DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU
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JAN 23 2018

KIRK CALDWELL
MAYOR

KATHY K. SOKUGAWA
ACTING DIRECTOR

TIMOTHY F. T. HIU
DEPUTY DIRECTOR

2017/ED-1(JY)

January 10, 2018

RECEIVED
18 JAN 10 P1:40
OFC. OF ENVIRONMENTAL QUALITY CONTROL

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

Dear Mr. Glenn:

SUBJECT:	Chapter 343, Hawaii Revised Statutes Final Environmental Assessment (EA)
Project:	King Kalakaua Plaza Renovation
Applicant:	Kalaimoku-Kuhio Development Corp. (John Manavian)
Agent:	PBR Hawaii & Associates, Inc. (Tom Schnell)
Location:	2080 Kalakaua Avenue - Waikiki
Tax Map Key:	2-6-016: 023 and 026
Proposal:	The Applicant proposes demolition of the existing four-story building and construction of a seven-story hotel with accessory uses. The existing underground parking structure will remain. The proposed project is a use within the Waikiki Special District which triggers Hawaii Environmental Policy Act, Chapter 343, Hawaii Revised Statues.
Determination:	Finding of No Significant Impact

Attached and incorporated by reference is the Final EA as prepared by the Applicant for the subject 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 finding in the next edition of The Environmental Notice on **January 23, 2018**. One hard copy of the Final EA, the Publication Form, and one disc containing both aforementioned documents are enclosed.

18-277

APPLICANT
PUBLICATION FORM

Project Name:	King Kalākaua Plaza Renovation
Project Short Name:	King Kalākaua Plaza Renovation
HRS §343-5 Trigger(s):	§343-5(a)(5): Proposed use within Waikīkī Special District
Island(s):	Oʻahu
Judicial District(s):	Honolulu
TMK(s):	2-6-016:023 and 2-6-016:026
Permit(s)/Approval(s):	Special District Permit (Major) Building Permit Sewer Connection Application Trenching Permit Grading Permit (if necessary) Street Usage Permit Modification to existing Joint Development Agreement (if necessary) Modification to existing Surface Encroachment Variance (if necessary)
Approving Agency:	City and County of Honolulu – Department of Planning and Permitting
Contact Name, Email, Telephone, Address	Joette Yago, Urban Design Branch 650 S. King Street, 7th Floor Honolulu, HI 96813 Phone: (808) 768-8020 Email: jyago@honolulu.gov.
Applicant:	Kalaimoku-Kuhio Development Corp.
Contact Name, Email, Telephone, Address	John M. Manavian 120 N. Robertson Boulevard Los Angeles, CA 90048 Phone: (310) 855-8484 Fax: (310) 652-8538 Email: tschnell@pbrhawaii.com
Consultant:	PBR HAWAII & Associates, Inc.
Contact Name, Email, Telephone, Address	Tom Schnell, Principal 1001 Bishop Street, Suite 650 Honolulu, HI 96813 Phone: (808) 521-5631 Fax: (808) 523-1402 Email: tschnell@pbrhawaii.com

Status (select one)	**Submittal Requirements**
____DEA-AFNSI	Submit 1) the approving agency notice of determination/transmittal letter on agency letterhead, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the DEA, and 4) a searchable PDF of the DEA; a 30-day comment period follows from the date of publication in the Notice.
_X_ FEA-FONSI	Submit 1) the approving agency notice of determination/transmittal letter on agency letterhead, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the FEA, and 4) a searchable PDF of the FEA; no comment period follows from publication in the Notice.
____ FEA-EISPN	Submit 1) the approving agency notice of determination/transmittal letter on agency letterhead, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the FEA, and 4) a searchable PDF of the FEA; a 30-day comment period follows from the date of publication in the Notice.
____ Act 172-12 EISPN ("Direct to EIS")	Submit 1) the approving agency notice of determination letter on agency letterhead and 2) this completed OEQC publication form as a Word file; no EA is required and a 30-day comment period follows from the date of publication in the Notice.
____ DEIS	Submit 1) a transmittal letter to the OEQC and to the approving agency, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the DEIS, 4) a searchable PDF of the DEIS, and 5) a

	searchable PDF of the distribution list; a 45-day comment period follows from the date of publication in the Notice.
____ FEIS	Submit 1) a transmittal letter to the OEQC and to the approving agency, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the FEIS, 4) a searchable PDF of the FEIS, and 5) a searchable PDF of the distribution list; no comment period follows from publication in the Notice.
____ FEIS Acceptance Determination	The approving agency simultaneously transmits to both the OEQC and the applicant a letter of its determination of acceptance or nonacceptance (pursuant to Section 11-200-23, HAR) of the FEIS; no comment period ensues upon publication in the Notice.
____ FEIS Statutory Acceptance	The approving agency simultaneously transmits to both the OEQC and the applicant a notice that it did not make a timely determination on the acceptance or nonacceptance of the applicant's FEIS under Section 343-5(c), HRS, and therefore the applicant's FEIS is deemed accepted as a matter of law.
____ Supplemental EIS Determination	The approving agency simultaneously transmits its notice to both the applicant and the OEQC that it has reviewed (pursuant to Section 11-200-27, HAR) the previously accepted FEIS and determines that a supplemental EIS is or is not required; no EA is required and no comment period ensues upon publication in the Notice.
____ Withdrawal	Identify the specific document(s) to withdraw and explain in the project summary section.
____ Other	Contact the OEQC if your action is not one of the above items.

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

KKDC intends to renovate and repurpose King Kalākaua Plaza for hotel use, with hotel-related retail uses on the ground floor. The renovation includes: 1) replacing the above-ground portion of the existing building with a new structure having substantially the same footprint as the existing building, a total of seven floors, and a height of approximately 85 – 100 feet; 2) a new porte-cochere; and 3) landscaping improvements. The underground portion of the existing, containing, two existing underground parking floors will be retained.

To determine whether renovating and repurposing the property for hotel use may significantly impact the physical and human environment, all phases and expected consequences of the proposed project have been evaluated, including potential primary, secondary, short-range, long-range, and cumulative impacts.

The renovations represent an investment in the long-term well-being of the surrounding community, and ensure that the building is a sustainable improvement to Waikīkī. King Kalākaua Plaza will make its most significant contribution to a sustainable development by retaining the: 1) two existing underground parking floors of the building; and 2) the loading zone portion of the structure along Kūhiō Avenue. This provides a substantially reduced environmental impact compared to the complete demolition of the existing structure.

KING KALĀKAUA PLAZA

RENOVATION

Final Environmental Assessment

Finding of No Significant Impact (HRS 343)
TMKs 2-6-016-023 and 026

Prepared for:
Kalaimoku-Kuhio Development Corp.

Prepared by:

PBR HAWAII
& ASSOCIATES, INC.

January 2018

KING KALĀKAUA PLAZA RENOVATION

Final Environmental Assessment -
Finding of No Significant Impact
(HRS 343)

Prepared for:

Kalaimoku-Kuhio Development Corp.

Prepared by:

PBR HAWAII
& ASSOCIATES, INC.

January 2018

SUMMARY

This Environmental Assessment has been prepared in accordance with Chapter 343, Hawai‘i Revised Statutes (HRS) for the renovation of a vacant, retail/restaurant building on two contiguous parcels (the Property) on the block bounded by Kalākaua Avenue, Kālaimoku Street, Kūhiō Avenue, and ‘Olohana Street in Waikīkī, Honolulu, O‘ahu, State of Hawai‘i.

Project Name:	King Kalākaua Plaza Renovation
Location:	Waikīkī, Honolulu, O‘ahu. Address: 2080 Kalākaua Avenue, Honolulu, HI 96815
Judicial District:	Honolulu
Tax Map Keys (TMK):	2-6-016:023 and 2-6-016:026 Throughout this EA, collectively, the two TMK parcels are referred to as the “Property.”
Area:	TMK 2-6-016:023: 38,861 square feet TMK 2-6-016:026: 6,711 square feet Total area: 45,572 sf, (approximately1.05 acres)
Applicant:	Kalaimoku-Kuhio Development Corp. (KKDC)
Approving Agency:	City and County of Honolulu Department of Planning and Permitting (DPP)
Landowner:	Kalaimoku-Kuhio Development Corp. (TMK 2-6-016:023) Decurion Corporation and RPG Oxnard Gateway, LLC [1] (TMK 2-6-016:026)
Existing Use:	The Property contains a retail/restaurant building and surrounding grounds on a single block. The building and grounds together constitute “King Kalākaua Plaza.” The building has four above-ground floors (approximately 65 feet high) and two underground parking floors and was formerly home to Nike Town, Banana Republic, and The All Star Café, a sports restaurant and bar. In 2009, the last of these anchor tenants moved out, and since then the building has been vacant. The underground parking floors are still in use.
Project Description:	KKDC intends to renovate and repurpose King Kalākaua Plaza for hotel use (with hotel-related retail uses on the ground floor). The renovation includes: 1) replacing the above-ground portion of the

[1] KKDC and RPG Oxnard Gateway, LLC are wholly owned subsidiaries of the Decurion Corporation.

existing building with a new structure having substantially the same footprint as the existing building, a total of seven floors, and a total height of approximately 85 – 100 feet; 2) a new porte-cochere; and 3) landscaping improvements. The two existing underground parking floors will be retained.

Current Land Use Designations:

State Land Use District: Urban
Primary Urban Center Development Plan Land Use Map – Resort
City and County of Honolulu Zoning – Resort Mixed Use Precinct (Waikīkī Special District)
Special District: Waikīkī Special District
Special Management Area (SMA) – not in the SMA

Major Approvals Required/Issuing Agency:

Permit/Approval	Issuing/Agency
Chapter 343, HRS Compliance	City and County of Honolulu, Department of Planning and Permitting
Special District Permit - Major	
Building Permit	
Sewer Connection Application	
Trenching Permit	
Grading Permit (if necessary)	
Street Usage Permit	
Modification to existing Joint Development Agreement (if necessary)	
Modification to existing Surface Encroachment Variance (if necessary)	

Alternatives Considered:

The following alternatives were considered:

- No action
- New retail uses
- Other uses as permitted in the Resort Mixed Use Precinct
- Demolish and replace the existing building with a substantially different building
- Renovate the existing above-ground structure
- Replace the above-ground portion of the existing building with a new structure (preferred alternative)

Determination:

Finding of No Significant Impact

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ACRONYMS

AIS	Archaeological Inventory Survey
ALISH	Agricultural Lands of Importance to the State of Hawai‘i
BMPs	best management practices
BWS	Board of Water Supply, City and County of Honolulu
CDP	Census Designated Place
cfs	Cubic feet per second
CWRM	State Commission on Water Resource Management
CZM	Coastal Zone Management
dBA	Decibels
DBEDT	Department of Business, Economic Development, and Tourism, State of Hawai‘i
DLNR	Department of Land and Natural Resources, State of Hawai‘i
DOFAW	Division of Forestry and Wildlife, Department of Land and Natural Resources
DOH	Department of Health, State of Hawai‘i
DPP	Department of Planning and Permitting, City and County of Honolulu
DTS	Department of Transportation Services, City and County of Honolulu
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency, United States Federal Government
FAR	Floor Area Ratio
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FONSI	Finding of No Significant Impact
GDP	Gross domestic product
HAR	Hawai‘i Administrative Rules
HECO	Hawaiian Electric Company
HRS	Hawai‘i Revised Statutes
HTCO	Hawaiian Telecom
ITE	Institute of Transportation Engineers
KKDC	Kalaimoku-Kuhio Development Corp.
LID	Low impact development
LOS	Level of Service
LSB	Land Study Bureau, University of Hawai‘i
MGD	million gallons per day
NFIP	National Flood Insurance Program
NRCS	Natural Resource Conservation Service, U.S. Department of Agriculture
OEQC	Office of Environmental Quality Control, Department of Land and Natural Resources
PER	Preliminary Engineering Report

$PM_{2.5}$	Particulate matter that is 2.5 microns or less in diameter
PM_{10}	Particulate matter that is 10 microns or less in diameter
PUC	Primary Urban Center
ROH	Revised Ordinances of Honolulu
SMA	Special Management Area
SHPD	State Historic Preservation Division, Department of Land and Natural Resources
SSA	Sole Source Aquifer
TIAR	Traffic Impact Analysis Report
TMK	Tax Map Key
UIC	Underground Injection Control
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service

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1 INTRODUCTION

This Environmental Assessment (EA) is prepared in accordance with Chapter 343, Hawai‘i Revised Statutes (HRS) and Title 11; Chapter 200, Hawai‘i Administrative Rules (HAR) for the renovation of King Kalākaua Plaza, Honolulu, Island of O‘ahu, State of Hawai‘i.

1.1 APPLICANT/LANDOWNER

Kalaimoku-Kuhio Development Corp. (KKDC) is the applicant. KKDC owns the parcel identified by tax map key (TMK) 2-6-016:023. The Decurion Corporation and RPG Oxnard Gateway, LLC own the parcel identified by TMK 2-6-016:026. KKDC and RPG Oxnard Gateway, LLC are wholly owned subsidiaries of the Decurion Corporation.

Contact: John M. Manavian
Kalaimoku-Kuhio Development Corp.
120 N. Robertson Boulevard
Los Angeles, California 90048-3115
Phone: (310) 855-8484
Fax: (310) 652-8538

1.2 ENVIRONMENTAL CONSULTANT

PBR HAWAII and Associates, Inc. is KKDC’s environmental planning consultant

Contact: Tom Schnell AICP, Principal
PBR HAWAII and Associates, Inc.
1001 Bishop Street, Suite 650
Honolulu, Hawai‘i 96813
Phone: (808) 521-5631
Fax: (808) 523-1402

1.3 APPROVING AGENCY

City and County of Honolulu Department of Planning and Permitting is the approving agency.

Contact: Kathy Sokugawa, Acting Director
City and County of Honolulu
Department of Planning and Permitting
650 S. King Street, 7th Floor
Honolulu, Hawai‘i 96813
Phone: (808) 768-8000
Fax: (808) 768-6743

1.4 COMPLIANCE WITH STATE OF HAWAIʻI ENVIRONMENTAL LAWS

Preparation of this document is in accordance with the provisions of Chapter 343, HRS and Title 11, Chapter 200, Hawaiʻi Administrative Rules (HAR) pertaining to Environmental Impact Statements (EIS). Section 343-5, HRS established nine types of actions that "trigger" compliance. The "triggers" applicable to the renovation and repurposing King Kalākaua Plaza for hotel use include: 1) use within the Waikīkī area of Oʻahu; and 2) "use" of State and/or County lands or funds[2].

1.5 STUDIES CONTRIBUTING TO THIS EA

The information contained in this EA is based on publicly available planning and other documents regarding the characteristics of the site and surrounding area, site visits, and technical studies prepared specifically for the Property. Technical studies are provided as appendices to this EA. These studies include:

- Arborist's report
- Preliminary engineering report
- Traffic impact analysis report

[2] The renovations may involve the "use" of State and/or County lands or funds relating to infrastructure improvements for access driveways and connections to water, sewer, or other utilities. While the specific nature of each improvement is not known at this time, this EA is intended to address all current and future instances involving the use of State and/or County lands and funds relating to renovation and use of the building and the Property.

2 DESCRIPTION

2.1 BACKGROUND INFORMATION

2.1.1 Location and Property Description

Located in densely urban Waikīkī, King Kalākaua Plaza consists of an existing retail/restaurant building and surrounding grounds on two contiguous parcels on the block bordered by Kalākaua Avenue, Kūhiō Avenue, Kālaimoku Street, and ‘Olohana Street. (Figure 1). The parcels are identified as TMK 2-6-016:023 and TMK 2-6-016:026 and contain a total area of 45,572 square feet (sf) (approximately1.05 acres). Throughout this EA, collectively, the two TMK parcels are referred to as the “Property” and “King Kalākaua Plaza” refers to the existing building and grounds.

King Kalākaua Plaza was built in 1998. The building has four above-ground floors (approximately 65 feet high with an interior area of approximately 93,300 square feet) and two unground parking floors. The grounds include a plaza fronting Kalākaua Avenue and landscaped areas (including several hardscape planning areas) on all other sides of the building.

The building was formerly home to Nike Town, Banana Republic, and The All Star Café, a sports restaurant and bar. In 2009, the last of these anchor tenants moved out, and since then the building has been vacant. The underground parking floors are still in use.

Figure 1 shows the location of King Kalākaua Plaza. Figure 2 shows the TMK parcels. Figure 3 shows an aerial photo of the Property and surrounding area.

2.1.2 Existing Land Use Designations

Current land use designations for the Property are:

- **State Land Use District:** Urban (Figure 4)
- **Primary Urban Center (PUC) Development Plan, Land Use Map:** Resort (Figure 5)
- **City and County of Honolulu Zoning:** Resort Mixed Use Precinct (Waikīkī Special District). (Figure 6)
- **Special District:** Waikīkī Special District (Figure 7)
- **Special Management Area (SMA):** Not in the SMA (Figure 8)

2.1.3 Surrounding Land Uses

Surrounding land uses and zoning are as follows:

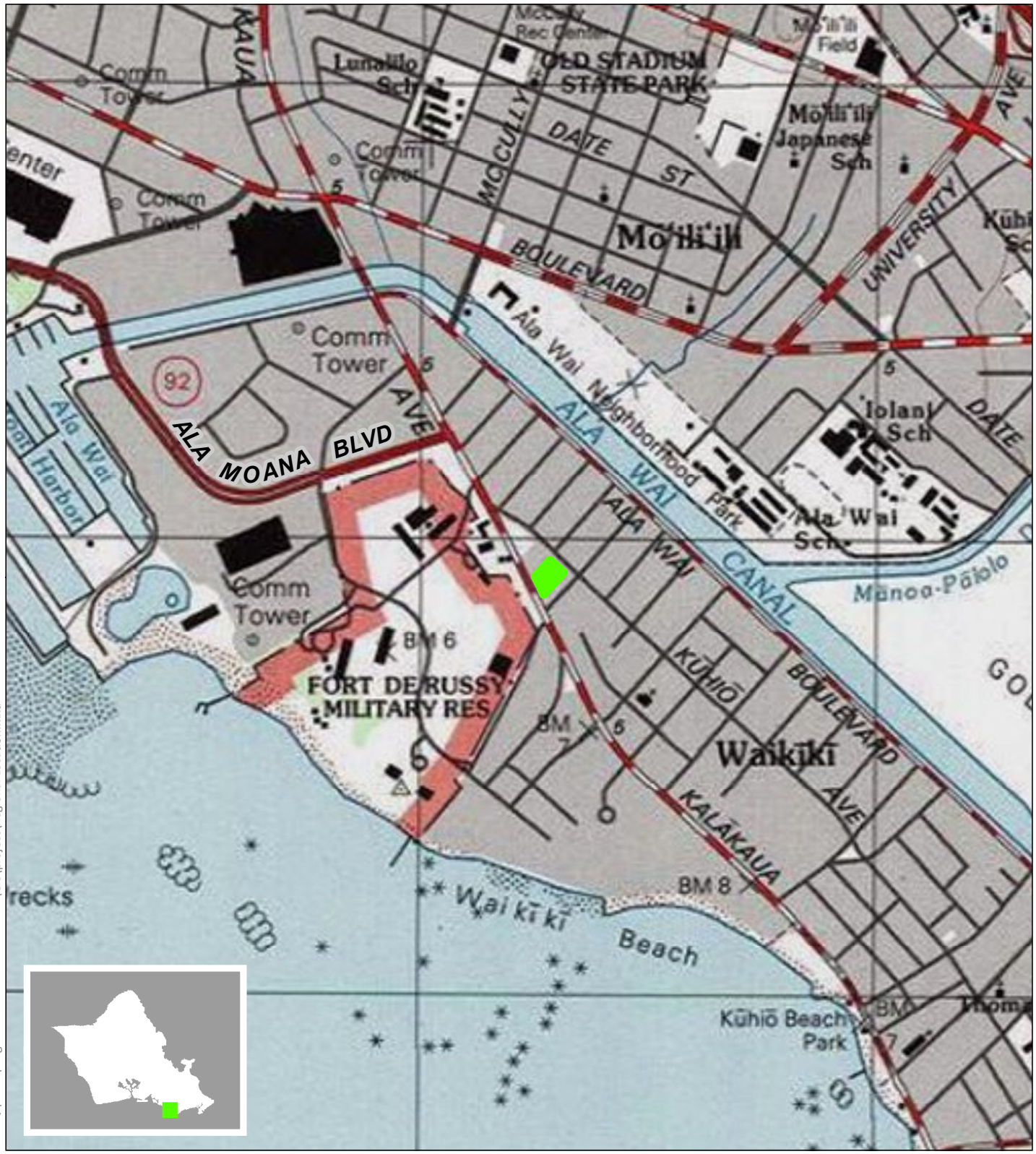
Across Kūhiō Avenue (Northeast/mauka)	**Existing Uses:** Kūhiō Avenue borders the Property on its mauka (northeast) edge. Across Kūhiō Avenue from the Property are the La Casa condominium complex and Maile Sky Court hotel. **Zoning:** Apartment Mixed Use Precinct
Across ‘Olohana Street (Northwest)	**Existing Uses:** ‘Olohana Street borders the Property on its northwest edge. Across ‘Olohana Street from the Property is the Waikiki Gateway Hotel. **Zoning:** Resort Mixed Use Precinct.
Across Kalākaua Avenue (Southwest/makai)	**Existing Uses:** Kalākaua Avenue borders the Property on its makai (southwest) edge, with a small City and County utility-related property (TMK 2-6-016:069) on the block. Across Kalākaua Avenue lies the Luana Waikiki hotel, Fort DeRussy Military Reservation, and United States Postal Service’s Waikīkī Post Office building. **Zoning:** Resort Mixed Use Precinct (Luana Waikiki), Public Precinct (Ft. DeRussy, Post Office)
Across Kālaimoku Street (Southeast)	**Existing Uses:** Kālaimoku Street borders the Property on its southeast edge. Across Kālaimoku Street from the Property is the Luxury Row shopping complex and The Ritz-Carlton Residences, Waikīkī Beach, a resort resident complex. **Zoning:** Resort Mixed Use Precinct

Figure 3 shows an aerial photo of the Property with surrounding uses labeled. Figure 9 shows photographs of the Property and surrounding area. Figure 6 shows the zoning map of the Property including the zoning of surrounding properties.

2.1.4 Regional Land Use History

The Property is part of the dense, urban Waikīkī Special District. Historically, Waikīkī was a coastal wetland featuring rice paddies, fishponds, and a narrow natural beach. The Property is located in an area formerly part of the *Kālia Loko i‘a* (Kālia fishponds). By the early 19th century, the sheltered harbor in Honolulu ahupua‘a began attracting trade and residents away from Waikīkī. By the mid- to late- 19th century, Waikīkī was becoming a popular recreation area for Americans living on O‘ahu. However the historical landscape continued to support some traditional ahupua’a operations until modern-day Waikīkī evolved in the late 19th and early 20th centuries.

The late 19th century brought the construction of the present Kalākaua Avenue and a tram line connecting Waikīkī to Honolulu. At the turn of the 20th century, the area around the Property was covered with approximately 30 acres of fishponds mainly reserved for royalty and the surrounding area also supported bananas, taro fields, rice paddies, and other wetland agriculture. Soon thereafter, land reclamation plans altered the natural environment of Waikīkī.



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DATE: 1/10/2017

LEGEND

Property

Figure 1:
Regional Location

KING KALĀKAUA PLAZA RENOVATION

Kalaimoku-Kuhio Development Corp

Island of O'ahu

North

Linear Scale (feet)

0 250 500 1,000

PBR HAWAII & ASSOCIATES, INC.

Source: ESRI Online Basemaps.

Disclaimer: This graphic has been prepared for general planning purposes only and should not be used for boundary interpretations or other spatial analysis.

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DATE: 11/21/2016

LEGEND

Property

Tax Map Key Parcels

Figure 2:
Tax Map Key

KING KALĀKAUA PLAZA RENOVATION

Kalaimoku-Kuhio Development Corp — Island of O'ahu

North — Linear Scale (feet) 0 25 50 100

PBR HAWAII & ASSOCIATES, INC.

Source: City & County of Honolulu, 2016.

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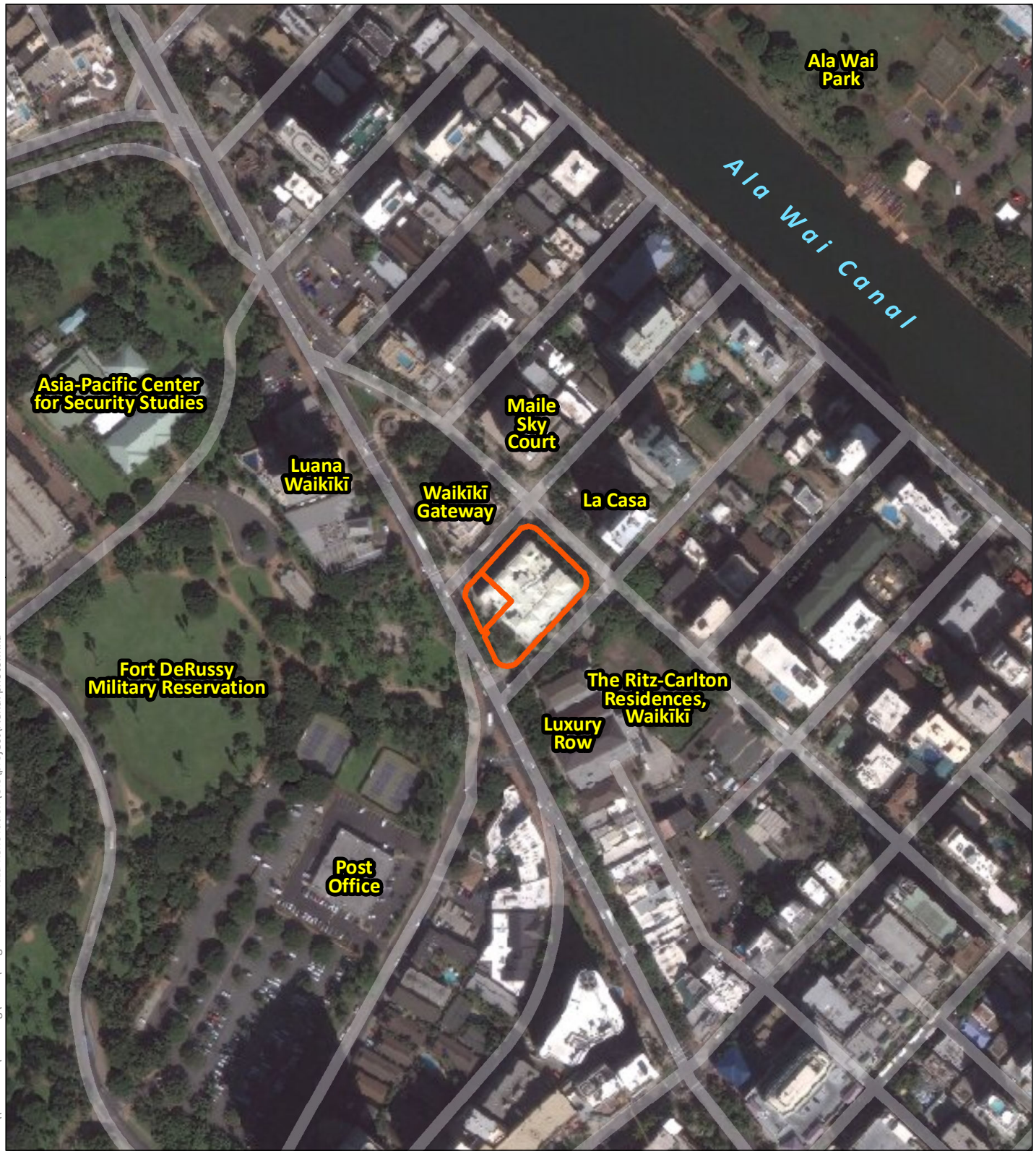

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DATE: 11/29/2016

LEGEND

Property

Figure 3:
Aerial Photo

KING KALĀKAUA PLAZA RENOVATION

Kalaimoku-Kuhio Development Corp — Island of O'ahu

North — Linear Scale (feet) 0 75 150 300

PBR HAWAII & ASSOCIATES, INC.

Source: ESRI Online Basemap. City & County of Honolulu, 2016.

Disclaimer: This graphic has been prepared for general planning purposes only and should not be used for boundary interpretations or other spatial analysis.

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DATE: 11/21/2016

LEGEND

Property

State Land Use District

- A - Agriculture
- C - Conservation
- R - Rural
- U - Urban

Source: State Land Use Commission, 2016. USDA NRCS, 2015.

Disclaimer: This graphic has been prepared for general planning purposes only and should not be used for boundary interpretations or other spatial analysis.

