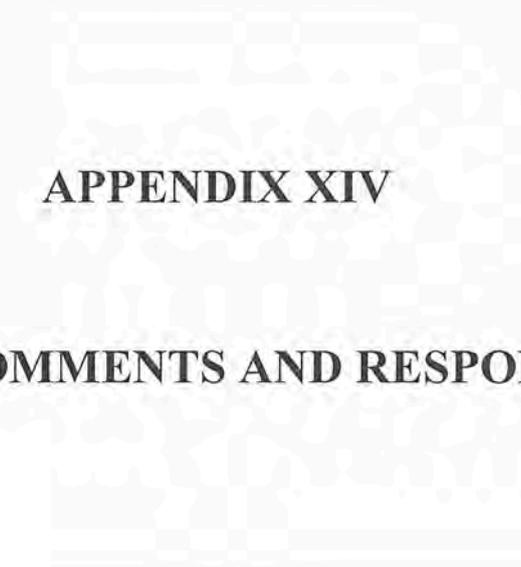
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12.21

WINTER SOLSTICE
12.21

PACREP LLC



APPENDIX XIV

DEA COMMENTS AND RESPONSE

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

PETER B. CARLISLE
MAYOR



KENNETH G. SILVA
FIRE CHIEF

EMMIT A. KANE
DEPUTY FIRE CHIEF

July 31, 2012

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-202
Honolulu, Hawaii 96822

Dear Mr. Kurahashi:

Subject: Draft Environmental Assessment
2121 and 2134 Kuhio Avenue and 2100 Kalakaua Avenue
Tax Map Keys: 2-6-018: 010, 042, 043, and 052

In response to a letter dated July 6, 2012, from David Tanoue of the Department of Planning and Permitting (DPP), the Honolulu Fire Department (HFD) reviewed the materials provided and requires that the following be complied with:

1. Fire department access roads shall be provided such that any portion of the facility or any portion of an exterior wall of the first story of the building is located not more than 150 feet (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]TM, 2006 Edition, Section 18.2.3.2.2.)

A fire department access road shall extend to within 50 ft (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; UFCTM, 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

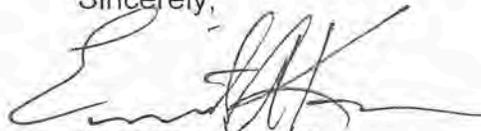
Mr. Keith Kurahashi
Page 2
July 31, 2012

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; UFCTM, 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 Acting Battalion Chief Gary Lum of our Fire Prevention Bureau at 723-7152 or glum@honolulu.gov.

Sincerely,



EMMIT A. KANE
Acting Fire Chief

EAK/SY:bh

cc: DPP, Urban Design Branch

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-202
HONOLULU, HAWAII 96822

BUS. (808) 988-2231
FAX. (808) 988-1140
E-Mail: kkurahashi@hawaii.rr.com

September 11, 2012

Mr. Emmit A. Kane, Acting Fire Chief
Fire Department
City and County of Honolulu
636 South Street
Honolulu, Hawaii 96813

Attention: Acting Battalion Chief Gary Lum
Fire Prevention Bureau

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Chief Kane:

Thank you for your letter of July 31, 2012 regarding the Draft Environmental Assessment (DEA) for the 2121 Kuhio Avenue Project (Project).

We appreciate your comments and offer the following responses:

1. The Applicant will provide to the extent necessary, fire department access roads in accordance with the National Fire Protection Association 1, Uniform Fire Code, 2006 Edition, as you have noted.
2. The Applicant will provide a water supply, approved by the County, capable of providing 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 (45,720mm) 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 and construction drawings will be submitted to the Honolulu Fire Department for review and approval.

Mr. Emmit A. Kane

Page 2

Your letter and this response will be included in the Final EA.

Very truly yours,

A handwritten signature in black ink that reads "Keith Kurahashi". The signature is written in a cursive style with a prominent initial "K".

Keith Kurahashi

cc: Department of Planning and Permitting
PACREP LLC



STATE OF HAWAII
DEPARTMENT OF EDUCATION
P.O. BOX 2360
HONOLULU, HAWAII 96804

OFFICE OF SCHOOL FACILITIES AND SUPPORT SERVICES

August 1, 2012

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-202
Honolulu, Hawai'i 96822

Dear Mr. Kurahashi:

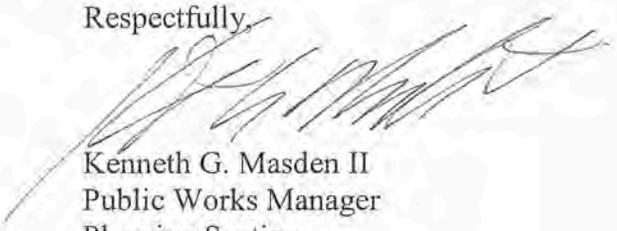
Subject: Draft Environmental Assessment for 2121 Kuhio,
TMKs 2-6-18:10, 42, 43, and 52, Waikiki, Honolulu, Hawai'i

The Department of Education (DOE) has reviewed the Draft Environmental Assessment for the 2121 Kuhio project.

The DOE would like to know if any of the units proposed by the project will house permanent residents, which could impact enrollment at nearby schools.

Thank you for the opportunity to provide comments. If you have any questions, please call Jeremy Kwock of the Facilities Development Branch at 377-8301.

Respectfully,



Kenneth G. Masden II
Public Works Manager
Planning Section

KGM:jmb

c: Ruth Silberstein, CAS, Kaimuki/McKinley/Roosevelt Complex Areas
David K. Tanoue, Director, Department of Planning and Permitting

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

MANDA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-202
HONOLULU, HAWAII 96822

BUS. (808) 988-2231

FAX. (808) 988-1140

E-Mail: kkurahashi@hawaii.m.com

September 11, 2012

Mr. Kenneth G. Masden II
Public Works Manager, Planning Section
State of Hawaii, Department of Education
P.O. Box 2360
Honolulu, Hawaii 96804

Attention: Mr. Jeremy Kwock
Facilities Development Branch

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Mr. Masden:

Thank you for your letter of August 1, 2012 regarding the Draft Environmental Assessment (DEA) for the 2121 Kuhio Avenue Project (Project).

The Project is being developed as a condo hotel. Based on market due diligence, the expectation is that there will only be a small handful of full-time residents as the project will primarily function as a hotel. For example, the Trump International Hotel & Tower® Waikiki Beach Walk® with 462 units has only 19 permanent residents. Accordingly, there should be no significant impact on enrollment at nearby schools. The 2121 Kuhio with 459 units should have about the same number of full time residents.

Your letter and this response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

cc: Department of Planning and Permitting
PACREP LLC

DEPARTMENT OF FACILITY MAINTENANCE
CITY AND COUNTY OF HONOLULU

1000 Uluohia Street, Suite 215, Kapolei, Hawaii 96707
Phone: (808) 768-3343 • Fax: (808) 768-3381
Website: www.honolulu.gov

PETER B. CARLISLE
MAYOR



WESTLEY K.C. CHUN, Ph.D., P.E., BCEE
DIRECTOR AND CHIEF ENGINEER

KENNETH A. SHIMIZU
DEPUTY DIRECTOR

IN REPLY REFER TO
DRM 12-693

August 3, 2012

Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-202
Honolulu, Hawaii 96822

Dear Gentlemen:

Subject: Draft Environmental Assessment (DEA)
2121 Kuhio Avenue

Thank you for the opportunity to review and comment on the subject project. We do not have any comments to offer at this time. Please keep us informed if an Environmental Impact Statement (EIS) will be required.

Should you have any questions, please call Dexter Akamine of the Division of Road Maintenance, at 768-3696.

Sincerely,

A handwritten signature in black ink, appearing to read "Westley K.C. Chun".

Westley K.C. Chun, Ph.D., P.E., BCEE
Director and Chief Engineer

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-202
HONOLULU, HAWAII 96822

BUS. (808) 988-2231
FAX. (808) 988-1140
E-Mail: kkurahashi@hawaii.rr.com

September 11, 2012

Westley K.C. Chun, Ph.D., P.E., BCEE
Director and Chief Engineer
Department of Facility Maintenance
City and County of Honolulu
1000 Uluohia Street, Suite 215
Kapolei, Hawaii 96707

Attention: Mr. Dexter Akamine
Division of Road Maintenance

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

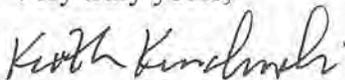
Dear Mr. Chun:

Thank you for your letter of August 3, 2012 regarding the Draft Environmental Assessment (DEA) for the 2121 Kuhio Avenue Project (Project).

We appreciate that you do not have comments to offer at this time. We will keep you informed if an Environmental Impact Statement will be required.

Your letter and this response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

cc: Department of Planning and Permitting
PACREP LLC

POLICE DEPARTMENT
CITY AND COUNTY OF HONOLULU

801 SOUTH BERETANIA STREET · HONOLULU, HAWAII 96813
TELEPHONE: (808) 529-3111 · INTERNET: www.honolulu-pd.org



PETER B. CARVILLE
MAYOR

LOUIS M. KEALOHA
CHIEF

DAVE M. KAJIHIRO
MARIE A. MCCAULEY
DEPUTY CHIEFS

OUR REFERENCE EO-WS

August 10, 2012

Mr. Keith Kurahashi
Kusao and Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-202
Honolulu, Hawaii 96822

Dear Mr. Kurahashi:

This is in response to a letter from the City Department of Planning and Permitting dated July 6, 2012, requesting comments on the Draft Environmental Assessment for the construction project located at 2121 Kuhio Avenue in Waikiki.

The project should have no significant impact on the facilities or operations of the Honolulu Police Department. The staging of construction in the open areas of the project should minimize traffic congestion on Kuhio Avenue and Kalaimoku Street.

If there are any questions, please call Major Ron Bode of District 6 (Waikiki) at 723-3345.

Sincerely,

LOUIS M. KEALOHA
Chief of Police

By 

BART S. HUBER
Assistant Chief
Support Services Bureau

cc: Ms. Kiyomi Oyama, DPP

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-202
HONOLULU, HAWAII 96822

BUS: (808) 988-2231
FAX: (808) 988-1140
E-Mail: kkurahashi@hawaii.nr.com

September 11, 2012

Louis M. Kealoha, Chief of Police
Honolulu Police Department
City and County of Honolulu
801 So. Beretania Street
Honolulu, Hawaii 96813

Attention: Major Ron Bode, District 6 (Waikiki)

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

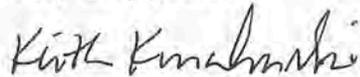
Dear Chief Kealoha:

Thank you for your letter of August 10, 2012 regarding the Draft Environmental Assessment (DEA) for the 2121 Kuhio Avenue Project (Project).

We appreciate your comment that the Project should have no significant impact on the facilities or operations of your Department and that staging of construction in the open areas of the project should minimize traffic congestion on Kuhio Avenue and Kalaimoku Street.

Your letter and this response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

cc: Department of Planning and Permitting
PACREP LLC

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843



August 14, 2012

PETER B. CARLISLE, MAYOR

DUANE R. MIYASHIRO, Chairman
MAHEALANI CYPHER, Vice Chair
THERESIA C. McMURDO
ADAM C. WONG

WESTLEY K.C. CHUN, Ex-Officio
GLENN M. OKIMOTO, Ex-Officio

ERNEST Y. W. LAU, P.E.
Manager and Chief Engineer

ELLEN E. KITAMURA, P.E.
Deputy Manager and Chief Engineer

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive Suite 5-202
Honolulu, Hawaii 96822

Dear Mr. Kurahashi:

Subject: Department of Planning and Permitting Letter Dated July 6, 2012,
Request for Comments on the Draft Environmental Assessment (DEA)
for a Proposed Condo-Hotel Project - TMK: 2-6-18: 10, 42, 43 and 52
2121 and 2139 Kuhio Avenue and 2100 Kalakaua Avenue

Thank you for the opportunity to comment on the proposed 459 unit condo-hotel project on Kuhio Avenue.

The existing water system is adequate to accommodate the proposed development. However, please be advised that this information is based upon current data, and therefore, the Board of Water Supply (BWS) reserves the right to change any position or information stated herein up until the final approval of your building permit application. The final decision on the availability of water will be confirmed when the building permit application is submitted for approval.

The BWS is studying the impact of hydraulic transient or "water hammer" events in the Waikiki area. The developer may be required to install on-site water system improvements such as a water hammer arrestor or surge anticipator valve to prevent hydraulic transient events or "water hammers" from damaging the water system.

When water is made available, the applicant will be required to pay our Water System Facilities Charges for resource development, transmission and daily storage.

The on-site fire protection requirements should be coordinated with the Fire Prevention Bureau of the Honolulu Fire Department.

The proposed project is subject to Board of Water Supply Cross-Connection Control and Backflow Prevention requirements prior to the issuance of the Building Permit Application.

If you have any questions, please contact Robert Chun at 748-5443.

Very truly yours,

ERNEST Y. W. LAU, P.E.
Manager and Chief Engineer

cc: Kiyomi Oyama, DPP Urban Design Branch

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-202
HONOLULU, HAWAII 96822

BUS. (808) 988-2231
FAX. (808) 988-1140
E-Mail: kkurahashi@hawaii.rr.com

September 11, 2012

Mr. Ernest Y.W. Lau, P.E.
Manager and Chief Engineer
Board of Water Supply
City and County of Honolulu
630 So. Beretania Street
Honolulu, Hawaii 96813

Attention: Mr. Robert Chun

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Mr. Lau:

Thank you for your letter of August 14, 2012 regarding the Draft Environmental Assessment (DEA) for the 2121 Kuhio Avenue Project (Project).

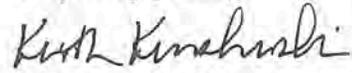
We value your comments and offer the following responses:

1. 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.
2. The Applicant understands that the Board of Water Supply (BWS) is studying the impact of hydraulic transient or "water hammer events" in Waikiki and that the Applicant may be required to install on-site water system improvements such as a water hammer arrestor or surge anticipator valve to prevent hydraulic transient events or "water hammers" from damaging the water system.
3. 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.
4. As you have recommended, the on-site fire protection requirements will be coordinated with the Fire Prevention Bureau of the Honolulu Fire Department.
5. The Applicant further understands that the proposed Project is subject to Board of Water Supply cross-connection control and backflow prevention requirements prior to the issuance of the building permit.

Ms. Ernest Y.W. Lau, P.E.
Page 2

Your letter and this response will be included in the Final EA.

Very truly yours,

A handwritten signature in black ink that reads "Keith Kurahashi". The signature is written in a cursive style with a large initial "K".

Keith Kurahashi

cc: Department of Planning and Permitting
PACREP LLC

NEIL ABERCROMBIE
GOVERNOR OF HAWAII



WILLIAM J. AHA, JR.
CHAIRPERSON
HAWAII LAND AND NATURAL RESOURCES
COMMISSION OF WATER RESOURCES MATIAGAARDI



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

August 15, 2012

Kusao & Kurahashi, Inc.
Attn: Keith Kurahashi
2752 Woodlawn Drive, Suite 5-202
Honolulu, Hawaii 96822

via email: kkurahashi@hawaii.rr.com

Dear Mr. Kurahashi,

SUBJECT: 2121 Kuhio, Chapter 343, Hawaii Revised Statutes, Draft Environmental Assessment

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; (2) Division of Boating and Ocean Recreation; and (3) Engineering Division, on the subject matter. No other comments were received as of our suspense date. Should you have any questions, please feel free to call Supervising Land Agent Steve Molmen at 587-0439. Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read "Russell Y. Tsuji".

Russell Y. Tsuji
Land Administrator

Enclosure(s)

c: Dept. of Planning and Permitting, Urban Design Branch
Attn: Kiyomi Oyama

7227

DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 7TH FLOOR • HONOLULU, HAWAII 96813
TELEPHONE: (808) 768-8000 • FAX: (808) 768-8041
DEPT. WEB SITE: www.honolulu.gov • CITY WEB SITE: www.honolulu.gov

RECEIVED

PETER B. CARLISLE
MAYOR



July 6, 2012

12 JUL 12 AIO:38

DAVID K. TANOUÉ
DIRECTOR

JIRO A. SUMADA
DEPUTY DIRECTOR

2012/ED-7(KO)

DEPT. OF LAND
& NATURAL RESOURCES
STATE OF HAWAII

Dear Participant:

Subject:	Chapter 343, Hawaii Revised Statutes Draft Environmental Assessment (EA)
Project:	2121 Kuhio
Applicant:	PACREP LLC
Agent:	Kusao & Kurahashi, Inc. (Keith Kurahashi)
Location:	2121 and 2139 Kuhio Avenue, and 2100 Kalakaua Avenue – Waikiki
Tax Map Keys:	2-6-18: 10, 42, 43 and 52
Proposal:	The construction of a new 34-story, 350-foot high condo hotel consisting of 459 dwelling units, a hotel lobby and support services, three parking levels, commercial uses (such as restaurant and retail establishments), and appurtenant site improvements.

RECEIVED
LAND DIVISION
2012 JUL 18 P 5:00 PM
DEPT. OF LAND & NATURAL RESOURCES
STATE OF HAWAII

Enclosed for your review and comment is a Draft EA for 2121 Kuhio, which has been prepared for the above-described project. Please submit your written comments to the Agent, Kusao and Kurahashi, Inc., with a copy to the Department of Planning and Permitting (DPP), Urban Design Branch. The Agent's address is:

Address: 2752 Woodlawn Drive, Suite 5-202
Honolulu, Hawaii 96822
Phone: (808) 988-2231

The DPP must determine whether the impacts of the project are significant enough to warrant the preparation of an Environmental Impact Statement (EIS). Based on the information currently available, the DPP anticipates issuing a "Finding of No Significant Impact" for this project (i.e., no EIS required). Following completion of this environmental assessment phase, the Applicant will submit a Resolution to the City Council to allow the 350-foot-high building to exceed the 300-foot height limit. Upon its completion, the Applicant will submit an application to the DPP for a Special District Permit (Major).

The deadline for comments is **August 22, 2012**. Please contact Kiyomi Oyama of our Urban Design Branch at 768-8034 if you have any questions.

Very truly yours,

FOR David K. Tanoue, Director
Department of Planning and Permitting

DKT:nw
Enclosure: Draft EA



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

July 19, 2012

MEMORANDUM

TO: *RA*

DLNR Agencies:

- Div. of Aquatic Resources
- Div. of Boating & Ocean Recreation
- Engineering Division
- Div. of Forestry & Wildlife
- Div. of State Parks
- Commission on Water Resource Management
- Office of Conservation & Coastal Lands
- Land Division Oahu District
- Historic Preservation

FROM: *RS*

RS Russell Y. Tsuji, Land Administrator

SUBJECT: Chapter 343, HRS, Draft EA, construction of a new, 34-story, 350-ft. high condo hotel consisting of 459 dwelling units, a hotel lobby and support services, three parking levels, commercial uses (such as restaurant and retail establishments), and appurtenant site improvements

LOCATION: 2121 and 2139 Kuhio Avenue, and 2100 Kalakaua Avenue Waikiki; TMKs (1) 2-6-018: 010, 042, 043 and 052

APPLICANT: Kusao and Kurahashi, Inc. for the City and County of Honolulu, Department of Planning and Permitting (DPP), Urban Design Branch

Transmitted for your review and comment on the above-referenced document. We would appreciate your comments on this document. Please submit any comments by August 15, 2012. Copies of the CD are available on the bookshelf next to our reception area in the event we have not provided a copy with this transmittal.

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Supervising Land Agent Steve Molmen at (808) 587-0439. Thank you.

Attachments

- We have no objections.
- We have no comments.
- Comments are attached.

Signed: *T. Choe*
 Print Name: Tina Choe
 Date: 7/25/12

cc: Central Files

BC



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

July 19, 2012

MEMORANDUM

TO: **DLNR Agencies:**
 Div. of Aquatic Resources
 Div. of Boating & Ocean Recreation
 Engineering Division
 Div. of Forestry & Wildlife
 Div. of State Parks
 Commission on Water Resource Management
 Office of Conservation & Coastal Lands
 Land Division Oahu District
 Historic Preservation

RECEIVED
LAND DIVISION
2012 JUL 25 P 3:05
DEPT. OF LAND &
NATURAL RESOURCES
STATE OF HAWAII

FROM: *R* Russell Y. Tsuji, Land Administrator
SUBJECT: Chapter 343, HRS, Draft EA, construction of a new, 34-story, 350-ft. high condo hotel consisting of 459 dwelling units, a hotel lobby and support services, three parking levels, commercial uses (such as restaurant and retail establishments), and appurtenant site improvements
LOCATION: 2121 and 2139 Kuhio Avenue, and 2100 Kalakaua Avenue Waikiki; TMKs (1) 2-6-018: 010, 042, 043 and 052
APPLICANT: Kusao and Kurahashi, Inc. for the City and County of Honolulu, Department of Planning and Permitting (DPP), Urban Design Branch

Transmitted for your review and comment on the above-referenced document. We would appreciate your comments on this document. Please submit any comments by August 15, 2012. Copies of the CD are available on the bookshelf next to our reception area in the event we have not provided a copy with this transmittal.

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: *Charles R. Anderson*
Print Name: Charles R. Anderson
Date: 7/24/12

cc: Central Files



RECEIVED
LAND DIVISION

AUG -3 P 3:33

DEPARTMENT OF LAND & NATURAL RESOURCES
STATE OF HAWAII

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

July 19, 2012

MEMORANDUM

TO: **DLNR Agencies:**
 Div. of Aquatic Resources
 Div. of Boating & Ocean Recreation
 Engineering Division
 Div. of Forestry & Wildlife
 Div. of State Parks
 Commission on Water Resource Management
 Office of Conservation & Coastal Lands
 Land Division Oahu District
 Historic Preservation

FROM: Russell Y. Tsuji, Land Administrator

SUBJECT: Chapter 343, HRS, Draft EA, construction of a new, 34-story, 350-ft. high condo hotel consisting of 459 dwelling units, a hotel lobby and support services, three parking levels, commercial uses (such as restaurant and retail establishments), and appurtenant site improvements

LOCATION: 2121 and 2139 Kuhio Avenue, and 2100 Kalakaua Avenue Waikiki; TMKs (1) 2-6-018: 010, 042, 043 and 052

APPLICANT: Kusao and Kurahashi, Inc. for the City and County of Honolulu, Department of Planning and Permitting (DPP), Urban Design Branch

Transmitted for your review and comment on the above-referenced document. We would appreciate your comments on this document. Please submit any comments by August 15, 2012. Copies of the CD are available on the bookshelf next to our reception area in the event we have not provided a copy with this transmittal.

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: Cathy S. Chesney, Civil Engineer
 Date: 8/3/12

cc: Central Files

DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION

LD/SteveMolmen
Ref.: 2121&2139KuhioAvenueDevelopment
Oahu.901

COMMENTS

- (X) We confirm that the project site, according to the Flood Insurance Rate Map (FIRM), is located in Flood Zone AO. The National Flood Insurance Program does regulate developments within Zone AO as indicated in bold letters below.
- () Please take note that the project site, according to the Flood Insurance Rate Map (FIRM), is located in Zone _____.
- () Please note that the correct Flood Zone Designation for the project site according to the Flood Insurance Rate Map (FIRM) is _____.
- (X) Please note that the project site 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 or Ms. Ardis Shaw-Kim at (808) 768-8296 of the City and County of Honolulu, Department of Planning and Permitting.
- () Mr. Frank DeMarco at (808) 961-8042 of the County of Hawaii, Department of Public Works.
- () Mr. Francis Cerizo at (808) 270-7771 of the County of Maui, Department of Planning.
- () Mr. Wynne Ushigome at (808) 241-4890 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 projects requiring water service from the Honolulu Board of Water Supply system will be required to pay a resource development charge, in addition to Water Facilities Charges for transmission and daily storage.
- () 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 Ms. Suzie S. Agraan the Planning Branch at 587-0258.

Signed: 
CARTY S. CHANG, CHIEF ENGINEER

Date: 8/3/21

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-202
HONOLULU, HAWAII 96822

BUS. (808) 988-2231
FAX. (808) 988-1140
E-Mail: kkurahashi@hawaii.nn.com

September 11, 2012

Mr. Russell Y. Tsuji, Land Administrator
Department of Land and Natural Resources
Land Division
P.O. Box 621
Honolulu, Hawaii 96809

Attention: Mr. Steve Molmen
Supervising Land Agent

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

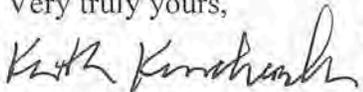
Dear Mr. Tsuji:

Thank you for your letter of August 15, 2012 regarding the Draft Environmental Assessment (DEA) for the 2121 Kuhio Avenue Project (Project).

We appreciate that the Land Division – Oahu District and Division of Boating and Ocean Recreation has no comments to offer and in response to your Engineering Division comments, the Applicant will ensure that the Project complies with the National Flood Insurance Program (NFIP) presented in Title 44 of the Code of Federal Regulations (44CFR), as required. The Applicant will contact Mr. Mario Siu-Li or Ms. Ardis Shaw-Kim at the Department of Planning and Permitting (DPP) should there be any questions regarding the local flood ordinance.

Your letter and this response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

cc: Department of Planning and Permitting
PACREP LLC

CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 3RD FLOOR
HONOLULU, HAWAII 96813

Phone: (808) 768-8305 • Fax: (808) 768-4730 • Internet: www.honolulu.gov

PETER B. CARLISLE
MAYOR



WAYNE Y. YOSHIOKA
DIRECTOR

KAI NANI KRAUT, P.E.
DEPUTY DIRECTOR

TP7/12-474380R

August 21, 2012

Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-202
Honolulu, Hawaii 96822

Dear Sir:

Subject: Draft Environmental Assessment (DEA) 2121 Kuhio

This responds to a letter from David K. Tanoue, Director, Department of Planning and Permitting, of July 6, 2012, requesting our comments concerning this proposed project.

The Traffic Engineering Division (TED) has the following comments:

- The area Neighborhood Board, as well as the area residents, businesses, etc., should be kept apprised of the details for the proposed project and the impacts the project may have on the adjoining local street network area.
- In the Traffic Impact Report on pages 3 and 5, there are discrepancies in the description of how many lanes Saratoga Road and Kaiolu Street have. On page 3 at "III. Existing Traffic Conditions, A. Area Roadway System," line 8, it reads "...Saratoga Road is generally a two-lane, two way roadway..." This should read "...Saratoga Road is generally a four lane two-way roadway..." On page 5, at the fourth paragraph, line three, the TIR reads "Kaiolu Street is a two-lane, one way (northbound) roadway..." This should read "Kaiolu Street is a one-lane, one-way (northbound) roadway..."
- Please ensure that the access driveway on Kalaimoku Street provides safe conditions for pedestrians while they are crossing it. Drop driveways are recommended. Also insure sidewalk width, etc. is in conformance with ADA requirements.

- The left turn on Kuhio Avenue at Olohana Street is already operating at a congested level. Since this is the only route for Ewa-bound Kuhio Avenue traffic to access the property, the intersection should be included in the TIR analysis.

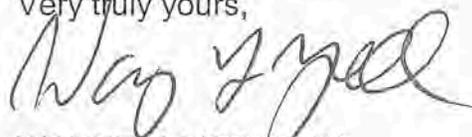
We have the following additional comments:

- Your DEA should include a description of Public Transit services and operations, the impact of your project on Public Transit bus and paratransit operations during construction. Basic information is available on our websites: www.thebus.org and www.honolulu.gov/dts. For more details, you may contact our staff at 768-8370.
- Construction notes should include the following note regarding transit:

"This project may affect bus routes, bus stops, and paratransit operations, therefore, the Contractor shall notify the Department of Transportation Services, Public Transit Division at 768-8396 and Oahu Transit Services, Inc. (bus operations: 848-4578 or 852-6016 and paratransit operations: 454-5041 or 454-5020) of the scope of work, location, proposed closure of any street, traffic lane, sidewalk, or bus stop and duration of project at least two weeks prior to construction."

Thank you for the opportunity to review this matter. Should you have any further questions, please contact Michael Murphy of my staff at 768-8359.

Very truly yours,



WAYNE Y. YOSHIOKA
Director

cc: Kiyomi Oyama
DPP, Urban Design Branch

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

MANOA MARKET PLACE
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E-Mail: kkurahashi@hawaii.rr.com

September 11, 2012

Mr. Wayne Y. Yoshioka, Director
Department of Transportation Services
City and County of Honolulu
650 So. King Street, 3rd Floor
Honolulu, Hawaii 96813

Attention: Mr. Michael Murphy

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Mr. Yoshioka:

Thank you for your letter of August 21, 2012 regarding the Draft Environmental Assessment (DEA) for the 2121 Kuhio Avenue Project (Project).

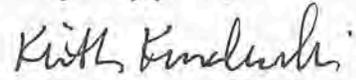
We appreciate your comments and offer the following responses:

1. The Applicant, through the Waikiki Special District process and related public hearing, will provide an update with details of the Project and impacts that it may have on the adjoining local street network system to the residents and businesses in Waikiki.
2. The Traffic Impact Report (TIR) in the Final EA will be revised to note your corrections.
3. As you have mentioned, the driveway on Kalaimoku Street will have drop driveways and sidewalk width in conformance with ADA requirements. The pedestrian walkway will be directed onto the Project site to minimize curb cuts that need to be crossed. The current porte cochere operates in this manner.
4. The TIR will be revised to include analysis of the Kuhio Avenue at Olohana Street intersection.
5. The Final EA will include a description of Public Transit services and operations and the impact of the Project on Public Transit bus and paratransit operations during construction.
6. The construction note you provided regarding transit will be included in our permit plans.

Mr. Wayne Y. Yoshioka
Page 2

Your letter and this response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

cc: Department of Planning and Permitting
PACREP LLC

DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU

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PETER B. CARLISLE
MAYOR



DAVID K. TANOUE
DIRECTOR

JIRO A. SUMADA
DEPUTY DIRECTOR

2012/ED-7 (KO)

August 22, 2012

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-202
Honolulu, Hawaii 96822

Dear Mr. Kurahashi:

Subject: Chapter 343, HRS, Draft Environmental Assessment
DDP Reference No. 2012/ED-7
2121 Kuhio
2121 Kuhio Avenue - Waikiki
Tax Map Key 2-6-18: 10, 42, 43, and 52

We have reviewed the Draft Environmental Assessment (DEA) for the above project and offer the following comments:

A. Site Development Division (SDD):

1. Civil Engineering Branch (CEB):

- a. Page 25 (Curb Cuts): Replace "Department of Transportation Services" with "Department of Planning and Permitting".
- b. The project shall maintain the current magnitude and direction of the surface drainage patterns. The project shall comply with the prevailing Storm Water Quality requirements in the Rules Related to the Storm Drainage Standards, if applicable.

2. Traffic Review Branch (TRB):

- a. The access driveway from Kuhio Avenue to the existing loading area and the vehicular turn around at the end of Lauula Street shall remain open for the duration of the construction of the project for use by tenants of the 2100 Kalakaua development. Provisions for an alternate access shall be provided in the event the access driveway from Kuhio Avenue needs to be temporarily closed.

- b. The modified use of the port cochere on Kalaimoku Street should be clarified with regard to the potential for vehicular queuing, in particular for trolley drop off and pick up activities. In addition, an alternative to convert Kalaimoku Street to a two-way traffic operation should be addressed.
- c. The use of Lauula Street and the potential impacts from this development should be included in the traffic study.
- d. The recommendations contained in the Traffic Impact Report dated March 2012, should be site specific and include a diagram of the location of these recommendations. Updates to the traffic impact analysis report (TIAR) may be required if there is a major change to the scope or timing of the major work items. A post TIAR will be required approximately 12 months after occupancy to validate the traffic projections contained in the initial TIAR. If additional traffic mitigation measures are necessary to support unanticipated traffic impacts directly attributable to this development, the applicant will be required to implement these measures.
- e. Construction plans for all work within or affecting public streets should be submitted for review and approval. Traffic control plans during construction should also be submitted for review and approval, as required. Vehicular access points shall be constructed as standard City dropped driveways. Adequate vehicular sight distance shall be provided and maintained at all driveways to pedestrians and other vehicles. Driveway grades shall not exceed five percent (5%) for a minimum distance of 25 feet from the property line.

B. Planning Division (PD):

1. DEA Section II. General Information - Primary Urban Center (PUC) Development Plan (DP). The project site is within an area designated as Resort on the PUC DP Land Use Map. Please delete "Precinct" to avoid confusion with LUO zoning districts. The proposed project is consistent with this designation.
2. The DEA should describe how the proposed project is consistent with the PUC DP policy pertaining to preserving panoramic views of natural landmarks and the urban skyline, specifically views of the Koolau Mountain Range (PUC DP Section 3.1.2).
3. The DEA should also provide compelling reasons why it is necessary to exceed the maximum 300-foot height limit by 50 feet.

C. Urban Design Branch (UDB):

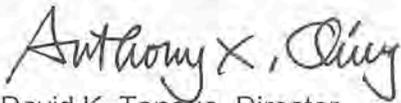
1. As previously discussed, the request for a resolution to allow the additional height will be processed concurrently with the Special District (Major) Permit Application. However, a more in-depth discussion regarding the need to exceed the 300-foot maximum height limit should be included in the EA.
2. In Appendix IV - Impact to Designated View Corridors, provide a cross section showing the relationship between the two proposed building heights (300- and 350-foot) and the Four Paddle condominium located across Kuhio Avenue. There should be more discussion explaining the view analysis and visual impacts of the proposed building heights and orientations to the surrounding area.
3. In Appendix IV - Impact to Designated View Corridors, regarding the Punchbowl View photos, identify surrounding high-rise buildings with their respective heights and those existing high-rise buildings located outside of Waikiki that are blocking views of the proposed project. Document how these building heights were determined (i.e., information sources). Show longitudinal section (to scale) from Punchbowl to the project site with surrounding significant building heights.
4. Tree mitigation and protection techniques should be described for the preservation of the banyan tree at the corner of Kuhio Avenue and Kalaimoku Street.
5. There are many mature street trees along Kuhio Avenue which are not reflected in the plan nor specifically discussed in the document. These should be retained and/or located on site, and the plan adjusted accordingly.
6. The Applicant intends to improve the pedestrian experience along Kuhio Avenue and encourage the use of public transit. However, there is no mention of the existing bus stop fronting the project's service driveway on Kuhio Avenue, or incorporation of the bus stop and passenger loading/unloading area shown on the plans. Allowances to the streetscape should be made for increased pedestrian traffic in this area and the landscape strip along the curb modified accordingly.
7. Quantify the "decorative and varied materials, [and] patterns" and "significant amounts of articulation" which will support the WSD guidelines and create a Hawaiian sense of place. As currently presented throughout the document, the Hawaiian sense of place required for special district projects is not clear. The design elements listed should be described in more depth.
8. Although a significant building setback is proposed, the building form itself appears solid and bulky. Stepped forms and design elements to break up the visual mass of the tower should be identified and described.

Mr. Keith Kurahashi
August 22, 2012
Page 4

9. In Appendix VI - Building Orientation Photographic Analysis, identifying the images as "Proposed Ewa/Diamond Head" and "Alternate Mauka/Makai" or insert a small diagrammatic site plan showing the different building orientations for each view. There should be photos down Kalaimoku and Launiu Streets and Kuhio Avenue (both directions) showing the visual impact of the two proposed building orientations.
10. A compelling explanation accompanying the graphics should be provided explaining why the Ewa/Diamond Head building orientation is necessary and the previous mauka/makai orientation no longer viable.

Should you have any questions, please contact Kiyomi Oyama of our Urban Design Branch at 768-8034.

Very truly yours,


FOR David K. Tanoue, Director
Department of Planning and Permitting

DKT:nw
Doc. 963961

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

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September 12, 2012

Mr. David K. Tanoue, Director
Department of Planning and Permitting
City and County of Honolulu
650 So. King Street, 7th Floor
Honolulu, Hawaii 96813

Attention: Ms. Kiyomi Oyama
Urban Design Branch

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Mr. Tanoue:

Thank you for your letter of August 22, 2012 regarding the Draft Environmental Assessment (DEA) for the 2121 Kuhio Avenue Project (Project).

We appreciate your comments and offer the following responses:

A. Site Development Division (SDD)

1. Civil Engineering Branch (CEB)

- a. Page 25 of the DEA will be revised in the Final EA to replace "Department of Transportation Services" with "Department of Planning and Permitting".
- b. Project shall maintain the current magnitude and direction of the surface drainage patterns. The Project will comply with the prevailing Storm Water Quality requirements in the Rules Related to the Storm Drainage Standards, if applicable.

2. Traffic Review Branch (TRB)

- a. The access driveway from Kuhio Avenue to the existing loading area and the vehicular turn around at the end of Lauula Street shall remain open for the duration of construction for the Project for use by tenants of the 2100 Kalakaua development. Provisions for an alternate access will be provided in the event the access driveway from Kuhio Avenue needs to be temporarily closed.

- b. The Traffic Impact Report (TIR) will be revised to discuss the modified use of the port cochiere on Kalaimoku Street with regard to the potential for queuing related to the trolley drop off and pick up activities. An alternative for conversion of Kalaimoku Street to a two-way traffic operation will be addressed and incorporated in a separate document. Your staff will be consulted through the development of the analysis.
- c. The use of Lauula Street will be reserved for deliveries and other low traffic-generating activities. The operations and use of the connection as a result of the project will occur primarily during off-peak traffic periods when traffic demands on the surrounding roadways are low. There will be no physical connection between Lauula Street and the proposed parking area. Therefore, the Lauula Street connection is not expected to be used as a secondary access for the project.
- d. The recommendations in the TIR will be made site specific and will include a diagram of the location of these recommendations as applicable. The Applicant understands that updates to the TIR may be required if there is a major change to the scope or timing of the major work items; that a post TIR will be required; and that if additional traffic mitigation is necessary to support unanticipated traffic impacts directly attributable to this development, the Applicant will be required to implement these measures.
- e. As you have directed, construction plans for all work within or affecting public streets will be submitted for review and approval; traffic control plans during construction will be submitted for review and approval, as required; vehicular access points will be constructed as standard City dropped driveways; adequate sight distance will be provided and maintained at all driveways to pedestrians and other vehicles; and driveway grades will not exceed 5% for a minimum distance of 25 feet from the property line.

B. Planning Division (PD)

- 1. The Final EA, Section II. General Information, J. Primary Urban Center Development Plan, Land Use Map will be revised to eliminate "Precinct". The Applicant understands that the Project is consistent with this designation.
- 2. The Final EA will describe how the proposed project is consistent with the Primary Urban Center (PUC) Development Plan (DP) policy pertaining to preserving panoramic views of natural landmarks and the urban skyline, specifically views of the Koolau Mountain Range (PUC DP Section 3.1.2).

C. Urban Design Branch (UDB)

1. The Applicant understands that the request for a resolution to allow the additional height will be processed concurrently with the Waikiki Special District (Major) Permit Application. A more in-depth discussion regarding the need to exceed the 300-foot maximum height limit will be included in the Final EA.
2. In the Final EA, Appendix IV – Impact to Designated View Corridors will include a cross section showing the relationship between the two proposed building heights (300- and 350-feet) and the Four Paddle condominium located across Kuhio Avenue. The Final EA will provide more discussion explaining the view analysis and visual impacts of the proposed building heights and orientations to the surrounding area.
3. In the Final EA, Appendix IV – Impact to Designated View Corridors will identify surrounding high-rise buildings with their respective heights and those existing high-rise buildings located outside of Waikiki that are blocking views of the proposed Project. The Final EA will include a longitudinal section (to scale) from Punchbowl to the Project site with surrounding significant building heights.
4. The Applicant has hired Steve Nimz & Associates Inc. Consulting Arborist Services to prepare a mitigation plan with measures to protect the banyan tree from construction activities. We will follow the recommendations of that plan. This plan will be included in the Waikiki Special District Permit application.
5. The Final EA will note that the mature street trees along Kuhio Avenue which are not reflected in the plan or discussed in the document will be retained or relocated on site.
6. The Final EA will discuss plans to provide for increased pedestrian traffic in the area around the bus stop and passenger loading and unloading area and the streetscape and the landscape strip along the curb will be modified accordingly in the Waikiki Special District Permit application.
7. The Final EA will quantify the “decorative and varied materials, [and] patterns” and “significant amounts of articulation” which will support the WSD guidelines and create a Hawaiian sense of place. The design elements listed will be described in more depth.
8. The Final EA will identify and describe stepped forms and design elements to break up the visual mass of the Tower.
9. Appendix VI – Building Orientation Photographic Analysis, will identify images as “Proposed Ewa/Diamond Head” and “Alternate Mauka/Makai” in the Final EA. The Final EA will include photos down Kalaimoku and Launiu Streets and

Kuhio Avenue in both directions showing the visual impact of the two proposed building orientations.

10. The Final EA will include a compelling explanation accompanying the graphics will be provided explaining why the Ewa/Diamond Head building orientation is necessary and why the previous mauka/makai orientation is no longer viable.

Your letter and this response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

cc: Department of Planning and Permitting
PACREP LLC

DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 7TH FLOOR • HONOLULU, HAWAII 96813
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PETER B. CARLISLE
MAYOR



JIRO A. SUMADA
ACTING DIRECTOR

2012/ED-7 (KO)

October 16, 2012

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-202
Honolulu, Hawaii 96822

Dear Mr. Kurahashi:

Subject: Chapter 343, HRS, Pre-Final Environmental Assessment
DDP Reference No. 2012/ED-7
2121 Kuhio
2121 Kuhio Avenue - Waikiki
Tax Map Key 2-6-18: 10, 42, 43, and 52

We have reviewed the Pre-Final Environmental Assessment (EA) (received September 12, 2012) for the above project. Not all of the comments in the letter by the Department of Planning and Permitting (dated August 22, 2012) have been fully addressed, and we suggest the following be amended prior to acceptance of the Final Environmental Assessment. They include:

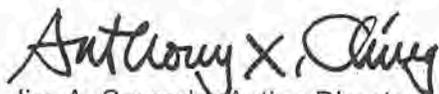
1. Comment A.2.b: The discussion regarding vehicular queuing for the porte cochere off of Kalaimoku Street should be further justified. As shown in the site plan, it is combined with the valet kiosk and therefore we believe the combined uses will have a significant impact on traffic along Kalaimoku Street.
2. Comment A.2.d: The diagram of site specific recommendations has not been included in the Traffic Impact Report.
3. Comment B.1: DEA Section II. General Information - Primary Urban Center (PUC) Development Plan (DP). Please delete "Precinct" to avoid confusion with the Land Use Ordinance (LUO) zoning districts.
4. The description of the building, articulation, scale, material, and color does not need to be given twice. Rather, we suggest it be summarized in the section regarding the LUO standards (Section X.D), with a reference to the full detailed description in the Waikiki Special District section (Section X.E).

Mr. Keith Kurahashi
October 16, 2012
Page 2

5. Appendix IV, Impact to Designated View Corridors:
 - a. Include a written explanation of the methodology of how the longitudinal section and photographic view simulation were determined. Discuss how the building heights were determined. Include information sources and other references as necessary.
 - b. For consistency and ease of comparison, the titles and labels on the figures should be the same and building heights/identification shown on each figure.
6. Section XII.B.6: Impact to Private Views. A reference is made to a plan view and cross section of the relationship between the project and the Four Paddle condominium included in Appendix IV, however only the plan view was provided. Please include the cross section.

Should you have any questions, please contact Kiyomi Oyama of our Urban Design Branch at 768-8034.

Very truly yours,


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

JAS:nw
Doc. 982657

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

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2752 WOODLAWN DRIVE, SUITE 5-202
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October 24, 2012

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Mr. Jiro Sumada, Acting Director
Department of Planning and Permitting
City and County of Honolulu
650 So. King Street, 7th Floor
Honolulu, Hawaii 96813

Attention: Ms. Kiyomi Oyama
Urban Design Branch

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Mr. Sumada:

Thank you for your letter of October 16, 2012 regarding the Pre-Final Environmental Assessment (P-FEA) for the 2121 Kuhio Avenue Project (Project).

We appreciate your comments and offer the following responses:

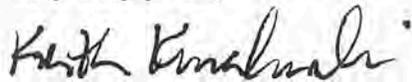
1. Comment A.2.b: The discussion regarding vehicular queuing for the porte cochere off of Kalaimoku Street will be further justified in the Final EA. The applicant understands that the 2100 Kalakaua valet averages about 5 to 10 vehicles per day (10:00 am to 10:00 pm), even on weekends. With this minimal activity the valet operation will not have a significant impact on traffic along Kalaimoku Street.
2. Comment A1.2.d: The diagram of site specific recommendations have been included in the revised Traffic Impact Report.
3. Comment B.1: Precinct has been deleted from the Final EA, Section II. General Information – Primary Urban Center (PUC) Development Plan (DP).
4. The description of the building, articulation, scale, material, and color has been summarized in Section X.D, with a reference to the full detailed description in the Waikiki Special District Section, Section X.E.2.a.iv.
5. Appendix IV, Impact to Designated View Corridors
 - a. We have provided a written explanation of the methodology of how the longitudinal section, photographic view simulation, and heights were determined and information sources and references used.

Mr. Jiro Sumada
Page 2

- b. The titles and labels on the figures are now the same and building heights and identification are shown on each figure.
6. Section XII.B.6: Impact to Private Views. The plan view and cross section are now provided in Appendix VI of the Final EA.

Your letter and this response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

cc: Department of Planning and Permitting
PACREP LLC

NEIL ABERCROMBIE
GOVERNOR



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

GLENN M. OKIMOTO
DIRECTOR

Deputy Directors
JADE T. BUTAY
FORD N. FUCHIGAMI
RANDY GRUNE
JADINE URASAKI

IN REPLY REFER TO:
HWY-PS
2.2714

August 23, 2012

Mr. Keith Kurahashi
Kusao and Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-202
Honolulu, Hawaii 96822

Dear Mr. Kurahashi:

Subject: Draft Environmental Assessment, Waikiki Special District Permit
2121 Kuhio, Condo-Hotel, Pacrep, LLC
Oahu, Waikiki, TMK: (1) 2-6-018: 010, 042, 043, 052

Pacrep, LLC proposes to construct a condominium-hotel at 2121 Kuhio Avenue that will consist of 459 units, 220 parking stalls, and appurtenant facilities. Associated developments include a retail building at 2100 Kalakaua and a parking facility at 2139 Kuhio Avenue.

The proposed development accesses roads under the jurisdiction of the City and County of Honolulu with the nearest State facility being Ala Moana Boulevard that connects to Kalakaua Avenue, about 2,000 feet from the development site.

The Draft Environmental Assessment contains a traffic impact analysis report (TIAR); however it deals only with traffic in the vicinity of the development and does not include in its analysis the intersection of Ala Moana Boulevard and Kalakaua Avenue.

Since the development will add dwelling units to Waikiki, the TIAR should include a traffic analysis and transportation mitigation improvements, if required, at the Ala Moana Boulevard intersection with Kalakaua Avenue.

Very truly yours,

A handwritten signature in black ink, appearing to read "Glenn M. Okimoto".

GLENN M. OKIMOTO, Ph.D.
Director of Transportation

c: Department of Planning and Permitting, Urban Design Branch

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

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September 11, 2012

Glenn M. Okimoto, Ph.D., Director
Department of Transportation
State of Hawaii
869 Punchbowl Street
Honolulu, Hawaii 96813-5097

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

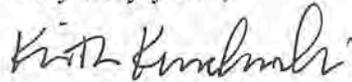
Dear Mr. Okimoto:

Thank you for your letter of August 23, 2012 regarding the Draft Environmental Assessment (DEA) for the 2121 Kuhio Avenue Project (Project).

We appreciate your comments and as you have requested, the Traffic Impact Report will be revised to include an analysis of the Ala Moana Boulevard and Kalakaua Avenue intersection.

Your letter and this response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

cc: Department of Planning and Permitting
PACREP LLC

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 11TH FLOOR
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Web site: www.honolulu.gov

PETER B. CARLISLE
MAYOR



LORI M.K. KAHIKINA, P.E.
DIRECTOR

CHRIS TAKASHIGE, P.E.
DEPUTY DIRECTOR

August 23, 2012

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-202
Honolulu, Hawaii 96822

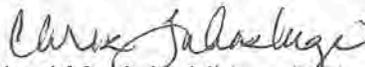
Dear Mr. Kurahashi:

Draft Environmental Assessment (EA)
2121 Kuhio

Thank you for the opportunity to review and comment. The Department of Design and Construction has no comments at this time.

Should you have any questions, please contact me at 768-8480.

Sincerely,


Lori M. K. Kahikina, P.E.
Director

LMKK:pg(474365)

Cc: DPP (Urban Design Branch)

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

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E-Mail: kkurahashi@hawaii.mn.com

September 11, 2012

Lori M. K. Kahikina, P.E.
Director
Department of Design and Construction
City and County of Honolulu
1000 Uluohia Street, Suite 215
Kapolei, Hawaii 96707

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Ms. Kahikina:

Thank you for your letter of August 23, 2012 regarding the Draft Environmental Assessment (DEA) for the 2121 Kuhio Avenue Project (Project).

We appreciate that you do not have comments to offer at this time.

Your letter and this response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

cc: Department of Planning and Permitting
PACREP LLC

NEIL ABERCROMBIE
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621
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ENGINEERING
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HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

September 26, 2012

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-202
Honolulu, Hawaii 96822
kkurahashi@hawaii.rr.com

LOG NO: 2012.2076
DOC NO: 1209SL22
Archaeology

Dear Mr. Kurahashi,

**SUBJECT: Chapter 6E-42 Historic Preservation Review–
Draft Environmental Assessment (EA) for 2121 Kūhiō
Waikīkī Ahupua‘a, Kona District, Island of O‘ahu
TMK: (1) 2-6-018:010, 042, 043, and 052**

Thank you for the opportunity to review the document titled *Draft Environmental Assessment (EA) 2121 Kūhiō Waikīkī, Honolulu, Hawaii Tax Map Key: 2-6-18: 10, 42, 43, and 52* (Kusao & Kurahashi, Inc., July 2012), which was received by our office on July 11, 2012. The applicant, PACREP LLC, proposes to develop 2121 Kūhiō, which is a 3.525 acre site that includes the existing retail development at 2100 Kalākaua and the surface parking lot at 2139 Kūhiō Avenue. The area planned for development under this draft EA is on the 2121 Kūhiō property (1.396 acres of vacant lot). The proposed development will involve construction of 34-story condo-hotel complex, administrative and retail spaces, entry drive and plaza, and landscaping.

The Final EA was completed for an earlier proposed development on the same property, under previous ownership. On June 9, 2006, the Department of Planning and Permitting (DPP) determined that proposal would not have significant effects and issued a Finding of No Significant Impact (FONSI). The current applicant after consultation with DPP decided to process a new draft EA. DPP anticipates issuing a FONSI for this proposed project.

An archaeological inventory survey (AIS) was conducted on the property in 2000. The AIS report (LeSuer et al. 2000) was reviewed and accepted by SHPD on July 18, 2000 (Log No. 25813, Doc. No. 0007SC06). Two historic properties were identified: SIHP 50-80-14-4970 (portion of the 'Auwai O Pau) and 50-80-14-5796 (a subsurface pre-contact to early 20th century cultural layer). SHPD concurred with an assessment that Site 5796 was not significant, while Site 4970 was significant under Hawaii State Register Criterion "d." No further work was recommended for these historic properties. As part of this review, SHPD requested a photographic essay of single-story structures built ca. 1950 in Waikīkī, which was conducted by Mason Architects in 2004.

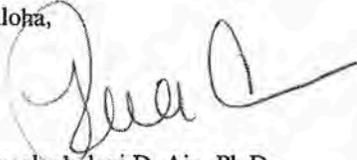
In reviewing the earlier draft EA, SHPD expressed concern that portions of SIHP 5796 and 4970, human remains, as well as other historically-significant sites or features, may still be present in the proposed project area. Based on these concerns, SHPD stated that the proposed undertaking "may have an effect on historic sites which may be present" and that any "adverse affects may be mitigated through archaeological monitoring" (March 10, 2006; Log No. 2006.0595, Doc. No. 0603AJ02). The new draft EA for the proposed development states that "the applicant plans to comply with these recommendations."

In reviewing the current draft EA, SHPD remains concerned that potential exists for historic properties (including burials) to be affected by the proposed work. We recommend that ground disturbing activities associated with this project be monitored by a qualified archaeologist. We request that the applicant submit an archaeological monitoring plan to our office for review and approval prior to construction commencing; the plan should include all information as specified in Hawaii Administrative Rule §13-279-4. We will notify your office when the plan has been approved

Mr. Keith Kurahashi
September 2012
Page 2

and work may proceed. Please contact Susan A. Lebo at (808) 692-8019 or Susan.A.Lebo@hawaii.gov if you have any questions or concerns regarding this letter.

Aloha,

A handwritten signature in black ink, appearing to read "Susan A. Lebo", written over a faint, illegible background.

Puaalaokalani D. Aju, Ph.D.
Administrator, State Historic Preservation Division

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October 26, 2012

Ms. Pua Aiu, Administrator
State Historic Preservation Division
Department of Land and Natural Resources
Land Division
P.O. Box 621
Honolulu, Hawaii 96809

Attention: Ms. Susan A. Lebo
Oahu Lead Archaeologist

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

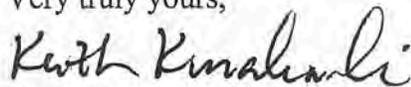
Dear Ms. Aiu:

Thank you for your letter of September 26, 2012 regarding the Draft Environmental Assessment (DEA) for the 2121 Kuhio Avenue Project (Project).

We appreciate your comments and as you have recommended, the Applicant will submit an archaeological monitoring plan to your office for review and approval prior to construction commencing. The plan will include all information as specified in Hawaii Administrative Rule §13-279-4. Ground disturbing activities associated with this Project will be monitored by a qualified archaeologist.

Your letter and this response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

cc: Department of Planning and Permitting
PACREP LLC



August 01, 2012

Kusao & Kurahashi, Inc.
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JEFF MERZ
WAIKIKI NEIGHBORHOOD BOARD NO. 9

HONOLULU HALE
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NEIGHBORHOOD COMMISSION OFFICE
PHONE: (808) 258-7802
eMail: jeffmerz@rocketmail.com

Re: Draft Environmental Assessment for 2121 Kuhio Avenue Development

Thank you for including the Waikiki Neighborhood Board in the review process for the above-referenced project. The Board is aware that this project is a revision of a development that was previously reviewed under various procedures and that a FONSI was issued in 2006 for a similar project on this site. Due to the significant differences between the previously approved and current proposals, as well as the age of the previous FONSI (5+ years), the Board is treating this as a new development for Chapter 343 Environmental Assessment review purposes.

General Comments:

The visual simulations, site-line analyses and elevations shown in Appendix I and VI are appreciated as they truly demonstrate to the public the potential visual impacts from this project.

Page 11 – Physical Characteristics

The tower is proposed to exceed the zoning height limit by 50 feet. While we understand that a formal zoning variance is not required due to recent revisions to the LUO, an explanation is needed why the additional 50 feet is proposed/required for this development. Regardless of this development's impact or lack of impact to visual site-lines, a disclosure of the rationale for exceeding height limits is needed under provisions of Chapter 343.

Page 13 – Flora

This section describes the iconic banyan tree at the corner of Kuhio and Kalaimoku Streets. However, Section XII on Page 37 is silent on possible construction impacts to the banyan tree and any proposed mitigation measures to address these impacts. Provide a description of what could occur to the banyan tree during the construction phase and what arborist-sanctioned mitigation measures are proposed to mitigate this impact. The Board then intends to request that the City codify these measures as conditions of approval for a future Major Special District permit and subsequent building permit(s).

Page 20 - PUC Development Plan

The Board appreciates your discussion of, and efforts at compliance with, the PUC Development Plan, especially with regard to policies related to walking, pedestrians and non-vehicular mobility. The provision of significant setbacks for landscaping, and non-fenced, publicly-accessible open space along Kuhio Avenue will enhance the pedestrian experience in compliance with a range of policies for Waikiki. While the provision of bicycle racks for employees is an appropriate endeavor,

the Board recommends that ample, secure and convenient bicycle storage space be provided for hotel guests, employees and possibly for the public.

Page 22 – Promote a Hawaiian Sense of Place

Page 26 – Design Guidelines

The Waikiki Special District Design Guidelines state that:

- *'the long axis of all new high rise structures should be oriented in a mauka-makai direction to minimize obstruction of mauka views....'*
- *'building forms which produce narrow towers are preferred'*
- *'buildings with a series of graduated, stepped forms are preferred for new projects'*

The structure as proposed exceeds the zoning height limit, is not graduated in scale and has a Diamond Head-'Ewa orientation. These aspects are inconsistent with the Waikiki Special District Design Guidelines and zoning regulations. While the developer has argued that these features may be warranted from a design perspective, a discussion is nonetheless needed outlining the rationale for non-compliance with design criteria. Stating and/or demonstrating visually that impacts will not be significant, does not negate the need to provide the public with a rationale for pursuing design non-compliance.

We understand a "Hawaiian Sense of Place" is open to subjectivity. However, the overarching theme in the Waikiki Special District Design Guidelines is *"using elements with a recognizable symbolic relationship to Hawaii's environment, people or culture"*. While the description of landscaping, articulation and resultant shadowing moves towards this goal, any building elements contributing to a Hawaiian sense of place are lacking in the structural renderings shown in the Draft EA.

The Design Guidelines note that *'all materials should be non-reflective'* and *'the use of...darkly tinted glass...should be avoided...or very limited in use'*. The Kuhio Avenue elevation appears to be clad in reflective gray/green glass. And while building articulation is achieved, its uninterrupted repetition across almost the entire width of the structure, adds to visual bulk and monolithic massing from public right-of-ways. This is especially true on the Kalakaua Avenue side of the structure and as visible from Fort DeRussy public areas.

The previously approved building design from 2006 described a preferred alternative building design with a mauka/makai orientation. In describing the previously-approved building plan, page 57 of the Final EA of 2006 states:

"The mauka-makai tower orientation was chosen because it is the Waikiki Special District Design Guidelines's recommended building orientation intended to minimize impacts to public mauka/makai views".

and

"Because the tower is generally located centrally on the property, the tower mass will appear diminished and it will fit well within the context of the site".

Explain if and how the mauka-makai discussion from the 2006 FEA is applicable or (not applicable) to the current proposed development.

A bifurcated or graduated/stepped tower and/or a mauka-makai-oriented structure design should be pursued in order to comply with Waikiki Special District Design Guidelines. In addition, the Board recommends that design elements be added to break the horizontality and visual bulk of the structure. It is imperative that compliance with all applicable design criteria be demonstrated fully, including those related to a Hawaiian sense of place. Where relief is requested from the code, an explanation of why the relief is being pursued in the first place, is needed.

In the absence of the above design concerns being addressed adequately in the Final EA, this Board believes the public visual impacts from this proposed development are significant under review provisions of HRS Chapter 343, a FONSI cannot be issued, and the preparation of an EIS would therefore be warranted.

Page 23 – 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 is currently in the process of completing 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 will not be contrary to what is proposed in the Circulator Study.

Page 27 - 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.

Page 29 – Parking

Based on the discussion of zoning requirements and parking agreements with the building at 2100 Kalakaua, there is a total requirement for 160 parking spaces at the new development. The development is currently proposing 220 parking spaces; 60 more than required. In the Final EA, explain why the developer is exceeding zoning code parking requirements and why this number of parking spaces is warranted.

Page 32 to 33 – Ground Level Features/Features in Required Yard

The provision of an open, non-fenced and publicly-accessible landscaped plaza and the preservation of the historic banyan tree on the property for public enjoyment, are excellent features of the project design and are consistent with Waikiki Special District Design Guidelines and the PUC Development Plan.

Page 37 – Impacts and Proposed Mitigation Measures

The access and transportation section discusses movements, impacts and mitigations as they pertain to vehicles only. This section lacks any holistic discussion of planning for transit, bicycles,

pedestrians or any other non-vehicle modes of transportation. Explain how space will be allocated for a future bike lane/shared lane, pedestrians and if any bus stops/routes will be impacted or enhanced by this development.

Page 38 to 43 – Water, Energy and Waste Discussion

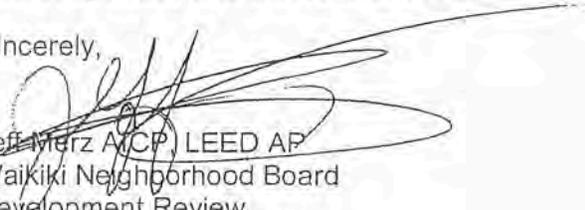
We appreciate your commitment to pursuing LEED certification. While Honolulu does not require LEED certification for new developments at this time, we encourage you to exhaust all possible sustainable features for the development and operation of your proposed facility.

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. Orient the building to take advantage of trade winds and other features of the Waikiki micro-climate.

Mahalo for your consideration of the above comments on the Draft EA. We look forward to publication of the final EA or subsequent EIS which adequately addresses concerns noted by this Board, agencies and the general public.

Sincerely,



Jeff Merz AICP, LEED AP
Waikiki Neighborhood Board
Development Review

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September 11, 2012

Mr. Jeff Merz
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**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Mr. Merz:

Thank you for your letter of August 1, 2012 regarding the Draft Environmental Assessment (DEA) for the 2121 Kuhio Avenue Project (Project).

We appreciate your comments and offer the following responses and will revise the Final Environmental Assessment (FEA) text accordingly:

General Comment

We are glad that you found the visual simulations, site-line analyses and elevations useful.

Page 11 – Physical Characteristics

The rationale for seeking the additional 50 feet of height will be discussed in the FEA.

Page 13 - Flora

We have hired Steve Nimz & Associates Inc. Consulting Arborist Services to prepare a mitigation plan with measures to protect the banyan tree from construction activities. We will follow the recommendations of that plan. The Applicant will support the Board's recommendation to codify these measures as conditions of approval on the future Waikiki Special District Permit, Major.

Page 20 – PUC Development Plan

As you have recommended, ample, secure and convenient bicycle storage space will be provided for hotel guests, employees and possibly the public.

Page 22 – Promote a Hawaiian Sense of Place
Page 26 – Design Guidelines

The proposed building orientation and design was developed to implement Waikiki Special Design District (WSDD) Guidelines.

The WSDD Guidelines section that includes “Orientation and Form” and establishes the guideline for the mauka/makai orientation is 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 following 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” 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.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalakaua Avenue and from Kuhio Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian accessways into and through Waikiki. This ewa/diamond head orientation is also sensitive to protection of public views from the Gateway to Waikiki located at Kalakaua Avenue and Ala Moana Boulevard and from the open space at Fort DeRussy. A volume study (Appendix VI Building Orientation – Photographic Analysis in the Final EA) on photographs of views from these locations have been prepared comparing the impacts from two building designs (enclosed), one with a mauka/makai building orientation and one with the proposed ewa/diamond head building orientation. The ewa/diamond head building orientation has significantly less visual impact along these important public view corridors except for one view at the corner of Kalakaua Avenue and Kalaimoku Street. The structure has a narrower face with the ewa/diamond head orientation than with a mauka/makai orientation in all but one of the viewpoints along Kalakaua Avenue and Kuhio Avenue. The view from the Gateway to Waikiki at Kalakaua Avenue and Ala Moana Boulevard is also less impacted with the ewa/diamond head building orientation.

A view from the open space at Fort DeRussy shows that the visual impact with either orientation is about the same.

At the request of the Department of Planning and Permitting (DPP) the Building Orientation – Photographic Analysis also shows views from Kalaimoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as significant public views **mauka views** at certain other streets located mauka of Kuhio Avenue.

The ewa/diamond head orientation has also allowed us to provide the widest possible uninterrupted public open space along Kuhio Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kuhio Avenue as possible and would have been significantly wider to accommodate a similar amount of floor area and not located above and within the proposed parking podium.

The concept of “building forms which produce narrow towers are preferred” is supported by the Project as well. The additional height allows the Applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

The project massing is composed of a four story tower podium, including a double height ground floor arrival lobby a fifth floor loggia and a 6th floor open-air, sky lobby, all of which support

the residential tower above. Physical stepping of the building massing is achieved at the 2nd and 5th floors of the podium, as well as the 6th, 34th and 35th floors of the tower.

The tower itself can be defined by its two unique primary facades: the residential 'makai' side and the street fronting 'mauka' side, along Kuhio Ave. For the 'makai' facade, the notion of "weaving" together the primary horizontal and vertical massing elements becomes the basis of the concept for exterior articulation.

On a macro scale, this is achieved in the 'makai' facade of the tower through the expression of five vertical piers, which define a primary central massing, flanked by two smaller masses. These five piers are then "woven" together with four major horizontal accent bands which define each of the four major residential zones within the vertical mass of the tower. The result is a compositional strategy which helps modulate the scale of the facade and effectively reduces the perceived height and width of the massing through the articulation of multiple smaller elements, both in the vertical and horizontal planes.

On a micro scale, the 'makai' facade - made up entirely of deep set lanais, continues the concept of weaving by articulating the vertical walls between units and the slab edge and lanai railing into a building scale "woven fabric". The depth and distinct woven texture of the facade will enhance the play of light and shadow across its surface. The woven pattern of the facade, evocative of traditional Hawaiian tapa patterns, becomes a major motif expressed in other scales and materials across the project's exterior.

Composition of the 'mauka' facade follows the massing patterns established on the 'makai' facade. The mass is broken into a series of strong vertical elements, bound together by horizontal accents at key compositional datum which furthers the notion of a "stepped" facade and helps diminish the perceived width of the facade. The material palette is comprised of painted stucco over concrete, with projecting slab edges, at the residential ends of the facade. Each of these flanking elements incorporates an adjacent exterior stair core, with a decorative aluminum louvered screened. The center of the composition is demarked by a strong central circulation core, similarly clad in the aluminum louvered screen, although one of a more intricate nature - incorporating the "basket weave" motif expressed in the 'makai' facade. The interstitial vertical surfaces are glazed circulation corridors of a non-reflective type glass, with vertical accent louvers at selected mullions, arranged in an abstracted grid pattern. The resulting composition breaks the overall massing into five distinct vertical elements. While lacking the depth of the 'makai' facade, the 'mauka' facade will offer a distinct range of material palette, texture and patterning and establishes formal and compositional elements which will be carried into the design for the podium.

The podium planning and design extends the scale and articulation of the adjacent 2100 Kalakaua 'Luxury Row' retail facility. Similar to the individual "storefront" expression of 'Luxury Row', the planning of the podium breaks the mass into five primary volumes - or 'storefronts' - along Kuhio Ave. These volumes are intentionally misaligned with each other to reinforce their individuality, however are coordinated with the five primary volumes of the 'mauka' tower facade above. The result is a massing which effectively reduces the scale of its

long Kuhio facade to the "storefront" scale which characterizes 'Luxury Row', while establishing a formal integration of the tower geometry with its supporting podium.

The material palette for the podium and tower draw from the diverse palette of materials utilized in the storefronts of 'Luxury Row', those being: limestone cladding, painted stucco, decorative ironwork/grillage, puka lava tile, timber, steel and glass. For the tower podium, materials are applied to the massing to further the notion of multiple smaller scaled, distinct elements, however also to emphasize the podium's relationship with the tower mass above.

To this end, at grade the five volumes of the podium are clad in alternating limestone, stucco or lava tile, each uniquely rendered as a way of maintaining the desired scale and pedestrian experience. The three parking levels above are clad in continuous "ribbon" of the decorative aluminum louvered screen. The screen framing module and "basket weave" expression is consistent throughout, creating a continuous unifying element which strongly interlocks the tower with the podium. The screen frame is then in-filled with two unique patterns: one a decorative louver screen, similar to the tower screens at the exterior stair and the other one a 3" mesh to support a planted wall. The result is a highly textured surface, articulated in two primary materials: decorative metal and green planting. The "woven" expression of the surface, inspired by the texture of the "makai" facade, similarly becomes a focal design feature, with immediate references to traditional Hawaiian weaving.

In addition to the primary exterior elements, the podium design utilizes a range of secondary design elements, to further modulate scale and enhance function. These include: continuous stucco faced planters on the second floor at the base of the exterior planted screens; a fifth floor loggia with deep set windows and perimeter planters; a planted entry canopy/trellis at the breezeway, framing the Kuhio lobby entrance; a continuous wood trellis and perimeter shutters at the open-air 6th floor lobby; a continuous perimeter planter at the 6th floor; a decorative cast concrete frieze at the 7th floor railing, demarking the transition of the podium to tower; and a painted steel trellis as the crowning element to both the 'mauka' and 'makai' facades.

In total, the design concepts and material articulation proposed for the project meet the goals of the Waikiki Special District design guidelines by providing an appealing inter-active pedestrian environment, with lush landscaping and a building design which utilizes extensive open-air lobby area and a palette of natural building materials, articulated in a manner sensitive to supporting a successful pedestrian scale at grade and to pronouncing the play of light and shadow across it's mass, as the building reacts to its tropical environment.

The Applicant will direct the architect to rework the colors and reflectivity of the glass panels to avoid the appearance of darkly tinted glass or ensure very limited use to provide articulation.

The 2006 Final EA for the previously planned development did not consider significant public views and view corridors in following the Waikiki Special District Design Guidelines. As explained above, the mauka/makai orientation in this instance is not in the best interest of public views which are better served by an ewa/diamond head orientation.

The relief from the mauka/makai orientation is being requested in the interest of best serving public views along the two major view corridors through Waikiki, Kalakaua Avenue and Kuhio Avenue.

Page 23 – Multi-Modal Transportation in Waikiki

As you have recommended, there will be a charge for employee parking, which will be limited. The Applicant will encourage the use of mass transit (bus ridership) by providing subsidized bus passes to employees agreeing to come to work via bus transport, to encourage bus ridership. Most of the parking stalls will not be offered for sale, those that are, will be sold separately from the units. Should a car share system be offered in Waikiki, the Applicant will make parking stalls available to accommodate car share at their hotel. Electric car charging stations will be provided in the parking lot. Discounted parking rates will be provided for electric cars.

In speaking with staff at the Department of Transportation Services (DTS), we have learned that the Circulator Study for Waikiki is still being prepared. We will continue to monitor the progress to see if the Circulator Study will affect our Project.

Page 27 – Landscaping

The Applicant will consider the use of xeriscape plants and will utilize appropriate native species within the landscaping for the Project. The Applicant will consider capturing rainfall and use of recycled gray water to supplement irrigation needs.

Page 29 - Parking

The parking requirement for the Project, based on 459 hotel rooms (no "lock-out" units planned) and accessory uses at one stall per four units is 115 parking stalls plus 45 parking stalls provided to meet the current parking requirements for 2100 Kalakaua, for a total of 160 required parking stalls. The Applicant will be providing 187 parking stalls, 27 more stalls than required. Based on your concerns the parking being provided has been reduced from the 220 stalls initially proposed in the DEA.

Page 32 to 33 – Ground Level Features/Features in Required Yard

We appreciate your support of our open, non-fenced and publicly-accessible landscaped plaza and the planned preservation of the large banyan tree on the property for public enjoyment.

Page 37 – Impacts and Proposed Mitigation Measures

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. Based on a discussion with the City's Bicycle Coordinator, the bike lane has been included in last year's budget proposal and is planned to be developed within the next two years. This proposed bike lane will provide for the bicycle needs of Waikiki and is relatively close to the Project site. Kuhio Avenue with its median improvement does not have area left to accommodate a bike lane. This

development is providing a significant setback and should the City decide to develop a bike lane, there is ample room. However, this would take away from important public open space. A bus stop is located at the northeast corner of the Project site that will be enhanced by the greater open space and the Applicant will work with the DTS to see if improvements to the bus stop could be made by the Applicant to further enhance the bus stop. No other bus stops or routes will be affected.

Page 38 to 43 – Water, Energy and Waste Discussion

The Applicant will consider the approaches and operations that you have recommended.

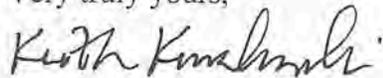
The Applicant plans to incorporate the application of LEED standards and strategies, to the extent economically feasible, to achieve sustainable site, utilities and building development. The green principles and strategies currently being considered for the Project include the following:

- Develop an erosion and sedimentation control plan;
- Promote alternative transportation by providing secure bicycle storage and locker room facilities;
- Explore alternatives for energy savings related to building cooling and hot water generation;
- Reduce water usage through use of high efficiency plumbing fixtures;
- Energy Star rated appliances;
- High performance glazing;
- Lighting control systems that reduce light usage;
- Design spaces with views to the exterior and options for natural ventilation;
- Create and implement a Green education program for employees and guests;
- Develop a solid waste management plan during construction and operations; and
- Explore reuse and recycling of demolished materials.

These LEED principles were selected for consideration because there is a strong possibility that the Applicant will be able to implement them.

Your letter and this response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

Encls.

cc: Department of Planning and Permitting
PACREP LLC

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-202
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October 26, 2012

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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
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Mr. Merz:

This letter serves as a supplement and update to our previous letter to you regarding the Draft Environmental Assessment (“DEA”) for the 2121 Kuhio Avenue Project (“Project”).

The Pre-Final EA for the project has been revised and the Final EA provides ewa/diamond head oriented building photos that are consistent with the revised plans in regard to both design and building orientation. See enclosed cd, Gateway Views (if you require hard copies of the photos, please call me at 988-2231 or write to me at the above address). The Project design has been revised to reduce the length of the tower of the building by about 48 feet based on concerns presented on the DEA. This reduction in length will reduce the impact of shadows and impacts to ocean views from the Four Paddle. With a 350-foot height limit, many of the Four Paddle units will retain an ocean view. A revised mauka/makai oriented building design has also been provided. The tower design footprint on the site for both the revised ewa/diamond head oriented building and the revised mauka/makai oriented building is provided in the enclosed Gateway Views.

Building Orientation

The proposed building orientation and design was developed to implement Waikiki Special Design District (WSDD) Guidelines.

The WSDD Guidelines section that includes “Orientation and Form” and establishes the guideline for the mauka/makai orientation is 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 following 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” 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.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalākaua Avenue and from Kūhiō Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian access ways into and through Waikīkī.

The proposed ewa/diamond head building orientation is also sensitive to the need to protect public views from the Gateway to Waikīkī located at Kalākaua Avenue and Ala Moana Boulevard. A volume study on photographs of views from these locations have been prepared comparing the visual impact of two building designs, one with a mauka/makai orientation and one with the proposed building design in an ewa/diamond head orientation. See Gateway Views, enclosed cd, included in the Final EA as Appendix VI, Building Orientation – Photographic Analysis.

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalākaua Avenue and from Kūhiō Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian access ways into and through Waikīkī. This

ewa/diamond head orientation is also sensitive to protection of public views from the Gateway to Waikiki located at Kalākaua Avenue and Ala Moana Boulevard. A volume study (enclosed cd, Gateway Views) on photographs of views from these locations has been prepared comparing the impacts from two building designs (enclosed), one with a mauka/makai building orientation and one with the proposed ewa/diamond head building orientation. The ewa/diamond head building orientation has significantly less visual impact along these important public view corridors except for one view at the corner of Kalākaua Avenue and Kālaimoku Street and two views looking ewa along Kūhiō Avenue. The structure has a narrower face with the ewa/diamond head orientation than with a mauka/makai orientation in all but three of the viewpoints along Kalākaua Avenue and Kūhiō Avenue. The view from the Gateway to Waikiki at Kalākaua Avenue and Ala Moana Boulevard is also less impacted with the ewa/diamond head building orientation.

The viewpoint at the open space at Fort DeRussy shows that the visual impact is greater with the ewa/diamond head orientation.

At the request of DPP the Building Orientation – Photographic Analysis (Appendix VI) also shows views from Kālaimoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two street corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as significant public views the mauka views at certain other streets located mauka of Kūhiō Avenue.

The ewa/diamond head orientation has also allowed us to provide the widest possible uninterrupted public open space along Kūhiō Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kūhiō Avenue as possible and would have been significantly wider to accommodate a similar amount of floor area.

The concept of “building forms which produce narrow towers are preferred” is supported by the Project as well. The additional height allows the applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

Shadow Study

Based on our shadow study (enclosed in cd), the Project with an ewa/diamond head orientation will shade the pool and deck area of the Four Paddle from about 2:00 pm on during the Equinox and will partially shade the Four Paddle barbecue deck area from about 2:00 pm to and fully shade the barbecue deck and pool area by 3:00 pm. and begin to shade the pool area from 3:00

pm on During the Winter Solstice the Project will partially shade the barbecue deck area from about 3:00 pm and begin to shade a small portion of the pool area from about 4:00 pm. The Four Paddle pool and deck area will not be affected during the Summer Solstice.

This ewa/diamond head orientation affects the block between Kālainmoku Street and Launiu Street during the Winter Solstice. , casting a shadowThe Project will partially shade this area from 12:00 pm and moves across this area fully shading the Kūhiō frontage at about 1:00 pm and partially shading it at 2:00 pm with less shading at 4:00 pm with the shadow clearing the property just after 4:00 pm to after 3:00 pm. This block is not affected during the Equinox and the Summer Solstice.

The Project with an ewa/diamond head orientation will cast a shadow overshade a small portion of the northern corner of Ft. DeRussy from before 8:00 am to 9:00 am during the Summer Soltice. These early morning shadows should have minimal impact on Ft. DeRussy and the growth and development of the trees at Ft. DeRussy. Ft. DeRussy is not affected during the Equinox and Winter Solstice.

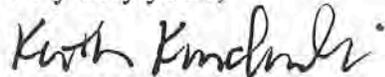
The mauka/makai orientation has less of an impact on the Four Paddle related to shadows during the Equinox with will shadeshadows cast over the barbecue deck area from about 2:00 pm and will cover most of the barbecue deck and a small portion of half of the pool and deck area from 3:00 pm, covering most of the barbecue deck and the entire pool and deckarea atfrom about 4:00 pm. During the Winter Solstice the Project will shade a small portion of the barbecue area from 4:00 pm. During the Summer Solstice, this orientation will not affect the pool and deck area.

The mauka/makai orientation does not affect the block between Kālainmoku Street and Launiu Street during the Summer Solstice and the Equinox. During the Winter Solstice, the Project will shade shadows affect portions of this block from 12:00 pm until 3:00 pm.

The mauka/makai orientation during the Summer Solstice, similar to the ewa/diamond head orientation will cast a shadow overshade a small portion of the northern corner of Ft. DeRussy from before about 8:00 am to 9:00 am. These early morning shadows should have minimal impact on Ft. DeRussy and the growth and development of the trees at Ft. DeRussy. Ft. DeRussy is not affected during the Equinox and Winter Solstice.

This response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

Encl.

cc: Department of Planning and Permitting
PACREP LLC

UNITE HERE!

LOCAL  HAWAII

Facsimile Transmittal Sheet

To: Keith Kurahashi

Company: Kusao & Kurahashi, Inc.

From: Benjamin Sadoski

Date: 8/22/2012

Fax Number: 808-988-1140

Total # of Pages
(including cover): 5

Re: Response to Draft Environmental Assessment - 2121 Kuhio Project

Notes:

UNITE HERE!

LOCAL 5 HAWAII

Eric Gill, Financial Secretary-Treasurer

Hernando Ramos Tan, President

Godfrey Maeshiro, Senior Vice-President

August 22, 2012

PACREP LLC
10880 Wilshire Blvd, Suite 2222
Los Angeles, CA 90024

Subject: Response to Draft Environmental Assessment - 2121 Kuhio Project

Dear Mr. Grosfeld:

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. The applicant states "There are several condo-hotel projects in Waikiki and similar to those other projects, the individual hotel units will be sold to investors, who are expected to place the units back into the hotel pool."¹
 - a. Why does the applicant expect that investors will place the units back into the rental pool?
 - b. What percentage of condo-hotel units have owners have placed into hotel rental pools at other properties in and around Waikiki and/or nationwide?
 - c. What, if any, steps will the applicant take to ensure condo-hotel unit buyers join the rental pool?
 - d. What steps will the applicant take to ensure that the units are used as hotel units rather than residential condominiums or rental apartments?
 - e. Will the developer manage the hotel operations? If not, has an operator been chosen?
 - f. Will the developer manage the Association of Apartment Owners? If not, has a manager been chosen?
2. What practices will the company employ to ensure customers are fully informed and protected throughout the condotel sales process?
 - a. Will the property be branded/franchised? If so, what steps will the company take during the sales process to ensure that potential buyers are aware of the relationship between the developer, the operator and the brand/franchise?
3. If the applicant will not take any steps to ensure that the units in this project are used primarily as hotel units:
 - a. Will the applicant construct parking to the standard of residential dwelling units in Waikiki?

¹ Draft Environmental Assessment, pg. 10.