Figure 4:
State Land Use District

KING KALĀKAUA PLAZA RENOVATION

Kalaimoku-Kuhio Development Corp

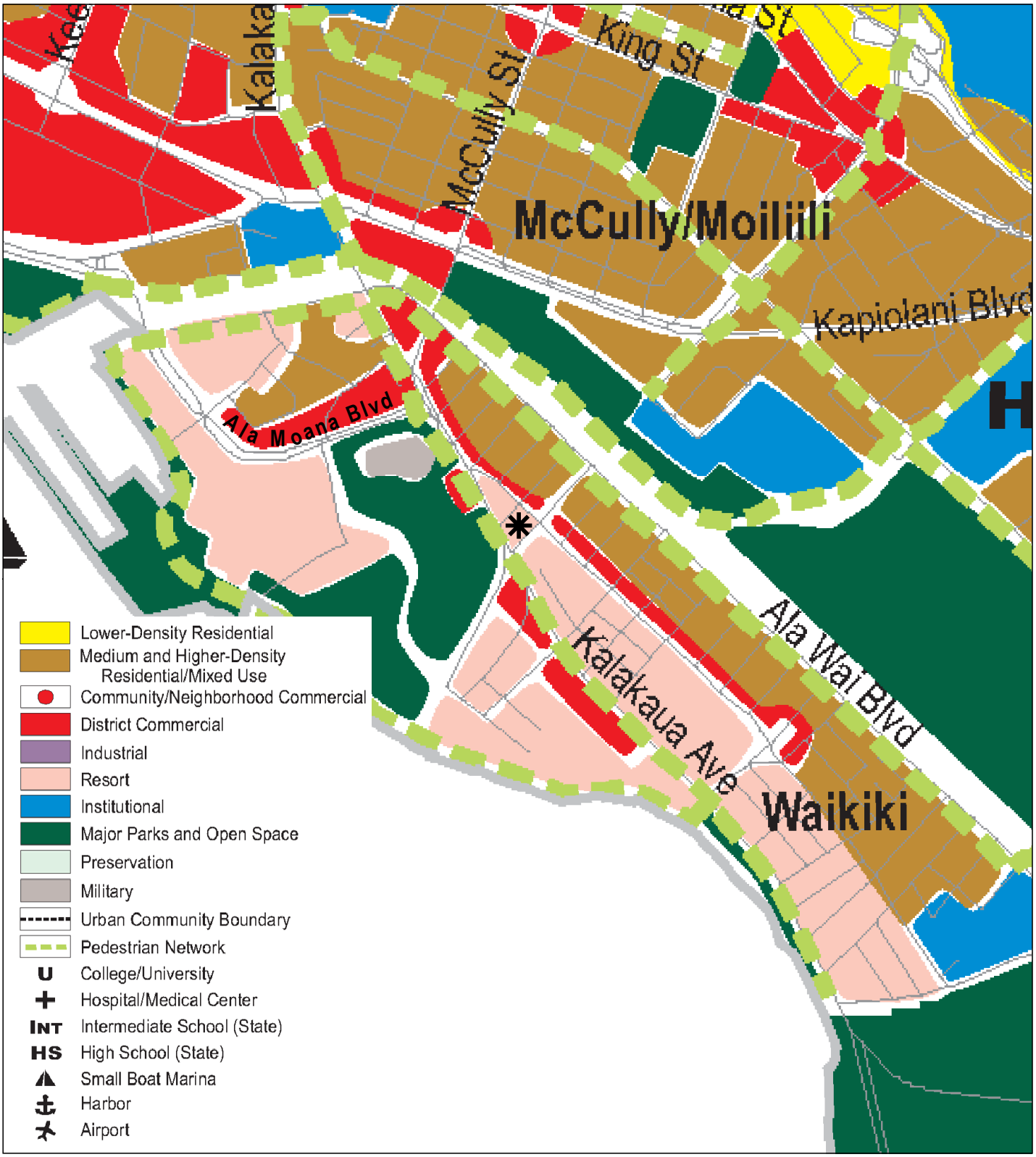
Island of O'ahu

North

Linear Scale (feet)

0 75 150 300

PBR HAWAII & ASSOCIATES, INC.



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Path: Q:\Oahu\King Kalakaua Plaza Renovation\GIS\project\PUC East.mxd

DATE: 1/10/2017

LEGEND

✱ Property

Figure 5:
Primary Urban Center Development Plan

KING KALĀKAUA PLAZA RENOVATION

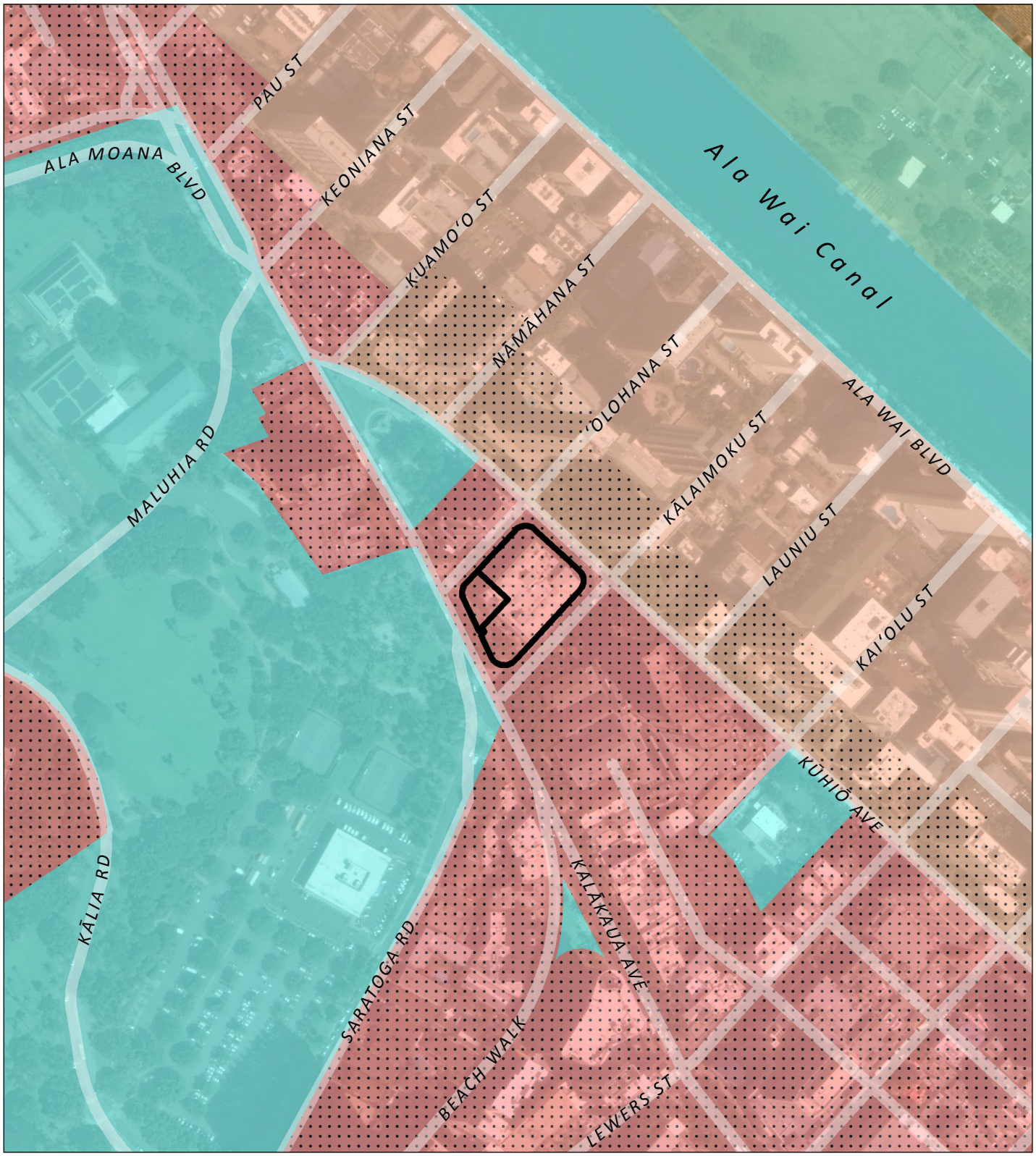
Kalaimoku-Kuhio Development Corp — Island of O'ahu

North — Linear Scale (feet) 0 300 600 1,200

PBR HAWAII & ASSOCIATES, INC.

Source: City & County of Honolulu, June 2004.

Disclaimer: This graphic has been prepared for general planning purposes only and should not be used for boundary interpretations or other spatial analysis.



PDF: Q:\Oahu\King Kalakaua Plaza Reno\PDF
Path: \\PBRFS04\Planning\Oahu\King Kalakaua Plaza Renovation\GIS\project\Zoning.mxd

DATE: 11/21/2016

LEGEND

Property

Zoning

- P-2
- A-3
- APT. PRECINCT
- APT. MIXED USE SUBPRECINCT
- RESORT MIXED USE PRECINCT
- PUBLIC PRECINCT

Source: City & County of Honolulu, 2016. USDA NRCS, 2015.

Disclaimer: This graphic has been prepared for general planning purposes only and should not be used for boundary interpretations or other spatial analysis.

Figure 6:
City and County of Honolulu Zoning

KING KALĀKAUA PLAZA RENOVATION

Kalaimoku-Kuhio Development Corp

Island of O'ahu

North

Linear Scale (feet)

0 75 150 300

PBR HAWAII & ASSOCIATES, INC.

PDF: Q:\Oahu\King Kalakaua Plaza Reno\PDF
Path: \\PBRFS04\Planning\Oahu\King Kalakaua Plaza Renovation\GIS\project\Special District Designation.mxd

DATE: 11/21/2016

LEGEND

Property

Special District Designation

Waikiki Special District

Diamond Head Special District

Figure 7:
Special District Designation

KING KALĀKAUA PLAZA RENOVATION

Kalaimoku-Kuhio Development Corp

Island of O'ahu

North

Linear Scale (feet)

0 250 500 1,000

PBR HAWAII & ASSOCIATES, INC.

Source: City & County of Honolulu, 2011. USDA NRCS, 2015.

Disclaimer: This graphic has been prepared for general planning purposes only and should not be used for boundary interpretations or other spatial analysis.

PDF: Q:\Oahu\King Kalakaua Plaza Reno\PDF
Path: \\PBRFS04\Planning\Oahu\King Kalakaua Plaza Renovation\GIS\project\Special Management Area.mxd

DATE: 12/5/2016

LEGEND

- Property
- Special Management Area

Figure 8:
Special Management Area

KING KALĀKAUA PLAZA RENOVATION

Kalaimoku-Kuhio Development Corp — Island of O'ahu

North — Linear Scale (feet): 0 250 500 1,000

PBR HAWAII & ASSOCIATES, INC.

Source: City & County of Honolulu, 2013. USDA NRCS, 2015.

Disclaimer: This graphic has been prepared for general planning purposes only and should not be used for boundary interpretations or other spatial analysis.

1 King Kalākaua Plaza, as seen from the intersection of Kalākaua Avenue, Kālaimoku Street.

2 View of the large plaza along Kalākaua Avenue.

3 View of the existing building along Kālaimoku Street.

4 View of Kūhiō Avenue sidewalk and loading area, looking northwest along the northeast edge of the Property.

5 View of ʻOlohana Street sidewalk and landscaping, looking southwest along the northwest edge of the Property.

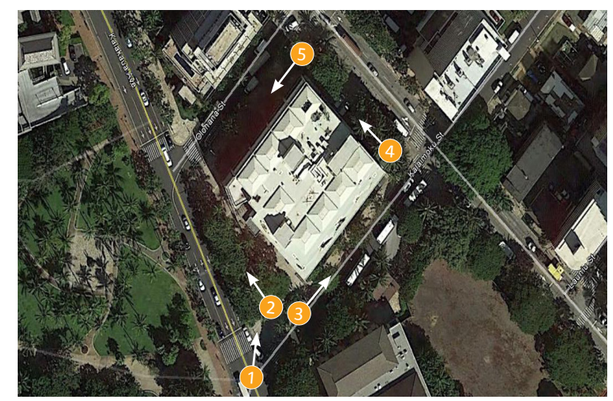


Figure 9:
Site Photos

KING KALĀKAUA PLAZA RENOVATION

Kalaimoku-Kuhio Development Corp Island of Oʻahu

PBR HAWAII & ASSOCIATES, INC.

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The 20th century brought major changes to Waikīkī, placing prominent visitors' landmarks in the ahupuaʻa and draining the former wetland. The Moana Hotel opened in 1901, with a hotel dining room that extended almost to the water's edge. Kalākaua Avenue (formerly Waikīkī Road) was completed in 1905. In 1908, the U.S. Army Corps of Engineers (USACE) made a large land purchase in the area to construct Fort DeRussy. The Ala Wai Canal, completed in 1924, drained the wetland and provided the material to fill in rice paddies, taro patches, and fishponds. Sand, rock, and coral were dredged from the reef for beach expansion and land reclamation, which formed the foundation for the buildings and businesses that reside there now. A number of iconic Waikīkī amenities followed, including the Royal Hawaiian Hotel in 1925-26, The Natatorium in 1927, Ala Wai Yacht Harbor in 1935, the Honolulu Zoo in 1952, the Waikīkī Aquarium in 1955 (migrating from an earlier location in Kapiʻolani Park), Duke Kahanamoku Beach and Lagoon in 1956, and Magic Island in 1964 (Wiegel, 2008).

2.2 PURPOSE AND NEED

In its current vacant state, King Kalākaua Plaza is unappealing, uninviting, and represents an entire block devoid of interest and energy and economic activity in a prominent area of Waikīkī. While past efforts have been made to attract visitors and shoppers toward this end of Kalākaua Avenue, and the landowner has made efforts to re-lease the Property, it is clear that the retail center of Waikīkī retail has migrated toward the middle of Kalākaua Avenue with projects such as the new International Market Place and the complete renovation of Royal Hawaiian Shopping Center. With the shift in retail activity (and even before based on the closure of Nike Town and Banana Republic) it is evident that the Property may not support viable retail economic activity, and it has been vacant for over six years.

The renovation and repurposing of King Kalākaua Plaza for hotel use (with hotel-related retail uses on the ground floor) will revitalize the block with positive activity, inviting uses, and attractive architecture and design elements that connote a Waikīkī sense of place. The renovation is a adaptive reuse of an existing vacant building that will contribute to the rejuvenation and revitalization of Waikīkī while also facilitating the desired character of Waikīkī (as specified under the Waikīkī Special District Design requirements, Section 21-9.80, ROH).

2.3 KING KALĀKAUA PLAZA EXISTING CONDITIONS & PROPOSED RENOVATIONS

Existing Conditions

King Kalākaua Plaza was built in 1998 and comprises a vacant retail/restaurant building and surrounding grounds on the Waikīkī block bordered by Kalākaua Avenue, Kūhiō Avenue, Kālaimoku Street, and ʻOlohana Street. The grounds include a large plaza along Kalākaua Avenue and landscaped areas around the entire building. There are sidewalks, curbs, and gutters around the entire block.

The above ground portion of the existing building is four stories, with a total height of approximately 65 feet and an interior floor area of approximately 93,300 square feet. The underground portion of the existing the building contains two parking floors with 205 parking stalls. There are five existing and permitted loading areas: two large loading zones accessible from Kūhiō Avenue (these are the main loading areas), two loading zones accessible from Kālaimoku Street, and one loading zone accessible from Kālaimoku Street and situated at the entrance to the underground parking area.

The building was formerly home to Nike Town, Banana Republic, and The All Star Café, a sports restaurant and bar. In 2009 Nike Town, the last of these anchor tenants moved out. Since then the building has been vacant. The underground parking area is still in use.

Proposed Renovations

KKDC intends to renovate and repurpose King Kalākaua Plaza for hotel use, with hotel-related retail uses on the ground floor. The renovation includes: 1) replacing the above-ground portion of the existing building with a new structure having substantially the same footprint as the existing building, a total of seven floors, and a height of approximately 85 – 100 feet; 2) a new porte-cochere; and 3) landscaping improvements. The underground portion of the existing, containing, two existing underground parking floors will be retained.

The hotel will be an extended stay class hotel with up to 230 rooms. Hotel operations will be managed by an established hotel operator. It is anticipated that the hotel will service business travelers and may be popular with kamaʻāina travelers seeking lodging in Waikīkī in a convenient location without typical resort-style amenities, although the hotel will have a pool and pool deck on the fourth floor. Ground-floor retail uses may include a coffee shop or café fronting Kalākaua Avenue, and there will be additional ground-floor retail space available for other retail uses.

Renovations may include the addition of up to three floors, interior and exterior renovations, a new porte-cochere, and landscaping improvements. With the renovations, the total building height may be up to approximately 85 – 100 feet and the interior floor area may total up to approximately 150,000 square feet. The building footprint will not be enlarged, with the additional floor area coming from the possible addition of up to three new floors. As much of the existing grounds will be retained as feasible and per code, and renovations will include landscape improvements for all planting areas surrounding the building.

Proposed renovations include:

- Replacing the above-ground portion of the existing building (four stories, approximately 65 feet high) with a new structure having substantially the same footprint as the existing building, a total of seven floors, and a height of approximately 85 – 100 feet (maximum height allowed for the Property is 350 feet).

- Addition of up to approximately 56,700 square feet of floor area from the three new floors (the existing building footprint will not be enlarged) for a total floor area of up to approximately 150,000 square feet (the maximum floor area for the Property is approximately 150,700 square feet).
- Repurposing King Kalākaua Plaza for hotel use (up to approximately 230 hotel rooms) including a lobby and hotel-related retail uses on the building ground floor.
- A porte-cochere accessible from Kālaimoku Street, designed to line up with existing driveways across Kālaimoku Street.
- An atrium through the center of the building with a ground-floor courtyard.
- A pool and pool deck on the building fourth floor fronting Kalākaua Avenue.
- Landscape improvements for the surrounding grounds.
- An outdoor seating area for a coffee shop or café on the ground floor along Kalākaua Avenue.
- Roof elements well-integrated into the building, with screened rooftop equipment, such as ventilation and air conditioning machinery.

Building Renovations/New Floors

The above-ground portion of the building will be up to seven floors (compared to the exiting building with four above-ground floors). The top four floors would be provided in generally a "U" shaped configuration. The open end of the "U" would face Kalākaua Avenue and provide an opening for the pool and pool deck area on the fourth floor. This design breaks up the massing of the new floors, provides for variation, and allows for sightlines into the center of the building. An atrium will be provided through the center of the building where there will be an open-air interior courtyard for hotel guests. The atrium will also provide light and air for the interior hotel rooms.

Building façade renovations will include clean, modern, vertical lines and architectural features with muted earth tones and textures, providing a modern interpretation of, and reference to, natural, historic, and cultural elements.

Waikīkī Sense of Place

To ensure the renovated and repurposed King Kalākaua Plaza conveys a Waikīkī sense of place, KKDC, the architect team, and the landscape architect team consulted with cultural practitioner Ramsay Taum. Mr. Taum's research indicates that the area of the Property was once part of the *Kālia Loko iʻa* (Kālia fishponds) a vast reserve of approximately 30 acres reserved for royalty. Three mauka streams flowed through the area before emptying into the ocean. In addition to the fishponds, the greater wetland area was used for fisheries, taro patches, and, rice paddies. With purchase of the Fort DeRussy property by the USACE in 1908, and later with completion of Ala Wai Canal by the USACE in 1924, the fishponds and wetland area were drained and filled, creating the fastland that now comprises the area of the Property and modern-day Waikīkī.

With this knowledge, the design team's inspiration for the renovated King Kalākaua Plaza draws from the area's history of fishponds and abundant natural wetlands. The renovations thus acknowledge and take cues related to water, aquaculture, and fishing elements and motifs, including interpretations of fish gates and nets; textures related to natural rock, wood, and plants; and woven textures and plaiting such as from lashings, nets, and baskets; and taro patches and rice paddies. Thus, the design elements echo: fishpond fences, corrals, and gates; fish nets and baskets; and cross-hatch patterns of resulting from multiple taro patches and rice paddies. This design approach fosters a Waikīkī sense of place and highlights Waikīkī's natural, historic, and cultural setting in a modern interpretation. Figure 10 references images, patterns, and textures that provide design inspiration and connote a Waikīkī sense of place.

Access/Porte-Cochere

The hotel lobby and main entrance will be accessed from Kālaimoku Street with the new porte-cochere providing convenient off-street space for arriving vehicles to drop off guests and unload luggage. To create the porte-cochere ingress and egress, an existing driveway curb cut off of Kālaimoku Street will be widened for the porte-cochere entrance and new driveway curb cut off of Kālaimoku Street will be required for the porte-cochere exit. These driveways have been designed to line up with existing driveways across Kālaimoku Street. Since Kālaimoku Street is a one-way street, the porte-cochere will also be one-way with the makai driveway providing ingress (left-in movements only) and the mauka driveway providing egress (left-out movements only). The porte-cochere will be wide enough to allow a moving vehicle to safely pass a stationary parked vehicle, including space for vehicles turning into and out of the porte-cochere. This two-lane design will be long enough for two vehicles in each lane, with additional space on the entering and exiting curves for two additional vehicles, for a total capacity of six vehicles.

Parking

Hotel parking will be provided within the existing underground parking garage (accessed from Kālaimoku Street), which contains 205 parking stalls. With the renovations, approximately 194 parking stalls will be retained. The slight reduction in parking stalls is due to the proposed conversion of some existing parking stalls to accommodate hotel operations. Significantly, the approximately 194 parking stalls provide three times the amount of parking required for hotel uses. Under Table 21-6.3, ROH, 0.25 parking stalls per hotel room are required. Thus, with up to 230 rooms the hotel would need 58 parking stalls. While no off-street vehicle parking is required for ground level retail uses in the Waikīkī Special District (per Section 21-9.80-4(h), ROH), with approximately 194 parking stalls the parking garage will have adequate capacity to accommodate parking for any ground-floor retail uses in addition to the hotel requirements.

Loading

Currently King Kalākaua Plaza has five existing and permitted loading zones:

- Two large loading zones accessible from Kūhiō Avenue (these are the main loading zones);

- Two loading zones accessible from Kālaimoku Street, including maneuvering space so that delivery vehicles do not have to reverse onto Kālaimoku Street; and
- One loading zone accessible from Kālaimoku Street and situated at the entrance to the underground parking area.

Based on the Land Use Ordinance (LUO) sections regarding off-street loading requirements (LUO Sections 21-6.100 to 21-6.120) the proposed uses would require four loading zones. To meet this requirement, four of the five existing and permitted loading zones will be retained:

- Two large loading zones accessible from Kūhiō Avenue; and
- Two loading zones accessible from Kālaimoku Street, including maneuvering space so that delivery vehicles do not have to reverse onto Kālaimoku Street.

Because the footprint of the existing building will maintain substantially the same, there are no feasible options for re-reorienting the existing loading zones. The two existing and permitted loading zones along Kūhiō Avenue will remain unchanged with trucks having to reverse into the stalls. It is anticipated the hotel will have single truck deliveries approximately twice a day. Therefore, schedules can be arranged to minimize traffic impacts. The Kālaimoku Street loading zones will remain unchanged and have maneuvering space so that delivery vehicles do not have to reverse onto Kālaimoku Street.

Landscaping

Landscape renovations will include an overall sprucing up of remaining landscaping. Existing trees and palms will be retained to the extent practicable, given the health of the plants, root systems, and any safety concerns. If any trees or palms are displaced (for example to accommodate the porte-cochere) replacement trees or palms will be provided at an appropriate location. Remaining planting areas and hardscape elements will be repaired and maintained. New groundcover plants, such as laua‘e fern and ‘ākia shrubs will be provided, along with new hedges and shrubs, such as naupaka and purple eranthemum. In compliance with Section 21-9.80-4(f)(6) use of fragrant, lush, tropical vegetation and native plant species will be used as appropriate. To provide attractive landscaping between the porte-cochere driveway area and the street, a surface encroachment variance (or a modification to the existing surface encroachment variance applicable to the Property) may be necessary for a small area within the City and County of Honolulu sidewalk right-of-way mid-block along Kālaimoku Street. This will provide for a landscaping planting area sloping up to the porte-cochere grade level, rather than a retaining wall along the sidewalk.

Outdoor Lighting

Outdoor lighting will be subdued or shielded to prevent glare and light spillage onto surrounding properties and rights-of-way. Indirect illumination may be used. The lights will not rotate, revolve, move, flash or flicker, in accordance with Section 21-9.80-4(c)(9), ROH. To the extent practicable,

outdoor lighting will be shielded so the bulb can only be seen from below bulb height, to ensure the safety of passing seabirds and prevent light pollution to surrounding properties.

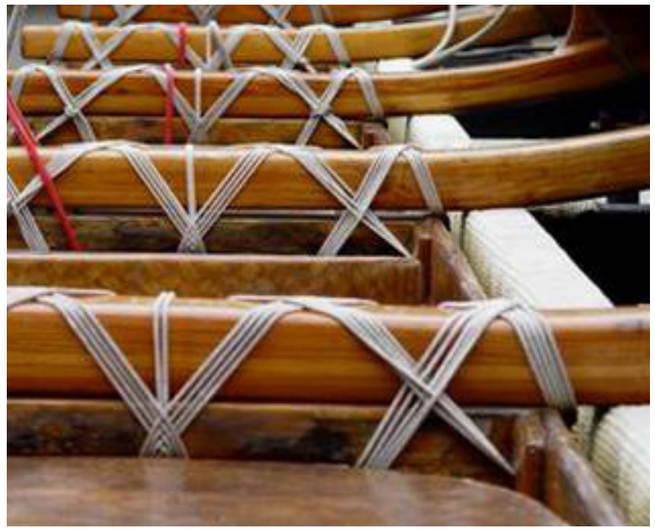
Waikīkī Special District Requirements
The renovations will be in compliance with all relevant Waikīkī Special District requirements and design controls (§21-9.80-4, ROH) and Waikīkī Special District Guidelines.

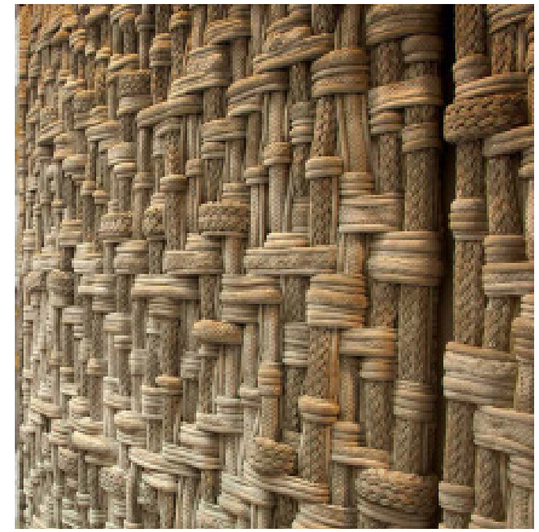
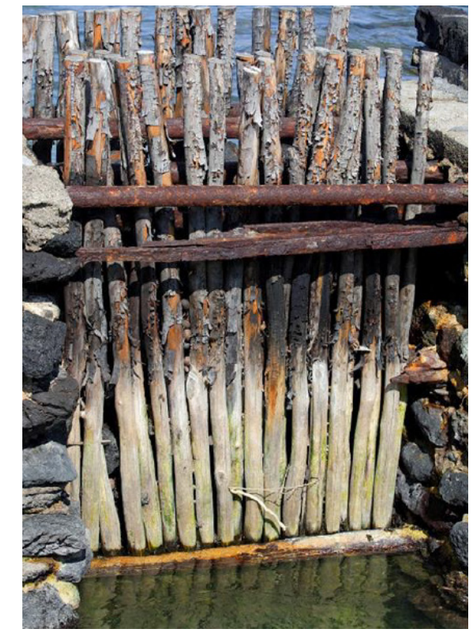
Figure 11 shows the site plan and conceptual landscape plan. Figure 12 shows a conceptual rendering of the renovated building. Figure 13 shows the existing, maximum proposed, and allowed building heights. Table 1 below summarizes information regarding King Kalākaua Plaza existing conditions and as proposed (with up to three additional floors).

Table 1. King Kalākaua Plaza: Existing and Proposed (with up to Three Additional Floors)

	Existing Conditions	**Proposed Renovations with up to 3 Additional Floors**	**Allowed/Notes**
Building Height	Approx. 65 feet (4 stories above ground)	Up to approx. 85 – 100 feet (7 stories)	350 feet with "height bonus" per Section 21-9.80-4(c)(3), ROH; 300 feet per Waikīkī Special District Urban Design Controls (Exhibit 21-9.15, ROH)
Property Use	Vacant retail/restaurant building.	Hotel (up to approx. 230 rooms) Hotel-related retail	Hotels and hotel-related uses are permitted uses within the Waikīkī Resort Mixed Use Precinct
Floor Area & Floor Area Ratio (FAR) [3]	Approx. 93,300 sf (FAR 1.15)	Approx. 150,000 sf (FAR 1.84)	Approx. 150,000 sf (FAR 1.0, plus additional density as provided under Table 21-9.6(B), ROH and Section 21-9.80-6. ROH)
Parking	205 parking stalls (two underground floors)	194 parking stalls	58 parking stalls required for hotel use (0.25 per dwelling or lodging unit (Table 21-6.3, ROH)
Loading Zones	5 loading zones	4 loading zones	4 loading zones required per Sections 21-6.100 to 21-6.130, ROH.
Landscaping (trees & palms)	20 trees 38 palms	20 trees 38 palms	The current number of trees and palms is proposed to be retained; if any trees or palms are displaced a replacement tree or palm will be provided at an appropriate location.

[3] The FAR calculation includes the Property area plus: 1) one half of the abutting portions of all four surrounding streets (per Table 21-9.6(B), ROH; and 2) other density bonuses for open space and other provided elements as provided under Section 21-9.80-6. ROH.



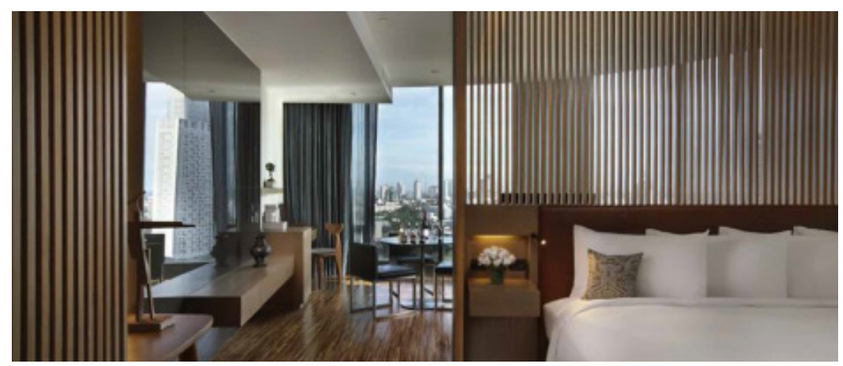


Figure 10:

Design Inspirations
Waikiki Sense of Place

KING KALĀKAUA PLAZA RENOVATION

Kalaimoku-Kuhio Development Corp Island of O'ahu

PBR HAWAII & ASSOCIATES, INC.