- b. How would this affect the public school system in the area? How would it affect other public resources? How would it affect traffic flows?
 - c. What other impact would the addition of 459 residential units have on the Waikiki community, should they end up being used as such?
4. What portion of the units will be sold as affordable units?
5. Is it possible that the developer or a successor could convert this project to a residential condominium or otherwise change the usage of the project's units?
6. Will the developer take steps to ensure that the entire project will not be converted to a residential condominium at any point? If not:
 - a. How will this affect long-term employment at the project?
 - b. What other impacts would this have on the surrounding community?
7. How will the building height affect the views in nearby condominiums? Which buildings will be impacted?
8. 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)?
9. In the section labeled "Parks", the Draft Environmental Assessment states, "As indicated in the plans provided in Appendix I, recreational amenities will be provided on the sixth floor level of the Project with a proposed swimming pool, Jacuzzi, deck and exercise room."² Will these amenities be open to the public? What public benefits is the developer intending to provide in return for this project?
10. The application lists changes which have resulted in a loss in hotel inventory in Waikiki, though it does not note the addition of timeshare inventory or its potential use as hotel inventory when units are unsold or unoccupied. According to a letter written by Jeffrey Overton of Group 70 regarding comments about the Draft EIS for the Hilton Hawaiian Village Beach Resort & Spa - Village Master Plan Improvements (this letter is included in comments attached to the Final EIS), "Hilton offers rental of timeshare units at the Grand Waikikian Tower during open intervals, which becomes part of the hotel room market. These rentals are primarily offered as promotion of timeshare sales, but the larger units also allow for more family stays at the resort." It also states, "In 2010, the rental of open intervals for Hilton timeshare units as part of the hotel room pool represented approximately 10.6% of timeshare unit occupancy."³ It should be noted that in addition to the Grand Waikikian Tower, Hilton also has plans to build two new timeshare towers at the Hilton Hawaiian Village. In addition, in May 2011 Outrigger Enterprises announced that Hilton Grand Vacations had purchased the former OHANA Islander Waikiki, and that "HGV [Hilton Grand Vacations] plans to transform the hotel into Hilton Grand Vacations Club - Waikiki Beach Walk® - an upscale urban timeshare resort."⁴ How does this information affect the

² Draft Environmental Assessment, pg. 41.

³ Letter from Jeffrey Overton, Group 70 International to Benjamin Sadoski, UNITE HERE Local 5, Subject: "Draft Environmental Impact Statement: Hilton Hawaiian Village Beach Resort & Spa Village Master Plan Improvements," May 19, 2011. Page 391 of the PDF version of the Hilton Hawaiian Village - Village Master Plan Final EIS, Volume 1.

⁴ "Outrigger Enterprises Group Announces Sale Of Ohana Islander Waikiki Hotel," Press Release by Outrigger Enterprises, May 27, 2011.

discussion of hotel inventory and the need for additional hotel inventory?

11. The applicant states, "As discussed earlier, there is a need for additional hotel product in Waikiki."⁵ It is notable that in a letter written by Jeffrey Overton of Group 70 in response to comments about the EIS Preparation Notice for the Hilton Hawaiian Village Beach Resort & Spa - Village Master Plan Improvements (this letter is included in comments attached to the Draft EIS), he stated "To attract guests, hotels in Waikiki have reduced room rates substantially in recent years. The combination of lower rates and lower occupancy has significantly reduced profitability, and a number of hotels in Waikiki have gone bankrupt."⁶ This letter was written in November 2010, but it relates to Hilton's 10-year master plan. The response continues, "In the absence of a substantial increase in demand, adding new hotel rooms in this environment would be expected to worsen the existing situation, both at the Hilton Hawaiian Village and more broadly in the Waikiki market." In later correspondence (the same letter mentioned in Item 7, Overton listed five hotels that have declared bankruptcy since 2005. Since the letter was written in May 2011, this did not include the September 2011 Chapter 11 of The Modern Honolulu, but it did include the following:

"2005: Aston Hotels Waikiki;
 2006: Waikiki Resort & Spa (Azabu Buildings);
 2009: The Lotus at Diamond Head (Anekona W);
 2009: Ilikai Hotel (Anderson);
 2009: Hawaiiana Hotel and Dorm"⁷

What is the applicant's reasoning for its assertion that there is a need for additional hotel product in Waikiki?

12. Given that condotels are not the same as hotels, what measures will the applicant take to ensure that the development of another condotel will meet the need for additional hotel product (if such a need exists) in Waikiki?
13. What demand is there for additional condominium product in Waikiki?
14. Which market will the condotel units be priced for? What is the comparable set of projects for this market?
15. The applicant states, "The Project during its operational phase in its first full calendar year is expected to create 475 on-site jobs."⁸
- How was this number calculated?
 - Does the applicant intend to staff the property at a higher level than the national average?

⁵ Draft Environmental Assessment, pg. 45.

⁶ Letter from Jeffrey Overton, Group 70 International to Benjamin Sadoski, UNITE HERE Local 5, Subject: "Environmental Impact Statement Notice of Preparation: Hilton Hawaiian Village Beach Resort & Spa Village Master Plan Improvements," November 9, 2010. Included on page 345 of the PDF version of the Hilton Hawaiian Village - Village Master Plan Draft EIS, Volume 1.

⁷ Letter from Jeffrey Overton, Group 70 International to Benjamin Sadoski, UNITE HERE Local 5, Subject: "Draft Environmental Impact Statement: Hilton Hawaiian Village Beach Resort & Spa Village Master Plan Improvements," May 19, 2011. Page 390 of the PDF version of the Hilton Hawaiian Village - Village Master Plan Final EIS, Volume 1.

⁸ Draft Environmental Assessment, pg. 54.

- c. Does the applicant believe occupancy at this property will be higher than average for Oahu?
- 16. 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?
- 17. How are the impacts of the currently proposed development different from the impacts of the previously proposed development for this site?

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
David K. Tanoue, Director, Department of Planning and Permitting, City and County of Honolulu

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

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September 11, 2012

Mr. Benjamin Sadoski
UNITE HERE, Local 5
1516 South King Street
Honolulu, Hawaii 96826

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Mr. Sadoski:

Thank you for your letter of August 22, 2012 regarding the Draft Environmental Assessment ("DEA") for the 2121 Kuhio Avenue Project ("Project").

We appreciate your comments and offer the following responses:

1.
 - a. One of the principals of the Applicant is involved in the Trump Tower condo hotel and based on their experience, approximately 75% of the units are placed in the hotel pool and only a small fraction are used as permanent residences. Waikiki is a vacation resort destination where most visitors visit the island between 2-3 weeks per year and otherwise contribute their unit to the hotel rental program.
 - b. As noted above, Waikiki is a vacation resort destination where most visitors visit the island between 2-3 weeks per year and otherwise contribute their unit to the hotel rental program.
 - c. U.S. federal securities laws prohibit the developer from using any mechanism to compel a buyer to contribute their unit to the hotel rental program however, as referenced above, Waikiki is a vacation resort destination where most visitors visit the island between 2-3 weeks per year and otherwise contribute their unit to the hotel rental program.
 - d. U.S. federal securities laws prohibit the developer from using any mechanism to compel a buyer to contribute their unit to the hotel rental program however, as referenced above, Waikiki is a vacation resort destination where most visitors visit the island between 2-3 weeks per year and otherwise contribute their unit to the hotel rental program.
 - e. The Applicant (Developer) does not expect to manage the hotel operation. An operator has not yet been selected.
 - f. The Applicant (Developer) does not expect to manage the AOA. A manager has not yet been chosen.

2. a. The Developer intends to keep interested buyers apprised of the progress being made through regular updates. The Developer intends to select a brand for the project.
3. a. The Applicant will provide sufficient parking for a hotel as this project, similar to Trump Tower, will operate like a hotel. As referenced above, Waikiki is a vacation resort destination where most visitors visit the island between 2-3 weeks per year and otherwise contribute their unit to the hotel rental program.
b. The Applicant intends for it to have no effect on the public school system.
c. The Applicant has produced all necessary studies, reports and analyses, all of which will be adhered to as the project intends to be in compliance with City codes and standards.
4. No portion of the units are intended to be sold as affordable units.
5. The Developer at this time has no intention of converting this Project to a residential condominium; however, we are not in a position to dictate what happens in the future.
6. The Developer will approach this as a hotel because as referenced above, Waikiki is a vacation resort destination where most visitors visit the island between 2-3 weeks per year and otherwise contribute their unit to the hotel rental program.
7. The building height will affect the angled views from the Four Paddle and 2121 Ala Wai Boulevard high-rise condominiums toward the ocean. The view from Waikiki Gateway Hotel looking east from floors above the former Niketown Building will be affected, but not as heavily impacted as with a structure with a mauka/makai orientation. Similarly, angled views from La Casa and Maile Skycourt will be less impacted with the proposed ewa/diamond head orientation than with a mauka/makai orientation.

The proposed building orientation and design was developed to implement Waikiki Special Design District (WSDD) Guidelines.

The WSDD Guidelines section that includes "Orientation and Form" and establishes the guideline for the mauka/makai orientation is 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 following 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” 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.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalakaua Avenue and from Kuhio Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian accessways into and through Waikiki. This ewa/diamond head orientation is also sensitive to protection of public views from the Gateway to Waikiki located at Kalakaua Avenue and Ala Moana Boulevard and from the open space at Fort DeRussy. A volume study (Appendix VI Building Orientation – Photographic Analysis in the Final EA) on photographs of views from these locations have been prepared comparing the impacts from two building designs (enclosed), one with a mauka/makai building orientation and one with the proposed ewa/diamond head building orientation. The ewa/diamond head building orientation has significantly less visual impact along these important public view corridors except for one view at the corner of Kalakaua Avenue and Kalaimoku Street. The structure has a narrower face with the ewa/diamond head orientation than with a mauka/makai orientation in all but one of the viewpoints along Kalakaua Avenue and Kuhio Avenue. The view from the Gateway to Waikiki at Kalakaua Avenue and Ala Moana Boulevard is also less impacted with the ewa/diamond head building orientation.

A view from the open space at Fort DeRussy shows that the visual impact with either orientation is about the same.

At the request of the Department of Planning and Permitting (DPP) the Building Orientation – Photographic Analysis also shows views from Kalaimoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as significant public views **mauka views** at certain other streets located mauka of Kuhio Avenue.

The ewa/diamond head orientation has also allowed us to provide the widest possible uninterrupted public open space along Kuhio Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kuhio Avenue as possible and would have been significantly wider to accommodate a similar amount of floor area and not located above and within the proposed parking podium.

The concept of “building forms which produce narrow towers are preferred” is supported by the Project as well. The additional height allows the applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

8. The Project may affect property values of the two high-rise condominiums with their angled ocean views being impacted, but some of that value reduction may be off-set by an upgrading of the character of the neighborhood with a quality development located at the Project. 2121 Ala Wai Boulevard will always be at risk for loss of ocean views, with potential development occurring between their high-rise and Four Paddle eliminating their angled ocean views. Redevelopment of this underutilized property could lead to redevelopment of surrounding underutilized properties improving the condition of the neighborhood and raising property values.

This being said it is important to point out that private views are not protected and underutilized or vacant properties may one day be developed to affect those private views.

9. The recreational amenities on the sixth floor will be for hotel guests only. They will not be open to the public. The following are the public benefits that will be provided with this Project:
 - a. The Project will, through provision of public open space, provide a tropical landscaped plaza area along Kūhiō Avenue that will provide relief from the built environment.
 - b. The Project expects to generate about \$2 million in conveyance tax revenues for the State.
 - c. The Project upon completion, will generate about \$5.25 million per year in annual property tax revenue for the City.
 - d. The Project during its first full calendar year and annually thereafter is expected to generate income of \$20 to \$30 million in hotel revenue resulting in GET (general excise tax revenue) of \$0.8 to \$1.2 million per year for the State (4%) and between \$100,000 to \$150,000 per year for the City (0.5%). The Project will also generate transient accommodations taxes (9.25%) totaling \$1.9 to \$2.775 million for the State, a portion of which may be shared with the City.

10. The Applicant recognized the proposed timeshare units at the Hilton Hawaiian Village in the DEA, stating on page 48:

“Hilton's planned timeshare (should qualify as condo hotel units, with amenities provided) development with 300 units by 2015 and another 250 units by 2021, is anticipated to help to offset the loss of 1,040 existing hotel units and loss of 788 hotel units in the future.”

Actually, there is a loss of 1,896 existing hotel units and an additional loss of 788 hotel units in the near future in Waikiki and this will be corrected in the Final EA. Even with the 550 timeshare units planned by Hilton and the 459 condo hotel units planned with the Project, there will be a net loss of 1,675 units in Waikiki. The Applicant treated timeshare units as hotel units and counted each timeshare unit as a hotel unit.

11. Hawaii News Now, online, posted on July 6, 2012 that Oahu hotels ran 88.7 percent full last week, compared to 86 percent the week before and 81.6 percent last year, with room rates up almost 12 percent from year-ago levels, partly because of the arrival of guests who are here for the RIMPAC military exercises lasting all this month. Oahu also benefited from new non-stops from New York JFK (Hawaiian Airlines) and Washington Dulles (United Airlines).

The Pacific Business News on August 10, 2012 noted that hotel occupancy on Oahu for the previous week rose 4.5 percentage points from the same week last year to 92.4 percent, while the average daily room rate jumped 15.3 percent to \$201.57.

The Applicant is comfortable with the positive occupancy rates and hopes for further improvement as the national and global economy continues to improve. These occupancy rates and daily room rates support the proposed increase in hotel and timeshare units.

12. This project will operate like a hotel. As referenced above, Waikiki is a vacation resort destination where most visitors visit the island between 2-3 weeks per year and otherwise contribute their unit to the hotel rental program.
13. There is strong demand for condominium product as future supply is severely constrained and will only be available from the repositioning or redevelopment of existing product, which is highly unlikely given the strength of the Waikiki hotel market.
14. The units are intended to be priced for a high-end market similar to the Trump Tower.
15.
 - a. The jobs analysis was calculated by the nation's leading economic advisor based on the IMPLAN model.
 - b. Staffing will be consistent with a high-end brand standard.
 - c. Expected occupancy is assumed to be consistent with similar properties in Waikiki, such as Trump Tower
16. The Developer continues to analyze the optimal source of financing. It is too early to tell how the project will be financed.
17. The impacts are a greater demand on infrastructure, however, the City has indicated that the water is adequate to support the Project and has approved a Sewer Connection Permit for the Project.

In a letter dated November 16, 2011, Board of Water Supply determined that the existing water system is adequate to handle either of two options presented at the time, Option A for 384 hotel condo suites and hotel residences, commercial, restaurant and office space or Option B for 526 hotel condo suites and hotel residences, commercial, restaurant and office space.

The Department of Planning and Permitting approved a Sewer Connection Application, on January 17, 2012, for the 459-unit condo hotel development conditioned upon the connection to the 20-inch sewer line in Kūhiō Avenue at the owner's expense and construction plans being submitted for review and approval. The existing municipal sewer system is adequate to accommodate the Project.

The Traffic Impact Report for the Project concluded that "... with the implementation of the proposed recommendation including the elimination or relocation of the existing drop-off area adjacent to the project site, staging and loading areas within and near the project site, traffic operations in the vicinity are anticipated to continue operating at levels

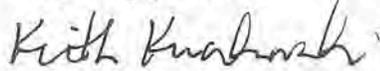
Mr. Benjamin Sadoski

Page 7

of service similar to those without project conditions.” The Project will not have a significant impact on traffic operations in the area.

Your letter and this response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

Encls.

cc: Department of Planning and Permitting
PACREP LLC

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-202
HONOLULU, HAWAII 96822

October 26, 2012

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E-mail: kkurahashi@hawaii.rr.com

Mr. Benjamin Sadoski
UNITE HERE, Local 5
1516 South King Street
Honolulu, Hawaii 96826

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Mr. Sadoski:

This letter serves as a supplement and update to our previous letter to you regarding the Draft Environmental Assessment ("DEA") for the 2121 Kuhio Avenue Project ("Project").

The Pre-Final EA for the project has been revised and the Final EA provides ewa/diamond head oriented building photos that are consistent with the revised plans in regard to both design and building orientation. See enclosed cd, Gateway Views (if you require hard copies of the photos, please call me at 988-2231 or write to me at the above address). The Project design has been revised to reduce the length of the tower of the building by about 48 feet based on concerns presented on the DEA. This reduction in length will reduce the impact of shadows and impacts to ocean views from the Four Paddle. With a 350-foot height limit, many of the Four Paddle units will retain an ocean view. A revised mauka/makai oriented building design has also been provided. The tower design footprint on the site for both the revised ewa/diamond head oriented building and the revised mauka/makai oriented building is provided in the enclosed Gateway Views.

Building Orientation

The proposed building orientation and design was developed to implement Waikiki Special Design District (WSDD) Guidelines.

The WSDD Guidelines section that includes "Orientation and Form" and establishes the guideline for the mauka/makai orientation is 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 following 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” 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.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalākaua Avenue and from Kūhiō Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian access ways into and through Waikīkī.

The proposed ewa/diamond head building orientation is also sensitive to the need to protect public views from the Gateway to Waikīkī located at Kalākaua Avenue and Ala Moana Boulevard. A volume study on photographs of views from these locations have been prepared comparing the visual impact of two building designs, one with a mauka/makai orientation and one with the proposed building design in an ewa/diamond head orientation. See Gateway Views, enclosed cd, included in the Final EA as Appendix VI, Building Orientation – Photographic Analysis.

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalākaua Avenue and from Kūhiō Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian access ways into and through Waikīkī. This

ewa/diamond head orientation is also sensitive to protection of public views from the Gateway to Waikiki located at Kalākaua Avenue and Ala Moana Boulevard. A volume study (enclosed cd, Gateway Views) on photographs of views from these locations has been prepared comparing the impacts from two building designs (enclosed), one with a mauka/makai building orientation and one with the proposed ewa/diamond head building orientation. The ewa/diamond head building orientation has significantly less visual impact along these important public view corridors except for one view at the corner of Kalākaua Avenue and Kālaimoku Street and two views looking ewa along Kūhiō Avenue. The structure has a narrower face with the ewa/diamond head orientation than with a mauka/makai orientation in all but three of the viewpoints along Kalākaua Avenue and Kūhiō Avenue. The view from the Gateway to Waikiki at Kalākaua Avenue and Ala Moana Boulevard is also less impacted with the ewa/diamond head building orientation.

The viewpoint at the open space at Fort DeRussy shows that the visual impact is greater with the ewa/diamond head orientation.

At the request of DPP the Building Orientation – Photographic Analysis (Appendix VI) also shows views from Kālaimoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two street corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as significant public views the mauka views at certain other streets located mauka of Kūhiō Avenue.

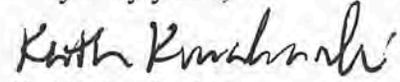
The ewa/diamond head orientation has also allowed us to provide the widest possible uninterrupted public open space along Kūhiō Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kūhiō Avenue as possible and would have been significantly wider to accommodate a similar amount of floor area.

The concept of “building forms which produce narrow towers are preferred” is supported by the Project as well. The additional height allows the applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

Mr. Benjamin Sadoski
Page 4

This response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

Encls.

cc: Department of Planning and Permitting
PACREP LLC



August 17, 2012

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Honolulu, Hawai'i, 96822

**SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT: 2121 KŪHIŌ WAIKĪKĪ,
HONOLULU, HAWAII (Tax Map Key: 2-6-18: 10, 42, 43, & 52)**

Dear Mr. Kurahashi,

Thank you for the opportunity to comment on the Draft Environmental Assessment (EA) for the 2121 Kūhiō project in Waikīkī. Our client, Kālainmoku – Kūhiō Development Corp (KKDC), is the property owner of King Kalākaua Plaza, which is directly across Kālainmoku Street (TMK: 2-6-16: 23, 26, and 69) from the proposed 2121 Kūhiō project. It is KKDC's understanding that the 2121 Kūhiō project will consist of a 409,000 square foot (SF), 34 story, 350 foot high structure that will include 459 condominium-hotel units, a three level parking garage (approximately 220 parking spaces), as well as ancillary support and ground floor commercial uses.

Based on the information in the Draft EA, on behalf of our client, we provide the following observations and comments:

- KKDC generally supports the proposed 2121 Kūhiō project and believes that it represents good quality, compact development of urban property compatible with the character of the Waikiki community and consistent with KKDC's own redevelopment objectives. Over the long term, KKDC intends to redevelop its property into a high-rise, mixed use project that will be consistent with the Waikiki Special District objectives.
- With regard to existing and future land use permits, KKDC would like the record to be clear on the required parking for the proposed 2121 Kūhiō project and the existing retail complex facing Kalākaua Avenue (2100 Kalākaua Retail Development). It appears that the 110,000 SF three story 2100 Kalākaua Retail Development project received approvals to delay construction of on-site parking requirements. It also received a Parking Agreement/Conditional Use Permit approval for use of off-site parking at King Kalākaua Plaza's underground parking garage. As a result of King Kalākaua Plaza's foreclosure proceedings in 2009 the off-site parking approvals were extinguished. Based on this information, KKDC would like the Draft EA to be clear that the 2100 Kalākaua Retail Development's parking requirement is not being provided at King Kalākaua Plaza and that KKDC has no intention or obligation to provide this parking requirement on its property.
- The Draft EA indicates that the 80,000 SF King Kalākaua Plaza building is occupied by tenants Niketown and Banana Republic. Both of these tenants vacated their premises by 2010 and the building has no occupants. However, KKDC would like the traffic impact report and Final EA to take into account the traffic counts of a fully occupied King

Mr. Keith Kurahashi

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT: 2121 KŪHIŌ WAIKĪKĪ, HONOLULU, HAWAII (Tax Map Key: 2-6-18: 10, 42, 43, & 52)

August 17, 2012

Page 2 of 2

Kalākaua Plaza building as KKDC is actively seeking tenants for the building, notwithstanding their long term objective to redevelop the property. Without accounting for the full occupancy of the King Kalākaua Plaza (which is likely in the near future, and quite possibly before the 2121 Kūhiō project is completed) the traffic impacts identified in the traffic impact report and Draft EA may be understated.

- KKDC also would like the traffic impact report and Final EA to address impacts of the proposed 2121 Kūhiō project's entry across from the only entrance to the King Kalākaua Plaza garage on Kālainmoku Street as well as identify mitigation measures that will minimize any potential impacts.
- Since King Kalākaua Plaza's only entrance to its garage is on Kālainmoku Street, KKDC would like to be consulted and its concerns addressed in the proposed Construction Traffic Management Plan that will be prepared at a later date. KKDC's main objectives are to ensure no street closures and to minimize the impact of construction traffic and activities on King Kalākaua Plaza as well as the existing street network.

Thank you again for the opportunity to provide comments on the Draft EA for the 2121 Kūhiō project. Please contact me if you have any questions regarding these comments or require additional information. Our client, Kālainmoku – Kūhiō Development Corp, seeks to work collaboratively to address any issues that may arise and looks forward to seeing the 2121 Kūhiō project completed.

Sincerely,

PBR HAWAII



Tom Schnell, AICP
Senior Associate

C: Kiyomi Oyama, DPP Urban Design Branch
Kālainmoku – Kūhiō Development Corp.

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

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September 11, 2012

Mr. Tom Schnell, AICP
PBR Hawaii & Associates, Inc.
1001 Bishop Street, Suite 650
Honolulu, Hawaii 96813-3484

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Mr. Schnell:

Thank you for your letter of August 17, 2012 regarding the Draft Environmental Assessment ("DEA") for the 2121 Kuhio Avenue Project ("Project").

We appreciate your comments and offer the following responses:

1. The Applicant appreciates your support of the Project.
2. The Final EA will be clarified to state that "The 2100 Kalakaua Retail Development required parking is not being provided at King Kalakaua Plaza's parking garage and the Kalaimoku-Kuhio Development Corporation ("KKDC"), owners of the King Kalakaua Plaza, has no intention or obligation to provide this parking."
3. The Final EA will be revised to note that the King Kalakaua Plaza is vacant, but former tenants included Niketown and Banana Republic. The traffic impact report will be revised to include in the analysis traffic from the King Kalakaua Plaza, assuming full occupancy.
4. The traffic impact report will discuss potential impacts to the access to the King Kalakaua Plaza garage on Kalaimoku Street and any mitigation measures, if needed.
5. The KKDC will be consulted and their concerns will be considered in the development of a Construction Management Plan to be prepared later.
6. The Applicant appreciates your client's (KKDC) willingness to work collaboratively to address any issues that may arise and the continued support to see the Project completed.

Mr. Tom Schnell
Page 2

Your letter and this response will be included in the Final EA.

Very truly yours,


Keith Kurahashi

cc: Department of Planning and Permitting
PACREP LLC



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William Y. L. Yuen
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JCcampbell@ahfi.com

August 27, 2012

Mr. Keith H. Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-202
Honolulu, HI 96822

Re: Draft Environmental Assessment – 2121 Kuhio

Dear Mr. Kurahashi:

We represent HSH 2100 LLC, the owner of 2100 Kalakaua Avenue. Thank you for the opportunity to provide comments on the Draft Environmental Assessment (the "DEA") that you prepared for the 2121 Kuhio project.

The DEA mentions, at pages 32 and 37, that the porte-cochere drop-off area and driveway may either remain the same or be modified. The ground floor plan shows the porte-cochere will be moved and a new entrance driveway will be developed on the 2121 Kuhio property. Please provide clarification and additional detail on the plans for the porte-cochere and driveway area. As you know, these areas are the subject of easements governing their joint development by the owners of both properties. HSH 2100 LLC would like to ensure that any modification of this area is in conformance with the easements and continues to serve both properties.

Thank you for your attention. If we can provide any further information, please feel free to contact us.

Sincerely,

William W. L. Yuen
Jean K. Campbell

JKC:mas
cc: Robert Siegel

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

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September 11, 2012

Mr. William W.L. Yuen
Ms. Jean K. Campbell
Alston Hunt Floyd and Ing, Lawyers
1001 Bishop Street, Suite 1800
Honolulu, Hawaii 96813-3484

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Mr. Yuen and Ms. Campbell:

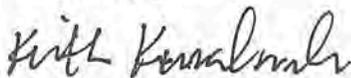
Thank you for your letter of August 27, 2012 regarding the Draft Environmental Assessment ("DEA") for the 2121 Kuhio Avenue Project ("Project").

We appreciate your comments and offer the following responses:

1. The porte-cochere drop-off area and driveway are conceptual plans. We have enclosed a copy of the ground floor site plan describing the proposed relocation.
2. The Applicant will work with you to ensure that any modification conforms to the easements and continues to serve both properties.

Your letter and this response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

cc: Department of Planning and Permitting
PACREP LLC

To whom it may Concern,

8/10/12
POB 536
Hauula, HI 96717

As a local, from the big island
(my father was a plantation Doctor and
my mother a marine Biologist and en-
vironmental activist who helped found
Kauai Nui Foundation), I am appalled at
the attack on Hawaii's environ-
mental laws. We must not destroy

the beauty that brings people here!

If the Argument is jobs + money,
then save our unique Advantage
of being a leader in ecotourism.

What is the Advantage of having
huge hotels that block the sun +
breezes and if you end up with a
concrete jungle devoid of tourists,
there will be no more jobs! No more
wildlife! Sincerely, Laura K. Krasnik

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

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September 11, 2012

Ms. Laura J. Gray, R.N.
P.O. Box 536
Haleiwa, Hawaii 96717

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Ms. Gray:

Thank you for your letter of August 10, 2012 regarding the Draft Environmental Assessment ("DEA") for the 2121 Kuhio Avenue Project ("Project").

The Project as planned does not attack Hawaii's environmental laws, we are currently in the very early environmental review (environmental assessment) phase of review. This review process is intended to identify the environmental impacts of the proposed development.

After completion of the environmental review process, there will be a Waikiki Special District Permit review and process with the Department of Planning and Permitting (DPP) and the review and consideration of a request to the City Council (Council) for a 350-foot height limit. Both processes will provide opportunities for public input, in the form of a public hearing with DPP and at least two City Council meetings at which public testimony is accepted. DPP and the City Council will consider the impacts and merits of the Project and determine whether to allow the 350-foot height limit. DPP will consider the Project design, building orientation and merits of the Project through the Waikiki Special District Permit review process and act accordingly.

Your letter and this response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

cc: Department of Planning and Permitting
PACREP LLC

Kusao & Kurahashi Inc.

17 August, 2012

2752 Woodlawn Drive, Suite 5-202

Honolulu, HI 26822

Copy to:

Office of Environmental Quality Control – State of Hawaii

State Office Tower, Room 702

235 South Beretania St.

Honolulu, HI 96813

Copy: Council Chair Ernest Martin.

Re: 2121 Kuhio Tower Draft Environmental Assessment

I was stunned when I first saw the report in the Star Advertiser about this planned new building.

It breaks just about every sensible environmental rule.

Having now seen the DEA I am

I understand that new buildings provide job opportunities and additional accommodation, but, a huge building that is parallel to the shoreline and is higher than current regulations allow is just not right.

The previous developers had presented plans for a structure that was better looking and provided more sky view and landscaping? That proposal would have provided a totally acceptable profit for the developers without destroying Waikiki.

This building will unnecessarily block both mauka and makai views for thousands of people.

If anyone in government wonders why people have low faith in them, this project is a perfect example of why the problem exists.

This project needs to be disapproved as currently designed.

Thank you,



Bill Quinlan

58-115 Napoionala Place, Haleiwa HI. 96712

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

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September 11, 2012

Mr. Bill Quinlan
58-115 Napoona Place
Haleiwa, Hawaii 96712

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Mr. Quinlan:

Thank you for your letter of August 17, 2012 regarding the Draft Environmental Assessment (“DEA”) for the 2121 Kuhio Avenue Project (“Project”).

We appreciate your comments and offer the following responses:

1. The proposed building orientation and design was developed to implement Waikiki Special Design District (WSDD) Guidelines.

The WSDD Guidelines section that includes “Orientation and Form” and establishes the guideline for the mauka/makai orientation is 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 following 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” 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.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalakaua Avenue and from Kuhio Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian accessways into and through Waikiki. This ewa/diamond head orientation is also sensitive to protection of public views from the Gateway to Waikiki located at Kalakaua Avenue and Ala Moana Boulevard and from the open space at Fort DeRussy. A volume study (Appendix VI Building Orientation – Photographic Analysis in the Final EA) on photographs of views from these locations have been prepared comparing the impacts from two building designs (enclosed), one with a mauka/makai building orientation and one with the proposed ewa/diamond head building orientation. The ewa/diamond head building orientation has significantly less visual impact along these important public view corridors except for one view at the corner of Kalakaua Avenue and Kalaimoku Street. The structure has a narrower face with the ewa/diamond head orientation than with a mauka/makai orientation in all but one of the viewpoints along Kalakaua Avenue and Kuhio Avenue. The view from the Gateway to Waikiki at Kalakaua Avenue and Ala Moana Boulevard is also less impacted with the ewa/diamond head building orientation.

A view from the open space at Fort DeRussy shows that the visual impact with either orientation is about the same.

At the request of the Department of Planning and Permitting (DPP) the Building Orientation – Photographic Analysis also shows views from Kalaimoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as significant public views **mauka views** at certain other streets located mauka of Kuhio Avenue.

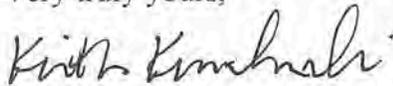
The ewa/diamond head orientation has also allowed us to provide the widest possible uninterrupted public open space along Kuhio Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kuhio Avenue as possible and would have been significantly wider to accommodate a similar amount of floor area and not located above and within the proposed parking podium.

The concept of “building forms which produce narrow towers are preferred” is supported by the Project as well. The additional height allows the Applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

2. The Applicant will request approval of a 350-foot height limit for the Project from City Council. The additional height allows the Applicant to provide a narrower tower, as well as a narrower parking podium with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built up environment typically found fronting Kuhio Avenue with limited open space relief provided by existing and proposed developments. This additional height will also allow a reduction in the length of the tower as viewed from Kuhio Avenue.

Your letter and this response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

cc: Department of Planning and Permitting
PACREP LLC

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-202
HONOLULU, HAWAII 96822

October 26, 2012

BUS. (808) 988-2231

FAX. (808) 988-1140

E-mail: kkurahashi@hawaii.rr.com

Mr. Bill Quinlan
58-115 Napoonala Place
Haleiwa, Hawaii 96712

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Mr. Quinlan:

This letter serves as a supplement and update to our previous letter to you regarding the Draft Environmental Assessment (“DEA”) for the 2121 Kuhio Avenue Project (“Project”).

The Pre-Final EA for the project has been revised and the Final EA provides ewa/diamond head oriented building photos that are consistent with the revised plans in regard to both design and building orientation. See enclosed cd, Gateway Views (if you require hard copies of the photos, please call me at 988-2231 or write to me at the above address). The Project design has been revised to reduce the length of the tower of the building by about 48 feet based on concerns presented on the DEA. This reduction in length will reduce the impact of shadows and impacts to ocean views from the Four Paddle. With a 350-foot height limit, many of the Four Paddle units will retain an ocean view. A revised mauka/makai oriented building design has also been provided. The tower design footprint on the site for both the revised ewa/diamond head oriented building and the revised mauka/makai oriented building is provided in the enclosed Gateway Views.

Building Orientation

The proposed building orientation and design was developed to implement Waikiki Special Design District (WSDD) Guidelines.

The WSDD Guidelines section that includes “Orientation and Form” and establishes the guideline for the mauka/makai orientation is 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 following 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” 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.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalākaua Avenue and from Kūhiō Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian access ways into and through Waikīkī.

The proposed ewa/diamond head building orientation is also sensitive to the need to protect public views from the Gateway to Waikīkī located at Kalākaua Avenue and Ala Moana Boulevard. A volume study on photographs of views from these locations have been prepared comparing the visual impact of two building designs, one with a mauka/makai orientation and one with the proposed building design in an ewa/diamond head orientation. See Gateway Views, enclosed cd, included in the Final EA as Appendix VI, Building Orientation – Photographic Analysis.

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalākaua Avenue and from Kūhiō Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian access ways into and through Waikīkī. This ewa/diamond head orientation is also sensitive to protection of public views from the Gateway to Waikiki located at Kalākaua Avenue and Ala Moana Boulevard. A volume study (enclosed cd,

Gateway Views) on photographs of views from these locations has been prepared comparing the impacts from two building designs (enclosed), one with a mauka/makai building orientation and one with the proposed ewa/diamond head building orientation. The ewa/diamond head building orientation has significantly less visual impact along these important public view corridors except for one view at the corner of Kalākaua Avenue and Kālaimoku Street and two views looking ewa along Kūhiō Avenue. The structure has a narrower face with the ewa/diamond head orientation than with a mauka/makai orientation in all but three of the viewpoints along Kalākaua Avenue and Kūhiō Avenue. The view from the Gateway to Waikiki at Kalākaua Avenue and Ala Moana Boulevard is also less impacted with the ewa/diamond head building orientation.

The viewpoint at the open space at Fort DeRussy shows that the visual impact is greater with the ewa/diamond head orientation.

At the request of DPP the Building Orientation – Photographic Analysis (Appendix VI) also shows views from Kālaimoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two street corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as significant public views the mauka views at certain other streets located mauka of Kūhiō Avenue.

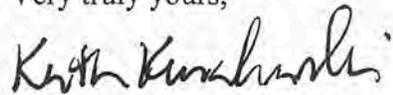
The ewa/diamond head orientation has also allowed us to provide the widest possible uninterrupted public open space along Kūhiō Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kūhiō Avenue as possible and would have been significantly wider to accommodate a similar amount of floor area.

The concept of “building forms which produce narrow towers are preferred” is supported by the Project as well. The additional height allows the applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

Mr. Bill Quinlan
Page 4

This response will be included in the Final EA.

Very truly yours,

A handwritten signature in black ink, appearing to read "Keith Kurahashi". The signature is written in a cursive style.

Keith Kurahashi

Encl.

cc: Department of Planning and Permitting
PACREP LLC

Ms. Nancy Magraudy
2115 Ala Wai Blvd. PH#3
Honolulu, Hi. 96815

August 18, 2012

Kusao & Kurahashi Inc.
2752 Woodlawn Dr. Sute 5-202
Honolulu, Hi. 26822

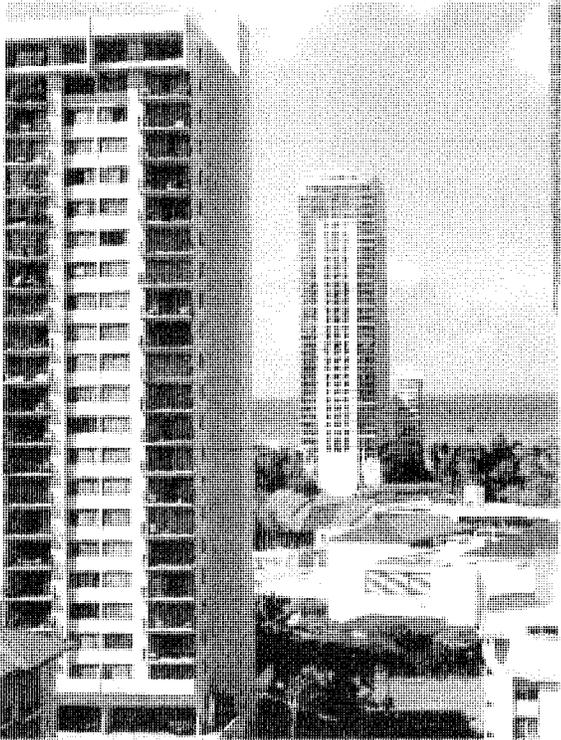
Gentlemen:

I live on the corner of Launiu and Ala Wai Blvd. I was shocked to see the plans for the 2121 Kuhio Tower that is in the works for the end of the street and I have concerns. I have perused some of the perspective and do not understand that it stated it had no impact on the current residents in the neighborhood. Some of my concerns are:

1. **TRAFFIC** There is always a back up of traffic on Kuhio Avenue, how will this affect the residents when you add 459 new units? Will they widen Kuhio Avenue? In the morning there is only one lane as service trucks are blocking the right lane. With it being called a Condo/Hotel there is only 25% parking for residents of the new building. People go round and round Launiu and Kuhio looking for parking now. The meters there now will disappear. It sometimes takes me a long time with bumper to bumper to go just three lights to my street. When I turn left if someone presses the WALK only two cars get through.
2. **SEWER** In 2006 our antiquated and inadequate sewer spill was a catastrophe and I look every day at the unsightly sewers above the ground on the Mauka side of Ala Wai. This is 2012 and it hasn't been taken care of yet.

3.

LIGHT, SUN, OCEAN



I will no longer be able to see the above from my Lanai. How can you say it has no impact and why is the building's wide side planned so that permanent residents now here cannot see the above.

These are a few of my concerns, and I hope the Environmental Committee will please look at this project carefully as to protect the residents who live here. I know progress has to be made on this property but such a massive building that will affect the environment, our property values forever.

Thank you for your consideration.

Respectfully,


Nancy Magraudy

TO: Councilman Stanley Chang Fax 808-768-1169 TEL 808-768-5004

FROM: Nancy Magraudy (resident Waikiki)

SUBJECT: Proposed Building at 2121 Kuhio

As a resident of Waikiki and a family owned condo in the Four Paddle I was shocked to find out that this building was going for approval of the City of Honolulu.

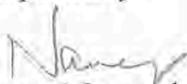
When the family first purchased an ocean view condo years ago at the Four Paddle at 2140 Kuhio we looked into the property across the street before we splurged on an ocean view to see what the zoning was at that time. It was zoned Commercial, three story limit at that time so we purchased it.

Now we find out that it is zoned 300 ft, sideways to ocean. How did that happen. We weren't ever notified of this change. Now after seeing the picture in the paper we see that it is getting approval for 400 feet, 34 story front view of ocean (don't know of my accuracy on this). An article said the Waikiki Board and others were approving of this. How can that happen. Why weren't residents notified so we could have our say.

I live on Ala Wai and Launiu, there will be no ocean view for me either, traffic is horrible on Kuhio always to get to my condo and I'm still looking at remnants of pipe on land from the 2006 Kaiolu spill.

What is your position on this? I thought the council and Waikiki Board was looking out for us.

Respectfully


Nancy Magraudy
2115 Ala Wai PH#3
Honolulu, Hi. 96815

808-924-8400

PS I understand it is going for environmental approval. I hope the same consideration will be given to new and long time residents of Waikiki as were given the whales on the environmental study of the Ferry.

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

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E-Mail: kkurahashi@hawaii.rr.com

September 11, 2012

Ms. Nancy Magraudy
2115 Ala Wai Boulevard, PH#3
Honolulu, Hawaii 96815

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Ms. Magraudy:

Thank you for your letter of August 18, 2012 regarding the Draft Environmental Assessment ("DEA") for the 2121 Kuhio Avenue Project ("Project").

We appreciate your comments and offer the following responses:

1. The Traffic Impact Report for the Project concluded that "... with the implementation of the proposed recommendation including the elimination or relocation of the existing drop-off area adjacent to the project site, staging and loading areas within and near the project site, traffic operations in the vicinity are anticipated to continue operating at levels of service similar to those without project conditions."
2. The parking requirement for the Project, based on 459 hotel rooms (no "lock-out" units planned) and accessory uses at one stall per four units is 115 parking stalls plus 45 parking stalls provided to meet the current parking requirements for 2100 Kalakaua, for a total of 160 required parking stalls. The Applicant will be providing 187 parking stalls, 27 more stalls than required.
3. DPP approved a Sewer Connection Application for the Project on January 17, 2012, subject to a condition that the Project connect to the 20-inch sewer line on Kuhio Avenue at the owner's expense. This confirms the adequacy of the municipal system to accommodate the proposed development.
4. The Applicant is concerned about the surrounding property owners' fears, and will do its best to develop a successful Project that considers the well-being of the general public. This Project will provide an improvement through ground-level beautification that will upgrade the lot and encourage other properties nearby to redevelop as well, thereby raising the quality of real estate in the area and increasing property values.
5. The proposed building orientation and design was developed to implement Waikiki Special Design District (WSDD) Guidelines.

The WSDD Guidelines section that includes “Orientation and Form” and establishes the guideline for the mauka/makai orientation is 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 following 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” 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
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- 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.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalakaua Avenue and from Kuhio Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian accessways into and through Waikiki. This ewa/diamond head orientation is also sensitive to protection of public views from the Gateway to Waikiki located at Kalakaua Avenue and Ala Moana Boulevard and from the open space at Fort DeRussy. A volume study (Appendix VI

Building Orientation – Photographic Analysis in the Final EA) on photographs of views from these locations have been prepared comparing the impacts from two building designs (enclosed), one with a mauka/makai building orientation and one with the proposed ewa/diamond head building orientation. The ewa/diamond head building orientation has significantly less visual impact along these important public view corridors except for one view at the corner of Kalakaua Avenue and Kalaimoku Street. The structure has a narrower face with the ewa/diamond head orientation than with a mauka/makai orientation in all but one of the viewpoints along Kalakaua Avenue and Kuhio Avenue. The view from the Gateway to Waikiki at Kalakaua Avenue and Ala Moana Boulevard is also less impacted with the ewa/diamond head building orientation.

A view from the open space at Fort DeRussy shows that the visual impact with either orientation is about the same.

At the request of the Department of Planning and Permitting (DPP) the Building Orientation – Photographic Analysis also shows views from Kalaimoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as significant public views **mauka views** at certain other streets located mauka of Kuhio Avenue.

The ewa/diamond head orientation has also allowed us to provide the widest possible uninterrupted public open space along Kuhio Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kuhio Avenue as possible and would have been significantly wider to accommodate a similar amount of floor area and not located above and within the proposed parking podium.

The concept of “building forms which produce narrow towers are preferred” is supported by the Project as well. The additional height allows the Applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

In Honolulu, public views are sometimes protected but private views are not. Every property owner has certain property rights to develop their property, in accordance with the City’s Land Use Ordinance.

We would also like to take this opportunity to respond to your concerns presented to Councilman Stanley Chang.

The Project site was formerly zoned Resort Commercial Precinct and is now zoned Resort Mixed Use Precinct (rezoned in December of last year. However, the height limit for the site, since 1969 has been 300 feet. The Four Paddle was built in 1973.

The City Council in December of last year approved the following amendment to the Land Use Ordinance:

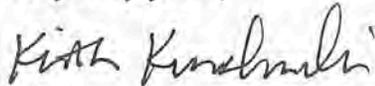
“The council by resolution may approve a building that exceeds the building height limits established in Exhibit 21-9.15 and on the zoning map, provided that the council determines that the building with the added height would not be visible within the view cones from the Punchbowl lookouts towards Diamond 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.”

This amendment allows an Applicant to submit a request for an increase in height up to 350 feet (in our case an increase of 50 feet) that will be reviewed by the City Council in the form of a Resolution.

Your concern about views, traffic congestion and sewer capacity was addressed earlier in this letter.

Your letter and this response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

Encls.

cc: Department of Planning and Permitting
PACREP LLC

Ms Nancy Magraudy
2115 Ala Wai Blvd PH3
Honolulu, Hi. 96815

October 4, 2012

Planning and Zoning Consultants
2752 Woodlawn Dr. Suite 5-202
Honolulu, Hi. 96815

Subject: Draft Enviromental Assessment
2121 Kuhio Ave. Development

Gentlemen:

Thank you for your response to my letter. I would like to respond to some of your answers. The Traffic Impact Report said that 459 units, plus employees with only 187 parking stalls will not impact the corner I use several times a day at Launiu and Kuhio? I can't believe planning really meant to only have a requirement for 160 stalls. What about the two bus stops, one in front of 4 Paddle and across the street. Will they be relocated? I use them almost everyday, I'm 76 years old.

I know the developer will pay for sewer access, but will City and County of Honolulu be able to handle 459 more units accessing pipes when the pipes replacing the bad ones on the Kaiolu spill are still ugly and exposed after 6 years.

You said it would add to the value of the building, less sun, no ocean view, traffic, I think it will have the opposite affect.

I'm happy that the views of Diamond Head and Punchbowl won't be ruined to implement requirements. However, I'm wondering if the City and County really meant to exclude people that live on Kuhio, a major hub of Waikiki. We of course won't be able to see ocean, and Ft. DeRussy that live in the Four Paddle. We have trouble coming home now at peak traffic hours.

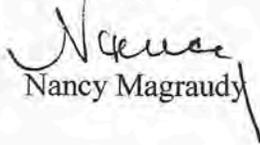
Thank you for the many pictures you sent, were there any of Kuhio Avenue.? I didn't see a building at the end of Launiu. I really don't care about "shadow affect". Thank you for the pictures anyway.

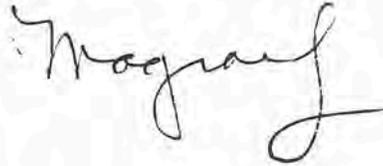
Thank you for the response to my letter to Councilman Chang. I'm at a loss to know why the real estate people that my family dealt with in purchasing an ocean view in the Four Paddle were told at the time that it was zoned Commercial three story, we must have been misinformed by our agents or we would not have purchased the unit. We had no reason to believe otherwise there were just small stores there at the time.

You say you are addressing parking requirements, views from De Russy and Punchbowl and I hope then that if you are permitted these things you will keep the required Makai to Mauka orientation and to 300 feet as they also require.

I will be sending a copy of this letter to Councilman Chang thanking him for forwarding you my concerns. As you know I live at the above address, but family owns a unit in the Four Paddle and the first time we even heard about zoning changes or this project was recently on the front page of the Star Advertiser. I thought we would have been notified before then.

Respectfully


Nancy Magraudy



KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-202
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October 26, 2012

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E-mail: kkurahashi@hawaii.rr.com

Ms. Nancy Magraudy
2115 Ala Wai Boulevard, PH#3
Honolulu, Hawaii 96815

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Ms. Magraudy:

Thank you for your letter of October 4, 2012 regarding the Draft Environmental Assessment ("DEA") for the 2121 Kuhio Avenue Project ("Project").

We appreciate your comments and offer the following responses:

1. The Applicant plans to implement the proposed recommendations of The Traffic Impact Report to ensure that traffic operations in the vicinity will continue to operate at levels of service similar to those if the Project were not built. The two bus stops are not planned to be relocated based on this Project.
2. The City has determined that they will be able to handle the expected flows from 459 hotel units for the Project provided that the Project connect to the 20-inch sewer line on Kuhio Avenue at the owner's expense.
3. The Pre-Final EA for the project has been revised and the Final EA provides ewa/diamond head oriented building photos that are consistent with the revised plans in regard to both design and building longitude. See enclosed cd, Gateway Views (if you require hard copies of the photos, please call me at 988-2231 or write to me at the above address). The Project design has been revised to reduce the length of the tower of the building by about 48 feet based on concerns presented on the DEA. This reduction in length will reduce the impact of shadows and impacts to ocean views on the Four Paddle. With a 350-foot height limit, many of the Four Paddle units will retain an ocean view. A revised mauka/makai oriented building design has also been provided. The tower design footprint on the site for both the revised ewa/diamond head oriented building and the revised mauka/makai oriented building is provided in the enclosed Gateway Views.
4. Generally higher end development in an area will tend to increase property values in an area. The precise impact on ocean views for each unit in the Four Paddle will be determined upon completion of the Project. As mentioned earlier, with a 350-foot height limit, many of the Four Paddle units will retain an ocean view.

5. In Honolulu, public views are sometimes protected but private views are not. Every property owner has certain property rights to develop their property, in accordance with the City's Land Use Ordinance. In many instances development of neighboring properties will impact the view of others. This being said, as mentioned earlier, with a 350-foot height limit, many of the Four Paddle units will retain an ocean view.
6. The photographs have been updated to reflect the current project design (see enclosed cd, Gateway Views). View 12 provides the view from Launiu Street.
7. A 350-foot height will allow us to lessen the view impacts to the Four Paddle and as discussed in our earlier letter, the proposed building orientation and design was developed to implement Waikiki Special Design District (WSDD) Guidelines.

The WSDD Guidelines section that includes "Orientation and Form" and establishes the guideline for the mauka/makai orientation is 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 following 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" 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
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- 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.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalākaua Avenue and from Kūhiō Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian access ways into and through Waikīkī.

The proposed ewa/diamond head building orientation is also sensitive to the need to protect public views from the Gateway to Waikīkī located at Kalākaua Avenue and Ala Moana Boulevard. A volume study on photographs of views from these locations have been prepared comparing the visual impact of two building designs, one with a mauka/makai orientation and one with the proposed building design in an ewa/diamond head orientation. See Gateway Views, enclosed cd, included in the Final EA as Appendix VI, Building Orientation – Photographic Analysis.

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalākaua Avenue and from Kūhiō Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian access ways into and through Waikīkī. This ewa/diamond head orientation is also sensitive to protection of public views from the Gateway to Waikiki located at Kalākaua Avenue and Ala Moana Boulevard. A volume study (enclosed cd, Gateway Views) on photographs of views from these locations has been prepared comparing the impacts from two building designs (enclosed), one with a mauka/makai building orientation and one with the proposed ewa/diamond head building orientation. The ewa/diamond head building orientation has significantly less visual impact along these important public view corridors except for one view at the corner of Kalākaua Avenue and Kālamoku Street and two views looking ewa along Kūhiō Avenue. The structure has a narrower face with the ewa/diamond head orientation than with a mauka/makai orientation in all but three of the viewpoints along Kalākaua Avenue and Kūhiō Avenue. The view from the Gateway to Waikiki at Kalākaua Avenue and Ala Moana Boulevard is also less impacted with the ewa/diamond head building orientation.

The viewpoint at the open space at Fort DeRussy shows that the visual impact is greater with the ewa/diamond head orientation.

At the request of DPP the Building Orientation – Photographic Analysis (Appendix VI) also shows views from Kālamoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two street corridors. However, the views along these two streets are not considered significant

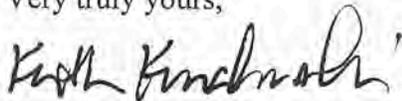
public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as significant public views the mauka views at certain other streets located mauka of Kūhiō Avenue.

The ewa/diamond head orientation has also allowed us to provide the widest possible uninterrupted public open space along Kūhiō Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kūhiō Avenue as possible and would have been significantly wider to accommodate a similar amount of floor area.

The concept of “building forms which produce narrow towers are preferred” is supported by the Project as well. The additional height allows the applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

Your letter and this response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

Encl.

cc: Department of Planning and Permitting
PACREP LLC
Councilmember Stanley Chang

2387 Ala Wai Blvd. #104
Honolulu, HI 96815

August 20, 2012

Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-202
Honolulu, Hawaii 96822

**Re: THE DRAFT ENVIRONMENTAL ASSESSMENT FOR 2121 KUHIO
TOWER PROJECT**

Gentlemen:

As a local resident, I would like to object to the conclusions of the 2121 Kuhio Avenue Draft Environmental Assessment.

I would like to request that the Office of Environmental Quality Control investigate other options for the building orientation that has been proposed by the Developer.

I believe these other options, including the building orientation proposed by the previous developer warrant further consideration in order to ensure the best solution for Waikiki.

It would be desirable to consider all the alternative solutions, identify them so it would reflect both the developer's plans and that of the local community.

Sincerely,



Nobu Takimoto

Cc: Office of Environmental Quality Control
235 South Beretania St.
State Office Tower, Room 702
Honolulu, Hawaii 96813

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-202
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E-Mail: kkurahashi@hawaii.rr.com

September 11, 2012

Mr. Nobu Takimoto
2387 Ala Wai Boulevard, #104
Honolulu, Hawaii 96815

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Mr. Takimoto:

Thank you for your letter of August 20, 2012 regarding the Draft Environmental Assessment (“DEA”) for the 2121 Kuhio Avenue Project (“Project”).

We appreciate your comments. Three alternatives were considered in the DEA. Based on your request, we will add a fourth alternative, the mauka/makai orientation and provide a discussion in the Final EA, as follows:

“XIII. ALTERNATIVES CONSIDERED

As mentioned throughout this report the Project is not anticipated to have a significant impact on the surrounding area in terms of public services and the environment.

Positive socio-economic impacts are projected with the development of a hotel complex, with increases in short term construction employment and long term employment in resort services.

A. NO ACTION

This alternative was considered and rejected as the applicant recently purchased this property and will need to develop it to provide a return on investment. The “no action” alternative is not an economically viable alternative.

B. DEVELOPMENT OF CONDOMINIUM UNITS

The applicant considered a development with luxury condominium units as was considered by the previous owner in the earlier FEA. Although the current market does not support the luxury condominium market at this time, at the time of completion this may be a potential market. The applicant in considering this use felt that it would be speculative on the luxury condominium market returning and the risk and carrying cost of this property should this market not return in a timely manner is not an acceptable risk.

C. CONDO HOTEL DEVELOPMENT – EWA/DIAMOND HEAD ORIENTATION

One of the applicant's principals has past experience with a condo hotel and is comfortable with this market, having been involved with the Trump Tower Waikiki located two blocks away on Saratoga Street. Another consideration in pursuing the condo hotel was the significant reduction in hotel units in Waikīkī since 2003 and the potential loss of additional hotel units, based on proposed redevelopment projects in Waikīkī.

As discussed earlier, there is a need for additional hotel product in Waikīkī. Since 2003, there has been a significant reduction in hotel units, including the Ohana Hobron conversion of 596 hotel rooms to a 181-unit condominium (Windsor) and the net loss of 1,300 hotel rooms at the Waikiki Beach Walk redevelopment, totaling 1,896 hotel units. In addition, the proposed Princess Kaiulani/Diamond Head Tower redevelopment will result in the net loss of 430 hotel units and the International Market Place will result in the loss of an additional 358 hotel units at the Miramar Waikiki hotel. The total hotel units lost and to be lost will be 2,684 units.

The improvements in the Project are geared toward achieving the intent of the WSD. The new public open space at this corner lot will create an area for gathering and an important amenity for visitors and surrounding residents.

The proposed building orientation and design was developed to implement Waikiki Special Design District (WSDD) Guidelines.

The WSDD Guidelines section that includes “Orientation and Form” and establishes the guideline for the mauka/makai orientation is 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 following 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” 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.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalakaua Avenue and from Kuhio Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian accessways into and through Waikiki. This ewa/diamond head orientation is also sensitive to protection of public views from the Gateway to Waikiki located at Kalakaua Avenue and Ala Moana Boulevard and from the open space at Fort DeRussy. A volume study (Appendix VI Building Orientation – Photographic Analysis in the Final EA) on photographs of views from these locations have been prepared comparing the impacts from two building designs (enclosed), one with a mauka/makai building orientation and one with the proposed ewa/diamond head building orientation. The ewa/diamond head building orientation has significantly less visual impact along these important public view corridors except for one view at the corner of Kalakaua Avenue and Kalaimoku Street. The structure has a narrower face with the ewa/diamond head orientation than with a mauka/makai orientation in all but one of the viewpoints along Kalakaua Avenue and Kuhio Avenue. The view from the Gateway to Waikiki at Kalakaua Avenue and Ala Moana Boulevard is also less impacted with the ewa/diamond head building orientation.

A view from the open space at Fort DeRussy shows that the visual impact with either orientation is about the same.

At the request of the Department of Planning and Permitting (DPP) the Building Orientation – Photographic Analysis also shows views from Kalaimoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as significant public views mauka views at certain other streets located mauka of Kuhio Avenue.

The ewa/diamond head orientation has also allowed us to provide the widest possible uninterrupted public open space along Kuhio Avenue. A mauka/makai oriented tower would

break this public open space since the tower would have to be situated as close to Kuhio Avenue as possible and would have been significantly wider to accommodate a similar amount of floor area and not located above and within the proposed parking podium.

The concept of “building forms which produce narrow towers are preferred” is supported by the Project as well. The additional height allows the applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing and proposed developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

D. CONDO HOTEL DEVELOPMENT – MAUKA/MAKAI ORIENTATION

A mauka/makai building orientation was considered, but based on the Waikiki Special District Guidelines and Building Orientation – Photographic Analysis in Appendix VI of this Final EA the ewa/diamond head orientation was selected.

As discussed in the previous section, the Waikiki Special District Design Guidelines section that includes “Orientation and Form” are intended to promote a design that responds to climate, relates to human scale and preserves **significant public views** (emphasis added).

The Project under this alternative would not affect any of the significant public views described in the previous section and in Section 21-9.80-3(a) of the Land Use Ordinance.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

A mauka/makai building orientation would not be sensitive to the need to protect public views from Kalakaua Avenue and from Kuhio Avenue. A mauka/makai orientation would have a greater impact on public views along these two major vehicular and pedestrian accessways into and through Waikiki. The mauka/makai building orientation would also have greater impact on public views than an ewa/diamond head orientation from the Gateway to Waikiki located at Kalakaua Avenue and Ala Moana Boulevard and from the open space at Fort DeRussy. A volume study (Appendix VI Building Orientation – Photographic Analysis in the Final EA) on photographs of views from these locations has been prepared comparing the impacts from two building designs, one with a mauka/makai building orientation and one with an ewa/diamond head building orientation. The mauka/makai building orientation has a significantly greater

visual impact along these important public view corridors except for one view at the corner of Kalakaua Avenue and Kalaimoku Street. The structure has a wider face with the mauka/makai orientation than with an ewa/diamond head orientation in all but one of the viewpoints along Kalakaua Avenue and Kuhio Avenue. The view from the Gateway to Waikiki at Kalakaua Avenue and Ala Moana Boulevard is also more impacted with the mauka/makai building orientation.

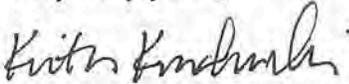
A view from the open space at Fort DeRussy shows that the visual impact with either orientation is about the same.

At the request of the Department of Planning and Permitting (DPP) the Building Orientation – Photographic Analysis also shows views from Kalaimoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as significant public views mauka views at certain other streets located mauka of Kuhio Avenue.

The mauka/makai orientation would not allow us to provide the widest possible uninterrupted public open space along Kuhio Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kuhio Avenue as possible and would have required been significantly wider to accommodate a similar amount of floor area.”

Your letter and this response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

Encls.

cc: Department of Planning and Permitting
PACREP LLC

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-202
HONOLULU, HAWAII 96822

October 26, 2012

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E-mail: kkurahashi@hawaii.rr.com

Mr. Nobu Takimoto
2387 Ala Wai Boulevard, #104
Honolulu, Hawaii 96815

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Mr. Takimoto:

This letter serves as a supplement and update to our previous letter to you regarding the Draft Environmental Assessment ("DEA") for the 2121 Kuhio Avenue Project ("Project").

The Pre-Final EA for the project has been revised and the Final EA provides ewa/diamond head oriented building photos that are consistent with the revised plans in regard to both design and building orientation. See enclosed cd, Gateway Views (if you require hard copies of the photos, please call me at 988-2231 or write to me at the above address). The Project design has been revised to reduce the length of the tower of the building by about 48 feet based on concerns presented on the DEA. This reduction in length will reduce the impact of shadows and impacts to ocean views from the Four Paddle. With a 350-foot height limit, many of the Four Paddle units will retain an ocean view. A revised mauka/makai oriented building design has also been provided. The tower design footprint on the site for both the revised ewa/diamond head oriented building and the revised mauka/makai oriented building is provided in the enclosed Gateway Views.

Building Orientation

The proposed building orientation and design was developed to implement Waikiki Special Design District (WSDD) Guidelines.

The WSDD Guidelines section that includes "Orientation and Form" and establishes the guideline for the mauka/makai orientation is 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 following 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” as follows:

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- 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.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalākaua Avenue and from Kūhiō Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian access ways into and through Waikīkī.

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Gateway Views) on photographs of views from these locations has been prepared comparing the impacts from two building designs (enclosed), one with a mauka/makai building orientation and one with the proposed ewa/diamond head building orientation. The ewa/diamond head building orientation has significantly less visual impact along these important public view corridors except for one view at the corner of Kalākaua Avenue and Kālaimoku Street and two views looking ewa along Kūhiō Avenue. The structure has a narrower face with the ewa/diamond head orientation than with a mauka/makai orientation in all but three of the viewpoints along Kalākaua Avenue and Kūhiō Avenue. The view from the Gateway to Waikiki at Kalākaua Avenue and Ala Moana Boulevard is also less impacted with the ewa/diamond head building orientation.

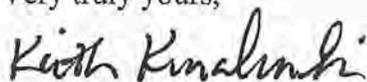
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The concept of “building forms which produce narrow towers are preferred” is supported by the Project as well. The additional height allows the applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

Very truly yours,



Keith Kurahashi

Encls.

cc: Department of Planning and Permitting
PACREP LLC

Margo Bourland

Subject: FW: 2121 Kuhio Tower Project

August 20, 2012

Kusao & Kurahashi Inc
2752 Woodlawn Drive, Suite 5-202
Honolulu, HI 26822

From: Margo Bourland [REDACTED]
Sent: Monday, August 20, 2012 3:48 PM
To: 'tberg@honolulu.gov'
Subject: 2121 Kuhio Tower Project

To Whom It May Concern;

RE: 2121 Kuhio Tower Project Environmental Study

Would you please provide information on all the alternative plans for this property. I would like to see what other plans are being presented now and what plans have been presented in the past, plus the reasons why the past plans were turned down. Were any of these plans turned away because they drastically affected thousands of existing home owners and property values, views, sunlight and openness issues, or traffic issues, or the aesthetics of Waikiki?

Why would the city and county's planning department pick a building design that would create a wall in Waikiki parallel to the ocean, and bigger than the Gateway hotel? Does this wall violate Hawaii's beautification program and the community aesthetics? The DEA report is failing to be concerned about blocking a wide view plane of the ocean, a superblock structure that blocks the Koolaus from Fort DeRussy, Saratoga Road and Kalia Road. Also, I would like to see the DEA's current traffic analysis report for the area and its impact on Waikiki in general.

Thank you for your assistance.

Best Regards,



Margo Bourland

1829 Laukahi Place
Honolulu, HI 96822

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-202
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E-Mail: kkurahashi@hawaii.mn.com

September 11, 2012

Ms. Margo Bourland
1829 Laukahi Place
Honolulu, Hawaii 96822

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Ms. Bourland:

Thank you for your email of August 20, 2012 regarding the Draft Environmental Assessment (“DEA”) for the 2121 Kuhio Avenue Project (“Project”).

We appreciate your comments and offer the following responses:

1. The following lists the alternatives considered for the Project as discussed in the Final EA.

“XIII. ALTERNATIVES CONSIDERED

As mentioned throughout this report the Project is not anticipated to have a significant impact on the surrounding area in terms of public services and the environment.

Positive socio-economic impacts are projected with the development of a hotel complex, with increases in short term construction employment and long term employment in resort services.

A. NO ACTION

This alternative was considered and rejected as the applicant recently purchased this property and will need to develop it to provide a return on investment. The “no action” alternative is not an economically viable alternative.

B. DEVELOPMENT OF CONDOMINIUM UNITS

The applicant considered a development with luxury condominium units as was considered by the previous owner in the earlier FEA. Although the current market does not support the luxury condominium market at this time, at the time of completion this may be a potential market. The applicant in considering this use felt that it would be speculative on the luxury condominium market returning and the risk and carrying cost of this property should this market not return in a timely manner is not an acceptable risk.

C. CONDO HOTEL DEVELOPMENT – EWA/DIAMOND HEAD ORIENTATION

One of the applicant's principals has past experience with a condo hotel and is comfortable with this market, having been involved with the Trump Tower Waikiki located two blocks away on Saratoga Street. Another consideration in pursuing the condo hotel was the significant reduction in hotel units in Waikīkī since 2003 and the potential loss of additional hotel units, based on proposed redevelopment projects in Waikīkī.

As discussed earlier, there is a need for additional hotel product in Waikīkī. Since 2003, there has been a significant reduction in hotel units, including the Ohana Hobron conversion of 596 hotel rooms to a 181-unit condominium (Windsor) and the net loss of 1,300 hotel rooms at the Waikiki Beach Walk redevelopment, totaling 1,896 hotel units. In addition, the proposed Princess Kaiulani/Diamond Head Tower redevelopment will result in the net loss of 430 hotel units and the International Market Place will result in the loss of an additional 358 hotel units at the Miramar Waikiki hotel. The total hotel units lost and to be lost will be 2,684 units.

The improvements in the Project are geared toward achieving the intent of the WSD. The new public open space at this corner lot will create an area for gathering and an important amenity for visitors and surrounding residents.

The proposed building orientation and design was developed to implement Waikiki Special Design District (WSDD) Guidelines.

The WSDD Guidelines section that includes “Orientation and Form” and establishes the guideline for the mauka/makai orientation is a subsection of “Building Design” which states as follows:

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Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalakaua Avenue and from Kuhio Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian accessways into and through Waikiki. This ewa/diamond head orientation is also sensitive to protection of public views from the Gateway to Waikiki located at Kalakaua Avenue and Ala Moana Boulevard and from the open space at Fort DeRussy. A volume study (Appendix VI Building Orientation – Photographic Analysis in the Final EA) on photographs of views from these locations have been prepared comparing the impacts from two building designs (enclosed), one with a mauka/makai building orientation and one with the proposed ewa/diamond head building orientation. The ewa/diamond head building orientation has significantly less visual impact along these important public view corridors except for one view at the corner of Kalakaua Avenue and Kalaimoku Street. The structure has a narrower face with the ewa/diamond head orientation than with a mauka/makai orientation in all but one of the viewpoints along Kalakaua Avenue and Kuhio Avenue. The view from the Gateway to Waikiki at Kalakaua Avenue and Ala Moana Boulevard is also less impacted with the ewa/diamond head building orientation.

A view from the open space at Fort DeRussy shows that the visual impact with either orientation is about the same.

At the request of the Department of Planning and Permitting (DPP) the Building Orientation – Photographic Analysis also shows views from Kalaimoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual

impact along these two corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as significant public views mauka views at certain other streets located mauka of Kuhio Avenue.

The ewa/diamond head orientation has also allowed us to provide the widest possible uninterrupted public open space along Kuhio Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kuhio Avenue as possible and would have been significantly wider to accommodate a similar amount of floor area and not located above and within the proposed parking podium.

The concept of “building forms which produce narrow towers are preferred” is supported by the Project as well. The additional height allows the applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing and proposed developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

D. CONDO HOTEL DEVELOPMENT – MAUKA/MAKAI ORIENTATION

A mauka/makai building orientation was considered, but based on the Waikiki Special District Guidelines and Building Orientation – Photographic Analysis in Appendix VI of this Final EA the ewa/diamond head orientation was selected.

As discussed in the previous section, the Waikiki Special District Design Guidelines section that includes “Orientation and Form” are intended to promote a design that responds to climate, relates to human scale and preserves **significant public views** (emphasis added).

The Project under this alternative would not affect any of the significant public views described in the previous section and in Section 21-9.80-3(a) of the Land Use Ordinance.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

A mauka/makai building orientation would not be sensitive to the need to protect public views from Kalakaua Avenue and from Kuhio Avenue. A mauka/makai orientation would have a greater impact on public views along these two major vehicular and pedestrian accessways into and through Waikiki. The mauka/makai building orientation would also have greater impact on public views than an ewa/diamond head orientation from the Gateway to Waikiki located at Kalakaua Avenue and Ala Moana Boulevard and from the open space at Fort DeRussy. A volume study (Appendix VI Building Orientation – Photographic Analysis in the Final EA) on photographs of views from these locations has been prepared comparing the impacts from two building designs, one with a mauka/makai building orientation and one with an ewa/diamond head building orientation. The mauka/makai building orientation has a significantly greater visual impact along these important public view corridors except for one view at the corner of Kalakaua Avenue and Kalaimoku Street. The structure has a wider face with the mauka/makai orientation than with an ewa/diamond head orientation in all but one of the viewpoints along Kalakaua Avenue and Kuhio Avenue. The view from the Gateway to Waikiki at Kalakaua Avenue and Ala Moana Boulevard is also more impacted with the mauka/makai building orientation.

A view from the open space at Fort DeRussy shows that the visual impact with either orientation is about the same.

At the request of the Department of Planning and Permitting (DPP) the Building Orientation – Photographic Analysis also shows views from Kalaimoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as significant public views mauka views at certain other streets located mauka of Kuhio Avenue.

The mauka/makai orientation would not allow us to provide the widest possible uninterrupted public open space along Kuhio Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kuhio Avenue as possible and would have required been significantly wider to accommodate a similar amount of floor area.”

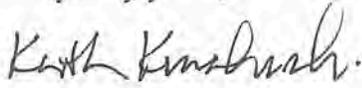
2. The Department of Planning and Permitting (DPP) has not approved this Project. The Project is going through a review process to determine whether the Project meets the requirements of building design in accordance with criteria, guidelines and development standards in the Land Use Ordinance.

Alternative C in the above section provides details on the Project’s compliance with Waikiki Special District Guidelines and the consideration of the ewa/diamond head orientation.

3. The latest Traffic Impact Report for the Project is enclosed and is included in Appendix III of the Final EA. The Traffic Impact Report concluded that "... with the implementation of the proposed recommendation including the elimination or relocation of the existing drop-off area adjacent to the project site, staging and loading areas within and near the project site, traffic operations in the vicinity are anticipated to continue operating at levels of service similar to those without project conditions." The Project will not have a significant impact on traffic operations in the area.

Your letter and this response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

Encls.

cc: Department of Planning and Permitting
PACREP LLC

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

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October 26, 2012

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Ms. Margo Bourland
1829 Laukahi Place
Honolulu, Hawaii 96822

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Ms. Bourland:

This letter serves as a supplement and update to our previous letter to you regarding the Draft Environmental Assessment ("DEA") for the 2121 Kuhio Avenue Project ("Project").

The Pre-Final EA for the project has been revised and the Final EA provides ewa/diamond head oriented building photos that are consistent with the revised plans in regard to both design and building orientation. See enclosed cd, Gateway Views (if you require hard copies of the photos, please call me at 988-2231 or write to me at the above address). The Project design has been revised to reduce the length of the tower of the building by about 48 feet based on concerns presented on the DEA. This reduction in length will reduce the impact of shadows and impacts to ocean views from the Four Paddle. With a 350-foot height limit, many of the Four Paddle units will retain an ocean view. A revised mauka/makai oriented building design has also been provided. The tower design footprint on the site for both the revised ewa/diamond head oriented building and the revised mauka/makai oriented building is provided in the enclosed Gateway Views.

Building Orientation

The proposed building orientation and design was developed to implement Waikiki Special Design District (WSDD) Guidelines.

The WSDD Guidelines section that includes "Orientation and Form" and establishes the guideline for the mauka/makai orientation is 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 following 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” 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.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalākaua Avenue and from Kūhiō Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian access ways into and through Waikīkī.

The proposed ewa/diamond head building orientation is also sensitive to the need to protect public views from the Gateway to Waikīkī located at Kalākaua Avenue and Ala Moana Boulevard. A volume study on photographs of views from these locations have been prepared comparing the visual impact of two building designs, one with a mauka/makai orientation and one with the proposed building design in an ewa/diamond head orientation. See Gateway Views, enclosed cd, included in the Final EA as Appendix VI, Building Orientation – Photographic Analysis.

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalākaua Avenue and from Kūhiō Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian access ways into and through Waikīkī. This ewa/diamond head orientation is also sensitive to protection of public views from the Gateway to Waikiki located at Kalākaua Avenue and Ala Moana Boulevard. A volume study (enclosed cd,

Gateway Views) on photographs of views from these locations has been prepared comparing the impacts from two building designs (enclosed), one with a mauka/makai building orientation and one with the proposed ewa/diamond head building orientation. The ewa/diamond head building orientation has significantly less visual impact along these important public view corridors except for one view at the corner of Kalākaua Avenue and Kālaimoku Street and two views looking ewa along Kūhiō Avenue. The structure has a narrower face with the ewa/diamond head orientation than with a mauka/makai orientation in all but three of the viewpoints along Kalākaua Avenue and Kūhiō Avenue. The view from the Gateway to Waikiki at Kalākaua Avenue and Ala Moana Boulevard is also less impacted with the ewa/diamond head building orientation.

The viewpoint at the open space at Fort DeRussy shows that the visual impact is greater with the ewa/diamond head orientation.

At the request of DPP the Building Orientation – Photographic Analysis (Appendix VI) also shows views from Kālaimoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two street corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as significant public views the mauka views at certain other streets located mauka of Kūhiō Avenue.

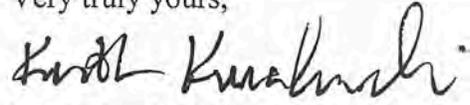
The ewa/diamond head orientation has also allowed us to provide the widest possible uninterrupted public open space along Kūhiō Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kūhiō Avenue as possible and would have been significantly wider to accommodate a similar amount of floor area.

The concept of “building forms which produce narrow towers are preferred” is supported by the Project as well. The additional height allows the applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

Ms. Margo Bourland
Page 4

This response will be included in the Final EA.

Very truly yours,

A handwritten signature in black ink, appearing to read "Keith Kurahashi". The signature is fluid and cursive, with a small dot at the end of the last stroke.

Keith Kurahashi

Encl.

cc: Department of Planning and Permitting
PACREP LLC

To whom it may concern,

As a resident of Waikiki I am concerned about the massive structure about to be built in our community. After researching the details of this proposed plan, it seems to me that the design and layout of this building does not comply with the Waikiki Special District Design Rules, thereby drastically affecting thousands of residents and visitors. I realize that these are just guidelines and I am not opposed to the construction of this building, only of its design and how it will greatly affect the area in which I and so many others like myself reside. For example, on page 4 of the WSD, one of the objectives is to "Provide opportunities to renovate and redevelop existing structures which otherwise might deteriorate." In my opinion a tower like this will brutally affect the future development of the neighborhood on the mauka side of this monstrosity. The residents alongside Launiu Street not to mention Kuhio Ave. will be facing a massive block wall which will now seriously affect the property value of their investments thus inhibiting future redevelopment or enhancement of such properties.

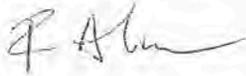
According to the developers, the reasoning for the designing of this building is to preserve the view of Diamond Head as you enter Waikiki through the gateway of the intersection of Kalakaua and Ala Moana, which is simply untrue as you cannot see Diamond Head from this point anyway. If this plan proceeds the way it exists at the moment, it will obstruct views of the mountains from other hotels along the beach line and the park at Fort DeRussy. It will also cause a huge obstruction of sunlight for residents who're mauka of this hotel. I believe that the developers have only one agenda in mind and it is not about any contribution to the community, but selfishly the opposite. It is all about stealing the ocean and mauka views from other residents and the public for their own benefit. And if this is not true, why not design this huge structure to accommodate both the public and residents of the surrounding neighborhood? The Trump building was successfully constructed with these ingredients in mind so we know it obviously can be done.

I encourage you to take a second look at the Waikiki Special District Design Rules and see the significant serious impact on the future of Waikiki if this building and others like it continue to be constructed in this sort of design. Assuming that buildings like the Marco Polo, Ilikai, and Sheraton, which block out large sections of sky, oceans, sunsets, parks, etc. are a thing of the past, how is this massive wall of a hotel allowed to be built with no consideration for the rest of Waikiki?

I thank you for your time.

Aloha,

Faye Archambeau



2140 Kuhio Ave. #1102
Honolulu, HI 96815

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

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September 11, 2012

Ms. Faye Archambeau
2140 Kuhio Avenue, #1102
Honolulu, Hawaii 96815

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Ms. Archambeau:

Thank you for your letter regarding the Draft Environmental Assessment (“DEA”) for the 2121 Kuhio Avenue Project (“Project”).

We appreciate your comments and offer the following responses:

1. The Applicant will process a Waikiki Special District Permit application with the Department of Planning and Permitting (DPP) that will address the Waikiki Special District Design guidelines and development standards. DPP will determine if the Project design can be approved through their review process.

The proposed building orientation and design was developed to implement Waikiki Special Design District (WSDD) Guidelines.

The WSDD Guidelines section that includes “Orientation and Form” and establishes the guideline for the mauka/makai orientation is 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 following 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” 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.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

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A view from the open space at Fort DeRussy shows that the visual impact with either orientation is about the same.

At the request of the Department of Planning and Permitting (DPP) the Building Orientation – Photographic Analysis also shows views from Kalaimoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two corridors. However, the views along these two streets are not

considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as significant public views **mauka views** at certain other streets located mauka of Kuhio Avenue.

The ewa/diamond head orientation has also allowed us to provide the widest possible uninterrupted public open space along Kuhio Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kuhio Avenue as possible and would have been significantly wider to accommodate a similar amount of floor area and not located above and within the proposed parking podium.

The concept of “building forms which produce narrow towers are preferred” is supported by the Project as well. The additional height allows the Applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

2. A shadow study (enclosed) is included in the Final EA and the narrative for that shadow study is provided below:

“Based on our shadow study, the Project with an ewa/diamond head orientation will shade the pool and deck area of the Four Paddle from about 2:00 pm on during the Equinox and partially shade the deck area from 2:00 pm to 3:00 pm and begin to shade the pool area from 3:00 pm on during the Winter Solstice. The Four Paddle pool and deck area will not be affected during the Summer Solstice.

This ewa/diamond head orientation affects the block between Kalaimoku Street and Launiu Street during the Winter Solstice, casting a shadow from 12:00 pm to after 3:00 pm. This block is not affected during the Equinox and the Summer Solstice.

The Project with an ewa/diamond head orientation will cast a shadow over a small portion of the northern corner of Ft. DeRussy from before 8:00 am to 9:00 am. These early morning shadows should have minimal impact on Ft. DeRussy and the growth and development of the trees at Ft. DeRussy.

The mauka/makai orientation has less of an impact on the Four Paddle related to shadows during the Equinox with shadows cast over the half of the pool and deck area from 3:00 pm, covering the entire pool and deck at about 4:00 pm. During the Winter Solstice, this orientation will not affect the pool and deck area.

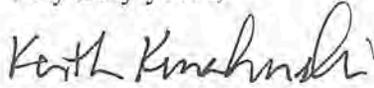
The mauka/makai orientation does not affect the block between Kalaimoku Street and Launiu Street during the Summer Solstice and the Equinox. During the Winter Solstice, shadows affect portions of this block from 12:00 pm until 3:00 pm.

The mauka/makai orientation, similar to the ewa/diamond head orientation will cast a shadow over a small portion of the northern corner of Ft. DeRussy from before 8:00 am to 9:00 am. These early morning shadows should have minimal impact on Ft. DeRussy and the growth and development of the trees at Ft. DeRussy.”

DPP will consider the proposed design of the structure and the potential impact to public views, public open space, and other criteria in determining the appropriate orientation for the building and other design elements.

Your letter and this response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

Encls.

cc: Department of Planning and Permitting
PACREP LLC

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

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October 26, 2012

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Ms. Faye Archambeau
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**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Ms. Archambeau:

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Building Orientation

The proposed building orientation and design was developed to implement Waikiki Special Design District (WSDD) Guidelines.

The WSDD Guidelines section that includes "Orientation and Form" and establishes the guideline for the mauka/makai orientation is a subsection of "Building Design" which states as follows:

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- 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.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

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The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalākaua Avenue and from Kūhiō Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian access ways into and through Waikīkī.

The proposed ewa/diamond head building orientation is also sensitive to the need to protect public views from the Gateway to Waikīkī located at Kalākaua Avenue and Ala Moana Boulevard. A volume study on photographs of views from these locations have been prepared comparing the visual impact of two building designs, one with a mauka/makai orientation and one with the proposed building design in an ewa/diamond head orientation. See Gateway Views, enclosed cd, included in the Final EA as Appendix VI, Building Orientation – Photographic Analysis.

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The viewpoint at the open space at Fort DeRussy shows that the visual impact is greater with the ewa/diamond head orientation.

At the request of DPP the Building Orientation – Photographic Analysis (Appendix VI) also shows views from Kālaimoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two street corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as significant public views the mauka views at certain other streets located mauka of Kūhiō Avenue.