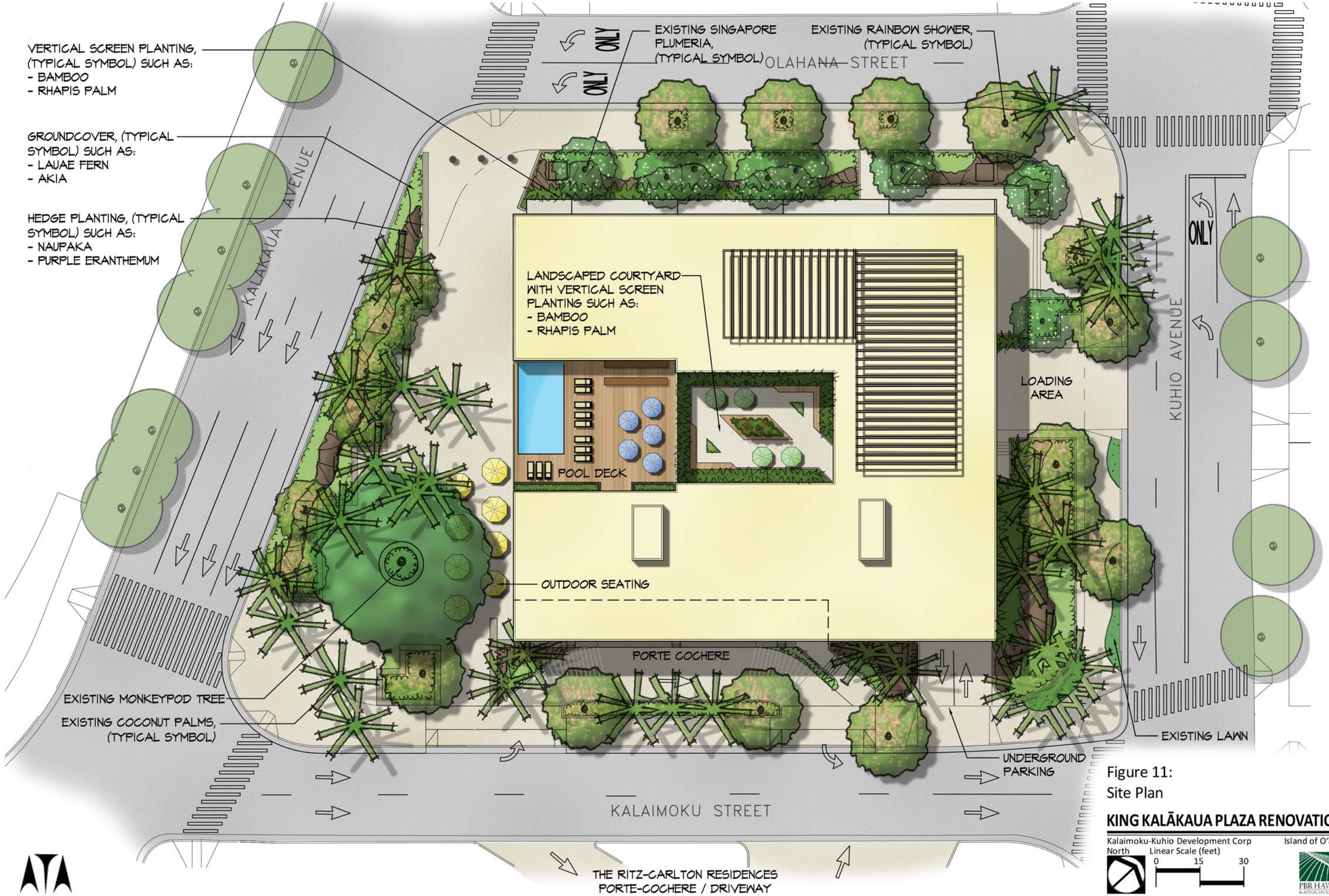


Figure 11:
Site Plan

KING KALĀKAUA PLAZA RENOVATION

Kalaimoku-Kuhio Development Corp

Island of O'ahu

PBR HAWAII & ASSOCIATES, INC.

PBR ARCHITECTS

ATA

Existing Building

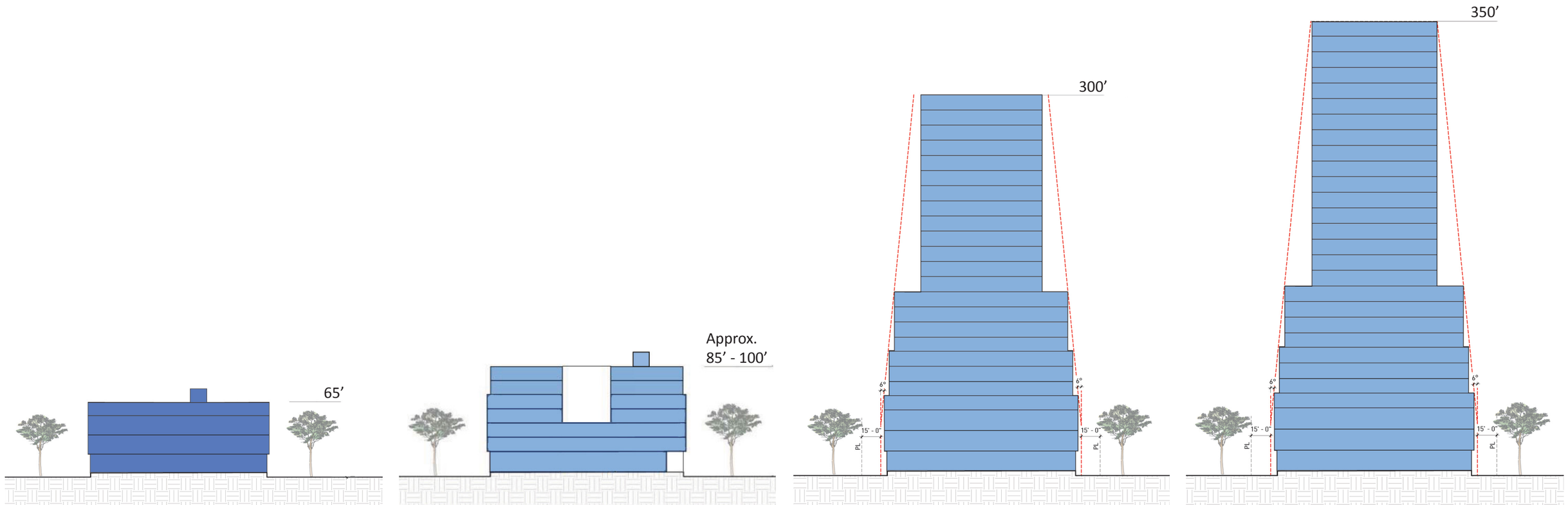
Proposed Renovation

Figure 12:
Conceptual Rendering

KING KALĀKAUA PLAZA RENOVATION

Kalaimoku-Kuhio Development Corp — Island of O'ahu

PBR HAWAII & ASSOCIATES, INC.



Existing Building
65’ Height
Four Floors
(16’ Floor Plates)

Proposed Renovations
New Above-Ground Structure with Seven Floors
(16’ Floor Plate on Ground Floor
12’ Floor Plates on Other Floors)

Allowed
300’ Height Allowed
(per Waikiki Special District Urban
Design Controls
Exhibit 21-9.15, ROH)

Bonus
350’ Height Allowed with Bonus
(per Section 21-9.80-4(3).ROH)

Figure 13:
Existing, Proposed, and Allowed
Building Heights

KING KALĀKAUA PLAZA RENOVATION
Kalaimoku-Kuhio Development Corp Island of O’ahu

PBR HAWAII & ASSOCIATES, INC.

2.4 SUSTAINABLE PLANNING AND DESIGN

The renovation and repurposing of King Kalākaua Plaza for hotel use represents an investment in the long-term well-being of the surrounding community, and will ensure that King Kalākaua Plaza is a sustainable improvement to Waikīkī.

Resource Conservation

King Kalākaua Plaza will make its most significant contribution to a sustainable development by retaining the: 1) two existing underground parking floors of the building; and 2) the loading zone portion of the structure along Kūhiō Avenue. This provides a substantially reduced environmental impact compared to the complete demolition of the existing structure. Research indicates that building reuse typically reduces a building's impact by between four and 46 percent with regard to climate change, human health, ecosystem quality, and resource depletion, compared to a new construction. (National Trust for Historic Preservation, 2011)

Water Conservation

As recommended by the City and County of Honolulu Board of Water Supply (BWS) (Appendix A), King Kalākaua Plaza will implement water conservation measures to the extent practicable. These may include:

- Low flow plumbing fixtures;
- Utilization of non-potable water for irrigation using catchment and chiller/air handler condensate;
- Cooling tower conductivity meters and water softening recycling systems;
- Drought tolerant plants and/or xeriscaping where new landscaping is added;
- Efficient irrigation systems; and
- Water Sense labeled low-flow water and plumbing fixtures

Mass Transit Compatibility

King Kalākaua Plaza is well located to take advantage of existing public transit. The Property is serviced by bus stops on Kalākaua Avenue, Kūhiō Avenue, and Saratoga Road. These stops are serviced by Routes 8, 13, 19, 20, 22, 23, 42, E, and 2L. Figure 17 shows roads, intersections, and public transit routes and stops in the vicinity of the Property. Private group transportation services such as trolleys and tour buses also provide transit in the area. Trolley access is available on 'Olohana Street and Kālaimoku Street. Tour buses were observed loading passengers on 'Olohana Street near Waikiki Gateway Hotel. (See Section 4.6.)

The City and County of Honolulu Department of Transportation Services (DTS) is planning a high-capacity bus circulator to connect Waikīkī to the future Honolulu High-Capacity Rail station at Ala Moana Center. While the formal route has not yet been established, the bus circulator will likely improve public transit conditions around the Property.

The Traffic Impact Analysis Report (TIAR) prepared for the renovations (Appendix C) determined that the renovation and repurposing of King Kalākaua Plaza for hotel use will reduce vehicle trips (to and from the Property) by more than 50 percent compared to if the building was fully occupied under its intended use with commercial tenants. This conclusion is based on a comparative analysis using: 1) Institute of Transportation Engineers (ITE) trip generation codes and 2) Waikīkī-specific trip generation rates.

2.5 SCHEDULE AND COST

Construction is expected to commence once permits and plans are approved. As of the date of this EA, it is thought that all major land use approvals may be obtained by the second quarter of 2018 and building permits may be obtained by the first quarter of 2019. Renovations to the building may take approximately 12 to 14 months. Therefore, building occupancy and on-going operations are estimated to start in fourth quarter of 2020. The total cost for design and construction is estimated at approximately $85 million.

3 DESCRIPTION OF THE NATURAL ENVIRONMENT, POTENTIAL IMPACTS, AND MITIGATION MEASURES

3.1 CLIMATE

The climate of the Honolulu can be characterized as mild and subtropical. Average temperatures range from about 73 degrees Fahrenheit in the coolest months (January and February) to about 82 degrees Fahrenheit in the warmest month (August). Average annual rainfall is around 17 inches per year, with December typically being the wettest month and June the driest (U.S. Climate Data, 2015). The prevailing wind throughout the year is the northeasterly trade wind, although southerly or southwesterly winds are not uncommon between October and April.

Potential Impacts and Mitigation Measures

The renovation and repurposing of King Kalākaua Plaza for hotel use is not expected to have a significant impact on the region's climate, and no mitigation measures are warranted or planned.

3.2 GEOLOGY AND TOPOGRAPHY

Waikīkī is part of the Honolulu plain, which consists of a broad, elevated coral reef partly covered by water-borne sediment that eroded from the Ko'olau range. Lava flows are interbedded with reef deposits which date as far back as the late Pleistocene epoch over 11,000 years ago. Fossils in the reef deposits suggest that the reef grew when sea level was higher than it is today (Macdonald, Abbott, & Peterson, 1983).

Directly prior to becoming an international visitors' mecca, Waikīkī was a coastal wetland with a narrow strip of sand at the shore (Section 4.2). The city drained the area in the early 20th century, imported sand for the beaches, and filled streams and ponds to create the present conditions.

The elevation of the Property varies between three and nine feet above mean sea level. The elevation at the south corner of the Property is three feet, and the elevation at the north corner of the Property is nine feet. Topography is relatively flat in the Property at zero to four percent.

Potential Impacts and Mitigation Measures

The renovation and repurposing of King Kalākaua Plaza for hotel use is not expected to have a significant impact on the geology or topography of the Property. The Property contains an existing building, paved areas, landscaping, and an underground parking structure, all of which will remain substantially intact. As such, no significant grading or any other ground disruption will be necessary. Some minor grading may be necessary for the new porte-cochere area and landscape renovations. Limited trenching may be necessary to connect to existing underground utilities.

3.3 SOILS

There are three large-scale soil inventories which inventoried soils in the State of Hawai‘i:

- The U.S. Department of Agriculture Natural Resources Conservation Service (NRCS) Soil Survey (Section 3.3.1)
- The University of Hawai‘i Land Study Bureau (LSB) Detailed Land Classification (Section 3.3.2)
- The State Department of Agriculture’s Agricultural Lands of Importance to the State of Hawai‘i (ALISH) (Section 3.3.3)

The main focus of these three studies is to describe the physical attributes of land and the relative productivity of different land types for agricultural production.

3.3.1 NRCS Soil Survey

The National Resource Conservation Service (NRCS) soil survey identifies only one soil type underlying the Property, “fill land, mixed” (Figure 14), which is a variety of materials either dredged from the ocean bottom or brought in from nearby areas, and is most often used for urban development.

3.3.2 Land Study Bureau Detailed Land Classification

The University of Hawai‘i Land Study Bureau’s (LSB) *Detailed Land Classification, Island of O‘ahu* classifies non-urban land by a five-class productivity rating system, using the letters A, B, C, D, and E, where “A” represents the highest class of productivity and “E” the lowest. Being mixed fill land, the soils underlying the Property are not classified by the LSB.

3.3.3 Agricultural Lands of Importance to the State of Hawai‘i (ALISH)

The State of Hawai‘i Department of Agriculture’s ALISH system rates agricultural land as “Prime,” “Unique” or “Other” lands. The remaining land is not classified. Being mixed fill land in an urban center, the land underlying the Property is not classified by the ALISH system and therefore is not considered important agricultural land.

Potential Impacts and Mitigation Measures

The renovations are not expected to have a significant impact on the soils of the Property. The Property contains an existing building, paved areas, landscaping, and an underground parking structure, all of which will remain substantially intact. As such, no significant grading or any other ground disruption will be necessary. Some minor grading may be necessary for the new porte-cochere area and landscape renovations. Limited trenching may be necessary to connect to existing underground utilities. Additionally, the renovations will not impact agricultural resources because the Property is not considered important agricultural land.

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DATE: 11/21/2016

LEGEND

Property

Soil Type

- BS-Beaches
- FL-Fill land, mixed
- JaC-Jaucas sand, 0 to 15% slopes
- W-Water > 40 acres

Source: USDA Natual Resources Conservation Service, 2001.

Disclaimer: This graphic has been prepared for general planning purposes only and should not be used for boundary interpretations or other spatial analysis.

Figure 14:
Soil Map

KING KALĀKAUA PLAZA RENOVATION

Kalaimoku-Kuhio Development Corp

Island of O'ahu

North

Linear Scale (feet)

0 150 300 600

PBR HAWAII & ASSOCIATES, INC.

3.4 GROUNDWATER AND SURFACE WATER RESOURCES

3.4.1 Groundwater Resources

Underlying the Property are two aquifers, one of which is a drinking water resource but with low vulnerability to contamination. According to the State Commission on Water Resource Management (CWRM) coding system, the Property overlies the Pālolo Aquifer System (30101) of the Honolulu Aquifer Sector. The Pālolo Aquifer System is one of six aquifer systems that make up the Honolulu Groundwater Management Area. Water development and groundwater use within the Honolulu Groundwater Management Area is regulated by the CWRM through the issuance of water use permits, well construction permits, and pump installation permits.

The Pālolo Aquifer is a system of two aquifers, with a sustainable yield of 5 million gallons per day (MGD) and an area of about 26 square kilometers (State of Hawai‘i Office of Planning, 2010).

The aquifer directly beneath the Property is vulnerable to contamination, but is not considered to be a drinking water or ecological resource. It is an unconfined, basal sedimentary aquifer composed of non-volcanic material. It is not a state drinking water resource, being of moderate salinity (1,000 to 1,500 mg/L Cl^-) and high vulnerability to contamination. According to the aquifer’s CWRM code, it is considered replaceable, and is not deemed to be of ecological importance. Groundwater depths range from 3.05 to 3.51 feet below ground surface. The direction of groundwater flow below the Property is not known, though can be reasonably assumed to be seaward.

The lower aquifer is considered an irreplaceable drinking water resource, but is protected from contamination by the local geology. It is a confined, basal flank aquifer defined by horizontally extensive lava formations. This lower aquifer is used as a drinking water resource, is fresh (<250 mg/L Cl^-) and has low vulnerability to contamination (State of Hawai‘i Office of Planning, 2011).

The Property is below (makai of) the Underground Injection Control (UIC) Line. Underground Injection Wells are used for injecting water or other fluids into a groundwater aquifer and are controlled by the Department of Health (DOH). The Property’s position below the UIC Line means that the underlying aquifer is not considered a drinking water source, a wider variety of wells are allowed, and some permit limitations are imposed.

The EPA classifies a large portion of O‘ahu, including the Pālolo Aquifer System, as the Southern O‘ahu Basal Aquifer, a Sole Source Aquifer (SSA). SSAs are designated in areas where few or no alternate drinking water sources are available and where, if contamination occurred, using an alternative source would be extremely expensive. A SSA designation gives the EPA the authority to review any proposed projects in the area using federal funds.

Below are the policies of the Hawai‘i Department of Health Clean Water Branch, which are applicable to all projects in the State of Hawai‘i:

- It is the State’s position that all projects must reduce, reuse and recycle water to protect, restore and sustain water quality and beneficial uses of State waters.
- State policy encourages stormwater infiltration through Low Impact Development (LID) practices, and discourages the treatment of stormwater as a waste product off impervious surfaces.
- This Environmental Assessment recognizes stormwater as:
    - a potential source of irrigation
    - a source of groundwater recharge and stream base flow
    - an asset that sustains and protects natural ecosystems and traditional beneficial uses of State waters

In addition, the State has a General Policy of Water Quality Antidegradation (§11-54-1.1, HAR), which states that existing uses and the level of water quality necessary to protect them, shall be maintained and protected. In the case that water quality exceeds levels necessary to protect aquatic habitats, water quality may not be degraded without director approval.

Potential Impacts and Mitigation Measures

No significant impacts to groundwater resources are anticipated. Under existing conditions approximately 83 percent of the Property is built upon and/or paved and the remaining approximately 17 percent is landscaped areas. The existing building, paved areas, and landscaping will remain substantially intact. Drainage after the renovations will follow the existing drainage pattern and stormwater runoff from the Property is not anticipated to increase. Stormwater runoff may slightly decrease due to the addition of new landscaping areas. As such no mitigation measures are warranted or planned at this time. KKDC will comply with all applicable County, State, and Federal rules regarding impacts to water quality.

3.4.2 Surface Water Resources

The Property is within the Ala Wai Watershed. There are no surface water resources on the Property. The nearest stream as classified by the Hawai‘i Department of Aquatic Resources is the Ala Wai Canal, located approximately 735 feet mauka of the Property. The nearest surface water body is the Pacific Ocean, located approximately 2,000 feet makai of the Property. Ala Wai Canal is a Class 2 inland water and the portion of the Pacific Ocean near the Property is a Class A marine water.

According to the U.S. Fish and Wildlife Service’s (USFWS) National Wetlands Inventory, the Property does not contain or border any lands designated as wetlands. The nearest inventoried wetland as classified by the State of Hawai‘i (State of Hawai‘i Office of Planning, 2013) is the Ala Wai Canal, classified by the USFWS as “Riverine”.

Potential Impacts and Mitigation Measures

No impacts on surface water resources are anticipated. The Ala Wai Canal is located upgradient of the Property, and therefore no impact from King Kalākaua Plaza is anticipated. To mitigate construction-related, short-term impacts, best management practices (BMPs) will be incorporated during construction to prevent stormwater discharges and contaminants such as sediment, pollutants, petroleum products, and debris from affecting coastal water quality. Before construction commences, BMPs will be installed fronting all drainage facilities, such as catch basin and drainage inlets along Kalākaua Avenue and Kūhiō Avenue. The contractor shall be responsible for clearing storm drain facilities to mitigate flooding during construction and removing BMPs upon completion of the project.

No impacts to any other wetlands are anticipated. The Property does not border or contain any wetlands, and is located approximately 0.2 miles from the nearest inventoried wetland. No mitigation measures are planned at this time.

Under current conditions, the Property contains no undisturbed areas of land or undeveloped drainage or vegetation features. Nevertheless, it is recognized that urban areas are one of the main contributors to nonpoint source pollution in the state, and KKDC recognizes the role played by individual properties in the health of urbanized watersheds. Where applicable and feasible, KKDC will follow State guidance on Stormwater Impact Assessments (State of Hawaiʻi Office of Planning, State Coastal Zone Management Program, 2013), Hawaiʻi Watershed Guidance (State Hawaiʻi Office of Planning, State Coastal Zone Management Program, 2010), and Low Impact Development (State of Hawaiʻi Office of Planning, State Coastal Zone Management Program, 2006), including some of the measures discussed above.

KKDC will comply with all applicable County, State, and Federal rules regarding impacts to water resources, including the City and County of Honolulu Rules Relating to Water Quality, effective August 16, 2017.

3.5 NATURAL HAZARDS

The Hawaiian Islands are susceptible to potential natural hazards, including flooding, tsunami inundation, hurricanes, and earthquakes. The Property's vulnerability to such hazards is described below. The nearest outdoor civil defense warning siren is located across Kapahulu Avenue from the Project site, in Fort DeRussy Military Reservation.

Flood Hazard

The Property is designated as within Flood Zone AO, within the one-percent-annual-chance flood area, according to the Flood Insurance Rate Map (FIRM) prepared by the Federal Emergency Management Agency (FEMA), National Flood Insurance Program (NFIP). See Figure 15. Zone AO lies inside the limits of the 1-percent-annual-chance flood (100-year flood), and developments

within Zone AO are regulated by NFIP. Properties within Zone AO require flood insurance purchase, as they typically have flood depths of between 1 and 3 feet; for the Property, the flood depth will be approximately 2 feet.

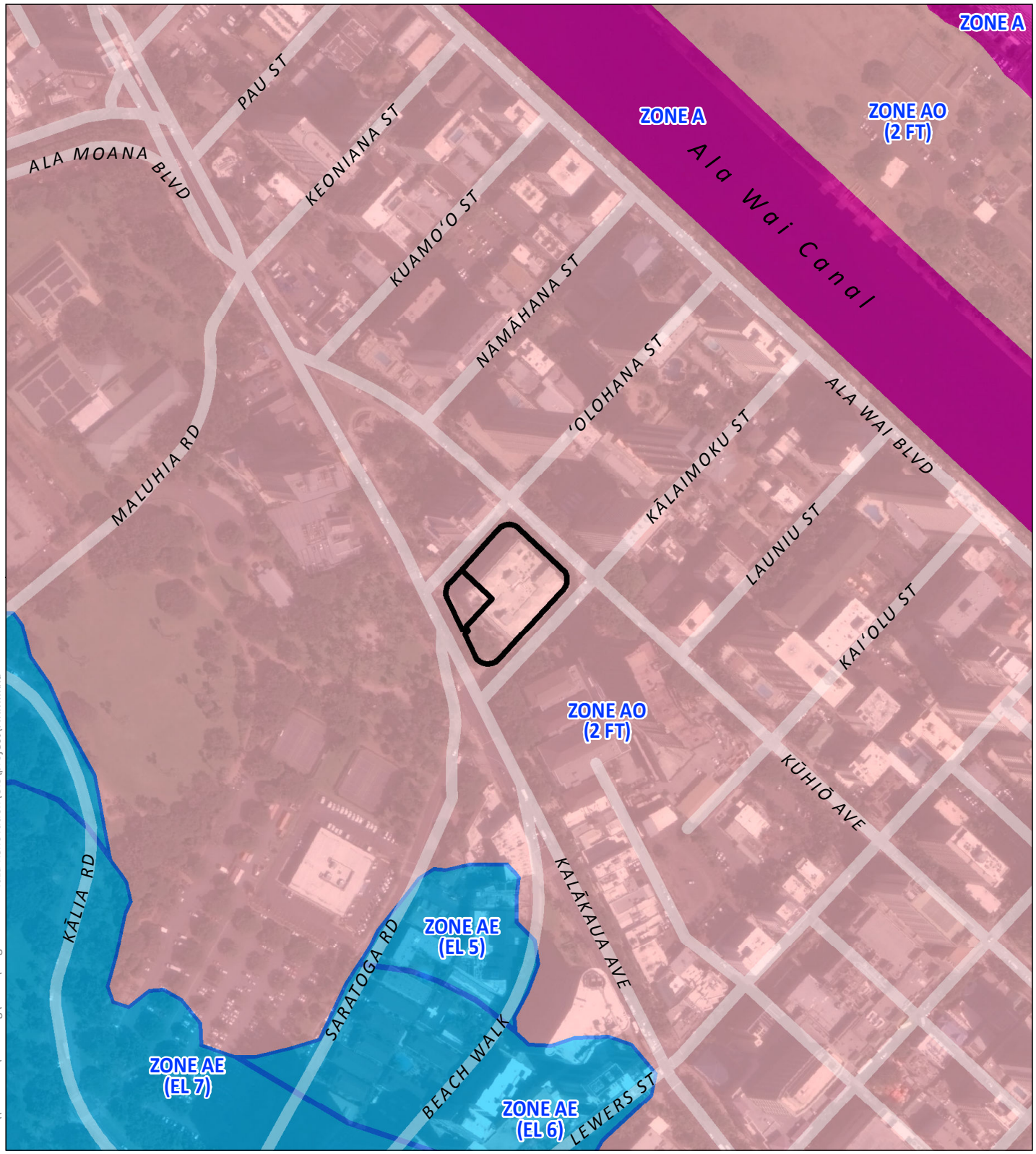
Climate change is predicted to result in both increased rainfall intensity and sea level rise, both of which will exacerbate flooding. In the last 30 years, Hawai'i has seen an increasing frequency of intense rainfall events. Climate change models suggest a continuation of this trend (U.S. Army Corps of Engineers, 2015).

Sea Level Rise

Elevations across most of the Property are high enough above sea level that direct inundation due to sea level rise is not anticipated to be likely in the context of moderate 21st century climate change projections and associated sea level rise. The elevation of the Property varies between three and nine feet above mean sea level. The elevation at the south corner of the Property is three feet, and the elevation at the north corner of the Property is nine feet. According to U.S. Army Corps of Engineers (USACE) projections, sea level is anticipated to rise an additional 0.4 to 4.5 feet between 2018 and 2100.

The Center for Island Climate Adaptation and Policy and the University of Hawaiʻi Sea Grant notes that sea level is expected to rise one foot by 2050 and three feet by 2100, and recommends that state and local governments plan accordingly (Center for Island Climate Adaptation and Policy, 2011). While an accelerating rise in local sea level should be planned for, the occurrence of specific water levels at specific times should not be anticipated because sea level rise models are inherently uncertain. Sources of this uncertainty include sparse local data, intrinsic uncertainty in climate warming and ice melt models, and prospective shifts in human behavior to curb greenhouse gas emissions.

A recent hydrogeological study of Honolulu indicated that flooding due to groundwater inundation may occur at the Property as sea level rises (Shellie Habel, 2017). Rather than look solely at ground elevation relative to sea level, the model accounts for the impacts of sea level rise (SLR) on groundwater levels in urban Honolulu to determine areas that maybe inundated by groundwater under various SLR scenarios. According to the model, at 0.32m (1.0 feet) SLR, the Property may experience "narrow unsaturated space" (near-inundation) along Kālaimoku Street and to a lesser degree along Olohana Street. At 0.60m (2.0 feet) SLR, the Property may experience near-inundation along all boundaries, and may experience groundwater inundation along Kālaimoku Street. At 0.98m (3.2 feet) SLR, the Property may experience groundwater inundation along all boundaries and near-inundation across the majority of the Property.



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DATE: 12/1/2016

LEGEND

Property

Flood Zone

A - 1% annual chance flood.

AE - 1% annual chance flood, Base Flood Elevation determined.

AO - 1% annual chance flood, Flood depths of 1 to 3 feet, Average depths determined.

Source: Federal Emergency Management Agency, 2015. USDA NRCS, 2015.

Disclaimer: This graphic has been prepared for general planning purposes only and should not be used for boundary interpretations or other spatial analysis.

Figure 15:
Flood Insurance Rate Map

KING KALĀKAUA PLAZA RENOVATION

Kalaimoku-Kuhio Development Corp

Island of O'ahu

North

Linear Scale (feet)

0 75 150 300

PBR HAWAII & ASSOCIATES, INC.

Tsunami Hazard

The Property is within the tsunami evacuation zone designated by the Hawai‘i State Civil Defense, as shown in Figure 16. Since the early 1800s, approximately 50 tsunamis have been reported in Hawai‘i. Seven caused major damage and two were generated locally. Compared to other areas in Hawai‘i, the reach of tsunami waves at Waikīkī Beach is relatively low. This is due to the shoreline’s orientation, as well as its wide, protective reef (Wiegel, 2008). Sea level rise will exacerbate tsunami-related hazards.