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The concept of “building forms which produce narrow towers are preferred” is supported by the Project as well. The additional height allows the applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

Shadow Study

Based on our shadow study (enclosed in cd), the Project with an ewa/diamond head orientation will shade the pool and deck area of the Four Paddle from about 2:00 pm on during the Equinox and will partially shade the Four Paddle barbecue deck area from about 2:00 pm to and fully shade the barbecue deck and pool area by 3:00 pm. and begin to shade the pool area from 3:00 pm on. During the Winter Solstice the Project will partially shade the barbecue deck area from

about 3:00 pm and begin to shade a small portion of the pool area from about 4:00 pm. The Four Paddle pool and deck area will not be affected during the Summer Solstice.

This ewa/diamond head orientation affects the block between Kālainmoku Street and Launiu Street during the Winter Solstice. , casting a shadowThe Project will partially shade this area from 12:00 pm and moves across this area fully shading the Kūhiō frontage at about 1:00 pm and partially shading it at 2:00 pm with less shading at 4:00 pm with the shadow clearing the property just after 4:00 pmto after 3:00 pm. This block is not affected during the Equinox and the Summer Solstice.

The Project with an ewa/diamond head orientation will cast a shadow overshade a small portion of the northern corner of Ft. DeRussy from before 8:00 am to 9:00 am during the Summer Soltice. These early morning shadows should have minimal impact on Ft. DeRussy and the growth and development of the trees at Ft. DeRussy. Ft. DeRussy is not affected during the Equinox and Winter Solstice.

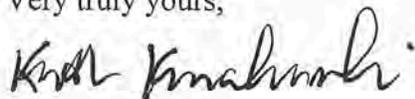
The mauka/makai orientation has less of an impact on the Four Paddle related to shadows during the Equinox with will shadeshadows cast over the barbecue deck area from about 2:00 pm and will cover most of the barbecue deck and a small portion of half of the pool and deck area from 3:00 pm, covering most of the barbecue deck and the entire pool and deckarea atfrom about 4:00 pm. During the Winter Solstice the Project will shade a small portion of the barbecue area from 4:00 pm. During the Summer Solstice, this orientation will not affect the pool and deck area.

The mauka/makai orientation does not affect the block between Kālainmoku Street and Launiu Street during the Summer Solstice and the Equinox. During the Winter Solstice, the Project will shade shadows affect portions of this block from 12:00 pm until 3:00 pm.

The mauka/makai orientation during the Summer Solstice, similar to the ewa/diamond head orientation will cast a shadow overshade a small portion of the northern corner of Ft. DeRussy from before about 8:00 am to 9:00 am. These early morning shadows should have minimal impact on Ft. DeRussy and the growth and development of the trees at Ft. DeRussy. Ft. DeRussy is not affected during the Equinox and Winter Solstice.

This response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

Encl.

cc: Department of Planning and Permitting
PACREP LLC

To Whom it May Concern,

This letter is in response to the proposal of the 2121 Kuhio Ave. condo hotel in Waikiki. The condo project is a 350 foot tall building that will drastically change the Honolulu skyline for the worse and therefore, should not be approved.

There are continuous efforts to preserve the unique Waikiki experience for visitors and residents alike. Regarding urban development in Waikiki, no document captures the deliberate efforts by the city to accomplish this better than the Urban Center Development Plan published in 2004 by the City and County of Honolulu. This plan was put in place in order to protect certain qualities of this area, such as the views of the mountains and ocean, and also the amazingly blue sky. It is clear that Waikiki and the surrounding areas are changing, but one of the purposes of this plan is to protect the parts of this city that are priceless.

An important aspect to mention is that this plan was written not only for the quality of tourism, but also for the residents. As a guide for development in the city, "the quality of the street environment for pedestrians, public spaces, the scale and design of new buildings" (p.3-46) should be addressed, according to the document. This being said, the thought of building a condo that will be 350 feet tall, seems to be taking the scale out of range. None of the buildings on the mauka or makai side of this lot are near this tall, making it seem like this would be out of place, and does not obey the city's development plan.

Not only will this building be a huge wall, it will block out the sun for pedestrians on the street, as well as residents in their personal units. The building will also obstruct views of the mountains and sky from Waikiki Bay, and therefore, will change the skyline of Waikiki.

The 2121 Kuhio Ave. project as it stands right now should not be approved. A plan that is consistent with the City and County of Honolulu's policies should only be considered.

Respectfully,



Julie Azua

2140 Kuhio Avenue, #906
Honolulu, HI 96815

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

MANOA MARKET PLACE
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September 11, 2012

Ms. Julie Azua
2140 Kuhio Avenue, #906
Honolulu, Hawaii 96815

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Ms. Azua:

Thank you for your letter regarding the Draft Environmental Assessment (“DEA”) for the 2121 Kuhio Avenue Project (“Project”).

We appreciate your comments and offer the following responses:

1. The Project’s compliance with the Primary Urban Center (PUC) Development Plan (DP) is discussed as follows in the Final EA as follows:

“1. “2. **The Vision for the PUC’s Future**

.....

2.4 **Honolulu is the Pacific’s Leading City and Travel Destination**

.....

“With ongoing redevelopment and improvement, Waikiki remains the State’s largest and most popular visitor destination.”

The applicant's Project is in keeping with this important vision statement. The Project will provide additional lodging services to help Waikiki remain the State's largest and most popular visitor destination.

2. “3 **Land Use and Transportation**

.....

3.1.2 **Policies**

.....

- Preserve panoramic views of natural landmarks and the urban skyline. Preserve views of the Koolau and Waianae Mountain Ranges, Punchbowl, Diamond Head, Pearl Harbor and other natural landmarks. Maintain important view corridors within and across urban Honolulu and keep Downtown the most prominent feature of the urban skyline. Views along the Pearl Harbor shoreline and the Pearl Harbor Historic Trail toward the mountains, shoreline, significant

landmarks, and adjacent communities should be created and maximized wherever possible and appropriate.

.....
3.1.3 Guidelines
.....

3.1.3.3 Urban Skyline and Mauka/Makai Views

- Maintain the visual prominence of important districts by allowing a greater height and massing of buildings
- Apart from Downtown and other central Honolulu locations, promote mid-rise or low-rise scale for new buildings.
- “Preserve the following panoramic views indicated schematically in Figure 3.1 by establishing building height limits and setbacks that are based on view plane analyses to determine the sight lines and desired view dimensions and characteristics:
 - From Ala Wai Canal Promenade toward the Koolau Range
 - From Ala Moana Beach Park toward the Koolau Range
 - From Kewalo Basin toward the Koolau Range and Punchbowl
 - From Kakaako Waterfront Park toward Punchbowl and the Koolau Range
 - From Punchbowl Lookout toward Diamond Head
- Preserve and enhance significant mauka or makai view corridors along major collector streets indicated in Figure 3.1 through a combination of zoning controls and streetscape improvements.
- Increase line-of-sight opportunities towards Pearl Harbor – particularly the U.S.S. Missouri and the U.S.S. Arizona memorials.”

Guidelines for the protection of views from certain “panoramic views of natural landmarks and the urban skyline” are provided in Section 3.1.3.3; “Urban Skyline and Mauka/Makai Views”. Waikiki is one of the most important districts that should maintain its visual prominence by allowing a greater height and massing of buildings, as permitted by the Land Use Ordinance.

The Project will not affect the views from Ala Wai Canal Promenade toward the Koolau Range; from Ala Moana Beach Park toward the Koolau Range; from Kewalo Basin toward the Koolau Range and Punchbowl; from Kakaako Waterfront Park toward Punchbowl and the Koolau Range; or from Punchbowl Lookout toward Diamond Head. The Project will not affect the significant mauka or makai view corridors along major collector streets in Figure 3.1, described as Bishop Street, Cooke Street, Ward Avenue, Piikoi Street, Keeaumoku Street, and McCully Street.

The Project will not affect the line-of-sight towards Pearl Harbor and the two memorials.

“3.4.1.2 **Visitor Industry**

.....

“The need to upgrade Waikiki. Waikiki is competing in the global market and as a mature destination, needs to be updated and improved. In addition to remodeling streets and public spaces, the City and State need to adopt policies that will elicit private reinvestment in Waikiki’s physical plant.”

The applicant plans to invest approximately \$275 million to develop the Project. This will be an important investment in Waikiki’s physical plant and will turn a now vacant property into a prime hotel development to support the visitor industry.

“3.5.1.4 **Walking**

.....

“Regional pedestrian networks are appropriate for the central Honolulu and Pearl Harbor areas. Districts with existing high levels of pedestrian activity include Waikiki 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 Kalakaua Avenue.”

The applicant plans to improve the pedestrian experience along Kuhio Avenue with significant public open spaces and greater than required yards to meet height setback requirements. The setback along Kuhio Avenue will average approximately 51 feet. This far exceeds the yard requirement of 20 feet.

This significant provision of public open space and landscaping along this major thoroughfare will greatly enhance the pedestrian experience through Waikiki by providing relief from the urban forms that congest the street level experience in the area.

The existing 2100 Kalakaua development provides a 34.75 foot setback with a wide landscaped setback providing landscape relief for pedestrians along this stretch of Waikiki.

“3.5.1.5 **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 applicant plans to provide bicycle racks in the Project parking garage on the property to accommodate employees that may bicycle to work, using the new bike lane planned for Kalakaua Avenue.

3. Land Use Map PUC - East

The Project is located in an area designated Resort on the PUC DP Land Use Map (PUC - East) and is consistent with this designation.

2. ‘The proposed building orientation and design was developed to implement Waikiki Special Design District (WSDD) Guidelines.

The WSDD Guidelines section that includes “Orientation and Form” and establishes the guideline for the mauka/makai orientation is 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 following 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” 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.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian

accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalakaua Avenue and from Kuhio Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian accessways into and through Waikiki. This ewa/diamond head orientation is also sensitive to protection of public views from the Gateway to Waikiki located at Kalakaua Avenue and Ala Moana Boulevard and from the open space at Fort DeRussy. A volume study (Appendix VI Building Orientation – Photographic Analysis in the Final EA) on photographs of views from these locations have been prepared comparing the impacts from two building designs (enclosed), one with a mauka/makai building orientation and one with the proposed ewa/diamond head building orientation. The ewa/diamond head building orientation has significantly less visual impact along these important public view corridors except for one view at the corner of Kalakaua Avenue and Kalaimoku Street. The structure has a narrower face with the ewa/diamond head orientation than with a mauka/makai orientation in all but one of the viewpoints along Kalakaua Avenue and Kuhio Avenue. The view from the Gateway to Waikiki at Kalakaua Avenue and Ala Moana Boulevard is also less impacted with the ewa/diamond head building orientation.

A view from the open space at Fort DeRussy shows that the visual impact with either orientation is about the same.

At the request of the Department of Planning and Permitting (DPP) the Building Orientation – Photographic Analysis also shows views from Kalaimoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as significant public views **mauka views** at certain other streets located mauka of Kuhio Avenue.

The ewa/diamond head orientation has also allowed us to provide the widest possible uninterrupted public open space along Kuhio Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kuhio Avenue as possible and would have been significantly wider to accommodate a similar amount of floor area and not located above and within the proposed parking podium.

The concept of “building forms which produce narrow towers are preferred” is supported by the Project as well. The additional height allows the applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing developments. The recent

amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

3. A shadow study (enclosed) is included in the Final EA and the narrative for that shadow study is provided below:

“Based on our shadow study, the Project with an ewa/diamond head orientation will shade the pool and deck area of the Four Paddle from about 2:00 pm on during the Equinox and partially shade the deck area from 2:00 pm to 3:00 pm and begin to shade the pool area from 3:00 pm on during the Winter Solstice. The Four Paddle pool and deck area will not be affected during the Summer Solstice.

This ewa/diamond head orientation affects the block between Kalaimoku Street and Launiu Street during the Winter Solstice, casting a shadow from 12:00 pm to after 3:00 pm. This block is not affected during the Equinox and the Summer Solstice.

The Project with an ewa/diamond head orientation will cast a shadow over a small portion of the northern corner of Ft. DeRussy from before 8:00 am to 9:00 am. These early morning shadows should have minimal impact on Ft. DeRussy and the growth and development of the trees at Ft. DeRussy.

The mauka/makai orientation has less of an impact on the Four Paddle related to shadows during the Equinox with shadows cast over the half of the pool and deck area from 3:00 pm, covering the entire pool and deck at about 4:00 pm. During the Winter Solstice, this orientation will not affect the pool and deck area.

The mauka/makai orientation does not affect the block between Kalaimoku Street and Launiu Street during the Summer Solstice and the Equinox. During the Winter Solstice, shadows affect portions of this block from 12:00 pm until 3:00 pm.

The mauka/makai orientation, similar to the ewa/diamond head orientation will cast a shadow over a small portion of the northern corner of Ft. DeRussy from before 8:00 am to 9:00 am. These early morning shadows should have minimal impact on Ft. DeRussy and the growth and development of the trees at Ft. DeRussy.”

This request will require a Waikiki Special District Permit subject to review and approval by the Department of Planning and Permitting and review and approval by City Council of a request for a 350-foot height limit subject to certain criteria related to views from the Punchbowl Cemetery and the area fronting Fort DeRussy.

DPP will consider the proposed design of the structure and the potential impact to public views, public open space, and other criteria in determining the appropriate orientation for the building and other design elements.

Ms. Julie Azua
Page 7

Your letter and this response will be included in the Final EA.

Very truly yours,

A handwritten signature in black ink, appearing to read "Keith Kurahashi". The signature is fluid and cursive.

Keith Kurahashi

cc: Department of Planning and Permitting
PACREP LLC

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-202
HONOLULU, HAWAII 96822
October 26, 2012

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Ms. Julie Azua
2140 Kuhio Avenue, #906
Honolulu, Hawaii 96815

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Ms. Azua:

This letter serves as a supplement and update to our previous letter to you regarding the Draft Environmental Assessment (“DEA”) for the 2121 Kuhio Avenue Project (“Project”).

The Pre-Final EA for the project has been revised and the Final EA provides ewa/diamond head oriented building photos that are consistent with the revised plans in regard to both design and building orientation. See enclosed cd, Gateway Views (if you require hard copies of the photos, please call me at 988-2231 or write to me at the above address). The Project design has been revised to reduce the length of the tower of the building by about 48 feet based on concerns presented on the DEA. This reduction in length will reduce the impact of shadows and impacts to ocean views from the Four Paddle. With a 350-foot height limit, many of the Four Paddle units will retain an ocean view. A revised mauka/makai oriented building design has also been provided. The tower design footprint on the site for both the revised ewa/diamond head oriented building and the revised mauka/makai oriented building is provided in the enclosed Gateway Views.

Building Orientation

The proposed building orientation and design was developed to implement Waikiki Special Design District (WSDD) Guidelines.

The WSDD Guidelines section that includes “Orientation and Form” and establishes the guideline for the mauka/makai orientation is 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.”

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- 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.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

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The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalākaua Avenue and from Kūhiō Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian access ways into and through Waikīkī.

The proposed ewa/diamond head building orientation is also sensitive to the need to protect public views from the Gateway to Waikīkī located at Kalākaua Avenue and Ala Moana Boulevard. A volume study on photographs of views from these locations have been prepared comparing the visual impact of two building designs, one with a mauka/makai orientation and one with the proposed building design in an ewa/diamond head orientation. See Gateway Views, enclosed cd, included in the Final EA as Appendix VI, Building Orientation – Photographic Analysis.

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalākaua Avenue and from Kūhiō Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian access ways into and through Waikīkī. This ewa/diamond head orientation is also sensitive to protection of public views from the Gateway to Waikiki located at Kalākaua Avenue and Ala Moana Boulevard. A volume study (enclosed cd,

Gateway Views) on photographs of views from these locations has been prepared comparing the impacts from two building designs (enclosed), one with a mauka/makai building orientation and one with the proposed ewa/diamond head building orientation. The ewa/diamond head building orientation has significantly less visual impact along these important public view corridors except for one view at the corner of Kalākaua Avenue and Kālaimoku Street and two views looking ewa along Kūhiō Avenue. The structure has a narrower face with the ewa/diamond head orientation than with a mauka/makai orientation in all but three of the viewpoints along Kalākaua Avenue and Kūhiō Avenue. The view from the Gateway to Waikiki at Kalākaua Avenue and Ala Moana Boulevard is also less impacted with the ewa/diamond head building orientation.

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about 3:00 pm and begin to shade a small portion of the pool area from about 4:00 pm. The Four Paddle pool and deck area will not be affected during the Summer Solstice.

This ewa/diamond head orientation affects the block between Kālainoku Street and Launiu Street during the Winter Solstice, casting a shadow. The Project will partially shade this area from 12:00 pm and moves across this area fully shading the Kūhiō frontage at about 1:00 pm and partially shading it at 2:00 pm with less shading at 4:00 pm with the shadow clearing the property just after 4:00 pm to after 3:00 pm. This block is not affected during the Equinox and the Summer Solstice.

The Project with an ewa/diamond head orientation will cast a shadow over a small portion of the northern corner of Ft. DeRussy from before 8:00 am to 9:00 am during the Summer Solstice. These early morning shadows should have minimal impact on Ft. DeRussy and the growth and development of the trees at Ft. DeRussy. Ft. DeRussy is not affected during the Equinox and Winter Solstice.

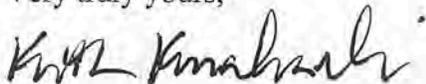
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The mauka/makai orientation does not affect the block between Kālainoku Street and Launiu Street during the Summer Solstice and the Equinox. During the Winter Solstice, the Project will shade shadows affect portions of this block from 12:00 pm until 3:00 pm.

The mauka/makai orientation during the Summer Solstice, similar to the ewa/diamond head orientation will cast a shadow over a small portion of the northern corner of Ft. DeRussy from before about 8:00 am to 9:00 am. These early morning shadows should have minimal impact on Ft. DeRussy and the growth and development of the trees at Ft. DeRussy. Ft. DeRussy is not affected during the Equinox and Winter Solstice.

This response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

Encl.

cc: Department of Planning and Permitting
PACREP LLC

Re: Proposed 2121 Kuhio Development

Hello,

First, we want to apologize for the lengthy correspondence but there are many issues to address after we attended a private presentation that the builder hosted at Trump Towers. The presentation room was only large enough for 20 guests so we feel it is important that this information be known. The video presentation and answers were vague and less than desirable.

We own two units at 2140 Kuhio Avenue aka Four Paddle building directly across the street from the lot on 2121 Kuhio Avenue. We are very concerned about the proposed 2121 Kuhio Tower being built. We purchased our units in Four Paddle with the understanding that only a small building could ever be built on that lot. We are not against improving the lot and areas surrounding our building but this building is too large for the size of the lot.

Here is a list of some issues that the meeting brought up.

1. They want to build wider or a 50' taller than the current 300' limit. The building will engulf the tiny little lot.
2. They are only planning around 200 parking spaces. This is not acceptable as parking is a major issue in Waikiki. They are only planning one parking space for every four unit's. Our building has approximately 300 spaces for 250 one-bedroom units plus guest parking.
3. Allowing a monster building on such a small lot will only encourage additional monster buildings on small lots and increased traffic.
4. They are requesting a variance on the orientation of the building based on the view plane when arriving into the gateway of Waikiki at the intersection of Kalakaua and Kuhio. That is not an issue because The Gateway Hotel blocks the view of Diamond Head from that point. The only things seen from The Gateway Hotel view plane are high rises and sky. The view planes that "would" be greatly affected are from Fort DeRussy to the Mountains and Mountains to the Ocean and everything in between by allowing the proposed building to run parallel with Kuhio Avenue. It will become the Sheraton Waikiki all over again.
5. They describe Kuhio as the "front" of the building but the entrance is at Tiffany's motor court and all the units face the ocean. The building will not be taking advantage of the mountain views because as they stated "they would be much less profitable." The rendering of the building has the Diamond Head and Ewa units with one window on the back corners of the building. The entire rest of the Kuhio side will be a solid wall of concrete with no windows or exterior hallways. My views would be completely obliterated by this enormous concrete wall. A smaller rotated building would still allow some views for "everyone" involved without completely single handedly destroying thousands of other tax paying citizens property values.
6. Just like at Trump Towers they are planning just one retail space at street level. Where are the ground level retail spaces like every other hotel in Waikiki? Also, look at how the retail spaces at the renovated area on Lewers Street has improved the area and pedestrian traffic. Retail space invites pedestrians, unlike Trump Towers and this planned development where commercial space starts on the sixth

floor for hotel guests. The Kuhio sidewalk will be service delivery alley and a walking path slightly larger than what currently exists with no need to stop. Want an example, walk the perimeter of Trump Towers.

7. The builder representative and architect claimed they spend six months a year in Waikiki but had no clue about the 500-day Kuhio sewer project that is beginning. They don't care about anything but profit for their offshore company and offshore investors. They stated that Trump Towers only has five full-time occupants.

Please do not allow one offshore developer to profit from the losses of thousands of other owner's in the area. This projected building will negatively impact property values in all the surrounding buildings once the ocean views are given to one developer. It was requested that they change the orientation like the previously approved building. It was stated that it is not profitable enough to build it that way. This is not good for our neighborhood or the future of Waikiki. The only improvement will be to the offshore builders bottom line.

As taxpayer's, everyone surrounding a project should be notified in direct mailings, not small newspaper ads, about possible zoning changes as this was a complete surprise. We should have been notified because something like this greatly affects our property values. As the zoning has already changed please consider all the above issues and the many unknown issues when considering permit approvals.

Thank you,

Charles Snider
Daniel Muzinich

12152 Moorpark St. #303
Studio City, CA 91604

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

MANOA MARKET PLACE
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September 11, 2012

Mr. Charles Snider
Mr. Daniel Mucinich
12152 Moorpark Street, #303
Studio City, California 91604

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Mr. Snider and Mr. Mucinich:

Thank you for your letter regarding the Draft Environmental Assessment (“DEA”) for the 2121 Kuhio Avenue Project (“Project”).

We appreciate your comments and offer the following responses:

1. The Applicant will be requesting a Resolution from City Council for a determination that the building with the added height (up to 350 feet) would not be visible within the view cones from the Punchbowl lookouts toward 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.

The Applicant has provided a photographic simulation of the impact of a 350-foot tower on the view cones from the Punchbowl lookouts toward Diamond Head and the horizon line of the ocean, enclosed. The proposed tower does not affect the view of Diamond Head and does not penetrate the horizon line of the ocean.

The Applicant has provided a photographic simulation of the impact of a 300-foot tower (currently permitted) versus a 350-foot tower as proposed and finds that the view from the Kalakaua Avenue frontage of Fort DeRussy towards the slopes and ridgeline of the Koolau Range is not affected with the taller tower. Neither tower will affect views of the slopes or ridgeline of the Koolau Range.

The concept of “building forms which produce narrow towers are preferred” is supported by the Project, as well. The additional height allows the Applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing and proposed developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance

of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

2. The parking requirement for the Project, based on 459 hotel rooms (no "lock-out" units planned) and accessory uses at one stall per four units is 115 parking stalls plus 45 parking stalls provided to meet the current parking requirements for 2100 Kalakaua, for a total of 160 required parking stalls. The Applicant will be providing 187 parking stalls, 27 more stalls than required.
3. The joint developed lot is 3.525 acres in size which is one of the larger developable lots in Waikiki. The proposed density is allowed under the development standards in the Waikiki Special District.
4. The proposed building orientation and design was developed to implement Waikiki Special Design District (WSDD) Guidelines.

The proposed building orientation and design was developed to implement Waikiki Special Design District (WSDD) Guidelines.

The WSDD Guidelines section that includes "Orientation and Form" and establishes the guideline for the mauka/makai orientation is 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 following 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" 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.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalakaua Avenue and from Kuhio Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian accessways into and through Waikiki. This ewa/diamond head orientation is also sensitive to protection of public views from the Gateway to Waikiki located at Kalakaua Avenue and Ala Moana Boulevard and from the open space at Fort DeRussy. A volume study (Appendix VI Building Orientation – Photographic Analysis in the Final EA) on photographs of views from these locations have been prepared comparing the impacts from two building designs (enclosed), one with a mauka/makai building orientation and one with the proposed ewa/diamond head building orientation. The ewa/diamond head building orientation has significantly less visual impact along these important public view corridors except for one view at the corner of Kalakaua Avenue and Kalaimoku Street. The structure has a narrower face with the ewa/diamond head orientation than with a mauka/makai orientation in all but one of the viewpoints along Kalakaua Avenue and Kuhio Avenue. The view from the Gateway to Waikiki at Kalakaua Avenue and Ala Moana Boulevard is also less impacted with the ewa/diamond head building orientation.

A view from the open space at Fort DeRussy shows that the visual impact with either orientation is about the same.

At the request of the Department of Planning and Permitting (DPP) the Building Orientation – Photographic Analysis also shows views from Kalaimoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as significant public views **mauka views** at certain other streets located mauka of Kuhio Avenue.

The ewa/diamond head orientation has also allowed us to provide the widest possible uninterrupted public open space along Kuhio Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to

Kuhio Avenue as possible and would have been significantly wider to accommodate a similar amount of floor area and not located above and within the proposed parking podium.

The concept of “building forms which produce narrow towers are preferred” is supported by the Project as well. The additional height allows the Applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

5. The Project will not turn its back on its Kuhio Avenue front yard. The Kuhio Avenue front of the Project will significantly enhance the “Hawaiian Sense of Place” of the area. New enhanced landscaping will look to incorporate both native plant species and introduced tropical plants brought to Hawaii including retention of the great Banyan tree at the corner of Kuhio Avenue and Kalaimoku Street.

In addition, the Project will improve the experience of its guests, visitors, and surrounding neighbors, by providing a front plaza larger than most other plazas along Kuhio Avenue. This plaza will be part of the significant public open space provided on the property.

The Project will provide a 51-foot setback, much greater than required 20-foot yard, along Kuhio Avenue. The proposed landscaping along the street frontages will add to the tropical ambiance of the Project. This wide public open space will also improve the views of pedestrians and vehicles traveling along Kuhio Avenue, recognized as a major vehicular and pedestrian access way and view corridor into in Waikiki in the WSD Guidelines.

Decorative and varied materials, patterns and landscaping will be integrated into the Project to enhance the streetscape and create a tropical Hawaiian sense of place.

The Applicant's design includes significant amounts of articulation which will provide rich visual textures by contrasting light and shadows on surfaces of the buildings to further the Hawaiian sense of place on its Kuhio Avenue building facade.

The concept of human scale at the ground level will be enhanced by the wide and large public open space at the ground level of this Project.

The ewa/diamond head orientation has allowed us to provide the widest possible uninterrupted public open space along Kuhio Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to

Kuhio Avenue as possible and would have been significantly wider to accommodate a similar amount of floor area.

6. The Project is planned as a condo hotel and is not focused on commercial development other than smaller accessory spaces and a ground floor restaurant or retail to energize the corner planned as the gathering place centered on the large Banyan tree that will be retained. As mentioned in item 5 above, the Kuhio Avenue frontage will have a 51-foot setback that will provide pedestrian paths, landscaping and seat walls in support of the public open space being provided by the Project. The Project will continue to provide a service lane off Kuhio Avenue providing access to loading zones for the Project and connection to Lauula Street. The Kuhio Avenue sidewalk will not serve as a service delivery alley.
7. The Applicant is concerned about the surrounding community and the greater community and the Project is projected to provide the following benefits:

The proposed development at 2121 Kuhio will not curtail the range of beneficial uses of the environment. The property presently sits vacant and does not provide any beneficial use to the owners or the public. The proposed 2121 Kuhio development will provide much need hotel room inventory in Waikiki, with 2,684 hotel units lost or to be lost in Waikiki since 2003.

The Project will, through provision of public open space, provide a tropical landscaped plaza area along Kuhio Avenue that will provide relief from the built environment.

The Project will also provide an increase in tax revenues for both the City and State.

The Project during its sales phase, selling individual condo hotel units to investors will result in over \$300 million in on-site sales generating about \$2 million in conveyance tax revenues for the State.

The Project upon completion will generate about \$4.5 million per year in annual property tax revenue for the City.

The Project during its first full calendar year and annually thereafter is expected to generate income of \$20 to \$30 million in on-site sales resulting in GET (general excise tax revenue) of \$0.8 to \$1.2 million per year for the State (4%) and between \$100,000 to \$150,000 per year for the City (0.5%). The Project will also generate transient accommodations taxes (9.25%) totaling \$1.9 to \$2.775 million for the State, a portion of which may be shared with the City.

As mentioned in item 7 above, the Project will provide benefits to the community and greater surrounding community.

Mr. Charles Snider and Mr. Daniel Mucinich
Page 6

As discussed in item 4, the Project is sensitive to the significant public views and the view corridor along Kuhio Avenue. These public views are protected.

Your letter and this response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

cc: Department of Planning and Permitting
PACREP LLC

October 20, 2012

Kusao & Kurahashi, Inc.
Planning and Zoning Consultants
2752 Woodlawn Dr. Suite 5-202
Honolulu, HI 96822

Mr. David K. Tanoue
Director of Department of Planning and Permitting
City and County of Honolulu
650 South King St. 7th Fl.
Honolulu, HI 96813

Office of Environmental Quality Control – State of Hawaii
State Office Tower, Room 702
235 S. Beretania St.
Honolulu, HI 96813

Subject: 2121 Kuhio Development – Response to K&K letter

To whom it may concern,

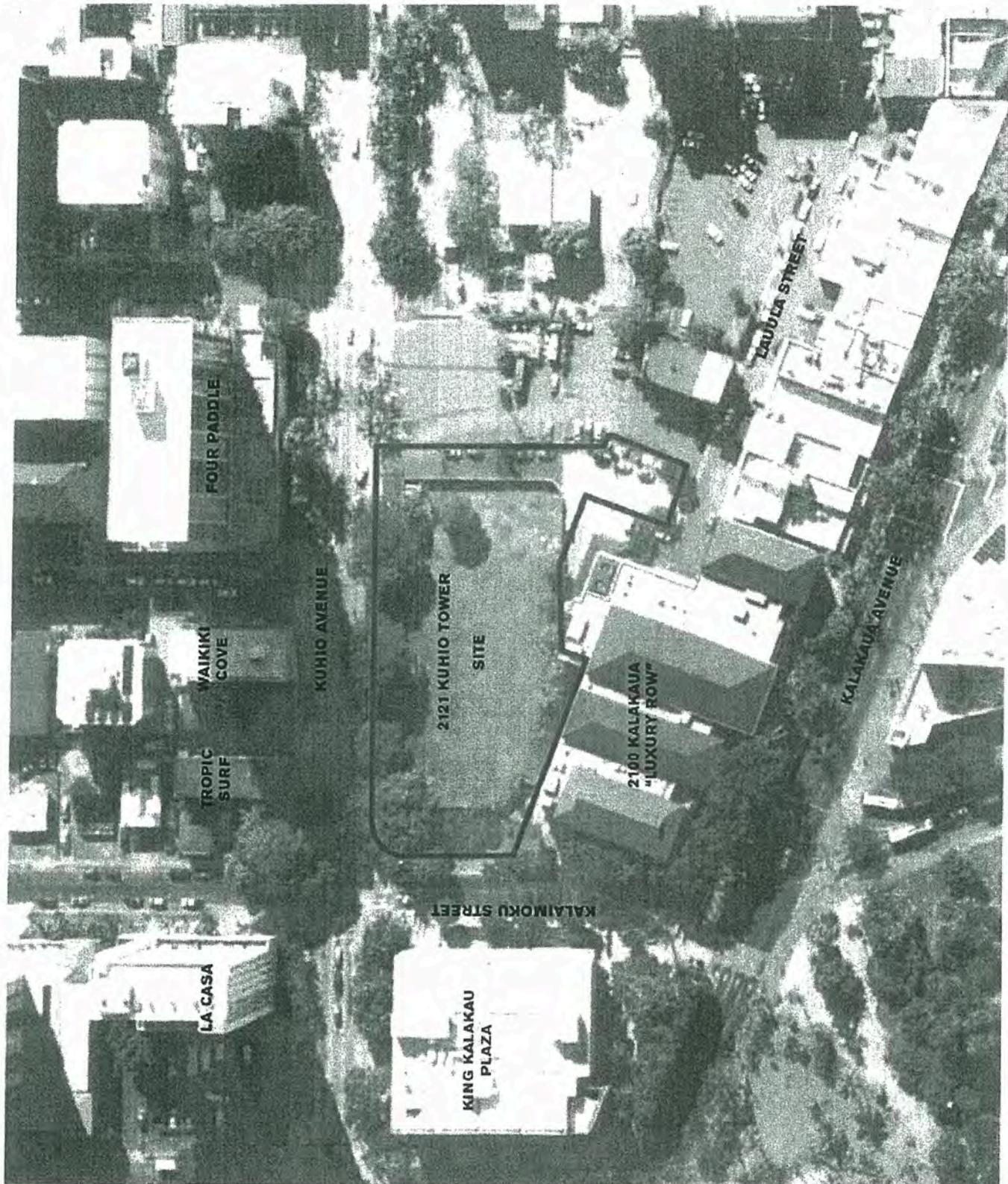
We are the owner's of units number #708 and #2507 in the Four Paddle Building located at 2140 Kuhio Avenue. As previously stated, we live here part-time but will be returning full-time within a couple of years. We are not satisfied with the response from K&K that the current proposed building design is the best thing for our neighborhood.

1. The proposed height and width they are suggesting is only due to the offshore builders greed and has nothing to do with improving the neighborhood or their neighbors concerns. The building is only one sided with views facing the ocean. They are not taking advantage of the beautiful mauka views because as was stated at the presentation from the builder "if units were built facing the mountains they would be less profitable." To us, stealing values from thousands of other surrounding owners does not justify an approval for switching the building orientation and raising the height to 350 feet. The prior planned tower is an example of what was approved and worked well for everyone involved including the neighbors. This current proposed building does not.

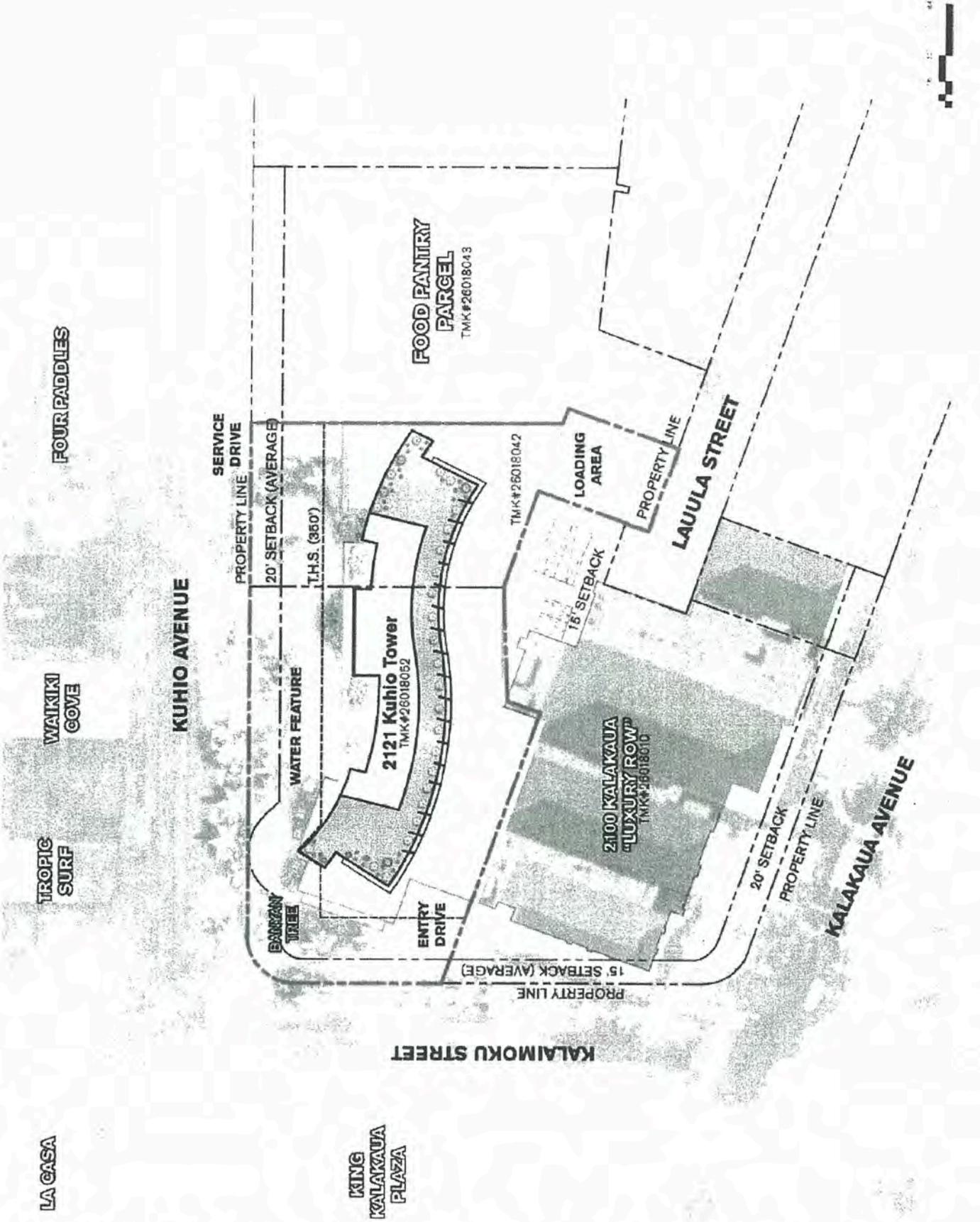
2. We are not against improving the lot and surrounding neighborhood but we feel this wall of a building is not acceptable. With the proposed orientation and height it will actually caused more damage than good to the neighborhood. All surrounding buildings will loose values, which the Four Paddle is already feeling just from the mere proposal of an Ewa – Diamond Head oriented building. They state the added taxes the new development would create. They are not taking into account the drop in taxes when all surrounding values fall due to one builder. In addition to that there would be no incentive to improve the older buildings on Launiu and Kalaimoku Streets because they would be looking right into a wall.

3. The proposed 40' set back on the ground level to create a green space will not invite life to the neighborhood. There is currently a green space there. An improvement would be more retail and restaurant space, which would bring both tourist and locals into the new space. Then our neighborhood would be improved and enjoyed by all. The current proposed building is going to be a lobby, motor court and possibly but not guaranteed a corner retail space. It will be just like Trump Towers ground floor operation, which lacks a Hawaiian sense of place and is unwelcoming to everyone with the exception of people staying upstairs and will do nothing to improve the neighborhood.

4. The photos that were provided in the letter from K&K appear to be skewed so that the building looks more appealing and that needs to be addressed. I have included some examples.



This photo from the EA report represents the property line and surrounding buildings.



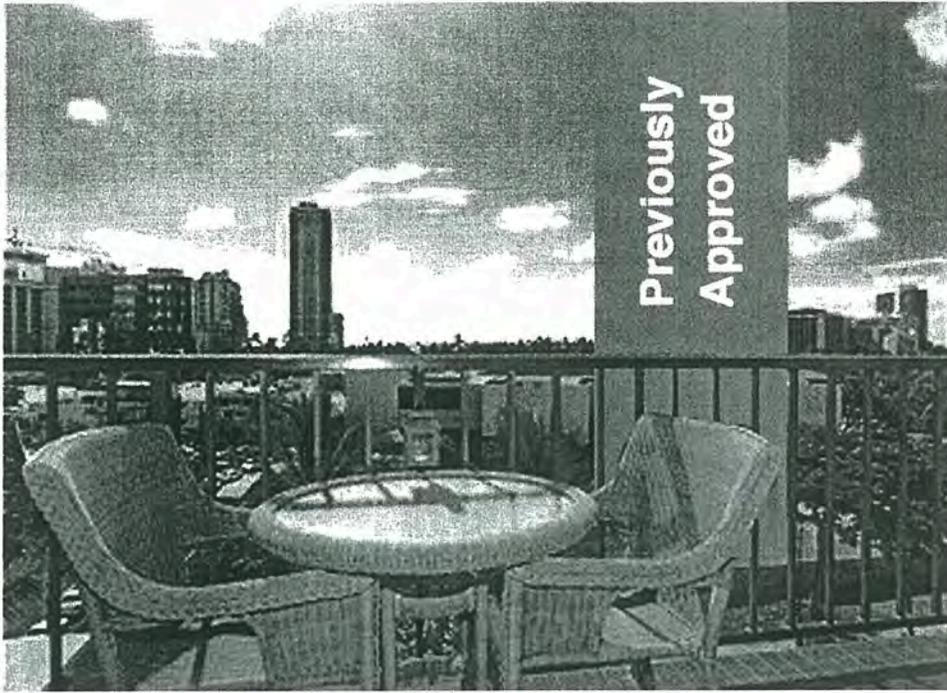
This photo also from the EA report shows the requested and planned footprint of the building, which was also presented at the meeting with the builder.



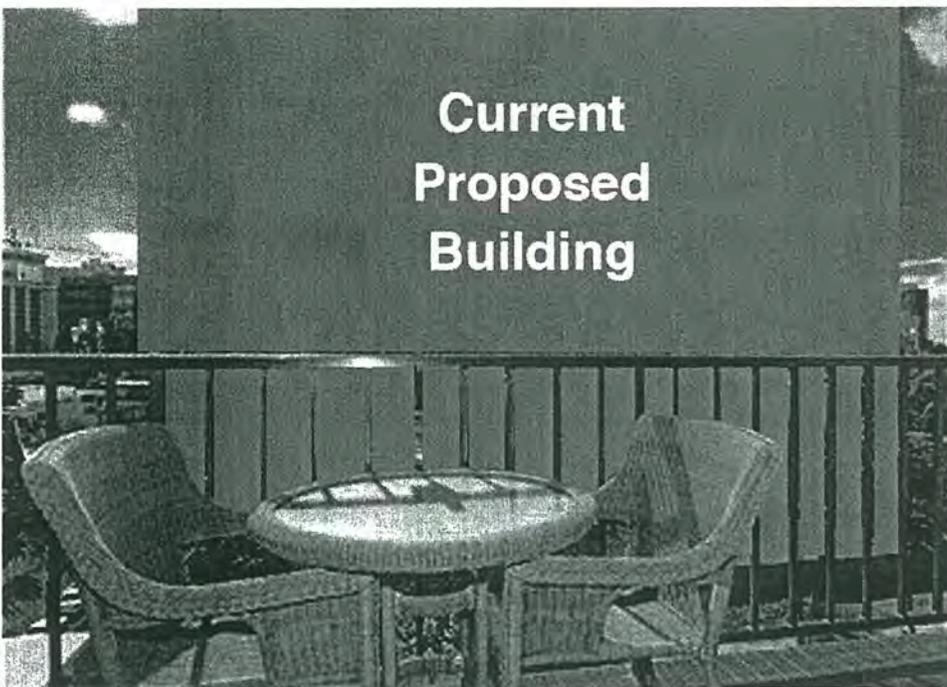
This photo from K&K looking makai on Launiu Street near the corner of Ala Wai Blvd. is a miss representation of what is actually being requested. Based on the previous aerial footprint view, the above rendering of the building is half a wide as is actually being requested. Based on the line drawing, there is no possible way that Trump Towers (in the distance) will be visible from here. If you compare the Four Paddle with the line drawing of the proposed building on the aerial footprint view, the requested building is 25% larger in length than the Four Paddle. It will be built to the edge of the Diamond Head side of the property line. It will be half way in front of the Four Paddle building, which is the high rise on the left side of this photo. In addition, the Four Paddle is 25 stories and this rendering does not represent the 350' request.



This photo from K&K looking makai on Kalaimoku Street near the corner of Ala Wai Blvd. is a miss representation of what is actually being requested. Based on the previous aerial footprint view, the above rendering of the building is half a wide as is actually being requested. If you compare the Four Paddle with the line drawing of the proposed building on the aerial footprint view, the requested building is 25% larger than the Four Paddle. It will be built to the edge of the Diamond Head side of the property line. In addition, the Four Paddle is 25 stories and this rendering does not represent the 350' request.



This above photo represents our view with the previously approved building, which worked well for the neighborhood. It caused the least obstruction for all neighbors. It preserved the makai and mauka views but still improved the neighborhood.



This above photo represents our view with the current proposed building, which as you can see causes great harm to us as well as all the surrounding neighbors. That is not limited to within a few blocks but includes those in Trump Towers and the hotels on Kalia Road, Beachwalk and Lewers as well as mauka of the Ala Wai. We feel as many others, including the Waikiki Neighborhood board that the current

requested orientation change should not be granted. The previously approved building that met the planning codes with the makai to mauka orientation did the least amount of harm but improved the neighborhood. The view plane from where Kalakaua and Kuhio split with a correctly oriented makai - mauka building would not be effected and the building would blend in with all the existing ones. If approval is given to the requested building, say goodbye to the makai and mauka views for all of Waikiki because once this starts it will not stop. Every small parcel of landowner will be requesting the same orientation approval. We will be exactly like New York and Hong Kong.

We would hope that our concerns will be taken into account when the City is considering the approval for this poorly oriented monster of a building. This is not what our neighborhood or Waikiki needs, not now or ever.

Thank you for your time.

Handwritten signatures of Charles Snider and Daniel Muzinich. The signature of Charles Snider is on the left, and the signature of Daniel Muzinich is on the right, with a small cross between them.

Charles Snider

Daniel Muzinich

Four Paddle #2507 and #708

Mailing Address:

12152 Moorpark St., #303

Studio City, CA 91604

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

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October 26, 2012

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E-mail: kkurahashi@hawaii.rr.com

Mr. Charles Snider
Mr. Daniel Mucinich
12152 Moorpark Street, #303
Studio City, California 91604

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Mr. Snider and Mr. Mucinich:

Thank you for your letter of October 20, 2012 regarding the Draft Environmental Assessment ("DEA") for the 2121 Kuhio Avenue Project ("Project").

We appreciate your comments and offer the following responses:

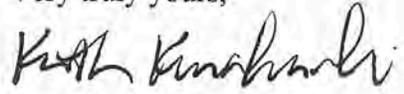
1. The Applicant has, based on concerns raised regarding the DEA, added three floors within the 350-foot height of the building to reduce the width of the tower of the building by about 48 feet, reducing visual impact to units in the Four Paddle.
2. As mentioned above the Applicant has modified the Project to lessen the impact on the views from the Four Paddle.
3. The average setback on the ground level will be about 75 feet. The existing green space is not open or available to the public. The 75-foot wide space planned by the Applicant will be a landscaped Plaza that will be open to the public (public open space). The Applicant is planning a restaurant and retail in the Project.
4. The photos provided earlier have been revised and are included in the enclosed cd (if you require hard copies of the photos, please call me at 988-2231 or write to me at the above address).

The Applicant is proceeding through a process to ensure that zoning code requirements of the Land Use Ordinance are met. The previous letter to you described the justification for the ewa/diamond head orientation of the building and tower.

Mr. Charles Snider and Mr. Daniel Mucinich
Page 2

Your letter and this response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

Encl.

cc: Department of Planning and Permitting
PACREP LLC

Office of Environmental Control - State of Hawaii
State Office Tower, Room 702
235 South Beretania St.
Honolulu, HI. 96813

Copy TO: KUSAO + KURAHASHI
INC.

To Whom it may Concern:

My wife and I recently purchased a unit at The Four Paddles, on the northeast corner of the building (unit #1101) facing the mountains and the Ala Wai Canal. While I have no personal loss of any view from my unit, I am concerned about the overall decline in value of the building due to this extraordinary structure, known as "The Wall," that is being planned at 2121 Kalia St.

Being new to the area, I am not aware of all the steps in the process that lead up to this being proposed and, so far, apparently accepted. I understand that this is lawful under the present zoning laws but I question the wisdom of such a structure that will adversely affect so much of the greater community.

It appears to me that all, if not most, of the high rise buildings in this area have been built to maximize individual views of the ocean or mountains which

are major considerations and value factors in the purchase of any property. It also has an effect on the rental value of these properties. As part of that equation it also appears that consideration was given to surrounding properties to minimize the obstruction of their view.

This is certainly not the case with this huge structure that quite literally, "Blocks out the Sun", being oriented East/West which will provide for the maximum obstruction of views of both the Ocean and the mountains, depending on ones relative location.

additionally, the area is already heavily congested with traffic and has insufficient parking. This can only add to that problem many fold.

Another significant negative is the Overburdened Sewerage system which is strained to capacity now. Adding another 486 units in a single structure can only add to the burden on that system as well.

In closing, I believe the cons far out weight the Pros in approving this project.

As I stated earlier, while it is lawful to build this in this location, is it wise?

The negative effect this one project will likely have on so many in the surrounding community does not seem prudent to me. When property values go down so does tax revenue to the city.

I sincerely hope that those in authority, charged with the responsibility to make the final decision on whether this project goes forward, will take all of the big picture (NO PUN INTENDED) into consideration.

Sincerely,

Edward C. Schrier
Colonel, Ret. USMC

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

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September 11, 2012

Mr. Edward Schriber
Colonel, Retired USMC
2140 Kuhio Avenue, #1101
Honolulu, Hawaii 96815

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Mr. Schriber:

Thank you for your letter regarding the Draft Environmental Assessment (“DEA”) for the 2121 Kuhio Avenue Project (“Project”).

We appreciate your comments and offer the following responses:

1. The Applicant is concerned about the surrounding property owners’ fears, and will do its best to develop a successful Project that considers the well-being of the general public. This Project will provide an improvement through ground-level beautification that will upgrade the lot and encourage other properties nearby to redevelop as well, thereby raising the quality of real estate in the area and increasing property values.
2. This request will require a Waikiki Special District (WSD) Permit subject to review and approval by the Department of Planning and Permitting (DPP). DPP will consider the proposed design of the structure and the potential impact to public views, public open space, and other criteria in determining the appropriate orientation for the building and other design elements.
3. The Applicant will also request approval of a 350-foot height limit for the Project from the City Council. The additional height allows the applicant to provide a narrower tower, as well as a narrower parking podium with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built up environment typically found fronting Kuhio Avenue with limited open space relief provided by existing and proposed developments. This additional height will also allow a reduction in the length of the tower as viewed from Kuhio Avenue.
4. The proposed building orientation and design was developed to implement Waikiki Special Design District (WSDD) Guidelines.

The WSDD Guidelines section that includes “Orientation and Form” and establishes the guideline for the mauka/makai orientation is 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 following 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” 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.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalakaua Avenue and from Kuhio Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian accessways into and through Waikiki. This ewa/diamond head orientation is also sensitive to protection of public views from the Gateway to Waikiki located at Kalakaua Avenue and Ala Moana Boulevard and from the open space at Fort DeRussy. A volume study (Appendix VI Building Orientation – Photographic Analysis in the Final EA) on photographs of views from these locations have been prepared comparing the impacts from two building designs (enclosed), one with a mauka/makai building orientation and one with the proposed ewa/diamond head building orientation. The ewa/diamond head building orientation has significantly less visual impact along these important public view corridors except for one view at the corner of Kalakaua Avenue and Kalaimoku Street.

The structure has a narrower face with the ewa/diamond head orientation than with a mauka/makai orientation in all but one of the viewpoints along Kalakaua Avenue and Kuhio Avenue. The view from the Gateway to Waikiki at Kalakaua Avenue and Ala Moana Boulevard is also less impacted with the ewa/diamond head building orientation.

A view from the open space at Fort DeRussy shows that the visual impact with either orientation is about the same.

At the request of the Department of Planning and Permitting (DPP) the Building Orientation – Photographic Analysis also shows views from Kalaimoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view corridors in the WSDG Guidelines. In fact the WSDG Guidelines has recognized as significant public views **mauka views** at certain other streets located mauka of Kuhio Avenue.

The ewa/diamond head orientation has also allowed us to provide the widest possible uninterrupted public open space along Kuhio Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kuhio Avenue as possible and would have been significantly wider to accommodate a similar amount of floor area and not located above and within the proposed parking podium.

The concept of “building forms which produce narrow towers are preferred” is supported by the Project as well. The additional height allows the applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

5. The Traffic Impact Report for the Project concluded that “... with the implementation of the proposed recommendation including the elimination or relocation of the existing drop-off area adjacent to the project site, staging and loading areas within and near the project site, traffic operations in the vicinity are anticipated to continue operating at levels of service similar to those without project conditions.” The Project will not have a significant impact on traffic operations in the area.
6. DPP approved a Sewer Connection Application, on January 17, 2012, for the 459-unit condo-hotel development conditioned upon the connection to the 20-inch sewer line in Kuhio Avenue at the owner's expense and construction plans being submitted for review and approval. The existing municipal sewer system is adequate to accommodate the Project.

7. The benefits of a major hotel (which supports the greater community) are as follows:

The proposed development at 2121 Kuhio will not curtail the range of beneficial uses of the environment. The property presently sits vacant and does not provide any beneficial use to the owners or the public. The proposed 2121 Kuhio development will provide much need hotel room inventory in Waikiki, with 2,684 hotel units lost or to be lost in Waikiki since 2003.

Through provision of public open space, the Project will provide a tropical landscaped plaza area along Kuhio Avenue that will provide relief from the surrounding buildings.

The Project will also provide an increase in tax revenues for both the City and State.

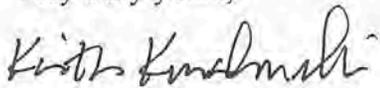
During its sales phase, the Project will be selling individual condo hotel units to investors which will result in over \$300 million in on-site sales and generate about \$2 million in conveyance tax revenues for the State.

Upon completion, the Project will generate about \$4.5 million per year in annual property tax revenue for the City.

The Project, during its first full calendar year and annually thereafter, is expected to generate income of \$20 to \$30 million in on-site sales resulting in GET (general excise tax revenue) of \$0.8 to \$1.2 million per year for the State (4%) and between \$100,000 to \$150,000 per year for the City (0.5%). The Project will also generate transient accommodations taxes (9.25%) totaling \$1.9 to \$2.775 million for the State, a portion of which may be shared with the City.

Your letter and this response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

cc: Department of Planning and Permitting
PACREP LLC

October 5, 2012

Kusao & Kurshashi, Inc ✓
Planning and Zoning consultants
2572 Woodlawn Drive, Suite 5-202
Honolulu, Hawaii 96822

Mr. David K Tanoue
Director of Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 7th Floor
Honolulu, Hawaii 96813

Office of Environmental Quality Control- State of Hawaii
State Office Tower, Room 702
235 South Beretania Street
Honolulu, Hawaii 96813

Subject: Project Development, 2121 Kuhio Avenue

I am in receipt of your response to my letter regarding the 2121 Kuhio Avenue Draft Environmental Assessment and I thank you for taking the time to respond.

I would like to start by confirming that I understand that the development of this project would create jobs and increase tax revenues. I would like to emphasize that I am supportive of job and tax revenue creation. Therefore, my input solely relates to the type of building being proposed, not to the concept of development on the site itself.

After reviewing your response to my letter, there are still questions that need answers.

In my review of the building photos that you sent, I am left with my own interpretation of what the true facts are. I still do not fully understand the building plan details, time frame and more importantly, the overall lay out "blue print" of the building that is being proposed in the Draft Environment Assessment (DEA). Indeed, there is clear conflict between the photos that you sent and the Site Plan in the DEA.

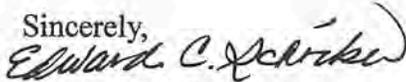
Throughout the study and design of this project, I would like to know aside from the renderings provided, is there a model of the building fabricated by the development team? If one has been built during the development and design stage, it would be useful for myself and others to view such a model and allow us to see the project in a broader scope and possibly give more clarity and definition to the project prior to review by the public and the Department of Planning and Permitting (DPP). In addition, a ground plan image showing the two orientations would help to verify how the images from a distance match to the ground plan. As it is, several photos (especially the one from Launiu St.), depict a much narrower building and a different placement than the original ground plans provided had indicated. Basically, the photos provided in the response do not seem accurate.

I believe that if the building is constructed in a perpendicular lay-out to Kuhio Avenue (Mauka orientation in your photos) it will be a win win for everyone. I look forward to hearing from you and learning more about the specifics about the actual building orientation and proposed design, matters that are still clearly "in flux" at the present time.

I would like to address the inconsistency between the DEA Site Plan and the photos received from Kusao & Kurshashi. The photos clearly show the EWA orientated building option with a substantial setback to the service road from Kuhio Avenue (on the eastern side of the site), while the Site Plan shows an "S" building with ingress into the service road. This substantial inconsistency, should, alone, cause a new DEA to be submitted. Indeed, I believe a full Environmental Impact Statement should now be undertaken on this project once the project definition has settled and been defined by the developer to enable clear analysis by the public and the DPP.

Your response also makes no mention of the fact that the Waikiki Neighborhood has previously voted in favor of the Mauka orientation building (from the previous developer), while no such vote exists in support of an Ewa orientation building. Please make these facts known to the DPP.

Sincerely,



Edward C. Schriber
Colonel, Retired USMC

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

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2752 WOODLAWN DRIVE, SUITE 5-202
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October 26, 2012

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Mr. Edward Schriber
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**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Mr. Schriber:

Thank you for your letter of October 5 regarding the Draft Environmental Assessment ("DEA") for the 2121 Kuhio Avenue Project ("Project").

We appreciate your comments and offer the following responses:

1. The Pre-Final EA for the project has been revised and the Final EA provides ewa/diamond head oriented building photos that are consistent with the revised plans in regard to both design and building longitude. See enclosed cd, Gateway Views (if you require hard copies of the photos, please call me at 988-2231 or write to me at the above address). The Project design has been revised to reduce the length of the tower of the building by about 48 feet based on concerns presented on the DEA. This reduction in length will reduce the impact of shadows and impacts to ocean views for some of the Four Paddle units. With a 350-foot height limit, many of the Four Paddle units will retain an ocean view. A revised mauka/makai oriented building design has also been provided. The tower design footprint on the site for both the revised ewa/diamond head oriented building and the revised mauka/makai oriented building is provided in the enclosed Gateway Views.
2. The Applicant does not have a model of the current building design. A ground plan image showing the two orientations is provided in the enclosed cd. The photos have been revised to accurately depict the visual impact of the proposed tower design.
3. The proposed building orientation and design was developed to implement Waikiki Special Design District (WSDD) Guidelines.

The WSDD Guidelines section that includes "Orientation and Form" and establishes the guideline for the mauka/makai orientation is 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 following 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” 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.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalākaua Avenue and from Kūhiō Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian access ways into and through Waikīkī.

The proposed ewa/diamond head building orientation is also sensitive to the need to protect public views from the Gateway to Waikīkī located at Kalākaua Avenue and Ala Moana Boulevard. A volume study on photographs of views from these locations have been prepared comparing the visual impact of two building designs, one with a mauka/makai orientation and one with the proposed building design in an ewa/diamond head orientation. See Gateway Views, enclosed cd, included in the Final EA as Appendix VI, Building Orientation – Photographic Analysis.

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalākaua Avenue and from Kūhiō Avenue minimizing impact to the

view corridors along these two major vehicular and pedestrian access ways into and through Waikīkī. This ewa/diamond head orientation is also sensitive to protection of public views from the Gateway to Waikiki located at Kalākaua Avenue and Ala Moana Boulevard. A volume study (enclosed cd, Gateway Views) on photographs of views from these locations has been prepared comparing the impacts from two building designs (enclosed), one with a mauka/makai building orientation and one with the proposed ewa/diamond head building orientation. The ewa/diamond head building orientation has significantly less visual impact along these important public view corridors except for one view at the corner of Kalākaua Avenue and Kālaaimoku Street and two views looking ewa along Kūhiō Avenue. The structure has a narrower face with the ewa/diamond head orientation than with a mauka/makai orientation in all but three of the viewpoints along Kalākaua Avenue and Kūhiō Avenue. The view from the Gateway to Waikiki at Kalākaua Avenue and Ala Moana Boulevard is also less impacted with the ewa/diamond head building orientation.

The viewpoint at the open space at Fort DeRussy shows that the visual impact is greater with the ewa/diamond head orientation.

At the request of DPP the Building Orientation – Photographic Analysis (Appendix VI) also shows views from Kālaaimoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two street corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as significant public views the mauka views at certain other streets located mauka of Kūhiō Avenue.

The ewa/diamond head orientation has also allowed us to provide the widest possible uninterrupted public open space along Kūhiō Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kūhiō Avenue as possible and would have been significantly wider to accommodate a similar amount of floor area.

The concept of “building forms which produce narrow towers are preferred” is supported by the Project as well. The additional height allows the applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

4. The Final EA site plans and photographic simulations have been revised to accurately depict the revised building designs for both the ewa/diamond head orientation and the mauka/makai orientation.

5. The Final EA and comments received to date from the agencies indicate that environmental impacts from the Project will not be significant. A similar proposal by a previous property owner received a Finding of No Significant Impact (FONSI) for that Final EA. Concerns from the neighboring Four Paddles residents and a few other neighbors related to building orientation and visual impact to private views have been addressed in the Final EA and do not warrant processing of a full Environmental Impact Statement.

The Applicant has, based on concerns raised regarding the Draft EA, added three floors within the 350-foot height of the building to reduce the width of the building by about 48 feet, reducing impact to the Four Paddle.

6. The K2 proposal is not a consideration in the Draft and Final EAs for the Project. The Waikiki Neighborhood Board vote in support of the earlier proposal is not relevant in reviewing the current alternative building orientation designs considered by the Applicant. DPP will review this letter and will be aware of the Boards support of the earlier proposal. We are providing a mauka/makai orientation as an alternative in the Final EA and have provided our analysis and rejection of this alternative.

Your letter and this response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

Encl.

cc: Department of Planning and Permitting
PACREP LLC

2140 Kuhio Avenue #2404
Honolulu, HI 96815

Kusao & Kurahashi Inc.
2752 Woodlawn Drive, Suite 5-202
Honolulu, HI 26822

August 6, 2012

Dear Sir/Madam

Re: Proposed 2121 Kuhio Avenue Development

I would like to object to the current development proposal at 2121 Kuhio Avenue configured west-east, or parallel to Kuhio Avenue. I believe this proposal is solely configured to maximize the revenue potential of the site without any serious consideration of the impact on the adjacent properties.

The developers presented their proposal as a "fait accomplis" at a recent Waikiki Neighborhood Board meeting. This caused me to contact Honolulu City Council members who kindly responded to my enquiry. The Chair and Presiding Officer said in writing:

"In checking with the City's department of planning and permitting, this project is in the early development stages and has not applied for any permits at this point-in-time. Eventually, this project will need a Waikiki Special District permit from the department of planning and permitting as well as authorization from council to exceed the current height limit, but it still has many more steps that need to be taken before the project will be allowed to proceed towards construction, therefore, contrary to what was represented at the May 8th meeting of the Waikiki Neighborhood Board -- it is not a done deal."

Since the Board presentation, the developer offered a meeting with locals, but limited it to just 10 people from Four Paddle – hardly an appropriate effort for a development involving hundreds of millions of dollars. Consequently all seats were accounted for within 2 hours of this announcement. This was not a good faith effort to engage the local community or a serious effort to seek input on alternative solutions. Notably, in the face of substantial questions about the project from Board members, one of the developer representative's at the earlier Waikiki Neighborhood Board Meeting had said to "trust us". This is no way to build trust.

In stark contrast, the previous developer for the site had made serious efforts to seek local input and as a result came up with a compromise proposal – a property perpendicular to Kuhio Avenue. This proposal would still represent a major development for the site. I would

be supportive of this outcome (also one that I would have thought was much more attractive at street level from both Kuhio and Kalakaua Avenues).

I would even be supportive of a "T" outcome, where the top of the "T" was configured in the same location as the previously proposed development tower, but with the addition of a low rise (up to 5 floors) at the bottom of the "T". Surely, such a configuration would substantially achieve revenues of the current developer's proposal, while importantly, demonstrating an effort to mitigate the impacts on the adjacent buildings.

The developer also said at the Neighborhood Board meeting that the economics were not sufficient enough to return to the prior configuration. I believe the developer should be asked to prove this assertion. If they overpaid for the site, that should be seen as a business risk for their account.

If you look at the high rise buildings configured around Fort Derussy/park, they are positioned to be respectful of the adjacent properties, almost always perpendicular to the adjacent property. I do not believe this is by accident – instead it is surely a legacy of prior approval procedures, community input and/or a demonstration of respectful behaviors of developers over recent decades.

The currently proposed configuration at 2121 Kuhio shows a total disregard for this approach and also for local community input. I will leave others to comment on other issues pertaining to sewer, parking and traffic issues.

I have heard little or no commentary from local residents saying there should be no development on the site. We respect the desire to move forward. We are also not in any way questioning that the development will be done to a high standard.

Nonetheless, I hope that the approving City authorities will take advantage of their impartial position to seek a configuration that is a "win-win" outcome, not the current "win-lose" just for the benefit of a single developer.

Mahalo for your consideration and time.

Sincerely yours,



Craig Stevens

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-202
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E-Mail: kkurahashi@hawaii.mn.com

September 11, 2012

Mr. Craig Stevens
2140 Kuhio Avenue, #2404
Honolulu, Hawaii 96815

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Mr. Stevens:

Thank you for your letter of August 6, 2012 regarding the Draft Environmental Assessment ("DEA") for the 2121 Kuhio Avenue Project ("Project").

We appreciate your comments and offer the following responses:

1. We apologize for any confusion at the Waikiki Neighborhood Board Meeting. The following is an excerpt from the Power Point Presentation that was read by Keith Kurahashi, the planning and zoning consultant for the Project:

"This request will require a Waikiki Special District Permit subject to review and approval by the Department of Planning and Permitting (DPP) and review and approval by City Council of a request for a 350-foot height limit subject to certain criteria related to views from the Punchbowl Cemetery and the area fronting Fort DeRussy."

We did not intend to give an impression that this was a done deal, as we are well aware that we are in the very early environmental review (environmental assessment) phase, after which there will be a Waikiki Special District Permit review and process with the Department of Planning and Permitting (DPP) and the review and consideration of a request to the City Council (Council) for a 350-foot height limit. Both processes will provide opportunities for public input, in the form of a public hearing with DPP and at least two City Council meetings at which public testimony is accepted.

2. The following provides a summary of community-outreach activities related to the Project to date and a brief description of the issues that have been raised. At each of the meetings with neighbors and the Waikiki Neighborhood Board, PACREP representatives described the plans for the site, showed pictures, renderings and site plans, and answered community members' questions.

- a. April 24, 2012
Met with two members of Aqua Hotels & Resorts, which manages Maile Sky Court
Met with Walter Flood, president of the La Casa AOA
Met with members of the Four Paddle AOA
- b. May 8, 2012
Presented at Waikiki Neighborhood Board meeting
- c. May 30, 2012
Met with approximately 25 members of the Four Paddle and 2121 Ala Wai AOAs
- d. June 19, 2012
Met with eight members of the Royal Kuhio AOA
Met with three members of the La Casa AOA
Met with three members of the Lanikea AOA, including the AOA President, Vice President and Secretary
Met with two members of the Maile Sky Court AOA

Issues Identified

Several issues were raised in the meetings with neighbors and/or mentioned in testimony before and discussed among the Waikiki Neighborhood Board, including private view obstruction, building orientation, construction noise and traffic, and environmental impact.

Timeshare options are not supported by community members; however, they support condominiums and hotel uses.

The Hawaiian sense of place and focus on landscape design is important. Community members would like to see cultural elements in the building design and the use of indigenous flora/fauna.

The attendance at the Applicant's meeting with the Four Paddle and 2121 Ala Wai was limited due to the size of the meeting room. However, based on the response to the request, no one was turned away, even those that showed up at the door without a reservation.

3. The proposed building orientation and design was developed to implement Waikiki Special Design District (WSDD) Guidelines.

The WSDD Guidelines section that includes “Orientation and Form” and establishes the guideline for the mauka/makai orientation is 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 following 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” 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.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalakaua Avenue and from Kuhio Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian accessways into and through Waikiki. This ewa/diamond head orientation is also sensitive to protection of public views from the Gateway to Waikiki located at Kalakaua Avenue and Ala Moana

Boulevard and from the open space at Fort DeRussy. A volume study (Appendix VI Building Orientation – Photographic Analysis in the Final EA) on photographs of views from these locations have been prepared comparing the impacts from two building designs (enclosed), one with a mauka/makai building orientation and one with the proposed ewa/diamond head building orientation. The ewa/diamond head building orientation has significantly less visual impact along these important public view corridors except for one view at the corner of Kalakaua Avenue and Kalaimoku Street. The structure has a narrower face with the ewa/diamond head orientation than with a mauka/makai orientation in all but one of the viewpoints along Kalakaua Avenue and Kuhio Avenue. The view from the Gateway to Waikiki at Kalakaua Avenue and Ala Moana Boulevard is also less impacted with the ewa/diamond head building orientation.

A view from the open space at Fort DeRussy shows that the visual impact with either orientation is about the same.

At the request of the Department of Planning and Permitting (DPP) the Building Orientation – Photographic Analysis also shows views from Kalaimoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as significant public views **mauka views** at certain other streets located mauka of Kuhio Avenue.

The ewa/diamond head orientation has also allowed us to provide the widest possible uninterrupted public open space along Kuhio Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kuhio Avenue as possible and would have been significantly wider to accommodate a similar amount of floor area and not located above and within the proposed parking podium.

The concept of “building forms which produce narrow towers are preferred” is supported by the Project as well. The additional height allows the applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

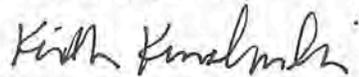
The 2006 Final EA for the previously planned development did not consider public views in following the recommendations in the Waikiki Special District Design Guidelines. As

explained above, the mauka/makai orientation in this instance is not in the best interest of public views which are better served by an ewa/diamond head orientation.

4. The risk versus reward in developments is an important but difficult concept to grasp. The developer has determined that there is an understood risk in funding this Project. The Applicant is poised to risk hundreds of millions of dollars on this Project and the reward must justify this risk.
5. A perpendicular layout, although respectful of the two abutting properties located mauka and makai, would not be considerate of the other two adjoining properties located ewa and diamond head. In our proposed orientation, we felt it most important to protect public views and improve our ability to maximize public open space.
6. We are appreciative of our local residents who have not objected to development on the site. They are excited about our plans to move forward and have not questioned that the development will be built to the highest standards.
7. The Applicant will work with DPP and the City Council to ensure that the public interest will be served.

Your letter and this response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

cc: Department of Planning and Permitting
PACREP LLC

2140 Kuhio Avenue #2404
Honolulu, HI 96815

Office of Environmental Quality Control – State of Hawaii
State Office Tower, Room 702
235 South Beretania St
Honolulu, HI 96813

August 18, 2012

Dear Sir/Madam,

Response to Draft Environmental Assessment for 2121 Kuhio Tower Project

Please will you include the following letter as part of the formal public response to the above DEA dated July 6, 2012.

1) Summary

I would like to object to the 2121 Kuhio Tower Project as currently proposed. I request that the Department of Planning and Permitting (DPP):

- a) **Assess the pros and cons of a re-orientation of the building to mitigate the impact on adjacent properties**
- b) **Assess the negative impact on values and tax revenues of adjacent properties of the present building configuration**
- c) **Secure an independent verification on the Developer's assertion that the economics of other solutions would not provide a fair economic rate of return**

2) The DRA Report Conclusions are Fatally Flawed

On Page 12, Section V, A. 1, the first assertion of the report is:

"The Project will have no impact on the residential population in the area"

With such a palpably incorrect assertion, it is clear that the report and analysis of this project has failed to adequately assess the impact of this project on the local residential population.

At the Waikiki Neighborhood Board of May 9th, 2012 (the primary forum for residential input to date), there was little support among the Board members and the negative comments from the audience input (residential property owners) were considerable.

This incorrect DPP assertion has led to an incomplete analysis of this project and alternatives to the Developer's preferred option.

3) Lack of Assessment of Indirect Economic Impacts

The report is quick to identify the positive economic impacts of the development, but does not quantify the negative economic impacts. Those impacts include the reduced value of properties around the 2121 site emanating from the proposed orientation of the building. This reduction in values from lower assessed values of properties will reduce revenues to the City of Honolulu.

Moreover, comments on the economics of this development by the Developer are simply accepted by the DPP. There is no independent review of these assertions. The Developer also made such assertions that summarized to this is the only possible economic solution.

This assertion will not stand up to independent assessment. If the developer overpaid for the site, or incurred design and engineering costs for this configuration after the Waikiki Neighborhood Board meeting in May, 2012, these should be considered a business risk for the Developer and for their account.

4) Absence of Mitigation Efforts by the Developer

Despite very clear input and requests for alternative building designs, the developer has made no material concessions regarding the orientation of the building. Indeed, the developer has acted to suppress public input, limiting representation from Four Paddle residents to just ten people. This is not a good faith effort by the Developer to engage local residents given the financial magnitude and local impact of this building.

Given the negative reaction at the Waikiki Neighborhood Board meeting in May 2012, the Developer has failed to return to the meeting because it is reasonable to assume that they would lose the vote for this project.

There is only brief mention in the report of reaction from locals to this project, or acknowledgement of their suggestions for alternatives. However, because the DPP has asserted there are no impacts on residents, they have failed to investigate and analyze this area.

In a 508 page report, there is only one page on Alternatives Considered (Section XIII). This section does not evaluate any alternative building orientations. Instead, it just addresses the type or unit designations.

This shows that this is a clearly incomplete analysis in the DEA and this should be addressed immediately.

5) Co-operation from Local Residents

In forums and discussions, I have had, local residents, including myself have not argued against development for the sake of development, nor have we argued the developer should not be allowed to earn a fair return. We are also not in any way questioning that the development will be done to a high standard.

The behaviors of this developer compared to that of the prior site owner are stark. The prior developer actively asked for local input and proposed a tower alignment consistent with that feedback. I would be supportive of that solution.

Indeed, I would even add to that by proposing a "T" configuration, where the top of the "T" was a tower in the same location proposed by the previous developer, with the lower part of the "T" being a low rise (up to 5 stories).

This would go a very long way to meeting the developer's economic needs. While, such a solution might not have the same excess profits of their solution, it would demonstrate a more balanced development proposal for a site of this size and be one that takes account of adjacent property orientations.

6) Presentation of a "fait accomplis" solution, but instead "this is not a done deal"

At the Waikiki Neighborhood Board Meeting, the Developer presented their designs as a fait accomplis solution. Indeed the DPP seems to have bought in to such an assertion without any serious challenge or independent analysis.

However, The Chair and Presiding Officer of the Honolulu City Council replied to my email stating there would be a deliberate process here.

The Chair and Presiding Officer said in writing (copy available on request):

"In checking with the City's department of planning and permitting, this project is in the early development stages and has not applied for any permits at this point-in-time. Eventually, this project will need a Waikiki Special District permit from the department of planning and permitting as well as authorization from council to exceed the current height limit, but it still has many more steps that need to be taken before the project will be allowed to proceed towards construction, therefore, contrary to what was represented at the May 8th meeting of the Waikiki Neighborhood Board - it is not a done deal."

7) Conclusion

We are requesting that the DPP enact that process and not be unduly influenced by the Developers assertions, and where appropriate challenge them. They should not also be "rail roaded" in to the developer's timetable. Instead the DPP should put in the requisite analysis time and resources for a development of this magnitude.

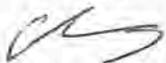
There ARE credible alternatives to the Developers preferred option and ones that have less detrimental impact on the residential owners in the area. It is clear that a review of other high rise properties bordering the Fort DeRussey area that mitigation measures have been utilized. It is clear that these have yet to be reviewed or adopted in the proposed 2121 Kuhio project.

In my judgment, the other orientation options would facilitate a size of development:

- a) considerably more consistent with the size of the 2121 Kuhio site footprint,
- b) population and traffic density of one of the most important nodal points in Waikiki,
- c) mitigate the impact on adjacent properties,
- d) while seeking to maintain the overall ambience of the beautiful Fort DeRussy Park area.

Mahalo for your consideration and time.

Sincerely yours,



Craig Stevens

CC - KUSABO & KURAHASHI INC

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

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September 11, 2012

Mr. Craig Stevens
2140 Kuhio Avenue, #2404
Honolulu, Hawaii 96815

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Mr. Stevens:

Thank you for your letter of August 18, 2012 regarding the Draft Environmental Assessment (“DEA”) for the 2121 Kuhio Avenue Project (“Project”).

We appreciate your comments and offer the following responses:

1. Summary

- a. The proposed building orientation and design was developed to implement Waikiki Special Design District (WSDD) Guidelines.

The WSDD Guidelines section that includes “Orientation and Form” and establishes the guideline for the mauka/makai orientation is 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 following 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” 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.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalakaua Avenue and from Kuhio Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian accessways into and through Waikiki. This ewa/diamond head orientation is also sensitive to protection of public views from the Gateway to Waikiki located at Kalakaua Avenue and Ala Moana Boulevard and from the open space at Fort DeRussy. A volume study (Appendix VI Building Orientation – Photographic Analysis in the Final EA) on photographs of views from these locations have been prepared comparing the impacts from two building designs (enclosed), one with a mauka/makai building orientation and one with the proposed ewa/diamond head building orientation. The ewa/diamond head building orientation has significantly less visual impact along these important public view corridors except for one view at the corner of Kalakaua Avenue and Kalaimoku Street. The structure has a narrower face with the ewa/diamond head orientation than with a mauka/makai orientation in all but one of the viewpoints along Kalakaua Avenue and Kuhio Avenue. The view from the Gateway to Waikiki at Kalakaua Avenue and Ala Moana Boulevard is also less impacted with the ewa/diamond head building orientation.

A view from the open space at Fort DeRussy shows that the visual impact with either orientation is about the same.

At the request of the Department of Planning and Permitting (DPP) the Building Orientation – Photographic Analysis also shows views from Kalaimoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two corridors. However, the views along these two streets

are not considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as significant public views mauka views at certain other streets located mauka of Kuhio Avenue.

The ewa/diamond head orientation has also allowed us to provide the widest possible uninterrupted public open space along Kuhio Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kuhio Avenue as possible and would have been significantly wider to accommodate a similar amount of floor area and not located above and within the proposed parking podium.

The concept of “building forms which produce narrow towers are preferred” is supported by the Project as well. The additional height allows the applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

- b. This Project will provide an improvement through ground-level beautification that will upgrade the lot and encourage other properties nearby to redevelop as well, thereby raising the quality of real estate in the area and increasing property values.
- c. The risk versus reward in developments is an important but difficult concept to grasp. The developer has determined that there is an understood risk in funding this Project. The Applicant is poised to risk hundreds of millions of dollars on this Project and the reward must justify this risk.

2. The DRA Report Conclusions are Fatally Flawed

The section that you refer to relates to the demographic impact of the Project and whether it will increase or decrease the resident population in Waikiki. The Project involves hotels and residential condos, as such the determination that it will not affect population numbers for Waikiki.

3. Lack of Assessment of Indirect Economic Impacts

As mentioned earlier, this Project will provide an improvement through ground-level beautification that will upgrade the lot and encourage other properties nearby to redevelop as well, thereby raising the quality of real estate in the area and increasing property values.

The Applicant's economic analysis is based on experience at the Trump International Hotel & Tower® Waikiki Beach Walk® and actual economics of that hotel.

Item 1 above provides an in-depth analysis of the WSDD Guidelines that support the proposed ewa/diamond orientation and compares the two possible building orientations.

4. Absence of Mitigation Efforts by the Developer

The Applicant has reviewed the WSDD Guidelines and finds that these guidelines support the proposed ewa/diamond head orientation.

The following provides a summary of community-outreach activities related to the Project to date and a brief description of the issues that have been raised. At each of the meetings with neighbors and the Waikiki Neighborhood Board, PACREP representatives described the plans for the site, showed pictures, renderings and site plans, and answered community members' questions.

- a. April 24, 2012
Met with two members of Aqua Hotels & Resorts, which manages Maile Sky Court
Met with Walter Flood, president of the La Casa AOA
Met with members of the Four Paddle AOA
- b. May 8, 2012
Presented at Waikiki Neighborhood Board meeting
- c. May 30, 2012
Met with approximately 25 members of the Four Paddle and 2121 Ala Wai AOAs
- d. June 19, 2012
Met with eight members of the Royal Kuhio AOA
Met with three members of the La Casa AOA
Met with three members of the Lanikea AOA, including the AOA President, Vice President and Secretary
Met with two members of the Maile Sky Court AOA

Issues Identified

Several issues were raised in the meetings with neighbors and/or mentioned in testimony before and discussed among the Waikiki Neighborhood Board, including private view obstruction, building orientation, construction noise and traffic, and environmental impact.

Timeshare options are not supported by community members; however, they support condominiums and hotel uses.

The Hawaiian sense of place and focus on landscape design is important. Community members would like to see cultural elements in the building design and the use of indigenous flora/fauna.

The attendance at the Applicant's meeting with the Four Paddle and 2121 Ala Wai was limited due to the size of the meeting room. However, based on the response to the request, no one was turned away, even those that showed up at the door without a reservation.

The Alternatives Section in the Final EA will consider the impacts of a mauka/makai oriented building.

5. The previous Applicant worked with the community, however, an Advertiser newspaper article dated October 27, 2005 stated that:

"The project has drawn concern about increased traffic and blocked views mainly from residents living in the nearby Four Paddle high-rise and the nearby 24-story La Casa condo."

6. We apologize for any confusion at the Waikiki Neighborhood Board Meeting. The following is an excerpt from the Power Point Presentation that was read by Keith Kurahashi, the planning and zoning consultant for the Project:

"This request will require a Waikiki Special District Permit subject to review and approval by the Department of Planning and Permitting (DPP) and review and approval by City Council of a request for a 350-foot height limit subject to certain criteria related to views from the Punchbowl Cemetery and the area fronting Fort DeRussy."