Hurricanes

Hurricanes are relatively rare in Hawai‘i, but since 1980, two hurricanes have had a major effect on Hawai‘i – Hurricane ‘Iwa in 1982 and Hurricane ‘Iniki in 1992. Hurricane season in Hawai‘i typically runs from May to November. While it is difficult to predict such natural occurrences, it is reasonable to assume that future incidents are likely, given historical events. During a hurricane, the Property will likely not be impacted by storm surge, but the building may be vulnerable to wind damage and wind-borne debris. Hurricane-related impacts may be exacerbated by climate change and associated sea level rise.

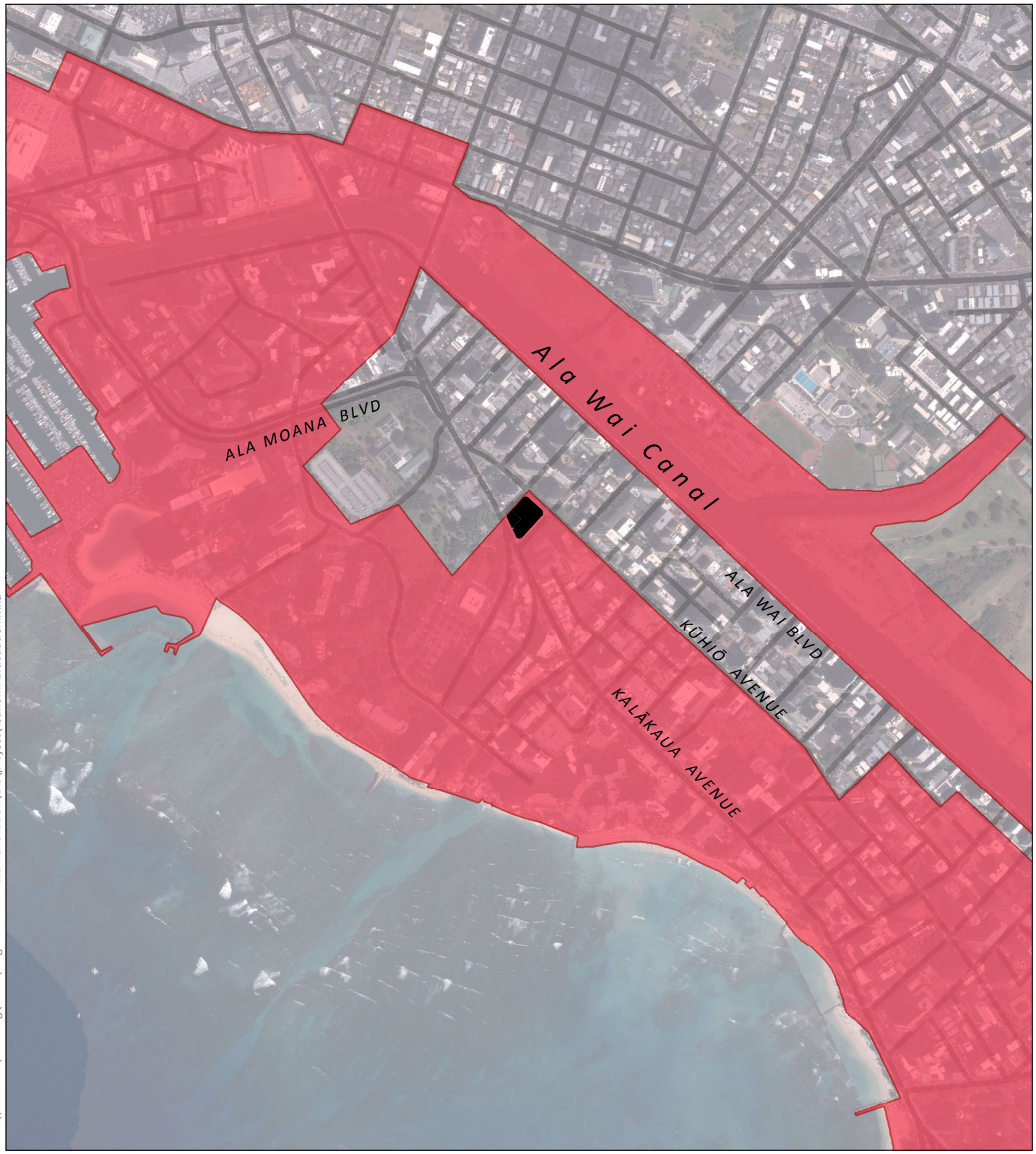
Earthquakes

Unlike other areas where a shift in tectonic plates is the cause of an earthquake, in Hawai‘i most earthquakes are linked to volcanic activity. Because of this unique situation, most of the thousands of earthquakes that occur in Hawai‘i each year are primarily located on Hawai‘i Island and do not cause major damage on O‘ahu. The vast majority of earthquakes are so small they are detectable only with highly sensitive instruments, though there have been several damaging earthquakes in the past.

Potential Impacts and Mitigation Measures

The renovation and repurposing of King Kalākaua Plaza for hotel use will not present or exacerbate any hazard condition relating to flood, tsunamis, hurricanes, and earthquakes, and no mitigation measures are planned or warranted at this time. In renovating King Kalākaua Plaza KKDC will comply with all applicable rules and regulations regarding flooding, including the requirements of Chapter 21A, Revised Ordinances of Honolulu regarding Flood Hazard Areas.

Most of the Property is not anticipated to suffer direct seawater inundation due to sea level rise within the 21st Century (based on projections from Center for Island Climate Adaptation and Policy and the University of Hawai‘i Sea Grant) but may begin to experience groundwater inundation if sea level rises by 1 to 2 feet. If: 1) the Property experiences near-inundation conditions and FIRM maps are updated to indicate that the Property resides in a higher-risk flood zone, or 2) increasing frequency of large storm events becomes a concern, mitigation strategies could include elevating electrical infrastructure for safety and to prevent water damage, reinforcing or relocating utilities as feasible, and adhering to NFIP requirements, building code updates, and/or County, State or



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DATE: 12/1/2016

LEGEND

- Property
- Tsunami Evacuation Zone

Figure 16:
Tsunami Evacuation Zone

KING KALĀKAUA PLAZA RENOVATION

Kalaimoku-Kuhio Development Corp — Island of O'ahu

North — Linear Scale (feet): 0 250 500 1,000

PBR HAWAII & ASSOCIATES, INC.

Source: City & County of Honolulu, 2010. USDA NRCS, 2015.

Disclaimer: This graphic has been prepared for general planning purposes only and should not be used for boundary interpretations or other spatial analysis.

Federal guidance. These mitigation measures could also be implemented should the south corner of the Property, the underground parking structure, or the building infrastructure begin to see impacts from sea level rise nearing 2100.

The potential impacts of hurricanes and earthquakes will be mitigated by designing all structures in compliance with the City and County of Honolulu Building Code and State Building Code. Impacts from natural hazards, such as tsunamis, will be further mitigated by adherence to appropriate civil defense evacuation procedures.

3.6 FLORA AND FAUNA

No rare, threatened, or endangered plants or animals are known to exist on the Property. The surrounding area is considered to contain little or no threatened and endangered species, and is not considered critical habitat for any particular plant or animal species (State of Hawaiʻi Office of Planning, 1992) (State of Hawaiʻi Office of Planning, 2014).

An arborist's report noted 20 trees and 38 palms on the Property, all species of which are commonly found in Honolulu. An additional 14 street trees and 14 street palms were located on the block within the City and County of Honolulu rights-of-ways, but not on the Property (34 trees and 52 palms total). All trees had a trunk diameter which exceeds six inches. The large monkeypod in the plaza was noted to be growing toward the building and uplifting concrete. The remaining plants were determined to be possible candidates for preservation, with 25 suitable for transplanting. Appendix E contains the arborist's report.

Potential Impacts and Mitigation Measures

Because no rare, threatened, or endangered plants or animals are known to exist on or near the Property, the renovations are not anticipated to have an impact on rare, threatened, or endangered plants or animals.

Typically, the Hawaiʻi State Department of Land and Natural Resources (DLNR) Division of Forestry and Wildlife (DOFAW) recommends that seabird-friendly lighting will be used to mitigate potential impacts to seabirds flying over the area. Outdoor lighting will be subdued or shielded to prevent glare and light spillage onto surrounding properties and rights-of-way. Lights will not rotate, revolve, move, flash or flicker in accordance with Section 21-9.80-4(c)(9), ROH. To the extent practicable, outdoor lighting will be shielded so the bulb can only be seen from below bulb height. If nighttime construction occurs, all lighting will be shielded and directed toward the ground to avoid attracting adult seabirds as they travel from the ocean to their breeding areas.

Landscape renovations will include an overall sprucing up of remaining landscaping. Existing trees and palms will be retained to the extent practicable, given the health of the plants, root systems, and any safety concerns. If any trees or palms are displaced (for example to accommodate the porte-cochere) replacement trees or palms will be provided at an appropriate location. Remaining

planting areas and hardscape elements are proposed to be repaired and maintained. New groundcover plants, such as laua‘e fern and ‘ākia shrubs will be provided, along with new hedges and shrubs, such as naupaka and purple eranthemum. In compliance with Section 21-9.80-4(f)(6) use of fragrant, lush, tropical vegetation and native plant species will be used as appropriate.

4 DESCRIPTION OF THE HUMAN ENVIRONMENT, POTENTIAL IMPACTS, AND MITIGATION MEASURES

4.1 ARCHAEOLOGICAL AND HISTORIC RESOURCES

The Property is fully developed with the existing King Kalākaua Plaza, which includes: a four-story retail/restaurant building, surrounding grounds (including a large paved plaza, sidewalks and walkways around the Property, and defined landscaped areas), and a two-level underground parking garage. Approximately 83 percent of the Property is built upon and/or paved and the remaining approximately 17 percent is landscaped areas. King Kalākaua Plaza was built in 1998, replacing various previous buildings and improvements that had been on the Property for many years before 1998.

In 1996, before King Kalākaua Plaza was built, an archaeological inventory survey (AIS) of the Property (including sub-surface testing) did not find any significant traditional sites or deposits and the AIS report concluded that no further archaeological investigations of the Property were warranted (Pacific Legacy, Inc., 1996). The State Historic Preservation Division (SHPD) accepted the AIS in a "no effect" letter dated April 26, 1996.

Potential Impacts and Mitigation Measures

The renovation and repurposing of King Kalākaua Plaza for use as a hotel is not anticipated to have any impact on archaeological or historic resources. The existing building, paved areas, landscaping, and underground parking structure will remain substantially intact and no significant grading will be necessary. Some minor grading may be needed for the new porte-cochere area and landscape renovations. Limited trenching may be necessary to connect to existing underground utilities.

KKDC and its contractors will comply with all state and county laws and rules regarding the preservation of archaeological and historic sites. Should historic sites such as walls, platforms, pavements and mounds, or remains such as artifacts, burials, or concentrations of shell or charcoal be inadvertently encountered during the construction activities, work will cease immediately in the immediate vicinity of the find, and the find will be protected. The contractor shall immediately contact SHPD which will assess the significance of the find and recommend appropriate mitigation measures, if necessary.

4.2 CULTURAL RESOURCES

King Kalākaua Plaza is located on man-made fill in the moku of Kona and ahupuaʻa of Waikīkī. Historically, Waikīkī was a coastal wetland featuring taro patches, duck ponds, fishponds, and a narrow natural beach. The ahupuaʻa also supported crops of yams, cloth plants, sugar cane and ti leaf. Later, rice supplanted taro to accommodate Chinese laborers.

Beginning in the 15th century, a vast system of irrigated taro fields was constructed, extending across the plain from Waikīkī to lower Mānoa and Pālolo valleys. This field system –traditionally attributed to the chief Kalamakua – took advantage of streams descending from Makiki, Mānoa, and Pālolo valleys which also constituted the community water supply.

By the arrival of Europeans in the late eighteenth century, Waikīkī had long been a center of population and political power on Oʻahu. King Kamehameha resided there upon taking control of the Hawaiian Islands in 1795.

By the early 19th century, the sheltered harbor in Honolulu ahupuaʻa began attracting trade and residents away from Waikīkī. King Kamehameha moved to Honolulu to maintain control of the sandalwood trade. The fields of Waikīkī became overgrown as the population emigrated out of the ahupuaʻa or was decimated by European diseases. However, some residents and aliʻi remained, and Waikīkī continued to sustain the traditional Hawaiian lifestyle.

In the mid- to late- 19th century, Waikīkī was also becoming a popular place for Americans living on Oʻahu. The late 19th century saw construction of the present Kalākaua Avenue and a tram line connecting Waikīkī to Honolulu. King Kalākaua established Kapiʻolani Park in 1877. The historical landscape continued to support traditional ahupuaʼa operations until modern-day Waikīkī evolved in the late 19th and early 20th centuries.

King Kalākaua Plaza is located in the vicinity of the former *Kālia Loko iʻa* (Kālia fishponds). At the turn of the 20th century, this area was covered with 30 acres of fish ponds mainly reserved for royalty. Three mauka streams flowed through the area before emptying into the ocean. In addition to the fishponds, the greater wetland area was used for fisheries, taro patches, and, rice paddies.

The 20th century brought major changes to Waikīkī. The Moana Hotel opened in 1901, with a hotel dining room that extended almost to the water's edge. Kalākaua Avenue (formerly Waikīkī Road) was completed in 1905. With purchase of the Fort DeRussy property by the USACE in 1908, and later with completion of Ala Wai Canal by the USACE in 1924, the fishponds and the wetland areas in the vicinity of the Property and in the greater Waikīkī area were drained and filled. Dredged material from the Ala Wai Canal was used for fill. In addition, rock, and coral dredged from the reef were used for beach expansion and land reclamation, forming the fast land for the buildings and businesses that comprise the area of the Property and modern-day Waikīkī.

A number of iconic Waikīkī amenities were built during the 20th century, including the Royal Hawaiian Hotel in 1925-26, The Natatorium in 1927, Ala Wai Yacht Harbor in 1935, the Honolulu Zoo in 1952, the Waikīkī Aquarium in 1955 (migrating from an earlier location in Kapiʻolani Park), and Duke Kahanamoku Beach and Lagoon in 1956 (Wiegel, 2008).

Potential Impacts and Mitigation Measures

The renovation and repurposing of King Kalākaua Plaza for use as a hotel is not anticipated to impede the exercise of Native Hawaiian rights, or rights of any ethnic group, related to gathering, access, or other customary activities. The Property is not known to be used for any specific gathering, access, or other customary activities. Approximately 83 percent of the Property is built upon and/or paved and the remaining approximately 17 percent is landscaped, primarily with introduced plant species.

To ensure the renovated and repurposed King Kalākaua Plaza conveys a Waikīkī sense of place KKDC, the architect team, and landscape architect team consulted with cultural practitioner Ramsay Taum. With Mr. Taum's knowledge and guidance, the design inspiration for the renovated King Kalākaua Plaza draws from the area's history of fishponds and abundant natural wetlands. The renovations thus acknowledge and take cues related to water, aquaculture, and fishing elements and motifs, including interpretations of fish gates and nets; textures related to natural rock, wood, and plants; and woven textures and plaiting such as from lashings, nets, and baskets; and taro patches and rice paddies. This design approach fosters a Waikīkī sense of place and highlights Waikīkī's natural, historic, and cultural setting in a modern interpretation. Figure 10 references images, patterns, and textures that provide design inspiration and connote a Waikīkī sense of place.

4.3 VISUAL RESOURCES

The existing King Kalākaua Plaza building, at four stories (total height approximately 65 feet) and surrounded by nearby other buildings (most much taller) on three sides, does not impact any significant public views identified under:

- Section 21-9.80-3, ROH, which identifies significant public views of Waikīkī landmarks, the ocean, and the mountains from public vantage points; and
- The PUC Development Plan's "Significant Panoramic Views" map (City and County of Honolulu Department of Planning and Permitting, 2004), which identifies significant public east-west views, mauka-makai views, and continuous views.

Views from within the Property on the ground level include: the surrounding roadways, Fort DeRussy Park, surrounding buildings, and limited mauka views.

While King Kalākaua Plaza is maintained, because the building is vacant, visually, the entire property is unappealing, unattractive, and uninviting. In its current vacant state, King Kalākaua Plaza represents an entire block devoid of interest and vitality in a prominent area of Waikīkī.

Potential Impacts and Mitigation Measures

The renovation and repurposing of King Kalākaua Plaza for use as a hotel is not anticipated to negatively impact visual resources in the area. Rather, the renovation will revitalize the block with

positive activity, inviting uses, and attractive architecture and design elements that connote a Waikīkī sense of place. In addition to an attractive new porte-cochere and hotel entrance along Kālaimoku Street, the renovations will include ground floor space for a coffee shop, café, or similar business, and if feasible, space for outdoor seating.

Landscape improvements will include an overall sprucing up of the remaining landscaping and remaining hardscape elements will be repaired and maintained. New groundcover plants, such as laua‘e fern and ‘ākia shrubs will be provided, along with new hedges and shrubs, such as naupaka and purple eranthemum. In compliance with Section 21-9.80-4(f)(6) use of fragrant, lush, tropical vegetation and native plant species will be used as appropriate.

As with existing conditions, the increase in height of the building from approximately 65 feet to approximately 85 – 100 feet will not impact significant public views identified under Section 21-9.80-3, ROH and the PUC Development Plan’s “Significant Panoramic Views” map. Many other buildings in the vicinity of King Kalākaua Plaza (where the maximum building height is 300-350 feet) are much higher multi-story apartment and hotel buildings (Figure 13).

Outdoor lighting will be subdued or shielded to prevent glare and light spillage onto surrounding properties and rights-of-way. Indirect illumination may be used. The lights will not rotate, revolve, move, flash or flicker, in accordance with Section 21-9.80-4(c)(9), ROH. To the extent practicable, outdoor lighting will be shielded so the bulb can only be seen from below bulb height, to ensure the safety of passing seabirds and prevent light pollution to the surrounding properties.

4.4 NOISE

Ambient noise levels in the vicinity of King Kalākaua Plaza are relatively high due to the Property’s proximity to Kalākaua Avenue, Kūhiō Avenue, and dense residential, commercial, resort, and other urban uses.

Principal sources of noise in the vicinity of the Property include vehicle traffic (including buses and commercial vehicles), air conditioning units from surrounding buildings, and general noise from human activity along Kalākaua Avenue, Kūhiō Avenue, Kālaimoku Street, and ‘Olohana Street.

Potential Impacts and Mitigation Measures

Regarding noise impacts related to the renovation and repurposing of King Kalākaua Plaza for use as a hotel, in the short-term, noise from construction can be expected from construction machinery, material transport vehicles, and other construction activities. Proper mitigation measures will be employed to minimize construction-related noise impacts. All construction activities will be in compliance with State DOH noise regulations on Community Noise Control (Chapter 11-46, HAR). When construction noise exceeds, or is expected to exceed, the DOH’s allowable limits, a

permit must be obtained from the DOH. Specific permit restrictions for construction activities as described in Chapter 11-46-7 (j) are:

- No permit shall allow any construction activities that emit noise in excess of the maximum permissible sound levels before 7:00 a.m. and after 6:00 p.m. of the same day, Monday through Friday;
- No permit shall allow any construction activities that emit noise in excess of the maximum permissible sound levels before 9:00 a.m. and after 6:00 p.m. on Saturday; and
- No permit shall allow any construction activities that would emit noise in excess of the maximum permissible sound levels on Sundays and holidays.

In the long-term, minor changes in ambient noise conditions are anticipated due to regular hotel operations. Sources of noise will include increased human activity, vehicles (guest, delivery, and service vehicles), operating machinery, and other business-related activities.

All hotel operations will be in compliance with State DOH community noise control requirements as specified under Section 11-46-4, HAR. This regulation requires that stationary noise sources in areas designed for multi-family dwellings, apartments, businesses, commercial uses, hotel uses, and resort uses be limited to maximum permissible sound levels of 60 decibels (dBA) from 7 am to 10 pm and 50 dBA from 10 pm to 7 am).

As in many other areas of Waikīkī, and other urban areas of Honolulu, noise from delivery trucks, trash pickup trucks, other non-stationary sources, and humans may be present at certain times. The hotel operator will be an experienced, successful hotel operator and it is expected that the hotel will be managed and operated in a highly professional manner so that noise from delivery trucks, solid waste pickup trucks, other non-stationary sources, and guests do not create an undue disturbance to neighbors.

4.5 AIR QUALITY

Air quality in the vicinity of the Property is generally considered to be good due to the presence of northeasterly trade winds that tend to disperse pollutants seaward. Vehicular traffic on nearby roadways is likely the primary source of air pollutants in the area. DOH operates several air monitoring stations throughout Oʻahu. The closest air monitoring station to the Property is the Honolulu Station located on Punchbowl Street on the roof of the DOH building (Kīnaʻu Hale), about three and one-third miles northwest of the Property. The Honolulu Station measures concentrations of $PM_{2.5}$ (particulate matter that is 2.5 microns or less in diameter), PM_{10} (particulate matter that is 10 microns or less in diameter), carbon monoxide, sulfur dioxide, wind direction, and wind speed.

According to the State of Hawaiʻi Annual Summary 2014 Air Quality Data, maximum levels of ozone, $PM_{2.5}$, PM_{10}, carbon monoxide, and sulfur dioxide at the Honolulu Station are consistently

below the limits set by state and federal ambient air quality standards (State of Hawai‘i Department of Health, Clean Air Branch, 2015).

Potential Impacts and Mitigation Measures

Regarding air quality impacts related to the renovation and repurposing of King Kalākaua Plaza for use as a hotel, in the short-term, emissions from construction vehicles and equipment may temporarily affect ambient air quality in the immediate vicinity. Impacts will be minimized through proper maintenance of construction equipment and vehicles and, if necessary, through development and implementation of a dust control management plan. Dust control measures may include watering loose soils, erecting dust screens, phasing land disturbing activities to minimize open soils, or establishing temporary groundcover. However, it is unlikely that a dust control management plan will be needed, given that no ground-disturbing activities are planned other than minor grading to create the new porte-cochere and minimal landscape improvements. All construction activities will comply with the provisions of §11-60.1-33, HAR on fugitive dust. No state or federal air quality standards will be violated during or after construction.

In the long-term, the renovations are not anticipated to significantly impact air quality.

4.6 ROADWAYS AND TRAFFIC

Austin, Tsutsumi & Associates prepared a traffic impact analysis report (TIAR) to assess traffic impacts related to the renovation and repurposing of King Kalākaua Plaza for use as a hotel. The information from the report and the report conclusions are summarized below. Appendix C contains the complete TIAR. Figure 17 shows roads, intersections, and public transit routes, and stops near the Property.

Existing Roadway and Traffic Conditions

King Kalākaua Plaza is on the block bordered by Kalākaua Avenue, Kūhiō Avenue, Kālaimoku Street, and ‘Olohana Street:

- **Kalākaua Avenue** is an eastbound, one-way, four-lane road that provides access through Waikīkī and runs from South Beretania Street to Paki Avenue. The speed limit in the vicinity of King Kalākaua Plaza is 25 miles per hour (mph).
- **Kūhiō Avenue** is an east-west, two-way, four-lane road (parallel to Ala Wai Boulevard) that runs from its intersection with Kalākaua Avenue (to the west of the Property) to Kapahulu Avenue. The speed limit in the vicinity of King Kalākaua Plaza is 25 miles per hour (mph).
- **Kālaimoku Street** is a northbound, one-way, two-lane road that links Kalākaua Avenue to Ala Wai Boulevard. South of Kalākaua Avenue, Kālaimoku Street becomes Saratoga Road, a two-way, four-lane road. Kālaimoku Street provides access to the Ritz-Carlton

Residences. The speed limit in the vicinity of King Kalākaua Plaza is 25 miles per hour (mph).

- ‘**Olohana Street** is a southbound, two-lane, one-way roadway that links Ala Wai Boulevard to Kalākaua Avenue. ‘Olohana Street provides access to the Waikiki Gateway Hotel. The speed limit in the vicinity of King Kalākaua Plaza is 25 miles per hour (mph).

AM and PM peak traffic generally occurs between 8:00 a.m. and 9: a.m., and 3:45 p.m. and 4:45 p.m., respectively. Under existing conditions traffic tends to accumulate on Kalākaua Avenue, generally due to delivery vehicles parked on the roadside, high traffic volume, and the close spacing of traffic signals. During the AM peak traffic hour, the queue generally clears quickly. However, during the PM peak traffic hour, queuing along Kalākaua Avenue was observed to extend ‘ewa of the split between Kalākaua Avenue and Kūhiō Avenue. At the intersection of Kalākaua Avenue, Kālaimoku Street, and Saratoga Road, vehicles were observed accumulating along Kalākaua Avenue and occasionally blocking movement from Saratoga Road onto Kālaimoku Street

Intersections

The TIAR drew the following conclusions regarding intersections in the vicinity of the Property:

Intersection	**Existing Conditions**
Kālaimoku Street-Kūhiō Avenue	Signalized intersection coordinated with other Kūhiō Avenue signalized intersections during peak traffic hours. The intersection operates at Level of Service (LOS) C or better. No significant delays observed.
‘Olohana Street-Kūhiō Avenue	Signalized intersection coordinated with other Kūhiō Avenue signalized intersections during peak traffic hours. The intersection operates at LOS D or better. Queuing from the ‘Olohana Street-Kalākaua Avenue intersection along ‘Olohana Street observed to occasionally extend into the intersection during peak traffic hours, but cleared and did not impact traffic operations.
Kālaimoku Street-Kalākaua Avenue/Saratoga Road	Signalized intersection coordinated with other Kalākaua Avenue signalized intersections. The pedestrian phase was actuated for every cycle on all approaches during peak hours. Queuing observed during peak traffic hours, and during PM peak traffic hours did not always clear. Northbound through traffic crossing Kalākaua Avenue experiences LOS F (overcapacity conditions) during PM peak traffic. Right turning traffic crossing Kalākaua Avenue experiences LOS E conditions during PM peak traffic.
‘Olohana Street-Kalākaua Avenue	Signalized intersection coordinated with other Kalākaua Avenue signalized intersections. The pedestrian phase was actuated for every cycle on all approaches during peak hours. No issues observed during AM peak traffic hour. During PM peak hour, queuing observed on Kalākaua Avenue extending to the Kalākaua Avenue-Kūhiō Avenue split. Queuing along ‘Olohana Street extended to Kūhiō Avenue.

Kālaimoku Street-Property driveway	Access to existing underground parking. No traffic-related issues were observed.
Kālaimoku Street-Ritz-Carlton private driveway	Vehicle drop-off to Ritz-Carlton valet parking. No traffic-related issues were observed.

Parking

Off-street parking at King Kalākaua Plaza is available in the building's existing underground parking structure which includes 205 parking stalls. The parking area is accessed from Kālaimoku Street.

Loading

Currently King Kalākaua Plaza has five existing and permitted loading zones:

- Two large loading zones accessible from Kūhiō Avenue (these are the main loading zones);
- Two loading zones accessible from Kālaimoku Street, including maneuvering space so that delivery vehicles do not have to reverse onto Kālaimoku Street; and
- One loading zone accessible from Kālaimoku Street and situated at the entrance to the underground parking area.

Bicycle and Pedestrian Conditions

The Waikīkī Special District is characterized by heavy pedestrian activity which is generated by the surrounding retail, restaurants, and hotels. Within the vicinity of the Property, all surrounding streets feature sidewalks on both sides. These sidewalks provide pedestrian access to Waikīkī's retail, restaurant, and hotel facilities. The makai sidewalk of Kalākaua Avenue accommodates the heaviest pedestrian use in the vicinity of the Property, with 249 pedestrians in the AM peak traffic hour and 263 pedestrians in the PM peak traffic hour. Heavy pedestrian traffic is accommodated by Kalākaua Avenue's wide sidewalks.

The makai side of Kalākaua Avenue contains an eastbound bicycle lane which runs from Ala Moana Boulevard to Kapahulu Avenue. A westbound bicycle lane runs on Ala Wai Boulevard from 'Āinakea Way to Keoniana Street. The heaviest bicycle traffic was observed on Kalākaua Avenue, with 36 cyclists in the AM peak traffic hour and 17 cyclists in the PM peak traffic hour. No other roadways that bound King Kalākaua Plaza contain bicycle lanes. A few bicyclists were observed on Kūhiō Avenue, despite the absence of bicycle lanes on that roadway.

There are four Bikeshare Hawaii Biki stations in very close proximity to King Kalākaua Plaza: 1) Biki station #314 at Saratoga Road and Kalākaua Avenue; 2) Biki station #316 at Beach Walk and Kalākaua Avenue; 3) Biki station #311 at Kalākaua Avenue and Gateway Park; and 4) Biki station #312 at 'Olohana Street and Kūhiō Avenue.

Public Transit

The Property is serviced by bus stops on Kalākaua Avenue, Kūhiō Avenue, and Saratoga Road. These stops are serviced by Routes 8, 13, 19, 20, 22, 23, 42, E, and 2L. Figure 17 shows roads, intersections, and public transit routes and stops in the vicinity of the Property.

Private group transportation services such as trolleys and tour buses also transit the area. Trolley access is available on ‘Olohana Street and Kālaimoku Street. Tour buses were observed loading passengers on ‘Olohana Street near Waikiki Gateway Hotel.

DTS is planning a high-capacity bus circulator to connect Waikīkī to the future Honolulu High-Capacity Rail station at Ala Moana Center. While the formal route has not yet been established, the bus circulator will likely improve public transit conditions around the Property.