We did not intend to give an impression that this was a done deal, as we are well aware that we are in the very early environmental review (environmental assessment) phase, after which there will be a Waikiki Special District Permit review and process with the Department of Planning and Permitting (DPP) and the review and consideration of a request to the City Council (Council) for a 350-foot height limit. Both processes will provide opportunities for public input, in the form of a public hearing with DPP and at least two City Council meetings at which public testimony is accepted.

7. The Applicant understands that DPP will review the Final EA and ensure that it adequately assesses the impacts of the Project. During the processing of the Waikiki Special District Permit, DPP will assess the projects conformance to the WSDD Guidelines.

Mr. Craig Stevens
Page 6

Your letter and this response will be included in the Final EA.

Very truly yours,

A handwritten signature in black ink, appearing to read "Keith Kurahashi". The signature is written in a cursive style with a large initial "K".

Keith Kurahashi

cc: Department of Planning and Permitting
PACREP LLC

October 1, 2012

Kusao & Kurahashi, Inc
Planning and Zoning Consultants
2752 Woodlawn Drive, Suite 5-202
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Mr. David Tanoue
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City and County of Honolulu
650 South King Street, 7th Floor
Honolulu, HI 96813

Office of Environmental Quality Control – State of Hawaii
State Office Tower, Room 702
235 South Beretania Street
Honolulu, HI 96813

**Draft Environmental Assessment for 2121 Kuhio Avenue Development
Response to the Letter from Kusao and Kurahashi**

Thank you for your letter from Kusao and Kurahashi dated September 11, 2012 in response to my comments on the 2121 Kuhio Project Draft Environmental Assessment (DEA).

Unfortunately, your response does not address my issues in a complete manner. In addition, there are material errors of fact in the reply.

1) Summary

Firstly, as a summary, I would like to highlight the following facts and recommendations (particularly for the benefit of the Department of Planning and Permitting):

1. The Ewa orientated building photos provided in your reply to my letter are materially inconsistent with the Site Plan in the DEA in regard to both design and building longitude (please see details in Section 2 of this letter below).
2. There are other misrepresentations of fact in your response that I am correcting for the record in this letter.
3. Additionally, the location on the site of the Mauka orientated building in the photos is different from that proposed by the previous K3 Owners LLC.
4. It should be highlighted that the Mauka orientated building has already secured neighborhood support via an affirmative vote taken by the Waikiki Neighborhood Board on June 13, 2006.
5. More recently, the Ewa orientated building was addressed at the Waikiki Neighborhood Board on June 12, 2012. The public and Board questions clearly highlighted how controversial an Ewa orientated building would be. As a result, the Board invited the developer to return to the Board with "adjustments to the project" (see Board minutes). The developer has, to date, declined to accept that invitation.
6. Jeff Merz representing the Waikiki Neighborhood Board raised a series of concerns about the DEA in its August 1, 2012 letter.

7. Other neighborhood written responses to the DEA demonstrate continued public support for the Mauka orientated building, substantially as proposed by the previous developer.
8. The constant changes to the Ewa orientated building design mean that it is now impossible to know the basis on which the public and DPP are expected to review and comment on this project.
9. Given the magnitude of impact on the neighborhood of this building, together with the lack of certainty over the project design and absence of public support, it is recommended that there should NOT be a Finding of No Significant Impact for this project at this moment in time.
10. Instead, the magnitude of the changes to the Mauka orientated building in the original K3 Owners LLC plan provides ample reason for this project to be subject to a Full Environment Impact Statement.

2) Conversation with Kusao and Kurahashi

The following are my notes of my telephone conversation with Keith Kurahashi of Kusao and Kurahashi on the afternoon of September 25, 2012

1. Mr. Keith Kurahashi advised me that the building design and configuration in the Draft Environmental Assessment (DEA) is the same as proposed in the Final Environmental Assessment (FEA)
2. This Site Plan is set out in Appendix 1 on page 73 (of 508 pages when displayed in PDF form) of the DEA
3. **With this in mind, the photos sent to me comparing the Ewa orientated building (with a Mauka orientated building) are inconsistent with the DEA Site Plan.**
 - a. The photos all show the Ewa orientated building with a shorter longitude than that proposed in the DEA (see Attachment 1 to this letter)
 - b. The Site Plan in the DEA (in Appendix 1) shows partial building ingress into the service road on the east side of the property (off Kuhio Avenue), whereas the photos show a building with an around 70 – 80 feet setback from the service road.
 - c. The photos show both the Ewa orientated building in comparison to a Mauka orientated building of a 300 feet height
 - d. The Site Plan in the DEA shows an "S" shaped building, yet the photos show a convex shaped building on the south side. It is a completely different design.
4. I understand from Mr. Keith Kurahashi that more recent building designs (than shown in DEA) are being considered which include reductions of over 50 feet on the eastern side of the Ewa building orientation.
5. **Mr. Kurahashi confirmed that these new designs had not yet been shared with the DPP in the DEA (or in the Final Environmental Assessment) as of September 25, 2012. They are waiting for comments from the DPP first.**

In summary, my conclusions and recommendations are:

- a. The building configuration in DEA that was the basis for public responses is now in question. If other configurations are to be proposed, these should be sent to the DPP and also shared with the public.
- b. If the DEA/FEA is based on the full building longitude as displayed in the DEA (including the ingress in to the service road off Kuhio Avenue), then the photos should be re-created to reflect this. This will ensure an accurate photographic comparison of the Ewa orientated property with the Mauka orientated property
- c. If on the other hand, the true intent of the Ewa orientated building is represented in the photos, then the Site Plan should be changed in the DEA to show the 70 – 80 feet setback from the Kuhio Avenue service road.
- d. These photos should be sent to all people that they were erroneously sent to in order to correct the record to allow them to respond to this correction

- e. If additional building configurations with lesser longitude are to be proposed, these should immediately be shared with the DPP and the public. Specifically, these should include not just photos, but a full Site Plan in order to avoid any ambiguity.
- f. Kasao and Kurahashi should be clear about whether the shorter longitude is conditional on the building height. If the longitude of the Ewa orientated building is conditional on the height, the Developer should set out reasons why such flexibility should exist at all.
- g. It should be noted that the design as shown on the DEA Site Plan represents the most invasive option of any proposed by this Developer (no setback from the Kuhio Avenue service road). I hope the DPP will take this into account in their deliberations and reject this option. It is recommended that the DPP should, specifically, NOT leave this as an option available to the Developer, if the Honolulu City Council does not approve the 350 feet building height.
- h. Given the nature of the public support for the Mauka orientated building, this should be the recommended orientation.

3) Detailed comments on Kasao & Kurahashi Letter Response

Craig Stevens Letter	Kasao & Kurahashi response	Kasao & Kurahashi response	Rebuttal from Craig Stevens
<p><i>The DRA Report Conclusions are Fatally Flawed</i></p> <p>On Page 12, Section V, A. 1, the first assertion of the report is: <i>"The Project will have no impact on the residential population in the area"</i> With such a palpably incorrect assertion, it is clear that the report and analysis of this project has failed to adequately assess the impact of this project on the local residential population.</p>	<p>Page 2, point 2</p>	<p>The Section you refer to relates to the demographic impact of the project and whether it will increase or decrease the residential population in Waikiki.</p> <p>The project involves hotels and residential condos, as such the determination that it will not affect population numbers for Waikiki.</p>	<p>Now you have added clarity to your English, I still do not see how "residential condos" will not increase the residential population in Waikiki. So your statement still appears incorrect.</p> <p>However, since I am supportive of a major development of this site (just not this one), I do not want to make this a significant point relative to the other points in this rebuttal.</p>

Craig Stevens Letter	Kasao & Kurahashi response	Kasao & Kurahashi response	Rebuttal from Craig Stevens
<p><i>Lack of Assessment of Indirect Economic Impacts</i></p> <p>Moreover, comments on the economics of this development by the Developer are simply accepted by the DPP. There is no independent review of these assertions. The Developer also made such assertions that summarized to this is the only possible economic solution. This assertion will not stand up to independent assessment. If the developer overpaid for the site, or incurred design and engineering costs for this configuration after the Waikiki Neighborhood Board meeting in May, 2012, these should be considered a business risk for the Developer and for their account.</p>	<p>Page 3, point 1 c</p>	<p>The risk versus reward concept in developments is an important but difficult concept to grasp. The development has determined that there is understood risk in funding this project.</p> <p>The Applicant is poised to risk hundreds of millions of dollars on this project and the reward must justify the risk.</p>	<p>I do not see why this is a difficult concept to grasp, either for the public or the DPP. All well run companies have criteria for investment returns and assessment of risks.</p> <p>The point is that the Kasao & Kurahashi response offers no facts or quantification about the risk reward profile of the Developer proposal, and specifically does not make the comparison to the alternative K3 Owners LLC configuration.</p> <p>I do not believe we should accept PACREPs comments in this area without independent verification.</p> <p>I can clearly see how the PACREP proposal represents the very highest rate of return possible. If that was the only criteria for this project, then the current proposal would clearly be the chose option.</p> <p>However, I believe that an independent study will verify that the K2 proposal is a profitable alternative.</p> <p>This will open up discussion alternatives that have less negative impact on the adjacent properties.</p>

Craig Stevens Letter	Kasao & Kurahashi response	Kasao & Kurahashi response	Rebuttal from Craig Stevens
<p>Point 4</p> <p><i>Absence of mitigation efforts by the Developer</i></p> <p>Despite very clear input and requests for alternative building designs, the developer has made no material concessions regarding the orientation of the building</p>	<p>Page 4, point 4</p>	<p>No response</p>	<p>Please address this issue.</p>
<p>Point 4</p> <p><i>Absence of mitigation efforts by the Developer</i></p> <p>Given the negative reaction at the Waikiki Neighborhood Board meeting in May 2012, the Developer has failed to return to the meeting because it is reasonable to assume that they would lose the vote for this project.</p>	<p>Page 4, point 4b</p>	<p>Simply mentions:</p> <p>May 8, 2012 Presented to the Waikiki Neighborhood Board meeting</p>	<p>Please address the substance of this issue.</p> <p>I am advised since my letter that certain members of the Waikiki Neighborhood Board have been advised that the Developer is not currently intending to return to the Board, despite the Board's invitation and expectation that they would do so.</p> <p>This confirms:</p> <ul style="list-style-type: none"> a) There was no sincere effort by the Developer to work with the local Neighborhood Board to resolve the issues raised b) That the Developer does not have confidence in its own proposal to secure public support c) When met with public input not in accordance with the Developer's goals, that they will make every effort to bypass public input <p>Instead, this Developer has solely focused its efforts on rebutting all public input, rather than to offer any compromises or work for win-win solutions.</p>

Craig Stevens Letter	Kasao & Kurahashi response	Kasao & Kurahashi response	Rebuttal from Craig Stevens
<p><i>Absence of mitigation efforts by the Developer</i></p> <p>Indeed, the developer has acted to suppress public input, limiting representation from Four Paddle residents to just ten people. This is not a good faith effort by the Developer to engage local residents given the financial magnitude and local impact of this building.</p>	<p>Page 4, point 4c</p>	<p>May 30, 2012</p> <p>Met with approximately 25 members of the Four Paddle and 2121 Ala Wai</p> <p>The attendance at the Applicants meeting with Four Paddle was limited..... However, based on the response to the request, no one was turned award</p>	<p>In response to my request to attend the meeting, the AOA Four Paddle representative responded to me with the following:</p> <p><i>William E. Denison, W. E. Denison Corporation, 3660 Waiālae Avenue, Suite 307, Honolulu, HI 96816</i></p> <p><i>The developer offered only 20 seats to be shared between the Four Paddle and 2121 Ala Wai owners</i></p> <p><i>The seats for the meeting tomorrow are all taken.</i></p> <p><i>We have asked the developer about having another meeting and they will let us know.</i></p> <p>To say that anyone who wanted to attend could do so now is a convenient restatement of what actually happened. This new statement of their position was not communicated ahead of the meeting in a clear effort to minimize attendance.</p> <p>I do not want to make a big issue of my particular experience. However, the broader point is that a room which can only take such a small number of people demonstrates a lack of good faith effort to engage local residential owners.</p> <p>(This is also consistent with the Developer's behavior to avoid another meeting and vote at the Waikiki Neighborhood Board).</p>

Craig Stevens Letter	Kasao & Kurahashi response	Kasao & Kurahashi response	Rebuttal from Craig Stevens
<p>"The previous applicant worked with the community...."</p>	<p>Page 5, point 5</p>	<p>However, an Advertiser newspaper article dated October 27, 2005 stated that:</p> <p>"The project has drawn concern about increased traffic and blocked views from residents living nearby Four Paddle high-rise and the nearby 24 story La Casa condo"</p>	<p>This point is not relevant to the choices before us.</p> <p>You are clearly trying to infer that the public might prefer the PACREP proposal over the K2 proposal or alternatively that the public would be against the K2 proposal.</p> <p>Kasao & Kurahashi knows that is untrue from the responses you have received to the DEA. As such, Kasao & Kurahashi is trying to mislead the DPP.</p> <p>Additionally, there is no mention of Waikiki Neighborhood Board votes in support of the Mauka orientated building.</p> <p>Of course, <i>any</i> building on the 2121 Kuhio site will increase traffic and block views <i>compared to the current empty site</i>. That is what the Advertiser comments refer to, not to the relevant merits of the two building orientations.</p> <p>The facts are clear that the responses of Four Paddle residential owners that the K2 proposal is preferable to the PACREP proposal in this regard and, secondly, are supportive of the K2 solution.</p> <p>Kasao & Kurahashi has deliberately ignored these facts.</p>

I look forward to Kusao & Kurahashi providing a complete response to the issues in this letter, including a full clarification of the final building design being proposed and appropriate corrections to the inconsistencies between the DEA and the photos that have been sent.

Sincerely yours,

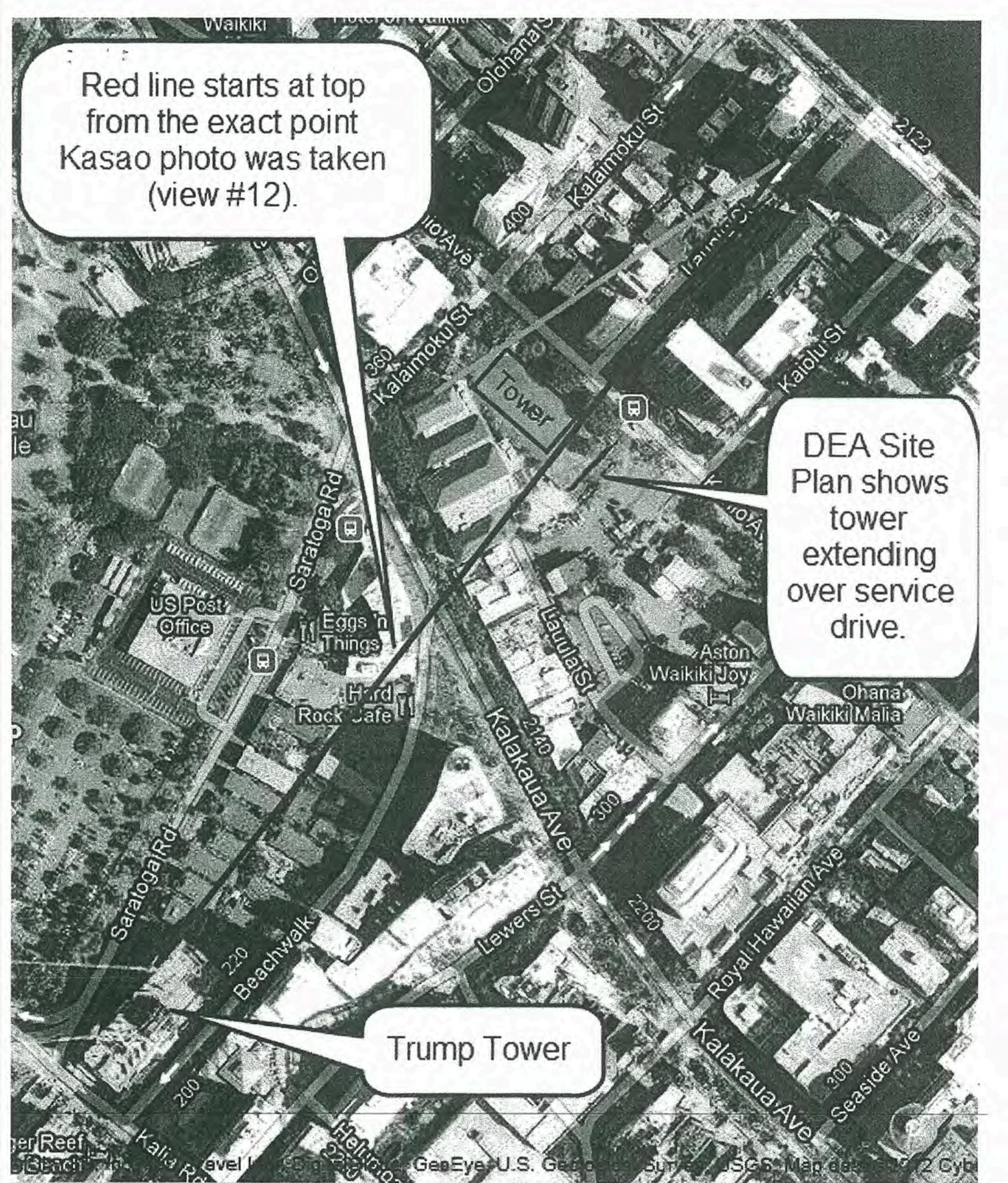


Craig Stevens

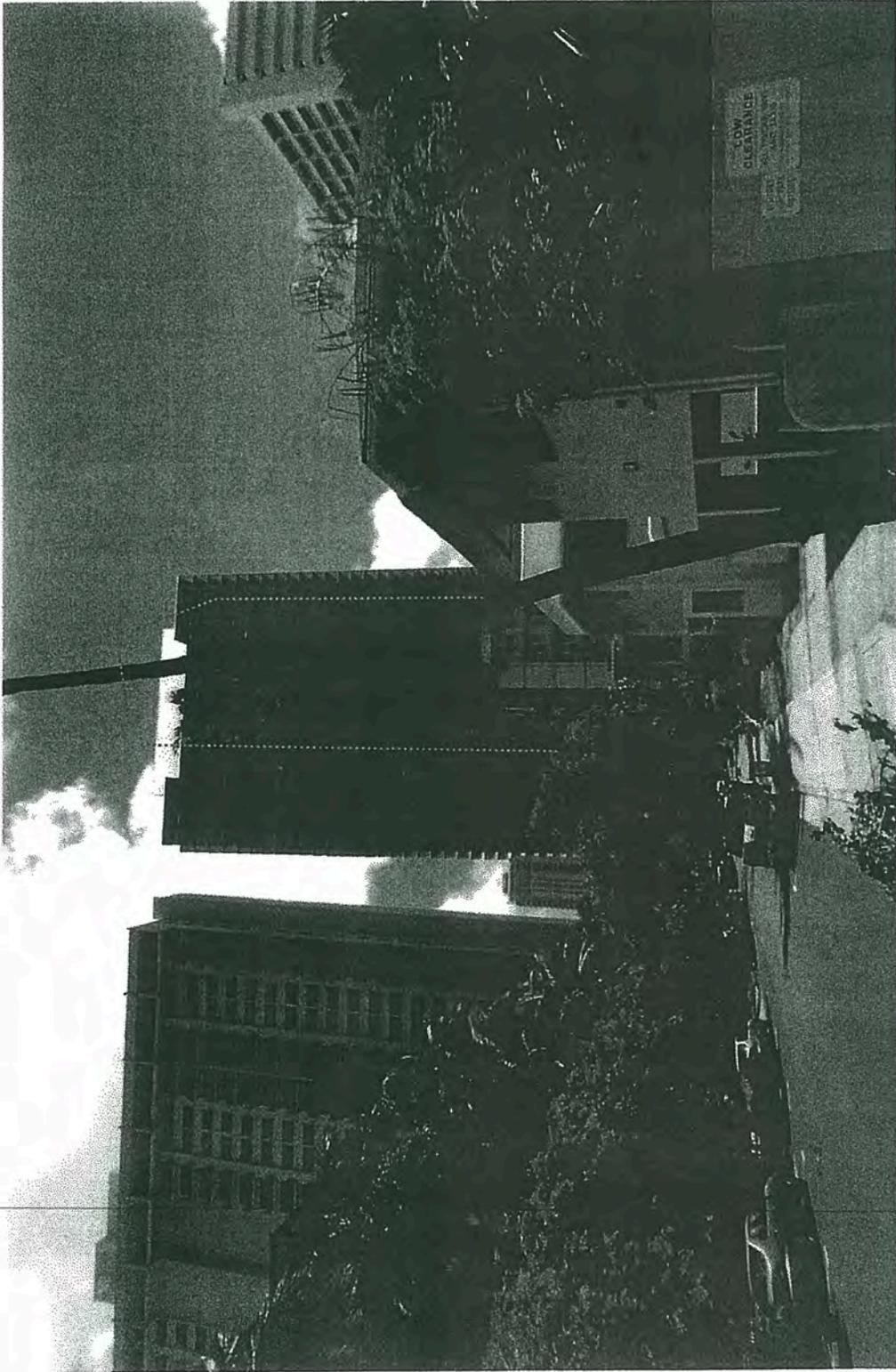
Red line starts at top from the exact point Kasao photo was taken (view #12).

DEA Site Plan shows tower extending over service drive.

Trump Tower



Gateway Views
Diamond Head/Ewa Orientation - View 12



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September 11, 2012

Mr. Craig Stevens
2140 Kuhio Avenue, #2404
Honolulu, Hawaii 96815

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Mr. Stevens:

Thank you for your letter of August 18, 2012 regarding the Draft Environmental Assessment ("DEA") for the 2121 Kuhio Avenue Project ("Project").

We appreciate your comments and offer the following responses:

1. Summary

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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.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalakaua Avenue and from Kuhio Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian accessways into and through Waikiki. This ewa/diamond head orientation is also sensitive to protection of public views from the Gateway to Waikiki located at Kalakaua Avenue and Ala Moana Boulevard and from the open space at Fort DeRussy. A volume study (Appendix VI Building Orientation – Photographic Analysis in the Final EA) on photographs of views from these locations have been prepared comparing the impacts from two building designs (enclosed), one with a mauka/makai building orientation and one with the proposed ewa/diamond head building orientation. The ewa/diamond head building orientation has significantly less visual impact along these important public view corridors except for one view at the corner of Kalakaua Avenue and Kalaimoku Street. The structure has a narrower face with the ewa/diamond head orientation than with a mauka/makai orientation in all but one of the viewpoints along Kalakaua Avenue and Kuhio Avenue. The view from the Gateway to Waikiki at Kalakaua Avenue and Ala Moana Boulevard is also less impacted with the ewa/diamond head building orientation.

A view from the open space at Fort DeRussy shows that the visual impact with either orientation is about the same.

At the request of the Department of Planning and Permitting (DPP) the Building Orientation – Photographic Analysis also shows views from Kalaimoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two corridors. However, the views along these two streets

are not considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as significant public views mauka views at certain other streets located mauka of Kuhio Avenue.

The ewa/diamond head orientation has also allowed us to provide the widest possible uninterrupted public open space along Kuhio Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kuhio Avenue as possible and would have been significantly wider to accommodate a similar amount of floor area and not located above and within the proposed parking podium.

The concept of “building forms which produce narrow towers are preferred” is supported by the Project as well. The additional height allows the applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

- b. This Project will provide an improvement through ground-level beautification that will upgrade the lot and encourage other properties nearby to redevelop as well, thereby raising the quality of real estate in the area and increasing property values.
- c. The risk versus reward in developments is an important but difficult concept to grasp. The developer has determined that there is an understood risk in funding this Project. The Applicant is poised to risk hundreds of millions of dollars on this Project and the reward must justify this risk.

2. The DRA Report Conclusions are Fatally Flawed

The section that you refer to relates to the demographic impact of the Project and whether it will increase or decrease the resident population in Waikiki. The Project involves hotels and residential condos, as such the determination that it will not affect population numbers for Waikiki.

3. Lack of Assessment of Indirect Economic Impacts

As mentioned earlier, this Project will provide an improvement through ground-level beautification that will upgrade the lot and encourage other properties nearby to redevelop as well, thereby raising the quality of real estate in the area and increasing property values.

The Applicant's economic analysis is based on experience at the Trump International Hotel & Tower® Waikiki Beach Walk® and actual economics of that hotel.

Item 1 above provides an in-depth analysis of the WSDD Guidelines that support the proposed ewa/diamond orientation and compares the two possible building orientations.

4. Absence of Mitigation Efforts by the Developer

The Applicant has reviewed the WSDD Guidelines and finds that these guidelines support the proposed ewa/diamond head orientation.

The following provides a summary of community-outreach activities related to the Project to date and a brief description of the issues that have been raised. At each of the meetings with neighbors and the Waikiki Neighborhood Board, PACREP representatives described the plans for the site, showed pictures, renderings and site plans, and answered community members' questions.

- a. April 24, 2012
Met with two members of Aqua Hotels & Resorts, which manages Maile Sky Court
Met with Walter Flood, president of the La Casa AOAO
Met with members of the Four Paddle AOAO
- b. May 8, 2012
Presented at Waikiki Neighborhood Board meeting
- c. May 30, 2012
Met with approximately 25 members of the Four Paddle and 2121 Ala Wai AOAOs
- d. June 19, 2012
Met with eight members of the Royal Kuhio AOAO
Met with three members of the La Casa AOAO
Met with three members of the Lanikea AOAO, including the AOAO President, Vice President and Secretary
Met with two members of the Maile Sky Court AOAO

Issues Identified

Several issues were raised in the meetings with neighbors and/or mentioned in testimony before and discussed among the Waikiki Neighborhood Board, including private view obstruction, building orientation, construction noise and traffic, and environmental impact.

Timeshare options are not supported by community members; however, they support condominiums and hotel uses.

The Hawaiian sense of place and focus on landscape design is important. Community members would like to see cultural elements in the building design and the use of indigenous flora/fauna.

The attendance at the Applicant's meeting with the Four Paddle and 2121 Ala Wai was limited due to the size of the meeting room. However, based on the response to the request, no one was turned away, even those that showed up at the door without a reservation.

The Alternatives Section in the Final EA will consider the impacts of a mauka/makai oriented building.

5. The previous Applicant worked with the community, however, an Advertiser newspaper article dated October 27, 2005 stated that:

"The project has drawn concern about increased traffic and blocked views mainly from residents living in the nearby Four Paddle high-rise and the nearby 24-story La Casa condo."

6. We apologize for any confusion at the Waikiki Neighborhood Board Meeting. The following is an excerpt from the Power Point Presentation that was read by Keith Kurahashi, the planning and zoning consultant for the Project:

"This request will require a Waikiki Special District Permit subject to review and approval by the Department of Planning and Permitting (DPP) and review and approval by City Council of a request for a 350-foot height limit subject to certain criteria related to views from the Punchbowl Cemetery and the area fronting Fort DeRussy."

We did not intend to give an impression that this was a done deal, as we are well aware that we are in the very early environmental review (environmental assessment) phase, after which there will be a Waikiki Special District Permit review and process with the Department of Planning and Permitting (DPP) and the review and consideration of a request to the City Council (Council) for a 350-foot height limit. Both processes will provide opportunities for public input, in the form of a public hearing with DPP and at least two City Council meetings at which public testimony is accepted.

7. The Applicant understands that DPP will review the Final EA and ensure that it adequately assesses the impacts of the Project. During the processing of the Waikiki Special District Permit, DPP will assess the projects conformance to the WSDD Guidelines.
-

Mr. Craig Stevens
Page 6

Your letter and this response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

cc: Department of Planning and Permitting
PACREP LLC

CC KUSAO - KURAHASHI
DEPARTMENT OF PLANNING & PERMITTING

2140 Kuhio Avenue #2404
Honolulu, HI 96815

Office of Environmental Quality Control – State of Hawaii
State Office Tower, Room 702
235 South Beretania Street
Honolulu, HI 96813

August 18, 2012

Dear Sir/Madam,

Response to Draft Environmental Assessment (DEA) for 2121 Kuhio Tower Project

Please will you include the following letter as part of the formal public response to the above DEA dated July 6, 2012.

1) Summary and Recommendations

I would like to object to the 2121 Kuhio Tower Project as currently proposed. I request that the Department of Planning and Permitting (DPP):

- a) **Identify the pros and cons of other building orientations to mitigate the impact on adjacent properties**
- b) **Quantify the negative impact on values and tax revenues of adjacent properties of the present building configuration**
- c) **Secure an independent verification on the Developer's assertion that the economics of other building development options would not provide a fair economic rate of return**
- d) **Subject the project to a full Environmental Impact Statement Requirement. Given the magnitude of this project and the size of the public reaction, this will ensure a full appraisal of a range of alternative building configurations**

2) The DRA Report Conclusions are Fatally Flawed

On Page 12, Section V, A. 1, the first assertion of the report is:

"The Project will have no impact on the residential population in the area"

With such a palpably incorrect assertion, it is clear that the report and analysis of this project has failed to adequately assess the impact of this project on the local residential population.

At the Waikiki Neighborhood Board of May 9th, 2012 (the primary forum for residential input to date), there was little support among the Board members and the negative comments from the audience (**residential property owners**) about the option proposed by the developer were considerable.

This incorrect DPP assertion has led to an incomplete analysis of this project and alternatives to the Developer's preferred option.

3) Lack of Assessment of Indirect Economic Impacts

The report is quick to identify the positive economic impacts of the development, but does not quantify the negative economic impacts. Those impacts include the reduced value of properties around the 2121 site emanating from the

proposed orientation of the building. This reduction in values from lower assessed values of properties will reduce revenues to the City of Honolulu.

Moreover, comments on the economics of this development by the Developer are simply accepted by the DPP. There is no independent review of these assertions. The Developer also made such assertions that summarized to this is the only possible economic solution.

This assertion will not stand up to independent assessment. If the developer overpaid for the site, or incurred design and engineering costs for this configuration after the Waikiki Neighborhood Board meeting in May, 2012, these should be considered a business risk for the Developer and for their account.

4) Absence of Mitigation Efforts by the Developer

Despite very clear input and requests for alternative building designs, the developer has made no material concessions regarding the orientation of the building. Indeed, the developer has acted to suppress public input, limiting representation from Four Paddle residents to just ten people. This is not a good faith effort by the Developer to engage local residents given the financial magnitude and local impact of this building.

Given the negative reaction at the Waikiki Neighborhood Board meeting in May 2012, the Developer has failed to return to the meeting because it is reasonable to assume that they would lose the vote for this project.

There is only brief mention in the report of reaction from locals to this project, or acknowledgement of their suggestions for alternatives. However, because the DPP has asserted there are no impacts on residents, they have failed to investigate and analyze this area.

In a 508 page report, there is only one page on Alternatives Considered (Section XIII). This section does not evaluate any alternative building orientations. Instead, it just addresses the type or unit designations.

This shows that this is a clearly incomplete analysis in the DEA and this should be addressed immediately.

5) Co-operation from Local Residents

In forums and discussions, I have had, local residents, including myself have not argued against development for the sake of development, nor have we argued the developer should not be allowed to earn a fair return. We are also not in any way questioning that the development will be done to a high standard.

The behaviors of this developer compared to that of the prior site owner are stark. The prior developer actively asked for local input and proposed a tower alignment consistent with that feedback. I would be supportive of that solution.

Indeed, I would even add to that by proposing a "T" configuration, where the top of the "T" was a tower in the same location proposed by the previous developer, with the lower part of the "T" being a low rise (up to 5 stories).

This would go a very long way to meeting the developer's economic needs. While, such a solution might not have the same excess profits of their solution, it would demonstrate a more balanced development proposal for a site of this size and be one that takes account of adjacent property orientations.

6) Presentation of a "fait accomplis" solution, but instead "this is not a done deal"

At the Waikiki Neighborhood Board Meeting, the Developer presented their designs as a fait accomplis solution. Indeed the DPP seems to have bought in to such an assertion without any serious challenge or independent analysis.

However, The Chair and Presiding Officer of the Honolulu City Council replied to my email stating there would be a deliberate process here.

The Chair and Presiding Officer said in writing (copy available on request):

"In checking with the City's department of planning and permitting, this project is in the early development stages and has not applied for any permits at this point-in-time. Eventually, this project will need a Waikiki Special District permit from the department of planning and permitting as well as authorization from council to exceed the current height limit, but it still has many more steps that need to be taken before the project will be allowed to proceed towards construction, therefore, contrary to what was represented at the May 8th meeting of the Waikiki Neighborhood Board - it is not a done deal."

The public expects the DPP to complete their review in a full and comprehensive manner to identify the best solution.

7) Conclusion

We are requesting that the DPP enact that process and not be unduly influenced by the Developers assertions, and where appropriate challenge them or seek independent verification. They should not also be "railroaded" in to the developer's timetable. Instead the DPP should put in the requisite analysis time and resources for a development of this magnitude.

There ARE credible alternatives to the Developers preferred option and ones that have less detrimental impact on the residential owners in the area. It is clear that a review of other high rise properties bordering the Fort DeRussey area that mitigation measures have been utilized. It is clear that these have yet to be reviewed or adopted in the proposed 2121 Kuhio project.

In my judgment, the other orientation options would facilitate a size of development:

- a) considerably more consistent with the size of the 2121 Kuhio site footprint,
- b) taking account of the population and traffic density of one of the most important nodal points in Waikiki,
- c) while mitigating the impact on adjacent properties,
- d) while seeking to maintain the overall ambience and skyline of the beautiful Fort DeRussy Park area.

This project should be subject to a full Environmental Impact Statement. This will ensure a full engagement of the local community and a more rigorous evaluation of alternative solutions, This will allow the environmental, community impact and economics of a range of building configurations to be reviewed.

Mahalo for your consideration and time.

Sincerely yours,



Craig Stevens

Cc Kusao & Kurahashi Inc.
Department and Planning and Permitting

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-202
HONOLULU, HAWAII 96822

October 26, 2012

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FAX. (808) 988-1140

E-mail: kkurahashi@hawaii.rr.com

Mr. Craig Stevens
2140 Kuhio Avenue, #2404
Honolulu, Hawaii 96815

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Mr. Stevens:

Thank you for your letter of October 1, 2012 regarding the Draft Environmental Assessment ("DEA") for the 2121 Kuhio Avenue Project ("Project").

We appreciate your comments and offer the following responses:

1) Summary

1. The Pre-Final EA for the project has been revised and the Final EA provides ewa/diamond head oriented building photos that are consistent with the revised plans in regard to both design and building orientation. See enclosed cd, Gateway Views (if you require hard copies of the photos, please call me at 988-2231 or write to me at the above address). The Project design has been revised to reduce the length of the tower of the building by about 48 feet based on concerns presented on the DEA. This reduction in length will reduce the impact of shadows and impacts to ocean views from the Four Paddle. With a 350-foot height limit, many of the Four Paddle units will retain an ocean view. A revised mauka/makai oriented building design has also been provided. The tower design footprint on the site for both the revised ewa/diamond head oriented building and the revised mauka/makai oriented building is provided in the enclosed Gateway Views.
2. We will address any other inadvertent misrepresentations.
3. The revised mauka/makai oriented building design is in accordance with this Applicant's design. The difference is that underground parking will not be provided and the Applicant is providing significant public open space, in exchange for greater density on the property.
4. The Applicant understands that the Waikiki Neighborhood Board supported a rezoning for the property and a conceptual design proposed by the previous owner of the property.

5. The Applicant has met the legal requirement for a presentation to the neighborhood board and has redesigned the project to address some of the concerns presented at the neighborhood board meeting, reducing the length of the tower by about 48 feet, reducing the impact on ocean views at the Four Paddle.
6. The concerns presented by Mr. Jeff Merz, representing the Waikiki Neighborhood Board, have been responded to in the Final EA.
7. The proposed building orientation and design was developed to implement Waikiki Special Design District (WSDD) Guidelines.

The WSDD Guidelines section that includes “Orientation and Form” and establishes the guideline for the mauka/makai orientation is 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 following 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” 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.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalākaua Avenue and from Kūhiō Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian access ways into and through Waikīkī.

The proposed ewa/diamond head building orientation is also sensitive to the need to protect public views from the Gateway to Waikīkī located at Kalākaua Avenue and Ala Moana Boulevard. A volume study on photographs of views from these locations have been prepared comparing the visual impact of two building designs, one with a mauka/makai orientation and one with the proposed building design in an ewa/diamond head orientation. See Gateway Views, enclosed cd, included in the Final EA as Appendix VI, Building Orientation – Photographic Analysis.

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalākaua Avenue and from Kūhiō Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian access ways into and through Waikīkī. This ewa/diamond head orientation is also sensitive to protection of public views from the Gateway to Waikiki located at Kalākaua Avenue and Ala Moana Boulevard. A volume study (enclosed cd, Gateway Views) on photographs of views from these locations has been prepared comparing the impacts from two building designs (enclosed), one with a mauka/makai building orientation and one with the proposed ewa/diamond head building orientation. The ewa/diamond head building orientation has significantly less visual impact along these important public view corridors except for one view at the corner of Kalākaua Avenue and Kālaimoku Street and two views looking ewa along Kūhiō Avenue. The structure has a narrower face with the ewa/diamond head orientation than with a mauka/makai orientation in all but three of the viewpoints along Kalākaua Avenue and Kūhiō Avenue. The view from the Gateway to Waikiki at Kalākaua Avenue and Ala Moana Boulevard is also less impacted with the ewa/diamond head building orientation.

The viewpoint at the open space at Fort DeRussy shows that the visual impact is greater with the ewa/diamond head orientation.

At the request of DPP the Building Orientation – Photographic Analysis (Appendix VI) also shows views from Kālainoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two street corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as significant public views the mauka views at certain other streets located mauka of Kūhiō Avenue.

The ewa/diamond head orientation has also allowed us to provide the widest possible uninterrupted public open space along Kūhiō Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kūhiō Avenue as possible and would have been significantly wider to accommodate a similar amount of floor area.

The concept of “building forms which produce narrow towers are preferred” is supported by the Project as well. The additional height allows the applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

8. The Applicant does not expect any significant changes to the current design.
 9. The Final EA and comments received to date from the agencies indicate that environmental impacts from the Project will not be significant. A similar proposal by a previous property owner received a Finding of No Significant Impact (FONSI) for that Final EA. Concerns from the neighboring Four Paddles residents and a few other neighbors related to building orientation and visual impact to private views have been addressed in the Final EA. The Applicant feels that a FONSI is warranted for this Project.
 10. The proposed building orientation better serves public views and adversely affects private views which in and of itself should not trigger a full Environmental Impact Statement.
- 2) Conversation with Kasao (Kusao) and Kurahashi
1. Subsequent to your discussion, the building design and configuration of the building has been revised and the Building Orientation - Photographic Analysis

and Shadow Study (enclosed cd) have been revised as well to reflect the current design.

2. The new site plan and other updated plans are provided in Appendix I of the Final EA.
3. The enclosed Building Orientation - Photographic Analysis and Shadow Study provides an accurate depiction of the current building design and a revised mauka/makai oriented building design both at a 350-foot height.
4. The current building design provides about a 48-foot reduction in the tower length from the eastern side of the previous tower design.
5. This current design is included in the Final EA.

Conclusions and Recommendations

- a. The building design and configuration has been revised based on concerns presented on the DEA and these revisions are included in the Final EA.
- b. The podium portion of the building will be built over the service road on the east side of the development lot, while the tower will be set back about 48 feet from eastern edge of the podium structure.
- c. The site plan and other plans have been revised to reflect the podium structure being built over the service road on the east side of the development lot, while the tower will be set back about 48 feet from eastern edge of the podium structure.
- d. A cd with the updated photos (Gateway Views) will be sent to DEA responders who received the earlier photos.
- e. The revised building design and configuration will be included in the Final EA submitted to DPP and will be available to the public at DPP when accepted and available through the internet when posted on the OEQC (Office of Environmental Quality Control) web site.
- f. The design of the building with the shorter building length is dependent on the 350-foot height limit.

The issue of receiving approval for an increase in the maximum building height from 300' to 350' is fundamentally based on an evaluation of the visual impacts of the added height, as seen from key vantage points, most notably the Punchbowl Lookout and Fort DeRussy. In both cases, view analysis confirm that the additional height has no impact on views of the horizon, slopes of Diamond Head or the Koolau Mountains and as such, should meet the intent of the ordinance.

In addition, the increase of the overall building height from 300' to 350' has a significant positive impact on the massing of the tower. The additional 50' of height translates to 6 additional residential floors, which can support over 64,000 GSF of building area. This allows the 350' tower to be 48' shorter in length than its 300' equivalent, which is equivalent to a 20% reduction in visual bulk and conversely, a 20% increase in sky exposure, light and air to the surrounding area.

To this end, the concept of "building forms which produce narrow towers are preferred" is supported by the Project. The additional height allows the applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kūhiō Avenue with limited open space relief provided by existing developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

- g. As mentioned and supported in item "f" above, the shorter length is dependent on the approval of the 350-foot height limit. The Applicant would request the longer building design if the 350-foot height is not approved by the City Council.
- h. The discussion in item "1) 7." above supports the ewa/diamond head orientation based on the WSDD Guidelines. The driving force behind the public support for the mauka/makai orientation appears to be the protection of public views for certain condominiums affected by the Project tower, which would adversely affect public views along the important Kalakaua Avenue and Kuhio Avenue view corridors and public open space proposed by the Applicant.

3) Detailed Comments on Kasao (Kusao) & Kurahashi Letter Response

Page 2, point 2 - In our discussion on "impact on the residential population" I explained that we are developing condo hotels which are hotel units that are typically placed in a hotel pool and are treated as hotels by DPP, which will not affect the residential population.

Page 3, point 1c - This Applicant and potential investors are poised to risk \$275 million dollars on this development and has developed a design and proposal that will provide an acceptable return for this Applicant.

The residents of the Four Paddle had opposed the previous design and the community outreach took over a year, with the end result being continued opposition from the Four Paddle, although the Waikiki Neighborhood Board did

support the previous design and development. These delays led to a downturn in the economy and more specifically the financial difficulty experienced by the previous owner, which over time led to the sale to this new developer.

Page 3, point 3 - Generally higher end development in an area will tend to increase property values in an area. The precise impact on ocean views for each unit in the Four Paddle will be determined upon completion of the Project. With a 350-foot height limit, many of the Four Paddle units will retain an ocean view. The net impact could be an increase or decrease in property value for the Four Paddle, but for units and properties whose views are not adversely affected, redevelopment could increase property values. When the Four Paddle was built, it precluded potential ocean views for parcels located mauka of the Four Paddle. Similarly, future development makai of the Project site will affect the ocean views of the Project. In Honolulu, public views are sometimes protected but private views are not. Every property owner has certain property rights to develop their property, in accordance with the City's Land Use Ordinance. In many instances development of neighboring properties will impact the view of others.

Page 4, point 3 - The Trump International Hotel as would any higher end development, tends to increase surrounding property values. The Applicant provided photographic evidence that their proposal would have less of an impact with its ewa/diamond head orientation on important public views in Waikiki than a mauka/makai orientation.

Page 4, point 4 - The Applicant has provided a new design, and based on a 350-foot design the new design will reduce the impact to private views at the Four Paddle. This design has reduced the length of the building by about 48 feet providing for better ocean views for many units at the Four Paddle.

Page 4, point 4b - As discussed in item "1) 5." the Applicant has met the legal requirement for a presentation to the neighborhood board and has redesigned the project to address some of the concerns presented at the neighborhood board meeting, reducing the length of the tower by about 48 feet, reducing the impact on ocean views at the Four Paddle.

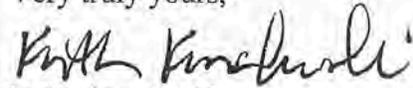
Page 4, point 4c - As mentioned in our previous response, the Applicant's outreach included meetings with managers of the Maile Sky Court and members of the AOA of La Casa, Four Paddle, 2121 Ala Wai, Royal Kuhio, Lanikea, and Maile Sky Court. At each of the meetings with neighbors and the Waikiki Neighborhood Board, PACREP representatives described the plans for the site, showed pictures, renderings and site plans, and answered community members' questions.

Page 5, point 5 - What I inferred is that at a certain point in time some of the Four Paddle residents opposed the earlier K2 proposal, few supported it. At this point in time

and as provided to DPP in the Final EA, we have received comments from some of the owners in the Four Paddle that they now prefer the K2 proposal. 6. The K2 proposal is not a consideration in the Draft and Final EAs for the Project. The Waikiki Neighborhood Board vote in support of the earlier proposal is not relevant in reviewing the current alternative building orientation designs considered by the Applicant. DPP will review this letter and will be aware of the Boards support of the earlier proposal. We are providing a mauka/makai orientation as an alternative in the Final EA and have provided our analysis and rejection of this alternative.

Your letter and this response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

Encl.

cc: Department of Planning and Permitting
PACREP LLC

August 8 2012

TO: Kusa And Kurahsahi, Inc.

Subject: 2121 Kuhio Ave Development by (PACREP)

When I attended the first public presentation by PACREP at the Waikiki Community Council, my impressions were as follows: a poor presentation of the facts, poor slide presentation and presenters who were poorly dressed for such a presentation.

Yes, I live at Four Paddle across from the vacant lot which 2121 Kuhio will be built. I am all for development which enhances and makes Waikiki a better place to live, but this project has failings. The proposed amount of parking for the building is inadequate for a condo hotel. That means more traffic congestion in adjacent streets for those trying to find parking. It also means drivers using our property to cut through causing problems already being addressed by the board at Four Paddle. When Nike Town complex is leased again, that means the additional parking that 2121 kuhio wants to use will not exist.

You or the builders do not care about the loss of property values at Four Paddle or other condos in the neighborhood when this structure is built, but they are only concerned about their profit and greed.

Many cities such as San Diego require that buildings do not block sunlight or views of other buildings. I guess Waikiki is becoming the next Hong Kong?

Traffic congestion, inadequate parking for the tenants of 2121 Kuhio, sewer concerns, water shortages, electrical, noise of construction for several years, And the city giving the go a head for an additional 300 feet on height, just makes this project more about greed than doing what is right for a neighborhood.

Go back to the drawing board, the first design presented many years ago was a better fit for the community.

Brent Ellis 2140 Kuhio Ave. #2210 (808-924-5148)-TAXPAYER

A handwritten signature in cursive script that reads "Brent Ellis". The signature is written in black ink and is positioned below the typed name and address.

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-202
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E-Mail: kkurahashi@hawaii.nn.com

September 11, 2012

Mr. Brent Ellis
2140 Kuhio Avenue, #2210
Honolulu, Hawaii 96815

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Mr. Ellis:

Thank you for your letter of August 8, 2012 regarding the Draft Environmental Assessment ("DEA") for the 2121 Kuhio Avenue Project ("Project").

We appreciate your comments and offer the following responses:

1. The Power Point Presentation that was provided is typical of presentations presented to Neighborhood Boards around the island. Yours is the first complaint that we have received on a presentation that we have prepared. The primary presenter was dressed in an aloha shirt, dress pants and dress shoes. We apologize for any confusion at the Waikiki Neighborhood Board Meeting. The following is an excerpt from the Power Point Presentation that was read by Keith Kurahashi, the planning and zoning consultant for the Project:

"This request will require a Waikiki Special District Permit subject to review and approval by the Department of Planning and Permitting and review and approval by City Council of a request for a 350-foot height limit subject to certain criteria related to views from the Punchbowl Cemetery and the area fronting Fort DeRussy."

We did not intend to give an impression that this was a done deal, as we are well aware that we are in the very early environmental review (environmental assessment) phase, after which there will be a Waikiki Special District Permit review and process with the Department of Planning and Permitting ("DPP") and the review and consideration of a request to the City Council for a 350-foot height limit. Both processes will provide opportunities for public input, in the form of a public hearing with DPP and at least two City Council meetings at which public testimony is accepted.

2. The parking requirement for the Project, based on 459 hotel rooms (no "lock-out" units planned) and accessory uses at one stall per four units is 115 parking stalls plus 45 parking stalls provided to meet the current parking requirements for 2100 Kalakaua, for a total of 160 required parking stalls. The applicant will be providing 187 parking stalls, 27 more stalls than required.

3. The Applicant is concerned about the surrounding property owners' fears, and will do its best to develop a successful Project that considers the well-being of the general public. This Project will provide an improvement through ground-level beautification that will upgrade the lot and encourage other properties nearby to redevelop as well, thereby raising the quality of real estate in the area and increasing property values.
4. The proposed building orientation and design was developed to implement Waikiki Special Design District (WSDD) Guidelines.

The WSDD Guidelines section that includes "Orientation and Form" and establishes the guideline for the mauka/makai orientation is 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 following 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" 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.

Another Waikiki Special District Design Guideline is found in the section on "Major Streets", which states as follows:

"Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian

accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalakaua Avenue and from Kuhio Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian accessways into and through Waikiki. This ewa/diamond head orientation is also sensitive to protection of public views from the Gateway to Waikiki located at Kalakaua Avenue and Ala Moana Boulevard and from the open space at Fort DeRussy. A volume study (Appendix VI Building Orientation – Photographic Analysis in the Final EA) on photographs of views from these locations have been prepared comparing the impacts from two building designs (enclosed), one with a mauka/makai building orientation and one with the proposed ewa/diamond head building orientation. The ewa/diamond head building orientation has significantly less visual impact along these important public view corridors except for one view at the corner of Kalakaua Avenue and Kalaimoku Street. The structure has a narrower face with the ewa/diamond head orientation than with a mauka/makai orientation in all but one of the viewpoints along Kalakaua Avenue and Kuhio Avenue. The view from the Gateway to Waikiki at Kalakaua Avenue and Ala Moana Boulevard is also less impacted with the ewa/diamond head building orientation.

A view from the open space at Fort DeRussy shows that the visual impact with either orientation is about the same.

At the request of the Department of Planning and Permitting (DPP) the Building Orientation – Photographic Analysis also shows views from Kalaimoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as significant public views **mauka views** at certain other streets located mauka of Kuhio Avenue.

The ewa/diamond head orientation has also allowed us to provide the widest possible uninterrupted public open space along Kuhio Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kuhio Avenue as possible and would have been significantly wider to accommodate a similar amount of floor area and not located above and within the proposed parking podium.

The concept of “building forms which produce narrow towers are preferred” is supported by the Project as well. The additional height allows the applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing developments. The recent

amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

5. In Honolulu, public views are sometimes protected but private views are not. Every property owner has certain property rights to develop their property, in accordance with the City's Land Use Ordinance.
6. A shadow study (enclosed) is included in the Final EA and the narrative for that shadow study is provided below:

“Based on our shadow study, the Project with an ewa/diamond head orientation will shade the pool and deck area of the Four Paddle from about 2:00 pm on during the Equinox and partially shade the deck area from 2:00 pm to 3:00 pm and begin to shade the pool area from 3:00 pm on during the Winter Solstice. The Four Paddle pool and deck area will not be affected during the Summer Solstice.

This ewa/diamond head orientation affects the block between Kalaimoku Street and Launiu Street during the Winter Solstice, casting a shadow from 12:00 pm to after 3:00 pm. This block is not affected during the Equinox and the Summer Solstice.

The Project with an ewa/diamond head orientation will cast a shadow over a small portion of the northern corner of Ft. DeRussy from before 8:00 am to 9:00 am. These early morning shadows should have minimal impact on Ft. DeRussy and the growth and development of the trees at Ft. DeRussy.

The mauka/makai orientation has less of an impact on the Four Paddle related to shadows during the Equinox with shadows cast over the half of the pool and deck area from 3:00 pm, covering the entire pool and deck at about 4:00 pm. During the Winter Solstice, this orientation will not affect the pool and deck area.

The mauka/makai orientation does not affect the block between Kalaimoku Street and Launiu Street during the Summer Solstice and the Equinox. During the Winter Solstice, shadows affect portions of this block from 12:00 pm until 3:00 pm.

The mauka/makai orientation, similar to the ewa/diamond head orientation will cast a shadow over a small portion of the northern corner of Ft. DeRussy from before 8:00 am to 9:00 am. These early morning shadows should have minimal impact on Ft. DeRussy and the growth and development of the trees at Ft. DeRussy.”

7. The Traffic Impact Report for the Project concluded that “... with the implementation of the proposed recommendation including the elimination or relocation of the existing drop-off area adjacent to the project site, staging and loading areas within and near the project site, traffic operations in the vicinity are anticipated to continue operating at levels

of service similar to those without project conditions.” The Project will not have a significant impact on traffic operations in the area.

The Department of Planning and Permitting approved a Sewer Connection Application, on January 17, 2012, for the 459-unit condo hotel development conditioned upon the connection to the 20-inch sewer line in Kūhiō Avenue at the owner's expense and construction plans being submitted for review and approval. The existing municipal sewer system is adequate to accommodate the Project.

In a letter dated November 16, 2011, Board of Water Supply determined that the existing water system is adequate to handle either of two options presented at the time, Option A for 384 hotel condo suites and hotel residences, commercial, restaurant and office space or Option B for 526 hotel condo suites and hotel residences, commercial, restaurant and office space..

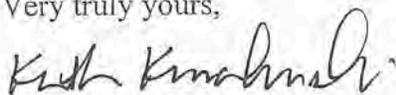
The Applicant will work with Hawaiian Electric Company to ensure adequate power to support the proposed condo hotel.

The Applicant will follow the recommendations of the noise consultant, including the use of properly muffled construction equipment on the job site and incorporation of State Department of Health construction noise limits and curfew times.

8. The Applicant will request approval of a 350-foot height limit for the Project from City Council. The additional height allows the applicant to provide a narrower tower, as well as a narrower parking podium with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built up environment typically found fronting Kuhio Avenue with limited open space relief provided by existing and proposed developments. This additional height will also allow a reduction in the length of the tower as viewed from Kuhio Avenue.

Your letter and this response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

Encls.

cc: Department of Planning and Permitting
PACREP LLC

August 14, 2012

To: The Honorable David K. Tanoue, Director
Office of environmental Quality Control State of Hawaii
State office Tower Room 702
235 South Britannia Street
Honolulu, Hawaii 96813

From: Brent B. Ellis

2140 ~~2121~~ Kuhio Ave #2210
Honolulu, Hawaii 96815

Subject: 2121 Kuhio Project by PACREP

Dear Mr. Tanoue:

The following are questions I have on the findings of no significant Impact for this project produced by PACREP, Kusau & Kuruhasi Inc. I appreciate your time in reading my questions and concerns and hope at a future date someone will respond to them.

To begin with, I do support building on the proposed site, but support the K3 plans developed in 2006 over what PACREP has proposed.

1. Why through out this report are references refered to K3 Waikiki development and not PACREP who is the current developer?
2. Why were the dates January 31 (a Tuesday) and February 1 (a Wednesday) used for the traffic volumes and conditions versus a Friday and a Saturday when manual turning movements and pedistrian counts would have been much higher than mid week dates? Were the selected dates used to present a lower statistical volume and conditions?
3. The resport does not include any mention of traffic problems when Waikiki closes Kalakawa for the 10-15 parades per year which effect kalaimoku which serves as the primary access for the project in additon to the secondary acces on kuhio. During parade events Kalaimoku and Kuhio are adversely affected with grid lock.

4. Why was the HCM2000 used in the capacity analysis methodology for highway capacity when there is a fifth edition of highway capacity manual (HCM2010) which updates the HCM2000? Does the HCM2000 outdated manual produce incorrect statistical data?

5. The report does not address the crosswalks at Kuhio and Kaiolu street. This impacts traffic. I bring this up, because we have already had one death within the last year on these crosswalks.

6. Why has there not been a prepared construction traffic management plan to minimize the impact of construction traffic?

7. Why is there not a state of Hawaii, city, or county of Honolulu traffic count in the vicinity of the project? Is there any sufficient available data to look at the trends for growth of traffic in this vicinity besides what was provided by the Environmental Assessment?

8. Fort Durusey is the jewel of Waikiki. What will be the shadow effect on this park during the morning hours? How will this effect the trees, the grass, and the enjoyment of sunshine in this park?

9. Where are the employees going to park for 2121 Kuhio? Is the plan to make them find parking in the area where parking is already nonexistent? The proposed parking is a major problem for this project.

10. Is there an alternative plan for this building? The other developers had a much more pleasing design which was acceptable to the homeowners who live in the vicinity.

I look forward to better communication from the developer to the community.

Brent Ellis

cc. KUSAO & KURAHASHI

August 14, 2012

To: Kusao & Kurahaski, Inc.
2752 Woodlawn Drive, Suite 5-200
Honolulu, Hi 26822

From: Brent B. Ellis
2121 Kuhio Ave #2210
Honolulu, Hawaii 96815

Subject: 2121 Kuhio Project by PACREP

Dear Kusao & Kurahaski, Inc.:

The following are questions I have on the findings of no significant Impact for this project produced by PACREP, Kusau & Kuruhasi Inc. I appreciate your time in reading my questions and concerns and hope at a future date someone will respond to them.

To begin with, I do support building on the proposed site, but support the K3 plans developed in 2006 over what PACREP has proposed.

1. Why through out this report are references refered to K3 Waikiki development and not PACREP who is the current developer?
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6. Why has there not been a prepared construction traffic management plan to minimize the impact of construction traffic?

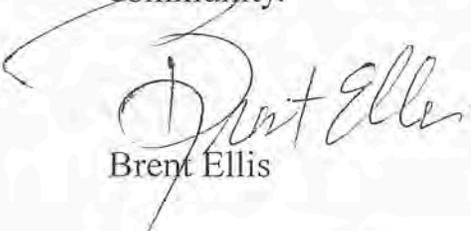
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I look forward to better communication from the developer to the community.



Brent Ellis

Cc: Office of Environmental Quality Control - State of Hawaii

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

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September 11, 2012

Mr. Brent Ellis
2140 Kuhio Avenue, #2210
Honolulu, Hawaii 96815

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Mr. Ellis:

Thank you for your letter of August 14, 2012 regarding the Draft Environmental Assessment ("DEA") for the 2121 Kuhio Avenue Project ("Project").

We appreciate your comments and offer the following responses:

1. The K3 Waikiki name for the Project was used by the new owner in earlier requests for provision of certain sub-consultant studies and letters to agencies early in the process. Since that time the Project name has changed to 2121 Kuhio.
2. The traffic assessment identifies impacts associated with the proposed project. The trip generating characteristics for the proposed project's land use is generally greater during the typical weekday. Therefore, the analysis is based on the worse-case scenario as a result of the project.
3. The traffic impact report that was prepared for the project was intended to identify potential project-related impacts and did not assess impacts caused by other facilities of functions.
4. The analysis is based on the Synchro 8.0 software which was derived from HCM2000. Applicable components of the recently released HCM2010 are incorporated in the Synchro 8.0 software. In addition, the City and County of Honolulu accepts and acknowledges the use of the HCM2000 software for analysis purposes. Since changes between HCM2000 and HCM2010 are not relevant for conditions in the study area contained in the report, the calculations using each method and procedure yield similar results. The report will be revised to clearly describe the basis of the analysis.
5. Pedestrian volumes were factored in the capacity analysis calculations.
6. A construction traffic management plan will be prepared and is recommended as such in the traffic report at such time when a construction contractor can identify necessary work zone area requirements that may affect the surrounding roadways.

7. The ambient growth in the immediate vicinity was evaluated based on historical traffic data obtained for other projects in the region over a span of 12 years. That data set yielded an ambient growth rate of 1.0% per year. The historical data was evaluated and found to be consistent with available City and County of Honolulu and State DOT data available for outlying areas. However, for conservative purposes, the traffic analysis assumed a more conservative 2% annual ambient growth rate.
8. Based on the shadow study enclosed and provided in the Final EA, the Project will cast a shadow over a small portion of the northern corner of the Ft. DeRussy from before 8:00 am to 9:00 am. These early morning shadows should have minimal impact on Ft. DeRussy and the growth and development of the trees at Ft. DeRussy.
9. Employees will be encouraged to use mass transportation, car pool, and other modes of transportation (walk, bicycles etc., as appropriate). Hotel guests, a few employees and any permanent residents will utilize the on-site parking.
10. The following lists the alternatives for the considered for the Project as discussed in the Final EA.

“XIII. ALTERNATIVES CONSIDERED

As mentioned throughout this report the Project is not anticipated to have a significant impact on the surrounding area in terms of public services and the environment.

Positive socio-economic impacts are projected with the development of a hotel complex, with increases in short term construction employment and long term employment in resort services.

A. NO ACTION

This alternative was considered and rejected as the applicant recently purchased this property and will need to develop it to provide a return on investment. The “no action” alternative is not an economically viable alternative.

B. DEVELOPMENT OF CONDOMINIUM UNITS

The applicant considered a development with luxury condominium units as was considered by the previous owner in the earlier FEA. Although the current market does not support the luxury condominium market at this time, at the time of completion this may be a potential market. The applicant in considering this use felt that it would be speculative on the luxury condominium market returning and the risk and carrying cost of this property should this market not return in a timely manner is not an acceptable risk.

C. CONDO HOTEL DEVELOPMENT – EWA/DIAMOND HEAD ORIENTATION

One of the applicant's principals has past experience with a condo hotel and is comfortable with this market, having been involved with the Trump Tower Waikiki located two blocks away on Saratoga Street. Another consideration in pursuing the condo hotel was the significant reduction in hotel units in Waikīkī since 2003 and the potential loss of additional hotel units, based on proposed redevelopment projects in Waikīkī.

As discussed earlier, there is a need for additional hotel product in Waikīkī. Since 2003, there has been a significant reduction in hotel units, including the Ohana Hobron conversion of 596 hotel rooms to a 181-unit condominium (Windsor) and the net loss of 1,300 hotel rooms at the Waikiki Beach Walk redevelopment, totaling 1,896 hotel units. In addition, the proposed Princess Kaiulani/Diamond Head Tower redevelopment will result in the net loss of 430 hotel units and the International Market Place will result in the loss of an additional 358 hotel units at the Miramar Waikiki hotel. The total hotel units lost and to be lost will be 2,684 units.

The improvements in the Project are geared toward achieving the intent of the WSD. The new public open space at this corner lot will create an area for gathering and an important amenity for visitors and surrounding residents.

The proposed building orientation and design was developed to implement Waikiki Special Design District (WSDD) Guidelines.

The WSDD Guidelines section that includes “Orientation and Form” and establishes the guideline for the mauka/makai orientation is 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 following 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” 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.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalakaua Avenue and from Kuhio Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian accessways into and through Waikiki. This ewa/diamond head orientation is also sensitive to protection of public views from the Gateway to Waikiki located at Kalakaua Avenue and Ala Moana Boulevard and from the open space at Fort DeRussy. A volume study (Appendix VI Building Orientation – Photographic Analysis in the Final EA) on photographs of views from these locations have been prepared comparing the impacts from two building designs (enclosed), one with a mauka/makai building orientation and one with the proposed ewa/diamond head building orientation. The ewa/diamond head building orientation has significantly less visual impact along these important public view corridors except for one view at the corner of Kalakaua Avenue and Kalaimoku Street. The structure has a narrower face with the ewa/diamond head orientation than with a mauka/makai orientation in all but one of the viewpoints along Kalakaua Avenue and Kuhio Avenue. The view from the Gateway to Waikiki at Kalakaua Avenue and Ala Moana Boulevard is also less impacted with the ewa/diamond head building orientation.

A view from the open space at Fort DeRussy shows that the visual impact with either orientation is about the same.

At the request of the Department of Planning and Permitting (DPP) the Building Orientation – Photographic Analysis also shows views from Kalaimoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as significant public views mauka views at certain other streets located mauka of Kuhio Avenue.

The ewa/diamond head orientation has also allowed us to provide the widest possible uninterrupted public open space along Kuhio Avenue. A mauka/makai oriented tower would

break this public open space since the tower would have to be situated as close to Kuhio Avenue as possible and would have been significantly wider to accommodate a similar amount of floor area and not located above and within the proposed parking podium.

The concept of “building forms which produce narrow towers are preferred” is supported by the Project as well. The additional height allows the applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing and proposed developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

D. CONDO HOTEL DEVELOPMENT – MAUKA/MAKAI ORIENTATION

A mauka/makai building orientation was considered, but based on the Waikiki Special District Guidelines and Building Orientation – Photographic Analysis in Appendix VI of this Final EA the ewa/diamond head orientation was selected.

As discussed in the previous section, the Waikiki Special District Design Guidelines section that includes “Orientation and Form” are intended to promote a design that responds to climate, relates to human scale and preserves **significant public views** (emphasis added).

The Project under this alternative would not affect any of the significant public views described in the previous section and in Section 21-9.80-3(a) of the Land Use Ordinance.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

A mauka/makai building orientation would not be sensitive to the need to protect public views from Kalakaua Avenue and from Kuhio Avenue. A mauka/makai orientation would have a greater impact on public views along these two major vehicular and pedestrian accessways into and through Waikiki. The mauka/makai building orientation would also have greater impact on public views than an ewa/diamond head orientation from the Gateway to Waikiki located at Kalakaua Avenue and Ala Moana Boulevard and from the open space at Fort DeRussy. A volume study (Appendix VI Building Orientation – Photographic Analysis in the Final EA) on photographs of views from these locations has been prepared comparing the impacts from two building designs, one with a mauka/makai building orientation and one with an ewa/diamond head building orientation. The mauka/makai building orientation has a significantly greater

visual impact along these important public view corridors except for one view at the corner of Kalakaua Avenue and Kalaimoku Street. The structure has a wider face with the mauka/makai orientation than with an ewa/diamond head orientation in all but one of the viewpoints along Kalakaua Avenue and Kuhio Avenue. The view from the Gateway to Waikiki at Kalakaua Avenue and Ala Moana Boulevard is also more impacted with the mauka/makai building orientation.

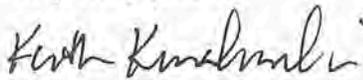
A view from the open space at Fort DeRussy shows that the visual impact with either orientation is about the same.

At the request of the Department of Planning and Permitting (DPP) the Building Orientation – Photographic Analysis also shows views from Kalaimoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as significant public views mauka views at certain other streets located mauka of Kuhio Avenue.

The mauka/makai orientation would not allow us to provide the widest possible uninterrupted public open space along Kuhio Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kuhio Avenue as possible and would have required been significantly wider to accommodate a similar amount of floor area.”

Your letter and this response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

Encls.

cc: Department of Planning and Permitting
PACREP LLC

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-202
HONOLULU, HAWAII 96822
October 26, 2012

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E-mail: kkurahashi@hawaii.rr.com

Mr. Brent Ellis
2140 Kuhio Avenue, #2210
Honolulu, Hawaii 96815

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Mr. Ellis:

This letter serves as a supplement and update to our previous letter to you regarding the Draft Environmental Assessment ("DEA") for the 2121 Kuhio Avenue Project ("Project").

The Pre-Final EA for the project has been revised and the Final EA provides ewa/diamond head oriented building photos that are consistent with the revised plans in regard to both design and building orientation. See enclosed cd, Gateway Views (if you require hard copies of the photos, please call me at 988-2231 or write to me at the above address). The Project design has been revised to reduce the length of the tower of the building by about 48 feet based on concerns presented on the DEA. This reduction in length will reduce the impact of shadows and impacts to ocean views from the Four Paddle. With a 350-foot height limit, many of the Four Paddle units will retain an ocean view. A revised mauka/makai oriented building design has also been provided. The tower design footprint on the site for both the revised ewa/diamond head oriented building and the revised mauka/makai oriented building is provided in the enclosed Gateway Views.

Building Orientation

The proposed building orientation and design was developed to implement Waikiki Special Design District (WSDD) Guidelines.

The WSDD Guidelines section that includes "Orientation and Form" and establishes the guideline for the mauka/makai orientation is 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 following 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” 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.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalākaua Avenue and from Kūhiō Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian access ways into and through Waikīkī.

The proposed ewa/diamond head building orientation is also sensitive to the need to protect public views from the Gateway to Waikīkī located at Kalākaua Avenue and Ala Moana Boulevard. A volume study on photographs of views from these locations have been prepared comparing the visual impact of two building designs, one with a mauka/makai orientation and one with the proposed building design in an ewa/diamond head orientation. See Gateway Views, enclosed cd, included in the Final EA as Appendix VI, Building Orientation – Photographic Analysis.

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalākaua Avenue and from Kūhiō Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian access ways into and through Waikīkī. This ewa/diamond head orientation is also sensitive to protection of public views from the Gateway to Waikiki located at Kalākaua Avenue and Ala Moana Boulevard. A volume study (enclosed cd,

Gateway Views) on photographs of views from these locations has been prepared comparing the impacts from two building designs (enclosed), one with a mauka/makai building orientation and one with the proposed ewa/diamond head building orientation. The ewa/diamond head building orientation has significantly less visual impact along these important public view corridors except for one view at the corner of Kalākaua Avenue and Kālainmoku Street and two views looking ewa along Kūhiō Avenue. The structure has a narrower face with the ewa/diamond head orientation than with a mauka/makai orientation in all but three of the viewpoints along Kalākaua Avenue and Kūhiō Avenue. The view from the Gateway to Waikiki at Kalākaua Avenue and Ala Moana Boulevard is also less impacted with the ewa/diamond head building orientation.

The viewpoint at the open space at Fort DeRussy shows that the visual impact is greater with the ewa/diamond head orientation.

At the request of DPP the Building Orientation – Photographic Analysis (Appendix VI) also shows views from Kālainmoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two street corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as significant public views the mauka views at certain other streets located mauka of Kūhiō Avenue.

The ewa/diamond head orientation has also allowed us to provide the widest possible uninterrupted public open space along Kūhiō Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kūhiō Avenue as possible and would have been significantly wider to accommodate a similar amount of floor area.

The concept of “building forms which produce narrow towers are preferred” is supported by the Project as well. The additional height allows the applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

Shadow Study

Based on our shadow study (enclosed in cd), the Project with an ewa/diamond head orientation will shade the pool and deck area of the Four Paddle from about 2:00 pm on during the Equinox and will partially shade the Four Paddle barbecue deck area from about 2:00 pm to and fully shade the barbecue deck and pool area by 3:00 pm. and begin to shade the pool area from 3:00 pm on. During the Winter Solstice the Project will partially shade the barbecue deck area from

about 3:00 pm and begin to shade a small portion of the pool area from about 4:00 pm. The Four Paddle pool and deck area will not be affected during the Summer Solstice.

This ewa/diamond head orientation affects the block between Kālainmoku Street and Launiu Street during the Winter Solstice. , casting a shadowThe Project will partially shade this area from 12:00 pm and moves across this area fully shading the Kūhiō frontage at about 1:00 pm and partially shading it at 2:00 pm with less shading at 4:00 pm with the shadow clearing the property just after 4:00 pm to after 3:00 pm. This block is not affected during the Equinox and the Summer Solstice.

The Project with an ewa/diamond head orientation will cast a shadow overshade a small portion of the northern corner of Ft. DeRussy from before 8:00 am to 9:00 am during the Summer Soltice. These early morning shadows should have minimal impact on Ft. DeRussy and the growth and development of the trees at Ft. DeRussy. Ft. DeRussy is not affected during the Equinox and Winter Solstice.

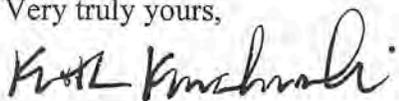
The mauka/makai orientation has less of an impact on the Four Paddle related to shadows during the Equinox with will shadeshadows cast over the barbecue deck area from about 2:00 pm and will cover most of the barbecue deck and a small portion of half of the pool and deck area from 3:00 pm, covering most of the barbecue deck and the entire pool and deckarea atfrom about 4:00 pm. During the Winter Solstice the Project will shade a small portion of the barbecue area from 4:00 pm. During the Summer Solstice, this orientation will not affect the pool and deck area.

The mauka/makai orientation does not affect the block between Kālainmoku Street and Launiu Street during the Summer Solstice and the Equinox. During the Winter Solstice, the Project will shade shadows affect portions of this block from 12:00 pm until 3:00 pm.

The mauka/makai orientation during the Summer Solstice, similar to the ewa/diamond head orientation will cast a shadow overshade a small portion of the northern corner of Ft. DeRussy from before about 8:00 am to 9:00 am. These early morning shadows should have minimal impact on Ft. DeRussy and the growth and development of the trees at Ft. DeRussy. Ft. DeRussy is not affected during the Equinox and Winter Solstice.

This response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

Encl.

cc: Department of Planning and Permitting
PACREP LLC

August 11, 2012

Re: proposed 2121 Kuhio Tower project

To those involved with this project:

I am a concerned citizen whose life will be adversely affected by the proposed development at 2121 Kuhio Ave. I have lived in Hawaii most of my life, and am a long-time owner in the Four Paddle condominium, directly across the street from the 2121 project. My unit at this time has a fantastic view of the ocean.

Progress cannot be stopped as long as it is approved and within the law.

However, this project is in direct violation of code/policy/law.

The picture shows this building to be a huge monstrosity.

At 350 feet in height, it will be taller than the Sheraton Waikiki.

It is entirely too big and overbuilt for this stretch of Kuhio Ave.

It parallels Kuhio Ave instead of sitting sideways to the main street. It is 50 feet over the height limits.

The developer says that he is maximizing the view of Diamond Head. Maximizing what view, and for whom? There is very little view of Diamond Head left at this point. The way he is maximizing the view is by building higher to see over the other buildings and illegally across the front instead of sideways. And in order to maximize what view is left for his buyers, he is taking away our view of the ocean completely.

This is not fair and not according to law.

The developer is Pacrep LLC. A Pacrep principal says that the proposed building orientation "maximizes public views". What does that mean? He is taking away public views – illegally. He says that it "provides the most attractive addition to the Waikiki skyline". This is very debatable depending on your perspective. How can an overbuilt monstrosity improve the skyline?

How can an out-of-state developer just come in and defy the laws and ruin long-time residents' lives and make their profits and leave the state? Are they really concerned with the effect of what they do on the long-time residents of the area? Why does the government allow them to ignore the regulations?

There was a purpose for adopting these regulations in the first place.

Ocean views will in some cases disappear completely. Traffic will become even more terrible – and the added unlawful 50 feet in height will contribute even further to the adverse view and traffic issues. Health and safety are serious concerns. Devastating sewage problems have plagued the area for years. Kuhio Ave and the surrounding area is constantly being torn up. Water pipes are old and frequently breaking. The infrastructure in the area is a deteriorated mess. Overbuilding cannot be supported. Infrastructure needs to be improved before unlawfully huge buildings are allowed.

The city may be unable to deny a permit based on how proposed building might adversely effect someone's view. Nevertheless, there are policies in place for mauka/makai orientation and other design restrictions that are meant to protect public views and uphold quality of life.

It seems that new proposed developments continuously disregard city or state laws in some way or another and yet these projects are approved. This has negative consequences on peoples' lives. It is blatant disregard of law. It sends the message that laws are meaningless and don't need to be obeyed.

The 350 foot tower exceeds the site's height limit by 50 feet. How is this justified? What about the undesirable impact this causes? Why do we have laws anyway if they are neglected?

Why do developers continuously just disregard the laws? And why are they approved?

I am going to be unlawfully forced to live in the shadows of this illegal monster – why - so the developer can illegally maximize his profits?

Everyone is supposed to follow the laws. Laws are written for specific purposes. There should be no exceptions for developers. Once again the little guy is simply run over by money and power.

Recent letters to editor of the Honolulu Star-Advertiser include such titles as "Don't allow projects that violate rules" and "New Waikiki building will ruin it for others".

I'm sure that many people feel as I do about this. They may be the silent majority. It is not easy to find out how to make your opinion known. The guys who approve these things and the guys who build them do not want to hear from the little guys. There are many retired people residing in the Four Paddle and La Casa condominiums and other nearby buildings who do not communicate via computer and are unable to protest. They only complain to each other. The attitude is they cannot do anything about it. They are unable to make their opinions known and thus cannot express the harm this project will cause them. But you will not hear from most of them – it is a shame.

La Casa is 23 stories and Four Paddle is 25 stories. This 35 story proposed atrocity just across the street will be devastating. It will wipe us out. We will live in darkness. Why is it being allowed?

G. Brown

Honolulu, Hawaii

KUSAO & KURAHASHI, INC.

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September 11, 2012

Mr. George Brown
Emailed

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Mr. Brown:

Thank you for your email of August 13, 2012 providing comments dated August 11, 2012 regarding the Draft Environmental Assessment (“DEA”) for the 2121 Kuhio Avenue Project (“Project”).

We appreciate your comments and offer the following responses:

1. The Project is going through a review process to determine whether the Project meets the requirements to allow for a 350-foot height and building design in accordance with criteria, guidelines and development standards in the Land Use Ordinance.

The proposed building orientation and design was developed to implement Waikiki Special Design District (WSDD) Guidelines.

The WSDD Guidelines section that includes “Orientation and Form” and establishes the guideline for the mauka/makai orientation is 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 following 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” 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.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

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A view from the open space at Fort DeRussy shows that the visual impact with either orientation is about the same.

At the request of the Department of Planning and Permitting (DPP) the Building Orientation – Photographic Analysis also shows views from Kalaimoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view

corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as significant public views **mauka views** at certain other streets located mauka of Kuhio Avenue.

The ewa/diamond head orientation has also allowed us to provide the widest possible uninterrupted public open space along Kuhio Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kuhio Avenue as possible and would have been significantly wider to accommodate a similar amount of floor area and not located above and within the proposed parking podium.

The concept of “building forms which produce narrow towers are preferred” is supported by the Project as well. The additional height allows the applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

2. PACREP LLC’s principals have been involved in developing properties in Waikiki since 2004. They have invested in new projects in Waikiki, along with development partners, in excess of hundreds of millions of dollars.
3. The Traffic Impact Report for the Project concluded that “... with the implementation of the proposed recommendation including the elimination or relocation of the existing drop-off area adjacent to the project site, staging and loading areas within and near the project site, traffic operations in the vicinity are anticipated to continue operating at levels of service similar to those without project conditions.” The Project will not have a significant impact on traffic operations in the area.

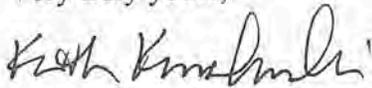
The Department of Planning and Permitting approved a Sewer Connection Application, on January 17, 2012, for the 459-unit condo hotel development conditioned upon the connection to the 20-inch sewer line in Kūhiō Avenue at the owner's expense and construction plans being submitted for review and approval. The existing municipal sewer system is adequate to accommodate the Project.

In a letter dated November 16, 2011, Board of Water Supply determined that the existing water system is adequate to handle either of two options presented at the time, Option A for 384 hotel condo suites and hotel residences, commercial, restaurant and office space or Option B for 526 hotel condo suites and hotel residences, commercial, restaurant and office space.

4. The City will review the building orientation and determine which orientation best serves public views and provides other amenities that will serve the public.
5. The Applicant will request approval of a 350-foot height limit for the Project from City Council. The additional height allows the applicant to provide a narrower tower, as well as a narrower parking podium with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the buildings typically found fronting Kuhio Avenue with limited open space relief provided by existing and proposed developments. This additional height will also allow a reduction in the length of the tower as viewed from Kuhio Avenue.
6. Notification has been provided to surrounding property owners and there will be other opportunities for public input. We are in the very early environmental review (environmental assessment) phase, after which there will be a Waikiki Special District Permit review and process with the Department of Planning and Permitting (DPP) and the review and consideration of a request to the City Council for a 350-foot height limit. Both processes will provide opportunities for public input, in the form of a public hearing with DPP and at least two City Council meetings at which public testimony is accepted.

Your letter and this response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

Encls.

cc: Department of Planning and Permitting
PACREP LLC

Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-202
Honolulu, HI 96822
Attn: Mr. Keith Kurahashi

October 7, 2012

Re: Draft Environmental Assessment: 2121 Kuhio Avenue Development

Dear Mr. Kurahashi:

Thank you for responding to my letter dated August 11, 2012, voicing my opposition to certain elements of the proposed 2121 Kuhio Tower project.

I still question the disregard for laws mandating mauka/makai orientation. Property values in my building, the Four Paddle, are already falling. Owners are panicking at the thought that a huge wall could be built across from them wiping out sunshine and views. The policies behind mauka/makai orientation are intended to protect public views and uphold quality of life. My neighbors' and my views and quality of life will be negatively affected in a huge way by the width of this building across from us. I still do not understand how these regulations do not need to be adhered to by the developer. How can the law be disregarded?

The Star-Advertiser's letters to the editor continually show the public's ongoing displeasure regarding non-compliance with regulations governing land development. In today's newspaper (Sunday, October 07, 2012), an article regarding the so-called Supertower in Kakaako includes public opinion that the project's disregard for building restrictions is "an insult to the democratic process and sound planning principals", and that it is a result of the governments' "wheeling and dealing with developers". A letter to the editor in the same newspaper states that "2012 has been unkind to land use in Hawaii". The letter speaks of the need "fight back against these governmental" agencies. "It is all for the developers with nothing for us except for more environmental destruction." . Such opinion is not healthy, and again brings the question up of how can the law be disregarded by developers. How is this able to happen? This is what I want to know.

Sincerely,



George Brown
c/o 2333 Kapiolani Blvd #3111
Honolulu, HI 96826

CC:
City and County of Honolulu
Department of Planning and Permitting
650 South King St, 7th Floor
Honolulu, HI 96813

State of Hawaii
Office of Environmental Quality Control
235 South Beretania Street
Honolulu, HI 96813

- EMAILS SENT TO:

- 1) KOYAMA @ HONOLULU, GOV
(CITY PLANNER)
- 2) OEQC @ DOH, HAWAII, GOV
(OFFICE OF ENVIRONMENTAL Q.C.)
- 3) KKURAHASHI @ HAWAII.FR.COM
(DEVELOPER'S REP.)