Potential Impacts and Mitigation Measures

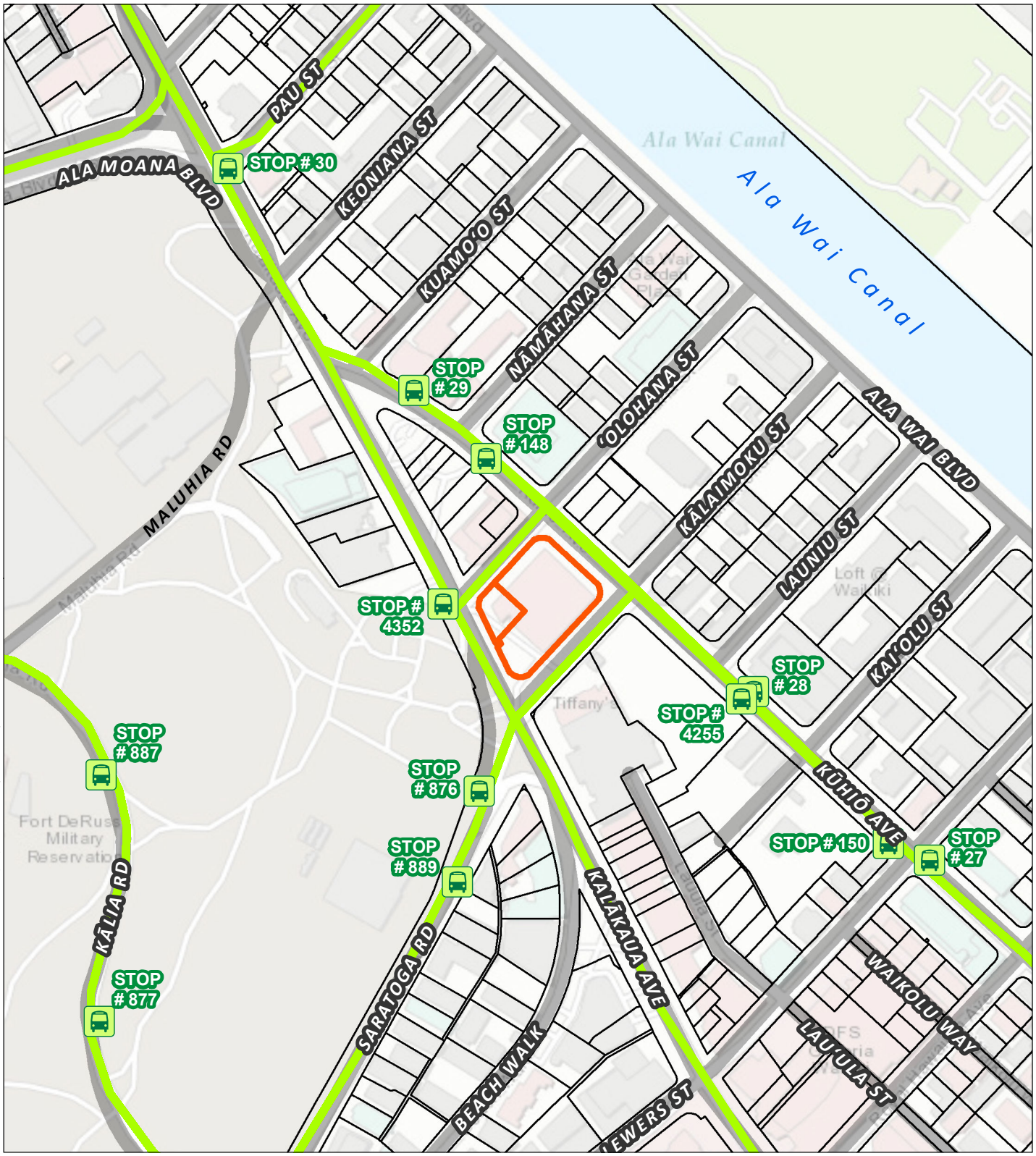
Roadway and Traffic Conditions

The TIAR concludes the renovation and repurposing of King Kalākaua Plaza for hotel use will reduce vehicle trips by more that 50 percent, compared to if the building was fully occupied under its intended use with commercial tenants. This conclusion is based on a comparative analysis using: 1) Institute of Transportation Engineers (ITE) trip generation codes and 2) Waikīkī-specific trip generation rates.

After renovation and repurposing of King Kalākaua Plaza for hotel use (and taking into account projected traffic growth rates and traffic projected from proposed developments in the vicinity), all study intersections are forecast to operate with LOS similar to existing conditions, with all movements operating at LOS E or better during the AM and PM peak hour of traffic, except for the northbound through movement on the Kālaimoku Street/Saratoga Road and Kalākaua Avenue intersection, which, as is the case under existing conditions, will continue to experience LOS F during the PM peak traffic hour.

Roadway and/or intersection improvements in the vicinity of the Property are not necessary or warranted, as: 1) use of King Kalākaua Plaza for a hotel will reduce vehicle trips, compared to if the existing building was fully occupied under its intended use with commercial tenants; and 2) if the existing building were occupied by commercial tenants, no traffic analysis or traffic improvements would be required as the building is fully developed and permitted for commercial uses.

Ala Moana Boulevard (Route 92, a State highway facility) is not anticipated to experience significant impacts from the renovation of King Kalākaua Plaza. The proposed renovations are anticipated to contribute between three and four percent to the Kalakaua Avenue/Ala Moana Boulevard intersection during the AM and PM peak hours of traffic; less than a typical 10 percent daily fluctuation.



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DATE: 11/20/2017

LEGEND

- Property
- Bus Routes
- Bus Stops 2017

Figure 17:
Roadway and Public Transit Map

KING KALĀKAUA PLAZA RENOVATION

Kalaimoku-Kuhio Development Corp — Island of O'ahu

North — Linear Scale (feet): 0 75 150 300

PBR HAWAII & ASSOCIATES, INC.

Source: City & County of Honolulu, 2017.

Disclaimer: This graphic has been prepared for general planning purposes only and should not be used for boundary interpretations or other spatial analysis.

Access/Porte-Cochere

In addition to decreasing traffic impacts due to converting the building from commercial use to hotel use, to further minimize traffic impacts the renovations will include an on-site porte-cochere along Kālaimoku Street for loading/unloading hotel operations. The porte-cochere will allow vehicles to pull off of Kālaimoku Street and minimize impacts from loading/unloading of passengers and luggage. The porte-cochere will be wide enough to allow a moving vehicle to safely pass a stationary parked vehicle, including space for vehicles turning into and out of the porte-cochere. This two-lane design will be long enough for two vehicles in each lane, with additional space on the entering and exiting curves for two additional vehicles, for a total capacity of six vehicles. To minimize queuing from entering vehicles along Kālaimoku Street, hotel staff should be readily available to: 1) assist with loading/unloading; 2) direct vehicles to the parking garage; and/or 3) direct vehicles to circulate around the block if necessary.

Parking

Regarding parking, with the renovations approximately 194 of the 205 existing parking stalls will be retained. The slight reduction in parking stalls is due to the conversion of some existing parking stalls to accommodate hotel operations. Significantly, the approximately 194 parking stalls provide three times the amount of parking required for hotel uses. Under Table 21-6.3, ROH, 0.25 parking stalls per hotel room are required. Thus, with up to 230 rooms the hotel would need 58 parking stalls. While no off-street vehicle parking is required for ground level retail uses in the Waikīkī Special District (per Section 21-9.80-4(h), ROH), with approximately 194 parking stalls the parking garage will have adequate capacity to accommodate parking for any ground-floor retail uses in addition to the hotel requirements

Loading

Based on the Land Use Ordinance (LUO) sections regarding off-street loading requirements (LUO Sections 21-6.100 to 21-6.120) the proposed uses would require four loading zones. To meet this requirement, four of the five existing and permitted loading zones will be retained:

- Two large loading zones accessible from Kūhiō Avenue; and
- Two loading zones accessible from Kālaimoku Street, including maneuvering space so that delivery vehicles do not have to reverse onto Kālaimoku Street.

Because the footprint of the existing building will maintain substantially the same, there are no feasible options for re-reorienting the existing loading zones. The two existing and permitted loading zones along Kūhiō Avenue will remain unchanged with trucks having to reverse into the stalls. It is anticipated the hotel will have single truck deliveries approximately twice a day. Therefore, schedules can be arranged to minimize traffic impacts. The Kālaimoku Street loading zones will remain unchanged and have maneuvering space so that delivery vehicles do not have to reverse onto Kālaimoku Street.

Pedestrian, Bicycle, and Public Transit Facilities
The TIAR concluded that pedestrian, bicycle, and public transit facilities are not anticipated to be significantly impacted by the renovation and repurposing of King Kalākaua Plaza for hotel use. The renovations will include bike racks for retail and hotel users and employees.

Construction Management Plan
To minimize impact to roadways and traffic conditions during the construction phase, after the Waikīkī Special District Permit is obtained, KKDC or its consultants and contractors will provide a construction management plan (CMP) to DPP for review and approval. The CMP is anticipated to: 1) identify the type, frequency and routing of construction-related vehicles; 2) provide recommendations to minimize the impacts from construction-related vehicles and related construction activities; 3) recommend limiting construction-related vehicular activity to periods outside of peak traffic periods; and 4) include preliminary or conceptual traffic control plans.

Should any construction-related work require the temporary closure of any traffic lane on a City street, a street usage permit will be obtained from DTS. If necessary, a Permit to Operate or Transport Oversize and/or Overweight Vehicles and Loads over State Highways will be obtained from the State Department of Transportation, Highways Division.

Traffic Management Plan
Although the TIAR concludes that the renovation and repurposing of King Kalākaua Plaza for hotel use will reduce vehicles trip by more than 50 percent, compared to if the building was fully occupied with commercial tenants, to further reduce traffic impacts, after the Waikīkī Special District Permit is obtained, KKDC or its consultants and contractors will provide a traffic management plan (TMP) to DPP for review and approval. The TMP will include recommendations for: 1) loading zone and porte-cochere operations; 2) traffic demand management (TDM) strategies to minimize vehicular trips, such as carpooling and ride sharing programs; and 3) incentives to encourage transit, bicycle, and pedestrian access.

4.8 INFRASTRUCTURE AND UTILITIES

Austin, Tsutsumi & Associates prepared a preliminary engineering report (PER) related to the renovation and repurposing of King Kalākaua Plaza for use as a hotel, with infrastructure demand based on a 230-room hotel and limited retail uses on the ground floor. Information from the report is summarized below. Appendix D contains the complete report.

4.8.1 Water System

The existing Board of Water Supply (BWS) water system in the vicinity of the Property consists of one 16-inch water main along Kūhiō Avenue. The Property is serviced by two six-inch water laterals, each of which is outfitted with a water meter. King Kalākaua Plaza is currently vacant, and therefore has minimal demand on the water system.

Two fire hydrants are located in the City right-of-way area that surrounds the Property, one along Kalākaua Avenue approximately 80 feet from the south corner of the Property, and another along Kālaimoku Street, approximately 100 feet from the south corner of the Property.

Potential Impacts and Mitigation Measures

BWS has determined that the existing water system is adequate to accommodate the proposed renovations based on current data, but the final decision on the availability of water will be confirmed when the building permit application is submitted for approval. See Appendix D (PER) appendices section for the BWS determination letter.

Based on anticipated demand, the existing BWS water connections can accommodate both daily (domestic) and fire protection demands. There are no plans to upgrade or construct new fire hydrants as part of the renovations, however field tests will be conducted to confirm the water pressure provided by the existing fire hydrants.

As recommended by BWS, King Kalākaua Plaza will implement water conservation measures to the extent practicable. These may include

- Low flow plumbing fixtures;
- Utilization of non-potable water for irrigation using catchment and chiller/air handler condensate;

Cooling tower conductivity meters and water softening recycling systems;

- Drought tolerant plants and/or xeriscaping where new landscaping is added;
- Efficient irrigation systems; and
- Water Sense labeled low-flow water and plumbing fixtures

In addition renovations will include a water hammer arrestor or expansion tank if necessary to reduce pressure spikes and potential main breaks in the BWS water system.

4.8.2 Wastewater System

Wastewater service to the Property is provided by the City and County of Honolulu Department of Environmental Services (City sewer system). The Property is serviced by a municipal sewer lateral that discharges into a municipal sewer main on Kūhiō Avenue.

Potential Impacts and Mitigation Measures

The Department of Planning and Permitting (DPP) Wastewater Division approved a Sewer Connection Application for the renovation and repurposing of King Kalākaua Plaza to a hotel with limited retail uses, indicating that municipal sewer system has the capacity to accommodate wastewater flows from the proposed 230-room hotel rooms and retail uses. A new sewer lateral connecting to the sewer main on Kūhiō Avenue will be required. Construction plans will be

submitted to DPP for review and approval, and KKDC will comply with all applicable requirements regarding wastewater facilities charges.

4.8.3 Drainage System

The Property is developed with curbs and gutters on all sides, with catch basins located at each corner to collect stormwater runoff. Water collected by the catch basins is routed to the City and County of Honolulu drainage system which is directed into the Ala Wai Canal at a point northeast of the Property. Under existing (developed) conditions, the Property contains approximately 83 percent impervious surfaces and 17 percent pervious surfaces, with a calculated stormwater runoff of 6.36 cubic feet per second (cfs) based on a 1-hour 10-year storm event.

Potential Impacts and Mitigation Measures

The proposed renovations are not anticipated to cause long-term impacts with regard to site drainage. Drainage for the renovated King Kalākaua Plaza will follow the existing drainage pattern and stormwater runoff from the Property is not anticipated to increase. Stormwater runoff may slightly decrease due to the addition of new landscaping areas. Changes to the existing curbs, gutters, and catch basins are not proposed. Therefore, no long-term mitigation measures are planned at this time.

To mitigate any short-term impacts related to construction, BMPs will be incorporated during the renovation to prevent stormwater discharges and contaminants such as sediment, pollutants, petroleum products, and debris from affecting coastal water quality. Before construction commences, BMPs will be installed fronting the Property's catch basins. The contractor shall be responsible for clearing storm drain facilities to mitigate flooding during construction and removing BMPs upon completion of the project. Section 3.4 includes mitigation measures regarding stormwater quality.

4.8.4 Electrical and Communication Systems

King Kalākaua Plaza is serviced by two existing Hawaiian Electric Company (HECO) transformers. These 1,500 kVA transformers are connected to the 12.47 kV circuits in HECO's Kalākaua Avenue underground duct system. HECO presently services the Waikīkī area from its Ena and Waikiki substations.

The Property is serviced by Hawaiian Telcom (HTCO) and Charter Communications from HTCO's underground duct system located within Kalākaua Avenue. The building's telecommunications service demarcation point is connected to HTCO copper pairs and fiber optic cables, and to Charter Communications fiber optic cables.

Currently the existing building on the Property is vacant, and therefore there are no significant demands on electrical and communication systems.

Potential Impacts and Mitigation Measures

The proposed renovations are not anticipated to significantly impact electrical and communication systems. Although the renovation to hotel use (with limited retail uses) will increase demand relative to existing conditions, it is anticipated that existing electrical and communication systems infrastructure will be adequate to accommodate the renewed demand.

During the design of the proposed improvements, a service request and building plans will be submitted to HECO for review and comment to confirm that their existing transformers have sufficient capacity for the added floor area. If necessary, existing communication systems cables will be reinforced.

4.8.5 Natural Gas

Hawaii Gas provides natural gas for the area. The Property is serviced by an existing lateral connected to main that runs along the south side of Kālaimoku Street approximately 50 feet from the Property line.

Currently the existing building on the Property is vacant, and therefore there are no significant demands (if any) on the natural gas system.

Potential Impacts and Mitigation Measures

The proposed renovations are not anticipated to create significant short- or long-term impacts with regard to natural gas, although the renovation to hotel use (with limited retail uses) will increase demand relative to existing conditions. King Kalākaua Plaza will resume natural gas service via the Kālaimoku Street gas main.

4.8.6 Solid Waste

Currently the existing building on the Property is vacant, and therefore there is no significant solid wasted being generated on the Property.

Most residential and general commercial trash from Honolulu is hauled to the Campbell Industrial Park H-POWER (Honolulu Program of Waste Energy Recovery) Plant. This waste-to-energy plant processes over 600,000 tons of waste per year and produces up to 10 percent of this island's electricity. Residual ash and non-combustible construction and demolition debris, as well as industry waste is disposed of in a landfill. The two landfills on O‘ahu are the Waimanalo Gulch Sanitary Landfill and the landfill in Nānākuli currently administered by PVT Land Company (City and County of Honolulu Department of Environmental Services, 2005).

Businesses (including hotels) are required to arrange or provide for the collection of all refuse (§9-3.1(a), ROH).

Potential Impacts and Mitigation Measures

The renovation and repurposing of King Kalākaua Plaza for hotel use is not anticipated to generate significant amounts of solid waste which the current municipal solid waste disposal system could not accommodate.

In the short-term, renovation demolition and construction activities are anticipated to generate some debris and solid waste, but the typical amounts of substantial refuse associated with a redevelopment of this scale are not anticipated due to the adaptive reuse of the existing building. Where possible materials will be re-reused and recycled.

In the long-term, hotel operations are not anticipated to have a significant impact on solid waste facilities. The hotel operator will arrange and provide for the collection of all refuse from the Property in accordance with Section 9-3.1(a), ROH. Solid waste containers will include an attached lid. All organic waste, food, and refuse will be managed properly. The hotel operator will recycle glass containers as required by under Section 9-3.1(c), ROH. Other solid waste may be recycled as practicable.

4.9 SOCIO-ECONOMIC CHARACTERISTICS

4.9.1 Population and Housing

The Property is part of the Urban Honolulu Census Designated Place (CDP). The Urban Honolulu CDP is roughly made up of 2,451 Census blocks and currently holds 35.3 percent of Oʻahu's population, at 350,399 people (State of Hawaiʻi Department of Business, Economic Development and Tourism (DBEDT), 2015). The General Plan for the City and County of Honolulu seeks to distribute between 45.1 to 49.8 percent of Oʻahu's population within the Primary Urban Center Development Plan area. In 2000, the PUC had a population of 419,333 people, or 47.9 percent of Oʻahu's population. Based on projections by the City DPP, Oʻahu's population is projected to increase to 969,467 people by 2020. This corresponds to the desired population of 437,230 to 487,794 people within the PUC area.

Waikīkī is arguably the densest place in the state, with a population density of 119,380 persons per square mile (State of Hawaiʻi Department of Business, Economic Development & Tourism, 2012). The Waikīkī Special District is made up of 10 Census Tracts comprising 117 Census blocks (State of Hawaiʻi Office of Planning, 2011) and experienced a population increase of 3.9 percent from April 2010 to July 2014, slightly lower than the rest of Honolulu and the island of Oʻahu (State of Hawaiʻi Department of Business, Economic Development and Tourism (DBEDT), 2015).

Waikīkī had a total population of 23,073 as of the 2010 U.S. Census, and a de facto population of 94,310.

Table 2 shows general demographic characteristics of the Waikīkī Special District and Oʻahu.

Table 2. Demographic Characteristics of Waikīkī Special District and Oʻahu

	Waikīkī Special District (2,451 Census Blocks)	Oʻahu
Resident Population	23,073	953,207
De Facto Population	94,310	987,406
Under 5 years	724	61,261
18 years and over	21,102	742,707
65 years and over	3,948	138,490
Total Households	12,287	311,047
Total housing units	18,821	336,899
Vacant units	5,819	25,852

Source: (State of Hawaiʻi Department of Business, Economic Development & Tourism, 2012). Oʻahu 2010 Census household data from (State of Hawaiʻi Department of Business, Economic Development & Tourism, 2011) and 2010 State of Hawaiʻi Data Book.

Compared to the rest of Oʻahu, Waikīkī has a larger Caucasian population (43.95 percent, compared to 21.08 percent) and smaller Asian population (37.27 percent, compared to 44.84 percent).

The resident population of the City and County of Honolulu is projected to increase at an annual rate of 0.4 percent from 2010 to 2040, with the state population projected to increase from 1,363,621 in 2010 to 1,708,900 by 2040 (State of Hawaii Department of Business, Economic Development and Tourism, 2012).

Potential Impacts and Mitigation Measures

The renovation and repurposing of King Kalākaua Plaza for hotel use will not increase the permanent resident population of Waikīkī or Honolulu. Rather, it is expected to that the hotel will service business travelers and may be popular with kamaʻāina travelers seeking lodging in Waikīkī in a convenient location without typical resort-style amenities, although the hotel will have a pool and pool deck on the fourth floor. Therefore, no mitigation measures in regard to permanent resident population are warranted or proposed.

4.9.2 Economy and Employment

Waikīkī contains 0.08 percent of the land in the state, yet it contributes 6.5 percent of the State Gross Domestic Product (GDP), 6.3 percent of civilian employment and 7.9 percent of state tax

revenues. Hosting 4.0 percent of Hawai‘i’s firms and employing 6.0 percent of the state’s payroll workforce, the area is a major business hub. Waikīkī is also home to a significant proportion (36.3 percent) of the state’s tourist accommodations, and a vast majority (80.7 percent) of accommodations on O‘ahu (State of Hawai‘i Department of Business, Economic Development & Tourism, 2012).

The workforce of Waikīkī primarily commutes from other areas of O‘ahu, with a smaller percentage commuting from neighbor islands and, more rarely, the mainland. Approximately nine percent of Waikīkī’s workforce resides in Waikīkī. Despite having a higher Caucasian population and smaller Asian population, Waikīkī has a larger Asian workforce and smaller Caucasian workforce than average for the state. The workforce has fewer Bachelor’s or advanced degrees (23.1 percent, vs. 28.0 percent in the state) and the majority is female (52 percent, as opposed to a minority of 48.9 percent in the state workforce) (State of Hawai‘i Department of Business, Economic Development & Tourism, 2012).
The Waikīkī workforce is slightly older than the state average. The percentage the workforce aged 29 years or younger in Waikīkī is 22.0 percent, compared to 23.4 percent in the state. The percentage of the workforce aged 55 years or older is 21.5 percent, compared to 20.8 percent in the state (State of Hawai‘i Department of Business, Economic Development & Tourism, 2012).

In the first quarter of 2016, Hawai‘i’s GDP was 80 billion dollars. GDP is expected to grow by about one and a half to two percent annually through at least 2018. (United States Department of Commerce, 2016).

The Hawai‘i economy is highly dependent on tourism. The Economic Research Organization at the University of Hawai‘i Office (UHERO) notes that growth in visitor arrivals and days will average just under two percent for the 2016-2017 period. U.S. mainland visitors are contributing the most to growth of Hawai‘i’s visitor industry. Inflation-adjusted visitor spending will remain unchanged, a trend that has continued since 2012. Inflation-adjusted hotel room prices have been relatively constant in recent quarters. (The Economic Research Organization at the University of Hawai‘i, 2016).

The state’s broader economy showed a total 1.4 percent increase in non-farm jobs. Slightly larger growth (two- to three-percent) occurred in the fields of healthcare, accommodation and food services, and transportation utilities. As of third quarter 2016, non-farm payroll growth was anticipated to stay at 1.4 percent for 2016. Personal income was projected to grow more than two percent in 2016 and advance at a rate of 1.5 percent through 2018. Labor incomes are widespread across the private sector, led by the construction industry. (The Economic Research Organization at the University of Hawai‘i, 2016) In 2015, median household income in Hawai‘i was $73,486 (U.S. Census Bureau, 2016). The national average for the same year was $69,615.

In its current vacant state, King Kalākaua Plaza generates little to no economic activity (the parking garage is still in use for paid parking). The vacant Property is unappealing, unattractive, and uninviting. This results in a "dead zone" devoid of vitality and economic activity on an entire block in a prominent location in Waikīkī. While past efforts have been made to attract visitors and shoppers toward this end of Kalākaua Avenue (for example, with the Luxury Row shopping complex across Kālaimoku Street and the previous King Kalākaua Plaza retail tenants Nike Town and Banana Republic), it is clear that the retail center of Waikīkī retail has migrated toward the center of Kalākaua Avenue with projects such as the new International Market Place and the complete renovation of Royal Hawaiian Shopping Center. And now the "dead zone" created by the vacant King Kalākaua Plaza stops visitors and shoppers from venturing down Kalākaua Avenue past Luxury Row.

Potential Impacts and Mitigation Measures

The renovation and repurposing of King Kalākaua Plaza for hotel use is anticipated to have a positive impact on the state and local economy. The renovation for hotel use will revitalize the block with appealing, attractive, and inviting uses, creating economic activity and encouraging visitors to venture further down Kalākaua Avenue, thus creating economic value, not only for King Kalākaua Plaza, but also for other nearby properties. Besides the conversion of the existing retail/restaurant building for hotel use, the renovations will include ground floor space for a coffee shop, café, or similar business, and if feasible, space for outdoor seating.

In the short-term, the renovations will create economic activity and jobs during the renovation phase, including from design and construction-related work and the multiplier effect on the local economy. The total cost for design and construction is estimated at approximately $85 million.

In the long-term, the new hotel and retail uses will create sustained economic activity and jobs related to on-going hotel and retail operations. It is estimated that the new hotel will create 70 to 75 full time equivalent jobs.

4.10 PUBLIC SERVICES AND FACILITIES

4.10.1 Schools

The Property is located in the Department of Education's Kaimukī Complex, Honolulu District. Table 3 shows the present enrollment for schools within the Complex, as well as nearby schools which fall outside the Complex, as listed by the Department of Education.

Potential Impacts and Mitigation Measures

The renovation and repurposing of King Kalākaua Plaza for hotel use will not impact student enrollment at public or private schools as the hotel will have no permanent residents. Therefore, no mitigation measures are warranted or planned.

Table 3: 2016-2017 Enrollment for Public Schools

School	Enrollment in 2016-2017 School Year
Ala Wai Elementary	403
Ali‘iolani Elementary	209
Hokulani Elementary	359
Jarrett Middle School	251
Jefferson Elementary	400
Kaimuki High School	739
Kaimuki Middle School	1004
Kuhio Elementary	235
Lunalilo Elementary	372
Palolo Elementary	292
Washington Middle School	848
School for Examining Essential Questions of Sustainability (Charter School, grades 6-8)	160
Waikiki Elementary School	570
Hawaii Center for the Deaf & Blind	58 (2012-13)

Source: (State of Hawai‘i Department of Education, 2016)

4.10.2 Police Protection Services

The Property is located within the jurisdiction of the City and County of Honolulu Police Department (Police Department) District 6 (Waikīkī), Sector 2. The nearest police station is the Honolulu Police Department Waikīkī Substation, located at 2425 Kalākaua Avenue, roughly 0.6 miles from the Property.

Potential Impacts and Mitigation Measures

The renovation and repurposing of King Kalākaua Plaza for use as a hotel is expected to have positive impact on public safety by establishing a positive presence on the Property, compared to the current vacant building. While King Kalākaua Plaza is maintained, because the building is vacant, the entire property is unappealing, unattractive, and uninviting. In its current vacant state, King Kalākaua Plaza is devoid of vitality and dark and unwelcoming in the evening. The renovations will brighten and enliven the area with a distinctive, safe, secure, welcoming, and well-run hotel.

After the renovations there may be an occasional and unavoidable demand for police services associated with on-going operations, however, it is anticipated that existing police services and operations will not be significantly affected.

The Police Department stated in a letter dated October 18, 2016 that KKDC should consider impacts to traffic, traffic safety, street signs, and the community, particularly those that may result from construction vehicles during the renovations. Overall, during construction, KKDC will ensure a safe means of ingress/egress for construction vehicles, motorists, and pedestrians in the vicinity of King Kalākaua Plaza. Contractor personnel will be reminded not to utilize public parks as a parking area, unless prior permission is obtained. See Section 4.6 for information regarding potential long-term impacts and mitigation measures related to roadways and traffic resulting from the renovations.

There may be an occasional and unavoidable demand for police, fire, and medical services associated with the building, however, it is anticipated that the existing services will not be adversely affected.

4.10.3 Fire Protection Services

The Waikīkī Fire Station is located at 381 Kapahulu Avenue, 1.3 miles from the Property. Two fire hydrants are located in the City right-of-way area that surrounds the Property, one along Kalākaua Avenue approximately 80 feet from the south corner of the Property, and another along Kālaimoku Street, approximately 100 feet from the south corner of the Property.

Potential Impacts and Mitigation Measures

After the renovations there may be an occasional and unavoidable demand for fire protection services associated with on-going operations, however, it is anticipated that existing fire protection services and operations will not be significantly affected. The renovations will be designed and built in accordance with all applicable provisions of the Fire Code of the City and County of Honolulu for high-rise buildings, change of use, and change of occupancy.

4.10.4 Medical Services

Within three miles of the Property there are emergency medical facilities: Straub Clinic and Hospital, and Kapiʻolani Medical Center. Emergency medical service is provided by the City and County of Honolulu Emergency Services Department, Emergency Medical Services Division. Urgent care (non-emergency medical services) is provided by a number of clinics in Waikīkī, including the Kūhiō Walk-In Medical Clinic, Straub Doctors on Call - Sheraton Waikīkī, Urgent Care Clinic of Waikīkī, and The Medical Corner.

Potential Impacts and Mitigation Measures

The renovation and repurposing of King Kalākaua Plaza for use as a hotel is not expected to impact existing medical services. After the renovations there may be an occasional and unavoidable demand for medical services associated with on-going operations, however, it is anticipated that

existing medical services will have adequate capacity to address any medical needs and will not be significantly affected.