August 11, 2012

Re: proposed 2121 Kuhio Tower project

To those involved with this project:

I am a concerned citizen whose life will be adversely affected by the proposed development at 2121 Kuhio Ave. I have lived in Hawaii most of my life, and am a long-time owner in the Four Paddle condominium, directly across the street from the 2121 project. My unit at this time has a fantastic view of the ocean.

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The picture shows this building to be a huge monstrosity.

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How can an out-of-state developer just come in and defy the laws and ruin long-time residents' lives and make their profits and leave the state? Are they really concerned with the effect of what they do on the long-time residents of the area? Why does the government allow them to ignore the regulations?

There was a purpose for adopting these regulations in the first place.

Ocean views will in some cases disappear completely. Traffic will become even more terrible – and the added unlawful 50 feet in height will contribute even further to the adverse view and traffic issues. Health and safety are serious concerns. Devastating sewage problems have plagued the area for years. Kuhio Ave and the surrounding area is constantly being torn up. Water pipes are old and frequently breaking. The infrastructure in the area is a deteriorated mess. Overbuilding cannot be supported. Infrastructure needs to be improved before unlawfully huge buildings are allowed.

The city may be unable to deny a permit based on how proposed building might adversely effect someone's view. Nevertheless, there are policies in place for mauka/makai orientation and other design restrictions that are meant to protect public views and uphold quality of life.

It seems that new proposed developments continuously disregard city or state laws in some way or another and yet these projects are approved. This has negative consequences on peoples' lives. It is blatant disregard of law. It sends the message that laws are meaningless and don't need to be obeyed.

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G. Brown

Honolulu, Hawaii

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October 26, 2012

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Tax Map Key: 2-6-18: 10, 42, 43 and 52**

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Thank you for your letter of October 7, 2012 providing comments dated August 11, 2012 regarding the Draft Environmental Assessment ("DEA") for the 2121 Kuhio Avenue Project ("Project").

We appreciate your comments and offer the following responses:

1. The Pre-Final EA for the project has been revised and the Final EA provides ewa/diamond head oriented building photos that are consistent with the revised plans in regard to both design and building longitude. See enclosed cd, Gateway Views (if you require hard copies of the photos, please call me at 988-2231 or write to me at the above address). The Project design has been revised to reduce the length of the tower of the building by about 48 feet based on concerns presented on the DEA. This reduction in length will reduce the impact of shadows and impacts to ocean views on the Four Paddle. With a 350-foot height limit, many of the Four Paddle units will retain an ocean view. A revised mauka/makai oriented building design has also been provided. The tower design footprint on the site for both the revised ewa/diamond head oriented building and the revised mauka/makai oriented building is provided in the enclosed Gateway Views.
2. The proposed building orientation and design was developed to implement Waikiki Special Design District (WSDD) Guidelines.

The proposed building orientation and design was developed to implement Waikiki Special Design District (WSDD) Guidelines.

The WSDD Guidelines section that includes "Orientation and Form" and establishes the guideline for the mauka/makai orientation is 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 following 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” 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.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalākaua Avenue and from Kūhiō Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian access ways into and through Waikīkī.

The proposed ewa/diamond head building orientation is also sensitive to the need to protect public views from the Gateway to Waikīkī located at Kalākaua Avenue and Ala Moana Boulevard. A volume study on photographs of views from these locations have been prepared comparing the visual impact of two building designs, one with a mauka/makai orientation and one with the proposed building design in an ewa/diamond head orientation. See Gateway Views, enclosed cd, included in the Final EA as Appendix VI, Building Orientation – Photographic Analysis.

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalākaua Avenue and from Kūhiō Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian access ways into and through Waikīkī. This ewa/diamond head orientation is also sensitive to protection of public views from the Gateway to Waikiki located at Kalākaua Avenue and Ala Moana Boulevard. A volume study (enclosed cd, Gateway Views) on photographs of views from these locations has been prepared comparing the impacts from two building designs (enclosed), one with a mauka/makai building orientation and one with the proposed ewa/diamond head building orientation. The ewa/diamond head building orientation has significantly less visual impact along these important public view corridors except for one view at the corner of Kalākaua Avenue and Kālamoku Street and two views looking ewa along Kūhiō Avenue. The structure has a narrower face with the ewa/diamond head orientation than with a mauka/makai orientation in all but three of the viewpoints along Kalākaua Avenue and Kūhiō Avenue. The view from the Gateway to Waikiki at Kalākaua Avenue and Ala Moana Boulevard is also less impacted with the ewa/diamond head building orientation.

The viewpoint at the open space at Fort DeRussy shows that the visual impact is greater with the ewa/diamond head orientation.

At the request of DPP the Building Orientation – Photographic Analysis (Appendix VI) also shows views from Kālamoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two street corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as significant public views the mauka views at certain other streets located mauka of Kūhiō Avenue.

The ewa/diamond head orientation has also allowed us to provide the widest possible uninterrupted public open space along Kūhiō Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kūhiō Avenue as possible and would have been significantly wider to accommodate a similar amount of floor area.

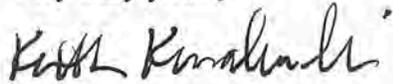
The concept of “building forms which produce narrow towers are preferred” is supported by the Project as well. The additional height allows the applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

Mr. George Brown
Page 4

3. As mentioned in item 2, the WSSD Guidelines have numerous components and the Applicant finds that in this instance the ewa/diamond head orientation, better serves public views and better meets the criteria of the WSSD Guidelines.

Your letter and this response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

Encl.

cc: Department of Planning and Permitting
PACREP LLC

August 15, 2012

Kusao & Kurahashi, Inc.
2752 Woodlawn Drive Suite 5-202
Honolulu Hawaii 96822

Reference: 2121 Kuhio Proposed Complex

My objection to the orientation is that the building is too wide and suggest that you get a variance to build higher and less wide as to not impact the surrounding area.

I too am concerned about the traffic that this many new residents of this complex will need. Kuhio Avenue is so crowded now that this will be a serious problem to say nothing of the impact on the sewers and electrical facilities.

Thank you for your consideration of my concerns.



Sherlane Dick
2140 Kuhio #1003
Honolulu Hawaii 96815

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

MANOA MARKET PLACE
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BUS. (808) 988-2231
FAX. (808) 988-1140
E-Mail: kkurahashi@hawaii.nr.com

September 11, 2012

Ms. Sherlane Dick
2140 Kuhio Avenue, #1003
Honolulu, Hawaii 96815

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Ms. Dick:

Thank you for your letter of August 15, 2012 regarding the Draft Environmental Assessment ("DEA") for the 2121 Kuhio Avenue Project ("Project").

We appreciate your comments and offer the following responses:

1. The Applicant will request approval of a 350-foot height limit for the Project from the City Council. The additional height allows the applicant to provide a narrower tower, as well as a narrower parking podium with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built up environment typically found fronting Kuhio Avenue with limited open space relief provided by existing and proposed developments. This additional height will also allow a reduction in the length of the tower as viewed from Kuhio Avenue.
2. The Traffic Impact Report for the Project concluded that "... with the implementation of the proposed recommendation including the elimination or relocation of the existing drop-off area adjacent to the project site, staging and loading areas within and near the project site, traffic operations in the vicinity are anticipated to continue operating at levels of service similar to those without project conditions." The Project will not have a significant impact on traffic operations in the area.
3. DPP approved a Sewer Connection Application, on January 17, 2012, for the 459-unit condo-hotel development conditioned upon the connection to the 20-inch sewer line in Kuhio Avenue at the owner's expense and construction plans being submitted for review and approval. The existing municipal sewer system is adequate to accommodate the Project.
4. The Hawaiian Electric Company has existing power lines serving this area and the applicant will coordinate development of 2121 Kuhio to ensure that the power lines will be adequate to support the proposed condominium condo hotel development.

Ms. Sherlane Dick
Page 2

Your letter and this response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

cc: Department of Planning and Permitting
PACREP LLC

Kusao & Kurahashi

August 16, 2012

2752 Woodlawn Drive Suite 5-202

Honolulu, HI. 26882

Dear Ladies and Gentlemen,

I have just finished reading the section of the report titled; " XVIII FINDINGS SUPPORTING ANTICIPATED DETERMINATION" . I take exception, there will be a long term environmental impact to the surrounding area. We'll experience the growth of a huge monolith in the center of our neighborhood. It will be noticed, Nay command attention from all points on the compass. People driving or walking down Ala Moana , Kalakaua Avenue or Kalia Road will not miss the view of the Koolau Range because "The Tower " 2121 Kuhio will block the view and they won't know The Koolau Range is there. On the flip side looking toward Fort DeRussy , Waikiki and the ocean we'll have an unobstructed view of the blank backside of 2121 Kuhio Avenue. The monolith will block the sweet ocean breeze that cools us in the evening and the sun will set at 2:00PM on that part of Kuhio Avenue, the cross streets and Ala Wai blvd. Yes it will be a long term negative impact on Waikiki.

Once there was a section of Waikiki that was called the jungle it was at the east end, between Kapahulu and Kanekapolei there were rumors of dark happenings ; drugs, gambling, etc . So what will happen behind the wall ?

The DEA reports a minimal impact , compared to; Sheraton Waikiki right on the beach to being 1800 feet from the ocean. Minimal compared to; Aloha Stadium being taller than the length of a football field by 16 yards, would the minimal building, even fit inside the stadium? This minimal impact is going to interrupt traffic for more than 24 months cement trucks will be lined up on Kuhio Avenue waiting to be pumped dry and it will be a constant round robin of trucks coming and going. When they began to pour cement it will start before 7:00 AM and won't stop until 3:30 PM Monday - Friday just in time for the normal traffic pattern to begin. Waikiki will be grid locked 6:00 AM to 6:00 PM. The noise level will be excessive; there will be hammering, grinding and engine sounds. Pedestrian traffic will need to be routed around and away from harm. Kuhio Avenue will be congested so heavily that motor traffic will be forced to move about Waikiki on Kalakaua Avenue and Ala Wai blvd. When Waikiki has a function that requires Kalakaua to be closed how will it be managed? Now the buses travel up and down Kuhio they even stop in front 2121 and 2140 since the bus dosen't go on Kalakaua and the Ali Wai will they now stop at the gateway to Waikiki? Recall the underground work done on Kapolani was it three or four years? The same will happen on Kuhio when they put in the 20" waste water pipe lateral to an existing pipe.

The developers talk about incorporating LEED Standards to the extent that it is economically feasible. The trigger words here are economically feasible. That requires locally produced materials, recycled materials, actual alternative energy sources. To be LEED compliant you must meet or exceed certain

manufacturing and construction requirements. Is it even a reality given the cost of transportation to the islands?

Thank you for your consideration.



Sincerely, Don Hanson Four Paddle # 808

7310 Moen CT.

San Jose, CA. 95139

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

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2752 WOODLAWN DRIVE, SUITE 5-202
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FAX. (808) 988-1140
E-Mail: kkurahashi@hawaii.rr.com

September 11, 2012

Mr. Don Hanson
7310 Moen Ct.
San Jose, California 95139

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Mr. Hanson:

Thank you for your letter of August 16, 2012 regarding the Draft Environmental Assessment ("DEA") for the 2121 Kuhio Avenue Project ("Project").

We appreciate your comments and offer the following responses:

1. The proposed building orientation and design was developed to implement Waikiki Special Design District (WSDD) Guidelines.

The WSDD Guidelines section that includes "Orientation and Form" and establishes the guideline for the mauka/makai orientation is 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 following 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" 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.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalakaua Avenue and from Kuhio Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian accessways into and through Waikiki. This ewa/diamond head orientation is also sensitive to protection of public views from the Gateway to Waikiki located at Kalakaua Avenue and Ala Moana Boulevard and from the open space at Fort DeRussy. A volume study (Appendix VI Building Orientation – Photographic Analysis in the Final EA) on photographs of views from these locations have been prepared comparing the impacts from two building designs (enclosed), one with a mauka/makai building orientation and one with the proposed ewa/diamond head building orientation. The ewa/diamond head building orientation has significantly less visual impact along these important public view corridors except for one view at the corner of Kalakaua Avenue and Kalaimoku Street. The structure has a narrower face with the ewa/diamond head orientation than with a mauka/makai orientation in all but one of the viewpoints along Kalakaua Avenue and Kuhio Avenue. The view from the Gateway to Waikiki at Kalakaua Avenue and Ala Moana Boulevard is also less impacted with the ewa/diamond head building orientation.

A view from the open space at Fort DeRussy shows that the visual impact with either orientation is about the same.

At the request of the Department of Planning and Permitting (DPP) the Building Orientation – Photographic Analysis also shows views from Kalaimoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as significant public views **mauka views** at certain other streets located mauka of Kuhio Avenue.

The ewa/diamond head orientation has also allowed us to provide the widest possible uninterrupted public open space along Kuhio Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kuhio Avenue as possible and would have been significantly wider to accommodate a similar amount of floor area and not located above and within the proposed parking podium.

The concept of “building forms which produce narrow towers are preferred” is supported by the Project as well. The additional height allows the Applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

2. Trade winds occur 70% of the time in Waikiki and blow from the northeast to the southwest. As such, during these periods, impacts to the Four Paddle will be minimal. The existing Luxury Row at 2100 Kalakaua already impacts the pedestrian level on Kalakaua Avenue, and as you approach the Fort DeRussy Park, located about 250 feet away, there are no tower developments that would be impacted by the Project Tower.
3. A shadow study (enclosed) is included in the Final EA and the narrative for that shadow study is provided below:

“Based on our shadow study, the Project with an ewa/diamond head orientation will shade the pool and deck area of the Four Paddle from about 2:00 pm on during the Equinox and partially shade the deck area from 2:00 pm to 3:00 pm and begin to shade the pool area from 3:00 pm on during the Winter Solstice. The Four Paddle pool and deck area will not be affected during the Summer Solstice.

This ewa/diamond head orientation affects the block between Kalaimoku Street and Launiu Street during the Winter Solstice, casting a shadow from 12:00 pm to after 3:00 pm. This block is not affected during the Equinox and the Summer Solstice.

The Project with an ewa/diamond head orientation will cast a shadow over a small portion of the northern corner of Ft. DeRussy from before 8:00 am to 9:00 am. These early morning shadows should have minimal impact on Ft. DeRussy and the growth and development of the trees at Ft. DeRussy.

The mauka/makai orientation has less of an impact on the Four Paddle related to shadows during the Equinox with shadows cast over the half of the pool and deck area from 3:00

pm, covering the entire pool and deck at about 4:00 pm. During the Winter Solstice, this orientation will not affect the pool and deck area.

The mauka/makai orientation does not affect the block between Kalaimoku Street and Launiu Street during the Summer Solstice and the Equinox. During the Winter Solstice, shadows affect portions of this block from 12:00 pm until 3:00 pm.

The mauka/makai orientation, similar to the ewa/diamond head orientation will cast a shadow over a small portion of the northern corner of Ft. DeRussy from before 8:00 am to 9:00 am. These early morning shadows should have minimal impact on Ft. DeRussy and the growth and development of the trees at Ft. DeRussy.”

4. The Applicant is not aware of any major hotels in Waikiki having a drug and/or gambling problem and will be vigilant in ensuring that this will not happen at this hotel.
5. The Applicant plans to utilize Caisson or augercast in the support system for the foundation. No pile driving is planned, which should eliminate the major noise impact from foundation work. Every effort will be made to stage construction in the open space areas planned for the Project to minimize impacts to Kuhio Avenue and Kalaimoku Street.

Mitigation of noise impacts due to construction will include the use of properly muffled construction equipment on the job site and incorporation of State Department of Health construction noise limits and curfew times.

A construction management plan, providing plans to mitigate traffic impacts during construction, will be submitted to the Department of Planning and Permitting for review and approval.

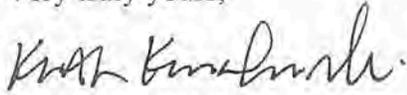
6. The Applicant plans to minimize impacts to the bus stop and Kuhio Avenue sidewalk fronting the Project. The wide 51-foot setback from Kuhio Avenue will allow the Applicant to stage most of the construction activity on-site. On rare occasions the Applicant may require a permit to close the Kuhio Avenue sidewalk during certain construction activity.
7. The Applicant plans to incorporate the application of LEED standards and strategies, to the extent economically feasible, to achieve sustainable site, utilities and building development. The green principles and strategies currently being considered for the Project include the following:
 - Develop an erosion and sedimentation control plan;
 - Promote alternative transportation by providing secure bicycle storage and locker room facilities;
 - Explore alternatives for energy savings related to building cooling and hot water generation;
 - Reduce water usage through use of high efficiency plumbing fixtures;

- Energy Star rated appliances;
- High performance glazing;
- Lighting control systems that reduce light usage;
- Design spaces with views to the exterior and options for natural ventilation;
- Create and implement a Green education program for employees and guests;
- Develop a solid waste management plan during construction and operations; and
- Explore reuse and recycling of demolished materials.

These LEED principles were selected for consideration because there is a strong possibility that the Applicant will be able to implement them.

Your letter and this response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

cc: Department of Planning and Permitting
PACREP LLC

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

MANOA MARKET PLACE
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October 26, 2012

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Mr. Don Hanson
7310 Moen Ct.
San Jose, California 95139

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Mr. Hanson:

This letter serves as a supplement and update to our previous letter to you regarding the Draft Environmental Assessment ("DEA") for the 2121 Kuhio Avenue Project ("Project").

The Pre-Final EA for the project has been revised and the Final EA provides ewa/diamond head oriented building photos that are consistent with the revised plans in regard to both design and building orientation. See enclosed cd, Gateway Views (if you require hard copies of the photos, please call me at 988-2231 or write to me at the above address). The Project design has been revised to reduce the length of the tower of the building by about 48 feet based on concerns presented on the DEA. This reduction in length will reduce the impact of shadows and impacts to ocean views from the Four Paddle. With a 350-foot height limit, many of the Four Paddle units will retain an ocean view. A revised mauka/makai oriented building design has also been provided. The tower design footprint on the site for both the revised ewa/diamond head oriented building and the revised mauka/makai oriented building is provided in the enclosed Gateway Views.

Building Orientation

The proposed building orientation and design was developed to implement Waikiki Special Design District (WSDD) Guidelines.

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- Views of Ala Wai Yacht Harbor from Magic Island Park”

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The proposed ewa/diamond head building orientation is also sensitive to the need to protect public views from the Gateway to Waikīkī located at Kalākaua Avenue and Ala Moana Boulevard. A volume study on photographs of views from these locations have been prepared comparing the visual impact of two building designs, one with a mauka/makai orientation and one with the proposed building design in an ewa/diamond head orientation. See Gateway Views, enclosed cd, included in the Final EA as Appendix VI, Building Orientation – Photographic Analysis.

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalākaua Avenue and from Kūhiō Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian access ways into and through Waikīkī. This ewa/diamond head orientation is also sensitive to protection of public views from the Gateway to Waikiki located at Kalākaua Avenue and Ala Moana Boulevard. A volume study (enclosed cd,

Gateway Views) on photographs of views from these locations has been prepared comparing the impacts from two building designs (enclosed), one with a mauka/makai building orientation and one with the proposed ewa/diamond head building orientation. The ewa/diamond head building orientation has significantly less visual impact along these important public view corridors except for one view at the corner of Kalākaua Avenue and Kālainmoku Street and two views looking ewa along Kūhiō Avenue. The structure has a narrower face with the ewa/diamond head orientation than with a mauka/makai orientation in all but three of the viewpoints along Kalākaua Avenue and Kūhiō Avenue. The view from the Gateway to Waikiki at Kalākaua Avenue and Ala Moana Boulevard is also less impacted with the ewa/diamond head building orientation.

The viewpoint at the open space at Fort DeRussy shows that the visual impact is greater with the ewa/diamond head orientation.

At the request of DPP the Building Orientation – Photographic Analysis (Appendix VI) also shows views from Kālainmoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two street corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as significant public views the mauka views at certain other streets located mauka of Kūhiō Avenue.

The ewa/diamond head orientation has also allowed us to provide the widest possible uninterrupted public open space along Kūhiō Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kūhiō Avenue as possible and would have been significantly wider to accommodate a similar amount of floor area.

The concept of “building forms which produce narrow towers are preferred” is supported by the Project as well. The additional height allows the applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

Shadow Study

Based on our shadow study (enclosed in cd), the Project with an ewa/diamond head orientation will shade the pool and deck area of the Four Paddle from about 2:00 pm on during the Equinox and will partially shade the Four Paddle barbecue deck area from about 2:00 pm to and fully shade the barbecue deck and pool area by 3:00 pm. and begin to shade the pool area from 3:00 pm on. During the Winter Solstice the Project will partially shade the barbecue deck area from

about 3:00 pm and begin to shade a small portion of the pool area from about 4:00 pm. The Four Paddle pool and deck area will not be affected during the Summer Solstice.

This ewa/diamond head orientation affects the block between Kālainmoku Street and Launiu Street during the Winter Solstice. , casting a shadowThe Project will partially shade this area from 12:00 pm and moves across this area fully shading the Kūhiō frontage at about 1:00 pm and partially shading it at 2:00 pm with less shading at 4:00 pm with the shadow clearing the property just after 4:00 pm to after 3:00 pm. This block is not affected during the Equinox and the Summer Solstice.

The Project with an ewa/diamond head orientation will cast a shadow overshade a small portion of the northern corner of Ft. DeRussy from before 8:00 am to 9:00 am during the Summer Solstice. These early morning shadows should have minimal impact on Ft. DeRussy and the growth and development of the trees at Ft. DeRussy. Ft. DeRussy is not affected during the Equinox and Winter Solstice.

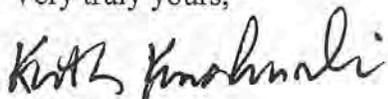
The mauka/makai orientation has less of an impact on the Four Paddle related to shadows during the Equinox with will shadesadows cast over the barbecue deck area from about 2:00 pm and will cover most of the barbecue deck and a small portion of half of the pool and deck area from 3:00 pm, covering most of the barbecue deck and the entire pool and deck area at from about 4:00 pm. During the Winter Solstice the Project will shade a small portion of the barbecue area from 4:00 pm. During the Summer Solstice, this orientation will not affect the pool and deck area.

The mauka/makai orientation does not affect the block between Kālainmoku Street and Launiu Street during the Summer Solstice and the Equinox. During the Winter Solstice, the Project will shade shadows affect portions of this block from 12:00 pm until 3:00 pm.

The mauka/makai orientation during the Summer Solstice, similar to the ewa/diamond head orientation will cast a shadow overshade a small portion of the northern corner of Ft. DeRussy from before about 8:00 am to 9:00 am. These early morning shadows should have minimal impact on Ft. DeRussy and the growth and development of the trees at Ft. DeRussy. Ft. DeRussy is not affected during the Equinox and Winter Solstice.

This response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

Encl.

cc: Department of Planning and Permitting
PACREP LLC

Copy to KASAO & KURAHASHI INC.

Office of Environmental Quality Control, Hawaii

State Office Tower, Room 702

235 South Beretania Street

Honolulu, Hawaii

August 17, 2012

To Whom It May Concern:

My husband and I read with great dismay in the Honolulu Advertiser that Irongate is given permission to start building in the lot directly across from 4 Paddles building, of which we own unit 1606 directly across from the proposed building site. We bought this unit and enjoyed our sunlight and view of the ocean.

There are several grave concerns about the direction your office and the Planning Dept is taking in allowing Irongate to build on this site.

Our direct environmental concern is that this proposed hotel not only completely block our view of the water, but with the proposed height, it will affect not only the view, but will cast a long shadow at all times of the day until the evening on Kuhio Street, making an environmental disaster on the street where there are many local residents as well as a favorite tourist haunt, affecting sunlight available to this ugly building's neighbors. Did your department not made a more relevant study of this proposed gigantic building out of character with the rest of Kuhio Street?

We understand that a prior proposed building was drawn in mind with more limitations on its environmental impact in this neighborhood. Another point to keep in mind is that Kuhio is a narrow street and this monstrosity directly affects the character of the neighborhood.

An interesting point to point out to you people is that Irongate developed another monstrosity known as the Trump Tower, which was so ugly and such an eye-sore to Waikiki (from close up and afar, essentially ruining the skyline of Waikiki) and such a financial disasters to people who invested to buy units (we have friends who lost millions in their units which sits empty on the real estate markets for years. Trump Tower is a laughing stock of all real estate investment community as to how stupid the City of Honolulu was to allow this to happen. Irongate only cares for its own huge

financial gain and nothing for its investor nor the Waikiki community nor the city of Honolulu. Did you not learn a lesson from that disaster>

We wonder if there is a collusion between your department and the Planning Dept with this big irresponsible and disastrous developer that we think an investigation should be made into this relationship.

Also, the traffic analysis was done six years ago, this is very irresponsible for your office to allow that to happen.

We demand a cease and desist order to disallow this environmental disastrous project to be built, if you do allow it, your department have a lot to answer to the thousands of neighbors and the city of Honolulu itself.

Ricky Ho

Emily Leung

Unit 1606, 4 Paddle

Emilyleung@mindspring.com

Handwritten signatures of Ricky Ho and Emily Leung. The signature for Ricky Ho is written in black ink and is positioned above the signature for Emily Leung, which is written in blue ink.

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-202
HONOLULU, HAWAII 96822

BUS. (808) 988-2231
FAX. (808) 988-1140
E-Mail: kkurahashi@hawaii.rr.com

September 11, 2012

Mr. Ricky Ho
Ms. Emily Leung
2140 Kuhio Avenue, #1606
Honolulu, Hawaii 96815

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Mr. Ho and Ms. Leung:

Thank you for your letter of August 17, 2012 regarding the Draft Environmental Assessment ("DEA") for the 2121 Kuhio Avenue Project ("Project").

We appreciate your comments and offer the following responses:

1. The proposed building orientation and design was developed to implement Waikiki Special Design District (WSDD) Guidelines.

The WSDD Guidelines section that includes "Orientation and Form" and establishes the guideline for the mauka/makai orientation is 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 following 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" 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.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalakaua Avenue and from Kuhio Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian accessways into and through Waikiki. This ewa/diamond head orientation is also sensitive to protection of public views from the Gateway to Waikiki located at Kalakaua Avenue and Ala Moana Boulevard and from the open space at Fort DeRussy. A volume study (Appendix VI Building Orientation – Photographic Analysis in the Final EA) on photographs of views from these locations have been prepared comparing the impacts from two building designs (enclosed), one with a mauka/makai building orientation and one with the proposed ewa/diamond head building orientation. The ewa/diamond head building orientation has significantly less visual impact along these important public view corridors except for one view at the corner of Kalakaua Avenue and Kalaimoku Street. The structure has a narrower face with the ewa/diamond head orientation than with a mauka/makai orientation in all but one of the viewpoints along Kalakaua Avenue and Kuhio Avenue. The view from the Gateway to Waikiki at Kalakaua Avenue and Ala Moana Boulevard is also less impacted with the ewa/diamond head building orientation.

A view from the open space at Fort DeRussy shows that the visual impact with either orientation is about the same.

At the request of the Department of Planning and Permitting (DPP) the Building Orientation – Photographic Analysis also shows views from Kalaimoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as

significant public views **mauka views** at certain other streets located mauka of Kuhio Avenue.

The ewa/diamond head orientation has also allowed us to provide the widest possible uninterrupted public open space along Kuhio Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kuhio Avenue as possible and would have been significantly wider to accommodate a similar amount of floor area and not located above and within the proposed parking podium.

The concept of “building forms which produce narrow towers are preferred” is supported by the Project as well. The additional height allows the applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

2. A shadow study (enclosed) is included in the Final EA and the narrative for that shadow study is provided below:

“Based on our shadow study, the Project with an ewa/diamond head orientation will shade the pool and deck area of the Four Paddle from about 2:00 pm on during the Equinox and partially shade the deck area from 2:00 pm to 3:00 pm and begin to shade the pool area from 3:00 pm on during the Winter Solstice. The Four Paddle pool and deck area will not be affected during the Summer Solstice.

This ewa/diamond head orientation affects the block between Kalaimoku Street and Launiu Street during the Winter Solstice, casting a shadow from 12:00 pm to after 3:00 pm. This block is not affected during the Equinox and the Summer Solstice.

The Project with an ewa/diamond head orientation will cast a shadow over a small portion of the northern corner of Ft. DeRussy from before 8:00 am to 9:00 am. These early morning shadows should have minimal impact on Ft. DeRussy and the growth and development of the trees at Ft. DeRussy.

The mauka/makai orientation has less of an impact on the Four Paddle related to shadows during the Equinox with shadows cast over the half of the pool and deck area from 3:00 pm, covering the entire pool and deck at about 4:00 pm. During the Winter Solstice, this orientation will not affect the pool and deck area.

The mauka/makai orientation does not affect the block between Kalaimoku Street and Launiu Street during the Summer Solstice and the Equinox. During the Winter Solstice, shadows affect portions of this block from 12:00 pm until 3:00 pm.

The mauka/makai orientation, similar to the ewa/diamond head orientation will cast a shadow over a small portion of the northern corner of Ft. DeRussy from before 8:00 am to 9:00 am. These early morning shadows should have minimal impact on Ft. DeRussy and the growth and development of the trees at Ft. DeRussy.”

3. The previously designed tower with the mauka/makai orientation was not planned to provide the significant public open space planned with this proposal. Opposition to that design was strong from several condominiums around the Project, including the Four Paddle.
4. In order to minimize impacts to Kuhio Avenue, the Project’s primary access is off Kalaimoku Street. Only an existing service drive which provides access to loading and access to Lauula Street will be allowed off of Kuhio Avenue. The proposed 51-foot wide public open space will provide a wider appearance for the Kuhio Avenue right-of-way, where a mauka/makai oriented building would have to be situated much closer to Kuhio Avenue.
5. The following is an excerpt from a story posted on HawaiiNewsNow.com on February 28, 2011, touting the success of Trump International Hotel & Tower Waikiki Beach Walk:

“Four years after a record-breaking \$700 million complete sellout, Trump International Hotel & Tower® Waikiki Beach Walk® is riding a new high. The ultra-luxury hotel-condominium located on prime Waikiki real estate announced that 317 units have closed to date for total sales of more than a half billion dollars with more closings in the coming weeks. Interest is strong with new sales continuing at a brisk pace.

“We are thrilled with the success of the closing program and the positive momentum that we are feeling as a result,” said Jason Grosfeld, representative for Irongate AZREP BW LLC, the developer of the property. “The project’s continued success is a testament to the quality of the real estate, the demand from multiple markets, the strength of the Trump brand and an irreplaceable location.”

Gary Pinkston was one of the buyers at the 2006 sales event. “Even through the market downturn, I remained confident in my purchase,” said Pinkston, who also owns a home on the North Shore of Oahu. “When the tower opened in November 2009 and I got a chance to see the property for myself, my confidence in this project was affirmed. The quality of the building and the hotel services offered are exceptional. And you cannot beat the location.” Pinkston currently owns two two-bedroom and den residences in the Trump tower.”

6. The Traffic Study was completed in March of this year, not six years ago. The Traffic Study was based on traffic counts taken at the end of January and beginning of February.

Your letter and this response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

cc: Department of Planning and Permitting
PACREP LLC

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-202
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October 26, 2012

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Mr. Ricky Ho
Ms. Emily Leung
2140 Kuhio Avenue, #1606
Honolulu, Hawaii 96815

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Mr. Ho and Ms. Leung:

This letter serves as a supplement and update to our previous letter to you regarding the Draft Environmental Assessment (“DEA”) for the 2121 Kuhio Avenue Project (“Project”).

The Pre-Final EA for the project has been revised and the Final EA provides ewa/diamond head oriented building photos that are consistent with the revised plans in regard to both design and building orientation. See enclosed cd, Gateway Views (if you require hard copies of the photos, please call me at 988-2231 or write to me at the above address). The Project design has been revised to reduce the length of the tower of the building by about 48 feet based on concerns presented on the DEA. This reduction in length will reduce the impact of shadows and impacts to ocean views from the Four Paddle. With a 350-foot height limit, many of the Four Paddle units will retain an ocean view. A revised mauka/makai oriented building design has also been provided. The tower design footprint on the site for both the revised ewa/diamond head oriented building and the revised mauka/makai oriented building is provided in the enclosed Gateway Views.

Building Orientation

The proposed building orientation and design was developed to implement Waikiki Special Design District (WSDD) Guidelines.

The WSDD Guidelines section that includes “Orientation and Form” and establishes the guideline for the mauka/makai orientation is 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 following 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” 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.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalākaua Avenue and from Kūhiō Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian access ways into and through Waikīkī.

The proposed ewa/diamond head building orientation is also sensitive to the need to protect public views from the Gateway to Waikīkī located at Kalākaua Avenue and Ala Moana Boulevard. A volume study on photographs of views from these locations have been prepared comparing the visual impact of two building designs, one with a mauka/makai orientation and one with the proposed building design in an ewa/diamond head orientation. See Gateway Views, enclosed cd, included in the Final EA as Appendix VI, Building Orientation – Photographic Analysis.

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalākaua Avenue and from Kūhiō Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian access ways into and through Waikīkī. This

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The viewpoint at the open space at Fort DeRussy shows that the visual impact is greater with the ewa/diamond head orientation.

At the request of DPP the Building Orientation – Photographic Analysis (Appendix VI) also shows views from Kālainmoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two street corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as significant public views the mauka views at certain other streets located mauka of Kūhiō Avenue.

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The concept of “building forms which produce narrow towers are preferred” is supported by the Project as well. The additional height allows the applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

Shadow Study

Based on our shadow study (enclosed in cd), the Project with an ewa/diamond head orientation will shade the pool and deck area of the Four Paddle from about 2:00 pm on during the Equinox and will partially shade the Four Paddle barbecue deck area from about 2:00 pm to and fully shade the barbecue deck and pool area by 3:00 pm. and begin to shade the pool area from 3:00

pm on Dduring the Winter Solstice the Project will partially shade the barbecue deck area from about 3:00 pm and begin to shade a small portion of the pool area from about 4:00 pm. The Four Paddle pool and deck area will not be affected during the Summer Solstice.

This ewa/diamond head orientation affects the block between Kālainmoku Street and Launiu Street during the Winter Solstice. , casting a shadowThe Project will partially shade this area from 12:00 pm and moves across this area fully shading the Kūhiō frontage at about 1:00 pm and partially shading it at 2:00 pm with less shading at 4:00 pm with the shadow clearing the property just after 4:00 pmto after 3:00 pm. This block is not affected during the Equinox and the Summer Solstice.

The Project with an ewa/diamond head orientation will cast a shadow overshadow a small portion of the northern corner of Ft. DeRussy from before 8:00 am to 9:00 am during the Summer Solstice. These early morning shadows should have minimal impact on Ft. DeRussy and the growth and development of the trees at Ft. DeRussy. Ft. DeRussy is not affected during the Equinox and Winter Solstice.

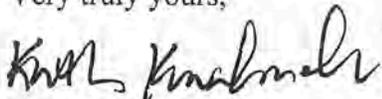
The mauka/makai orientation has less of an impact on the Four Paddle related to shadows during the Equinox with will shadeshadows cast over the barbecue deck area from about 2:00 pm and will cover most of the barbecue deck and a small portion of half of the pool and deck area from 3:00 pm, covering most of the barbecue deck and the entire pool and deckarea atfrom about 4:00 pm. During the Winter Solstice the Project will shade a small portion of the barbecue area from 4:00 pm. During the Summer Solstice, this orientation will not affect the pool and deck area.

The mauka/makai orientation does not affect the block between Kālainmoku Street and Launiu Street during the Summer Solstice and the Equinox. During the Winter Solstice, the Project will shade shadows affect portions of this block from 12:00 pm until 3:00 pm.

The mauka/makai orientation during the Summer Solstice, similar to the ewa/diamond head orientation will cast a shadow overshadow a small portion of the northern corner of Ft. DeRussy from before about 8:00 am to 9:00 am. These early morning shadows should have minimal impact on Ft. DeRussy and the growth and development of the trees at Ft. DeRussy. Ft. DeRussy is not affected during the Equinox and Winter Solstice.

This response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

Encl.

cc: Department of Planning and Permitting
PACREP LLC

8-18-12

Kusao & Kurahashi Inc.
2752 Woodlawn Drive, Suite 5-202
Honolulu, HI 26822

Office of Environmental Quality Control - State of Hawaii
State Office Tower, Room 702
235 South Beretania St.
Honolulu, HI 96813

Regarding 2121 Kuhio Tower, Environmental Assessment; Public commentary before Aug 22nd, 2012

Dear reviewers:

As a resident of Waikiki, and in particular, of the Four Paddle building at 2140 Kuhio Avenue, I have concerns that I would like to have addressed with regard to this large building planned for my neighborhood.

My concerns are with:

- 1) The sewer capabilities in the immediate area to manage this new projected volume. This could be a health hazard at minimum, noxious to the environment, and a tourism disaster to boot. Since we already have issues with sewage odors emanating from multiple areas in the immediate vicinity, in the lots adjacent to and where the construction is planned, it needs to be explained how adding significant volume to this processing could possibly NOT impact the area. The recent sewer lines 'floating' in the Ala Wai is just an example of potential 'unplanned' issues.
- 2) Traffic congestion on Kuhio between Lewers and Launiu. Currently more than 12 city buses cruise both ways, in addition to trolleys, tour buses, and car traffic. Increasing the potential for pedestrian injury and fatalities is even more disconcerting. Many lives have already been lost in this area due to the inability to see around the multitude of vehicles already present. Please address how this additional volume of people and vehicles will NOT be impacted by the increased volume and decreased visibility, including blocking sunlight over the entire block.
- 3) Will taxpayer dollars be used to address any 'unforeseen' negative environmental impact from this huge building? Please address how this major change in the ambiance of the neighborhood could impact the use of tax dollars in our Waikiki community.

Mahalo for your time, and I look forward to your response!



Cynthia Cadwell
2140 Kuhio Ave. #601
Honolulu, HI 96815
808-888-6140

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

MANDA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-202
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E-Mail: kkurahashi@hawaii.rr.com

September 11, 2012

Ms. Cynthia Cadwell
2140 Kuhio Avenue, #601
Honolulu, Hawaii 96815

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Ms. Cadwell:

Thank you for your letter of August 18, 2012 regarding the Draft Environmental Assessment ("DEA") for the 2121 Kuhio Avenue Project ("Project").

We appreciate your comments and offer the following responses:

1. The Department of Planning and Permitting approved a Sewer Connection Application, on January 17, 2012, for the 459-unit condo hotel development conditioned upon the connection to the 20-inch sewer line in Kuhio Avenue at the owner's expense and construction plans being submitted for review and approval. The existing municipal sewer system is adequate to accommodate the Project.
2. The Traffic Impact Report for the Project concluded that "... with the implementation of the proposed recommendation including the elimination or relocation of the existing drop-off area adjacent to the project site, staging and loading areas within and near the project site, traffic operations in the vicinity are anticipated to continue operating at levels of service similar to those without project conditions." The Project will not have a significant impact on traffic operations in the area.
3. Taxpayer dollars will not be needed to provide for the development of this condo-hotel development in Waikiki. In fact the benefits of a major hotel (which supports the greater community) are as follows (including infusion of tax revenues at both the City and State levels):

The proposed development at 2121 Kuhio will not curtail the range of beneficial uses of the environment. The property presently sits vacant and does not provide any beneficial use to the owners or the public. The proposed 2121 Kuhio development will provide much need hotel room inventory in Waikiki, with 2,684 hotel units lost or to be lost in Waikiki since 2003.

The Project will, through provision of public open space, provide a tropical landscaped plaza area along Kuhio Avenue that will provide relief from the built environment.

The Project will also provide an increase in tax revenues for both the City and State.

During its sales phase, the Project will be selling individual condo-hotel units to investors which will result in over \$300 million in on-site sales and generate about \$2 million in conveyance tax revenues for the State.

Upon completion, the Project will generate about \$4.5 million per year in annual property tax revenue for the City.

The Project, during its first full calendar year and annually thereafter, is expected to generate income of \$20 to \$30 million in on-site sales resulting in GET (general excise tax revenue) of \$0.8 to \$1.2 million per year for the State (4%) and between \$100,000 to \$150,000 per year for the City (0.5%). The Project will also generate transient accommodations taxes (9.25%) totaling \$1.9 to \$2.775 million for the State, a portion of which may be shared with the City.

Your letter and this response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

cc: Department of Planning and Permitting
PACREP LLC

Michael Garza
2140 Kuhio Ave #907
Honolulu, Hawaii 96815

Kusao & Kurahashi Inc.
2752 Woodlawn Drive, Suite 5-202
Honolulu, HI 96822

18 AUG 2012

Dear Sir/Madam

Re: Response to 2121 Kuhio Ave Draft Environmental Assessment (July 6, 2012)

Aloha, I'm a local resident in Waikiki and I wanted to state my concern in the matter of 2121 Kuhio Draft Environmental Assessment.

I would like to request that the office of Environmental Quality Control investigate a different building type to the one proposed now by the current developer.

There has to be other options and the original building orientation that was originally proposed by the original developer was much better than this current one. I have been living in Waikiki for 5 years after being stationed here with the US Navy. I chose to purchase my condo at the Four Paddle because I loved this area. I loved the feel of the more open area that this side of Waikiki has to offer. I chose this area because it is not as congested and offers an open feel to Waikiki with beautiful Hawaiian sun. Building a huge wall type of building is the wrong decision for the people of Waikiki. I feel this wall type structure will not benefit many local residents and will actually negatively impact many current residents. I have put everything I have worked so hard for into my condo when I made this initial purchase being told that a grocery store would open in this lot and I really felt that would be a sound decision.

My personal feeling is that we should develop some type of a small structure no more than a few floors. Waikiki could really use a grocery store or continue to use this space as a parking lot. As you all know, Waikiki is already max congested. Building another new structure will only congest Waikiki even more than it already is and parking is already difficult to find as it is. Why are we building another high rise in this location when we don't even have parking for the tenants that already reside in this area not to mention the tourist and local people who would like to visit Waikiki? Most of the time our own local people don't even want to come to Waikiki due to this reason. So adding another high rise will make these matters even worse. Lets work together as a family that we are on this island and not build a wall type high rise in this lot.

There has to be something better that we can do with this space for the people of Waikiki and for the land itself not to mention all the sewage issues that Waikiki already has. Please, PLEASE do NOT building a wall type high rise in this area!! This is not what we need.

Very Respectfully,

Michael Garza

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

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September 11, 2012

Mr. Michael Garza
2140 Kuhio Avenue, #907
Honolulu, Hawaii 96815

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Mr. Garza:

Thank you for your letter of August 18, 2012 regarding the Draft Environmental Assessment ("DEA") for the 2121 Kuhio Avenue Project ("Project").

We appreciate your comments and offer the following responses:

1. A grocery store is still in the long range plans for the empty lot located on Kuhio Avenue across from the eastern half of Four Paddle.

The proposed building orientation and design was developed to implement Waikiki Special Design District (WSDD) Guidelines.

The WSDD Guidelines section that includes "Orientation and Form" and establishes the guideline for the mauka/makai orientation is 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 following 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" 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.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalakaua Avenue and from Kuhio Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian accessways into and through Waikiki. This ewa/diamond head orientation is also sensitive to protection of public views from the Gateway to Waikiki located at Kalakaua Avenue and Ala Moana Boulevard and from the open space at Fort DeRussy. A volume study (Appendix VI Building Orientation – Photographic Analysis in the Final EA) on photographs of views from these locations have been prepared comparing the impacts from two building designs (enclosed), one with a mauka/makai building orientation and one with the proposed ewa/diamond head building orientation. The ewa/diamond head building orientation has significantly less visual impact along these important public view corridors except for one view at the corner of Kalakaua Avenue and Kalaimoku Street. The structure has a narrower face with the ewa/diamond head orientation than with a mauka/makai orientation in all but one of the viewpoints along Kalakaua Avenue and Kuhio Avenue. The view from the Gateway to Waikiki at Kalakaua Avenue and Ala Moana Boulevard is also less impacted with the ewa/diamond head building orientation.

A view from the open space at Fort DeRussy shows that the visual impact with either orientation is about the same.

At the request of the Department of Planning and Permitting (DPP) the Building Orientation – Photographic Analysis also shows views from Kalaimoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view

corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as significant public views **mauka views** at certain other streets located mauka of Kuhio Avenue.

The ewa/diamond head orientation has also allowed us to provide the widest possible uninterrupted public open space along Kuhio Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kuhio Avenue as possible and would have been significantly wider to accommodate a similar amount of floor area and not located above and within the proposed parking podium.

The concept of “building forms which produce narrow towers are preferred” is supported by the Project as well. The additional height allows the applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

2. The Traffic Impact Report for the Project concluded that “... with the implementation of the proposed recommendation including the elimination or relocation of the existing drop-off area adjacent to the project site, staging and loading areas within and near the project site, traffic operations in the vicinity are anticipated to continue operating at levels of service similar to those without project conditions.” The Project will not have a significant impact on traffic operations in the area.
3. The Department of Planning and Permitting approved a Sewer Connection Application, on January 17, 2012, for the 459-unit condo hotel development conditioned upon the connection to the 20-inch sewer line in Kuhio Avenue at the owner's expense and construction plans being submitted for review and approval. The existing municipal sewer system is adequate to accommodate the Project.
4. The benefits of a major hotel (which supports the greater community) are as follows:

The proposed development at 2121 Kuhio will not curtail the range of beneficial uses of the environment. The property presently sits vacant and does not provide any beneficial use to the owners or the public. The proposed 2121 Kuhio development will provide much need hotel room inventory in Waikiki, with 2,684 hotel units lost or to be lost in Waikiki since 2003.

The Project will, through provision of public open space, provide a tropical landscaped plaza area along Kuhio Avenue that will provide relief from the surrounding buildings.

The Project will also provide an increase in tax revenues for both the City and State.

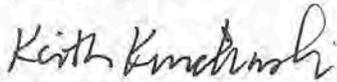
During its sales phase, the Project will be selling individual condo-hotel units to investors that will result in over \$300 million in on-site sales and generate about \$2 million in conveyance tax revenues for the State.

Upon completion, the Project will generate about \$4.5 million per year in annual property tax revenue for the City.

The Project, during its first full calendar year and annually thereafter, is expected to generate income of \$20 to \$30 million in on-site sales resulting in GET (general excise tax revenue) of \$0.8 to \$1.2 million per year for the State (4%) and between \$100,000 to \$150,000 per year for the City (0.5%). The Project will also generate transient accommodations taxes (9.25%) totaling \$1.9 to \$2.775 million for the State, a portion of which may be shared with the City.

Your letter and this response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

cc: Department of Planning and Permitting
PACREP LLC

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

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October 26, 2012

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Mr. Michael Garza
2140 Kuhio Avenue, #907
Honolulu, Hawaii 96815

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Mr. Garza:

This letter serves as a supplement and update to our previous letter to you regarding the Draft Environmental Assessment (“DEA”) for the 2121 Kuhio Avenue Project (“Project”).

The Pre-Final EA for the project has been revised and the Final EA provides ewa/diamond head oriented building photos that are consistent with the revised plans in regard to both design and building orientation. See enclosed cd, Gateway Views (if you require hard copies of the photos, please call me at 988-2231 or write to me at the above address). The Project design has been revised to reduce the length of the tower of the building by about 48 feet based on concerns presented on the DEA. This reduction in length will reduce the impact of shadows and impacts to ocean views from the Four Paddle. With a 350-foot height limit, many of the Four Paddle units will retain an ocean view. A revised mauka/makai oriented building design has also been provided. The tower design footprint on the site for both the revised ewa/diamond head oriented building and the revised mauka/makai oriented building is provided in the enclosed Gateway Views.

Building Orientation

The proposed building orientation and design was developed to implement Waikiki Special Design District (WSDD) Guidelines.

The WSDD Guidelines section that includes “Orientation and Form” and establishes the guideline for the mauka/makai orientation is 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 following 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” 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.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalākaua Avenue and from Kūhiō Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian access ways into and through Waikīkī.

The proposed ewa/diamond head building orientation is also sensitive to the need to protect public views from the Gateway to Waikīkī located at Kalākaua Avenue and Ala Moana Boulevard. A volume study on photographs of views from these locations have been prepared comparing the visual impact of two building designs, one with a mauka/makai orientation and one with the proposed building design in an ewa/diamond head orientation. See Gateway Views, enclosed cd, included in the Final EA as Appendix VI, Building Orientation – Photographic Analysis.

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalākaua Avenue and from Kūhiō Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian access ways into and through Waikīkī. This ewa/diamond head orientation is also sensitive to protection of public views from the Gateway to Waikiki located at Kalākaua Avenue and Ala Moana Boulevard. A volume study (enclosed cd, Gateway Views) on photographs of views from these locations has been prepared comparing the

impacts from two building designs (enclosed), one with a mauka/makai building orientation and one with the proposed ewa/diamond head building orientation. The ewa/diamond head building orientation has significantly less visual impact along these important public view corridors except for one view at the corner of Kalākaua Avenue and Kālainmoku Street and two views looking ewa along Kūhiō Avenue. The structure has a narrower face with the ewa/diamond head orientation than with a mauka/makai orientation in all but three of the viewpoints along Kalākaua Avenue and Kūhiō Avenue. The view from the Gateway to Waikiki at Kalākaua Avenue and Ala Moana Boulevard is also less impacted with the ewa/diamond head building orientation.

The viewpoint at the open space at Fort DeRussy shows that the visual impact is greater with the ewa/diamond head orientation.

At the request of DPP the Building Orientation – Photographic Analysis (Appendix VI) also shows views from Kālainmoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two street corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as significant public views the mauka views at certain other streets located mauka of Kūhiō Avenue.

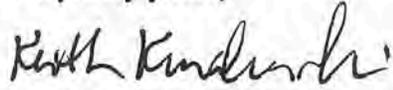
The ewa/diamond head orientation has also allowed us to provide the widest possible uninterrupted public open space along Kūhiō Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kūhiō Avenue as possible and would have been significantly wider to accommodate a similar amount of floor area.

The concept of “building forms which produce narrow towers are preferred” is supported by the Project as well. The additional height allows the applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

Mr. Michael Garza
Page 4

This response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

Encl.

cc: Department of Planning and Permitting
PACREP LLC

August 18, 2012

Kusao & Kurahashi Inc.
2752 Woodlawn Drive, Suite 5-202
Honolulu, HI 26822

Re: 2121 Kuhio Tower Project

To Whom It May Concern,

The following letter is in regards to the 34 story condo hotel proposed by PACREP, LLC at 2121 Kuhio Avenue. As a resident of the neighboring community, I am very disappointed and strongly opposed to the approval of this project in that it fails to adhere to many of the guidelines set forth by the Waikiki Special District including building design and form, orientation, retention of a residential sector and maintenance of the character of the community, maintenance of significant public views, and the total disregard of the community's wishes and the formal opposition to the project by the Waikiki Neighborhood Board. There are also concerns regarding the DEA report and the project's impact on the community.

The WSD guidelines state that, "the long axis of all new high-rise structures be oriented in a mauka-makai direction to minimize obstruction of mauka views and maximize natural ventilation. A mixture of low, mid, and high-rise buildings are recommended to provide adequate light and air, and to create neighborhoods with a pedestrian scale. They are recommended along view corridors to preserve and enhance mauka/makai views. **"The orientation, scale, and design of this project essentially place a large monolithic wall that overshadows the surrounding neighborhoods including Fort DeRussy, blocks mauka public views of the Koolau range from Fort DeRussy, and has a negative impact on the "openness" of this community. The current DEA states that there is no effect, and actually states, that these views are "greatly enhanced." This is not correct. From several areas in Fort DeRussy and along Saratoga and Kalia Roads, many of the views of the mountains will be diminished or removed.**

The plans for this site have changed on multiple occasions from the original 2100 Kalakaua proposal for retail establishments that was embraced by the community. The most recent proposal of a residential time share was not entirely supported by the community although passed by the Waikiki Neighborhood Board. It still would have required a zoning change by the city council. The developers attempted to construct a building that would have the least impact upon the neighborhood, but this failed due to the economic downturn. There was an apparent change to the zoning law affecting Waikiki that would allow mixed use developments. The proposed project of a condo hotel places a **"hotel"** in a residential community which is in direct contradiction to the guidelines requiring no impact on the residential population. This type of project and scale does not conform to the character of the neighborhood. Although tourism is a mainstay of the economy, the transient nature of a hotel has a negative impact in that it does not promote community, shared interest, or enhance a residential neighborhood. There is more tenant turnover, increased traffic, pedestrian congestion, and a disregard for the impact of this type of project on the residents of the community.

The DEA has no statement regarding the impact on housing valuations in the area. There is no concern regarding how the proposed structure blocks a wide view plane and would negatively affect home values and future redevelopment to the properties that are mauka to the project.

The DEA report states that that there would be no impact on traffic, noise, or an increased strain on an already fragile infrastructure. I disagree. The traffic analysis report enclosed in the DEA states that there would be no significant impact on traffic and refers to the prior developer "K3 Project" which makes the analysis suspect. Is this a current report or one provided to the previous client six years ago? This does not promote credibility or trust in the new developer by using misleading or falsified reports. The DEA states that the project developer would promote the use of public transit by clients and employees further adding to pedestrian congestion at four major bus stops within a block of the project. There would be added traffic from the proposed Kalaimoku Street porte-cochere onto Kuhio Avenue including taxis and service vehicles, in addition to delivery vehicles using the midblock public access road. Traffic will also be affected by the road closures for sewer line reconstruction planned over the next 2 years. This is not addressed by the traffic analysis.

The noise and pollution associated with a construction site is unbearable if you reside in close proximity. As a resident of the area, I had the very unpleasant experience of the water main break and subsequent construction of the emergency sewer bypass resulting in noise, dust, and traffic which I do not want to relive. The construction of this project is planned for 24 months resulting in increased noise, pollution, and added traffic delays. I am also very concerned about the impact of a project of this scale has on a fragile infrastructure despite clearance from the DWS. The developer has not proposed any improvements in infrastructure which would be at the cost of the taxpayer should it fail. The developer has unlimited upside profit potential without providing the community any infrastructure benefits.

In summary, I ask that the Office of Environmental Quality Control delay the approval of the current Draft Environmental Assessment for the 2121 Kuhio Tower Project given that the project does not adhere to the Waikiki Special District guidelines for new construction, concerns need to be addressed regarding the environmental and community impact of this project as detailed above, and the concerns of the community need to be recognized.

Respectfully,



Brian Kluess
2140 Kuhio Avenue
Unit 1008
Honolulu, HI 96815

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

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September 11, 2012

Mr. Brian Kluess
2140 Kuhio Avenue, #1606
Honolulu, Hawaii 96815

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Mr. Kluess:

Thank you for your letter of August 18, 2012 regarding the Draft Environmental Assessment (“DEA”) for the 2121 Kuhio Avenue Project (“Project”).

We appreciate your comments and offer the following responses:

1. The proposed building orientation and design was developed to implement Waikiki Special Design District (WSDD) Guidelines.

The WSDD Guidelines section that includes “Orientation and Form” and establishes the guideline for the mauka/makai orientation is a subsection of “Building Design” which states as follows:

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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.

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The ewa/diamond head orientation has also allowed us to provide the widest possible uninterrupted public open space along Kuhio Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kuhio Avenue as possible and would have been significantly wider to accommodate a similar amount of floor area and not located above and within the proposed parking podium.

The concept of “building forms which produce narrow towers are preferred” is supported by the Project as well. The additional height allows the applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

2. An Advertiser newspaper article dated October 27, 2005 noted opposition to the earlier plan for the property from the Four Paddle and the La Casa condominiums, enclosed.
3. The WSDD Guideline relating to “support the retention of a residential sector” is not being pursued by this Project. There have been other projects in Waikiki and in recent years, most projects involved residential condominium developments and reduction of the number of hotel units in Waikiki.

The benefits of a major hotel (which supports the greater community) are as follows:

The proposed development at 2121 Kuhio will not curtail the range of beneficial uses of the environment. The property presently sits vacant and does not provide any beneficial use to the owners or the public. The proposed 2121 Kuhio development will provide much need hotel room inventory in Waikiki, with 2,684 hotel units lost or to be lost in Waikiki since 2003.

The Project will, through provision of public open space, provide a tropical landscaped plaza area along Kūhiō Avenue that will provide relief from the built environment.

The Project will also provide an increase in tax revenues for both the City and State.

The Project during its sales phase, selling individual condo hotel units to investors will result in over \$300 million in on-site sales generating about \$2 million in conveyance tax revenues for the State.

The Project upon completion will generate about \$4.5 million per year in annual property tax revenue for the City.

The Project during its first full calendar year and annually thereafter is expected to generate income of \$20 to \$30 million in on-site sales resulting in GET (general excise tax revenue) of \$0.8 to \$1.2 million per year for the State (4%) and between \$100,000 to \$150,000 per year for the City (0.5%). The Project will also generate transient accommodations taxes (9.25%) totaling \$1.9 to \$2.775 million for the State, a portion of which may be shared with the City.

4. The Traffic Impact Report for the Project concluded that "... with the implementation of the proposed recommendation including the elimination or relocation of the existing drop-off area adjacent to the project site, staging and loading areas within and near the project site, traffic operations in the vicinity are anticipated to continue operating at levels of service similar to those without project conditions." The Project will not have a significant impact on traffic operations in the area.
5. The Applicant is concerned about the surrounding property owners' fears, and will do its best to develop a successful Project that considers the well-being of the general public. This Project will provide an improvement through ground-level beautification that will upgrade the lot and encourage other properties nearby to redevelop as well, thereby raising the quality of real estate in the area and increasing property values.
6. The engineers that prepared sub-consultant reports of traffic, noise and infrastructure are well respected in their fields of study and have accurately reported on the expected impacts of the Project. These coupled with infrastructure approvals and letters noting adequate infrastructure from City agencies.
7. The Traffic Study was completed in March of this year, not six years ago. The Traffic Study was based on traffic counts taken at the end of January and beginning of February.

The K3 Waikiki name for the Project was used by the new owner in earlier requests for provision of certain sub-consultant studies and letters to agencies early in the process. Since that time the Project name has been changed to 2121 Kuhio.

The use of public transit is supported by the City and State to reduce vehicular traffic on our streets. The Applicant will provide additional public open space around the bus stop immediately fronting the Project Site to accommodate any increase in riders waiting at the stop.

The Traffic Study focused on traffic impact at completion of the development and occupancy of the hotel which should occur beyond the next two years and based on your letter will occur after completion of the sewer improvements which you have indicated will result in closures of Kuhio Avenue over the next two years. A construction management plan, providing plans to mitigate traffic impacts during construction, will be submitted to the Department of Planning and Permitting for review and approval in the future. This plan will address impacts related to the closure of portions of Kuhio Avenue for the sewer line construction.

8. The applicant plans to utilize Caisson or augercast in the support system for the foundation. No pile driving is planned, which should eliminate the major noise impact from foundation work. Every effort will be made to stage construction in the open space areas planned for the Project to minimize impacts to Kūhiō Avenue and Kālainoku Street.

Mitigation of noise impacts due to construction will include the use of properly muffled construction equipment on the job site and incorporation of State Department of Health construction noise limits and curfew times.

9. The final section of that Air Quality Study, "Conclusions and Recommendations", discussed the actual impacts and mitigation measures as follows:

"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."

The applicant will follow these recommendations to minimize construction impacts on the neighborhood. As noted, no mitigation requirements will be required for long-term traffic impacts which are expected to be negligible.

10. The Department of Planning and Permitting approved a Sewer Connection Application, on January 17, 2012, for the 459-unit condo hotel development conditioned upon the connection to the 20-inch sewer line in Kūhiō Avenue at the owner's expense and

construction plans being submitted for review and approval. The existing municipal sewer system is adequate to accommodate the Project.

11. Taxpayer dollars will not be needed to provide for the development of this condo hotel development in Waikiki. In fact the benefits of a major hotel (which supports the greater community) were described in item 3 above and included an increase of tax revenues at both the City and State levels.

The Project does adhere to the WSDD Guidelines as noted in part in this letter and more fully in the Final EA. The Final EA is a disclosure document that provides the environmental impact of the Project and the Applicant's plans to mitigate the impacts. This document merely discloses environmental impacts and its approval through a Finding of No Significant Impact (FONSI) is not an approval of the project. It recognizes that environmental disclosure has been provided and allows the Applicant to apply for entitlement permits such as the Waikiki Special District Permit application that would approve the Project and allow application for building permits.

Your letter and this response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

Encls.

cc: Department of Planning and Permitting
PACREP LLC

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

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October 26, 2012

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Mr. Brian Kluess
2140 Kuhio Avenue, #1606
Honolulu, Hawaii 96815

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Mr. Kluess:

This letter serves as a supplement and update to our previous letter to you regarding the Draft Environmental Assessment ("DEA") for the 2121 Kuhio Avenue Project ("Project").

The Pre-Final EA for the project has been revised and the Final EA provides ewa/diamond head oriented building photos that are consistent with the revised plans in regard to both design and building orientation. See enclosed cd, Gateway Views (if you require hard copies of the photos, please call me at 988-2231 or write to me at the above address). The Project design has been revised to reduce the length of the tower of the building by about 48 feet based on concerns presented on the DEA. This reduction in length will reduce the impact of shadows and impacts to ocean views from the Four Paddle. With a 350-foot height limit, many of the Four Paddle units will retain an ocean view. A revised mauka/makai oriented building design has also been provided. The tower design footprint on the site for both the revised ewa/diamond head oriented building and the revised mauka/makai oriented building is provided in the enclosed Gateway Views.

Building Orientation

The proposed building orientation and design was developed to implement Waikiki Special Design District (WSDD) Guidelines.

The WSDD Guidelines section that includes "Orientation and Form" and establishes the guideline for the mauka/makai orientation is 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 following 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” 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.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalākaua Avenue and from Kūhiō Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian access ways into and through Waikīkī.

The proposed ewa/diamond head building orientation is also sensitive to the need to protect public views from the Gateway to Waikīkī located at Kalākaua Avenue and Ala Moana Boulevard. A volume study on photographs of views from these locations have been prepared comparing the visual impact of two building designs, one with a mauka/makai orientation and one with the proposed building design in an ewa/diamond head orientation. See Gateway Views, enclosed cd, included in the Final EA as Appendix VI, Building Orientation – Photographic Analysis.

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalākaua Avenue and from Kūhiō Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian access ways into and through Waikīkī. This ewa/diamond head orientation is also sensitive to protection of public views from the Gateway to Waikiki located at Kalākaua Avenue and Ala Moana Boulevard. A volume study (enclosed cd,

Gateway Views) on photographs of views from these locations has been prepared comparing the impacts from two building designs (enclosed), one with a mauka/makai building orientation and one with the proposed ewa/diamond head building orientation. The ewa/diamond head building orientation has significantly less visual impact along these important public view corridors except for one view at the corner of Kalākaua Avenue and Kālaimoku Street and two views looking ewa along Kūhiō Avenue. The structure has a narrower face with the ewa/diamond head orientation than with a mauka/makai orientation in all but three of the viewpoints along Kalākaua Avenue and Kūhiō Avenue. The view from the Gateway to Waikiki at Kalākaua Avenue and Ala Moana Boulevard is also less impacted with the ewa/diamond head building orientation.

The viewpoint at the open space at Fort DeRussy shows that the visual impact is greater with the ewa/diamond head orientation.

At the request of DPP the Building Orientation – Photographic Analysis (Appendix VI) also shows views from Kālaimoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two street corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as significant public views the mauka views at certain other streets located mauka of Kūhiō Avenue.

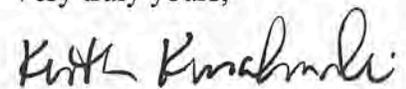
The ewa/diamond head orientation has also allowed us to provide the widest possible uninterrupted public open space along Kūhiō Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kūhiō Avenue as possible and would have been significantly wider to accommodate a similar amount of floor area.

The concept of “building forms which produce narrow towers are preferred” is supported by the Project as well. The additional height allows the applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

Mr. Brian Kluess
Page 4

This response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

Encl.

cc: Department of Planning and Permitting
PACREP LLC

1
Kusao & Kurahashi Inc.
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AUG 18, 2012

Aloha,

After reading the Draft Environmental Assessment (DEA) for 2121 Kuhio Tower, I'm writing as a Waikiki resident concerned about the design plans of the proposed project. I greatly respect this process of review, and humbly ask for your honest consideration of the points I'd like to convey, which I offer from my heart and conscience.

In no way am I opposed to development on that lot, but rather what seems like less-than-conscientious design plans which will have a significant impact on the community. Do the Waikiki Special District Design Guidelines actually carry weight? If they do, please consider these issues that I think make obvious the reason that this plan as presented is not acceptable for our community. It also makes the previous plan for this lot shine by comparison, in terms of it's sensitivity to the aesthetics prescribed in the Waikiki Special District Design Guidelines.

1.) CLEAR MAUKA-MAKAI VIOLATION: On pg.8 in the publicly available and downloadable PDF of the Waikiki Special District Design Guidelines, it states that "the long axis of all new high-rise structures should be oriented in a mauka-makai direction to minimize obstruction of mauka views and maximize natural ventilation. For similar reasons, building forms which produce narrow towers are preferred." Without question, this is the key issue to how this design will negatively impact the surrounding community in a variety of ways if allowed to proceed without modification. This building is the opposite of a mauka-makai direction. It immediately smacks of a shared resource grab and appears to disregard a sense of place altogether.

2.) KUHIO AVE. EYESORE: This design plan will create an eyesore on one of Waikiki's main drags, Kuhio Avenue, by inserting a 350' high, city block-long slab of concrete, with all the units loaded toward the ocean, and a giant concrete wall facing Kuhio Avenue. Since much of the reasoning behind the Waikiki Special District Design Guidelines is "aimed at restoring the basic appeal of a *pedestrian-friendly* environment" as the document states on pg. 4, it seems odd that so little thought about the impact to Kuhio Avenue appears to be considered. Putting some landscaping around it's base hardly disguises what these developers are after with this sort of design, which is be the *sole-benefiting* entity in this project, grabbing every inch of available ocean view to market to out of state investors. It will bring little to no enhancement of pedestrian or public environment. The developers and purchasers of these non-apartment, almost sub-grade hotel rooms are the only winners, while Kuhio Avenue is stuck with a wall of concrete. Meanwhile this towering city block-size chunk of concrete juts up as a blight on the walkway along the avenue, an impenetrable light hog creating immense shadow and restricted airflow, serving only the needs of itself.

3.) ALMOST ZERO PEDESTRIAN-LEVEL CONTRIBUTION: "People-friendly activities such as lei-selling, vending carts and outdoor dining" are encouraged, reads the Waikiki Special District Design Guidelines on pg. 4; the building will put a few trees and bushes on a lawn along Kuhio Avenue without any of those three features: no lei-making, no vendor carts and no outdoor street dining. Instead of double-loading the building to create community with units facing various directions, at the expense of a sense of Hawaiian place, they would like to park this wall of concrete facing the ocean with it's featureless back to the bustling neighborhood behind it. It is very disrespectful. This adds absolutely zero to the community, with a paltry sundry/retail shop (alternately defined as a coffee shop at times) and single restaurant being the meager contributions. Also alternately referenced as either being on the first floor or sixth floor is the single planned restaurant. For a construction project of this size, one restaurant

and a sundry shop is a questionable and weak contribution to the sense of retail a community needs out of a Kuhio Avenue enterprise. As the DEA states on pg. 33 "the project will provide dining and retail for Waikiki residents... and provide much needed landscape relief and public open space for this part of Waikiki". Can you possibly think a single restaurant and sundry store adds real dining or retail value to the community, or that this design as a front-loaded block of concrete will "provide much-needed landscape relief and public open space"? The DEA also refers to the Kuhio Street side as the "front" of the building, which is laughable.

4.) THE WALL VS. GRADUATED, STEPPED FORMS: Of further note relating to the eyesore nature of the design, on pg.8 of the Waikiki Special District Design Guidelines it mentions that "buildings with a series of graduated, stepped forms are preferred for new projects" in the area. The proposed single-sided block design flies in the face of this critical design guideline about varying heights, which the previous plan addressed to some degree. By issuing a FONSI - Finding Of No Significant Impact - you're suggesting there are no real consequences on the community of a design which is basically an uninterrupted square 350' high concrete wall. That merits a red flag to me. This is not creating a Hawaiian sense of place. The previous design plans were appropriate to consider for a FONSI, as the design was vastly less greedy with what I would call community resources - the light, air public view planes from the street that a graduated, varying height design respects. The previous plan allowed for an orientation that would help Kuhio Avenue maintain it's feeling of light, air, and ability for many participants in a crowded neighborhood to share resources. Again, it is the design and plans, not the idea of using the vacant weed-filled lot, that is an issue. A site with varying heights would be, as the Waikiki Special District Design Guidelines point out, "recommended along view corridors to preserve and enhance mauka/makai views and to create a pedestrian scale along the street." That is not happening with this project. On pg. 10 the District guidelines goes on to additionally note for a second time "all projects should develop a human scale at ground level" and that "a mixture of various building heights, as well as elements used to obtain building articulation, are preferred."

5.) SEE-THROUGH VIEWS: The Waikiki Special District Design Guidelines mentions on pg.12 that designs should allow see-through views for critical things like ocean or mountains, when available. Instead of preserving a key mauka view from Ft. DeRussy Park and makai views from Launiu Street and beyond, Launiu Street will now run directly into a concrete wall, like the portion of the Sheraton Waikiki in between the towers, but a block long and 350' high. What will the impact on Launiu Street be, of turning it into a corridor that ends with that obstruction? That's another point. But on the issue of both this property and it's mauka and makai views, on pg. 13, the District guidelines states that when "a building is located between a public space and shoreline, mountain view, open space or landmark, ground level spaces such as entryways, lobbies and arcades should be designed to provide visual links through the building to these amenities" - it's hard to imagine the prime mauka view they have down Launiu will not be taken advantage of in this design.

6.) HIDING THE WALL: On pg. 21, the Waikiki Special District Design Guidelines states "extensive landscaping... must be provided to screen blank walls and parking areas from public views" - but, can you really screen off a 350' blank wall? With much respect, I ask for your kokua on this one: a Hawaiian sense of place on Kuhio Avenue, a "Major Street" as we'll discuss later, via a building's featureless concrete wall backside? Do a handful of trees and shrubs hide the 350' wall's defilement of the promenade? I'm sorry, but a few trees and bushes with a laughable "water feature" do not make up for turning a sunny, breezy stretch of this "Major Street" into a much darker, danker place. The DEA even notes the air quality issues associated with this design, which we'll discuss next.

7.) AIR QUALITY: I have grave concerns about your giving this project design a green light when it states on pg. 416 in the DEA "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." This very clearly states that beyond the scope of construction, there is the potential for a long-term impact on air quality, which is obvious from the design. It's not only an eyesore and a blatant violation of the principles of the Waikiki Special District Design Guidelines, but it is also potentially unhealthy for the community air quality. The previous design proposed for this property would have made much less of an impact on the community in terms of air flow, as a tall, narrow structure, even to the layman, clearly promotes airflow better than the selfish design being proposed for 2121 Kuhio. That is a considerable cost for the community, in order to benefit very few. They can easily do a different design. Let them go higher, and force it to be narrower with stacks on both sides. Share the air through the obvious: not having a wall cut off circulation. Our pristine air is one of the treasured resources that helps make Honolulu among the most livable cities. I understand it's easy to have overlooked some of these things, so I urge you to consider that and how such a structure will both impact the air, and send a negative impression home in visitors' minds who are here to escape the gloomy feeling of a concrete jungle.

8.) DISREGARD FOR THE PARK: On pg. 28 of the District guidelines, Ft. DeRussy is named as a place that's "park-like setting should be enhanced and complimented." It's hard to imagine how this towering rectangle of concrete will compliment the park, when it creates a shadow over the northern edges of it in the morning, and cuts off the Kuhio Avenue portion of the neighborhood. The previous design would have allowed a *great deal of view-through, and not appear as a massive square of concrete* abutting the park area so closely, boxing in the 442 war monument area, and taking away mauka views from the park.

9.) MAJOR STREETS: In the same section of the District guidelines referenced above on pg. 28, when discussing "Major Streets", those streets included are Kalakaua, Kuhio, and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards - they are classed as "view corridors, open spaces, and public access." This section ends with a stinging statement: "development within and adjacent to these rights-of-way should provide a high degree of compliance with the District guidelines to realize objectives relative to the streetscape." All three design criteria will be ignored: a wall-like structure of this height and a city block in length will block views of both mauka and makai directions on a view corridor, be the antithesis of the concept of open spaces, and in so many ways appear to have little to do with public access. What the design does suggest is a total disregard for the compliance of the mauka-makai design concept previously laid out in the District guidelines and discussed earlier. This design of front-loading the property to squeeze out every inch of their potential ocean view at the expense of the community does not provide a high degree of compliance with District guidelines. As the quotes from the document itself clearly state, projects on these so-called "Major Streets" should be more compliant than most, not riddled with serious aberrations from the District vision.

8.) COMMUNITY VALUE: The condotel classification is very confusing and I fail to see how this construction provides either a real hotel experience or a condominium experience, when it comes to community value. There is not a parking space for each unit; therefore, the potential interest of anyone being a resident is low to none. An example of how little actual residential potential this building has comes from their DEA which points out there are only five actual residents in the nearby and very similar condotel Trump Waikiki. The District guidelines on pg. 5 of the PDF states among District Objectives that proposed projects should "support the retention of a residential sector" in Waikiki; a building without parking spaces for each unit and individual laundry in the units is not supportive of retaining a residential sector, and certainly adds to the question of what condo benefits this building has outside of it's quasi-hotel qualities. No affordable housing units are being allocated. Yet, on the other end of the stick, we as a community don't get the benefits of a major hotel brand coming to town, so it's not nearly as viable as a true hotel would be, and not viable toward the stated goals in the Waikiki Special District Design Guidelines of retaining a residential sector. One or the other would be the obvious choice, not a weak hybrid like this project's current plan.

4.

9.) **BULL IN A CHINA SHOP:** For the DEA to suggest on pg. 22 that "the project will have no impact on the residential population of the area" is a further troubling statement. Across the street and dealing with the full brunt of this project will be residences stretching a block down to the Ala Wai along Launiu Street, and facing the project on Kuhio and even Kalakaua Avenues (where it should be noted there is a five story structure of residences and wildly popular series of blocks filled with shops and places to stroll whose mauka views will be wiped out or seriously altered). Every building from Ala Wai Boulevard south toward Kuhio will now face a wall of concrete, with landscaping at it's base. Launiu Street - the entire street - will have a previously valued open space running mauka-to-makai cut-off. The building will create a mysterious wall at the end of the block. A featureless slab of concrete, hardly revealing what it is will be beyond just a major impact on the residential population on Launiu Street, inhibiting future development on the street, and affecting property values of the entire block. Also factor in the handful of condominiums on Kuhio Avenue (which are by positive example double-sided, like the Four Paddle, with units facing both mauka and makai), which will now have this continuous wall of concrete interrupting the sense of place in the neighborhood. Every single residence on that street will now face toward a giant uninterrupted concrete wall, while visitors and residents on Kalakaua Avenue have their mauka view disappear. Further, from the area on the other side of the Ala Wai Canal, on the Honolulu side adjacent to Waikiki, each street like Launiu provides a wide open public view plane, a welcome vista toward the ocean, letting light in that creates ambiance throughout the northern side of Waikiki, and beyond, to the University/Mo'ili'ili area. This insensitive construction ignores all of that impact on residents.

10.) **FINAL NOTE - KOKUA:** I understand, as the Waikiki Special District Design Guidelines points out on pg. 36, that when it comes to Planned Development, "flexibility may be provided... if it can be demonstrated that the project will benefit the community", and I applaud that flexibility, and sense of give and take, as it is essential to getting things done in the islands. That is why I have tried to reason with you about these ten areas I feel this construction is a detriment if allowed to proceed without modifications. However, it must occur to you that there is, beyond providing the short-term construction jobs and a handful more positions when completed, little this project does to actually benefit the community, and be worthy of such flexibility when it comes to deviations from the District guidelines. It is a take-away by the project developers and a handful of out-of-state investors who purchase these units to profit at the expense of the community which will receive manini in return. The eyesore it will create on Kuhio Street for generations to come who will have to live with this rude design doesn't seem to benefit the community, which is the justification with being flexible on the guidelines for proposed projects.

In conclusion, 2121 Kuhio Tower does not meet, as presented, many of the benchmarks defining the spirit of cooperation and sharing of our community resources suggested in the Waikiki Special District Design Guidelines. Will this design "contribute to the... overall ambiance and appearance of Waikiki" as the guidelines dictate? Or will it merely line the pockets of people thousands of miles away, while taking another bite out of the neighborhood? Please reason with these developers, and come to a conclusion that does not create a wall in Waikiki, and offer a big zero to the community.

Feel free to contact me if I can be of service. I felt compelled to reach out to you with my comments and hope that they truly are considered.

With much respect,

DZ

pp. Dave Lawrence
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808-225-6325

cc OFFICE OF ENVIRONMENTAL QUALITY CONTROL,

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September 11, 2012

Mr. Dave Lawrence
2140 Kuhio Avenue, #1102
Honolulu, Hawaii 96815

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Mr. Lawrence:

Thank you for your letter of August 18, 2012 regarding the Draft Environmental Assessment (“DEA”) for the 2121 Kuhio Avenue Project (“Project”).

We appreciate your comments and offer the following responses:

This request will require a Waikiki Special District (WSD) Permit subject to review and approval by the Department of Planning and Permitting (DPP). DPP will consider the proposed design of the structure and the potential impact to public views, public open space, and other criteria in determining the appropriate orientation for the building and other design elements. Just for clarification, it appears that your page numbering for the Waikiki Special District Design (WSDD) Guidelines added four pages, including four pages (title, images, Index, and Introduction) to the document, which started with page 1 – District Objectives. As an example, your reference to page 8 in item 1 actually occurs on page 4, District Guidelines page.

1. **CLEAR MAUKA-MAKAI VIOLATION**

The proposed building orientation and design was developed to implement Waikiki Special Design District (WSDD) Guidelines.

The WSDD Guidelines section that includes “Orientation and Form” and establishes the guideline for the mauka/makai orientation is 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 following 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” 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.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalakaua Avenue and from Kuhio Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian accessways into and through Waikiki. This ewa/diamond head orientation is also sensitive to protection of public views from the Gateway to Waikiki located at Kalakaua Avenue and Ala Moana Boulevard and from the open space at Fort DeRussy. A volume study (Appendix VI Building Orientation – Photographic Analysis in the Final EA) on photographs of views from these locations have been prepared comparing the impacts from two building designs (enclosed), one with a mauka/makai building orientation and one with the proposed ewa/diamond head building orientation. The ewa/diamond head building orientation has significantly less visual impact along these important public view corridors except for one view at the corner of Kalakaua Avenue and Kalaimoku Street. The structure has a narrower face with the ewa/diamond head orientation than with a mauka/makai orientation in all but one of the viewpoints along Kalakaua Avenue and Kuhio Avenue. The view from the Gateway to Waikiki at Kalakaua Avenue and Ala Moana Boulevard is also less impacted with the ewa/diamond head building orientation.

A view from the open space at Fort DeRussy shows that the visual impact with either orientation is about the same.

At the request of the Department of Planning and Permitting (DPP) the Building Orientation – Photographic Analysis also shows views from Kalaimoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as significant public views **mauka views** at certain other streets located mauka of Kuhio Avenue.

The ewa/diamond head orientation has also allowed us to provide the widest possible uninterrupted public open space along Kuhio Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kuhio Avenue as possible and would have been significantly wider to accommodate a similar amount of floor area and not located above and within the proposed parking podium.

The concept of “building forms which produce narrow towers are preferred” is supported by the Project as well. The additional height allows the Applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

2. KUHIO AVE. EYESORE

We respectfully disagree with your view of the proposed tower. At the pedestrian level, traveling along Kuhio Avenue, the wide setback of about 51 feet, where only 20 feet is required for the yard area will provide an inviting public open space with seat walls around a water feature and around other landscape elements. This will provide a gathering place for resting and enjoying the tropical setting as well as an informal outdoor dining element for residents and visitors.

As mentioned in the previous section the ewa/diamond head orientation of the tower is in keeping with the Waikiki Special District Guidelines and better implements the protection of public views and important view corridors.

The proposed condo hotel units will not be sub-grade hotel rooms but will be developed as high quality units similar to the units at the Trump International Hotel and Tower Waikiki Beach Walk.

A shadow study (enclosed) is included in the Final EA and the narrative for that shadow study is provided below:

“Based on our shadow study, the Project with an ewa/diamond head orientation will shade the pool and deck area of the Four Paddle from about 2:00 pm on during the Equinox and partially shade the deck area from 2:00 pm to 3:00 pm and begin to shade the pool area from 3:00 pm on during the Winter Solstice. The Four Paddle pool and deck area will not be affected during the Summer Solstice.

This ewa/diamond head orientation affects the block between Kalaimoku Street and Launiu Street during the Winter Solstice, casting a shadow from 12:00 pm to after 3:00 pm. This block is not affected during the Equinox and the Summer Solstice.

The Project with an ewa/diamond head orientation will cast a shadow over a small portion of the northern corner of Ft. DeRussy from before 8:00 am to 9:00 am. These early morning shadows should have minimal impact on Ft. DeRussy and the growth and development of the trees at Ft. DeRussy.