4.10.5 Recreational Facilities

The Property is located near many public recreational facilities and amenities. Kalākaua Avenue lies on the Property's southeast edge, separating it from Fort DeRussy Park, which features open green space, the U.S. Army Museum of Hawaii, and beach access. The nearby beach stretches the length of Waikīkī, providing access to beachfront commercial uses and views of the city and Diamond Head. Its position in the heart of Waikīkī places the Property within walking distance of a large number of recreational opportunities for visitors within the Waikīkī Resort Mixed Use Precinct. The Ala Wai Golf Course and Ala Wai Community Park are located less than one mile from the Property, mauka of the nearby Ala Wai Canal. The Honolulu Zoo is about a mile from the Property, located within Kapiʻolani Regional Park, the largest and oldest public park in Hawaiʻi, which stretches from the Honolulu Zoo towards Diamond Head State Park.
In addition to these recreational facilities, Waikīkī attracts visitors as a major retail and nightlife destination.

Potential Impacts and Mitigation Measures
The renovation and repurposing of King Kalākaua Plaza for use as a hotel is not expected to have an adverse impact on nearby recreational facilities. In a letter dated November 4, 2016, the City and County of Honolulu Department of Parks and Recreation stated: "…the proposed project will have no impact on any program or facility of the Department...."

The building will not restrict recreational opportunities for the public, and the renovated building may have an indirect positive impact by providing visitor accommodations and some retail, near coastal recreation areas in Waikīkī.

5 LAND USE CONFORMANCE

This section describes the State of Hawai‘i and City and County of Honolulu land use plans, policies, and ordinances relevant to King Kalākaua Plaza. Each subsection includes a discussion of how the project conforms to the plans and requirements.

5.1 STATE OF HAWAI‘I

5.1.1 State of Land Use Law, Chapter 205, Hawai‘i Revised Statutes

The State Land Use Law (Chapter 205, HRS), establishes the State Land Use Commission and authorizes this body to designate all lands in the State into one of four (4) Districts: “Urban”, “Rural”, “Agricultural”, or “Conservation”. The Property is within the State Land Use Urban District (Figure 4). Hotels are consistent with uses permitted in the Urban District.

5.1.2 State Coastal Zone Management (CZM) Program

The U.S. Congress enacted the Coastal Zone Management (CZM) Act to assist states in better managing coastal and estuarine environments. The act provides grants to states that develop and implement federally-approved CZM plans. The State of Hawai‘i’s CZM Act Program was enacted pursuant to Chapter 205A, HRS. The program outlines management objectives centered around ten areas: 1) Recreational Resources; 2) Historic Resources; 3) Scenic and Open Space Resources; 4) Coastal Ecosystems; 5) Economic Uses; 6) Coastal Hazards; 7) Managing Development; 8) Public Participation in Coastal Management; 9) Beach Protection; and 10) Marine Resources. All lands within the State of Hawai‘i fall within the CZM area, including the Property.

The objectives and policies of the Hawai‘i CZM Program, along with a detailed discussion of how the renovations and improvements in the Project Area conform to these objectives and policies, are discussed below.

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

COASTAL ZONE MANAGEMENT ACT, CHAPTER 205A, HRS	S	N/S	N/A
RECREATIONAL RESOURCES			
Objective: (A) Provide coastal recreational opportunities accessible to the public.			
Policies:			
(A) Improve coordination and funding of coastal recreational planning and management; and			x
(B) Provide adequate, accessible, and diverse recreational opportunities in the coastal zone management area by:			
(i) Protecting coastal resources uniquely suited for recreational activities that cannot be provided in other areas;	x		
(ii) Requiring replacement of coastal resources having significant recreational value including, but not limited to, surfing sites, fishponds, and sand beaches,			x

COASTAL ZONE MANAGEMENT ACT, CHAPTER 205A, HRS	S	N/S	N/A
when such resources will be unavoidably damaged by development; or requiring reasonable monetary compensation to the State for recreation when replacement is not feasible or desirable;			
(iii) Providing and managing adequate public access, consistent with conservation of natural resources, to and along shorelines with recreational value;			x
(iv) Providing an adequate supply of shoreline parks and other recreational facilities suitable for public recreation;			x
(v) Ensuring public recreational uses of county, state, and federally owned or controlled shoreline lands and waters having recreational value consistent with public safety standards and conservation of natural resources;			x
(vi) Adopting water quality standards and regulating point and nonpoint sources of pollution to protect, and where feasible, restore the recreational value of coastal waters;	x		
(vii) Developing new shoreline recreational opportunities, where appropriate, such as artificial lagoons, artificial beaches, and artificial reefs for surfing and fishing; and			x
(viii) Encouraging reasonable dedication of shoreline areas with recreational value for public use as part of discretionary approvals or permits by the land use commission, board of land and natural resources, and county authorities; and crediting such dedication against the requirements of section 46-6.			x

Discussion: The renovation and repurposing of King Kalākaua Plaza for use as a hotel will not impede any of the policies of the Recreational Resources management objective. The existing building and the renovated building do not, and will not, restrict recreational opportunities for the public, and the renovated building may have an indirect positive impact by providing visitor accommodations and some retail, near coastal recreation areas in Waikīkī.

Where applicable and feasible, KKDC will follow State guidance on Stormwater Impact Assessments (State of Hawaiʻi Office of Planning, State Coastal Zone Management Program, 2013), Hawaiʻi Watershed Guidance (State Hawaiʻi Office of Planning, State Coastal Zone Management Program, 2010), and Low Impact Development (State of Hawaiʻi Office of Planning, State Coastal Zone Management Program, 2006).

To mitigate construction-related, short-term impacts, best management practices (BMPs) will be incorporated during construction to prevent stormwater discharges and contaminants such as sediment, pollutants, petroleum products, and debris from affecting coastal water quality. Before construction commences, BMPs will be installed fronting all drainage facilities, such as catch basin and drainage inlets along Kalākaua Avenue and Kūhiō Avenue. The contractor shall be responsible for clearing storm drain facilities to mitigate flooding during construction and removing BMPs upon completion of the project.

HISTORIC RESOURCES

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

COASTAL ZONE MANAGEMENT ACT, CHAPTER 205A, HRS	S	N/S	N/A
Policies:			
(A) Identify and analyze significant archaeological resources;			x
(B) Maximize information retention through preservation of remains and artifacts or salvage operations; and			x
(C) Support state goals for protection, restoration, interpretation, and display of historic resources.	x		

Discussion: The renovation and repurposing of King Kalākaua Plaza for use as a hotel is not anticipated to have any impact on archaeological or historic resources. The existing building, paved areas, landscaping, and underground parking structure will remain substantially intact and no significant grading or any other ground disruption will be necessary. Some minor grading may be needed for the new porte-cochere area and landscape renovations. Limited trenching may be necessary to connect to existing underground utilities.

KKDC and its contractors will comply with all state and county laws and rules regarding the preservation of archaeological and historic sites. Should historic sites such as walls, platforms, pavements and mounds, or remains such as artifacts, burials, or concentrations of shell or charcoal be inadvertently encountered during the construction activities, work will cease immediately in the immediate vicinity of the find, and the find will be protected. The contractor shall immediately contact the State Historic Preservation Division (SHPD), which will assess the significance of the find and recommend appropriate mitigation measures, if necessary.

See Section 4.1 for more information on archeological and historic resources.

SCENIC AND OPEN SPACE RESOURCES			
Objective: (A) Protect, preserve, and, where desirable, restore or improve the quality of coastal scenic and open space resources.			
Policies:			
(A) Identify valued scenic resources in the coastal zone management area;	x		
(B) Ensure that new developments are compatible with their visual environment by designing and locating such developments to minimize the alteration of natural landforms and existing public views to and along the shoreline;	x		
(C) Preserve, maintain, and, where desirable, improve and restore shoreline open space and scenic resources; and	x		
(D) Encourage those developments that are not coastal dependent to locate in inland areas.	x		

Discussion: The renovation and repurposing of King Kalākaua Plaza for hotel use (with hotel-related retail uses on the ground floor), including the increase in height of the building from approximately 65 feet to approximately 85 – 100 feet, will not impact significant public views identified under Section 21-9.80-3, ROH and the PUC Development Plan's "Significant Panoramic Views" map (see Section 4.3 for additional information regarding visual impacts). Many other buildings in the vicinity of King Kalākaua Plaza feature much higher multi-story

COASTAL ZONE MANAGEMENT ACT, CHAPTER 205A, HRS	S	N/S	N/A
apartment residential and resort buildings where the maximum building height is 300-350 feet (Figure 13). The renovation of and repurposing of King Kalākaua Plaza for hotel use will revitalize this area of Waikīkī as an active, visitor-friendly block with a renewed Waikīkī sense of place. Section 4.2 describes the Property's cultural background. The proposed operations at King Kalākaua Plaza are not coastal dependent, therefore the Property is a logical location.			
COASTAL ECOSYSTEMS			
Objective: (A) Protect valuable coastal ecosystems, including reefs, from disruption and minimize adverse impacts on all coastal ecosystems.			
Policies:			
(A) Exercise an overall conservation ethic, and practice stewardship in the protection, use, and development of marine and coastal resources;	x		
(B) Improve the technical basis for natural resource management;			x
(C) Preserve valuable coastal ecosystems, including reefs, of significant biological or economic importance;	x		
(D) Minimize disruption or degradation of coastal water ecosystems by effective regulation of stream diversions, channelization, and similar land and water uses, recognizing competing water needs; and	x		
(E) Promote water quantity and quality planning and management practices that reflect the tolerance of fresh water and marine ecosystems and maintain and enhance water quality through the development and implementation of point and nonpoint source water pollution control measures.	x		
Discussion: The proposed renovations will not impede any of the policies of the Coastal Ecosystems management objective. King Kalākaua Plaza will make its most significant contribution to a sustainable development by retaining the: 1) two existing underground parking floors of the building; and 2) the loading zone portion of the structure along Kūhiō Avenue. This provides a substantially reduced environmental impact compared to the complete demolition of the existing structure. (Section 2.4) In addition, to support water resource conservation, King Kalākaua Plaza will implement water conservation measures to the extent practicable. (See Section 2.4.) King Kalākaua Plaza is also well located to take advantage of existing public transit. To minimize disruption to coastal ecosystems, best management practices (BMPs) will be incorporated during construction to prevent stormwater discharges and contaminants such as sediment, pollutants, petroleum products, and debris from affecting coastal water quality (Section 3.4). Seabird-friendly lighting will be used to mitigate potential impacts to seabirds flying over the area. Outdoor lighting will be subdued or shielded to prevent glare and light spillage onto			

COASTAL ZONE MANAGEMENT ACT, CHAPTER 205A, HRS	S	N/S	N/A
surrounding properties and rights-of-way. Lights will not rotate, revolve, move, flash or flicker in accordance with §21-9.80-4(c)(9), ROH. Outdoor lighting will be shielded so the bulb can only be seen from below bulb height. If nighttime construction occurs, all lighting will be shielded and directed toward the ground to avoid attracting adult seabirds as they travel from the ocean to their breeding areas. (Section 3.6) No impacts on surface water resources are anticipated. The Ala Wai Canal is located upgradient of the Property, and therefore no impact from King Kalākaua Plaza is anticipated. To mitigate construction-related, short-term impacts, best management practices (BMPs) will be incorporated during construction to prevent stormwater discharges and contaminants such as sediment, pollutants, petroleum products, and debris from affecting coastal water quality. Before construction commences, BMPs will be installed fronting all drainage facilities, such as catch basin and drainage inlets along Kalākaua Avenue and Kūhiō Avenue. The contractor shall be responsible for clearing storm drain facilities to mitigate flooding during construction and removing BMPs upon completion of the project. Where applicable and feasible, KKDC will follow State guidance on Stormwater Impact Assessments (State of Hawaiʻi Office of Planning, State Coastal Zone Management Program, 2013), Hawaiʻi Watershed Guidance (State Hawaiʻi Office of Planning, State Coastal Zone Management Program, 2010), and Low Impact Development (State of Hawaiʻi Office of Planning, State Coastal Zone Management Program, 2006).			
ECONOMIC USES			
Objective: (A) Provide public or private facilities and improvements important to the State's economy in suitable locations.			
Policies:			
(A) Concentrate coastal dependent development in appropriate areas;	x		
(B) Ensure that coastal dependent development such as harbors and ports, and coastal related development such as visitor industry facilities and energy generating facilities, are located, designed, and constructed to minimize adverse social, visual, and environmental impacts in the coastal zone management area; and			x
(C) Direct the location and expansion of coastal dependent developments to areas presently designated and used for such developments and permit reasonable long-term growth at such areas, and permit coastal dependent development outside of presently designated areas when:	x		
(i) Use of presently designated locations is not feasible;			
(ii) Adverse environmental effects are minimized; and			
(iii) The development is important to the State's economy.			
Discussion: The proposed renovations will not impede any of the policies of the Economic Uses management objective. Operations at the building are not coastal dependent, therefore the			

COASTAL ZONE MANAGEMENT ACT, CHAPTER 205A, HRS	S	N/S	N/A
Property is a logical location. Operations on the Property will not restrict economic uses of coastline areas. The renovation and repurposing of King Kalākaua Plaza for hotel use is anticipated to have a positive impact on the state and local economy. The renovation for hotel use will revitalize the block with appealing, attractive, and inviting uses, creating economic activity and encouraging visitors to venture farther down Kalākaua Avenue, thus creating economic value, not only for King Kalākaua Plaza, but also for other nearby properties. Besides the conversion of the existing retail/restaurant building for hotel use, the renovations will include ground floor space for a coffee shop, café, or similar business, and if feasible space for outdoor seating. See Section 4.9.2.			
COASTAL HAZARDS			
Objective: (A) Reduce hazard to life and property from tsunami, storm waves, stream flooding, erosion, subsidence, and pollution.			
Policies:			
(A) Develop and communicate adequate information about storm wave, tsunami, flood, erosion, subsidence, and point and nonpoint source pollution hazards;			
(B) Control development in areas subject to storm wave, tsunami, flood, erosion, hurricane, wind, subsidence, and point and nonpoint source pollution hazards;			
(C) Ensure that developments comply with requirements of the Federal Flood Insurance Program; and			
(D) Prevent coastal flooding from inland projects.			
Discussion: The proposed renovations will not present or exacerbate any hazard condition relating to flood, tsunamis, hurricanes, or other coastal hazards. The Property is designated as within Flood Zone AO, within the one-percent-annual-chance flood area, according to the FIRM prepared by FEMA. See Figure 15. The potential impacts of hurricanes and earthquakes will be mitigated by designing all structures in compliance with the City and County of Honolulu Building Code and State Building Code. Impacts from natural hazards, such as tsunamis, will be further mitigated by adherence to appropriate civil defense evacuation procedures. Section 3.5, Figure 15, and Figure 16 of this EA provide additional information regarding currently available information relating to coastal hazards.			
MANAGING DEVELOPMENT			
Objective: (A) Improve the development review process, communication, and public participation in the management of coastal resources and hazards.			
Policies:			
(A) Use, implement, and enforce existing law effectively to the maximum extent possible in managing present and future coastal zone development;	x		

COASTAL ZONE MANAGEMENT ACT, CHAPTER 205A, HRS	S	N/S	N/A
(B) Facilitate timely processing of applications for development permits and resolve overlapping or conflicting permit requirements; and	x		
(C) Communicate the potential short and long-term impacts of proposed significant coastal developments early in their life cycle and in terms understandable to the public to facilitate public participation in the planning and review process.	x		
Discussion: The purpose of this EA is to communicate the potential short and long-term impacts of the proposed renovations at an early stage in the process. This EA is being made available to government agencies, community groups, and individuals for review.			
PUBLIC PARTICIPATION			
Objective: (A) Stimulate public awareness, education, and participation in coastal management.			
Policies:			
(A) Promote public involvement in coastal zone management processes;			x
(B) Disseminate information on coastal management issues by means of educational materials, published reports, staff contact, and public workshops for persons and organizations concerned with coastal issues, developments, and government activities; and			x
(C) Organize workshops, policy dialogues, and site-specific mediations to respond to coastal issues and conflicts.			x
Discussion: This EA is being made available to government agencies, community groups, and individuals for review. In addition, plans for the renovation and repurposing of King Kalākaua Plaza for hotel use were presented to Waikīkī Neighborhood Board No. 9 on October 11, 2016. The Board voted in support the renovations with 14 board members in favor and one board member abstaining.			
BEACH PROTECTION			
Objective: (A) Protect beaches for public use and recreation.			
Policies:			
(A) Locate new structures inland from the shoreline setback to conserve open space, minimize interference with natural shoreline processes, and minimize loss of improvements due to erosion;			x
(B) Prohibit construction of private erosion-protection structures seaward of the shoreline, except when they result in improved aesthetic and engineering solutions to erosion at the sites and do not interfere with existing recreational and waterline activities; and			x
(C) Minimize the construction of public erosion-protection structures seaward of the shoreline.			x
Discussion: The proposed renovations will not impede any of the policies of the Beach Protection management objective. The Property is not located within the shoreline setback, and plans do not entail construction of coastal erosion controls. The site plan and conceptual landscape plan (Figure 11) includes appropriate landscaping which will be professionally maintained.			

COASTAL ZONE MANAGEMENT ACT, CHAPTER 205A, HRS	S	N/S	N/A
MARINE RESOURCES			
Objective: (A) Promote the protection, use, and development of marine and coastal resources to assure their sustainability.			
Policies:			
(A) Ensure that the use and development of marine and coastal resources are ecologically and environmentally sound and economically beneficial;	x		
(B) Coordinate the management of marine and coastal resources and activities to improve effectiveness and efficiency;			x
(C) Assert and articulate the interests of the State as a partner with federal agencies in the sound management of ocean resources within the United States exclusive economic zone;			x
(D) Promote research, study, and understanding of ocean processes, marine life, and other ocean resources in order to acquire and inventory information necessary to understand how ocean development activities relate to and impact upon ocean and coastal resources; and			x
(E) Encourage research and development of new, innovative technologies for exploring, using, or protecting marine and coastal resources.			x
Discussion: The proposed renovations will not impede any of the policies of the Marine Resources management objective. The building will not affect management of marine and coastal resources, State, or Federal initiatives, or marine or coastal research initiatives.			

5.1.3 Hawaii State Plan

The Hawaii State Plan (Chapter 226, HRS), establishes goals, objectives, priorities, and priority guidelines for growth, development, and the allocation of resources throughout the state. Below is a table with relevant discussion regarding the ability of the Project to meet Hawaii State Plan planning objectives, policies, and priority guidelines related to: growth of the state economic base, improving Hawai‘i’s visitor experience.

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

HAWAII STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES	S	N/S	N/A
HRS § 226-1: Findings and Purpose.			
HRS § 226-2: Definitions.			
HRS § 226-3: Overall Theme.			

HRS § 226-4: State Goals.			
Goals: In order to guarantee, for the present and future generations, those elements of choice and mobility that insure that individuals and groups may approach their desired levels of self-reliance and self-determination, it shall be the goal of the State to achieve: (1) A strong, viable economy, characterized by stability, diversity and growth that enables fulfillment of the needs and expectations of Hawaii’s present and future generations.	x		

HAWAII STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES	S	N/S	N/A
(2) A desired physical environment, characterized by beauty, cleanliness, quiet, stable natural systems, and uniqueness, that enhances the mental and physical well-being of the people.	x		
(3) Physical, social and economic well-being, for individuals and families in Hawaii, that nourishes a sense of community responsibility, of caring and of participation in community life.	x		

Discussion: The renovation and repurposing of King Kalākaua Plaza for hotel use is anticipated to have a positive impact on the state and local economy. The renovation will revitalize the block with appealing, attractive, and inviting uses, creating economic activity and encouraging visitors to venture further down Kalākaua Avenue, thus creating economic value, not only for King Kalākaua Plaza, but also for other nearby properties. Besides the conversion of the existing retail/restaurant building for hotel use, the renovations will include ground floor space for a coffee shop, café, or similar business, and if feasible, space for outdoor seating. See Section 4.9.2.

The renovation is not anticipated to involve degradation of environmental quality. The Property is fully developed with the existing King Kalākaua Plaza, which includes: a four-story retail/restaurant building, surrounding grounds (including a large paved plaza, sidewalks and walkways around the Property, and defined landscaped areas), and a two-level underground parking garage. The existing building, paved areas, landscaping, and underground parking structure will remain substantially intact. Research indicates that building reuse typically reduces a building's impact by between four and 46 percent with regard to climate change, human health, ecosystem quality, and resource depletion, compared to a new construction (National Trust for Historic Preservation, 2011).

The renovation and repurposing of King Kalākaua Plaza for hotel use will revitalize this area of Waikīkī as an active, visitor-friendly block with a renewed Waikīkī sense of place. The building in its current state does not contribute to the vitality of the Waikīkī Special District and does not accommodate any active uses.

HRS § 226-5: Objectives and policies for population.			
Objective: It shall be the objective in planning for the State's population to guide population growth to be consistent with the achievement of physical, economic and social objectives contained in this chapter.			
Policies:			
(1) Manage population growth statewide in a manner that provides increased opportunities for Hawaii's people to pursue their physical, social and economic aspirations while recognizing the unique needs of each County.			**x**
(2) Encourage an increase in economic activities and employment opportunities on the neighbor islands consistent with community needs and desires.	**x**		
(3) Promote increased opportunities for Hawaii's people to pursue their socio-economic aspirations throughout the islands.			**x**

HAWAII STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES	S	N/S	N/A
(4) Encourage research activities and public awareness programs to foster an understanding of Hawaii's limited capacity to accommodate population needs and to address concerns resulting from an increase in Hawaii's population.			x
(5) Encourage federal actions and coordination among major governmental agencies to promote a more balanced distribution of immigrants among the states, provided that such actions do not prevent the reunion of immediate family members.			x
(6) Pursue an increase in federal assistance for states with a greater proportion of foreign immigrants relative to their state's population.			x
(7) Plan the development and availability of land and water resources in a coordinated manner so as to provide for the desired levels of growth in each geographic area.	x		

Discussion: The renovation for hotel use will not increase the permanent resident population of Waikīkī or Honolulu. It is anticipated that the hotel will service business travelers and may be popular with kamaʻāina travelers seeking lodging in Waikīkī in a convenient location without typical resort-style amenities, although the hotel will have a pool and pool deck on the fourth floor.

The renovation and repurposing of King Kalākaua Plaza for hotel use will revitalize this area of Waikīkī as an active, visitor-friendly block with a renewed Waikīkī sense of place. In its current state King Kalākaua Plaza does not contribute to the vitality of the Waikīkī Special District and does not accommodate any active uses. The renovations will reactivate the block and draw visitors to the area.

Current land use designations for the Property are:

- **State Land Use District:** Urban (Figure 4)
- **Primary Urban Center (PUC) Development Plan, Land Use Map:** Resort (Figure 5)
- **City and County of Honolulu Zoning:** Resort Mixed Use Precinct (Waikīkī Special District). (Figure 6)
- **Special District:** Waikīkī Special District (Figure 7)
- **Special Management Area (SMA):** Not in the SMA (Figure 8)

The proposed renovations are compatible with the relevant land use plans, policies, and ordinances as discussed in this section (Section 5).

HRS § 226-6: Objectives and policies for the economy in general.			
Objectives: Planning for the State's economy in general shall be directed toward achievement of the following objectives:			
(1) Increased and diversified employment opportunities to achieve full employment, increased income and job choice, and improved living standards for Hawaii's people, while at the same time stimulating the development and expansion of economic activities capitalizing on defense, dual-use, and science and technology assets, particularly on the neighbor islands where employment opportunities may be limited.	x		

HAWAII STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES	S	N/S	N/A
(2) A steadily growing and diversified economic base that is not overly dependent on a few industries, and includes the development and expansion of industries on the neighbor islands.			x
Policies:			
(1) Promote and encourage entrepreneurship within Hawaii by residents and nonresidents of the State.			x
(2) Expand Hawaii's national and international marketing, communication, and organizational ties, to increase the State's capacity to adjust to and capitalize upon economic changes and opportunities occurring outside the State.	x		
(3) Promote Hawaii as an attractive market for environmentally and socially sound investment activities that benefit Hawaii's people.			x
(4) Transform and maintain Hawaii as a place that welcomes and facilitates innovative activity that may lead to commercial opportunities.			x
(5) Promote innovative activity that may pose initial risks, but ultimately contribute to the economy of Hawaii			x
(6) Seek broader outlets for new or expanded Hawaii business investments.			x
(7) Expand existing markets and penetrate new markets for Hawaii's products and services.			x
(8) Assure that the basic economic needs of Hawaii's people are maintained in the event of disruptions in overseas transportation.			x
(9) Strive to achieve a level of construction activity responsive to, and consistent with, state growth objectives.	x		
(10) Encourage the formation of cooperatives and other favorable marketing arrangements at the local or regional level to assist Hawaii's small scale producers, manufacturers, and distributors.			x
(11) Encourage labor-intensive activities that are economically satisfying and which offer opportunities for upward mobility.			x
(12) Encourage innovative activities that may not be labor-intensive, but may otherwise contribute to the economy of Hawaii.			x
(13) Foster greater cooperation and coordination between the government and private sectors in developing Hawaii's employment and economic growth opportunities.			x
(14) Stimulate the development and expansion of economic activities which will benefit areas with substantial or expected employment problems.	x		
(15) Maintain acceptable working conditions and standards for Hawaii's workers.	x		
(16) Provide equal employment opportunities for all segments of Hawaii's population through affirmative action and nondiscrimination measures.	x		
(17) Stimulate the development and expansion of economic activities capitalizing on defense, dual-use, and science and technology assets, particularly on the neighbor islands where employment opportunities may be limited.			x
(18) Encourage businesses that have favorable financial multiplier effects within Hawaii's economy, particularly with respect to emerging industries in science and technology.	x		
(19) Promote and protect intangible resources in Hawaii, such as scenic beauty and the aloha spirit, which are vital to a healthy economy.	x		

HAWAII STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES	S	N/S	N/A
(20) Increase effective communication between the educational community and the private sector to develop relevant curricula and training programs to meet future employment needs in general, and requirements of new or innovative potential growth industries in particular.			x
(21) Foster a business climate in Hawaii--including attitudes, tax and regulatory policies, and financial and technical assistance programs--that is conducive to the expansion of existing enterprises and the creation and attraction of new business and industry.			x

Discussion: The renovation of and repurposing King Kalākaua Plaza for hotel use (with hotel-related retail uses on the ground floor) will positively affect the State's economy. In its current vacant state, King Kalākaua Plaza generates little to no economic activity (the parking garage is still in use for paid parking). In the short-term, the renovations will create economic activity and jobs during the renovation phase, including from design and construction-related work and the multiplier effect on the local economy. The total cost for design and construction is estimated at approximately $85 million. In the long-term, the new hotel and retail uses will create sustained economic activity and jobs related to on-going hotel and retail operations. It is estimated that the new hotel will create 70 to 75 full time equivalent jobs.

The renovation for hotel use will revitalize the block with appealing, attractive, and inviting uses, creating economic activity and encouraging visitors to venture further down Kalākaua Avenue, thus creating economic value, not only for King Kalākaua Plaza, but also for other nearby properties. Besides the conversion of the existing retail/restaurant building for hotel use, the renovations will include ground floor space for a coffee shop, café, or similar business, and if feasible, space for outdoor seating. See Section 4.9.2.

The proposed renovations are compatible with the relevant land use plans, policies, and ordinances as discussed in this section (Section 5).

HRS § 226-7: Objectives and policies for the economy – agriculture.			
Objectives: Planning for the State's economy with regard to agriculture shall be directed towards achievement of the following objectives:			
(1) Viability of Hawaii's sugar and pineapple industries.			x
(2) Growth and development of diversified agriculture throughout the State.			x
(3) An agriculture industry that continues to constitute a dynamic and essential component of Hawaii's strategic, economic, and social well-being.			x
Policies:			
(1) Establish a clear direction for Hawaii's agriculture through stakeholder commitment and advocacy.			x
(2) Encourage agriculture by making best use of natural resources.			x
(3) Provide the governor and the legislature with information and options needed for prudent decision making for the development of agriculture.			x
(4) Establish strong relationships between the agricultural and visitor industries for mutual marketing benefits.			x

HAWAII STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES	S	N/S	N/A
(5) Foster increased public awareness and understanding of the contributions and benefits of agriculture as a major sector of Hawaii's economy.			x
(6) Seek the enactment and retention of federal and state legislation that benefits Hawaii's agricultural industries.			x
(7) Strengthen diversified agriculture by developing an effective promotion, marketing, and distribution system between Hawaii's producers and consumer markets locally, on the continental United States, and internationally.			x
(8) Support research and development activities that provide greater efficiency and economic productivity in agriculture.			x
(9) Enhance agricultural growth by providing public incentives and encouraging private initiatives.			x
(10) Assure the availability of agriculturally suitable lands with adequate water to accommodate present and future needs.			x
(11) Increase the attractiveness and opportunities for an agricultural education and livelihood.			x
(12) Expand Hawaii's agricultural base by promoting growth and development of flowers, tropical fruits and plants, livestock, feed grains, forestry, food crops, aquaculture, and other potential enterprises.			x
(13) Promote economically competitive activities that increase Hawaii's agricultural self-sufficiency.			x
(14) Promote and assist in the establishment of sound financial programs for diversified agriculture.			x
(15) Institute and support programs and activities to assist the entry of displaced agricultural workers into alternative agricultural or other employment.			x
(16) Facilitate the transition of agricultural lands in economically nonfeasible agricultural production to economically viable agricultural uses.			x
(17) Perpetuate, promote, and increase use of traditional Hawaiian farming systems, such as the use of loko iʻa, māla, and irrigated loʻi, and growth of traditional Hawaiian crops, such as kalo, ʻuala, and ʻulu.			x
(18) Increase and develop small-scale farms.			x
Discussion: Objectives policies pertaining to the State's economy with regard to agriculture are not applicable. The Property is within the State Land Use Urban District and is in the densely urban Waikīkī area of Oahu. The proposed renovations are compatible with the relevant land use plans, policies, and ordinances as discussed in this section (Section 5).			

HRS § 226-8: Objectives and policies for the economy – visitor industry.			
Objectives: Planning for the State's economy with regard to the visitor industry shall be directed towards the achievement of the objective of a visitor industry that constitutes a major component of steady growth for Hawaii's economy.			
Policies:			
(1) Support and assist in the promotion of Hawaii's visitor attractions and facilities.	x		
(2) Ensure that visitor industry activities are in keeping with the social, economic, and physical needs and aspirations of Hawaii's people.	x		
(3) Improve the quality of existing visitor destination areas.	x		

HAWAII STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES	S	N/S	N/A
(4) Encourage cooperation and coordination between the government and private sectors in developing and maintaining well-designed, adequately serviced visitor industry and related developments which are sensitive to neighboring communities and activities.			x
(5) Develop the industry in a manner that will continue to provide new job opportunities and steady employment for Hawaii's people.	x		
(6) Provide opportunities for Hawaii's people to obtain job training and education that will allow for upward mobility within the visitor industry.			x
(7) Foster a recognition of the contribution of the visitor industry to Hawaii's economy and the need to perpetuate the aloha spirit.			x
(8) Foster an understanding by visitors of the aloha spirit and of the unique and sensitive character of Hawaii's cultures and values.	x		

Discussion: The renovation and repurposing of King Kalākaua Plaza for hotel use is anticipated to have a positive impact on the state and local economy. The renovation for hotel use will revitalize the block with appealing, attractive, and inviting uses, creating economic activity and encouraging visitors to venture further down Kalākaua Avenue, thus creating economic value, not only for King Kalākaua Plaza, but also for other nearby properties. Besides the conversion of the existing retail/restaurant building for hotel use, the renovations will include ground floor space for a coffee shop, café, or similar business, and if feasible, space for outdoor seating. See Section 4.9.2.

The renovation and repurposing of King Kalākaua Plaza for hotel use will revitalize this area of Waikīkī as an active, visitor-friendly block with a renewed Waikīkī sense of place. Section 4.2 describes the Property's cultural background.

In its current state King Kalākaua Plaza does not contribute to the vitality of the Waikīkī Special District and does not accommodate any active uses. The renovations will reactivate the block and draw visitors to the area.

The proposed renovations are compatible with the relevant land use plans, policies, and ordinances as discussed in this section (Section 5).

HRS § 226-9: Objective and policies for the economy – federal expenditures.			
Objective: Planning for the State's economy with regard to federal expenditures shall be directed towards achievement of the objective of a stable federal investment base as an integral component of Hawaii's economy.			
Policies:			
(1) Encourage the sustained flow of federal expenditures in Hawaii that generates long-term government civilian employment.			x
(2) Promote Hawaii's supportive role in national defense.			x
(3) Promote the development of federally supported activities in Hawaii that respect state-wide economic concerns, are sensitive to community needs, and minimize adverse impacts on Hawaii's environment.			x

HAWAII STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES	S	N/S	N/A
(4) Increase opportunities for entry and advancement of Hawaii's people into federal government service.			x
(5) Promote federal use of local commodities, services, and facilities available in Hawaii.			x
(6) Strengthen federal-state-county communication and coordination in all federal activities that affect Hawaii.			x
(7) Pursue the return of federally controlled lands in Hawaii that are not required for either the defense of the nation or for other purposes of national importance, and promote the mutually beneficial exchanges of land between federal agencies, the State, and the counties.			x
Discussion: The proposed renovations will not use federal funds or land.			

HRS § 226-10: Objectives and policies for the economy – potential growth and innovative activities.			
Objective: Planning for the State's economy with regard to potential growth activities shall be directed towards achievement of the objective of development and expansion of potential growth activities that serve to increase and diversify Hawaii's economic base.			
Policies:			
(1) Facilitate investment and employment growth in economic activities that have the potential to expand and diversify Hawaii's economy, including but not limited to diversified agriculture, aquaculture, renewable energy development, creative media, health care, and science and technology-based sectors.			x
(2) Facilitate investment in innovative activity that may pose risks or be less labor-intensive than other traditional business activity, but if successful, will generate revenue in Hawaii through the export of services or products or substitution of imported services or products;			x
(3) Encourage entrepreneurship in innovative activity by academic researchers and instructors who may not have the background, skill, or initial inclination to commercially exploit their discoveries or achievements.			x
(4) Recognize that innovative activity is not exclusively dependent upon individuals with advanced formal education, but that many self-taught, motivated individuals are able, willing, sufficiently knowledgeable, and equipped with the attitude necessary to undertake innovative activity.			x
(5) Increase the opportunities for investors in innovative activity and talent engaged in innovative activity to personally meet and interact at cultural, art, entertainment, culinary, athletic, or visitor-oriented events without a business focus;			x
(6) Expand Hawaii's capacity to attract and service international programs and activities that generate employment for Hawaii's people.	x		
(7) Enhance and promote Hawaii's role as a center for international relations, trade, finance, services, technology, education, culture, and the arts.	x		
(8) Accelerate research and development of new energy-related industries based on wind, solar, ocean, underground resources, and solid waste.			x
(9) Promote Hawaii's geographic, environmental, social, and technological advantages to attract new or innovative economic activities into the State.			x

HAWAII STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES	S	N/S	N/A
(10) Provide public incentives and encourage private initiative to attract new or innovative industries that best support Hawaii's social, economic, physical, and environmental objectives.			x
(11) Increase research and the development of ocean-related economic activities such as mining, food production, and scientific research.			x
(12) Develop, promote, and support research and educational and training programs that will enhance Hawaii's ability to attract and develop economic activities of benefit to Hawaii.			x
(13) Foster a broader public recognition and understanding of the potential benefits of new or innovative growth-oriented industry in Hawaii.			x
(14) Encourage the development and implementation of joint federal and state initiatives to attract federal programs and projects that will support Hawaii's social, economic, physical, and environmental objectives.			x
(15) Increase research and development of businesses and services in the telecommunications and information industries.			x
(16) Foster the research and development of nonfossil fuel and energy efficient modes of transportation.			x
(17) Recognize and promote health care and health care information technology as growth industries.			x

Discussion: The renovation and repurposing of King Kalākaua Plaza for hotel use is anticipated to have a positive impact on the state and local economy. The renovation for hotel use will revitalize the block with appealing, attractive, and inviting uses, creating economic activity and encouraging visitors to venture farther down Kalākaua Avenue, thus creating economic value, not only for King Kalākaua Plaza, but also for other nearby properties. Besides the conversion of the existing retail/restaurant building for hotel use, the renovations will include ground floor space for a coffee shop, café, or similar business, and if feasible, space for outdoor seating. See Section 4.9.2.

The renovation and repurposing of King Kalākaua Plaza for hotel use will revitalize this area of Waikīkī as an active, visitor-friendly block with a renewed Waikīkī sense of place. In its current state King Kalākaua Plaza does not contribute to the vitality of the Waikīkī Special District and does not accommodate any active uses. The renovations will reactivate the block and draw visitors to the area.

The proposed renovations are compatible with the relevant land use plans, policies, and ordinances as discussed in this section (Section 5).

HRS § 226-10.5: Objectives and policies for the economy – information industry.			
Objective: Planning for the State's economy with regard to telecommunications and information technology shall be directed toward recognizing that broadband and wireless communication capability and infrastructure are foundations for an innovative economy and positioning Hawaii as a leader in broadband and wireless communications and applications in the Pacific Region.			
Policies:			
(1) Promote efforts to attain the highest speeds of electronic and wireless communication within Hawaii and between Hawaii and the world, and make high speed communication available to all residents and businesses in Hawaii;			**x**
(2) Encourage the continued development and expansion of the telecommunications infrastructure serving Hawaii to accommodate future growth and innovation in Hawaii's economy;			**x**
(3) Facilitate the development of new or innovative business and service ventures in the information industry which will provide employment opportunities for the people of Hawaii;			**x**
(4) Encourage mainland- and foreign-based companies of all sizes, whether information technology-focused or not, to allow their principals, employees, or contractors to live in and work from Hawaii, using technology to communicate with their headquarters, offices, or customers located out-of-state;			**x**
(5) Encourage greater cooperation between the public and private sectors in developing and maintaining a well- designed information industry;			**x**
(6) Ensure that the development of new businesses and services in the industry are in keeping with the social, economic, and physical needs and aspirations of Hawaii's people;			**x**
(7) Provide opportunities for Hawaii's people to obtain job training and education that will allow for upward mobility within the information industry;			**x**
(8) Foster a recognition of the contribution of the information industry to Hawaii's economy; and			**x**
(9) Assist in the promotion of Hawaii as a broker, creator, and processor of information in the Pacific.			**x**
Discussion: The proposed renovations have no relationship to the information industry.			

HRS § 226-11: Objectives and policies for the physical environment – land-based, shoreline, and marine resources.			
Objectives: Planning for the State's physical environment shall be directed towards achievement of the objective of enhancement of Hawaii's scenic assets, natural beauty, and multi-cultural/historical resources.			
(1) Prudent use of Hawaii's land-based, shoreline, and marine resources.	**x**		
(2) Effective protection of Hawaii's unique and fragile environmental resources.	**x**		
Policies:			
(1) Exercise an overall conservation ethic in the use of Hawaii's natural resources.	**x**		
(2) Ensure compatibility between land-based and water-based activities and natural resources and ecological systems.	**x**		
(3) Take into account the physical attributes of areas when planning and designing activities and facilities.	**x**		

(4) Manage natural resources and environs to encourage their beneficial and multiple use without generating costly or irreparable environmental damage.	x		
(5) Consider multiple uses in watershed areas, provided such uses do not detrimentally affect water quality and recharge functions.			x
(6) Encourage the protection of rare or endangered plant and animal species and habitats native to Hawaii.			x
(7) Provide public incentives that encourage private actions to protect significant natural resources from degradation or unnecessary depletion.			x
(8) Pursue compatible relationships among activities, facilities, and natural resources.	x		
(9) Promote increased accessibility and prudent use of inland and shoreline areas for public recreational, educational, and scientific purposes.			x

Discussion: King Kalākaua Plaza will make its most significant contribution to a sustainable development by retaining the: 1) two existing underground parking floors of the building; and 2) the loading zone portion of the structure along Kūhiō Avenue. This provides a substantially reduced environmental impact compared to the complete demolition of the existing structure. (Section 2.4)

In addition, to support water resource conservation, King Kalākaua Plaza will implement water conservation measures to the extent practicable. (See Section 2.4.) King Kalākaua Plaza is also well located to take advantage of existing public transit.

To minimize disruption to coastal ecosystems, best management practices (BMPs) will be incorporated during construction to prevent stormwater discharges and contaminants such as sediment, pollutants, petroleum products, and debris from affecting coastal water quality (Section 3.4).

Because no rare, threatened, or endangered plants or animals are known to exist on or near the Property, the renovations are not anticipated to have an impact on rare, threatened, or endangered plants or animals.

Seabird-friendly lighting will be used to mitigate potential impacts to seabirds flying over the area. Outdoor lighting will be subdued or shielded to prevent glare and light spillage onto surrounding properties and rights-of-way. Lights will not rotate, revolve, move, flash or flicker in accordance with §21-9.80-4(c)(9), ROH. Outdoor lighting will be shielded so the bulb can only be seen from below bulb height. If nighttime construction occurs, all lighting will be shielded and directed toward the ground to avoid attracting adult seabirds as they travel from the ocean to their breeding areas. (Section 3.6)

No impacts on surface water resources are anticipated. The Ala Wai Canal is located upgradient of the Property, and therefore no impact from King Kalākaua Plaza is anticipated. To mitigate construction-related, short-term impacts, best management practices (BMPs) will be incorporated during construction to prevent stormwater discharges and contaminants such as sediment, pollutants, petroleum products, and debris from affecting coastal water quality. Before construction commences, BMPs will be installed fronting all drainage facilities, such as catch basin and drainage inlets along Kalākaua Avenue and Kūhiō Avenue. The contractor shall be

responsible for clearing storm drain facilities to mitigate flooding during construction and removing BMPs upon completion of the project.

Where applicable and feasible, KKDC will follow State guidance on Stormwater Impact Assessments (State of Hawaiʻi Office of Planning, State Coastal Zone Management Program, 2013), Hawaiʻi Watershed Guidance (State Hawaiʻi Office of Planning, State Coastal Zone Management Program, 2010), and Low Impact Development (State of Hawaiʻi Office of Planning, State Coastal Zone Management Program, 2006), including some of the measures discussed above.

HRS § 226-12: Objectives and policies for the physical environment – scenic, natural beauty, and historic resources.			
Objective: Planning for the State's physical environment shall be directed towards achievement of the objective of enhancement of Hawaii's scenic assets, natural beauty, and multi-cultural/historical resources.			
Policies:			
(1) Promote the preservation and restoration of significant natural and historic resources.	**x**		
(2) Provide incentives to maintain and enhance historic, cultural, and scenic amenities.			**x**
(3) Promote the preservation of views and vistas to enhance the visual and aesthetic enjoyment of mountains, ocean, scenic landscapes, and other natural features.	**x**		
(4) Protect those special areas, structures, and elements that are an integral and functional part of Hawaii's ethnic and cultural heritage.	**x**		
(5) Encourage the design of developments and activities that complement the natural beauty of the islands.	**x**		

Discussion: The renovation and repurposing of King Kalākaua Plaza for hotel use (with hotel-related retail uses on the ground floor), including the increase in height of the building from approximately 65 feet to approximately 85 – 100 feet, will not impact significant public views identified under Section 21-9.80-3, ROH and the PUC Development Plan's "Significant Panoramic Views" map (see Section 4.3 for additional information regarding visual impacts). Many other buildings in the vicinity of King Kalākaua Plaza (where the maximum building height is 300-350 feet) are much higher multi-story apartment and hotel buildings (Figure 13).

The renovation and repurposing of King Kalākaua Plaza for hotel use will revitalize this area of Waikīkī as an active, visitor-friendly block with a renewed Waikīkī sense of place. Section 4.2 describes the Property's cultural background.

HRS § 226-13: Objectives and policies for the physical environment – land, air, and water quality.			
Objectives: Planning for the State's physical environment with regard to land, air, and water quality shall be directed towards achievement of the following objectives:			
(1) Maintenance and pursuit of improved quality in Hawaii's land, air, and water resources.	**x**		
(2) Greater public awareness and appreciation of Hawaii's environmental resources.	**x**		
Policies:			
(1) Foster educational activities that promote a better understanding of Hawaii's limited environmental resources.			**x**
(2) Promote the proper management of Hawaii's land and water resources.	**x**		
(3) Promote effective measures to achieve desired quality in Hawaii's surface, ground, and coastal waters.	**x**		
(4) Encourage actions to maintain or improve aural and air quality levels to enhance the health and well-being of Hawaii's people.	**x**		
(5) Reduce the threat to life and property from erosion, flooding, tsunamis, hurricanes, earthquakes, volcanic eruptions, and other natural or man-induced hazards and disasters.			**x**
(6) Encourage design and construction practices that enhance the physical qualities of Hawaii's communities.	**x**		
(7) Encourage urban developments in close proximity to existing services and facilities.	**x**		
(8) Foster recognition of the importance and value of the land, air, and water resources to Hawaii's people, their cultures and visitors.	**x**		

Discussion: King Kalākaua Plaza will make its most significant contribution to a sustainable development by retaining the: 1) two existing underground parking floors of the building; and 2) the loading zone portion of the structure along Kūhiō Avenue. This provides a substantially reduced environmental impact compared to the complete demolition of the existing structure. (Section 2.4)

In addition, to support water resource conservation, King Kalākaua Plaza will implement water conservation measures to the extent practicable. (See Section 2.4.) King Kalākaua Plaza is also well located to take advantage of existing public transit.

To minimize disruption to coastal ecosystems, best management practices (BMPs) will be incorporated during construction to prevent stormwater discharges and contaminants such as sediment, pollutants, petroleum products, and debris from affecting coastal water quality (Section 3.4).

Because no rare, threatened, or endangered plants or animals are known to exist on or near the Property, the renovations are not anticipated to have an impact on rare, threatened, or endangered plants or animals. Seabird-friendly lighting will be used to mitigate potential impacts to seabirds flying over the area.

No impacts on surface water resources are anticipated. The Ala Wai Canal is located upgradient of the Property, and therefore no impact from King Kalākaua Plaza is anticipated. To mitigate

construction-related, short-term impacts, best management practices (BMPs) will be incorporated during construction to prevent stormwater discharges and contaminants such as sediment, pollutants, petroleum products, and debris from affecting coastal water quality. Before construction commences, BMPs will be installed fronting all drainage facilities, such as catch basin and drainage inlets along Kalākaua Avenue and Kūhiō Avenue. The contractor shall be responsible for clearing storm drain facilities to mitigate flooding during construction and removing BMPs upon completion of the project.

Where applicable and feasible, KKDC will follow State guidance on Stormwater Impact Assessments (State of Hawaiʻi Office of Planning, State Coastal Zone Management Program, 2013), Hawaiʻi Watershed Guidance (State Hawaiʻi Office of Planning, State Coastal Zone Management Program, 2010), and Low Impact Development (State of Hawaiʻi Office of Planning, State Coastal Zone Management Program, 2006), including some of the measures discussed above.

The renovations will not present or exacerbate any hazard condition relating to flood, tsunamis, hurricanes, and earthquakes, and no mitigation measures are planned or warranted at this time.

Most of the Property is not anticipated to suffer direct seawater inundation due to sea level rise within the 21st Century (based on projections from Center for Island Climate Adaptation and Policy and the University of Hawaiʻi Sea Grant) but may begin to experience groundwater inundation if sea level rises by 1 to 2 feet. If: 1) the Property experiences near-inundation conditions and FIRM maps are updated to indicate that the Property resides in a higher-risk flood zone, or 2) increasing frequency of large storm events becomes a concern, mitigation strategies could include elevating electrical infrastructure for safety and to prevent water damage, reinforcing or relocating utilities as feasible, and adhering to NFIP requirements, building code updates, and/or County, State or Federal guidance. These mitigation measures could also be implemented should the south corner of the Property, the underground parking structure, or the building infrastructure begin to see impacts from sea level rise nearing 2100. See Section 3.5.

The potential impacts of hurricanes and earthquakes will be mitigated by designing all structures in compliance with the City and County of Honolulu Building Code and State Building Code. Impacts from natural hazards will be further mitigated by adherence to appropriate civil defense evacuation procedures.

The renovation and repurposing of King Kalākaua Plaza for hotel use will revitalize this area of Waikīkī as an active, visitor-friendly block with a renewed Waikīkī sense of place. Section 4.2 describes the Property's cultural background.

The proposed renovations are compatible with the relevant land use plans, policies, and ordinances as discussed in this section (Section 5).

HRS § 226-14: Objective and policies for facility systems – in general.			
Objective: Planning for the State's facility systems in general shall be directed towards achievement of the objective of water, transportation, waste disposal, and energy and telecommunication systems that support statewide social, economic, and physical objectives.			
Policies:			
(1) Accommodate the needs of Hawaii's people through coordination of facility systems and capital improvement priorities in consonance with state and county plans.			**x**
(2) Encourage flexibility in the design and development of facility systems to promote prudent use of resources and accommodate changing public demands and priorities.			**x**
(3) Ensure that required facility systems can be supported within resource capacities and at reasonable cost to the user.			**x**
(4) Pursue alternative methods of financing programs and projects and cost-saving techniques in the planning, construction, and maintenance of facility systems.			**x**
Discussion: The proposed renovations do not involve coordination of State facility systems. The Property's own infrastructure is addressed in Sections 4.6 and 4.8.			

HRS § 226-15: Objectives and policies for facility systems – solid and liquid wastes.			
Objectives: Planning for the State's facility systems with regard to solid and liquid wastes shall be directed towards the achievement of the following objectives:			
(1) Maintenance of basic public health and sanitation standards relating to treatment and disposal of solid and liquid wastes.	**x**		
(2) Provision of adequate sewerage facilities for physical and economic activities that alleviate problems in housing, employment, mobility, and other areas.			**x**
Policies:			
(1) Encourage the adequate development of sewerage facilities that complement planned growth.			**x**
(2) Promote re-use and recycling to reduce solid and liquid wastes and employ a conservation ethic.	**x**		
(3) Promote research to develop more efficient and economical treatment and disposal of solid and liquid wastes.			**x**
Discussion: The Property's infrastructure is addressed in Section 4.8. The Department of Planning and Permitting (DPP) Wastewater Division approved a Sewer Connection Application for the renovation and repurposing of King Kalākaua Plaza to a hotel with limited retail uses, indicating that municipal sewer system has the capacity to accommodate wastewater flows from the proposed 230-room hotel rooms and retail uses. The renovation and repurposing of King Kalākaua Plaza for hotel use is not anticipated to generate significant amounts of solid waste which the current municipal solid waste disposal system could not accommodate. King Kalākaua Plaza will make its most significant contribution to a sustainable development by retaining the: 1) two existing underground parking floors of the building; and 2) the loading zone portion of the structure along Kūhiō Avenue. This provides a substantially reduced environmental impact compared to the complete demolition of the existing structure.			

HRS § 226-16: Objectives and policies for facility systems – water.			
Objective: Planning for the State's facility systems with regard to water shall be directed towards achievement of the objective of the provision of water to adequately accommodate domestic, agricultural, commercial, industrial, recreational, and other needs within resource capacities.			
Policies:			
(1) Coordinate development of land use activities with existing and potential water supply.	**x**		
(2) Support research and development of alternative methods to meet future water requirements well in advance of anticipated needs.			**x**
(3) Reclaim and encourage the productive use of runoff water and wastewater discharges.	**x**		
(4) Assist in improving the quality, efficiency, service, and storage capabilities of water systems for domestic and agricultural use.			**x**
(5) Support water supply services to areas experiencing critical water problems.			**x**
(6) Promote water conservation programs and practices in government, private industry, and the general public to help ensure adequate water to meet long-term needs.	**x**		

Discussion: BWS has determined that the existing water system is adequate to accommodate the proposed renovations based on current data, but the final decision on the availability of water will be confirmed when the building permit application is submitted for approval. See Appendix D (PER) appendices section for the BWS determination letter.

As recommended by the City and County of Honolulu Board of Water Supply (BWS) (Appendix A), King Kalākaua Plaza will implement water conservation measures to the extent practicable. These may include:

- Low flow plumbing fixtures;
- Utilization of non-potable water for irrigation using catchment and chiller/air handler condensate;
- Cooling tower conductivity meters and water softening recycling systems;
- Drought tolerant plants and/or xeriscaping where new landscaping is added;
- Efficient irrigation systems; and
- Water Sense labeled low-flow water and plumbing fixtures

HRS § 226-17: Objectives and policies for facility systems – transportation.			
Objective: Planning for the State's facility systems with regard to energy shall be directed toward the achievement of the following objectives, giving due consideration to all:			
(1) An integrated multi-modal transportation system that services statewide needs and promotes the efficient, economical, safe, and convenient movement of people and goods.	**x**		
(2) A statewide transportation system that is consistent with and will accommodate planned growth objectives throughout the State.	**x**		
Policies:			
(1) Design, program, and develop a multi-modal system in conformance with desired growth and physical development as stated in this chapter;	**x**		

(2) Coordinate state, county, federal, and private transportation activities and programs toward the achievement of statewide objectives;			x
(3) Encourage a reasonable distribution of financial responsibilities for transportation among participating governmental and private parties;			x
(4) Provide for improved accessibility to shipping, docking, and storage facilities;			x
(5) Promote a reasonable level and variety of mass transportation services that adequately meet statewide and community needs;	x		
(6) Encourage transportation systems that serve to accommodate present and future development needs of communities;			x
(7) Encourage a variety of carriers to offer increased opportunities and advantages to interisland movement of people and goods;			x
(8) Increase the capacities of airport and harbor systems and support facilities to effectively accommodate transshipment and storage needs;			x
(9) Encourage the development of transportation systems and programs which would assist statewide economic growth and diversification;			x
(10) Encourage the design and development of transportation systems sensitive to the needs of affected communities and the quality of Hawaii's natural environment;	x		
(11) Encourage safe and convenient use of low-cost, energy-efficient, non-polluting means of transportation;	x		
(12) Coordinate intergovernmental land use and transportation planning activities to ensure the timely delivery of supporting transportation infrastructure in order to accommodate planned growth objectives; and			x
(13) Encourage diversification of transportation modes and infrastructure to promote alternate fuels and energy efficiency.	X		
Discussion: The TIAR (see Section 4.6 and Appendix C) concludes the renovation for hotel use: 1) will reduce vehicle trips by more that 50 percent, compared to if the building was fully occupied with commercial tenants; and 2) is not anticipated to significantly impact pedestrian, bicycle, and public transit facilities in the area.			

HRS § 226-18: Objectives and policies for facility systems – energy.			
Objectives: (a) Planning for the State's facility systems with regard to energy shall be directed toward the achievement of the following objectives, giving due consideration to all:			
(1) Dependable, efficient, and economical statewide energy systems capable of supporting the needs of the people;			x
(2) Increased energy security and self-sufficiency through the reduction and ultimate elimination of Hawaii's dependence on imported fuels for electrical generation and ground transportation;			x
(3) Greater diversification of energy generation in the face of threats to Hawaii's energy supplies and systems;			x
(4) Reduction, avoidance, or sequestration of greenhouse gas emissions from energy supply and use; and			x
(5) Utility models that make the social and financial interests of Hawaii's utility customers a priority.			x
Policies: (b) To achieve the energy objectives, it shall be the policy of this State to ensure the short- and long-term provision of adequate, reasonably priced, and dependable energy services to accommodate demand. (c) To further achieve the energy objectives, it shall be the policy of this State to:			
(1) Support research and development as well as promote the use of renewable energy sources;			x

(2) Ensure that the combination of energy supplies and energy-saving systems is sufficient to support the demands of growth;			**x**
(3) Base decisions of least-cost supply-side and demand-side energy resource options on a comparison of their total costs and benefits when a least-cost is determined by a reasonably comprehensive, quantitative, and qualitative accounting of their long-term, direct and indirect economic, environmental, social, cultural, and public health costs and benefits;			**x**
(4) Promote all cost-effective conservation of power and fuel supplies through measures including:			**x**
(A) Development of cost-effective demand-side management programs;			**x**
(B) Education;			**x**
(C) Adoption of energy-efficient practices and technologies; and			**x**
(D) Increasing energy efficiency and decreasing energy use in public infrastructure;			**x**
(5) Ensure, to the extent that new supply-side resources are needed, that the development or expansion of energy systems uses the least-cost energy supply option and maximizes efficient technologies;			**x**
(6) Support research, development, and demonstration of energy efficiency, load management, and other demand-side management programs, practices, and technologies;			**x**
(7) Promote alternate fuels and transportation energy efficiency;			**x**
(8) Support actions that reduce, avoid, or sequester greenhouse gases in utility, transportation, and industrial sector applications; and			**x**
(9) Support actions that reduce, avoid, or sequester Hawaii's greenhouse gas emissions through agriculture and forestry initiatives.			**x**
(10) Provide priority handling and processing for all state and county permits required for renewable energy projects;			**x**
(11) Ensure that liquefied natural gas is used only as a cost-effective transitional, limited-term replacement of petroleum for electricity generation and does not impede the development and use of other cost-effective renewable energy sources; and			**x**
(12) Promote the development of indigenous geothermal energy resources that are located on public trust land as an affordable and reliable source of firm power for Hawaii.			**x**

Discussion: The renovation and repurposing of King Kalākaua Plaza for hotel use (with hotel-related retail uses on the ground floor) has no direct relationship to the State's objectives and policies related to energy development.

The renovation for hotel use will not require substantial energy consumption. Although the renovation will increase demand relative to existing conditions, it is anticipated that existing electrical infrastructure will be adequate to accommodate the renewed demand. King Kalākaua Plaza has no relationship to energy development.

HRS § 226-18.5: Objectives and policies for facility systems—telecommunications.
Objective: Planning for the State's telecommunications facility systems shall be directed towards the achievement of dependable, efficient, and economical statewide telecommunications systems capable of supporting the needs of the people.

Policies:			
(1) Facilitate research and development of telecommunications systems and resources;			**x**
(2) Encourage public and private sector efforts to develop means for adequate, ongoing telecommunications planning;			**x**
(3) Promote efficient management and use of existing telecommunications systems and services; and		**x**	
(4) Facilitate the development of education and training of telecommunications personnel.			**x**
Discussion: Section 4.8.4 discusses the proposed renovations with regard to electrical and telecommunications infrastructure. Although the restaurant/retail building renovation to hotel use (with limited retail uses) will increase demand relative to existing conditions, it is anticipated that existing electrical and communication systems infrastructure will be adequate to accommodate the renewed demand.			