The mauka/makai orientation has less of an impact on the Four Paddle related to shadows during the Equinox with shadows cast over the half of the pool and deck area from 3:00 pm, covering the entire pool and deck at about 4:00 pm. During the Winter Solstice, this orientation will not affect the pool and deck area.

The mauka/makai orientation does not affect the block between Kalaimoku Street and Launiu Street during the Summer Solstice and the Equinox. During the Winter Solstice, shadows affect portions of this block from 12:00 pm until 3:00 pm.

The mauka/makai orientation, similar to the ewa/diamond head orientation will cast a shadow over a small portion of the northern corner of Ft. DeRussy from before 8:00 am to 9:00 am. These early morning shadows should have minimal impact on Ft. DeRussy and the growth and development of the trees at Ft. DeRussy.”

Trade winds occur 70% of the time in Waikiki and blow from the northeast to the southwest. During these periods, impacts to surrounding properties will be minimal. The existing Luxury Row at 2100 Kalakaua already impacts the pedestrian level on Kalakaua Avenue, and as you approach the Fort DeRussy Park, located about 250 feet away, there are no tower developments that would be impacted by the Project Tower.

3. ALMOST ZERO PEDESTRIAN LEVEL CONTRIBUTION

As mentioned in the previous section, at the pedestrian level, traveling along Kuhio Avenue, the wide setback of about 51 feet, where only 20 feet is required for the yard area will provide an inviting public open space with seat walls around a water feature and around other landscape elements. This will provide a gathering place for resting and

enjoying the tropical setting as well as an informal outdoor dining element for residents and visitors.

The plan for surrounding properties will serve the needs of the community in relation to commercial use. The neighboring vacant parcel is proposed for a future Food Pantry (grocery store) development, since the length of their lease at their present site at Kuhio Avenue and Walina Street is controlled by the fee owner of the property. Their purchase of this property was done in anticipation of eventually losing the lease at their existing store site.

About a block away from the Four Paddle at Lewers Street there is an ABC store and from that block on, there are retail and dining facilities provided along Kuhio Avenue. In the other direction, a block away from the Project Site, are restaurants and further away retail.

The property across the street, the former Nike Town development had included retail and dining facilities, but now sits vacant. Kalakaua Avenue, about a block away provides other dining and retail opportunities.

As mentioned in Item 1, the ewa/diamond head orientation of the tower is in keeping with the Waikiki Special District Guidelines and better implements the protection of public views.

4. THE WALL VERSUS GRADUATED STEPPED FORMS

The project massing is composed of a four story tower podium, including a double height ground floor arrival lobby a fifth floor loggia and a 6th floor open-air, sky lobby, all of which support the residential tower above. Physical stepping of the building massing is achieved at the 2nd and 5th floors of the podium, as well as the 6th, 34th and 35th floors of the tower.

The tower itself can be defined by its two unique primary facades: the residential 'makai' side and the street fronting 'mauka' side, along Kuhio Ave. For the 'makai' facade, the notion of "weaving" together the primary horizontal and vertical massing elements becomes the basis of the concept for exterior articulation.

On a macro scale, this is achieved in the 'makai' facade of the tower through the expression of five vertical piers, which define a primary central massing, flanked by two smaller masses. These five piers are then "woven" together with four major horizontal accent bands which define each of the four major residential zones within the vertical mass of the tower. The result is a compositional strategy which helps modulate the scale of the facade and effectively reduces the perceived height and width of the massing through the articulation of multiple smaller elements, both in the vertical and horizontal planes.

On a micro scale, the 'makai' facade - made up entirely of deep set lanais, continues the concept of weaving by articulating the vertical walls between units and the slab edge and lanai railing into a building scale "woven fabric". The depth and distinct woven texture of the facade will enhance the play of light and shadow across its surface. The woven pattern of the facade, evocative of traditional Hawaiian tapa patterns, becomes a major motif expressed in other scales and materials across the project's exterior.

Composition of the 'mauka' facade follows the massing patterns established on the 'makai' facade. The mass is broken into a series of strong vertical elements, bound together by horizontal accents at key compositional datum which furthers the notion of a "stepped" facade and helps diminish the perceived width of the facade. The material palette is comprised of painted stucco over concrete, with projecting slab edges, at the residential ends of the facade. Each of these flanking elements incorporates an adjacent exterior stair core, with a decorative aluminum louvered screened. The center of the composition is demarked by a strong central circulation core, similarly clad in the aluminum louvered screen, although one of a more intricate nature - incorporating the "basket weave" motif expressed in the 'makai' facade. The interstitial vertical surfaces are glazed circulation corridors of a non-reflective type glass, with vertical accent louvers at selected mullions, arranged in an abstracted grid pattern. The resulting composition breaks the overall massing into five distinct vertical elements. While lacking the depth of the 'makai' facade, the 'mauka' facade will offer a distinct range of material palette, texture and patterning and establishes formal and compositional elements which will be carried into the design for the podium.

The podium planning and design extends the scale and articulation of the adjacent 2100 Kalakaua 'Luxury Row' retail facility. Similar to the individual "storefront" expression of 'Luxury Row', the planning of the podium breaks the mass into five primary volumes - or 'storefronts' - along Kuhio Ave. These volumes are intentionally misaligned with each other to reinforce their individuality, however are coordinated with the five primary volumes of the 'mauka' tower facade above. The result is a massing which effectively reduces the scale of its long Kuhio facade to the "storefront" scale which characterizes 'Luxury Row', while establishing a formal integration of the tower geometry with its supporting podium.

The material palette for the podium and tower draw from the diverse palette of materials utilized in the storefronts of 'Luxury Row', those being: limestone cladding, painted stucco, decorative ironwork/grillage, puka lava tile, timber, steel and glass. For the tower podium, materials are applied to the massing to further the notion of multiple smaller scaled, distinct elements, however also to emphasize the podium's relationship with the tower mass above.

To this end, at grade the five volumes of the podium are clad in alternating limestone, stucco or lava tile, each uniquely rendered as a way of maintaining the desired scale and pedestrian experience. The three parking levels above are clad in continuous "ribbon" of the decorative aluminum louvered screen. The screen framing module and "basket

weave" expression is consistent throughout, creating a continuous unifying element which strongly interlocks the tower with the podium. The screen frame is then in-filled with two unique patterns: one a decorative louver screen, similar to the tower screens at the exterior stair and the other one a 3" mesh to support a planted wall. The result is a highly textured surface, articulated in two primary materials: decorative metal and green planting. The "woven" expression of the surface, inspired by the texture of the "makai" facade, similarly becomes a focal design feature, with immediate references to traditional Hawaiian weaving.

In addition to the primary exterior elements, the podium design utilizes a range of secondary design elements, to further modulate scale and enhance function. These include: continuous stucco faced planters on the second floor at the base of the exterior planted screens; a fifth floor loggia with deep set windows and perimeter planters; a planted entry canopy/trellis at the breezeway, framing the Kuhio lobby entrance; a continuous wood trellis and perimeter shutters at the open-air 6th floor lobby; a continuous perimeter planter at the 6th floor; a decorative cast concrete frieze at the 7th floor railing, demarking the transition of the podium to tower; and a painted steel trellis as the crowning element to both the 'mauka' and 'makai' facades.

In total, the design concepts and material articulation proposed for the project meet the goals of the Waikiki Special District design guidelines by providing an appealing interactive pedestrian environment, with lush landscaping and a building design which utilizes extensive open-air lobby area and a palette of natural building materials, articulated in a manner sensitive to supporting a successful pedestrian scale at grade and to pronouncing the play of light and shadow across it's mass, as the building reacts to its tropical environment.

The Project will significantly enhance the "Hawaiian Sense of Place" of the area. New enhanced landscaping will look to incorporate both native plant species and introduced tropical plants brought to Hawaii including retention of the great Banyan tree at the corner of Kuhio Avenue and Kalaimoku Street.

In addition, the Project will improve the experience of its guests, visitors, and surrounding neighbors, by providing a front plaza larger than most other plazas along Kuhio Avenue. This plaza will be part of the significant public open space provided on the property.

The Project will provide a 51-foot setback (to meet height setback requirements), much greater than required 20-foot yard, along Kuhio Avenue. The proposed landscaping along the street frontages will add to the tropical ambiance of the Project. This wide public open space will also improve the views of pedestrians and vehicles traveling along Kuhio Avenue, recognized as a major vehicular and pedestrian accessway and view corridor into in Waikiki in the WSD Guidelines.

Decorative and varied materials, patterns and landscaping will be integrated into the Project to enhance the streetscape and create a tropical Hawaiian sense of place.

The Applicant's design includes significant amounts of articulation which will provide rich visual textures by contrasting light and shadows on surfaces of the buildings to further the Hawaiian sense of place.

The concept of human scale at the ground level will be enhanced by the wide and large public open space at the ground level of this Project.

5. SEE THROUGH VIEWS

The section of the WSSD Guidelines that you mention is found in Ground Level features (page 8) and states that "Some of these elements are: openings through buildings, such as entrances or lobbies because they provide views to the ocean or mountains...". The Project Site does not have ocean views at the ground/lobby level. However there are mountain views looking through the lobby area which support this guideline.

Ocean views from Kuhio Avenue are not considered significant public views, because there are no views of the ocean from this or other areas of Kuhio Avenue.

Mauka views from the following streets mauka of Kuhio Avenue are considered significant public views: Nohonani and Nahua Streets; Kanekapolei and Kaiolu Streets; Lewers and Walina Streets; and Seaside Avenue and the Ala Wai Promenade. Although not mentioned mauka views along Launiu Street and Kalaimoku Street will not be affected.

The guideline you mention in the last sentence of item 5 is related to buildings that are located between a public space and the shoreline, mountain view, open space or landmark, which is not the case with this Project, which does not separate the Kuhio Avenue sidewalk area from any of these features. The Applicant will consider aligning the open lobby with Launiu Street to provide mauka views through the Lobby.

6. HIDING THE WALL

The Applicant will provide screening elements for the parking structure as discussed in the WSSD Guideline on Landscaping. The parking levels and tower level will not be a blank wall but will include screening elements, textures and articulation. The screening of parking areas from public views was intended for open parking lots, as parking structures had other screening concepts.

7. AIR QUALITY

Your quote from the Air Quality Study, “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.”, noted the potential impacts, while the final section of that study “Conclusions and Recommendations” discussed the actual impacts and mitigation measures. These are as follows:

“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.”

The Applicant will follow these recommendations to minimize construction impacts on the neighborhood. As noted, no mitigation requirements will be required for long-term traffic impacts which are expected to be negligible.

8. DISREGARD FOR THE PARK

Based on the shadow study enclosed and provided in the Final EA (enclosed), the Project will cast a shadow over a small portion of the northern corner of the Ft. DeRussy from before 8:00 am to 9:00 am. The shadow should have minimal impact on Ft. Derussy.

9. MAJOR STREETS

Actually, the proposed ewa/diamond head orientation will provide the widest view corridor for vehicle occupants and pedestrians at the street level and will also provide the greatest amount of public open space greatly enhancing open space and public access.

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kuhio Avenue minimizing impact to the view corridor along this major vehicular and pedestrian accessway into and through Waikiki.

The ewa/diamond head orientation has also allowed us to provide the widest possible uninterrupted public open space along Kuhio Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kuhio Avenue as possible and would have been significantly wider to accommodate a similar amount of floor area.

10. COMMUNITY VALUE (Item No. 8 repeated in your letter)

The Project is a condo hotel and is expected to operate as a hotel, the only difference being in ownership. The condo hotel will be owned by individuals, most of whom will place their unit in the hotel pool, some will own the unit as a vacation home and as you mention a few will make the unit a permanent residence. DPP treats these as hotels and requires parking at the hotel rate. The Applicant will provide more than the required parking to cover the few units that may end up as permanent residences.

The WSDD Guideline relating to "support the retention of a residential sector" is not being pursued by this Project. There have been other projects in Waikiki and in recent years, most projects involved residential condominium developments and reduction of the number of hotel units in Waikiki.

The benefits of a major hotel (which supports the greater community) are as follows:

The proposed development at 2121 Kuhio will not curtail the range of beneficial uses of the environment. The property presently sits vacant and does not provide any beneficial use to the owners or the public. The proposed 2121 Kuhio development will provide much need hotel room inventory in Waikiki, with 2,684 hotel units lost or to be lost in Waikiki since 2003.

The Project will, through provision of public open space, provide a tropical landscaped plaza area along Kūhiō Avenue that will provide relief from the built environment.

The Project will also provide an increase in tax revenues for both the City and State.

The Project during its sales phase, selling individual condo hotel units to investors will result in over \$300 million in on-site sales generating about \$2 million in conveyance tax revenues for the State.

The Project upon completion will generate about \$4.5 million per year in annual property tax revenue for the City.

The Project during its first full calendar year and annually thereafter is expected to generate income of \$20 to \$30 million in on-site sales resulting in GET (general excise tax revenue) of \$0.8 to \$1.2 million per year for the State (4%) and between \$100,000 to \$150,000 per year for the City (0.5%). The Project will also generate transient accommodations taxes (9.25%) totaling \$1.9 to \$2.775 million for the State, a portion of which may be shared with the City.

11. BULL IN A CHINA SHOP (Item No. 9 repeated in your letter)

The quote that you cited from the DEA was related to the Demographic impact of the Project and referred to whether the Project would increase or decrease the population of Honolulu.

The views intended to be protected by the WSDD Guidelines are protected by the ewa/diamond head orientation, however, private views that you have mentioned will be affected for the residences you have mentioned. However, for certain other properties the mauka/makai orientation would have a greater impact on their views, properties located ewa and diamond head of the Project Site.

Launiu Street ends on its makai end at Kuhio Avenue. It does not now or for some time in the past had a clear mauka to makai open space. The 2100 Kalakaua project has blocked this open space and prior to that the Waikiki Market Place developed by Magoon Estate. Private views that you have discussed are not protected and are subject to the impact of development on properties surrounding them, nearby or further away.

12. FINAL NOTE - KOKUA

This Project is not being developed as a Planned Development and is not requesting flexibility in development standards as would be allowed. Although not subject to the community benefits of a Planned Development, the Project is providing significant community benefits as noted in item 10 above.

Mr. Dave Lawrence
Page 12

As mentioned throughout this letter and in the DEA, the Project is being developed in compliance with WSDD Guidelines and is sensitive to protecting important public views and important view corridors. It also provide a large and significant, continuous public open space that would not be possible under a mauka/makai orientation.

Your letter and this response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

Encls.

cc: Department of Planning and Permitting
PACREP LLC

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

MANOA MARKET PLACE
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October 26, 2012

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Mr. Dave Lawrence
2140 Kuhio Avenue, #1102
Honolulu, Hawaii 96815

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Mr. Lawrence:

This letter serves as a supplement and update to our previous letter to you regarding the Draft Environmental Assessment (“DEA”) for the 2121 Kuhio Avenue Project (“Project”).

The Pre-Final EA for the project has been revised and the Final EA provides ewa/diamond head oriented building photos that are consistent with the revised plans in regard to both design and building orientation. See enclosed cd, Gateway Views (if you require hard copies of the photos, please call me at 988-2231 or write to me at the above address). The Project design has been revised to reduce the length of the tower of the building by about 48 feet based on concerns presented on the DEA. This reduction in length will reduce the impact of shadows and impacts to ocean views from the Four Paddle. With a 350-foot height limit, many of the Four Paddle units will retain an ocean view. A revised mauka/makai oriented building design has also been provided. The tower design footprint on the site for both the revised ewa/diamond head oriented building and the revised mauka/makai oriented building is provided in the enclosed Gateway Views.

Building Orientation

The proposed building orientation and design was developed to implement Waikiki Special Design District (WSDD) Guidelines.

The WSDD Guidelines section that includes “Orientation and Form” and establishes the guideline for the mauka/makai orientation is 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 following 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” 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.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalākaua Avenue and from Kūhiō Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian access ways into and through Waikīkī.

The proposed ewa/diamond head building orientation is also sensitive to the need to protect public views from the Gateway to Waikīkī located at Kalākaua Avenue and Ala Moana Boulevard. A volume study on photographs of views from these locations have been prepared comparing the visual impact of two building designs, one with a mauka/makai orientation and one with the proposed building design in an ewa/diamond head orientation. See Gateway Views, enclosed cd, included in the Final EA as Appendix VI, Building Orientation – Photographic Analysis.

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalākaua Avenue and from Kūhiō Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian access ways into and through Waikīkī. This ewa/diamond head orientation is also sensitive to protection of public views from the Gateway to Waikiki located at Kalākaua Avenue and Ala Moana Boulevard. A volume study (enclosed cd,

Gateway Views) on photographs of views from these locations has been prepared comparing the impacts from two building designs (enclosed), one with a mauka/makai building orientation and one with the proposed ewa/diamond head building orientation. The ewa/diamond head building orientation has significantly less visual impact along these important public view corridors except for one view at the corner of Kalākaua Avenue and Kālainmoku Street and two views looking ewa along Kūhiō Avenue. The structure has a narrower face with the ewa/diamond head orientation than with a mauka/makai orientation in all but three of the viewpoints along Kalākaua Avenue and Kūhiō Avenue. The view from the Gateway to Waikiki at Kalākaua Avenue and Ala Moana Boulevard is also less impacted with the ewa/diamond head building orientation.

The viewpoint at the open space at Fort DeRussy shows that the visual impact is greater with the ewa/diamond head orientation.

At the request of DPP the Building Orientation – Photographic Analysis (Appendix VI) also shows views from Kālainmoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two street corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as significant public views the mauka views at certain other streets located mauka of Kūhiō Avenue.

The ewa/diamond head orientation has also allowed us to provide the widest possible uninterrupted public open space along Kūhiō Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kūhiō Avenue as possible and would have been significantly wider to accommodate a similar amount of floor area.

The concept of “building forms which produce narrow towers are preferred” is supported by the Project as well. The additional height allows the applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

Shadow Study

Based on our shadow study (enclosed in cd), the Project with an ewa/diamond head orientation will shade the pool and deck area of the Four Paddle from about 2:00 pm on during the Equinox and will partially shade the Four Paddle barbecue deck area from about 2:00 pm to and fully shade the barbecue deck and pool area by 3:00 pm. and begin to shade the pool area from 3:00 pm on. During the Winter Solstice the Project will partially shade the barbecue deck area from

about 3:00 pm and begin to shade a small portion of the pool area from about 4:00 pm. The Four Paddle pool and deck area will not be affected during the Summer Solstice.

This ewa/diamond head orientation affects the block between Kālainmoku Street and Launiu Street during the Winter Solstice. , casting a shadowThe Project will partially shade this area from 12:00 pm and moves across this area fully shading the Kūhiō frontage at about 1:00 pm and partially shading it at 2:00 pm with less shading at 4:00 pm with the shadow clearing the property just after 4:00 pm to after 3:00 pm. This block is not affected during the Equinox and the Summer Solstice.

The Project with an ewa/diamond head orientation will cast a shadow overshadow a small portion of the northern corner of Ft. DeRussy from before 8:00 am to 9:00 am during the Summer Solstice. These early morning shadows should have minimal impact on Ft. DeRussy and the growth and development of the trees at Ft. DeRussy. Ft. DeRussy is not affected during the Equinox and Winter Solstice.

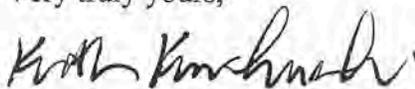
The mauka/makai orientation has less of an impact on the Four Paddle related to shadows during the Equinox with will shade shadows cast over the barbecue deck area from about 2:00 pm and will cover most of the barbecue deck and a small portion of half of the pool and deck area from 3:00 pm, covering most of the barbecue deck and the entire pool and deck area at from about 4:00 pm. During the Winter Solstice the Project will shade a small portion of the barbecue area from 4:00 pm. During the Summer Solstice, this orientation will not affect the pool and deck area.

The mauka/makai orientation does not affect the block between Kālainmoku Street and Launiu Street during the Summer Solstice and the Equinox. During the Winter Solstice, the Project will shade shadows affect portions of this block from 12:00 pm until 3:00 pm.

The mauka/makai orientation during the Summer Solstice, similar to the ewa/diamond head orientation will cast a shadow overshadow a small portion of the northern corner of Ft. DeRussy from before about 8:00 am to 9:00 am. These early morning shadows should have minimal impact on Ft. DeRussy and the growth and development of the trees at Ft. DeRussy. Ft. DeRussy is not affected during the Equinox and Winter Solstice.

This response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

Encl.

cc: Department of Planning and Permitting
PACREP LLC

As a resident of Waikiki for the past twelve years I 'am very concerned with the 2121 Kuhio Tower Project. I attended the Waikiki neighbor board meeting when this Project was presented. What I heard was that we as Resident had so say so and have to live with it. I find it very difficult to understand this after research and further reading information State, city and county Gide lines. I ask that you please read and respond to the items listed below . I have faith that you will do this. Mahalo for your time and attention.

CHARLES G. MARTIN

Charles G. Martin 08/18/2012

2140 KUHIO AVE SUITE 1006

HONOLULU HA 96815

Re: The Environmental Assessment for the 2121 Kuhio Tower Project.

- 1) Apparently no concern has been expressed in the DEA regarding the wide orientation of this project and how it largely and **drastically affects thousands of existing home owners and property values mauka side of this project** by blocking such a wide view plane of the ocean. May I ask why this seems of no concern in the report?
- 2) In addition to the above, shouldn't the report provide an analysis of the effect of how the wide blockage of view plane **affects future redevelopment opportunities for the mauka side properties** since it will completely bock ocean views down both sides of Launiu Street. Is it not important to consider that this area needs redevelopment, and how this wide, parallel to the ocean structure diminishes the incentive along Launiu St for future redevelopment?
- 3) Everyone knows that **building walls parallel to the ocean is contrary to everyone's concern for community sensible planning**. It is not only smart planning but common sense to prevent development of wide, superblock structures that diminish the values of so many other properties. Why is there apparently no concern or mention in the DEA about the sought after **mauka / makai rules** that so many residents in Honolulu agree with?
- 4) Why are there **no mention of the drastic change in the skyline and openness of this area from all directions**? This is an enormous wall that will stick up high from the makai and mauka sides blocking the sky, sunlight and openness like no other building that stands so close to and between Kalakaua and Kuhio. It clearly poses a drastic affect on the "openness" and "Hawaiiana" of the area. Shouldn't the DEA report disclose more about the size of this wall, it's orientation, close proximity to Kalakau and Kuhio streets, Fort DeRussy Park, the parades, etc. and how it will drastically obstruct the openness, shadows and visibility of the sky from the streets below due to its orientation?
- 5) Has anyone in the DPP **requested an alternative plan with a perpendicular orientation? We know this is possible, since** the previous developers had presented plans for a **much less obstructive structure** with more depth to the landscape and openness to the sky, and which was approved by the community. So we know there is definitely an alternate plan possible for this project. It may mean slightly fewer rooms, or fewer profits, but the positive effect on the area of an alternate and more community sensible plan has absolutely no chance of being considered with this project, when the developers are not required to present one. This tower will have the best views in this entire area of Waikiki with green park land in front and blue ocean beyond. It's very hard for anyone to believe that there is no other viable alternative for a change in building orientation with such a prime location and the views to be had. With such a wide building built parallel to the ocean, doesn't this warrant presenting an alternate plan to the community? Most likely, the community and other approval organizations will overwhelmingly approve it, and that's why the developers are avoiding it at all cost.

More Examples to the 2121 Kuhio Tower EA draft report – **which address specific items in the report.**
(Please do not copy and paste, as your answers should be unique).

- 1) V: Social Characteristics: A: Demographic impacts: 1: Residential population:
Shouldn't the DEA report discuss how this project will affect owners who bought in Four Paddle and other mauka-side buildings by reducing their property values and taking away their ocean views. It will (and already has) caused owners to relocate in anticipation of completely lost ocean views and property values due to the wide width and orientation of this tower. And the adverse affect on the pool deck, losing all afternoon sun.
- 2) V: Social Characteristics: A: Demographic impacts: 2: Visitor Population:
Tthis talks about the benefits of replacing lost hotel rooms. But ignores the effect of adding to already low occupancy rates of other hotels, which are struggling to keep occupancy up, by reducing rates. Is there a study by an unaffiliated party that proves more rooms are needed? Adding 459 more rooms is not necessarily good if it lowers the occupancy rates of existing hotels, which are already struggling.
- 3) V: Social Characteristics: B: Housing impacts: 1: Increase Supply:
As it says the project will not add to the supply of housing units in Waikiki. However, Waikiki does in fact need more housing units since the price of condominiums is exorbitantly high in this area. Instead, the project is decreasing the attractiveness and values of already existing housing in Waikiki. **And even more importantly, it will also decrease redevelopment projects for the entire Launiu street, on both sides, mauka of the project.** Why isn't this mentioned as a housing impact, when it clearly is for thousands of residential condos.
- 4) X: Public plans and land use policies: B: General plan: 3: Phisical development and Urban design:
It states that the board of water supply and DPP wastewater branch have indicated that water supply and sewage treatment facilities are adequate to support the project. How can this be, when Kuhio Ave is constantly being torn up to fix the sewer and water systems? Several sewer manholes smell already (ie. Lewers and Ala Wai), and when it rains hard, its much worse. This seems misleading to make this statement when everyone knows the sewer system is at capacity, with ugly backup pipes still above ground, and the Ala Wai spill fresh in everyone's mind. Where can I find a report from the DPP saying the sewer system is adequate to support this project?
- 5) X: Public plans and land use policies: D: Land use ordinance (sec. 21-9.80 waikiki special district): 1. a:
It states that the project will significantly enhance the "Hawaiian sense of place". But it fails to mention that it will block a large length of sunlight and view of the sky from both Kalakaua and Kuhio, due to the parallel orientation of the building. While it may add trees and landscaping near the sidewalk, it will also cause a shadow for almost the entire afternoon that stretches for 1 and ½ blocks for pedestrians and vehicles on Kuhio. It will also cast a large wide shadow for most of the morning over Kalakaua and parts of Fort DeRussy park, while block the view of the sky to pedestrians. Isn't it important to limit the width of a structure so that people walking by can see sunlight and sky, and isn't this equally important for a "Hawaiian sense of place"? There are several areas in this document that talk about the much needed landscape relief and public open space the project provides, but it does not once talk about the amount of sunlight that is blocked and the sky that is hidden from view for 1.5 blocks.
- 6) IV: Economic characteristics: B: Government Revenues/taxes:
How do they calculate \$20 to \$30 million in hotel room sales? Please clarify how they arrive at 20 to 30 million in room sales, since this is the basis for the project's contribution to state and city revenues. If I use conservative estimates of 80% of units in the hotel pool (non owner occupied), and 70% rental occupancy, I calculate they would need to rent each room for an average of \$266/night. Calculated as:
 $(25000000 / (459 * .8)) / (365 * .7) = \266 or \$8000/month.
This seems high for an average room.

- 6) The DEA report includes Traffic analysis entitled "K3 Project". Why is the **traffic analysis referring to a report done six years ago**? It seems that dates may have been changed in various places in this analysis, but the report seems to be titled after the previous developer's project. Is this traffic report current, or is it 6 years old?

KUSAO & KURAHASHI, INC.

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September 11, 2012

Mr. Charles Martin
2140 Kuhio Avenue, #1006
Honolulu, Hawaii 96815

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Mr. Martin:

Thank you for your letter of August 18, 2012 regarding the Draft Environmental Assessment ("DEA") for the 2121 Kuhio Avenue Project ("Project").

We appreciate your comments and offer the following responses:

1. We apologize for any confusion at the Waikiki Neighborhood Board Meeting. The following is an excerpt from the Power Point Presentation that was read by Keith Kurahashi, the planning and zoning consultant for the Project:

"This request will require a Waikiki Special District Permit subject to review and approval by the Department of Planning and Permitting and review and approval by City Council of a request for a 350-foot height limit subject to certain criteria related to views from the Punchbowl Cemetery and the area fronting Fort DeRussy."

We did not intend to give an impression that this was a done deal, as we are well aware that we are in the very early environmental review (environmental assessment) phase, after which there will be a Waikiki Special District Permit review and process with the Department of Planning and Permitting ("DPP") and the review and consideration of a request to the City Council for a 350-foot height limit. Both processes will provide opportunities for public input, in the form of a public hearing with DPP and at least two City Council meetings at which public testimony is accepted.

2. The proposed building orientation and design was developed to implement Waikiki Special Design District (WSDD) Guidelines.

The WSDD Guidelines section that includes "Orientation and Form" and establishes the guideline for the mauka/makai orientation is 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 following 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” 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.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalakaua Avenue and from Kuhio Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian accessways into and through Waikiki. This ewa/diamond head orientation is also sensitive to protection of public views from the Gateway to Waikiki located at Kalakaua Avenue and Ala Moana Boulevard and from the open space at Fort DeRussy. A volume study (Appendix VI Building Orientation – Photographic Analysis in the Final EA) on photographs of views from these locations have been prepared comparing the impacts from two building designs (enclosed), one with a mauka/makai building orientation and one with the proposed ewa/diamond head building orientation. The ewa/diamond head building orientation has significantly less visual impact along these important public view corridors except for one view at the corner of Kalakaua Avenue and Kalaimoku Street.

The structure has a narrower face with the ewa/diamond head orientation than with a mauka/makai orientation in all but one of the viewpoints along Kalakaua Avenue and Kuhio Avenue. The view from the Gateway to Waikiki at Kalakaua Avenue and Ala Moana Boulevard is also less impacted with the ewa/diamond head building orientation.

A view from the open space at Fort DeRussy shows that the visual impact with either orientation is about the same.

At the request of the Department of Planning and Permitting (DPP) the Building Orientation – Photographic Analysis also shows views from Kalaimoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as significant public views **mauka views** at certain other streets located mauka of Kuhio Avenue.

The ewa/diamond head orientation has also allowed us to provide the widest possible uninterrupted public open space along Kuhio Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kuhio Avenue as possible and would have been significantly wider to accommodate a similar amount of floor area and not located above and within the proposed parking podium.

The concept of “building forms which produce narrow towers are preferred” is supported by the Project as well. The additional height allows the applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

2. In Honolulu, public views are sometimes protected but private views are not. Every property owner has certain property rights to develop their property, in accordance with the City’s Land Use Ordinance. In many instances development of neighboring properties will impact the view of others.
3. As mentioned in item 2, the ewa/diamond head orientation better serves public views and WSDD Guidelines related to the view corridor along Kuhio Avenue and Kalakaua Avenue.
4. Although the proposed ewa/diamond head orientation will block private ocean views of residential towers located mauka of Kuhio Avenue, the protected public view cited in the

WSDD Guidelines are looking mauka on Kuhio Avenue along certain streets. A mauka/makai orientation although improving private ocean views of certain condominium towers, it would affect the views toward Diamond Head and in the ewa direction for certain other towers. Towers diamond head or ewa of the Project will be faced with a wider face whereas the ewa/diamond head orientation provides a much narrower face to the building.

5. DPP has asked for further justification of the ewa/diamond head orientation and a view analysis and comparison of the two orientations from several other streets in the Final EA. This view analysis and comparison will be provided in the Final EA.

Although the earlier proposal received support from the Waikiki Neighborhood Board the surrounding condominiums continued to oppose the project, including the Four Paddle.

As mentioned in item 2 above, the proposed ewa/diamond head orientation protects important public views and the view corridor of Kuhio Avenue and provides significant uninterrupted public open space that could not be provided with a mauka/makai orientation.

SPECIFIC ITEMS IN DRAFT EA

1. Section V: Social Characteristics: A: Demographic impacts: 1: Residential population:

The demographic impact of the Project in this section related to whether the Project would increase or decrease the population of Honolulu.

A shadow study (enclosed) is included in the Final EA and the narrative for that shadow study is provided below:

“Based on our shadow study, the Project with an ewa/diamond head orientation will shade the pool and deck area of the Four Paddle from about 2:00 pm on during the Equinox and partially shade the deck area from 2:00 pm to 3:00 pm and begin to shade the pool area from 3:00 pm on during the Winter Solstice. The Four Paddle pool and deck area will not be affected during the Summer Solstice.

This ewa/diamond head orientation affects the block between Kalaimoku Street and Launiu Street during the Winter Solstice, casting a shadow from 12:00 pm to after 3:00 pm. This block is not affected during the Equinox and the Summer Solstice.

The Project with an ewa/diamond head orientation will cast a shadow over a small portion of the northern corner of Ft. DeRussy from before 8:00 am to 9:00 am. These early morning shadows should have minimal impact on Ft. DeRussy and the growth and development of the trees at Ft. DeRussy.

The mauka/makai orientation has less of an impact on the Four Paddle related to shadows during the Equinox with shadows cast over the half of the pool and deck area from 3:00 pm, covering the entire pool and deck at about 4:00 pm. During the Winter Solstice, this orientation will not affect the pool and deck area.

The mauka/makai orientation does not affect the block between Kalaimoku Street and Launiu Street during the Summer Solstice and the Equinox. During the Winter Solstice, shadows affect portions of this block from 12:00 pm until 3:00 pm.

The mauka/makai orientation, similar to the ewa/diamond head orientation will cast a shadow over a small portion of the northern corner of Ft. DeRussy from before 8:00 am to 9:00 am. These early morning shadows should have minimal impact on Ft. DeRussy and the growth and development of the trees at Ft. DeRussy.”

2. Section V: Social Characteristics: A: Demographic impacts: 2: Visitor population:

Hawaii News Now, online, posted on July 6, 2012 that Oahu hotels ran 88.7 percent full last week, compared to 86 percent the week before and 81.6 percent last year, with room rates up almost 12 percent from year-ago levels, partly because of the arrival of guests who are here for the RIMPAC military exercises lasting all this month. Oahu also benefited from new non-stops from New York JFK (Hawaiian Airlines) and Washington Dulles (United Airlines).

The Pacific Business News on August 10, 2012 noted that hotel occupancy on Oahu for the previous week rose 4.5 percentage points from the same week last year to 92.4 percent, while the average daily room rate jumped 15.3 percent to \$201.57.

The Applicant is comfortable with the positive occupancy rates and hopes for further improvement as the national and global economy continues to improve. These occupancy rates, daily room rates and loss of hotel rooms in Waikiki support the proposed increase in hotel units.

3. V: Social Characteristics: B: Housing impacts: 1: Increase Supply:

The DEA focuses on the impacts of this Project on the housing supply and as noted we will not add to that housing supply. The Applicant will do its best to develop a successful Project that considers the well-being of the general public. This Project will provide an improvement through ground-level beautification that will upgrade the lot and encourage other properties nearby to redevelop as well, thereby raising the quality of real estate in the area and increasing property values.

4. X: Public plans and land use policies: B: General plan: 3: Physical development and Urban design:

The Board of Water Supply noted that the existing water system is adequate to accommodate the Project in a letter dated November 16, 2011 (enclosed).

The Department of Planning and Permitting approved a Sewer Connection Application (enclosed), on January 17, 2012, for the 459-unit condo hotel development conditioned upon the connection to the 20-inch sewer line in Kūhiō Avenue at the owner's expense and construction plans being submitted for review and approval. The existing municipal sewer system is adequate to accommodate the Project.

5. X: Public plans and land use policies; D: Land use ordinance; 3: Physical development and Urban design; 1.a

Based on our shadow study, the Project with an ewa/diamond head orientation will shade the pool and deck area of the Four Paddle from about 2:00 pm on during the Equinox and partially shade the deck area from 2:00 pm to 3:00 pm and begin to shade the pool area from 3:00 pm on during the Winter Solstice. The Four Paddle pool and deck area will not be affected during the Summer Solstice.

The Project will significantly enhance the "Hawaiian Sense of Place" of the area. New enhanced landscaping will look to incorporate both native plant species and introduced tropical plants brought to Hawaii including retention of the great Banyan tree at the corner of Kūhiō Avenue and Kālainmoku Street.

In addition, the Project will improve the experience of its guests, visitors, and surrounding neighbors, by providing a front plaza larger than most other plazas along Kūhiō Avenue. This plaza will be part of the significant public open space provided on the property.

The Project will provide an average 51-foot setback (to meet height setback requirements), much greater than the required 20-foot yard, on Kūhiō Avenue. The proposed landscaping along the street frontages will add to the tropical ambiance of the Project.

Decorative and varied materials, patterns and landscaping will be integrated into the Project to enhance the streetscape and create a tropical Hawaiian sense of place.

The applicant's design includes significant amounts of articulation which will provide rich visual textures by contrasting light and shadows on surfaces of the buildings to further the Hawaiian sense of place.

6. IV: Economic characteristics; B: Government Revenues/taxes:

The \$20 to \$30 million in hotel room sales is based on their experience at the Trump International Hotel & Tower® Waikiki Beach Walk®, tempered with the Project's location. The Trump Tower room rate is significantly higher than \$266 per night.

7. The Traffic Study was completed in March of this year, not six years ago. The Traffic Study was based on traffic counts taken at the end of January and beginning of February.

The K3 Waikiki name for the Project was used by the new owner in earlier requests for provision of certain sub-consultant studies and letters to agencies early in the process. Since that time the Project name has been changed to 2121 Kuhio.

Mr. Charles Martin
Page 7

Your letter and this response will be included in the Final EA.

Very truly yours,

A handwritten signature in black ink that reads "Keith Kurahashi". The signature is written in a cursive style with a prominent "K" at the beginning.

Keith Kurahashi

cc: Department of Planning and Permitting
PACREP LLC

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

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October 26, 2012

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Mr. Charles Martin
2140 Kuhio Avenue, #1006
Honolulu, Hawaii 96815

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Mr. Martin:

This letter serves as a supplement and update to our previous letter to you regarding the Draft Environmental Assessment ("DEA") for the 2121 Kuhio Avenue Project ("Project").

The Pre-Final EA for the project has been revised and the Final EA provides ewa/diamond head oriented building photos that are consistent with the revised plans in regard to both design and building orientation. See enclosed cd, Gateway Views (if you require hard copies of the photos, please call me at 988-2231 or write to me at the above address). The Project design has been revised to reduce the length of the tower of the building by about 48 feet based on concerns presented on the DEA. This reduction in length will reduce the impact of shadows and impacts to ocean views from the Four Paddle. With a 350-foot height limit, many of the Four Paddle units will retain an ocean view. A revised mauka/makai oriented building design has also been provided. The tower design footprint on the site for both the revised ewa/diamond head oriented building and the revised mauka/makai oriented building is provided in the enclosed Gateway Views.

Building Orientation

The proposed building orientation and design was developed to implement Waikiki Special Design District (WSDD) Guidelines.

The WSDD Guidelines section that includes "Orientation and Form" and establishes the guideline for the mauka/makai orientation is 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 following 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” 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.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalākaua Avenue and from Kūhiō Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian access ways into and through Waikīkī.

The proposed ewa/diamond head building orientation is also sensitive to the need to protect public views from the Gateway to Waikīkī located at Kalākaua Avenue and Ala Moana Boulevard. A volume study on photographs of views from these locations have been prepared comparing the visual impact of two building designs, one with a mauka/makai orientation and one with the proposed building design in an ewa/diamond head orientation. See Gateway Views, enclosed cd, included in the Final EA as Appendix VI, Building Orientation – Photographic Analysis.

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalākaua Avenue and from Kūhiō Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian access ways into and through Waikīkī. This ewa/diamond head orientation is also sensitive to protection of public views from the Gateway to Waikiki located at Kalākaua Avenue and Ala Moana Boulevard. A volume study (enclosed cd,

Gateway Views) on photographs of views from these locations has been prepared comparing the impacts from two building designs (enclosed), one with a mauka/makai building orientation and one with the proposed ewa/diamond head building orientation. The ewa/diamond head building orientation has significantly less visual impact along these important public view corridors except for one view at the corner of Kalākaua Avenue and Kālaimoku Street and two views looking ewa along Kūhiō Avenue. The structure has a narrower face with the ewa/diamond head orientation than with a mauka/makai orientation in all but three of the viewpoints along Kalākaua Avenue and Kūhiō Avenue. The view from the Gateway to Waikiki at Kalākaua Avenue and Ala Moana Boulevard is also less impacted with the ewa/diamond head building orientation.

The viewpoint at the open space at Fort DeRussy shows that the visual impact is greater with the ewa/diamond head orientation.

At the request of DPP the Building Orientation – Photographic Analysis (Appendix VI) also shows views from Kālaimoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two street corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as significant public views the mauka views at certain other streets located mauka of Kūhiō Avenue.

The ewa/diamond head orientation has also allowed us to provide the widest possible uninterrupted public open space along Kūhiō Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kūhiō Avenue as possible and would have been significantly wider to accommodate a similar amount of floor area.

The concept of “building forms which produce narrow towers are preferred” is supported by the Project as well. The additional height allows the applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

Shadow Study

Based on our shadow study (enclosed in cd), the Project with an ewa/diamond head orientation will shade the pool and deck area of the Four Paddle from about 2:00 pm on during the Equinox and will partially shade the Four Paddle barbecue deck area from about 2:00 pm to and fully shade the barbecue deck and pool area by 3:00 pm. and begin to shade the pool area from 3:00 pm on. During the Winter Solstice the Project will partially shade the barbecue deck area from

about 3:00 pm and begin to shade a small portion of the pool area from about 4:00 pm. The Four Paddle pool and deck area will not be affected during the Summer Solstice.

This ewa/diamond head orientation affects the block between Kālainoku Street and Launiu Street during the Winter Solstice. , casting a shadowThe Project will partially shade this area from 12:00 pm and moves across this area fully shading the Kūhiō frontage at about 1:00 pm and partially shading it at 2:00 pm with less shading at 4:00 pm with the shadow clearing the property just after 4:00 pm to after 3:00 pm. This block is not affected during the Equinox and the Summer Solstice.

The Project with an ewa/diamond head orientation will cast a shadow overshade a small portion of the northern corner of Ft. DeRussy from before 8:00 am to 9:00 am during the Summer Solstice. These early morning shadows should have minimal impact on Ft. DeRussy and the growth and development of the trees at Ft. DeRussy. Ft. DeRussy is not affected during the Equinox and Winter Solstice.

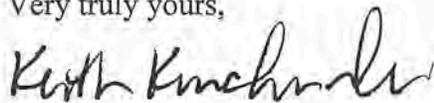
The mauka/makai orientation has less of an impact on the Four Paddle related to shadows during the Equinox with will shadeshadows cast over the barbecue deck area from about 2:00 pm and will cover most of the barbecue deck and a small portion of half of the pool and deck area from 3:00 pm, covering most of the barbecue deck and the entire pool and deck area at from about 4:00 pm. During the Winter Solstice the Project will shade a small portion of the barbecue area from 4:00 pm. During the Summer Solstice, this orientation will not affect the pool and deck area.

The mauka/makai orientation does not affect the block between Kālainoku Street and Launiu Street during the Summer Solstice and the Equinox. During the Winter Solstice, the Project will shade shadows affect portions of this block from 12:00 pm until 3:00 pm.

The mauka/makai orientation during the Summer Solstice, similar to the ewa/diamond head orientation will cast a shadow overshade a small portion of the northern corner of Ft. DeRussy from before about 8:00 am to 9:00 am. These early morning shadows should have minimal impact on Ft. DeRussy and the growth and development of the trees at Ft. DeRussy. Ft. DeRussy is not affected during the Equinox and Winter Solstice.

This response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

Encl.

cc: Department of Planning and Permitting
PACREP LLC

Kusao & Kurahashi Inc
2752 Woodlawn Drive Suite 4-202
Honolulu, HI 96822

August 18, 2012

Dear Sir

RE: Response to 2121 Kohia Avenue
Draft Environment Assessment (July 6, 2012)

This is to inform you that I would like to object to the result of above subject report.

I strongly request that the Office of Environmental Quality Control should ask "third party" to reinvestigate the environment assessment of 2121 Kohia Tower.

Hawaii is rich in natural environment.

Economy is important but "To keep the Nature" is more important.

Nobody want Hawaii likely to be New York, London, Tokyo.

We hope that O.E.Q.C will order the Developer to reconsider their latest Plan.

Mahalo!

Kaichi Yamashita
2140 Kohia Ave. #2208
Honolulu HI 96815

cc: Office of Environment Quality Control - State of Hawaii

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

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September 11, 2012

Mr. Koichi Yamashita
2140 Kuhio Avenue, #2208
Honolulu, Hawaii 96815

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Mr. Yamashita:

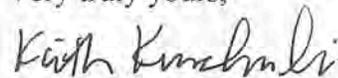
Thank you for your letter of August 18, 2012 regarding the Draft Environmental Assessment ("DEA") for the 2121 Kuhio Avenue Project ("Project").

We appreciate your comments and offer the following responses:

1. The report, Final EA, is an environmental disclosure document that describes the impacts of the Project and the Applicant's proposed mitigation measures.
2. The Department of Planning and Permitting is the "third party" that will review the Final EA and determine whether it has adequately disclosed the projected impacts in determining its disposition.

Your letter and this response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

cc: Department of Planning and Permitting
PACREP LLC

Elizabeth Anderson, LSW
2140 Kuhio Ave. #1511
Honolulu HI 96815
veggiepeace@aol.com
(808) 926-4494

August 19th 2012

Kusao & Kurahashi Inc,
2752 Woodlawn Drive, Suite 5-202
Honolulu HI 96822

RE: The Draft Environmental Assessment for the 2121 Kuhio Tower Project

Aloha Kusao & Kurahashi Inc.,

I am a resident of the Four Paddle Building across the street from the proposed 2121 Kuhio Tower Project. I live on the mountain side of the building, so my personal view will not be affected by the proposed project. My husband is a marble mason, so we support construction projects in Waikiki. My concern with the project is how the proposed Kuhio Tower Project will affect the Waikiki Community at large. The huge wall like structure that parallels the ocean in the current proposal will drastically affect the openness and the community feeling of the area. I support the project, but feel the orientation/design of building should be altered. A taller thinner building (maybe 400 feet high) would be more attractive and enhance the Waikiki skyline vs. damaging it as the currently proposed structure would do. We don't want our tourist first impression to be of a giant wall like structure that will darken the entrance to Waikiki. Poor planning now could affect future development in the area. Please consider changing the orientation/design of the building, so it will impact the community in a positive way.

Mahalo for your consideration.


Elizabeth Anderson, LSW

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-202
HONOLULU, HAWAII 96822

BUS. (808) 988-2231
FAX. (808) 988-1140
E-Mail: kkurahashi@hawaii.mn.com

September 11, 2012

Ms. Elizabeth Anderson, LSW
2140 Kuhio Avenue, #1511
Honolulu, Hawaii 96815

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Ms. Anderson:

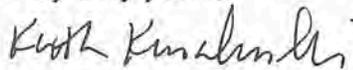
Thank you for your letter of August 19, 2012 regarding the Draft Environmental Assessment ("DEA") for the 2121 Kuhio Avenue Project ("Project").

We appreciate your comments and offer the following responses:

1. The Applicant appreciates your support for a taller building, however, the maximum height limit without a Planned Development Resort permit application or variance application is 350 feet.
2. We agree with the concept that "building forms which produce narrow towers are preferred" is supported by the Project as well. The additional height allows the applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing and proposed developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

Your letter and this response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

cc: Department of Planning and Permitting
PACREP LLC

*Elizabeth Anderson, LSW
2140 Kuhio Ave. #1511
Honolulu HI 96815
veggiepeace@aol.com
(808) 926-4494*

October 8, 2012

Kusao & Kurahashi Inc.
Planning and Zoning Consultants
2752 Woodlawn Drive, Suite 5-202
Honolulu HI 96822

Mr. David K. Tanoue
Director of Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 7th Floor
Honolulu HI 96813

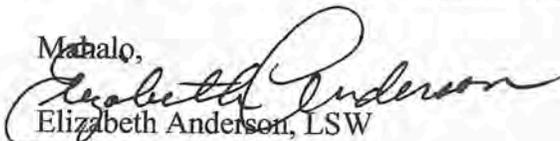
Office of Environmental Quality Control-State of Hawaii
State Office Tower, Room 702
235 South Beretania St.
Honolulu HI 96813

Subject: Draft Environmental Assessment for the 2121 Kuhio Avenue Development

Aloha Keith Kurahashi,

Thank you for your response to my attached letter. Can you please clarify your response? In one section you stated the maximum high can only be 350 feet indicating that that height wouldn't support the taller narrow building. In the next section, you stated that you agree with the concept that "building forms which produce narrow towers are preferred" and supported by the project. You also indicated that because of the additional height up to 350 feet that this allows the applicant to provide a narrower tower. Does that mean you will not support the wall like structure, and only approve the narrow tower? I look forward to your response.

~~Mahealani,~~


Elizabeth Anderson, LSW

Elizabeth Anderson, LSW
2140 Kuhio Ave. #1511
Honolulu HI 96815
veggiepeace@aol.com
(808) 926-4494

August 19th 2012

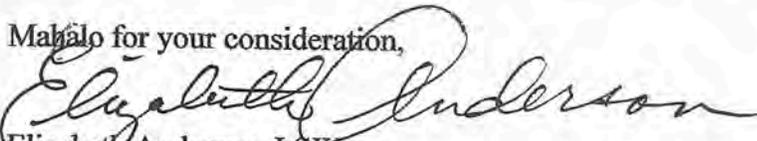
Kusao & Kurahashi Inc.
2752 Woodlawn Drive, Suite 5-202
Honolulu HI 96822

RE: The Draft Environmental Assessment for the 2121 Kuhio Tower Project

Aloha Kusao & Kurahashi Inc.,

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Mahalo for your consideration,


Elizabeth Anderson, LSW

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

MANDA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-202
HONOLULU, HAWAII 96822

BUS. (808) 988-2231
FAX. (808) 988-1140
E-Mail: kkurahashi@hawaii.rr.com

September 11, 2012

Ms. Elizabeth Anderson, LSW
2140 Kuhio Avenue, #1511
Honolulu, Hawaii 96815

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Ms. Anderson:

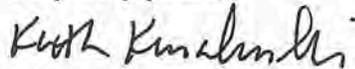
Thank you for your letter of August 19, 2012 regarding the Draft Environmental Assessment ("DEA") for the 2121 Kuhio Avenue Project ("Project").

We appreciate your comments and offer the following responses:

1. The Applicant appreciates your support for a taller building, however, the maximum height limit without a Planned Development Resort permit application or variance application is 350 feet.
2. We agree with the concept that "building forms which produce narrow towers are preferred" is supported by the Project as well. The additional height allows the applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing and proposed developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

Your letter and this response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

cc: Department of Planning and Permitting
PACREP LLC

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-202
HONOLULU, HAWAII 96822
October 26, 2012

BUS. (808) 988-2231
FAX. (808) 988-1140
E-mail: kkurahashi@hawaii.rr.com

Ms. Elizabeth Anderson, LSW
2140 Kuhio Avenue, #1511
Honolulu, Hawaii 96815

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Ms. Anderson:

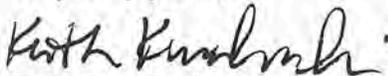
Thank you for your letter of October 8, 2012 regarding the Draft Environmental Assessment ("DEA") for the 2121 Kuhio Avenue Project ("Project").

We appreciate your comments and offer the following responses:

1. The Project design has been revised to reduce the length of the tower of the building by about 48 feet based on concerns presented on the DEA. This reduction in length will reduce the impact of shadows and impacts to ocean views for the Four Paddle. With a 350-foot height limit, many of the Four Paddle units will retain an ocean view. A revised mauka/makai oriented building design has also been provided. The tower design footprint on the site for both the revised ewa/diamond head oriented building and the revised mauka/makai oriented building is provided in the enclosed Gateway Views.
2. The Applicant supports the narrower (reduced length) of the revised tower that we are proposing. This is made possible by the 350-foot height that we will request.

Your letter and this response will be included in the Final EA.

Very truly yours,


Keith Kurahashi

cc: Department of Planning and Permitting
PACREP LLC

Kusao & Kurahashi, Inc.
2752 Woodlawn Dr. #5-202
Honolulu, HI 96822

Aug. 19, 2012

To Whom it may concern,

The environmental assessment does not take into account that the new (2121 Kuhio) building proposed will be an extra large monolith much like the Sheraton Waikiki On The Beach. The Sheraton Hotel building would not be allowed today!

The orientation proposed by the developer must be investigated to the fullest extent, i.e., lateral width (mountain to ocean), ratio of parking stalls to number of rooms, sewer alignment, etc.

Sincerely,



Mike Gorelangton
2140 Kuhio Ave, #2201
Honolulu, HI 96815

Cc: Office of Environmental Quality Control

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-202
HONOLULU, HAWAII 96822

BUS. (808) 988-2231
FAX. (808) 988-1140
E-Mail: kkurahashi@hawaii.rr.com

September 11, 2012

Mr. Mike Gorelangton
2140 Kuhio Avenue, #2201
Honolulu, Hawaii 96815

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Mr. Gorelangton:

Thank you for your letter of August 19, 2012 regarding the Draft Environmental Assessment ("DEA") for the 2121 Kuhio Avenue Project ("Project").

We appreciate your comments and offer the following responses:

1. The proposed building orientation and design was developed to implement Waikiki Special Design District (WSDD) Guidelines.

The WSDD Guidelines section that includes "Orientation and Form" and establishes the guideline for the mauka/makai orientation is 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 following 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" 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.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalakaua Avenue and from Kuhio Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian accessways into and through Waikiki. This ewa/diamond head orientation is also sensitive to protection of public views from the Gateway to Waikiki located at Kalakaua Avenue and Ala Moana Boulevard and from the open space at Fort DeRussy. A volume study (Appendix VI Building Orientation – Photographic Analysis in the Final EA) on photographs of views from these locations have been prepared comparing the impacts from two building designs (enclosed), one with a mauka/makai building orientation and one with the proposed ewa/diamond head building orientation. The ewa/diamond head building orientation has significantly less visual impact along these important public view corridors except for one view at the corner of Kalakaua Avenue and Kalaimoku Street. The structure has a narrower face with the ewa/diamond head orientation than with a mauka/makai orientation in all but one of the viewpoints along Kalakaua Avenue and Kuhio Avenue. The view from the Gateway to Waikiki at Kalakaua Avenue and Ala Moana Boulevard is also less impacted with the ewa/diamond head building orientation.

A view from the open space at Fort DeRussy shows that the visual impact with either orientation is about the same.

At the request of the Department of Planning and Permitting (DPP) the Building Orientation – Photographic Analysis also shows views from Kalaimoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as

significant public views **mauka views** at certain other streets located mauka of Kuhio Avenue.

The ewa/diamond head orientation has also allowed us to provide the widest possible uninterrupted public open space along Kuhio Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kuhio Avenue as possible and would have been significantly wider to accommodate a similar amount of floor area and not located above and within the proposed parking podium.

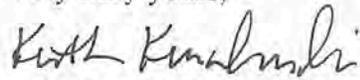
The concept of “building forms which produce narrow towers are preferred” is supported by the Project as well. The additional height allows the applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

2. The parking requirement for the Project, based on 459 hotel rooms (no "lock-out" units planned) and accessory uses at one stall per four units is 115 parking stalls plus 45 parking stalls provided to meet the current parking requirements for 2100 Kalakaua, for a total of 160 required parking stalls. The applicant will be providing 187 parking stalls, 27 more stalls than required.
3. The Department of Planning and Permitting approved a Sewer Connection Application, on January 17, 2012, for the 459-unit condo hotel development conditioned upon the connection to the 20-inch sewer line in Kūhiō Avenue at the owner's expense and construction plans being submitted for review and approval. The existing municipal sewer system is adequate to accommodate the Project.
4. In a letter dated November 16, 2011, Board of Water Supply determined that the existing water system is adequate to handle either of two options presented at the time, Option A for 384 hotel condo suites and hotel residences, commercial, restaurant and office space or Option B for 526 hotel condo suites and hotel residences, commercial, restaurant and office space.

Mr. Mike Gorelangton
Page 4

Your letter and this response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

Encls.

cc: Department of Planning and Permitting
PACREP LLC

Mike Gorelangton
2140 Kuhio Ave, #2201
Honolulu, HI 96815

October 14, 2012

Kusao & Kurahashi, Inc.
Planning and Zoning Consultants,
2752 Woodlawn Dr. Suite 5-202,
Honolulu, HI 96822

Mr. David K. Tanoue
Director of Department of Planning and Permitting,
City and County of Honolulu,
650 South King St. 7th Fl.,
Honolulu, HI 96813

Office of Environmental Quality Control – State of Hawaii
State Office Tower, Room 702,
235 South Beretania Street,
Honolulu, HI 96813

Subject: Comments on the Kusao and Kurahashi Letter Received regarding the proposed 2121 Kuhio Project

Dear Mr. Kurahashi,

Thank you for your response to my comments on the Draft Environmental Assessment (DEA).

As a board member at the Four Paddle, I was encouraged to see what appears to be a much narrower building in your photos than the original Site Plan. In reviewing the photos, it is clear that the new narrower design represents around a 70-80 feet setback from the service drive on the Diamond Head side of the project. While I am still strongly in favor of an orientation that is perpendicular to the ocean, I am happy to see your move to a much narrower tower.

Given your response, I will assume that you have reflected this change in the Site Plan in the Final Environmental Assessment submitted to the DPP.

I would be grateful if you could confirm the actual setback of the tower from the service drive (in number of feet), and if possible, could you please send me the revised Site Plan diagram.

Thank you.

Sincerely,



Mike Gorelangton

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-202
HONOLULU, HAWAII 96822

BUS. (808) 988-2231

FAX. (808) 988-1140

E-mail: kkurahashi@hawaii.rr.com

October 26, 2012

Mr. Mike Gorelangton
2140 Kuhio Avenue, #2201
Honolulu, Hawaii 96815

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Mr. Gorelangton:

Thank you for your letter of October 14, 2012 regarding the Draft Environmental Assessment ("DEA") for the 2121 Kuhio Avenue Project ("Project").

We appreciate your comments and offer the following responses:

1. The Pre-Final EA for the project has been revised and the Final EA provides ewa/diamond head oriented building photos that are consistent with the revised plans in regard to both design and building longitude. See enclosed cd, Gateway Views (if you require hard copies of the photos, please call me at 988-2231 or write to me at the above address). The Project design has been revised to reduce the length of the tower of the building by about 48 feet based on concerns presented on the DEA. This reduction in length will reduce the impact of shadows and impacts to ocean views for the Four Paddle. With a 350-foot height limit, many of the Four Paddle units will retain an ocean view. A revised mauka/makai oriented building design has also been provided.
2. The tower design footprint on the site for both the revised ewa/diamond head oriented building and the revised mauka/makai oriented building is provided in the enclosed Gateway Views.
3. The proposed building orientation and design was developed to implement Waikiki Special Design District (WSDD) Guidelines.

The WSDD Guidelines section that includes "Orientation and Form" and establishes the guideline for the mauka/makai orientation is a subsection of "Building Design" which states as follows:

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The proposed ewa/diamond head building orientation is also sensitive to the need to protect public views from the Gateway to Waikīkī located at Kalākaua Avenue and Ala Moana Boulevard. A volume study on photographs of views from these locations have been prepared comparing the visual impact of two building designs, one with a mauka/makai orientation and one with the proposed building design in an ewa/diamond head orientation. See Gateway Views, enclosed cd, included in the Final EA as Appendix VI, Building Orientation – Photographic Analysis.

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalākaua Avenue and from Kūhiō Avenue minimizing impact to the

view corridors along these two major vehicular and pedestrian access ways into and through Waikīkī. This ewa/diamond head orientation is also sensitive to protection of public views from the Gateway to Waikiki located at Kalākaua Avenue and Ala Moana Boulevard. A volume study (enclosed cd, Gateway Views) on photographs of views from these locations has been prepared comparing the impacts from two building designs (enclosed), one with a mauka/makai building orientation and one with the proposed ewa/diamond head building orientation. The ewa/diamond head building orientation has significantly less visual impact along these important public view corridors except for one view at the corner of Kalākaua Avenue and Kālamoku Street and two views looking ewa along Kūhiō Avenue. The structure has a narrower face with the ewa/diamond head orientation than with a mauka/makai orientation in all but three of the viewpoints along Kalākaua Avenue and Kūhiō Avenue. The view from the Gateway to Waikiki at Kalākaua Avenue and Ala Moana Boulevard is also less impacted with the ewa/diamond head building orientation.

The viewpoint at the open space at Fort DeRussy shows that the visual impact is greater with the ewa/diamond head orientation.

At the request of DPP the Building Orientation – Photographic Analysis (Appendix VI) also shows views from Kālamoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two street corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as significant public views the mauka views at certain other streets located mauka of Kūhiō Avenue.

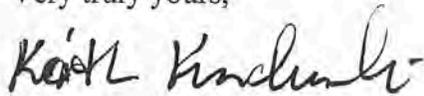
The ewa/diamond head orientation has also allowed us to provide the widest possible uninterrupted public open space along Kūhiō Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kūhiō Avenue as possible and would have been significantly wider to accommodate a similar amount of floor area.

The concept of “building forms which produce narrow towers are preferred” is supported by the Project as well. The additional height allows the applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

Mr. Mike Gorelangton
Page 4

This response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

Encl.

cc: Department of Planning and Permitting
PACREP LLC



Ms Barbara F Hancock
2140 Kuhio Ave Apt 1304
Honolulu, HI 96815-2310

Kusao & Kurahashi Inc.
2752 Woodlawn Drive, Suite 5-202
Honolulu, HI 96822

Dear Sirs:

I am a resident of 4 Paddle Condominium which is located directly across from the proposed 2121 Kuhio Project Tower. What concerns me is that the proposed project will have all their apartments facing the ocean and that a huge wall will be facing Kuhio Avenue. This building, as I understand it, will be approximately 350 feet high and spread out as a very wide area creating a blockage of the sun and sky and casting a very large shadow on nearby buildings. This wall will be about 100 feet away directly across from Four Paddle. It will be right in our face!

It seems to me that this is a violation of our rights by blocking the sky and sunshine to so many buildings just so this proposed project will give that co-hotel a beautiful view of ocean and blue sky but denying others in the area the same.

I realize that the developer has the right to build this project but I don't feel that they have a right to build it in such a way that other buildings in this area of Waikiki will be affected by losing this blue sky and sunlight that they want the Kuhio Project Tower to have. Also, I feel that this proposed wall that will be built on the Kuhio side will not enhance or beautify the area. This huge wall will be an eyesore and I do not believe that this is what we wish in Waikiki.

I hope that the plans for this proposed project would be modified so that it would be built like the Trump Hotel and not spread out that we will not have this wide huge solid wall that will create enormous shade and lack of sunshine.

Thank you for your consideration of this matter.

Sincerely,

Barbara Hancock
Ph: 808-664-4724

8-19-12

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-202
HONOLULU, HAWAII 96822

BUS. (808) 988-2231
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E-Mail: kkurahashi@hawaii,rr.com

September 11, 2012

Ms. Barbara F. Hancock
2140 Kuhio Avenue, #1304
Honolulu, Hawaii 96815-2310

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Ms. Hancock:

Thank you for your letter of August 19, 2012 regarding the Draft Environmental Assessment ("DEA") for the 2121 Kuhio Avenue Project ("Project").

We appreciate your comments and offer the following responses:

1. The proposed building orientation and design was developed to implement Waikiki Special Design District (WSDD) Guidelines.

The WSDD Guidelines section that includes "Orientation and Form" and establishes the guideline for the mauka/makai orientation is 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 following 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" 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.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalakaua Avenue and from Kuhio Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian accessways into and through Waikiki. This ewa/diamond head orientation is also sensitive to protection of public views from the Gateway to Waikiki located at Kalakaua Avenue and Ala Moana Boulevard and from the open space at Fort DeRussy. A volume study (Appendix VI Building Orientation – Photographic Analysis in the Final EA) on photographs of views from these locations have been prepared comparing the impacts from two building designs (enclosed), one with a mauka/makai building orientation and one with the proposed ewa/diamond head building orientation. The ewa/diamond head building orientation has significantly less visual impact along these important public view corridors except for one view at the corner of Kalakaua Avenue and Kalaimoku Street. The structure has a narrower face with the ewa/diamond head orientation than with a mauka/makai orientation in all but one of the viewpoints along Kalakaua Avenue and Kuhio Avenue. The view from the Gateway to Waikiki at Kalakaua Avenue and Ala Moana Boulevard is also less impacted with the ewa/diamond head building orientation.

A view from the open space at Fort DeRussy shows that the visual impact with either orientation is about the same.

At the request of the Department of Planning and Permitting (DPP) the Building Orientation – Photographic Analysis also shows views from Kalaimoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as significant public views **mauka views** at certain other streets located mauka of Kuhio Avenue.

The ewa/diamond head orientation has also allowed us to provide the widest possible uninterrupted public open space along Kuhio Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kuhio Avenue as possible and would have been significantly wider to accommodate a similar amount of floor area and not located above and within the proposed parking podium.

The concept of “building forms which produce narrow towers are preferred” is supported by the Project as well. The additional height allows the applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

2. A shadow study (enclosed) is included in the Final EA and the narrative for that shadow study is provided below:

“Based on our shadow study, the Project with an ewa/diamond head orientation will shade the pool and deck area of the Four Paddle from about 2:00 pm on during the Equinox and partially shade the deck area from 2:00 pm to 3:00 pm and begin to shade the pool area from 3:00 pm on during the Winter Solstice. The Four Paddle pool and deck area will not be affected during the Summer Solstice.

This ewa/diamond head orientation affects the block between Kalaimoku Street and Launiu Street during the Winter Solstice, casting a shadow from 12:00 pm to after 3:00 pm. This block is not affected during the Equinox and the Summer Solstice.

The Project with an ewa/diamond head orientation will cast a shadow over a small portion of the northern corner of Ft. DeRussy from before 8:00 am to 9:00 am. These early morning shadows should have minimal impact on Ft. DeRussy and the growth and development of the trees at Ft. DeRussy.

The mauka/makai orientation has less of an impact on the Four Paddle related to shadows during the Equinox with shadows cast over the half of the pool and deck area from 3:00 pm, covering the entire pool and deck at about 4:00 pm. During the Winter Solstice, this orientation will not affect the pool and deck area.

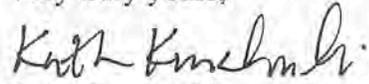
The mauka/makai orientation does not affect the block between Kalaimoku Street and Launiu Street during the Summer Solstice and the Equinox. During the Winter Solstice, shadows affect portions of this block from 12:00 pm until 3:00 pm.

The mauka/makai orientation, similar to the ewa/diamond head orientation will cast a shadow over a small portion of the northern corner of Ft. DeRussy from before 8:00 am to 9:00 am. These early morning shadows should have minimal impact on Ft. DeRussy and the growth and development of the trees at Ft. DeRussy.”

3. In Honolulu, public views are sometimes protected but private views are not. Every property owner has certain property rights to develop their property, in accordance with the City’s Land Use Ordinance. In many instances development of neighboring properties will impact the view of others.
4. As discussed in Item No. 1, public views and the important view corridor along Kalakaua Avenue and Kuhio Avenue described in WSDD Guidelines is better served by the proposed ewa/diamond head orientation.

Your letter and this response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

cc: Department of Planning and Permitting
PACREP LLC

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

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October 26, 2012

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Ms. Barbara F. Hancock
2140 Kuhio Avenue, #1304
Honolulu, Hawaii 96815-2310

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Ms. Hancock:

This letter serves as a supplement and update to our previous letter to you regarding the Draft Environmental Assessment ("DEA") for the 2121 Kuhio Avenue Project ("Project").

The Pre-Final EA for the project has been revised and the Final EA provides ewa/diamond head oriented building photos that are consistent with the revised plans in regard to both design and building orientation. See enclosed cd, Gateway Views (if you require hard copies of the photos, please call me at 988-2231 or write to me at the above address). The Project design has been revised to reduce the length of the tower of the building by about 48 feet based on concerns presented on the DEA. This reduction in length will reduce the impact of shadows and impacts to ocean views from the Four Paddle. With a 350-foot height limit, many of the Four Paddle units will retain an ocean view. A revised mauka/makai oriented building design has also been provided. The tower design footprint on the site for both the revised ewa/diamond head oriented building and the revised mauka/makai oriented building is provided in the enclosed Gateway Views.

Building Orientation

The proposed building orientation and design was developed to implement Waikiki Special Design District (WSDD) Guidelines.

The WSDD Guidelines section that includes "Orientation and Form" and establishes the guideline for the mauka/makai orientation is 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 Hawaiiiana in the built environment."

As noted, the following 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” 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.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalākaua Avenue and from Kūhiō Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian access ways into and through Waikīkī.

The proposed ewa/diamond head building orientation is also sensitive to the need to protect public views from the Gateway to Waikīkī located at Kalākaua Avenue and Ala Moana Boulevard. A volume study on photographs of views from these locations have been prepared comparing the visual impact of two building designs, one with a mauka/makai orientation and one with the proposed building design in an ewa/diamond head orientation. See Gateway Views, enclosed cd, included in the Final EA as Appendix VI, Building Orientation – Photographic Analysis.

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalākaua Avenue and from Kūhiō Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian access ways into and through Waikīkī. This ewa/diamond head orientation is also sensitive to protection of public views from the Gateway to Waikiki located at Kalākaua Avenue and Ala Moana Boulevard. A volume study (enclosed cd,

Gateway Views) on photographs of views from these locations has been prepared comparing the impacts from two building designs (enclosed), one with a mauka/makai building orientation and one with the proposed ewa/diamond head building orientation. The ewa/diamond head building orientation has significantly less visual impact along these important public view corridors except for one view at the corner of Kalākaua Avenue and Kālimoku Street and two views looking ewa along Kūhiō Avenue. The structure has a narrower face with the ewa/diamond head orientation than with a mauka/makai orientation in all but three of the viewpoints along Kalākaua Avenue and Kūhiō Avenue. The view from the Gateway to Waikiki at Kalākaua Avenue and Ala Moana Boulevard is also less impacted with the ewa/diamond head building orientation.

The viewpoint at the open space at Fort DeRussy shows that the visual impact is greater with the ewa/diamond head orientation.

At the request of DPP the Building Orientation – Photographic Analysis (Appendix VI) also shows views from Kālimoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two street corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as significant public views the mauka views at certain other streets located mauka of Kūhiō Avenue.

The ewa/diamond head orientation has also allowed us to provide the widest possible uninterrupted public open space along Kūhiō Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kūhiō Avenue as possible and would have been significantly wider to accommodate a similar amount of floor area.

The concept of “building forms which produce narrow towers are preferred” is supported by the Project as well. The additional height allows the applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

Shadow Study

Based on our shadow study (enclosed in cd), the Project with an ewa/diamond head orientation will shade the pool and deck area of the Four Paddle from about 2:00 pm on during the Equinox and will partially shade the Four Paddle barbecue deck area from about 2:00 pm to and fully shade the barbecue deck and pool area by 3:00 pm. and begin to shade the pool area from 3:00 pm on. During the Winter Solstice the Project will partially shade the barbecue deck area from

about 3:00 pm and begin to shade a small portion of the pool area from about 4:00 pm. The Four Paddle pool and deck area will not be affected during the Summer Solstice.

This ewa/diamond head orientation affects the block between Kālainmoku Street and Launiu Street during the Winter Solstice. , casting a shadowThe Project will partially shade this area from 12:00 pm and moves across this area fully shading the Kūhiō frontage at about 1:00 pm and partially shading it at 2:00 pm with less shading at 4:00 pm with the shadow clearing the property just after 4:00 pmto after 3:00 pm. This block is not affected during the Equinox and the Summer Solstice.

The Project with an ewa/diamond head orientation will cast a shadow overshade a small portion of the northern corner of Ft. DeRussy from before 8:00 am to 9:00 am during the Summer Soltice. These early morning shadows should have minimal impact on Ft. DeRussy and the growth and development of the trees at Ft. DeRussy. Ft. DeRussy is not affected during the Equinox and Winter Solstice.

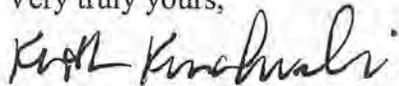
The mauka/makai orientation has less of an impact on the Four Paddle related to shadows during the Equinox with will shadeshadows cast over the barbecue deck area from about 2:00 pm and will cover most of the barbecue deck and a small portion of half of the pool and deck area from 3:00 pm, covering most of the barbecue deck and the entire pool and deckarea atfrom about 4:00 pm. During the Winter Solstice the Project will shade a small portion of the barbecue area from 4:00 pm. During the Summer Solstice, this orientation will not affect the pool and deck area.

The mauka/makai orientation does not affect the block between Kālainmoku Street and Launiu Street during the Summer Solstice and the Equinox. During the Winter Solstice, the Project will shade shadows affect portions of this block from 12:00 pm until 3:00 pm.

The mauka/makai orientation during the Summer Solstice, similar to the ewa/diamond head orientation will cast a shadow overshade a small portion of the northern corner of Ft. DeRussy from before about 8:00 am to 9:00 am. These early morning shadows should have minimal impact on Ft. DeRussy and the growth and development of the trees at Ft. DeRussy. Ft. DeRussy is not affected during the Equinox and Winter Solstice.

This response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

Encl.

cc: Department of Planning and Permitting
PACREP LLC

William Harpenau
2140 Kuhio Ave, #2202
Honolulu, HI 96815
August 19, 2012

Kusao & Kurahashi Inc.
2752 Woodlawn Drive, Suite 5-202
Honolulu, HI 96822

CC: Office of Environmental Quality Control - State of Hawaii

Dear Sir/Madam:

I am a resident of Waikiki and own 2 properties in Waikiki. I am writing in regards to the planned 2121 Kuhio Tower to express my objection to the orientation of the building, and its impact on the immediate area and the residential community adjacent and mauka-side of the project. I have spent hours going over the EA report, and have some questions I'd like to ask below, please.

Before I start, my overall question I'd like to ask you to seriously consider is: Are the tradeoffs of diminishing property values, changing people's way of living and enjoyment, and creating a huge wall parallel to the ocean, where almost every other building has a perpendicular orientation, worth it in order for a single developer to build 459 ocean facing units in this prime location, which could support a columnar type building with openness and depth instead? I look forward to your response. And please see my photos at the end. Thank you.

- 1) Apparently very little is talked about in the DEA regarding the wide orientation of this project. It is surely going to **negatively affect thousands of existing home owners and property values mauka side of this project** by blocking such a wide view plane of the ocean. Besides the view plane, the Four Paddle pool deck will lose the majority of its afternoon sun, and the ocean facing units will have a huge ugly wall less than 200 feet right in front of their lanais. This will have a huge impact (and already has), on the 250 units and property values at the Four Paddle especially. *May I ask why a more thorough discussion and disclosure of the impact to residents is not warranted, and almost seems to be kept secret in the report? Already, people are selling their condos and moving due to this project. Last month, one of our HOA Board members at the Four Paddle moved out and put his condo on the market because of this project. (Charles Snider).*
- 2) In addition to the above, I could not find any disclosure or analysis of how the wide blockage of the view plane caused by this wall, will **affect future redevelopment opportunities for the mauka- side properties all along Launiu St.** (Please see the attached photos). This planned tower will have an adverse impact on future redevelopment for the entire block behind it along Launiu St., which dead-ends into Kuhio right in the middle of the proposed tower wall. This not only blocks ocean views from any existing and future developments, but it also blocks almost the entire skyline looking down this one-way street. *Doesn't the impact of this tower with its wide, parallel to the ocean, structure diminish the incentive along Launiu Street for future redevelopment?*
- 3) Almost everyone agrees that **building walls parallel to the ocean is contrary to community sensible planning.** It is not only smart planning but common sense to avoid development of wide, superblock structures that diminish the values of so many other properties and future development. Why is there apparently no concern or mention in the DEA about the **mauka / makai rules, especially in an area as densely populated as Waikiki?**
- 4) I'm very concerned about the **drastic change to the skyline and feeling of openness of this area from the mauka and makai sides of this location.** This is an enormous wall that will stick up high and wide like no other building in between Kuhio and Kalakau in this section of Waikiki. Placing a building of this size and orientation in this area poses a drastic affect on the "openness" and "sense of Hawaiiana" of the area. It adds a wall that

stands not only above Kuhio, but above Kalakau too. And it begins to form a high wall around Fort DeRussy park. It extends the "corridor" effect and the loss of sunlight on Kuhio. Do we want Fort DeRussy to eventually look like Central Park? Shouldn't the EA report disclose in its text analysis, more about the size of this wall, its orientation, its close proximity to Kalakau and Kuhio streets, Fort DeRussy Park, and how it will adversely affect the openness, shadows and visibility of the sky from the streets below due to its orientation? Is this not a significant impact on the area?

- 5) Building a wall that is parallel to the ocean **opens the way for future developments to also build walls parallel to the ocean**. How can you prevent another development from doing the same thing, and then another, and another? *If this project is allowed to maximize ocean facing units when it doesn't have to, isn't this setting a precedent for future developments to do the same?*
- 6) Is it not warranted in this situation, to **request an alternative plan from the developer with a perpendicular orientation? We know this is possible**, since the previous developers had presented plans for a structure with more depth to the landscape and openness to the sky, and which was approved by the Neighborhood Board. So we know there is definitely an alternative plan possible for this project. It may mean slightly fewer rooms, or fewer profits, but the positive effect on the area with a more community sensible plan has absolutely no chance of being considered with this project when the developers are not asked to present one. **This tower will have the best views in this entire area of Waikiki** with green park land in front and blue ocean beyond. It's very **difficult for anyone to believe that there is no viable alternative** for a change in building orientation with such a prime location and the views this will have in either orientation. With such a wide building built parallel to the ocean, *doesn't this warrant providing an alternate plan to the community? This is our community where we work and live. We would like to see an alternate plan with a columnar building, the pool on the side and with the same space for retail, restaurant, etc. It is possible and the community knows it.*
- 7) The DEA report includes a Traffic analysis entitled "K3 Project". Why is the **traffic analysis referring to a report done six years ago**? It seems that dates may have been changed in various places in this analysis, but the report seems to be titled after the previous developer's project. Is this traffic report current, or is it 6 years old? Adding 459 more units to this area, which already is so congested, just seems hard to believe that it presents no significant impact.
- 1) EA report Section V: Social Characteristics: A: Demographic impacts: 2: Visitor Population:
This section talks about the benefits of replacing lost hotel rooms. But ignores the effect of adding to the already low occupancy rates of hotels, which are struggling to keep occupancy up, by reducing rates. Is there a study by an unaffiliated party that *proves more rooms are needed? Adding 459 more rooms is not necessarily good if it lowers the occupancy rates of existing hotels, which are already struggling.*
- 2) EA report Section V: Social Characteristics: B: Housing impacts: 1: Increase Supply:
As it says the project will not add to the supply of housing units in Waikiki. However, **Waikiki needs more housing units since the price of condominiums is exorbitantly high in this area**. Instead, the project is **decreasing** the attractiveness and values of already existing housing in Waikiki. Shouldn't the need for additional residential housing in Waikiki be addressed, and the adverse affect this wall will have on existing housing?
- 3) EA report Section X: Public plans and land use policies: B: General plan: 3: Physical development and Urban design:
It states that the board of water supply and DPP wastewater branch have indicated that water supply and sewage treatment facilities are adequate to support the project. How can this be, when Kuhio Ave is constantly being torn up to fix the sewer and water systems? *Several sewer manholes often smell already (ie. Lewers and Ala Wai intersection), and when it rains hard, its much worse. This seems misleading to make this statement when everyone knows the sewer system is at capacity, with ugly backup pipes still above ground, and Kuhio in the early stages of a long sewer repair project currently. If the sewer system is adequate to support this project, why have we been having so many sewer problems, and unfinished repairs?*

- 4) EA report Section X: Public plans and land use policies: D: Land use ordinance (sec. 21-9.80 waikiki special district): 1. a:

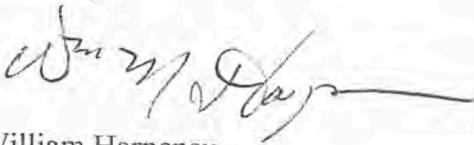
It states that the project will significantly enhance the "**Hawaiian sense of place**". It seems obvious that the orientation of the building will actually significantly hurt the Hawaiian sense of place in this area. This section in the report fails to mention that it will create a corridor of blocked sunlight with its large wall. Is building such a gigantic wall considered enhancing the Hawaiian sense of place? There are several areas in the EA report that talk about the **much needed** landscape relief and public open space the project provides, but it does not once talk about the corridor effect it creates due to the planned orientation.

- 5) EA report Section IV: Economic characteristics: B: Government Revenues/taxes:

It's not specified how they calculate \$20 to \$30 million in hotel room sales. Please clarify, since this is the basis for the project's contribution to state and city revenues. If I use conservative estimates of 80% of units in the hotel pool (non owner occupied), and 70% rental occupancy, I calculate they would need to rent each room for an average of \$266/night. Calculated as: $(\$25,000,000 \text{ median} / (459 * .8)) / (365 * .7) = \266 or \$8000/month. This seems quite high for an average room rate.

Thank you again for your consideration of my concerns.

Sincerely,

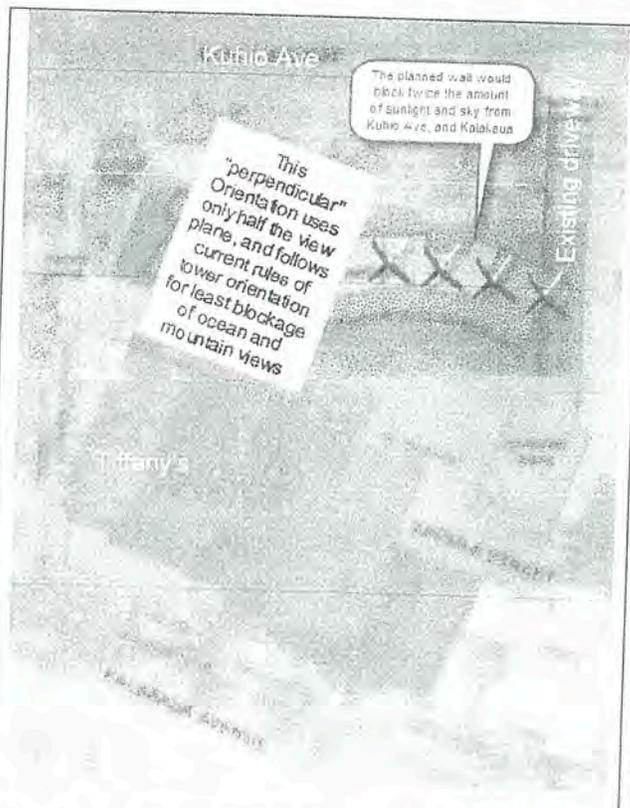
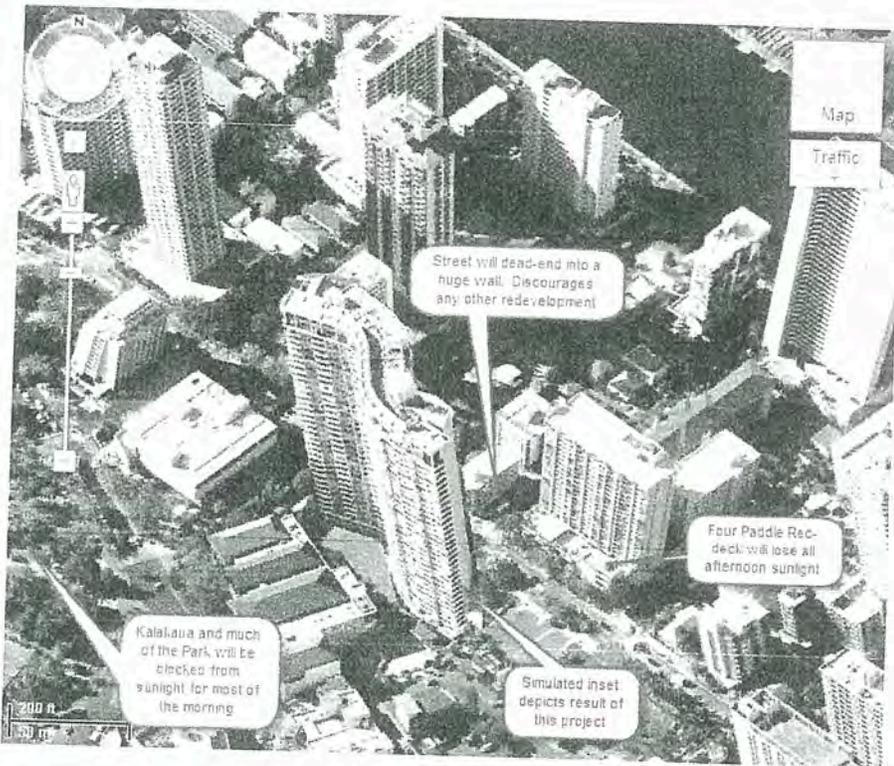


William Harpenau

Note: The following photos took a lot of work to create, but I feel that they help to prove the points and concerns I've made. Please take a moment to look at them. Thank you.



This shows the loss of openness, sky and sunlight the planned wall will cause. It's clearly obvious from these photos, which structure is more community sensible and allows for future redevelopment without drastically diminishing existing property values. The photo in the center is not exaggerated. The photo is taken from Saratoga Rd. in front of the Post office.



A perpendicular orientation would block half the amount of view plane and sunlight on Kuhio and Kalakaua, versus the planned wall orientation. The red X's show the amount of view plane that could be preserved. It also allows the developers a larger pool deck.

The Waikiki Board approved this type of structure on this site previously, and I think anyone would agree that this is more preferable for the community in many aspects, as opposed to a wall that blocks so much of the sky, sunlight, and diminishes property values in the area.

View from intersection of Kalakaua & Ala Moana

The Developer says their tower orientation will provide the least blockage of Diamond Head from this important designated viewpoint. As you can see, there is already no visibility of Diamond Head over the Gateway Hotel and other high-rises. Either way, the new tower will add a large pillar obstruction to this skyline view towering high above and behind the Gateway Hotel.



When the developers presented their plan to the community in May, they stressed that the orientation would preserve the view of Diamond Head from Kalakaua while entering Waikiki. As you can see, the view of Diamond Head does not exist along this area on Kalakaua.

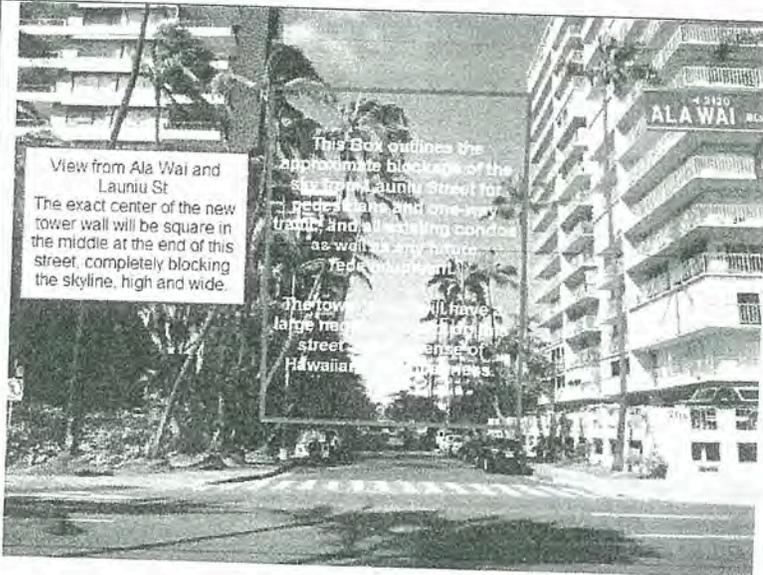
The difference in the amount of sky that will be blocked between having a wall and a perpendicular building does not seem to be significant enough to outweigh all the negative effects of having a wall parallel to the ocean.

View from Ala Wai and Launiu St
The exact center of the new tower wall will be square in the middle at the end of this street, completely blocking the skyline, high and wide.

This box outlines the approximate blockage of the sky from Launiu Street for pedestrians and one-way traffic, and all existing condos as well as any future redevelopment.

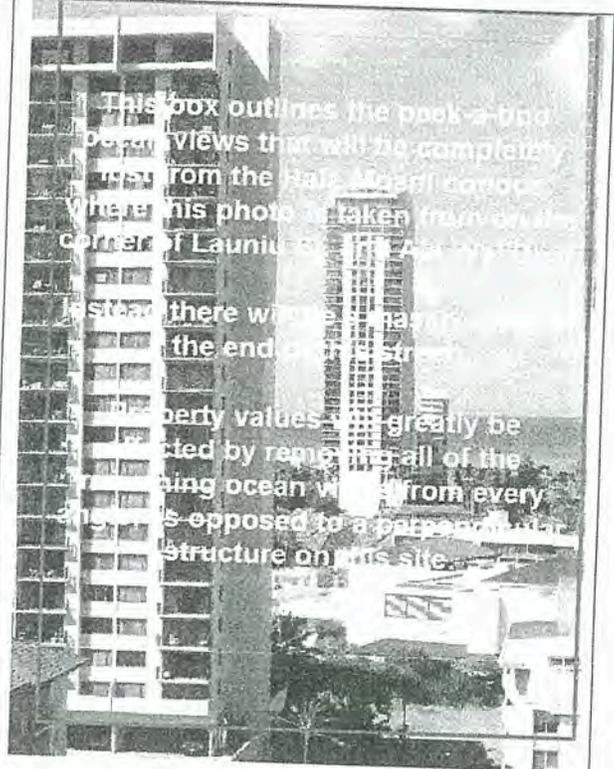
The tower will have a large rectangular street frontage of Hawaiian

All have a view of the ocean.



Looking down Launiu Street, the view of the sky will be completely removed due to the wide wall orientation.

This box outlines the peak-a-boo ocean views that will be completely lost from the Hale Moani condos where this photo is taken from on the corner of Launiu Street. At the moment, there will be a fairly good view of the end of the street. Property values will greatly be affected by removing all of the remaining ocean views from every angle as opposed to a perpendicular structure on this site.



The remaining ocean views from the Hale Moani condos (where this photo was taken) on Launiu St will be completely removed. The planned wall orientation will eliminate views from many more angles for existing condos and future redevelopment.

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

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September 11, 2012

Mr. William Harpenau
2140 Kuhio Avenue, #2202
Honolulu, Hawaii 96815

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Mr. Harpenau:

Thank you for your letter of August 19 regarding the Draft Environmental Assessment ("DEA") for the 2121 Kuhio Avenue Project ("Project").

We appreciate your comments and offer the following responses:

We have enclosed a couple of aerial photos showing the orientation of some recently constructed buildings that were oriented in an ewa/diamond head direction and older buildings that were also oriented in an ewa/diamond head direction. The orientation of the buildings in many instances was governed by the shape of the buildable lot. When the long axis of the lot was in the shape of the developable area of this lot directs the orientation of the building. The long axis of the lot is in the ewa/diamond head direction, the tower structure was usually oriented in the ewa/diamond head direction, as was the case for the Four Paddle tower.

1. The proposed building orientation and design was developed to implement Waikiki Special Design District (WSDD) Guidelines.

The WSDD Guidelines section that includes "Orientation and Form" and establishes the guideline for the mauka/makai orientation is 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 Hawaiiiana in the built environment."

As noted, the following 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” 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.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalakaua Avenue and from Kuhio Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian accessways into and through Waikiki. This ewa/diamond head orientation is also sensitive to protection of public views from the Gateway to Waikiki located at Kalakaua Avenue and Ala Moana Boulevard and from the open space at Fort DeRussy. A volume study (Appendix VI Building Orientation – Photographic Analysis in the Final EA) on photographs of views from these locations have been prepared comparing the impacts from two building designs (enclosed), one with a mauka/makai building orientation and one with the proposed ewa/diamond head building orientation. The ewa/diamond head building orientation has significantly less visual impact along these important public view corridors except for one view at the corner of Kalakaua Avenue and Kalaimoku Street. The structure has a narrower face with the ewa/diamond head orientation than with a mauka/makai orientation in all but one of the viewpoints along Kalakaua Avenue and Kuhio Avenue. The view from the Gateway to Waikiki at Kalakaua Avenue and Ala Moana Boulevard is also less impacted with the ewa/diamond head building orientation.

A view from the open space at Fort DeRussy shows that the visual impact with either orientation is about the same.

At the request of the Department of Planning and Permitting (DPP) the Building Orientation – Photographic Analysis also shows views from Kalaimoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as significant public views **mauka views** at certain other streets located mauka of Kuhio Avenue.

The ewa/diamond head orientation has also allowed us to provide the widest possible uninterrupted public open space along Kuhio Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kuhio Avenue as possible and would have been significantly wider to accommodate a similar amount of floor area and not located above and within the proposed parking podium.

The concept of “building forms which produce narrow towers are preferred” is supported by the Project as well. The additional height allows the Applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

Based on our shadow study, enclosed, the Project with an ewa/diamond head orientation will shade the pool and deck area of the Four Paddle from about 2:00 pm on during the Equinox and partially shade the deck area from 2:00 pm to 3:00 pm and begin to shade the pool area from 3:00 pm on during the Winter Solstice. The Four Paddle pool and deck area will not be affected during the Summer Solstice. This orientation affects the block between Kalaimoku Street and Launiu Street during the Winter Solstice, casting a shadow from 12:00 pm to after 3:00 pm. This block is not affected during the Equinox and the Summer Solstice. The mauka/makai orientation has less of an impact on the Four Paddle related to shadows during the Equinox with shadows cast over the half of the pool and deck area from 3:00 pm, covering the entire pool and deck at about 4:00 pm. During the Winter Solstice, this orientation will not affect the pool and deck area. The mauka/makai orientation does not affect the block between Kalaimoku Street and Launiu Street during the Summer Solstice and the Equinox. During the Winter Solstice, shadows affect portions of this block from 12:00 pm until 3:00 pm. Based on the shadow study, the Project will cast a shadow over a small portion of the northern corner of the Ft. DeRussy from before 8:00 am to 9:00 am. These early morning shadows should have

minimal impact on Ft. DeRussy and the growth and development of the trees at Ft. DeRussy. This information will also be included in the Final EA.

2. We have enclosed a Building Height plan view (included in the Final EA in Appendix XIV, Private View Impact) and cross section that shows the relationship between the Project and Four Paddle (2140 Kuhio Avenue) and 2121 Ala Wai Boulevard. Direct makai views from the ewa side of Four Paddle will be blocked.

The lower direct makai views for 2121 Ala Wai Boulevard are presently blocked by Four Paddle, however, views between 233 feet and 350 feet will be blocked by the Project.

In Honolulu, public views are sometimes protected but private views are not. Every property owner has certain property rights to develop their property, in accordance with the City's Land Use Ordinance. In many instances development of neighboring properties will impact the view of others.

3. The Final EA will have additional justification for the ewa/diamond head orientation of the tower structure, as noted in Item No. 1 above.
4. Item No. 1 above discusses the justification for the building orientation and a discussion on the greater public open space that the Applicant has been able to provide with the tower orientation and size. This earlier item also discusses the positive visual impact to the important view corridors at Kalakaua Avenue and Kuhio Avenue, which were all considered in the Project design and orientation. Item No. 1 also discusses the shadow impact of the Project. These discussions will be included in the Final EA.
5. The Applicant believes that each future project will have to be reviewed based on its own merits and whether the building orientation can be justified based on the WSDD Guidelines. The Applicant also believes that a 51-foot wide public open space along Kuhio Avenue or Kalakaua Avenue that enhances these important two view corridors would be well received by the visitors and residents of Waikiki.
6. The perpendicular or mauka/makai orientation alternative is discussed in the Final EA, although it does support private views, it would be at greater impact to public views along the Kuhio Avenue and Kalakaua Avenue view corridor. The Applicant does plan for restaurant use on the sixth floor of the podium and a retail or restaurant space on the ground floor.

The Applicant understands that the future plan for the developable lot to the east of the Project Site is for a grocery store.

7. The Traffic Study was completed in March of this year, not six years ago. The Traffic Study was based on traffic counts taken at the end of January and beginning of February.

The K3 Waikiki name for the Project was used by the new owner in earlier requests for provision of certain sub-consultant studies and letters to agencies early in the process. Since that time the Project name has been changed to 2121 Kuhio.

The Traffic Impact Report for the Project concluded that "... with the implementation of the proposed recommendation including the elimination or relocation of the existing drop-off area adjacent to the project site, staging and loading areas within and near the project site, traffic operations in the vicinity are anticipated to continue operating at levels of service similar to those without project conditions." The Project will not have a significant impact on traffic operations in the area.

- 1) Hawaii News Now, online, posted on July 6, 2012 that Oahu hotels ran 88.7 percent full last week, compared to 86 percent the week before and 81.6 percent last year, with room rates up almost 12 percent from year-ago levels, partly because of the arrival of guests who are here for the RIMPAC military exercises lasting all this month. Oahu also benefited from new non-stops from New York JFK (Hawaiian Airlines) and Washington Dulles (United Airlines).

The Pacific Business News on August 10, 2012 noted that hotel occupancy on Oahu for the previous week rose 4.5 percentage points from the same week last year to 92.4 percent, while the average daily room rate jumped 15.3 percent to \$201.57.

The Applicant is comfortable with the positive occupancy rates and hopes for further improvement as the national and global economy continues to improve. These occupancy rates, daily room rates, and loss of hotel rooms in Waikiki support the proposed increase in hotel units.

- 2) The DEA focuses on the impacts of this Project on the housing supply and as noted we will not add to that housing supply. The Applicant will do its best to develop a successful Project that considers the well-being of the general public. This Project will provide an improvement through ground-level beautification that will upgrade the lot and encourage other properties nearby to redevelop as well, thereby raising the quality of real estate in the area and increasing property values. Many of the current Apartment Precinct properties are underutilized, including some located near the Project Site. Upgrading of surrounding properties could lead to redevelopment in the Apartment Precinct, intended to provide for a stable residential population in Waikiki.
- 3) The Board of Water Supply noted that the existing water system is adequate to accommodate the Project in a letter dated November 16, 2011 (enclosed).

The Department of Planning and Permitting approved a Sewer Connection Application (enclosed), on January 17, 2012, for the 459-unit condo hotel development conditioned upon the connection to the 20-inch sewer line in Kūhiō Avenue at the owner's expense and construction plans being submitted for review and approval. The existing municipal sewer system is adequate to accommodate the Project. The sewer improvements experienced in Waikiki have been to rehabilitate older sewer lines and to increase sewer capacity in Waikiki.

- 4) The building orientation has been discussed extensively in Item No. 1.

The Project will significantly enhance the “Hawaiian Sense of Place” of the area. New enhanced landscaping will look to incorporate both native plant species and introduced tropical plants brought to Hawaii including retention of the great Banyan tree at the corner of Kuhio Avenue and Kalaimoku Street.

In addition, the Project will improve the experience of its guests, visitors, and surrounding neighbors, by providing a front plaza larger than most other plazas along Kuhio Avenue. This plaza will be part of the significant public open space provided on the property.

The Project will provide a 51-foot setback (to meet height setback requirements), much greater than required 20-foot yard, along Kuhio Avenue. The proposed landscaping along the street frontages will add to the tropical ambiance of the Project. This wide public open space will also improve the views of pedestrians and vehicles traveling along Kuhio Avenue, recognized as a major vehicular and pedestrian accessway and view corridor into in Waikiki in the WSD Guidelines.

Decorative and varied materials, patterns and landscaping will be integrated into the Project to enhance the streetscape and create a tropical Hawaiian sense of place.

The Applicant's design includes significant amounts of articulation which will provide rich visual textures by contrasting light and shadows on surfaces of the buildings to further the Hawaiian sense of place.

The concept of human scale at the ground level will be enhanced by the wide and large public open space at the ground level of this Project.

- 5) The \$20 to \$30 million in hotel room sales is based on their experience at the Trump International Hotel & Tower® Waikiki Beach Walk®, tempered with the Project's location. The Trump Tower room rate is significantly higher than \$266 per night.

Photographs at the bottom of page 3: Your photos show the Project as being 270% wider than the proposed tower by the previous developer. Our architect has indicated that the difference in width would be about 170% wider.

Photographs on page 4: These concerns have been addressed earlier in this letter.

Photographs on page 5: The view over the Gateway Hotel will be one of a slender tower with the proposed ewa/diamond head orientation versus a wider tower with the mauka/makai orientation. We apologize for any confusion at the Waikiki Neighborhood Board. The statement of no visual impact to Diamond Head was in relation to the view of Diamond Head from the Punchbowl Lookout. The view along the view corridor of Kalakaua Avenue was an improved view traveling in the diamond head direction. The difference in the view along the Kalakaua Avenue view corridor versus the blocking of ocean views for condominiums situate mauka of the Project is the protection of public views versus public views. The view along Launiu Street looking makai is not a protected significant public view. The significant public views to be protected along these streets, located mauka of

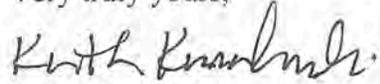
Mr. William Harpenau
Page 7

Kuhio Avenue, are mauka views. As mentioned previously, private views from condominiums in Waikiki are not protected.

Photographs on page 6: These issues related to building orientation have been discussed throughout this letter.

Your letter and this response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

cc: Department of Planning and Permitting
PACREP LLC

Building Orientation Survey

1. Kalia Tower, Hilton Hawaiian Village
Completed 2001
2. The Watermark Waikiki
Completed 2008
3. Allure Waikiki
Completed 2010
4. Lanikea at Waikiki
Completed 2005



Irongate

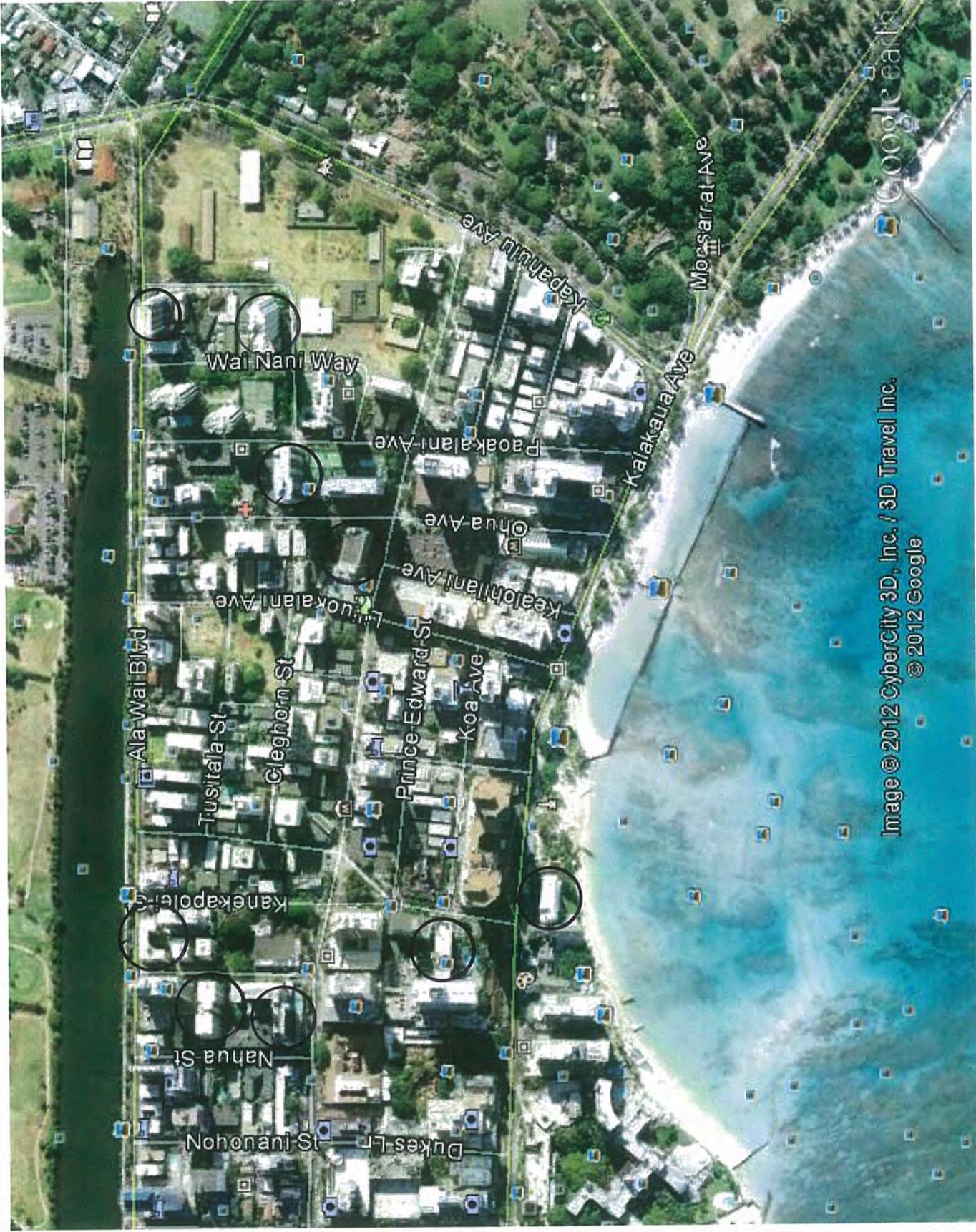
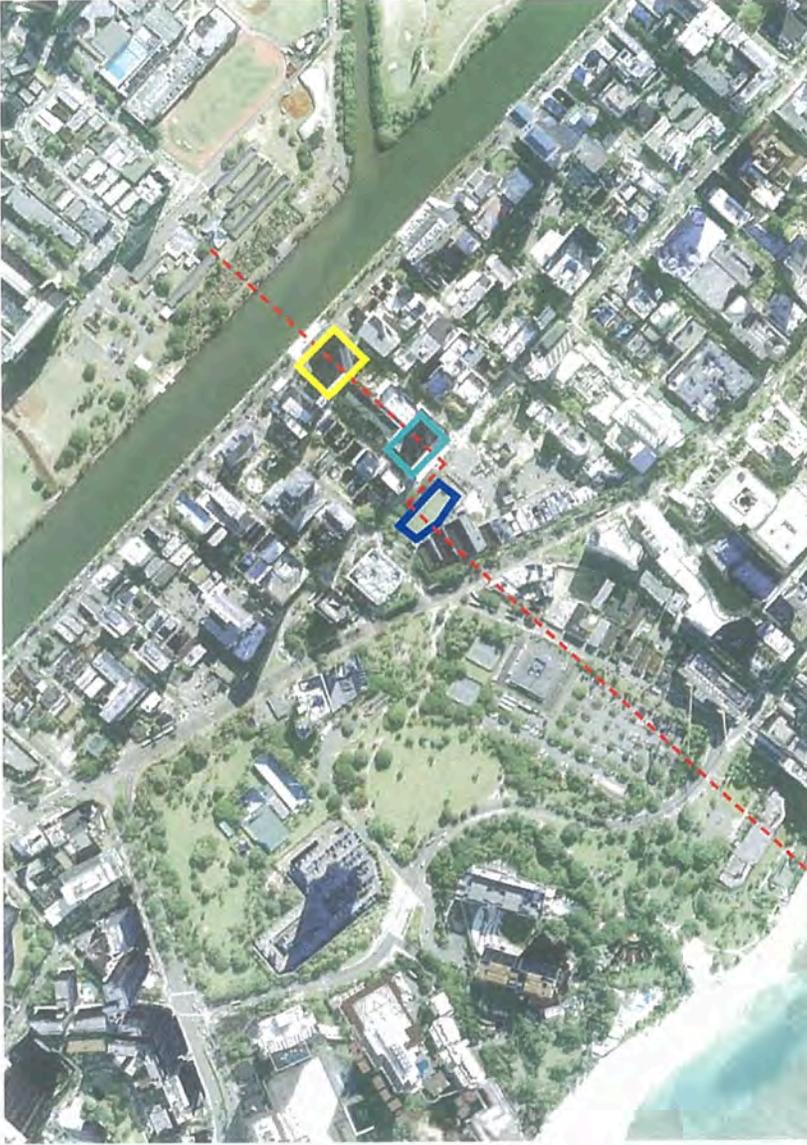


Image © 2012 CyberCity 3D, Inc. / 3D Travel Inc.
© 2012 Google



2121
KUHIO TOWER

2121 ALA WAI BLVD
2140 KUHIO AVE
PROPOSED
2121 KUHIO AVE



Building
Height
Plan View
2
[Cross-Section]

GUERIN GLASS
ARCHITECTS, PC

PACREP LLC

Cross Section: 1/250
350' Proposal

PROPOSED -
2121 KUHIO AVE
350' Height

2140 KUHIO AVE
230' Height

2121 ALA WAI
BLVD
347' Height

Shoreline

Ala Wai Canal

Cross Section: 1/250
300' Proposal

PROPOSED -
2121 KUHIO AVE
300' Height

2140 KUHIO AVE
230' Height

2121 ALA WAI
BLVD
347' Height

Shoreline

Building
Height
Cross Section

All height figures for existing buildings from www.emporis.com

PACREP LLC

GUERIN GLASS
ARCHITECTS, PC

William Harpenau
2140 Kuhio Ave, #2202
Honolulu, HI 96815

October 10, 2012

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Planning and Zoning Consultants
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Office of Environmental Quality Control – State of Hawaii
State Office Tower, Room 702
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Honolulu, HI 96813

Subject: 2121 Kuhio Development – Response received from Developer regarding my letter on DEA

Dear Sir/ Madam,

I am writing in reference to the response letter from Kusao and Kurahashi, Inc. dated September 11, 2012. I want to thank you for your response. However, I have some serious concerns that I feel have not been answered fully or accurately, and some of the answers even seem to be misleading and also confusing in places due to conflicting data or designs. The DPP has encouraged us to write in to address any issues that had not been fully addressed in the K&K response. As a result, I am requesting that this letter be placed into the record to correct the facts.

Additionally, I would like to advise that I attended the Waikiki Neighborhood Board meeting this Tuesday (October 9, 2012), together with other residents in the Kuhio Ave area. The 2121 Kuhio Tower project was once again discussed at this meeting. The Board Chairperson, Robert Finley summarized the discussion by confirming that “the **Board’s position is not in favor of the tower’s proposed Ewa orientation**”. I would also like to confirm that my detailed points set out in this letter have been shared with Board members as well. During these discussions, we were also reminded that the Board had previously voted in favor of a Mauka-makai orientated building. No such vote exists for an Ewa orientated building. The meeting also noted that the Developer has declined to accept the invitation of the Board to address local resident concerns, or to offer any mitigation measures in their submitted Final Environmental Assessment.

In summary, I anticipate that the DPP will take account of, and consider the position of the Waikiki Neighborhood Board, which is against the proposed orientation.

Point #1: Some of the most disturbing and confusing issues I have with the response are the inaccuracies of many photos K&K provided. The response to my letter mentioned multiple times how the narrow oriented building “would be a greater [negative] impact to public views along the Kuhio and Kalakaua corridor”. However, many of the photos are clearly exaggerated and skewed in favor of the wide tower.

Photos are extremely important, because people make decisions based on them since they depict the visual impact to the surrounding area, the blockage of sky and sunlight, and the impact on existing and future developments. On my first look at many of the photos, it immediately appeared they were not accurate. So I selected ones where I could verify their accuracy (or inaccuracy) based on landmarks in the photos.

For example:

1) Photo View #12 - taken from Launiu St. on the sidewalk.

- a) Anyone looking at this photo (view #12) showing the “wide” tower orientation, would be led to believe that the tower’s effect is far more minimized than the actual ground plan depicts. It makes the proposed tower appear much narrower and pushed further in the Ewa direction than the ground plans depict. The point I made in my original letter was that the tower will present a massive wall directly centered at the end of Launiu St. This will discourage future developments on Launiu St, due to the wide blockage of any ocean views for the entire street, mauka-side of the project. This important photo requested by the DPP is clearly misleading by inaccurately minimizing the effect of the wide-oriented tower at the end of this street.

I have therefore, provided a satellite photo below (**Item #1**) that shows a red line from exactly where the K&K photo was taken on the sidewalk in View #12 (also attached).

In View #12 you can see the Trump tower between Four Paddle and the superimposed tower. I drew a red line from the point where the photo was taken to the right-hand side of the Trump tower (which can be seen in the photo). This clearly places the proposed Kuhio tower much further in the Ewa direction than the developer’s ground plan depicts. Therefore, view #12 is inaccurate, and seems to be trying to diminish the issue I raised about a large wall at the end of Launiu St, which removes partial ocean views for the entire block, and discourages future development projects all along Launiu St. And that it completely blocks the sky looking down Launiu St for pedestrians and the one-way traffic, thereby adversely affecting this entire street.

2) Photo View #3 - taken from Kalakaua Ave, just Ewa of the service station.

- a) This misleading photo taken from Kalakaua Ave, shows the narrow-oriented tower appearing to be much wider and actually sitting right on top of Kuhio Ave (see **Item #2**). This is an exaggeration of the effect of this tower’s blockage of the skyline. And is important because it inaccurately depicts the narrow tower to be blocking more skyline in the Kuhio corridor from this viewpoint than it actually would.

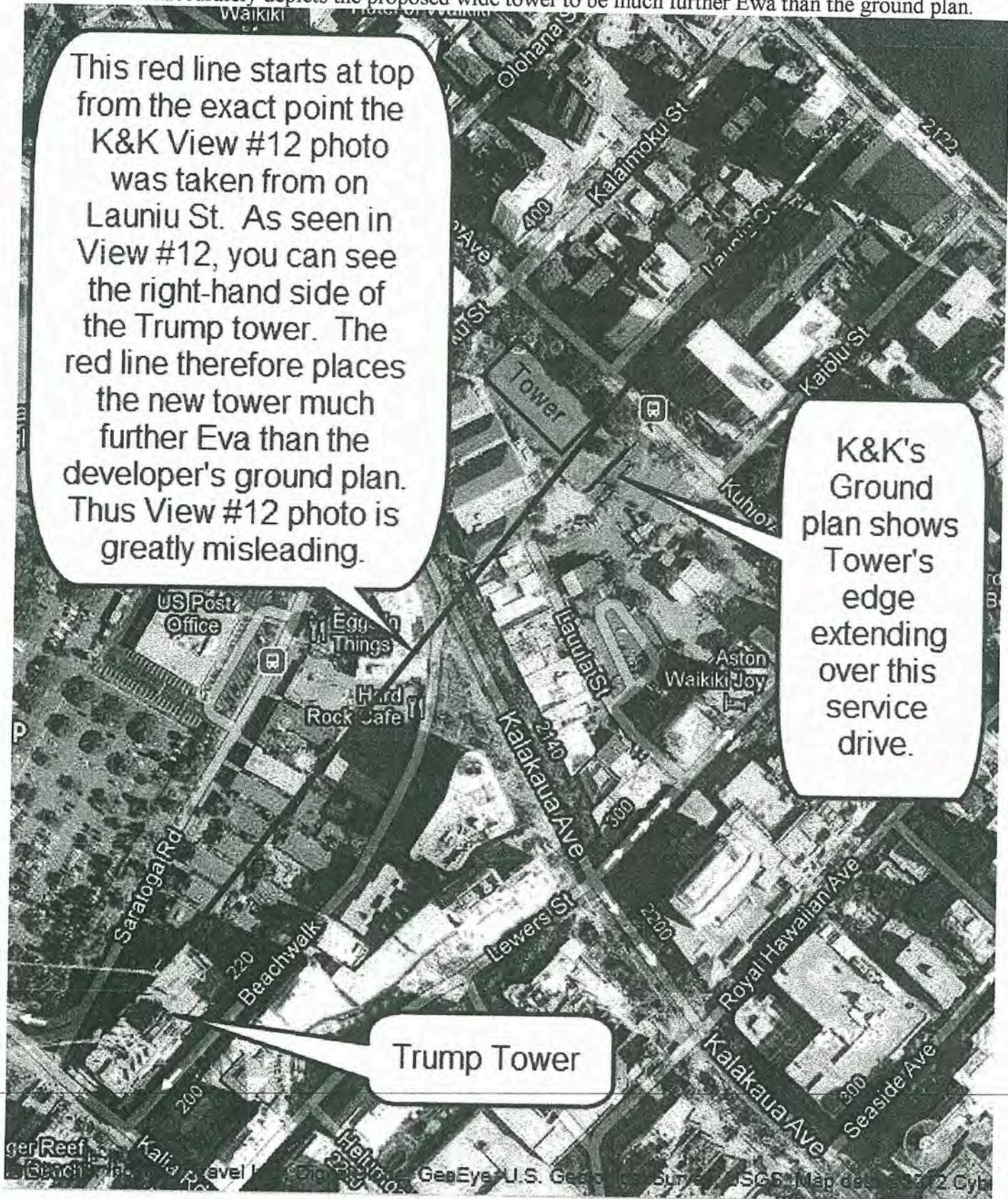
I have therefore attached a satellite photo below (**Item #2**) with a red line showing the exact point where this photo was taken from on Kalakaua, extending to the exact point seen on the Royal Kuhio tower beyond the left edge of the superimposed tower in View #3 (also attached below). This places the narrow tower extending over and on top of Kuhio Ave. This is another example of photos which are misleading and skewed in favor of the wide tower orientation.

Item #1: This photo shows the inaccuracy of the super-imposed wide-oriented tower depicted in K&K photo View #12. It inaccurately depicts the proposed wide tower to be much further Ewa than the ground plan.

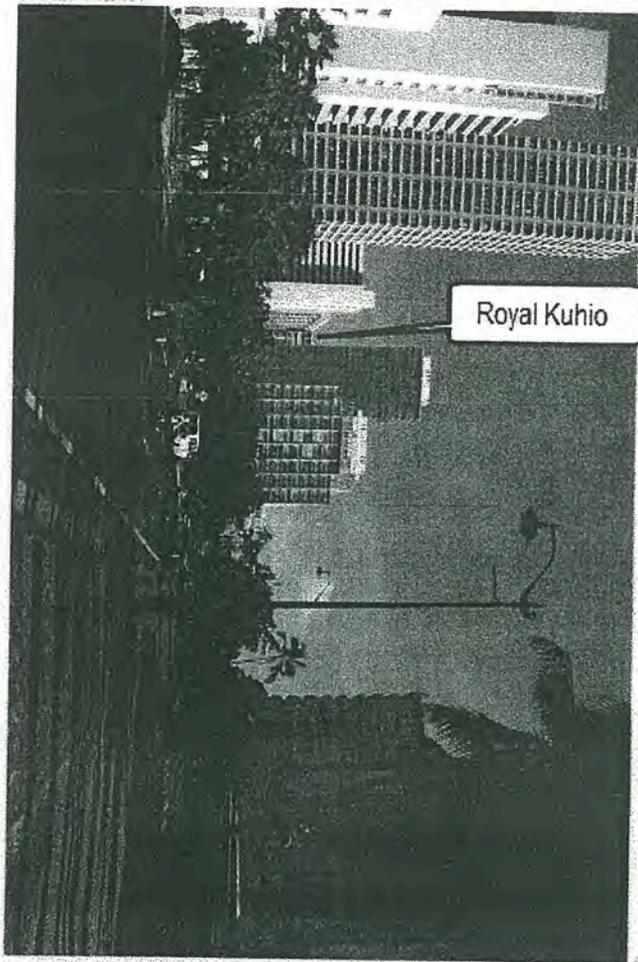
This red line starts at top from the exact point the K&K View #12 photo was taken from on Launiu St. As seen in View #12, you can see the right-hand side of the Trump tower. The red line therefore places the new tower much further Ewa than the developer's ground plan. Thus View #12 photo is greatly misleading.

K&K's Ground plan shows Tower's edge extending over this service drive.

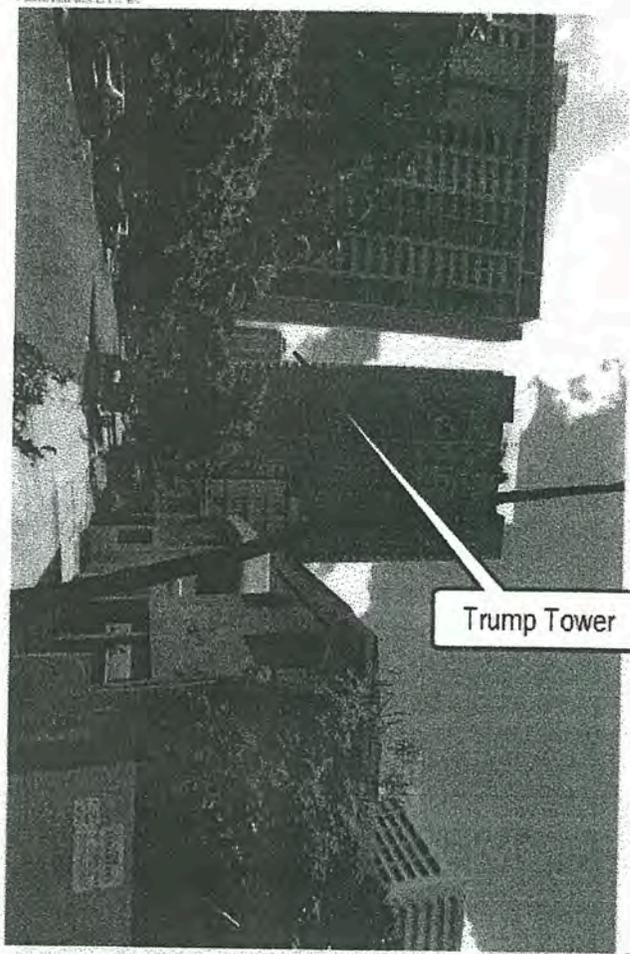
Trump Tower



Item #3: These are copies of K&K's photos: View #12 and View #3 referenced above. These are just two examples of misleading photos that are skewed in favor of the wide tower orientation.



Royal Kuhio



Trump Tower



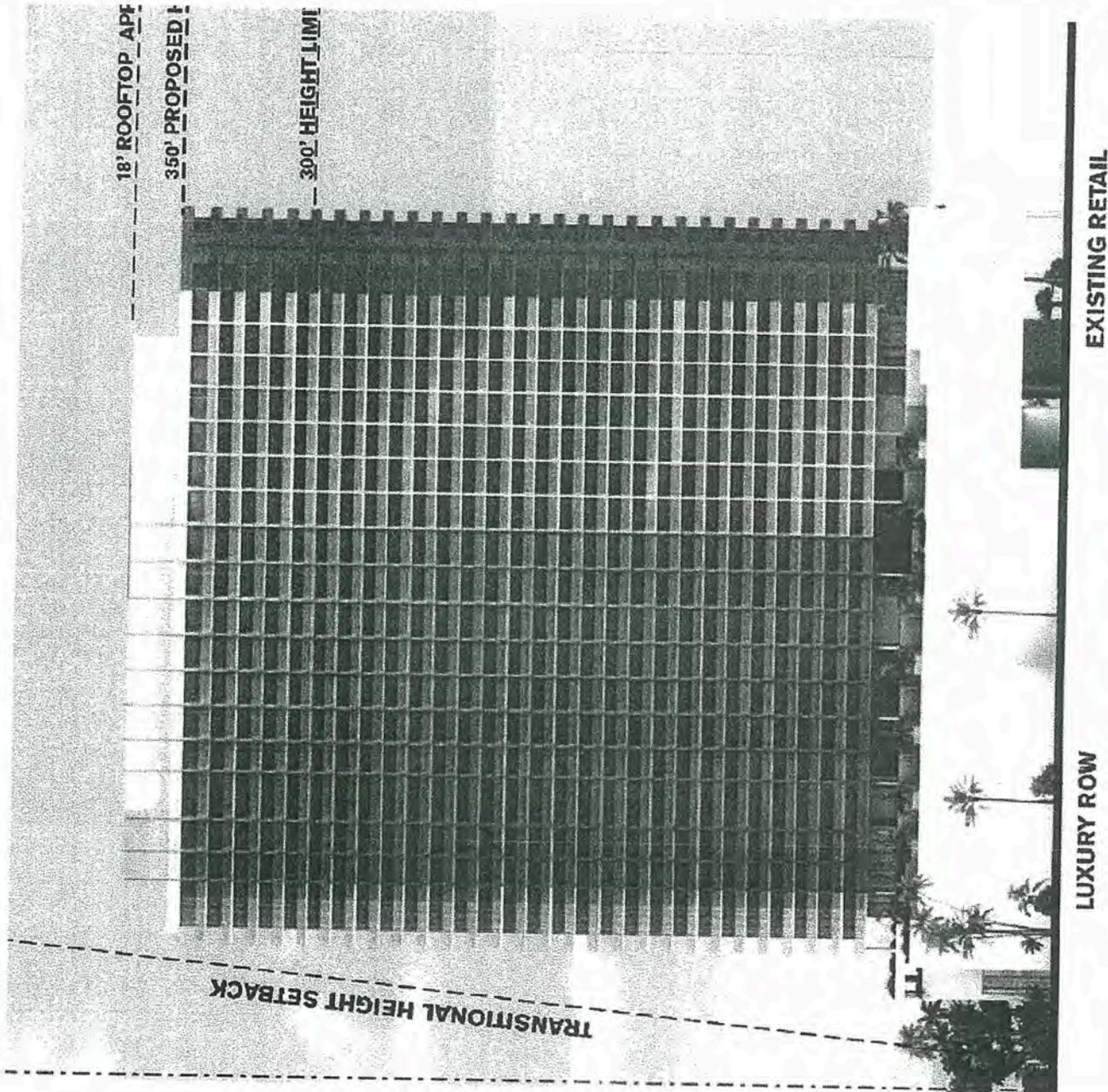
Gateway Views
Downloaded from the Honolulu Star-Bulletin, Nov. 19



This photo is not taken from Ala Wai as the yellow triangle depicts.

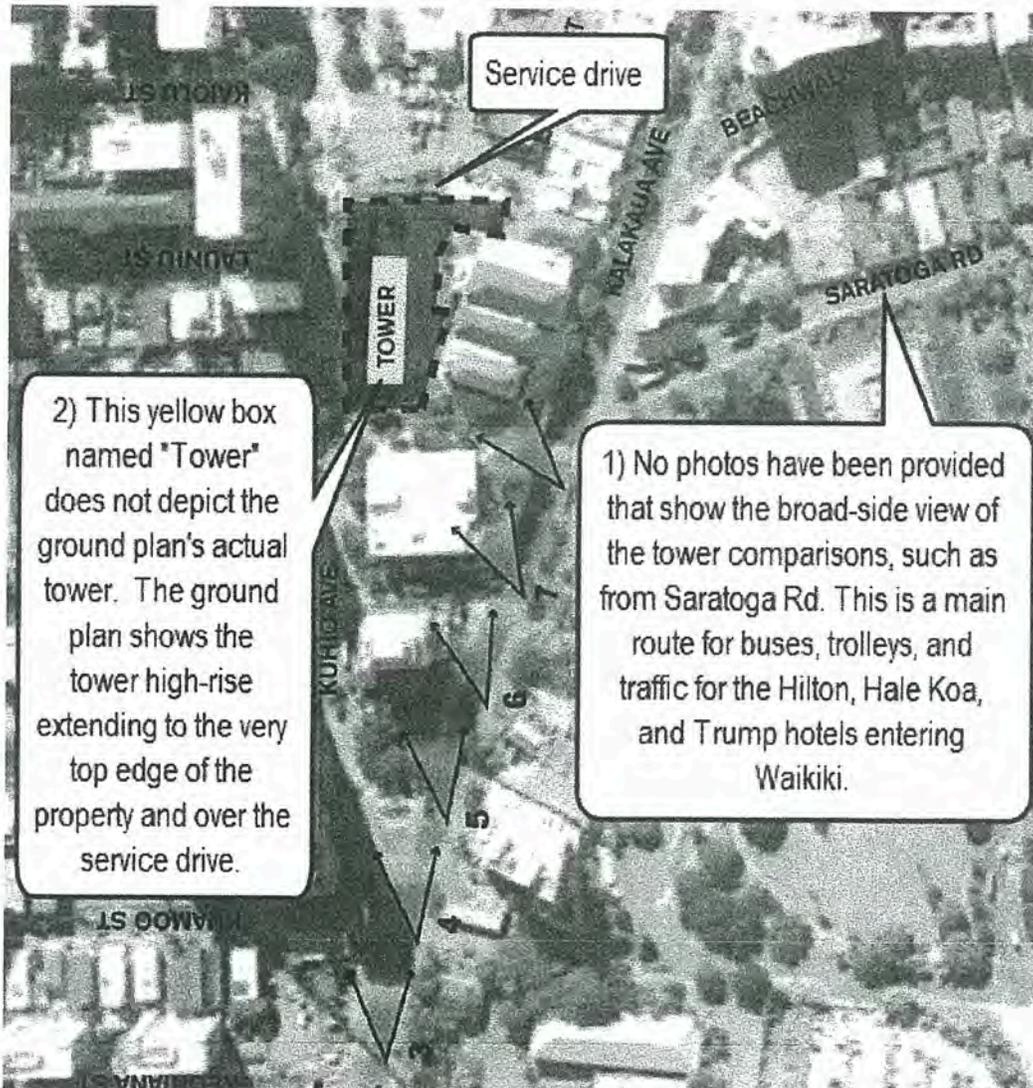
Gateway Views
Downloaded from the Honolulu Star-Bulletin, Nov. 19

Item #4: This image is from the DEA report showing the wide tower plan. This does not look anything close to the wide tower shown in View #12? View #12 depicts a much narrower tower that doesn't come close to the width in this image. This is another example that the super-imposed views are misleading in favor of a wide tower.

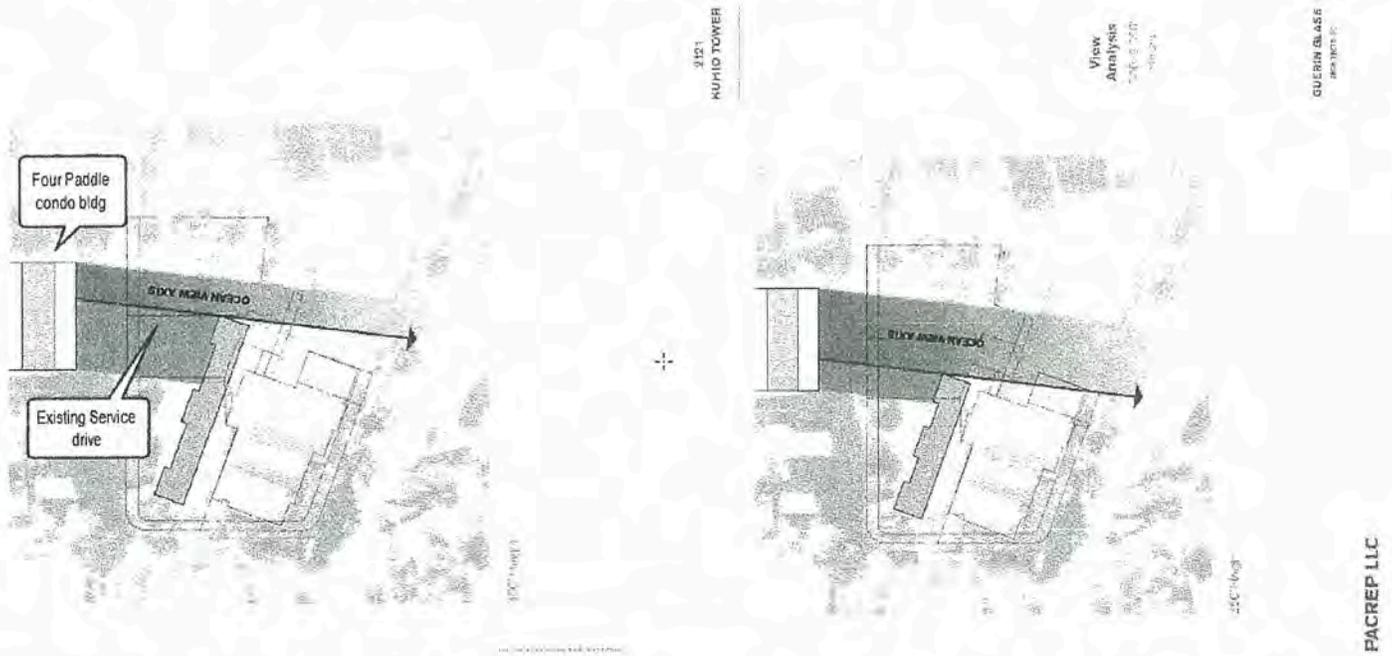


Point #3: The photo below shows the lack of any “broad-side” view comparison photos provided by K&K. Such as: directly across Kalakaua Ave from Luxury Row, or from Saratoga Rd. Saratoga Road is a main entry route for busses, trolleys and traffic which stop at the Hilton Hawaiian, Hale Koa and Trump Tower hotels. A broad-side photo from both Kalakaua Ave or Saratoga Rd seems pertinent, and would clearly show the advantages of the narrow mauka-makai oriented tower in this immediate area. Why were they omitted?

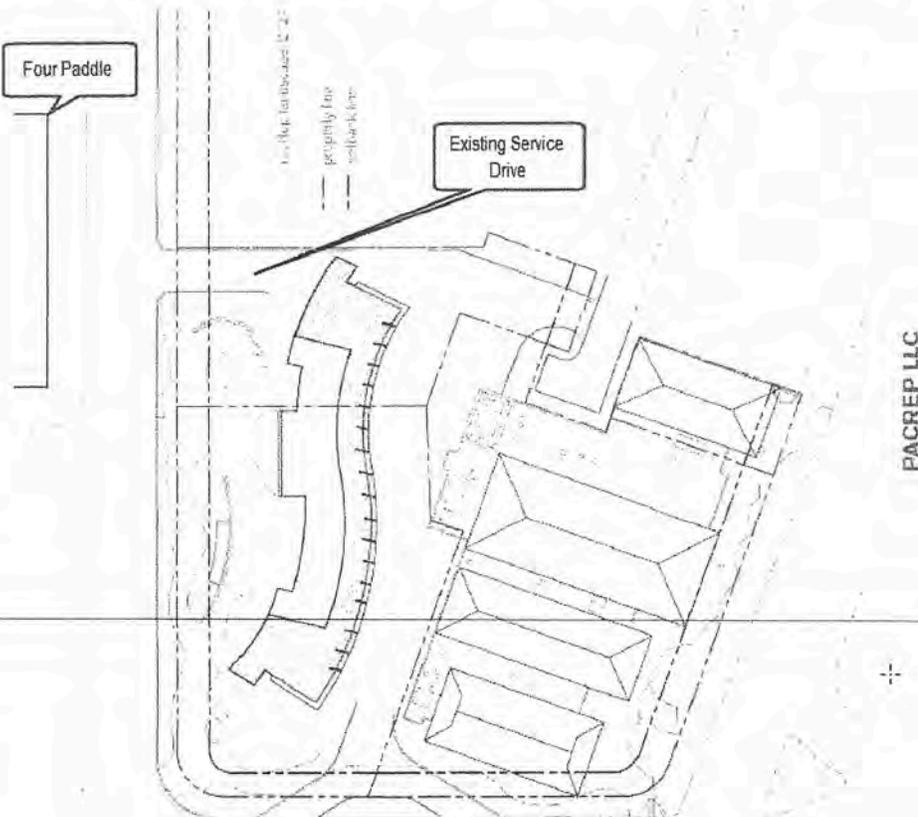
Also, the small yellow rectangle labeled “Tower” in this photo is not the actual proposed high-rise tower depicted in the ground plan (for either the 300’ or 350’ towers). The ground plan shows the high-rise portion of the 300’ tower extending over the service drive (above the dashed line in this photo). The 350’ plan is only slightly below that, but definitely not where the yellow box is in this photo. This is another misleading and confusing photo as to where the actual view blockage of the tower will be.



Point #4: The images below are taken from the DEA report and show the view plane blockage of both the 300' and 350' tower options. As mentioned above, neither of these images matches the placement of the super-imposed towers shown in K&K's View photos. Photos are very important because they present the visual effect of the tower's size and effects on scenery and blockage. I'm very confused by all the discrepancies and inaccuracies. The View photos from K&K are inaccurate and skewed in favor of the wide tower orientation.

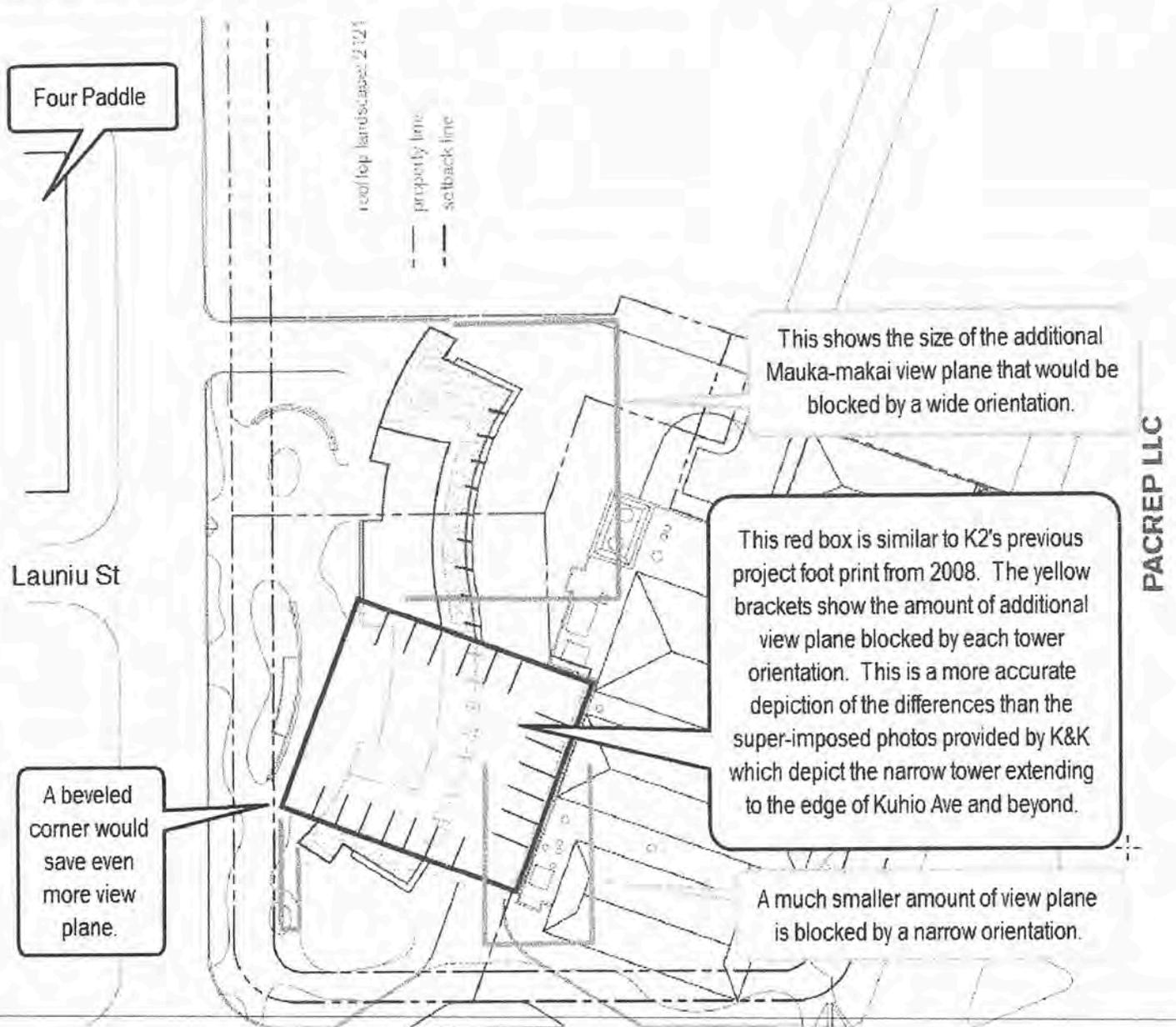


Another ground plan from the DEA report clearly shows the high-rise roof extending over the service drive:



Point #5: This photo below shows a ground plan comparison, (which K&K did not provide). Such an image would have helped to verify many of the super-imposed photo views provided, which as mentioned above are misleading and seem to be inaccurately skewed in favor of the wide tower orientation.

Therefore, I created this comparison showing both the wide and narrow orientations, and bracketed (in yellow) the differences in the **amount of view plane saved** by both tower orientations. This shows that the amount of ocean/mountain view plane saved by a narrow tower are more than twice the amount of the Diamond Head-Ewa view plane saved by the wide orientation. Preserving the ocean/mountain view plane helps preserve future development incentives mauka-side of the project by preserving ocean and sky views on Launiu St, and preserving the sense of openness for pedestrians and the one-way traffic heading towards the ocean.



Point #6: Thank you for providing the “other buildings orientation study” image. The image you provided below shows only 4 other buildings built within the last 30 or so years with a mauka-makai orientation. These buildings have a much less effect on other properties mauka-side of these sites, as the 2121 Kuhio project will have. The **Lanikea** building at 411 Olohana St was built with a very narrow tower (half the width of the lot size they own). Also, the 2121 Kuhio project is wider than the other 4 buildings, (except for the **Alure**, which is already behind another tall building). Also, the small yellow rectangle depicting the 2121 Kuhio project is not accurate. The tower will be much wider than that according to the ground plan. The 2121 Kuhio tower is also centered at the end of a long block (Launiu St) with one-way traffic heading in the ocean direction. A wide tower on this lot has a larger effect than any of the other buildings shown. And it raises the level and sets a precedent of what would be allowed by future projects if the wide oriented tower is built.

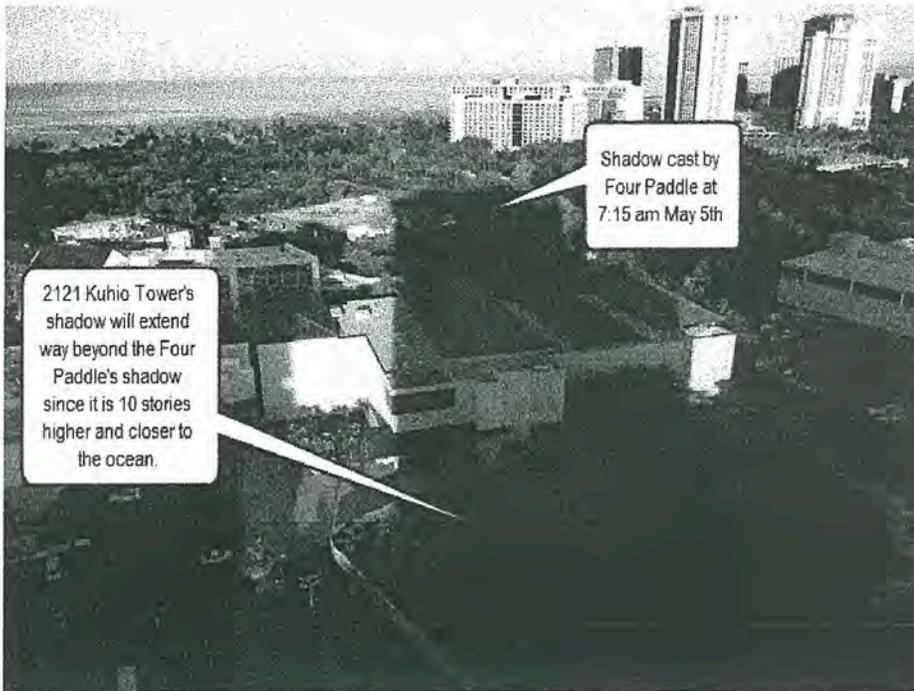


Building Orientation Survey

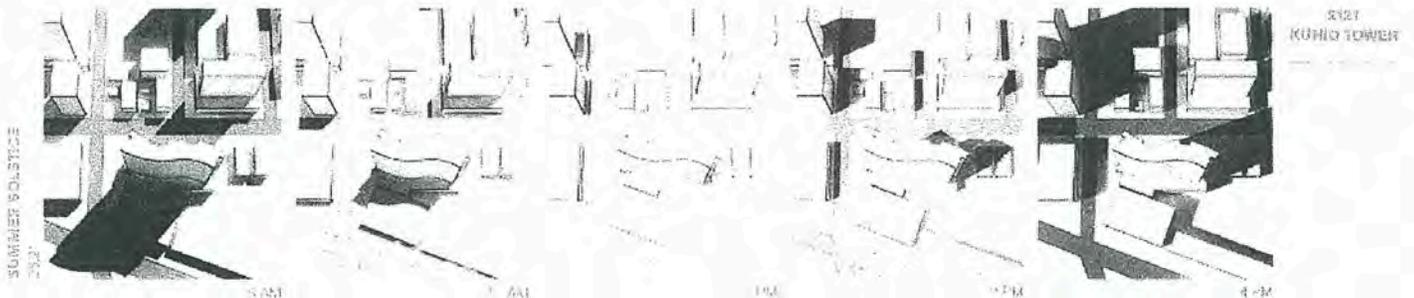
1. Kala Point - Aloha-Leeward Makai Completed 2001
2. The Walden - Aloha Completed 2008
3. Alure - Aloha Completed 2003
4. Lanikea at Olohana Completed 2000

Figure

Point #7: Thank you for including your shadow study. The photo below shows the Four Paddle shadow over Ft DeRussy on May 5th at 7:15 am. Obviously, the 2121 Kuhio Tower shadow will extend far beyond Four Paddle's shadow.



However, in your letter, Item 1, Paragraph 14, you state that "...the Project will cast a shadow over a **small portion** of the northern corner of Ft DeRussy between 8:00am and 9:00am." Below is the portion of the shadow study you are referring to. I cannot see how this can be accurate when compared to the four paddle shadow in the photo above at 7:15 am. The 2121 Kuhio tower will be close to 10 stories higher than Four Paddle and much closer to Kalakaua.



To verify this, the website below calculates the sun's angle on June 21, 2012, at 8:00 am, in Honolulu to be **27.41 degrees** above the horizon. I cannot see how the tower will cast such a small shadow as the shadow study depicts with the sun at 27.41 degrees. The study seems misleading and inaccurately minimizes the effect of the tower's shadow on Ft DeRussy Park, the tennis courts, parade and band gatherings, and Kalakaua Ave. It seems that a **full EIS** should be required which presents more accurate information.

<http://www.susdesign.com/sunangle/>

Point #8: Thank you for responding regarding how the tower relates to the WSDD guidelines. As you mention, the guidelines state that **“The resulting design solutions should reduce the perception of crowding”**. I feel that the wide tower completely works against this guideline. It will create a large, wide wall at the end of Launiu Street, as tall as the Trump Tower and wider. Almost every mauka/makai street in Waikiki has an open view looking down the street from the Ala Wai towards the ocean. Launiu Street will be one of the few streets to have a **closed-in** effect due to the wide tower centered directly at the end of this street with one-way traffic pointing directly at the tower. Therefore, a narrow tower would help to minimize the adverse “crowding” affect. Again, as pointed out above, the view #12 photo taken on Launiu St is inaccurate based on the ground plans provided. (See discussion on view #12 above).

Point #9: Also, as you mention, the WSDD also says buildings should **“preserve significant public views”**. Your photos have not shown any broad-side views of the wide tower taken from anywhere along Saratoga Rd, or directly across Kalakaua Ave, (only angle shots were provided). Any place along Kalakaua in this area is a significant viewpoint where thousands of pedestrians walk every day. Also, **Saratoga Rd** is significant because of the amount of traffic that stops by the Hilton Hawaiian, Hale Koa and Trump Tower hotels along Kalia Rd and on through to Saratoga Rd. And the traffic that stops at the intersection of Saratoga Rd and Kalakaua will be looking directly at the broad-side of the tower above Luxury Row. Since the tower will be very similar in size to another **“Marco Polo”** building towering high above Kalakaua Ave, it will clearly diminish the **“openness”** from Kalakaua, and it will extend the “closed in” corridor effect along Kuhio Blvd.

The “Significant Views” identified in Section 9.80-3(a) of the LUO do not identify the viewpoints in your photos taken along Kalakaua Ave. However, we know these are guidelines.

My point is that 1) Saratoga Rd, 2) Kalakaua Ave (directly in front of Luxury Row), and 3) Launiu St. are all important public viewpoints that will be adversely affected by a large wide tower that will be as tall as the Trump Tower and wider than any other mauka-makai oriented building recently built in Waikiki, (except for possibly the Alure condominium).

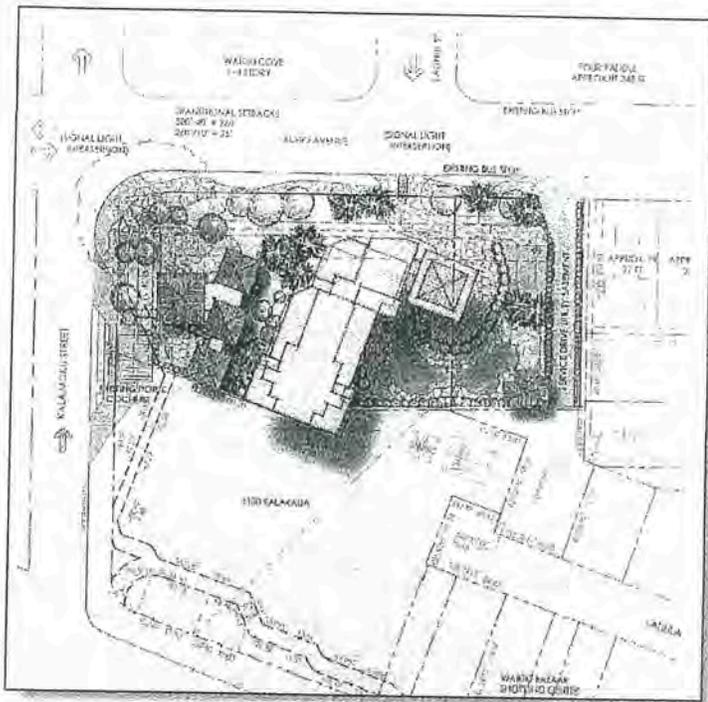
Therefore, I disagree with your statement saying “The Project will not affect any of these significant public views described here and in Section 21-9.80-3(a) of the LUO”. As the guidelines state, “Kalakaua and Kuhio function as view corridors, open spaces and public access.” The tower will diminish the aspect of open space and view corridor from both streets with its large, wide blockage of sunlight and sky.

Point #10: In your response, Question 1. Paragraph 9, you said **“The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalakaua Ave and from Kuhio Ave minimizing impact to the view corridors along these two major access-ways into and through Waikiki.”**

As my photos above show (with the red lines), the **“minimizing impact”** point being made in favor of the wide tower is inaccurate in many of the photos. In your photos, the wide tower is depicted to be much narrower and further Ewa than the ground plans depict in either the 300’ or 350’ plans. And the narrow tower is exaggerated to appear much longer and less desirable, - so much so that it extends over Kuhio Ave when analyzing your photos.

Point #11: In Question 1. Paragraph 12, you say **“The ewa/diamond head orientation has also allowed us to provide the widest possible uninterrupted public open space along Kuhio Ave.”** I have included the photo below from the previous K2 plan. It shows an uninterrupted public open space and one with more depth, sunlight and views of the sky. A **beveled corner** of the building which K2 designed also helps to preserve this

space. In your photos, there is no beveled corner on the narrow tower. Yet, the wide tower has many curves and features. I'm sure a beveled corner can be designed if a serious alternative building design is attempted.



Point #12: In Question 1. Paragraph 13, you say **“The concept of ‘building forms which produce narrow towers are preferred’ is supported by the Project.”** Your point is that by adding an additional 50’ to the tower, you can make the width of the tower narrower. Your building is still designed in an Ewa/diamond head orientation. To say that your project supports this important guideline is a bit of a stretch, and seems to be a way of interpreting the guideline in favor of your design, when that’s not how the guideline was intended when there is a clear option to build a tower that is perpendicular, as opposed to parallel to the ocean.

The perpendicular option in this case, has also been previously approved by the Waikiki Neighborhood Board as in the previous K2 project. And the parallel option is in fact disapproved by the WNB and community.

Point #13: I would like to point out an article in Star Advertiser today (October 11, 2012) which shows that Hughes Corp plans to build 22 “skinnier” towers that are “mauka-makai” oriented beginning in 2014 in the Ward Centers. (Photo below). This is a large area where buildings could be built parallel to the ocean to maximize profits also, but the developers are choosing what’s sensible and right for the community in order to maintain views for future development and maintain the openness on major streets.

This is a clear example of a developer responding to public input and, in particular, reacting to the desire to preserve the ambience of this city together with ocean and mountain views and incentivize urban growth. I look forward to the developer of the 2121 Kuhio site starting to demonstrate these same behaviors.



[Click here to enlarge graphic.](#)

GETTING STARTED

The initial phase is projected to break ground in 2014, and is expected to be completed in 2016.

The \$1.25 billion project will generate 9,000 direct and indirect jobs:

1. 400-foot-tall market-priced residential tower
2. 400-foot-tall market-priced residential tower
3. Moderate-priced residential tower. Height of tower not yet determined
4. Renovation of IBM Building

Note: Heights for all remaining towers could be up to 400 feet but are not set yet.



Three residential high-rises could start coming out of the ground at Ward Centers in 2014 as part of a revised master plan transforming 60 acres of retail and industrial businesses into an almost entirely new neighborhood dominated by condominium towers and twice as many shops and restaurants.

Howard Hughes Corp. unveiled the development plan Wednesday, about two years after the Texas-based firm acquired Ward Centers from General Growth Properties.

“We really believe we have the ability to transform the neighborhood into something that hasn’t been seen before in Honolulu,” said David Striph, senior vice president overseeing Hawaii operations for Hughes Corp.

The Hughes Corp. plan is a revision to a 2008 General Growth plan that led to state approval for developing up to 9.3 million square feet of building area, including 4,300 residential units, in the area.

Revisions by Hughes Corp. pertain to how the company intends to distribute all the approved development to shape the community, and doesn’t change how much total density is allowed.

The new plan, dubbed Ward Village, would double the amount of retail, dining and entertainment venues on their property. It also calls for 22 skinnier towers that preserve more public views of the mountains and ocean compared with General Growth’s plan for 20 towers.

Another major plan revision is the intention by Hughes Corp. to orient the long side of nearly all its towers on a mauka-makai axis to further maximize public mountain and ocean views between buildings.

Eight towers still would front Ala Moana Boulevard, but they would be set back 60 to 70 feet from the street instead of 15 feet, according to Nick Vanderboom, Hughes Corp. vice president of development.

Point #14: The developers have omitted the fact that a **narrow tower orientation is more Energy Efficient**. Three fourths of the year the afternoon sun would directly face the broad side of the wide tower, which every unit in the tower is facing. Obviously, this creates more demand on air conditioning and energy consumption throughout the entire building. A narrow building minimizes the energy consumption for A/C demand throughout the entire year. This is demonstrated in the shadow study below where both the Spring and Fall equinoxes, and the Winter solstice would present direct sunlight on the smaller, narrow side of a narrow oriented tower. This is in accordance with building guidelines and the WSDD.



Point #15: The developer's response letter keeps stating over and over that "**private views are not protected**". While that may be true, views are definitely taken into account for maintaining property values and promoting future development. This is evident by the "**Mauka-makai rule**" implemented by the HCDA (Hawaii Community Development Authority).

While the developer intends to build a large wall and keep referring to the fact that private views are not protected, they are doing so at the expense of other design guidelines and building standards that are clearly the norm for future development which enhance the incentive for urban growth and less traffic on our freeways. It is highly unlikely that the "private views are not protected" verbiage is a green light to build walls that diminish incentives for urban growth and future development.

In closing, I would like to summarize:

1. This letter conclusively demonstrates there are material errors of fact in the K&K response to my letter (and also letters I am aware of sent to other members of the public).
2. There is clear inconsistency between the information in the DEA (and the submitted FEA) and the K&K responses to the public.
3. Given the clear conflicts of presented information by the Developer, there is no certainty as to the final design being proposed, which would allow the **DPP and public** to undertake a full review.
4. The public, as evidenced by the **Waikiki Neighborhood Board** is clearly against an Ewa orientated building.
5. The Developer has made no material change to its design in the Site Plan between the DEA and the FEA, notwithstanding all the feedback they have received in this DEA process.
6. The inconsistencies of information provided by the Developer, the still fluid design proposals and the magnitude of negative public response provide ample reason for the DPP not to issue a Finding of No Significant Impact. As a result, instead this project should be subject to a full Environmental Impact Statement (EIS) and the Developer should be encouraged by the DPP to work more closely with the impacted community.
7. Mauka-makai oriented buildings are the norm for future planning, and are becoming more and more important as the density in urban areas increases and the city plans for urban population growth. This is clearly demonstrated by the large Hughes Corp project planned at Ward Centers.
8. A narrow building **minimizes the energy consumption for A/C demand** throughout the year, - something the developers omitted in the DEA.

Finally, I wish to confirm that I am supportive of the jobs and tax revenue creation of a project like this. I accept a major building will ultimately be constructed at this site. The matter at issue is the design of this building, not a decision between development and no development.

Thank you again for your consideration of these matters.

Sincerely,



William Harpenau

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Planning and Zoning Consultants

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**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Mr. Harpenau:

Thank you for your letter of October 10, 2012 regarding the Draft Environmental Assessment ("DEA") for the 2121 Kuhio Avenue Project ("Project").

We appreciate your comments and offer the following responses:

Point #1

The Pre-Final EA for the project has been revised and the Final EA provides ewa/diamond head oriented building photos that are consistent with the revised plans in regard to both design and building longitude. See enclosed cd, Gateway Views (if you require hard copies of the photos, please call me at 988-2231 or write to me at the above address). The Project design has been revised to reduce the length of the tower of the building by about 48 feet based on concerns presented on the DEA. This reduction in length will reduce the impact of shadows and impacts to ocean views for the Four Paddle. With a 350-foot height limit, many of the Four Paddle units will retain an ocean view. A revised mauka/makai oriented building design has also been provided. The tower design footprint on the site for both the revised ewa/diamond head oriented building and the revised mauka/makai oriented building is provided in the enclosed Gateway Views.

Photo views #12 and #3 and all other views have been revised to accurately reflect the current ewa/diamond head tower design and the current alternate mauka/makai tower design. The site plans, floor plans and elevations have been revised in the Final EA to depict the current tower and building design.

Point #3

The Applicant has provided the views requested by the Department of Planning and Permitting (DPP). The Applicant feels that DPP may not have required the view down Saratoga because we have provided a view near the corner of Kalakaua Avenue and Saratoga Road, View 8 that shows the greater visual impact of the ewa/diamond head orientation.

The yellow box with the tower label has been removed.

Point #4

This image is a concept plan that shows the difference in the width or length of the building between a 300-foot tower and a 350-foot tower and the resulting impact on the ocean view axis from the Four Paddle. This plan has been revised in the Final EA to reflect the revised building design.

Point #5

The Applicant has provided a more accurate depiction of the tower footprint for both orientations that is included in the Gateway Views enclosed.

Point #6

The proposed building orientation and design was developed to implement Waikiki Special Design District (WSDD) Guidelines.

The WSDD Guidelines section that includes "Orientation and Form" and establishes the guideline for the mauka/makai orientation is 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 following 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" 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.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalākaua Avenue and from Kūhiō Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian access ways into and through Waikīkī.

The proposed ewa/diamond head building orientation is also sensitive to the need to protect public views from the Gateway to Waikīkī located at Kalākaua Avenue and Ala Moana Boulevard. A volume study on photographs of views from these locations have been prepared comparing the visual impact of two building designs, one with a mauka/makai orientation and one with the proposed building design in an ewa/diamond head orientation. See Gateway Views, enclosed cd, included in the Final EA as Appendix VI, Building Orientation – Photographic Analysis.

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalākaua Avenue and from Kūhiō Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian access ways into and through Waikīkī. This ewa/diamond head orientation is also sensitive to protection of public views from the Gateway to Waikiki located at Kalākaua Avenue and Ala Moana Boulevard. A volume study (enclosed cd, Gateway Views) on photographs of views from these locations has been prepared comparing the impacts from two building designs (enclosed), one with a mauka/makai building orientation and one with the proposed ewa/diamond head building orientation. The ewa/diamond head building orientation has significantly less visual impact along these important public view corridors except for one view at the corner of Kalākaua Avenue and Kālainmoku Street and two views looking ewa along Kūhiō Avenue. The structure has a narrower face with the ewa/diamond head orientation than with a mauka/makai orientation in all but three of the viewpoints along Kalākaua Avenue and Kūhiō Avenue. The view from the Gateway to Waikiki at Kalākaua Avenue and Ala Moana Boulevard is also less impacted with the ewa/diamond head building orientation.

The viewpoint at the open space at Fort DeRussy shows that the visual impact is greater with the ewa/diamond head orientation.

At the request of DPP the Building Orientation – Photographic Analysis (Appendix VI) also shows views from Kālainmoku Street and Launiu Street. In these views, the mauka/makai

orientation has significantly less visual impact along these two street corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as significant public views the mauka views at certain other streets located mauka of Kūhiō Avenue.

The ewa/diamond head orientation has also allowed us to provide the widest possible uninterrupted public open space along Kūhiō Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kūhiō Avenue as possible and would have been significantly wider to accommodate a similar amount of floor area.

The concept of “building forms which produce narrow towers are preferred” is supported by the Project as well. The additional height allows the applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

Point #7

The Shadow Study was prepared using Autodesk 3DS Max Design and the shadows were taken during three specific times of the year. The Summer Solstice for 2012 was on June 20 of this year. Your photograph was taken on May 5th which could be part of the difference. The other difference relates to the time of day being 7:15 am and 8:00 am. The shadow impact changes significantly in the early morning hours due to the angle of the sun as it rises. Long shadows in the early morning hours and later in the day are expected and normally last for a relatively short time as the sun rises or sets. The Shadow Study has been revised to reflect two revised tower orientations and is included on the enclosed cd.

Based on our shadow study, the Project with an ewa/diamond head orientation will shade the pool and deck area of the Four Paddle from about 2:00 pm on during the Equinox and will partially shade the Four Paddle barbecue deck area from about 2:00 pm to and fully shade the barbecue deck and pool area by 3:00 pm. and begin to shade the pool area from 3:00 pm on Dduring the Winter Solstice the Project will partially shade the barbecue deck area from about 3:00 pm and begin to shade a small portion of the pool area from about 4:00 pm. The Four Paddle pool and deck area will not be affected during the Summer Solstice.

This ewa/diamond head orientation affects the block between Kālainoku Street and Launiu Street during the Winter Solstice. , casting a shadowThe Project will partially shade this area from 12:00 pm and moves across this area fully shading the Kūhiō frontage at about 1:00 pm and partially shading it at 2:00 pm with less shading at 4:00 pm with the shadow clearing the

property just after 4:00 pm to after 3:00 pm. This block is not affected during the Equinox and the Summer Solstice.

The Project with an ewa/diamond head orientation will cast a shadow over a small portion of the northern corner of Ft. DeRussy from before 8:00 am to 9:00 am during the Summer Solstice. These early morning shadows should have minimal impact on Ft. DeRussy and the growth and development of the trees at Ft. DeRussy. Ft. DeRussy is not affected during the Equinox and Winter Solstice.

The mauka/makai orientation has less of an impact on the Four Paddle related to shadows during the Equinox with shadows cast over the barbecue deck area from about 2:00 pm and will cover most of the barbecue deck and a small portion of half of the pool and deck area from 3:00 pm, covering most of the barbecue deck and the entire pool and deck area from about 4:00 pm. During the Winter Solstice the Project will shade a small portion of the barbecue area from 4:00 pm. During the Summer Solstice, this orientation will not affect the pool and deck area.

The mauka/makai orientation does not affect the block between Kālainmoku Street and Launiu Street during the Summer Solstice and the Equinox. During the Winter Solstice, the Project will shade shadows affect portions of this block from 12:00 pm until 3:00 pm. 8.

The mauka/makai orientation during the Summer Solstice, similar to the ewa/diamond head orientation will cast a shadow over a small portion of the northern corner of Ft. DeRussy from before about 8:00 am to 9:00 am. These early morning shadows should have minimal impact on Ft. DeRussy and the growth and development of the trees at Ft. DeRussy. Ft. DeRussy is not affected during the Equinox and Winter Solstice.

Point #8

Walking along Kuhio Avenue fronting the project, pedestrians will experience a wide landscaped public open space and plaza will reduce the perception of crowding. As you walk along Kalakaua Avenue and Kuhio Avenue the narrower face of the ewa/diamond head tower will also reduce the perception of crowding. Based on other significant views established for the WSDD Guidelines from Kuhio Avenue, if a significant view were established for Launiu Street, it would be a mauka view.

Point #9

Pedestrians normally notice just three to four stories in height as they walk along, unless they are looking at buildings from a distance, such as from the Gateway to Waikiki at Kalakaua Avenue and Ala Moana Boulevard. The singular points that you discuss would show a much wider face for the ewa/diamond head orientation, while if you look at the overall visual impact as you walk along Kalakaua Avenue and Kuhio Avenue, the ewa/diamond head orientation better serves the public views.

Point #10

These views have been corrected in the enclosed cd.

Point #11

Please understand that this plan included a fence along the frontage on Kuhio Avenue and along the service drive on the east side of the property to provide for a private recreation area on the property. This plan had limited public open space at the corner of Kalaimoku Street and Kuhio Avenue. The Applicant's proposal provides mostly public open space that will provide a public amenity.

Point #12

The 350-foot height was established to reduce the bulk of a building and to provide more slender towers. Our proposed design provides that slender tower. The building orientation conforms to the WSDD Guidelines in many aspects, including Gateway views, view corridors along Kalakaua Avenue and Kuhio Avenue and in the provision of public open space.

Point #13

The Applicant has considered the WSDD Guidelines and the building orientation and design is supported by many aspects of the WSDD Guidelines, whereas a mauka/makai orientation would not support these Guidelines.

Point #14

The shadows rotate through the day and at point so the day the mauka/makai buildings have the sun striking their wide faces as seen in the shadow study. During parts of the day sun and heat impact seems to favor the mauka/makai orientation and during other parts of the day it favors the ewa/diamond head orientation.

Point #15

The mauka-makai rule of the HCDA (Hawaii Community Development Authority) is not a hard and fast rule as exceptions are permitted and projects need to be viewed on a case-by-case basis. Similarly in the WSDD the mauka/makai orientation is not cast in stone and projects need to be considered on a case-by-case basis to determine if other important guidelines are better served with an ewa/diamond head orientation.

Summary

1. The material errors of fact have been revised in the Final EA.

2. Some revisions in the Final EA are the result of comments received in the DEA and in order to mitigate certain concerns, such as shrinking the length or width of the tower.
3. The building design will undergo another review by DPP in the Waikiki Special District (WSD) Permit application that will be submitted. The final design will be as approved by DPP during the WSD process and building permit process.
4. Although the Waikiki Neighborhood Board may oppose the ewa/diamond head oriented tower, the WSD Guidelines support this orientation in this specific case.
5. The Applicant has revised his site plan to address concerns raised during the DEA process. The Project design has been revised to reduce the length of the tower of the building by about 48 feet. This reduction in length will reduce the impact of shadows and impacts to ocean views for some of the Four Paddle units. With a 350-foot height limit, many of the Four Paddle units will retain an ocean view.
6. The Final EA and comments received to date from the agencies indicate that environmental impacts from the Project will not be significant. A similar proposal by a previous property owner received a Finding of No Significant Impact (FONSI) for that Final EA. Concerns from the neighboring Four Paddles residents and a few other neighbors related to building orientation and visual impact to private views have been addressed in the Final EA. The Applicant feels that a FONSI is warranted for this Project.
7. The mauka/makai orientation is a guideline and projects need to be considered on a case-by-case basis to see if public purpose is better served by an ewa/diamond head orientation.
8. The following was found on the internet in searching "building orientation energy efficiency":

Optimal Building Orientation and Insulation

The ORAU CSE building has been optimized for energy efficiency. The design reduces anticipated energy use by more than 23 percent as compared with a typical building. This savings is a result of the integration of various building systems, including the siting, exterior "skin," HVAC systems and lighting systems. Following are other aspects of the building that enhance energy efficiency.

- The building is oriented on an east-west axis to take advantage of solar orientation: maximizing solar heat gain in the winter on the south side and, with the combined use of shading, minimizing solar heat gain in the summer.
- Shading provided by overhangs helps reduce the heat gain from the higher summer sun, as does the white roof, with its high solar reflectance index.

Mr. William Harpenau

Page 8

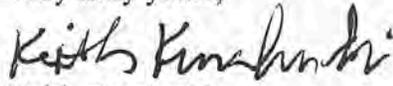
- Additional energy savings is achieved by the use of high-performance glazing. The exterior skin of the building is protected further by a high insulation level, including a continuous layer of wall insulation applied outside the wall studs.

Both orientations are skewed at similar angles to the recommended east-west orientation recommended above.

The Applicant appreciates your support of the economic benefits of this Project. The matter at hand is the design in which we disagree on the appropriate orientation.

Your letter and this response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

Encl.

cc: Department of Planning and Permitting
PACREP LLC

Mike Magraudy
2140 Kuhio Ave
Honolulu, HI 96815-2372

August 19, 2012

Office of Environmental Quality Control – State of Hawaii
State Office Tower, Room 702
235 South Beretania St.
Honolulu, HI 96813

Cc: Kusao & Kurahashi Inc.

Please consider the following list of questions and considerations regarding the Environmental Assessment for 2121 Kuhio Honolulu, HI, and Dated July 2012.

1. Are Environmental Reports suppose to sound like a sales pitch? Shouldn't this document be more objective. It reads like the developer wrote it, which is what I thought when I read it.
2. Section IV – What is the projected per night room cost? Is it in line with the current cost per night for the Waikiki area? In the current economic climate buildings of this type have a chance to go into insolvency. If this was the case would the units be allowed to be sold as condos if a court ruled so, and therefore how would this affect the parking?
3. In Section IV (Environmental Characteristics) nothing was addressed on the impact the building's size and orientation has on the surrounding neighborhood. Reduction of Afternoon Sunshine on the streets of Launiu St. and Kuhio Ave. This was not addressed in the report. A building of this size and orientation will have a substantial impact on the surrounding neighborhood.
4. In Energy Section states that the Board of Water Supply and DPP indicate that there is adequate resources, water/sewage, to support the project. I think an attached analysis to the report would be required for this statement; a simple verbal "ok" should not be adequate. Due to the current problems with sewage in the Waikiki area this should be looked at in great detail.
5. Section D Land Use Ordinance states that the project will not affect "Mauka" views from public viewing. Looking at the size and placement of the building these item can be in question. Who made the decision this is not blocking a view? Did the developer make this decision?
6. Appendix V, Parking and additional Traffic. The parking does not address the retail and dining the project includes in the statement only enough for the hotel-condo portion. Detailed traffic analysis should be included to analyze problems before construction starts. The DPP approved a reduction of parking from 92 to 45 stalls, why? Later in the document they state there will be 220 parking stalls. What is the real answer? Parking is a major problem in this area and if anything they should be required to build more rather than less parking stalls. Has a parking management plan been submitted?

Regards,



Michael R. Magraudy

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

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September 11, 2012

Mr. Mike Magraudy
2115 Ala Wai Boulevard, PH#3
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**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Mr. Magraudy:

Thank you for your letter of August 19, 2012 regarding the Draft Environmental Assessment ("DEA") for the 2121 Kuhio Avenue Project ("Project").

We appreciate your comments and offer the following responses:

1. Environmental assessments are disclosure documents that disclose the projected impacts of a project, the plans for mitigating these impacts, if any. This is an objective document, that looks at the positive and negative impacts of the Project.
2. The average room rate on Oahu was a little over \$200 in August. The projected room rate for the Project has not been established and will depend on the hotel operator selected. However, the Applicant's economic analysis is based on experience at the Trump International Hotel & Tower® Waikiki Beach Walk® and actual economics of that hotel. The Applicant is comfortable that this Project will succeed as a hotel project as the Trump Tower has exceeded their expectations.

The Department of Planning and Permitting (DPP) would determine parking requirements should the development attempt conversion to a residential condominium. The residential condominium development was considered in the early review of the Project Site, but the Applicant's experience with Trump Tower and success at that location has led to the proposed condo hotel at this site.

3. A shadow study (enclosed) is included in the Final EA and the narrative for that shadow study is provided below:

"Based on our shadow study, the Project with an ewa/diamond head orientation will shade the pool and deck area of the Four Paddle from about 2:00 pm on during the Equinox and partially shade the deck area from 2:00 pm to 3:00 pm and begin to shade the pool area from 3:00 pm on during the Winter Solstice. The Four Paddle pool and deck area will not be affected during the Summer Solstice.

This ewa/diamond head orientation affects the block between Kalaimoku Street and Launiu Street during the Winter Solstice, casting a shadow from 12:00 pm to after 3:00 pm. This block is not affected during the Equinox and the Summer Solstice. The Project with an ewa/diamond head orientation will cast a shadow over a small portion of the northern corner of Ft. DeRussy from before 8:00 am to 9:00 am. These early morning shadows should have minimal impact on Ft. DeRussy and the growth and development of the trees at Ft. DeRussy.

The mauka/makai orientation has less of an impact on the Four Paddle related to shadows during the Equinox with shadows cast over the half of the pool and deck area from 3:00 pm, covering the entire pool and deck at about 4:00 pm. During the Winter Solstice, this orientation will not affect the pool and deck area.

The mauka/makai orientation does not affect the block between Kalaimoku Street and Launiu Street during the Summer Solstice and the Equinox. During the Winter Solstice, shadows affect portions of this block from 12:00 pm until 3:00 pm.

The mauka/makai orientation, similar to the ewa/diamond head orientation will cast a shadow over a small portion of the northern corner of Ft. DeRussy from before 8:00 am to 9:00 am. These early morning shadows should have minimal impact on Ft. DeRussy and the growth and development of the trees at Ft. DeRussy.”

4. The Department of Planning and Permitting approved a Sewer Connection Application, on January 17, 2012 (enclosed), for the 459-unit condo hotel development conditioned upon the connection to the 20-inch sewer line in Kūhiō Avenue at the owner's expense and construction plans being submitted for review and approval. The existing municipal sewer system is adequate to accommodate the Project.

In a letter dated November 16, 2011 (enclosed), the Board of Water Supply determined that the existing water system is adequate to handle either of two options presented at the time, Option A for 384 hotel condo suites and hotel residences, commercial, restaurant and office space or Option B for 526 hotel condo suites and hotel residences, commercial, restaurant and office space.

The Final EA provides the following discussion on water and sewer facilities and impacts:

“2. Water

Existing

The Project site is serviced by the municipal system of the Board of Water Supply (BWS). The BWS system in the vicinity of the Project consists of a looped 16-inch and 8-inch water main located within the adjacent Kūhiō Avenue and Kalākaua Avenue, respectively. Existing water service to the Project site is provided by water

lateral connections to the 16-inch water main located in Kūhiō Avenue. The water meters servicing the Project site consist of two 3/4-inch water meter servicing parcel 52 and one 1-1/2-inch meter servicing parcel 42.

Proposed

The Project will likely require a new water lateral connection to the existing 16-inch water main located in Kūhiō Avenue. Based on other similar projects of this size, it is likely that the water flow demand of the Project will qualify for the FM type meter, which would serve both domestic and fire protection service to the Project. The actual meter size and type will need to be confirmed in coordination with the Project Mechanical Engineer during the design phase of the Project. By utilizing the FM type meter, the Project would be required to make only one lateral connection to the existing 16-inch water main for both services rather than two separate water lateral connections for separate domestic and fire protection water service. Other improvements include a new reduced pressure flow preventer.

Mitigation Measures

In a letter dated November 16, 2011, BWS determined that the existing water system is adequate to handle either of two options presented at the time, Option A for 384 hotel condo suites and hotel residences, commercial, restaurant and office space or Option B for 526 hotel condo suites and hotel residences, commercial, restaurant and office space. BWS noted that, when water is made available the applicant will be required to pay the Water System Facilities Charge ("WSFC") for resource development, transmission and daily storage and that on-site fire protection requirements should be coordinated with the Fire Prevention Bureau of the Honolulu Fire Department. The applicant will pay applicable WSFC and will coordinate on-site fire protection requirements with the Fire Prevention Bureau of the Honolulu Fire Department.

3. Wastewater

Existing

The City's off-site sanitary sewer collection system servicing the Project consists of an older 16-inch sewer main and a newer 20-inch sewer main located in Kūhiō Avenue. These sewer mains convey sewage flow in the Diamond Head direction to the Beachwalk Wastewater Pump Station ("WWPS") located between Kaiolu Street extension and Lewers Street. Sewage flows from the Beachwalk WWPS are transported to the Sand Island Wastewater Treatment Plant for processing.

Proposed

The projected sewer flows from the proposed 459-unit condo hotel development and supporting uses is estimated at 105,941 gpd. The projected sewer flows from the Project

will be discharged through a new sewer lateral to the existing 20-inch sewer main in Kūhiō Avenue.

Mitigation Measures

DPP approved a Sewer Connection Application, on January 17, 2012, for the 459-unit condo hotel development conditioned upon the connection to the 20-inch sewer line in Kūhiō Avenue at the owner's expense and construction plans being submitted for review and approval. The estimated Wastewater System Facility Charge is \$1,853,062.90.

Although not part of this Project, the Hilton Hawaiian Village is in the process of upgrading the nearby Fort DeRussy WWPS and eliminating an overflow connection that was installed near the WWPS to divert flow to the Beachwalk WWPS. The overflow connection was needed at the time to free up capacity for the Waikikian timeshare development. The elimination of the overflow will reduce the flow in the existing 20-inch sewer main in Kūhiō Avenue and to the Beachwalk WWPS.”

5. Section D of the Draft EA noted that the Project will not affect specific public mauka views that are to be protected, according to the Waikiki Special Design District Guidelines. In instances where this determination was not obvious, the Applicant provided photographic evidence.
6. The parking requirement for the Project, based on 459 hotel rooms (no "lock-out" units planned) and accessory uses at one stall per four units is 115 parking stalls plus 45 parking stalls provided to meet the current parking requirements for 2100 Kalakaua, for a total of 160 required parking stalls. The applicant will be providing 187 parking stalls, 27 more stalls than required. If additional parking stalls are required by DPP beyond the 27 surplus stalls planned, additional parking stalls will be provided.

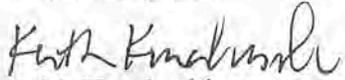
DPP was willing to reduce the required parking for 2100 Kalakaua based on a parking use study provided by the previous owner's consultant. The retail and restaurant facilities in Waikiki have a very strong pedestrian component from visitors and residents living in Waikiki and limited parking demand.

The Applicant's traffic consultant has not prepared a Traffic Management Plan, however, typically a Traffic Management Plan and Construction Management Plan are made a condition of approval of the Waikiki Special District permit that will be applied for shortly.

Mr. Mike Magraudy
Page 5

Your letter and this response will be included in the Final EA.

Very truly yours,


Keith Kurahashi

cc: Department of Planning and Permitting
PACREP LLC

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-202
HONOLULU, HAWAII 96822

October 26, 2012

BUS. (808) 988-2231

FAX. (808) 988-1140

E-mail: kkurahashi@hawaii.rr.com

Mr. Mike Magraudy
2115 Ala Wai Boulevard, PH#3
Honolulu, Hawaii 96815

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Mr. Magraudy:

This letter serves as a supplement and update to our previous letter to you regarding the Draft Environmental Assessment (“DEA”) for the 2121 Kuhio Avenue Project (“Project”).

The Pre-Final EA for the project has been revised and the Final EA provides a shadow study for the ewa/diamond head oriented building. See enclosed cd, Shadow Study (if you require hard copies of the photos, please call me at 988-2231 or write to me at the above address). The Project design has been revised to reduce the length of the tower of the building by about 48 feet based on concerns presented on the DEA. This reduction in length will reduce the impact of shadows and impacts to ocean views from the Four Paddle. With a 350-foot height limit, many of the Four Paddle units will retain an ocean view.

Shadow Study

Based on our shadow study (enclosed in cd), the Project with an ewa/diamond head orientation will shade the pool and deck area of the Four Paddle from about 2:00 pm on during the Equinox and will partially shade the Four Paddle barbecue deck area from about 2:00 pm to and fully shade the barbecue deck and pool area by 3:00 pm. and begin to shade the pool area from 3:00 pm on. During the Winter Solstice the Project will partially shade the barbecue deck area from about 3:00 pm and begin to shade a small portion of the pool area from about 4:00 pm. The Four Paddle pool and deck area will not be affected during the Summer Solstice.

This ewa/diamond head orientation affects the block between Kālaimoku Street and Launiu Street during the Winter Solstice, casting a shadow. The Project will partially shade this area from 12:00 pm and moves across this area fully shading the Kūhiō frontage at about 1:00 pm and partially shading it at 2:00 pm with less shading at 4:00 pm with the shadow clearing the property just after 4:00 pm to after 3:00 pm. This block is not affected during the Equinox and the Summer Solstice.

The Project with an ewa/diamond head orientation will cast a shadow over a small portion of the northern corner of Ft. DeRussy from before 8:00 am to 9:00 am during the Summer Solstice. These early morning shadows should have minimal impact on Ft. DeRussy and the

Mr. Mike Magraudy

Page 2

growth and development of the trees at Ft. DeRussy. Ft. DeRussy is not affected during the Equinox and Winter Solstice.

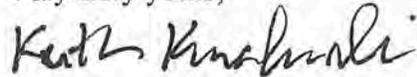
The mauka/makai orientation has less of an impact on the Four Paddle related to shadows during the Equinox with will shades cast over the barbecue deck area from about 2:00 pm and will cover most of the barbecue deck and a small portion of half of the pool and deck area from 3:00 pm, covering most of the barbecue deck and the entire pool and deck area at from about 4:00 pm. During the Winter Solstice the Project will shade a small portion of the barbecue area from 4:00 pm. During the Summer Solstice, this orientation will not affect the pool and deck area.

The mauka/makai orientation does not affect the block between Kālainoku Street and Launiu Street during the Summer Solstice and the Equinox. During the Winter Solstice, the Project will shade shadows affect portions of this block from 12:00 pm until 3:00 pm.

The mauka/makai orientation during the Summer Solstice, similar to the ewa/diamond head orientation will cast a shadow overshade a small portion of the northern corner of Ft. DeRussy from before about 8:00 am to 9:00 am. These early morning shadows should have minimal impact on Ft. DeRussy and the growth and development of the trees at Ft. DeRussy. Ft. DeRussy is not affected during the Equinox and Winter Solstice.

This response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

Encl.

cc: Department of Planning and Permitting
PACREP LLC

August 19, 2012

Kusao & Kurahashi, Inc.
2752 Woodlawn Drive
Suite 5-202
Honolulu, HI 96822

Gentlemen:

As a many years resident of 4 Paddle condo, which is directly across the street, 2140 Kuhio, I have very strong opposition to the positioning of the proposed 2121 Kuhio tower project.

With such a wide parallel ocean-facing building it destroys the environment of open space for sky, ocean, and park views, thus totally obliterating all rainbow and sunset views and casting shadow over the entire neighborhood.

The additional vehicles will create bumper-to-bumper traffic nightmare for an already busy Kuhio street and with the limited number of parking spaces it most likely will create more parking problems.

With the additional 459 units it brings into question the sewage and water adequacy. The sewer system is under constant repair already, how can it accommodate so many additional units?

Real estate values have dropped in the entire neighborhood with news of the proposed building positioning, and even more than because of the economy downturn. This also discourages further redevelopment along Launiu Steet all the way back to the Ala Wai Boulevard.

Thank you so much for considering our concerns, and with deep appreciation.



Martin Sharp, RPR
2140 Kuhio Ave.
Suite 2502
Honolulu, HI 96815

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

MANOA MARKET PLACE
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E-Mail: kkurahashi@hawaii.nn.com

September 11, 2012

Mr. Martin Sharp, RPR
2140 Ala Wai Boulevard, #2502
Honolulu, Hawaii 96815

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Mr. Sharp:

Thank you for your letter of August 19, 2012 regarding the Draft Environmental Assessment ("DEA") for the 2121 Kuhio Avenue Project ("Project").

We appreciate your comments and offer the following responses:

1. The proposed building orientation and design was developed to implement Waikiki Special Design District (WSDD) Guidelines.

The WSDD Guidelines section that includes "Orientation and Form" and establishes the guideline for the mauka/makai orientation is 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 following 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" 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.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalakaua Avenue and from Kuhio Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian accessways into and through Waikiki. This ewa/diamond head orientation is also sensitive to protection of public views from the Gateway to Waikiki located at Kalakaua Avenue and Ala Moana Boulevard and from the open space at Fort DeRussy. A volume study (Appendix VI Building Orientation – Photographic Analysis in the Final EA) on photographs of views from these locations have been prepared comparing the impacts from two building designs (enclosed), one with a mauka/makai building orientation and one with the proposed ewa/diamond head building orientation. The ewa/diamond head building orientation has significantly less visual impact along these important public view corridors except for one view at the corner of Kalakaua Avenue and Kalaimoku Street. The structure has a narrower face with the ewa/diamond head orientation than with a mauka/makai orientation in all but one of the viewpoints along Kalakaua Avenue and Kuhio Avenue. The view from the Gateway to Waikiki at Kalakaua Avenue and Ala Moana Boulevard is also less impacted with the ewa/diamond head building orientation.

A view from the open space at Fort DeRussy shows that the visual impact with either orientation is about the same.

At the request of the Department of Planning and Permitting (DPP) the Building Orientation – Photographic Analysis also shows views from Kalaimoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as

significant public views **mauka views** at certain other streets located mauka of Kuhio Avenue.

The ewa/diamond head orientation has also allowed us to provide the widest possible uninterrupted public open space along Kuhio Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kuhio Avenue as possible and would have been significantly wider to accommodate a similar amount of floor area and not located above and within the proposed parking podium.

The concept of “building forms which produce narrow towers are preferred” is supported by the Project as well. The additional height allows the applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level. 1.

2. A shadow study (enclosed) is included in the Final EA and the narrative for that shadow study is provided below:

“Based on our shadow study, the Project with an ewa/diamond head orientation will shade the pool and deck area of the Four Paddle from about 2:00 pm on during the Equinox and partially shade the deck area from 2:00 pm to 3:00 pm and begin to shade the pool area from 3:00 pm on during the Winter Solstice. The Four Paddle pool and deck area will not be affected during the Summer Solstice.

This ewa/diamond head orientation affects the block between Kalaimoku Street and Launiu Street during the Winter Solstice, casting a shadow from 12:00 pm to after 3:00 pm. This block is not affected during the Equinox and the Summer Solstice.

The Project with an ewa/diamond head orientation will cast a shadow over a small portion of the northern corner of Ft. DeRussy from before 8:00 am to 9:00 am. These early morning shadows should have minimal impact on Ft. DeRussy and the growth and development of the trees at Ft. DeRussy.

The mauka/makai orientation has less of an impact on the Four Paddle related to shadows during the Equinox with shadows cast over the half of the pool and deck area from 3:00 pm, covering the entire pool and deck at about 4:00 pm. During the Winter Solstice, this orientation will not affect the pool and deck area.

The mauka/makai orientation does not affect the block between Kalaimoku Street and Launiu Street during the Summer Solstice and the Equinox. During the Winter Solstice, shadows affect portions of this block from 12:00 pm until 3:00 pm.

The mauka/makai orientation, similar to the ewa/diamond head orientation will cast a shadow over a small portion of the northern corner of Ft. DeRussy from before 8:00 am to 9:00 am. These early morning shadows should have minimal impact on Ft. DeRussy and the growth and development of the trees at Ft. DeRussy.”

3. The Traffic Impact Report for the Project concluded that “... with the implementation of the proposed recommendation including the elimination or relocation of the existing drop-off area adjacent to the project site, staging and loading areas within and near the project site, traffic operations in the vicinity are anticipated to continue operating at levels of service similar to those without project conditions.” The Project will not have a significant impact on traffic operations in the area.
4. The parking requirement for the Project, based on 459 hotel rooms (no "lock-out" units planned) and accessory uses at one stall per four units is 115 parking stalls plus 45 parking stalls provided to meet the current parking requirements for 2100 Kalakaua, for a total of 160 required parking stalls. The applicant will be providing 187 parking stalls, 27 more stalls than required.
5. The Department of Planning and Permitting approved a Sewer Connection Application, on January 17, 2012, for the 459-unit condo hotel development conditioned upon the connection to the 20-inch sewer line in Kūhiō Avenue at the owner's expense and construction plans being submitted for review and approval. The existing municipal sewer system is adequate to accommodate the Project.

In a letter dated November 16, 2011, Board of Water Supply determined that the existing water system is adequate to handle either of two options presented at the time, Option A for 384 hotel condo suites and hotel residences, commercial, restaurant and office space or Option B for 526 hotel condo suites and hotel residences, commercial, restaurant and office space.

6. The Applicant is concerned about the surrounding property owners' fears, and will do its best to develop a successful Project that considers the well-being of the general public. This Project will provide an improvement through ground-level beautification that will upgrade the lot and encourage other properties nearby to redevelop as well, thereby raising the quality of real estate in the area and increasing property values.

Mr. Martin Sharp
Page 5

Your letter and this response will be included in the Final EA.

Very truly yours,

A handwritten signature in black ink that reads "Keith Kurahashi". The signature is written in a cursive style with a small flourish at the end.

Keith Kurahashi

Encls.

cc: Department of Planning and Permitting
PACREP LLC

October 8th 2012

Kusao & Kurahashi, Inc.
Planning and Zoning Consultants
2752 Woodlawn Dr. Suite 5-202
Honolulu, HI 96822

Mr. David K. Tanoue
Director of Department of Planning and Permitting
City and County of Honolulu
650 South King St. 7th Fl.
Honolulu, HI 96813

Office of Environmental Quality Control – State of Hawaii
State Office Tower, Room 702
235 S. Beretania St.
Honolulu, HI 96813

Subject: 2121 Kuhio Development

Dear Sir/ Madam,

I am writing with reference to the response letter from Kusao and Kurahashi, Inc. dated 09-11-12. The response does not fully address the concerns I mentioned in my letter dated 08-19-12, enclosed with this letter.

The proposed towering extensive building at 2121 Kuhio Ave. will cause significant environmental destruction in the neighborhood, and add a nightmarish surge of traffic and parking problems to the area. This proposed new building with over 450 units will undoubtedly put tremendous pressures on the already vulnerable sewage and water system.

The photos enclosed with your letter does not comply with the DEA Site Plan. Apparently, there is a significant inconsistency between the DEA Site Plan and the photos I received. A new DEA site plan should be submitted for both public and DPP review. In addition, a full Environmental Impact Statement should be implemented.

I support the new jobs and tax revenues that this project will generate. However, I do not approve of the orientation and enormity of the building being proposed.

I request more information from you since the rebuttal point in your letter does not satisfy my concerns. Thank you for your renewed consideration in this matter.

With much appreciation,

Martin Sharp

Martin Sharp, RPR
2140 Kuhio Ave. #2502
Honolulu, HI 96815

August 19, 2012

Office of the Environmental Quality Control – State of Hawaii
State Office Tower, Room 702
235 South Beretania Street
Honolulu, HI 96815

Attention: Hon. David K. Tanoue, Director

As a many years resident of 4 Paddle condo, which is directly across the street, 2140 Kuhio, I have very strong opposition to the positioning of the proposed 2121 Kuhio tower project.

With such a wide parallel ocean-facing building it destroys the environment of open space for sky, ocean, and park views, thus totally obliterating all rainbow and sunset views and casting shadow over the entire neighborhood.

The additional vehicles will create bumper-to-bumper traffic nightmare for an already busy Kuhio street and with the limited number of parking spaces it most likely will create more parking problems.

With the additional 459 units it brings into question the sewage and water adequacy. The sewer system is under constant repair already, how can it accommodate so many additional units?

Real estate values have dropped in the entire neighborhood with news of the proposed building positioning, and even more than because of the economy downturn. This also discourages further redevelopment along Launiu Steet all the way back to the Ala Wai Boulevard.

Thank you so much for considering our concerns, and with deep appreciation.

Martin Sharp, RPR
2140 Kuhio Ave. *APT 2502*
Honolulu, HI 96815

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

MANOA MARKET PLACE
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E-Mail: kkurahashi@hawaii.rr.com

September 11, 2012

Mr. Martin Sharp, RPR
2140 Ala Wai Boulevard, #2502
Honolulu, Hawaii 96815

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Mr. Sharp:

Thank you for your letter of August 19, 2012 regarding the Draft Environmental Assessment ("DEA") for the 2121 Kuhio Avenue Project ("Project").

We appreciate your comments and offer the following responses:

1. The proposed building orientation and design was developed to implement Waikiki Special Design District (WSDD) Guidelines.

The WSDD Guidelines section that includes "Orientation and Form" and establishes the guideline for the mauka/makai orientation is 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 following 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" 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.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalakaua Avenue and from Kuhio Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian accessways into and through Waikiki. This ewa/diamond head orientation is also sensitive to protection of public views from the Gateway to Waikiki located at Kalakaua Avenue and Ala Moana Boulevard and from the open space at Fort DeRussy. A volume study (Appendix VI Building Orientation – Photographic Analysis in the Final EA) on photographs of views from these locations have been prepared comparing the impacts from two building designs (enclosed), one with a mauka/makai building orientation and one with the proposed ewa/diamond head building orientation. The ewa/diamond head building orientation has significantly less visual impact along these important public view corridors except for one view at the corner of Kalakaua Avenue and Kalaimoku Street. The structure has a narrower face with the ewa/diamond head orientation than with a mauka/makai orientation in all but one of the viewpoints along Kalakaua Avenue and Kuhio Avenue. The view from the Gateway to Waikiki at Kalakaua Avenue and Ala Moana Boulevard is also less impacted with the ewa/diamond head building orientation.

A view from the open space at Fort DeRussy shows that the visual impact with either orientation is about the same.

At the request of the Department of Planning and Permitting (DPP) the Building Orientation – Photographic Analysis also shows views from Kalaimoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as

significant public views **mauka views** at certain other streets located mauka of Kuhio Avenue.

The ewa/diamond head orientation has also allowed us to provide the widest possible uninterrupted public open space along Kuhio Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kuhio Avenue as possible and would have been significantly wider to accommodate a similar amount of floor area and not located above and within the proposed parking podium.

The concept of “building forms which produce narrow towers are preferred” is supported by the Project as well. The additional height allows the applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level. 1.

2. A shadow study (enclosed) is included in the Final EA and the narrative for that shadow study is provided below:

“Based on our shadow study, the Project with an ewa/diamond head orientation will shade the pool and deck area of the Four Paddle from about 2:00 pm on during the Equinox and partially shade the deck area from 2:00 pm to 3:00 pm and begin to shade the pool area from 3:00 pm on during the Winter Solstice. The Four Paddle pool and deck area will not be affected during the Summer Solstice.

This ewa/diamond head orientation affects the block between Kalaimoku Street and Launiu Street during the Winter Solstice, casting a shadow from 12:00 pm to after 3:00 pm. This block is not affected during the Equinox and the Summer Solstice.

The Project with an ewa/diamond head orientation will cast a shadow over a small portion of the northern corner of Ft. DeRussy from before 8:00 am to 9:00 am. These early morning shadows should have minimal impact on Ft. DeRussy and the growth and development of the trees at Ft. DeRussy.

The mauka/makai orientation has less of an impact on the Four Paddle related to shadows during the Equinox with shadows cast over the half of the pool and deck area from 3:00 pm, covering the entire pool and deck at about 4:00 pm. During the Winter Solstice, this orientation will not affect the pool and deck area.

The mauka/makai orientation does not affect the block between Kalaimoku Street and Launiu Street during the Summer Solstice and the Equinox. During the Winter Solstice, shadows affect portions of this block from 12:00 pm until 3:00 pm.

The mauka/makai orientation, similar to the ewa/diamond head orientation will cast a shadow over a small portion of the northern corner of Ft. DeRussy from before 8:00 am to 9:00 am. These early morning shadows should have minimal impact on Ft. DeRussy and the growth and development of the trees at Ft. DeRussy.”

3. The Traffic Impact Report for the Project concluded that “... with the implementation of the proposed recommendation including the elimination or relocation of the existing drop-off area adjacent to the project site, staging and loading areas within and near the project site, traffic operations in the vicinity are anticipated to continue operating at levels of service similar to those without project conditions.” The Project will not have a significant impact on traffic operations in the area.
4. The parking requirement for the Project, based on 459 hotel rooms (no "lock-out" units planned) and accessory uses at one stall per four units is 115 parking stalls plus 45 parking stalls provided to meet the current parking requirements for 2100 Kalakaua, for a total of 160 required parking stalls. The applicant will be providing 187 parking stalls, 27 more stalls than required.
5. The Department of Planning and Permitting approved a Sewer Connection Application, on January 17, 2012, for the 459-unit condo hotel development conditioned upon the connection to the 20-inch sewer line in Kūhiō Avenue at the owner's expense and construction plans being submitted for review and approval. The existing municipal sewer system is adequate to accommodate the Project.

In a letter dated November 16, 2011, Board of Water Supply determined that the existing water system is adequate to handle either of two options presented at the time, Option A for 384 hotel condo suites and hotel residences, commercial, restaurant and office space or Option B for 526 hotel condo suites and hotel residences, commercial, restaurant and office space.

6. The Applicant is concerned about the surrounding property owners' fears, and will do its best to develop a successful Project that considers the well-being of the general public. This Project will provide an improvement through ground-level beautification that will upgrade the lot and encourage other properties nearby to redevelop as well, thereby raising the quality of real estate in the area and increasing property values.

Mr. Martin Sharp
Page 5

Your letter and this response will be included in the Final EA.

Very truly yours,


Keith Kurahashi

Encls.

cc: Department of Planning and Permitting
PACREP LLC

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-202
HONOLULU, HAWAII 96822
October 26, 2012

BUS. (808) 988-2231
FAX. (808) 988-1140
E-mail: kkurahashi@hawaii.rr.com

Mr. Martin Sharp, RPR
2140 Ala Wai Boulevard, #2502
Honolulu, Hawaii 96815

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Mr. Sharp:

Thank you for your letter of October 8, 2012 regarding the Draft Environmental Assessment ("DEA") for the 2121 Kuhio Avenue Project ("Project").

We appreciate your comments and offer the following responses:

1. The Final EA and comments received to date from the agencies indicate that environmental impacts from the Project will not be significant. Your concerns related to impacts related to traffic, parking, sewer demand and water demand have been addressed in our earlier letter to you dated September 12, 2012.
2. The Pre-Final EA for the project has been revised and the Final EA provides ewa/diamond head oriented building photos that are consistent with the revised plans in regard to both design and building longitude. See enclosed cd, Gateway Views (if you require hard copies of the photos, please call me at 988-2231 or write to me at the above address). The Project design has been revised to reduce the length of the tower of the building by about 48 feet based on concerns presented on the DEA. This reduction in length will reduce the impact of shadows and impacts to ocean views for the Four Paddle. With a 350-foot height limit, many of the Four Paddle units will retain an ocean view. A revised mauka/makai oriented building design has also been provided. The tower design footprint on the site for both the revised ewa/diamond head oriented building and the revised mauka/makai oriented building is provided in the enclosed Gateway Views.
3. The Final EA and comments received to date from the agencies indicate that environmental impacts from the Project will not be significant. A similar proposal by a previous property owner received a Finding of No Significant Impact (FONSI) for that Final EA. Concerns from the neighboring Four Paddles residents and a few other neighbors related to building orientation and visual impact to private views have been addressed in the Final EA. The Applicant feels that a full Environmental Impact Statement is not warranted. The Applicant further feels that a FONSI is warranted for this Project.

4. The proposed building orientation and design was developed to implement Waikiki Special Design District (WSDD) Guidelines.

The WSDD Guidelines section that includes “Orientation and Form” and establishes the guideline for the mauka/makai orientation is 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 following 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” 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.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalākaua Avenue and from Kūhiō Avenue minimizing impact to the

view corridors along these two major vehicular and pedestrian access ways into and through Waikīkī.

The proposed ewa/diamond head building orientation is also sensitive to the need to protect public views from the Gateway to Waikīkī located at Kalākaua Avenue and Ala Moana Boulevard. A volume study on photographs of views from these locations have been prepared comparing the visual impact of two building designs, one with a mauka/makai orientation and one with the proposed building design in an ewa/diamond head orientation. See Gateway Views, enclosed cd, included in the Final EA as Appendix VI, Building Orientation – Photographic Analysis.

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalākaua Avenue and from Kūhiō Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian access ways into and through Waikīkī. This ewa/diamond head orientation is also sensitive to protection of public views from the Gateway to Waikiki located at Kalākaua Avenue and Ala Moana Boulevard. A volume study (enclosed cd, Gateway Views) on photographs of views from these locations has been prepared comparing the impacts from two building designs (enclosed), one with a mauka/makai building orientation and one with the proposed ewa/diamond head building orientation. The ewa/diamond head building orientation has significantly less visual impact along these important public view corridors except for one view at the corner of Kalākaua Avenue and Kālainmoku Street and two views looking ewa along Kūhiō Avenue. The structure has a narrower face with the ewa/diamond head orientation than with a mauka/makai orientation in all but three of the viewpoints along Kalākaua Avenue and Kūhiō Avenue. The view from the Gateway to Waikiki at Kalākaua Avenue and Ala Moana Boulevard is also less impacted with the ewa/diamond head building orientation.

The viewpoint at the open space at Fort DeRussy shows that the visual impact is greater with the ewa/diamond head orientation.

At the request of DPP the Building Orientation – Photographic Analysis (Appendix VI) also shows views from Kālainmoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two street corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as significant public views the mauka views at certain other streets located mauka of Kūhiō Avenue.

The ewa/diamond head orientation has also allowed us to provide the widest possible uninterrupted public open space along Kūhiō Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kūhiō Avenue as possible and would have been significantly wider to accommodate a similar amount of floor area.

The concept of “building forms which produce narrow towers are preferred” is supported by the Project as well. The additional height allows the applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

Shadow Study

We have also enclosed (cd) a revised Shadow Study. Based on our shadow study (enclosed in cd), the Project with an ewa/diamond head orientation will shade the pool and deck area of the Four Paddle from about 2:00 pm on during the Equinox and will partially shade the Four Paddle barbecue deck area from about 2:00 pm to and fully shade the barbecue deck and pool area by 3:00 pm. and begin to shade the pool area from 3:00 pm on. During the Winter Solstice the Project will partially shade the barbecue deck area from about 3:00 pm and begin to shade a small portion of the pool area from about 4:00 pm. The Four Paddle pool and deck area will not be affected during the Summer Solstice.

This ewa/diamond head orientation affects the block between Kālainmoku Street and Launiu Street during the Winter Solstice, casting a shadow. The Project will partially shade this area from 12:00 pm and moves across this area fully shading the Kūhiō frontage at about 1:00 pm and partially shading it at 2:00 pm with less shading at 4:00 pm with the shadow clearing the property just after 4:00 pm to after 3:00 pm. This block is not affected during the Equinox and the Summer Solstice.

The Project with an ewa/diamond head orientation will cast a shadow over a small portion of the northern corner of Ft. DeRussy from before 8:00 am to 9:00 am during the Summer Solstice. These early morning shadows should have minimal impact on Ft. DeRussy and the growth and development of the trees at Ft. DeRussy. Ft. DeRussy is not affected during the Equinox and Winter Solstice.

The mauka/makai orientation has less of an impact on the Four Paddle related to shadows during the Equinox with will shade shadows cast over the barbecue deck area from about 2:00 pm and will cover most of the barbecue deck and a small portion of half of the pool and deck area from 3:00 pm, covering most of the barbecue deck and the entire pool and deck area from about 4:00 pm. During the Winter Solstice the Project will shade a small portion of the barbecue area from 4:00 pm. During the Summer Solstice, this orientation will not affect the pool and deck area.

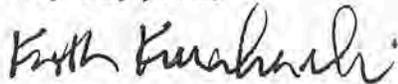
The mauka/makai orientation does not affect the block between Kālainmoku Street and Launiu Street during the Summer Solstice and the Equinox. During the Winter Solstice, the Project will shade shadows affect portions of this block from 12:00 pm until 3:00 pm.

Mr. Martin Sharp
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The mauka/makai orientation during the Summer Solstice, similar to the ewa/diamond head orientation will cast a shadow overshade a small portion of the northern corner of Ft. DeRussy from before about 8:00 am to 9:00 am. These early morning shadows should have minimal impact on Ft. DeRussy and the growth and development of the trees at Ft. DeRussy. Ft. DeRussy is not affected during the Equinox and Winter Solstice.

This response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

Encl.

cc: Department of Planning and Permitting
PACREP LLC

Paul Will, Shinobu Will

2140 Kuhio Ave, #1902

Honolulu, HI 96815

Kusao & Kurahashi Inc.

2752 Woodlawn Drive, Suite 5-202

Honolulu, HI 26822

August 19, 2012

To whom it may concern:

Re: Response to 2121 Kuhio Avenue Draft Environmental Assessment (July 6, 2012)

As a local resident, I am concerned about a condo project at 2121 Kuhio Avenue. There are several reasons caused by built new condo, such as severe traffic, not enough parking, and impair scenery.

Especially, I am worried about a view at Waikiki, since here is a tourist place. Therefore, it is not only neighbors' issue. Waikiki supposed to be a beautiful view place. Condominiums are the kind of public assets that cannot be separated from the areas they occupy.

Above the reason, I would like you to rethink of the building orientation, height or size. Please do not "just build" and have perspective as a third party in a neutral way.

Thank you,

Signature



Paul Will, Shinobu Will

Cc: Office of Environmental Quality Control

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

MANOA MARKET PLACE
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September 11, 2012

Mr. Paul Will
Mr. Shinobu Will
2140 Ala Wai Boulevard, #1902
Honolulu, Hawaii 96815

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Mr. Paul Will and Mr. Shinobu Will:

Thank you for your letter of August 19, 2012 regarding the Draft Environmental Assessment ("DEA") for the 2121 Kuhio Avenue Project ("Project").

We appreciate your comments and offer the following responses:

1. The Traffic Impact Report for the Project concluded that "... with the implementation of the proposed recommendation including the elimination or relocation of the existing drop-off area adjacent to the project site, staging and loading areas within and near the project site, traffic operations in the vicinity are anticipated to continue operating at levels of service similar to those without project conditions." The Project will not have a significant impact on traffic operations in the area.
2. The parking requirement for the Project, based on 459 hotel rooms (no "lock-out" units planned) and accessory uses at one stall per four units is 115 parking stalls plus 45 parking stalls provided to meet the current parking requirements for 2100 Kalakaua, for a total of 160 required parking stalls. The applicant will be providing 187 parking stalls, 27 more stalls than required.
3. The proposed building orientation and design was developed to implement Waikiki Special Design District (WSDD) Guidelines.

The WSDD Guidelines section that includes "Orientation and Form" and establishes the guideline for the mauka/makai orientation is 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 following 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” 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.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalakaua Avenue and from Kuhio Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian accessways into and through Waikiki. This ewa/diamond head orientation is also sensitive to protection of public views from the Gateway to Waikiki located at Kalakaua Avenue and Ala Moana Boulevard and from the open space at Fort DeRussy. A volume study (Appendix VI Building Orientation – Photographic Analysis in the Final EA) on photographs of views from these locations have been prepared comparing the impacts from two building designs (enclosed), one with a mauka/makai building orientation and one with the proposed ewa/diamond head building orientation. The ewa/diamond head building orientation has significantly less visual impact along these important public view corridors except for one view at the corner of Kalakaua Avenue and Kalaimoku Street. The structure has a narrower face with the ewa/diamond head orientation than with a mauka/makai orientation in all but one of the viewpoints along Kalakaua Avenue and

Kuhio Avenue. The view from the Gateway to Waikiki at Kalakaua Avenue and Ala Moana Boulevard is also less impacted with the ewa/diamond head building orientation.

A view from the open space at Fort DeRussy shows that the visual impact with either orientation is about the same.

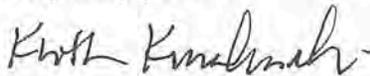
At the request of the Department of Planning and Permitting (DPP) the Building Orientation – Photographic Analysis also shows views from Kalaimoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as significant public views **mauka views** at certain other streets located mauka of Kuhio Avenue.

The ewa/diamond head orientation has also allowed us to provide the widest possible uninterrupted public open space along Kuhio Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kuhio Avenue as possible and would have been significantly wider to accommodate a similar amount of floor area and not located above and within the proposed parking podium.

The concept of “building forms which produce narrow towers are preferred” is supported by the Project as well. The additional height allows the applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

Your letter and this response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

Encls.

cc: Department of Planning and Permitting
PACREP LLC

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-202
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October 26, 2012

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Mr. Paul Will
Mr. Shinobu Will
2140 Ala Wai Boulevard, #1902
Honolulu, Hawaii 96815

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Mr. Paul Will and Mr. Shinobu Will:

This letter serves as a supplement and update to our previous letter to you regarding the Draft Environmental Assessment ("DEA") for the 2121 Kuhio Avenue Project ("Project").

The Pre-Final EA for the project has been revised and the Final EA provides ewa/diamond head oriented building photos that are consistent with the revised plans in regard to both design and building orientation. See enclosed cd, Gateway Views (if you require hard copies of the photos, please call me at 988-2231 or write to me at the above address). The Project design has been revised to reduce the length of the tower of the building by about 48 feet based on concerns presented on the DEA. This reduction in length will reduce the impact of shadows and impacts to ocean views from the Four Paddle. With a 350-foot height limit, many of the Four Paddle units will retain an ocean view. A revised mauka/makai oriented building design has also been provided. The tower design footprint on the site for both the revised ewa/diamond head oriented building and the revised mauka/makai oriented building is provided in the enclosed Gateway Views.

Building Orientation

The proposed building orientation and design was developed to implement Waikiki Special Design District (WSDD) Guidelines.

The WSDD Guidelines section that includes "Orientation and Form" and establishes the guideline for the mauka/makai orientation is a subsection of "Building Design" which states as follows:

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As noted, the following 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” 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.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalākaua Avenue and from Kūhiō Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian access ways into and through Waikīkī.

The proposed ewa/diamond head building orientation is also sensitive to the need to protect public views from the Gateway to Waikīkī located at Kalākaua Avenue and Ala Moana Boulevard. A volume study on photographs of views from these locations have been prepared comparing the visual impact of two building designs, one with a mauka/makai orientation and one with the proposed building design in an ewa/diamond head orientation. See Gateway Views, enclosed cd, included in the Final EA as Appendix VI, Building Orientation – Photographic Analysis.

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalākaua Avenue and from Kūhiō Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian access ways into and through Waikīkī. This

ewa/diamond head orientation is also sensitive to protection of public views from the Gateway to Waikiki located at Kalākaua Avenue and Ala Moana Boulevard. A volume study (enclosed cd, Gateway Views) on photographs of views from these locations has been prepared comparing the impacts from two building designs (enclosed), one with a mauka/makai building orientation and one with the proposed ewa/diamond head building orientation. The ewa/diamond head building orientation has significantly less visual impact along these important public view corridors except for one view at the corner of Kalākaua Avenue and Kālaimoku Street and two views looking ewa along Kūhiō Avenue. The structure has a narrower face with the ewa/diamond head orientation than with a mauka/makai orientation in all but three of the viewpoints along Kalākaua Avenue and Kūhiō Avenue. The view from the Gateway to Waikiki at Kalākaua Avenue and Ala Moana Boulevard is also less impacted with the ewa/diamond head building orientation.

The viewpoint at the open space at Fort DeRussy shows that the visual impact is greater with the ewa/diamond head orientation.

At the request of DPP the Building Orientation – Photographic Analysis (Appendix VI) also shows views from Kālaimoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two street corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as significant public views the mauka views at certain other streets located mauka of Kūhiō Avenue.

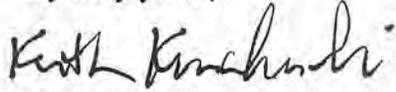
The ewa/diamond head orientation has also allowed us to provide the widest possible uninterrupted public open space along Kūhiō Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kūhiō Avenue as possible and would have been significantly wider to accommodate a similar amount of floor area.

The concept of “building forms which produce narrow towers are preferred” is supported by the Project as well. The additional height allows the applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

Mr. Paul Will and Mr. Shinobu Will
Page 4

This response will be included in the Final EA.

Very truly yours,

A handwritten signature in black ink, appearing to read "Keith Kurahashi". The signature is written in a cursive style with a prominent initial "K".

Keith Kurahashi

Encl.

cc: Department of Planning and Permitting
PACREP LLC

20 August 2012

To: Office of Environmental Quality Control -State of Hawaii
State Office Tower, Room 702, 235 South Beretania st
Honolulu, Hawaii 96813

From : David G. Johnston
2140 Kuhio Avenue, Apt 803
Honolulu, Hawaii 96815

Subject: 2121 Kuhio Tower Project

To whom it may concern,

I would like to express my concern about how the project is being presented to the members of the community. It is obvious to me that the space is being developed for maximizing revenue and profits with total disregard for the future of Waikiki. Waikiki has lost its Hawaiian charm and is now recognized as a large urban and overcrowded community, there is no resemblance to a Hawaiian theme as shown in the Waikiki Development Guide. I'm not against development of the site, just the size and massiveness of the building, are there no alternative designs that would have less impact on the surrounding area. Below are my concerns:

1. Traffic flow on Kalakaua and Kuhio is already strained during peak traffic periods, factor in the dozen or so parades that occur annually and Kuhio Avenue goes into gridlock for hours. Parking on Kalamoku, Lau'niu' and Kaiolu. It is normal to see vehicles double parked awaiting a car vacate this premium space. Where are the employees, the additional tourist and few new residents of 2121 Kuhio Tower expected to find parking?
2. Can the existing sewer system handle the increase in waste volume? It is obvious the city has not completely solved the previous problem in the Ala Wai canal sewage system.
3. My final point is the view from Saratoga and Ft DeRussey. This high rise wall is going to eliminate what is left of those mountain views available to the public from said areas.

Signed,


David G. Johnston

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

MAHOA MARKET PLACE
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September 11, 2012

Mr. David G. Johnston
2140 Ala Wai Boulevard, #803
Honolulu, Hawaii 96815

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Mr. Johnston:

Thank you for your letter of August 20, 2012 regarding the Draft Environmental Assessment ("DEA") for the 2121 Kuhio Avenue Project ("Project").

We appreciate your comments and offer the following responses:

The proposed building orientation and design was developed to implement Waikiki Special Design District (WSDD) Guidelines.

The WSDD Guidelines section that includes "Orientation and Form" and establishes the guideline for the mauka/makai orientation is 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 following 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" 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.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalakaua Avenue and from Kuhio Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian accessways into and through Waikiki. This ewa/diamond head orientation is also sensitive to protection of public views from the Gateway to Waikiki located at Kalakaua Avenue and Ala Moana Boulevard and from the open space at Fort DeRussy. A volume study (Appendix VI Building Orientation – Photographic Analysis in the Final EA) on photographs of views from these locations have been prepared comparing the impacts from two building designs (enclosed), one with a mauka/makai building orientation and one with the proposed ewa/diamond head building orientation. The ewa/diamond head building orientation has significantly less visual impact along these important public view corridors except for one view at the corner of Kalakaua Avenue and Kalaimoku Street. The structure has a narrower face with the ewa/diamond head orientation than with a mauka/makai orientation in all but one of the viewpoints along Kalakaua Avenue and Kuhio Avenue. The view from the Gateway to Waikiki at Kalakaua Avenue and Ala Moana Boulevard is also less impacted with the ewa/diamond head building orientation.

A view from the open space at Fort DeRussy shows that the visual impact with either orientation is about the same.

At the request of the Department of Planning and Permitting (DPP) the Building Orientation – Photographic Analysis also shows views from Kalaimoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as significant public views **mauka views** at certain other streets located mauka of Kuhio Avenue.

The ewa/diamond head orientation has also allowed us to provide the widest possible uninterrupted public open space along Kuhio Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kuhio Avenue as possible and would have been significantly wider to accommodate a similar amount of floor area and not located above and within the proposed parking podium.

The concept of "building forms which produce narrow towers are preferred" is supported by the Project as well. The additional height allows the applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

1. The Traffic Impact Report for the Project concluded that "... with the implementation of the proposed recommendation including the elimination or relocation of the existing drop-off area adjacent to the project site, staging and loading areas within and near the project site, traffic operations in the vicinity are anticipated to continue operating at levels of service similar to those without project conditions." The Project will not have a significant impact on traffic operations in the area.

The parking requirement for the Project, based on 459 hotel rooms (no "lock-out" units planned) and accessory uses at one stall per four units is 115 parking stalls plus 45 parking stalls provided to meet the current parking requirements for 2100 Kalakaua, for a total of 160 required parking stalls. The applicant will be providing 187 parking stalls, 27 more stalls than required.

Employees will be encouraged to use mass transportation, car pool, and other modes of transportation (walk, bicycles etc., as appropriate). Hotel guests, a few employees and any permanent residents will utilize the on-site parking.

2. The Department of Planning and Permitting approved a Sewer Connection Application, on January 17, 2012, for the 459-unit condo hotel development conditioned upon the connection to the 20-inch sewer line in Kūhiō Avenue at the owner's expense and construction plans being submitted for review and approval. The existing municipal sewer system is adequate to accommodate the Project.
3. As presented in Item No. 1, the tower orientation took into account the various views that were intended to be protected in accordance with the WSDD Guidelines and found that the ewa/diamond head orientation best served the public views described in the guidelines.

Mr. David G. Johnston
Page 4

Your letter and this response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

Encls.

cc: Department of Planning and Permitting
PACREP LLC

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-202
HONOLULU, HAWAII 96822
October 26, 2012

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Mr. David G. Johnston
2140 Ala Wai Boulevard, #803
Honolulu, Hawaii 96815

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Mr. Johnston:

This letter serves as a supplement and update to our previous letter to you regarding the Draft Environmental Assessment (“DEA”) for the 2121 Kuhio Avenue Project (“Project”).

The Pre-Final EA for the project has been revised and the Final EA provides ewa/diamond head oriented building photos that are consistent with the revised plans in regard to both design and building orientation. See enclosed cd, Gateway Views (if you require hard copies of the photos, please call me at 988-2231 or write to me at the above address). The Project design has been revised to reduce the length of the tower of the building by about 48 feet based on concerns presented on the DEA. This reduction in length will reduce the impact of shadows and impacts to ocean views from the Four Paddle. With a 350-foot height limit, many of the Four Paddle units will retain an ocean view. A revised mauka/makai oriented building design has also been provided. The tower design footprint on the site for both the revised ewa/diamond head oriented building and the revised mauka/makai oriented building is provided in the enclosed Gateway Views.

Building Orientation

The proposed building orientation and design was developed to implement Waikiki Special Design District (WSDD) Guidelines.

The WSDD Guidelines section that includes “Orientation and Form” and establishes the guideline for the mauka/makai orientation is 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 following 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” 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.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalākaua Avenue and from Kūhiō Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian access ways into and through Waikīkī.

The proposed ewa/diamond head building orientation is also sensitive to the need to protect public views from the Gateway to Waikīkī located at Kalākaua Avenue and Ala Moana Boulevard. A volume study on photographs of views from these locations have been prepared comparing the visual impact of two building designs, one with a mauka/makai orientation and one with the proposed building design in an ewa/diamond head orientation. See Gateway Views, enclosed cd, included in the Final EA as Appendix VI, Building Orientation – Photographic Analysis.

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalākaua Avenue and from Kūhiō Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian access ways into and through Waikīkī. This ewa/diamond head orientation is also sensitive to protection of public views from the Gateway to Waikiki located at Kalākaua Avenue and Ala Moana Boulevard. A volume study (enclosed cd,

Gateway Views) on photographs of views from these locations has been prepared comparing the impacts from two building designs (enclosed), one with a mauka/makai building orientation and one with the proposed ewa/diamond head building orientation. The ewa/diamond head building orientation has significantly less visual impact along these important public view corridors except for one view at the corner of Kalākaua Avenue and Kālaimoku Street and two views looking ewa along Kūhiō Avenue. The structure has a narrower face with the ewa/diamond head orientation than with a mauka/makai orientation in all but three of the viewpoints along Kalākaua Avenue and Kūhiō Avenue. The view from the Gateway to Waikiki at Kalākaua Avenue and Ala Moana Boulevard is also less impacted with the ewa/diamond head building orientation.

The viewpoint at the open space at Fort DeRussy shows that the visual impact is greater with the ewa/diamond head orientation.

At the request of DPP the Building Orientation – Photographic Analysis (Appendix VI) also shows views from Kālaimoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two street corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as significant public views the mauka views at certain other streets located mauka of Kūhiō Avenue.

The ewa/diamond head orientation has also allowed us to provide the widest possible uninterrupted public open space along Kūhiō Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kūhiō Avenue as possible and would have been significantly wider to accommodate a similar amount of floor area.

The concept of “building forms which produce narrow towers are preferred” is supported by the Project as well. The additional height allows the applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

Mr. David G. Johnston
Page 4

This response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

Encl.

cc: Department of Planning and Permitting
PACREP LLC

EARL THACKER, LTD.

SINCE 1930 A TRADITION IN HAWAII'S REAL ESTATE INDUSTRY
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Peter E. Thacker
President

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THACKERLTD@AOL.COM

August 20, 2012

Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-202
Honolulu, Hawaii 96822

Gentlemen:

**Re: THE DRAFT ENVIRONMENTAL ASSESSMENT FOR 2121 KUHIO TOWER
PROJECT**

I have reviewed the EA for 2121 Kuhio Tower Project and as a manager of 33 units at the Four Paddle Condominium, I would like to object on behalf of the owners I represent to the conclusions of the 2121 Kuhio Avenue Draft Environmental Assessment. (I represent Units 605, 703, 807, 903, 904, 908, 1007, 1009, 1011, 1306, 1311, 1401, 1403, 1501, 1503, 1504, 1506, 1602, 1708, 1811, 1911, 1912, 2005, 2102, 2106, 2108, 2109, 2110, 2209, 2302, 2304, 2402 and 2510).

On behalf of these owners, we would like to request that alternative solutions be considered that would enhance both the developer's plans, alternative solutions be identified that can take into account both this developer's desires, but also the input of the local community and neighborhood.

We are also asking that the Office of Environmental Quality Control consider alternative placement of the building that has been proposed by the developer. Previous plans, including the building orientation proposed by the previous developer would warrant further consideration in order to ensure the best solution for Waikiki is approved.

Sincerely,



Linda M. Rohr, R.A.

Cc: Office of Environmental Quality Control
235 South Beretania St.
State Office Tower, Room 702
Honolulu, Hawaii 96813

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

MANOA MARKET PLACE
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September 11, 2012

Ms. Linda M. Rohr, RA
1833 Kalakaua Avenue, Suite 609
Honolulu, Hawaii 96815

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Ms. Rohr:

Thank you for your letter of August 20, 2012 regarding the Draft Environmental Assessment ("DEA") for the 2121 Kuhio Avenue Project ("Project").

We appreciate your comments and offer the following responses:

1. The following alternatives are discussed in the Final EA:

A. NO ACTION

This alternative was considered and rejected as the applicant recently purchased this property and will need to develop it to provide a return on investment. The "no action" alternative is not an economically viable alternative.

B. DEVELOPMENT OF CONDOMINIUM UNITS

The applicant considered a development with luxury condominium units as was considered by the previous owner in the earlier FEA. Although the current market does not support the luxury condominium market at this time, at the time of completion this may be a potential market. The applicant in considering this use felt that it would be speculative on the luxury condominium market returning and the risk and carrying cost of this property should this market not return in a timely manner is not an acceptable risk.

**C. CONDO HOTEL DEVELOPMENT – EWA/DIAMOND HEAD
ORIENTATION**

One of the applicant's principals has past experience with a condo hotel and is comfortable with this market, having been involved with the Trump Tower Waikiki located two blocks away on Saratoga Street. Another consideration in pursuing the condo hotel was the significant reduction in hotel units in Waikīkī since 2003 and the potential loss of additional hotel units, based on proposed redevelopment projects in Waikīkī.

As discussed earlier, there is a need for additional hotel product in Waikīkī. Since 2003, there has been a significant reduction in hotel units, including the Ohana Hobron conversion of 596 hotel rooms to a 181-unit condominium (Windsor) and the net loss of 1,300 hotel rooms at the Waikiki Beach Walk redevelopment, totaling 1,896 hotel units. In addition, the proposed Princess Kaiulani/Diamond Head Tower redevelopment will result in the net loss of 430 hotel units and the International Market Place will result in the loss of an additional 358 hotel units at the Miramar Waikiki hotel. The total hotel units lost and to be lost will be 2,684 units.

The improvements in the Project are geared toward achieving the intent of the WSD. The new public open space at this corner lot will create an area for gathering and an important amenity for visitors and surrounding residents.

The proposed building orientation and design was developed to implement Waikiki Special Design District (WSDD) Guidelines.

The WSDD Guidelines section that includes “Orientation and Form” and establishes the guideline for the mauka/makai orientation is a subsection of “Building Design” which states as follows:

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

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

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A view from the open space at Fort DeRussy shows that the visual impact with either orientation is about the same.

At the request of the Department of Planning and Permitting (DPP) the Building Orientation – Photographic Analysis also shows views from Kalaimoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as significant public views mauka views at certain other streets located mauka of Kuhio Avenue.

The ewa/diamond head orientation has also allowed us to provide the widest possible uninterrupted public open space along Kuhio Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kuhio Avenue as possible and would have been significantly wider to accommodate a

similar amount of floor area and not located above and within the proposed parking podium.

The concept of “building forms which produce narrow towers are preferred” is supported by the Project as well. The additional height allows the applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing and proposed developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

D. CONDO HOTEL DEVELOPMENT – MAUKA/MAKAI ORIENTATION

A mauka/makai building orientation was considered, but based on the Waikiki Special District Guidelines and Building Orientation – Photographic Analysis in Appendix VI of this Final EA the ewa/diamond head orientation was selected.

As discussed in the previous section, the Waikiki Special District Design Guidelines section that includes “Orientation and Form” are intended to promote a design that responds to climate, relates to human scale and preserves **significant public views** (emphasis added).

The Project under this alternative would not affect any of the significant public views described in the previous section and in Section 21-9.80-3(a) of the Land Use Ordinance.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

A mauka/makai building orientation would not be sensitive to the need to protect public views from Kalakaua Avenue and from Kuhio Avenue. A mauka/makai orientation would have a greater impact on public views along these two major vehicular and pedestrian accessways into and through Waikiki. The mauka/makai building orientation would also have greater impact on public views than an ewa/diamond head orientation from the Gateway to Waikiki located at Kalakaua Avenue and Ala Moana Boulevard and from the open space at Fort DeRussy. A volume study (Appendix VI Building Orientation – Photographic Analysis in the Final EA) on photographs of views from these locations has been prepared comparing the impacts from two building designs, one with a

mauka/makai building orientation and one with an ewa/diamond head building orientation. The mauka/makai building orientation has a significantly greater visual impact along these important public view corridors except for one view at the corner of Kalakaua Avenue and Kalaimoku Street. The structure has a wider face with the mauka/makai orientation than with an ewa/diamond head orientation in all but one of the viewpoints along Kalakaua Avenue and Kuhio Avenue. The view from the Gateway to Waikiki at Kalakaua Avenue and Ala Moana Boulevard is also more impacted with the mauka/makai building orientation.

A view from the open space at Fort DeRussy shows that the visual impact with either orientation is about the same.

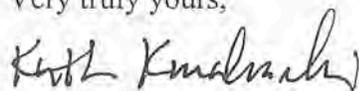
At the request of the Department of Planning and Permitting (DPP) the Building Orientation – Photographic Analysis also shows views from Kalaimoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as significant public views mauka views at certain other streets located mauka of Kuhio Avenue.

The mauka/makai orientation would not allow us to provide the widest possible uninterrupted public open space along Kuhio Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kuhio Avenue as possible and would have required been significantly wider to accommodate a similar amount of floor area.”

2. As discussed in Item No. 1, the building orientation was reviewed and the Applicant finds that the ewa/diamond head orientation best serves the public view points and view corridors proposed for protection in the WSDD Guidelines.

Your letter and this response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

cc: Department of Planning and Permitting
PACREP LLC

2140 Kuhio Avenue, #1506
Honolulu, HI 96815

August 20, 2012

Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-202
Honolulu, Hawaii 96822

**Re: THE DRAFT ENVIRONMENTAL ASSESSMENT FOR 2121 KUHIO
TOWER PROJECT**

Gentlemen:

As a local resident, I would like to object to the conclusions of the 2121 Kuhio Avenue Draft Environmental Assessment.

I would like to request that the Office of Environmental Quality Control investigate other options for the building orientation that has been proposed by the Developer.

I believe these other options, including the building orientation proposed by the previous developer warrant further consideration in order to ensure the best solution for Waikiki.

It would be desirable to consider all the alternative solutions, identify them so it would reflect both the developer's plans and that of the local community.

Sincerely,



Linda M. Rohr

Cc: Office of Environmental Quality Control
235 South Beretania St.
State Office Tower, Room 702
Honolulu, Hawaii 96813

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

MANOA MARKET PLACE
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September 11, 2012

Ms. Linda M. Rohr, RA
2140 Kuhio Avenue, #1506
Honolulu, Hawaii 96815

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Ms. Rohr:

Thank you for your letter of August 20, 2012 regarding the Draft Environmental Assessment ("DEA") for the 2121 Kuhio Avenue Project ("Project").

We appreciate your comments and offer the following responses:

1. The following alternatives are discussed in the Final EA:

"A. NO ACTION

This alternative was considered and rejected as the applicant recently purchased this property and will need to develop it to provide a return on investment. The "no action" alternative is not an economically viable alternative.

B. DEVELOPMENT OF CONDOMINIUM UNITS

The applicant considered a development with luxury condominium units as was considered by the previous owner in the earlier FEA. Although the current market does not support the luxury condominium market at this time, at the time of completion this may be a potential market. The applicant in considering this use felt that it would be speculative on the luxury condominium market returning and the risk and carrying cost of this property should this market not return in a timely manner is not an acceptable risk.

**C. CONDO HOTEL DEVELOPMENT – EWA/DIAMOND HEAD
ORIENTATION**

One of the applicant's principals has past experience with a condo hotel and is comfortable with this market, having been involved with the Trump Tower Waikiki located two blocks away on Saratoga Street. Another consideration in pursuing the condo hotel was the significant reduction in hotel units in Waikīkī since 2003 and the potential loss of additional hotel units, based on proposed redevelopment projects in Waikīkī.

As discussed earlier, there is a need for additional hotel product in Waikīkī. Since 2003, there has been a significant reduction in hotel units, including the Ohana Hobron conversion of 596 hotel rooms to a 181-unit condominium (Windsor) and the net loss of 1,300 hotel rooms at the Waikiki Beach Walk redevelopment, totaling 1,896 hotel units. In addition, the proposed Princess Kaiulani/Diamond Head Tower redevelopment will result in the net loss of 430 hotel units and the International Market Place will result in the loss of an additional 358 hotel units at the Miramar Waikiki hotel. The total hotel units lost and to be lost will be 2,684 units.

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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.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalakaua Avenue and from Kuhio Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian accessways into and through Waikiki. This ewa/diamond head orientation is also sensitive to protection of public views from the Gateway to Waikiki located at Kalakaua Avenue and Ala Moana Boulevard and from the open space at Fort DeRussy. A volume study (Appendix VI Building Orientation – Photographic Analysis in the Final EA) on photographs of views from these locations have been prepared comparing the impacts from two building designs (enclosed), one with a mauka/makai building orientation and one with the proposed ewa/diamond head building orientation. The ewa/diamond head building orientation has significantly less visual impact along these important public view corridors except for one view at the corner of Kalakaua Avenue and Kalaimoku Street. The structure has a narrower face with the ewa/diamond head orientation than with a mauka/makai orientation in all but one of the viewpoints along Kalakaua Avenue and Kuhio Avenue. The view from the Gateway to Waikiki at Kalakaua Avenue and Ala Moana Boulevard is also less impacted with the ewa/diamond head building orientation.

A view from the open space at Fort DeRussy shows that the visual impact with either orientation is about the same.

At the request of the Department of Planning and Permitting (DPP) the Building Orientation – Photographic Analysis also shows views from Kalaimoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as significant public views mauka views at certain other streets located mauka of Kuhio Avenue.

The ewa/diamond head orientation has also allowed us to provide the widest possible uninterrupted public open space along Kuhio Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kuhio Avenue as possible and would have been significantly wider to accommodate a

similar amount of floor area and not located above and within the proposed parking podium.

The concept of “building forms which produce narrow towers are preferred” is supported by the Project as well. The additional height allows the applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing and proposed developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

D. CONDO HOTEL DEVELOPMENT – MAUKA/MAKAI ORIENTATION

A mauka/makai building orientation was considered, but based on the Waikiki Special District Guidelines and Building Orientation – Photographic Analysis in Appendix VI of this Final EA the ewa/diamond head orientation was selected.

As discussed in the previous section, the Waikiki Special District Design Guidelines section that includes “Orientation and Form” are intended to promote a design that responds to climate, relates to human scale and preserves **significant public views** (emphasis added).

The Project under this alternative would not affect any of the significant public views described in the previous section and in Section 21-9.80-3(a) of the Land Use Ordinance.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

A mauka/makai building orientation would not be sensitive to the need to protect public views from Kalakaua Avenue and from Kuhio Avenue. A mauka/makai orientation would have a greater impact on public views along these two major vehicular and pedestrian accessways into and through Waikiki. The mauka/makai building orientation would also have greater impact on public views than an ewa/diamond head orientation from the Gateway to Waikiki located at Kalakaua Avenue and Ala Moana Boulevard and from the open space at Fort DeRussy. A volume study (Appendix VI Building Orientation – Photographic Analysis in the Final EA) on photographs of views from these locations has been prepared comparing the impacts from two building designs, one with a

mauka/makai building orientation and one with an ewa/diamond head building orientation. The mauka/makai building orientation has a significantly greater visual impact along these important public view corridors except for one view at the corner of Kalakaua Avenue and Kalaimoku Street. The structure has a wider face with the mauka/makai orientation than with an ewa/diamond head orientation in all but one of the viewpoints along Kalakaua Avenue and Kuhio Avenue. The view from the Gateway to Waikiki at Kalakaua Avenue and Ala Moana Boulevard is also more impacted with the mauka/makai building orientation.

A view from the open space at Fort DeRussy shows that the visual impact with either orientation is about the same.

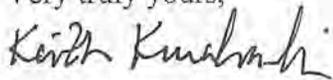
At the request of the Department of Planning and Permitting (DPP) the Building Orientation – Photographic Analysis also shows views from Kalaimoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as significant public views mauka views at certain other streets located mauka of Kuhio Avenue.

The mauka/makai orientation would not allow us to provide the widest possible uninterrupted public open space along Kuhio Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kuhio Avenue as possible and would have required been significantly wider to accommodate a similar amount of floor area.”

2. As discussed in Item No. 1, the building orientation was reviewed and the Applicant finds that the ewa/diamond head orientation best serves the public view points and view corridors proposed for protection in the WSDD Guidelines.

Your letter and this response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

Encls.

cc: Department of Planning and Permitting
PACREP LLC

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-202
HONOLULU, HAWAII 96822
October 26, 2012

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E-mail: kkurahashi@hawaii.rr.com

Ms. Linda M. Rohr, RA
1833 Kalakaua Avenue, Suite 609
Honolulu, Hawaii 96815

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Ms. Rohr:

This letter serves as a supplement and update to our previous letter to you regarding the Draft Environmental Assessment ("DEA") for the 2121 Kuhio Avenue Project ("Project").

The Pre-Final EA for the project has been revised and the Final EA provides ewa/diamond head oriented building photos that are consistent with the revised plans in regard to both design and building orientation. See enclosed cd, Gateway Views (if you require hard copies of the photos, please call me at 988-2231 or write to me at the above address). The Project design has been revised to reduce the length of the tower of the building by about 48 feet based on concerns presented on the DEA. This reduction in length will reduce the impact of shadows and impacts to ocean views from the Four Paddle. With a 350-foot height limit, many of the Four Paddle units will retain an ocean view. A revised mauka/makai oriented building design has also been provided. The tower design footprint on the site for both the revised ewa/diamond head oriented building and the revised mauka/makai oriented building is provided in the enclosed Gateway Views.

Building Orientation

The proposed building orientation and design was developed to implement Waikiki Special Design District (WSDD) Guidelines.

The WSDD Guidelines section that includes "Orientation and Form" and establishes the guideline for the mauka/makai orientation is 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 following 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” 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.

Another Waikiki Special District Design Guideline is found in the section on “Major Streets”, which states as follows:

“Kalakaua, Kuhio and Kapahulu Avenues, and Ala Wai and Ala Moana Boulevards, have been identified for their significance. They provide major vehicular and pedestrian accessways into and through Waikiki. These streets also function as view corridors, open spaces and public access.”

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalākaua Avenue and from Kūhiō Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian access ways into and through Waikīkī.

The proposed ewa/diamond head building orientation is also sensitive to the need to protect public views from the Gateway to Waikīkī located at Kalākaua Avenue and Ala Moana Boulevard. A volume study on photographs of views from these locations have been prepared comparing the visual impact of two building designs, one with a mauka/makai orientation and one with the proposed building design in an ewa/diamond head orientation. See Gateway Views, enclosed cd, included in the Final EA as Appendix VI, Building Orientation – Photographic Analysis.

The proposed ewa/diamond head building orientation is sensitive to the need to protect public views from Kalākaua Avenue and from Kūhiō Avenue minimizing impact to the view corridors along these two major vehicular and pedestrian access ways into and through Waikīkī. This ewa/diamond head orientation is also sensitive to protection of public views from the Gateway to Waikiki located at Kalākaua Avenue and Ala Moana Boulevard. A volume study (enclosed cd, Gateway Views) on photographs of views from these locations has been prepared comparing the

impacts from two building designs (enclosed), one with a mauka/makai building orientation and one with the proposed ewa/diamond head building orientation. The ewa/diamond head building orientation has significantly less visual impact along these important public view corridors except for one view at the corner of Kalākaua Avenue and Kālainmoku Street and two views looking ewa along Kūhiō Avenue. The structure has a narrower face with the ewa/diamond head orientation than with a mauka/makai orientation in all but three of the viewpoints along Kalākaua Avenue and Kūhiō Avenue. The view from the Gateway to Waikiki at Kalākaua Avenue and Ala Moana Boulevard is also less impacted with the ewa/diamond head building orientation.

The viewpoint at the open space at Fort DeRussy shows that the visual impact is greater with the ewa/diamond head orientation.

At the request of DPP the Building Orientation – Photographic Analysis (Appendix VI) also shows views from Kālainmoku Street and Launiu Street. In these views, the mauka/makai orientation has significantly less visual impact along these two street corridors. However, the views along these two streets are not considered significant public views and these corridors have not been designated as view corridors in the WSDD Guidelines. In fact the WSDD Guidelines has recognized as significant public views the mauka views at certain other streets located mauka of Kūhiō Avenue.

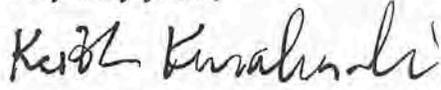
The ewa/diamond head orientation has also allowed us to provide the widest possible uninterrupted public open space along Kūhiō Avenue. A mauka/makai oriented tower would break this public open space since the tower would have to be situated as close to Kūhiō Avenue as possible and would have been significantly wider to accommodate a similar amount of floor area.

The concept of “building forms which produce narrow towers are preferred” is supported by the Project as well. The additional height allows the applicant to provide a narrower tower, as well as a narrower parking podium, with more parking levels, maximizing the public open space provided at the ground level. This greater public open space will provide visual relief from the built environment typically found fronting Kuhio Avenue with limited open space relief provided by existing developments. The recent amendments to the Waikiki Special District in the Land Use Ordinance (LUO) have created enticement to provide greater public open space and through the allowance of additional height up to 350 feet provided an opportunity to maximize public open space on the ground level.

Mr. Linda Rohr
Page 4

This response will be included in the Final EA.

Very truly yours,



Keith Kurahashi

Encl.

cc: Department of Planning and Permitting
PACREP LLC

**Montage Hawaii Realty, LLC 1888 Kalakaua Avenue C312
Honolulu, HI 96815**

October 12, 2012

TO:

Kusao & Kurahashi, Inc

Planning and Zoning Consultants

2752 Woodlawn Drive, Suite 5-102

Mr. David K Tanoue

Director of Department of Planning and Permitting

City and County of Honolulu

650 South King Street, 7th Floor

Honolulu, HI 96813

Office of Environmental Quality Control-State of Hawaii

State Office Tower, Room 702

235 Beretania Street

Honolulu, HI 96813

Subject: Draft Environmental Assessment: 2121 Kuhio Avenue Development

I am a real estate broker who lives in the Four Paddle and over the years have sold many ocean view units in this building.

My clients and I rely on the rental income of these units the primary benefit is the sweeping ocean view. I believe there are hundreds of owners in this building who also rely on this ocean view distinction. It is one of the only buildings in Waikiki with sweeping ocean views.

I have heard dozens of real estate agents over the years show property in this building and the word on the streets was always that the tiny lot across the street could one day be developed but that there was not enough room for parking to or safety issues to justify a large building. There was one plan for a thin building that turned sideways to allow only blocking partial view looking toward Ewa where there are already buildings. Even this building it was told would likely never be built because there was not enough land to justify it.

Many senior citizens have retired in this building because of the view.

Furthermore, Honolulu in the last 5 years has allowed very unattractive massive buildings that have bad elements for nature and for design. I am shocked at these buildings and how they lower the property values. They sell for high amounts and then end up half empty for years. Why not approve small buildings that are green buildings that are not so tall and have solar power and intentional community space rather than these eye sores?

I believe a full environmental impact should be done. I also believe this building should be stopped. A smaller mixed use shopping center with loft apartments, a movie theater, restaurant and something no more then 5-6 stories high is more appropriate for this land space.

Thank you,

Larry Tadlock, R

Broker in Charge, Montage Hawaii Realty, LLC

KUSAO & KURAHASHI, INC.

Planning and Zoning Consultants

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Mr. Larry Tadlock
Montage Hawaii Realty, LLC
1888 Kalakaua Avenue, C312
Honolulu, Hawaii 96815

**Subject: Draft Environmental Assessment
2121 Kuhio Avenue Development
Tax Map Key: 2-6-18: 10, 42, 43 and 52**

Dear Mr. Tadlock:

Thank you for your letter of October 12, 2012 regarding the Draft Environmental Assessment ("DEA") for the 2121 Kuhio Avenue Project ("Project").

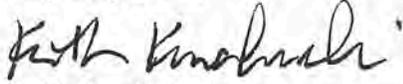
We appreciate your comments and offer the following responses:

1. The Project design has been revised to reduce the length of the tower of the building by about 48 feet based on concerns presented on the DEA. This reduction in length will reduce the impact to ocean views for the Four Paddle. With a 350-foot height limit, many of the Four Paddle units will retain an ocean view.
2. The smaller vacant lot is part of a larger joint developed lot that totals 3.525 acres, which is one of the larger lots in Waikiki. With this joint development and larger lot area to work with the building under the City's zoning code, the Land Use Ordinance (LUO) and the portion dealing with the Waikiki Special District a larger, taller building is permitted.
3. The Applicant is concerned about the surrounding property owners' fears, and will do its best to develop a successful first class Project that considers the well-being of the general public. This Project will provide an improvement through ground-level beautification that will upgrade the lot and encourage other properties nearby to redevelop as well, thereby raising the quality of real estate in the area and increasing property values.
4. With the cost of land and construction, typically new developments will normally develop a property to its full potential as allowed by zoning.
5. The previous development proposal was processed as an Environmental Assessment based on minimal environmental impacts and the adequacy of the existing infrastructure to support the development. Similarly, the environmental impacts with our proposed development are not expected to be significant and the existing infrastructure has proven to be adequate to support the proposed development.

Mr. Larry Tadlock
Page 2

Your letter and this response will be included in the Final EA.

Very truly yours,

A handwritten signature in black ink, appearing to read "Keith Kurahashi". The signature is written in a cursive style with a prominent initial "K".

Keith Kurahashi

cc: Department of Planning and Permitting
PACREP LLC