HRS § 226-19: Objectives and policies for socio-cultural advancement – housing.			
Objectives: Planning for the State's socio-cultural advancement with regard to housing shall be directed toward the achievement of the following objectives:			
(1) Greater opportunities for Hawaii's people to secure reasonably priced, safe, sanitary, and livable homes, located in suitable environments that satisfactorily accommodate the needs and desires of families and individuals, through collaboration and cooperation between government and nonprofit and for-profit developers to ensure that more affordable housing is made available to very low-, low- and moderate-income segments of Hawaii's population.			**x**
(2) The orderly development of residential areas sensitive to community needs and other land uses.			**x**
(3) The development and provision of affordable rental housing by the State to meet the housing needs of Hawaii's people.			**x**
Policies:			
(1) Effectively accommodate the housing needs of Hawaii's people.			**x**
(2) Stimulate and promote feasible approaches that increase housing choices for low-income, moderate-income, and gap-group households.			**x**
(3) Increase homeownership and rental opportunities and choices in terms of quality, location, cost, densities, style, and size of housing.			**x**
(4) Promote appropriate improvement, rehabilitation, and maintenance of existing housing units and residential areas.			**x**
(5) Promote design and location of housing developments taking into account the physical setting, accessibility to public facilities and services, and other concerns of existing communities and surrounding areas.			**x**
(6) Facilitate the use of available vacant, developable, and underutilized urban lands for housing.			**x**
(7) Foster a variety of lifestyles traditional to Hawaii through the design and maintenance of neighborhoods that reflect the culture and values of the community.			**x**
(8) Promote research and development of methods to reduce the cost of housing construction in Hawaii.			**x**

Discussion: The renovation and repurposing of King Kalākaua Plaza for hotel use (with hotel-related retail uses on the ground floor) will not: 1) increase the permanent resident population of Waikīkī or Honolulu; and 2) impede retention of the residential sector in Waikīkī. The existing building is designed and permitted for retail and restaurant uses. It is anticipated that the hotel will service business travelers and may be popular with kamaʻāina travelers seeking lodging in Waikīkī in a convenient location without typical resort-style amenities

HRS § 226-20: Objectives and policies for socio-cultural advancement – health.			
Objectives: Planning for the State's socio-cultural advancement with regard to health shall be directed towards achievement of the following objectives:			
(1) Fulfillment of basic individual health needs of the general public.			**x**
(2) Maintenance of sanitary and environmentally healthful conditions in Hawaii's communities.			**x**
(3) Elimination of health disparities by identifying and addressing social determinants of health.			**x**
Policies:			
(1) Provide adequate and accessible services and facilities for prevention and treatment of physical and mental health problems, including substance abuse.			**x**
(2) Encourage improved cooperation among public and private sectors in the provision of health care to accommodate the total health needs of individuals throughout the State.			**x**
(3) Encourage public and private efforts to develop and promote statewide and local strategies to reduce health care and related insurance costs.			**x**
(4) Foster an awareness of the need for personal health maintenance and preventive health care through education and other measures.			**x**
(5) Provide programs, services, and activities that ensure environmentally healthful and sanitary conditions.			**x**
(6) Improve the State's capabilities in preventing contamination by pesticides and other potentially hazardous substances through increased coordination, education, monitoring, and enforcement.			**x**
(7) Prioritize programs, services, interventions, and activities that address identified social determinants of health to improve native Hawaiian health and well-being consistent with the United States Congress' declaration of policy as codified in title 42 United States Code section 11702, and to reduce health disparities of disproportionately affected demographics, including native Hawaiians, other Pacific Islanders, and Filipinos. The prioritization of affected demographic groups other than native Hawaiians may be reviewed every ten years and revised based on the best available epidemiological and public health data.			**x**
Discussion: The renovation and repurposing of King Kalākaua Plaza for hotel use (with hotel-related retail uses on the ground floor) has no direct relationship to the State's objectives and policies related to health or provision of healthcare. The renovation is not expected to impact existing medical services and it is anticipated that existing medical services will have adequate capacity to address any medical needs			

HRS § 226-21: Objectives and policies for socio-cultural advancement – education.			
Objectives: Planning for the State's socio-cultural advancement with regard to education shall be directed towards achievement of the objective of the provision of a variety of educational opportunities to enable individuals to fulfill their needs, responsibilities, and aspirations.			
Policies:			
(1) Support educational programs and activities that enhance personal development, physical fitness, recreation, and cultural pursuits of all groups.			**x**
(2) Ensure the provision of adequate and accessible educational services and facilities that are designed to meet individual and community needs.			**x**
(3) Provide appropriate educational opportunities for groups with special needs.			**x**
(4) Promote educational programs which enhance understanding of Hawaii's cultural heritage.			**x**
(5) Provide higher educational opportunities that enable Hawaii's people to adapt to changing employment demands.			**x**
(6) Assist individuals, especially those experiencing critical employment problems or barriers, or undergoing employment transitions, by providing appropriate employment training programs and other related educational opportunities.			**x**
(7) Promote programs and activities that facilitate the acquisition of basic skills, such as reading, writing, computing, listening, speaking, and reasoning.			**x**
(8) Emphasize quality educational programs in Hawaii's institutions to promote academic excellence.			**x**
(9) Support research programs and activities that enhance the education programs of the State.			**x**
Discussion: The renovation and repurposing of King Kalākaua Plaza for hotel use will not impact student enrollment at public or private schools as the hotel will have no permanent residents.			

HRS § 226-22: Objective and policies for socio-cultural advancement – social services.			
Objective: Planning for the State's socio-cultural advancement with regard to social services shall be directed towards the achievement of the objective of improved public and private social services and activities that enable individuals, families, and groups to become more self-reliant and confident to improve their well-being.			
Policies:			
(1) Assist individuals, especially those in need of attaining a minimally adequate standard of living and those confronted by social and economic hardship conditions, through social services and activities within the State's fiscal capacities.			**x**
(2) Promote coordination and integrative approaches among public and private agencies and programs to jointly address social problems that will enable individuals, families, and groups to deal effectively with social problems and to enhance their participation in society.			**x**
(3) Facilitate the adjustment of new residents, especially recently arrived immigrants, into Hawaii's communities.			**x**
(4) Promote alternatives to institutional care in the provision of long-term care for elder and disabled populations.			**x**
(5) Support public and private efforts to prevent domestic abuse and child molestation, and assist victims of abuse and neglect.			**x**

(6) Promote programs which assist people in need of family planning services to enable them to meet their needs.			x
Discussion: The renovation and repurposing of King Kalākaua Plaza for hotel use (with hotel-related retail uses on the ground floor) has no direct relationship to the State's objective and policies related to social services.			

HRS § 226-23: Objectives and policies for socio-cultural advancement – leisure.			
Objective: Planning for the State's socio-cultural advancement with regard to leisure shall be directed towards the achievement of the objective of the adequate provision of resources to accommodate diverse cultural, artistic, and recreational needs for present and future generations.			
Policies:			
(1) Foster and preserve Hawaii's multi-cultural heritage through supportive cultural, artistic, recreational, and humanities-oriented programs and activities.			x
(2) Provide a wide range of activities and facilities to fulfill the cultural, artistic, and recreational needs of all diverse and special groups effectively and efficiently.			x
(3) Enhance the enjoyment of recreational experiences through safety and security measures, educational opportunities, and improved facility design and maintenance.	x		
(4) Promote the recreational and educational potential of natural resources having scenic, open space, cultural, historical, geological, or biological values while ensuring that their inherent values are preserved.	x		
(5) Ensure opportunities for everyone to use and enjoy Hawaii's recreational resources.	x		
(6) Assure the availability of sufficient resources to provide for future cultural, artistic, and recreational needs.	x		
(7) Provide adequate and accessible physical fitness programs to promote the physical and mental well-being of Hawaii's people.			x
(8) Increase opportunities for appreciation and participation in the creative arts, including the literary, theatrical, visual, musical, folk, and traditional art forms.			x
(9) Encourage the development of creative expression in the artistic disciplines to enable all segments of Hawaii's population to participate in the creative arts.			x
(10) Assure adequate access to significant natural and cultural resources in public ownership.	x		

Discussion: The design inspiration for the renovated King Kalākaua Plaza draws from the area's history of fishponds and abundant natural wetlands. The renovations thus acknowledge and take cues related to water, aquaculture, and fishing elements and motifs, including interpretations of fish gates and nets; textures related to natural rock, wood, and plants; and woven textures and plaiting such as from lashings, nets, and baskets; and taro patches and rice paddies. This design approach fosters a Waikīkī sense of place and highlights Waikīkī's natural, historic, and cultural setting in a modern interpretation. Figure 10 references images, patterns, and textures that provide design inspiration and connote a Waikīkī sense of place.

King Kalākaua Plaza will have a positive impact on visual resources of the neighborhood. The proposed renovations will not alter either panoramic views identified in the PUC Development Plan or public views identified in the ROH. The relatively small height increase to the building will not present a potential impact to panoramic views.

The proposed renovations will not restrict recreational opportunities for the public, and the renovated building may have an indirect positive impact by providing visitor accommodations and some retail, near coastal recreation areas in Waikīkī.

A detailed discussion of impacts to natural resources can be found in Sections 2.4 (Sustainability), 3.4 (Groundwater and Surface Water), and 3.6 (Flora and Fauna).

HRS § 226-24: Objective and policies for socio-cultural advancement – individual rights and personal well-being.			
Objective: Planning for the State's socio-cultural advancement with regard to individual rights and personal well-being shall be directed towards achievement of the objective of increased opportunities and protection of individual rights to enable individuals to fulfill their socio-economic needs and aspirations.			
Policies:			
(1) Provide effective services and activities that protect individuals from criminal acts and unfair practices and that alleviate the consequences of criminal acts in order to foster a safe and secure environment.			**x**
(2) Uphold and protect the national and state constitutional rights of every individual.			**x**
(3) Assure access to, and availability of, legal assistance, consumer protection, and other public services which strive to attain social justice.			**x**
(4) Ensure equal opportunities for individual participation in society.			**x**
Discussion: The renovation and repurposing of King Kalākaua Plaza for hotel use (with hotel-related retail uses on the ground floor) has no direct relationship to the State's objective and policies related to protection of individual rights.			

HRS § 226-25: Objectives and policies for socio-cultural advancement – culture.
Objective: Planning for the State's socio-cultural advancement with regard to culture shall be directed toward the achievement of the objective of enhancement of cultural identities, traditions, values, customs, and arts of Hawaii's people.

Policies:			
(1) Foster increased knowledge and understanding of Hawaii's ethnic and cultural heritages and the history of Hawaii.	**x**		
(2) Support activities and conditions that promote cultural values, customs, and arts that enrich the lifestyles of Hawaii's people and which are sensitive and responsive to family and community needs.	**x**		
(3) Encourage increased awareness of the effects of proposed public and private actions on the integrity and quality of cultural and community lifestyles in Hawaii.			**x**
(4) Encourage the essence of the aloha spirit in people's daily activities to promote harmonious relationships among Hawaii's people and visitors.	**x**		

Discussion: The renovation and repurposing of King Kalākaua Plaza for use as a hotel is not anticipated to impede the exercise of Native Hawaiian rights, or rights of any ethnic group, related to gathering, access, or other customary activities. The Property is not known to be used for any specific gathering, access, or other customary activities. Approximately 83 percent of the Property is built upon and/or paved and the remaining approximately 17 percent is landscaped, primarily with introduced plant species.

To ensure the renovated King Kalākaua Plaza conveys a Waikīkī sense of place KKDC, the architect team, and landscape architect team consulted with cultural practitioner Ramsay Taum. With Mr. Taum's knowledge and guidance, the design inspiration for the renovated King Kalākaua Plaza draws from the area's history of fishponds and abundant natural wetlands. The renovations thus acknowledge and take cues related to water, aquaculture, and fishing elements and motifs, including interpretations of fish gates and nets; textures related to natural rock, wood, and plants; and woven textures and plaiting such as from lashings, nets, and baskets; and taro patches and rice paddies. This design approach fosters a Waikīkī sense of place and highlights Waikīkī's natural, historic, and cultural setting in a modern interpretation. Figure 10 references images, patterns, and textures that provide design inspiration and connote a Waikīkī sense of place.

HRS § 226-26: Objectives and policies for socio-cultural advancement – public safety.			
Objectives: Planning for the State's socio-cultural advancement with regard to public safety shall be directed towards the achievement of the following objectives:			
(1) Assurance of public safety and adequate protection of life and property for all people.	**x**		
(2) Optimum organizational readiness and capability in all phases of emergency management to maintain the strength, resources, and social and economic well-being of the community in the event of civil disruptions, wars, natural disasters, and other major disturbances.	**x**		
(3) Promotion of a sense of community responsibility for the welfare and safety of Hawaii's people.			**x**
Policies related to public safety:			
(1) Ensure that public safety programs are effective and responsive to community needs.			**x**

(2) Encourage increased community awareness and participation in public safety programs.			**x**
Policies related to criminal justice:			
(1) Support criminal justice programs aimed at preventing and curtailing criminal activities.			**x**
(2) Develop a coordinated, systematic approach to criminal justice administration among all criminal justice agencies.			**x**
(3) Provide a range of correctional resources which may include facilities and alternatives to traditional incarceration in order to address the varied security needs of the community and successfully reintegrate offenders into the community.			**x**
Policies related to emergency management:			
(1) Ensure that responsible organizations are in a proper state of readiness to respond to major war-related, natural, or technological disasters and civil disturbances at all times.			**x**
(2) Enhance the coordination between emergency management programs throughout the State.			**x**
Discussion: King Kalākaua Plaza has no direct relationship to public safety, criminal justice, and emergency management. However KKDC has consulted various government agencies involved with emergency management, listed in Section 8. Natural hazards are addressed in Section 3.5. The renovation and repurposing of King Kalākaua Plaza for use as a hotel is expected to have positive impact on public safety by establishing a positive presence on the Property, compared to the current vacant building.			

HRS § 226-27: Objectives and policies for socio-cultural advancement – government.			
Objectives: Planning the State's socio-cultural advancement with regard to government shall be directed towards the achievement of the following objectives:			
(1) Efficient, effective, and responsive government services at all levels in the State.			**x**
(2) Fiscal integrity, responsibility, and efficiency in the state government and county governments.			**x**
Policies:			
(1) Provide for necessary public goods and services not assumed by the private sector.			**x**
(2) Pursue an openness and responsiveness in government that permits the flow of public information, interaction, and response.			**x**
(3) Minimize the size of government to that necessary to be effective.			**x**
(4) Stimulate the responsibility in citizens to productively participate in government for a better Hawaii.			**x**
(5) Assure that government attitudes, actions, and services are sensitive to community needs and concerns.			**x**
(6) Provide for a balanced fiscal budget.			**x**
(7) Improve the fiscal budgeting and management system of the State.			**x**
(8) Promote the consolidation of state and county governmental functions to increase the effective and efficient delivery of government programs and services and to eliminate duplicative services wherever feasible.			**x**

Discussion: King Kalākaua Plaza has no relationship to governance. The renovation and repurposing of King Kalākaua Plaza for hotel use (with hotel-related retail uses on the ground floor) has no direct relationship to the State's objectives and policies related to socio-cultural advancement with regard to government.

HAWAI'I STATE PLAN, CHAPTER 226, HRS – PART III. PRIORITY GUIDELINES	**S**	**N/S**	**N/A**
HRS § 226-101: Purpose. The purpose of this part is to establish overall priority guidelines to address areas of statewide concern.			
HRS § 226-102: Overall direction. The State shall strive to improve the quality of life for Hawaii's present and future present and future population through the pursuit of desirable courses of action in five major areas of statewide concern which merit priority attention: economic development, population growth and land resource management, affordable housing, crime and criminal justice, and quality education.			
HRS § 226-103: Economic priority guidelines.			
(a) ***Priority guidelines to stimulate economic growth and encourage business expansion and development to provide needed jobs for Hawaii's people and achieve a stable and diversified economy:***			
(1) Seek a variety of means to increase the availability of investment capital for new and expanding enterprises.			x
(A) Encourage investments which:			
(i) Reflect long term commitments to the State;	x		
(ii) Rely on economic linkages within the local economy;			x
(iii) Diversify the economy;			x
(iv) Reinvest in the local economy;	x		
(v) Are sensitive to community needs and priorities; and	x		
(vi) Demonstrate a commitment to provide management opportunities to Hawaii residents.			x
(B) Encourage investments in innovative activities that have a nexus to the State, such as:			
(i) Present or former residents acting as entrepreneurs or principals;			x
(ii) Academic support from an institution of higher education in Hawaii;			x
(iii) Investment interest from Hawaii residents;			x
(iv) Resources unique to Hawaii that are required for innovative activity; and			x
(v) Complementary or supportive industries or government programs or projects.			x
(2) Encourage the expansion of technological research to assist industry development and support the development and commercialization of technological advancements.			x
(3) Improve the quality, accessibility, and range of services provided by government to business, including data and reference services and assistance in complying with governmental regulations.			x

(4) Seek to ensure that state business tax and labor laws and administrative policies are equitable, rational, and predictable.			x
(5) Streamline the processes for building and development permit and review and telecommunication infrastructure installation approval, and eliminate or consolidate other burdensome or duplicative governmental requirements imposed on business, where scientific evidence indicates that public health, safety and welfare would not be adversely affected.			x
(6) Encourage the formation of cooperatives and other favorable marketing or distribution arrangements at the regional or local level to assist Hawaii's small-scale producers, manufacturers, and distributors.			x
(7) Continue to seek legislation to protect Hawaii from transportation interruptions between Hawaii and the continental United States.			x
(8) Provide public incentives and encourage private initiative to develop and attract industries which promise long-term growth potentials and which have the following characteristics:			
(A) An industry that can take advantage of Hawaii's unique location and available physical and human resources.	x		
(B) A clean industry that would have minimal adverse effects on Hawaii's environment.	x		
(C) An industry that is willing to hire and train Hawaii's people to meet the industry's labor needs at all levels of employment.			x
(D) An industry that would provide reasonable income and steady employment.	x		
(9) Support and encourage, through educational and technical assistance programs and other means, expanded opportunities for employee ownership and participation in Hawaii business.			x
(10) Enhance the quality of Hawaii's labor force and develop and maintain career opportunities for Hawaii's people through the following actions:			
(A) Expand vocational training in diversified agriculture, aquaculture, information industry, and other areas where growth is desired and feasible.			x
(B) Encourage more effective career counseling and guidance in high schools and post-secondary institutions to inform students of present and future career opportunities.			x
(C) Allocate educational resources to career areas where high employment is expected and where growth of new industries is desired.			x
(D) Promote career opportunities in all industries for Hawaii's people by encouraging firms doing business in the State to hire residents.			x
(E) Promote greater public and private sector cooperation in determining industrial training needs and in developing relevant curricula and on- the-job training opportunities.			x
(F) Provide retraining programs and other support services to assist entry of displaced workers into alternative employment.			x
(b) ***Priority guidelines to promote the economic health and quality of the visitor industry:***			
(1) Promote visitor satisfaction by fostering an environment which enhances the Aloha Spirit and minimizes inconveniences to Hawaii's residents and visitors.	x		
(2) Encourage the development and maintenance of well-designed, adequately serviced hotels and resort destination areas which are sensitive to neighboring communities and activities and which provide for adequate shoreline setbacks and beach access.	x		

(3) Support appropriate capital improvements to enhance the quality of existing resort destination areas and provide incentives to encourage investment in upgrading, repair, and maintenance of visitor facilities.	x		
(4) Encourage visitor industry practices and activities which respect, preserve, and enhance Hawaii's significant natural, scenic, historic, and cultural resources.	x		
(5) Develop and maintain career opportunities in the visitor industry for Hawaii's people, with emphasis on managerial positions.	x		
(6) Support and coordinate tourism promotion abroad to enhance Hawaii's share of existing and potential visitor markets.			x
(7) Maintain and encourage a more favorable resort investment climate consistent with the objectives of this chapter.	x		
(8) Support law enforcement activities that provide a safer environment for both visitors and residents alike.			x
(9) Coordinate visitor industry activities and promotions to business visitors through the state network of advanced data communication techniques.			x
(c) ***Priority guidelines to promote the continued viability of the sugar and pineapple industries:***			
(1) Provide adequate agricultural lands to support the economic viability of the sugar and pineapple industries.			x
(2) Continue efforts to maintain federal support to provide stable sugar prices high enough to allow profitable operations in Hawaii.			x
(3) Support research and development, as appropriate, to improve the quality and production of sugar and pineapple crops.			x
(d) ***Priority guidelines to promote the growth and development of diversified agriculture and aquaculture:***			
(1) Identify, conserve, and protect agricultural and aquacultural lands of importance and initiate affirmative and comprehensive programs to promote economically productive agricultural and aquacultural uses of such lands.	x		
(2) Assist in providing adequate, reasonably priced water for agricultural activities.			x
(3) Encourage public and private investment to increase water supply and to improve transmission, storage, and irrigation facilities in support of diversified agriculture and aquaculture.			x
(4) Assist in the formation and operation of production and marketing associations and cooperatives to reduce production and marketing costs.			x
(5) Encourage and assist with the development of a waterborne and airborne freight and cargo system capable of meeting the needs of Hawaii's agricultural community.			x
(6) Seek favorable freight rates for Hawaii's agricultural products from interisland and overseas transportation operators.			x
(7) Encourage the development and expansion of agricultural and aquacultural activities which offer long-term economic growth potential and employment opportunities.			x
(8) Continue the development of agricultural parks and other programs to assist small independent farmers in securing agricultural lands and loans.			x
(9) Require agricultural uses in agricultural subdivisions and closely monitor the uses in these subdivisions.			x
(10) Support the continuation of land currently in use for diversified agriculture.			x

(11) Encourage residents and visitors to support Hawaii's farmers by purchasing locally grown food and food products.			x
(e) ***Priority guidelines for water use and development:***			
(1) Maintain and improve water conservation programs to reduce the overall water consumption rate.	x		
(2) Encourage the improvement of irrigation technology and promote the use of nonpotable water for agricultural and landscaping purposes.			x
(3) Increase the support for research and development of economically feasible alternative water sources.			x
(4) Explore alternative funding sources and approaches to support future water development programs and water system improvements.			x
(f) ***Priority guidelines for energy use and development:***			
(1) Encourage the development, demonstration, and commercialization of renewable energy sources.			x
(2) Initiate, maintain, and improve energy conservation programs aimed at reducing energy waste and increasing public awareness of the need to conserve energy.		x	
(3) Provide incentives to encourage the use of energy conserving technology in residential, industrial, and other buildings.			x
(4) Encourage the development and use of energy conserving and cost-efficient transportation systems.			x
(g) ***Priority guidelines to promote the development of the information industry:***			
(1) Establish an information network, with an emphasis on broadband and wireless infrastructure and capability, that will serve as the foundation of and catalyst for overall economic growth and diversification in Hawaii.			x
(2) Encourage the development of services such as financial data processing, a products and services exchange, foreign language translations, telemarketing, teleconferencing, a twenty-four-hour international stock exchange, international banking, and a Pacific Rim management center.			x
(3) Encourage the development of small businesses in the information field such as software development, the development of new information systems and peripherals, data conversion and data entry services, and home or cottage services such as computer programming, secretarial, and accounting services.			x
(4) Encourage the development or expansion of educational and training opportunities for residents in the information and telecommunications fields.			x
(5) Encourage research activities, including legal research in the information and telecommunications fields.			x
(6) Support promotional activities to market Hawaii's information industry services.			x
(7) Encourage the location or co-location of telecommunication or wireless information relay facilities in the community, including public areas, where scientific evidence indicates that the public health safety, and welfare would not be adversely affected.			x

Discussion: The renovations represent an investment in the long-term well-being of the surrounding community, and ensure that the building is a sustainable improvement to Waikīkī.

King Kalākaua Plaza will make its most significant contribution to a sustainable development by retaining the: 1) two existing underground parking floors of the building; and 2) the loading zone portion of the structure along Kūhiō Avenue. This provides a substantially reduced environmental impact compared to the complete demolition of the existing structure. Research indicates that building reuse typically reduces a building's impact by between four and 46 percent with regard to climate change, human health, ecosystem quality, and resource depletion, compared to a new construction. (National Trust for Historic Preservation, 2011)

The renovation and repurposing of King Kalākaua Plaza for hotel use is anticipated to have a positive impact on the state and local economy. The renovation for hotel use will revitalize the block with appealing, attractive, and inviting uses, creating economic activity and encouraging visitors to venture further down Kalākaua Avenue, thus creating economic value, not only for King Kalākaua Plaza, but also for other nearby properties. Besides the conversion of the existing retail/restaurant building for hotel use, the renovations will include ground floor space for a coffee shop, café, or similar business, and if feasible, space for outdoor seating. See Section 4.9.2.

The design inspiration for the renovated King Kalākaua Plaza draws from the area's history of fishponds and abundant natural wetlands. The renovations thus acknowledge and take cues related to water, aquaculture, and fishing elements and motifs, including interpretations of fish gates and nets; textures related to natural rock, wood, and plants; and woven textures and plaiting such as from lashings, nets, and baskets; and taro patches and rice paddies. This design approach fosters a Waikīkī sense of place and highlights Waikīkī's natural, historic, and cultural setting in a modern interpretation. Figure 10 references images, patterns, and textures that provide design inspiration and connote a Waikīkī sense of place.

The renovations will not impact agricultural resources because the Property is not considered important agricultural land. (See Section 3.3.)

As recommended by the City and County of Honolulu Board of Water Supply (BWS) (Appendix A and Appendix B), King Kalākaua Plaza will implement water conservation measures to the extent practicable. These are discussed in Section 2.4.

King Kalākaua Plaza will make its most significant contribution to a sustainable development by retaining the: 1) two existing underground parking floors of the building; and 2) the loading zone portion of the structure along Kūhiō Avenue. This provides a substantially reduced environmental impact compared to the complete demolition of the existing structure. Research indicates that building reuse typically reduces a building's impact by between four and 46 percent with regard to climate change, human health, ecosystem quality, and resource depletion, compared to a new construction. (National Trust for Historic Preservation, 2011)

HRS § 226-104: Population growth and land resources priority guidelines.			
(a) ***Priority guidelines to effect desired statewide growth and distribution:***			
(1) Encourage planning and resource management to insure that population growth rates throughout the State are consistent with available and planned resource capacities and reflect the needs and desires of Hawaii's people.			**x**
(2) Manage a growth rate for Hawaii's economy that will parallel future employment needs for Hawaii's people.	**x**		
(3) Ensure that adequate support services and facilities are provided to accommodate the desired distribution of future growth throughout the State.	**x**		
(4) Encourage major state and federal investments and services to promote economic development and private investment to the neighbor islands, as appropriate.			**x**
(5) Explore the possibility of making available urban land, low-interest loans, and housing subsidies to encourage the provision of housing to support selective economic and population growth on the neighbor islands.			**x**
(6) Seek federal funds and other funding sources outside the State for research, program development, and training to provide future employment opportunities on the neighbor islands.			**x**
(7) Support the development of high technology parks on the neighbor islands.			**x**
(b) ***Priority guidelines for regional growth distribution and land resource utilization:***			
(1) Encourage urban growth primarily to existing urban areas where adequate public facilities are already available or can be provided with reasonable public expenditures, and away from areas where other important benefits are present, such as protection of important agricultural land or preservation of lifestyles.	**x**		
(2) Make available marginal or nonessential agricultural lands for appropriate urban uses while maintaining agricultural lands of importance in the agricultural district.	**x**		
(3) Restrict development when drafting of water would result in exceeding the sustainable yield or in significantly diminishing the recharge capacity of any groundwater area.			**x**
(4) Encourage restriction of new urban development in areas where water is insufficient from any source for both agricultural and domestic use.			**x**
(5) In order to preserve green belts, give priority to state capital-improvement funds which encourage location of urban development within existing urban areas except where compelling public interest dictates development of a noncontiguous new urban core.			**x**
(6) Seek participation from the private sector for the cost of building infrastructure and utilities, and maintaining open spaces.	**x**		
(7) Pursue rehabilitation of appropriate urban areas.	**x**		
(8) Support the redevelopment of Kakaako into a viable residential, industrial, and commercial community.			**x**
(9) Direct future urban development away from critical environmental areas or impose mitigating measures so that negative impacts on the environment would be minimized.	**x**		

(10) Identify critical environmental areas in Hawaii to include but not be limited to the following: watershed and recharge areas; wildlife habitats (on land and in the ocean); areas with endangered species of plants and wildlife; natural streams and water bodies; scenic and recreational shoreline resources; open space and natural areas; historic and cultural sites; areas particularly sensitive to reduction in water and air quality; and scenic resources.	**x**		
(11) Identify all areas where priority should be given to preserving rural character and lifestyle.			**x**
(12) Utilize Hawaii's limited land resources wisely, providing adequate land to accommodate projected population and economic growth needs while ensuring the protection of the environment and the availability of the shoreline, conservation lands, and other limited resources for future generations.	**x**		
(13) Protect and enhance Hawaii's shoreline, open spaces, and scenic resources.	**x**		

Discussion: The renovation and repurposing of King Kalākaua Plaza for hotel use is anticipated to have a positive impact on the state and local economy. The renovation for hotel use will revitalize the block with appealing, attractive, and inviting uses, creating economic activity and encouraging visitors to venture further down Kalākaua Avenue, thus creating economic value, not only for King Kalākaua Plaza, but also for other nearby properties. Besides the conversion of the existing retail/restaurant building for hotel use, the renovations will include ground floor space for a coffee shop, café, or similar business, and if feasible space for outdoor seating. See Section 4.9.2.

The proposed renovations are compatible with the relevant land use plans, policies, and ordinances as discussed in this section (Section 5).

The renovations will not impact agricultural resources because the Property is not considered important agricultural land. (See Section 3.3.)

A detailed discussion of impacts to natural resources can be found in Sections 2.4 (Sustainability), 3.4 (Groundwater and Surface Water), and 3.6 (Flora and Fauna).

The renovation and repurposing of King Kalākaua Plaza for hotel use (with hotel-related retail uses on the ground floor), including the increase in height of the building from approximately 65 feet to approximately 85 – 100 feet, will not impact significant public views identified under Section 21-9.80-3, ROH and the PUC Development Plan's "Significant Panoramic Views" map (see Section 4.3 for additional information regarding visual impacts). Many other buildings in the vicinity of King Kalākaua Plaza (where the maximum building height is 300-350 feet) are much higher multi-story apartment and hotel buildings (Figure 13).

HRS § 226-105: Crime and criminal justice.			
Priority guidelines in the area of crime and criminal justice:			
(1) Support law enforcement activities and other criminal justice efforts that are directed to provide a safer environment.	**x**		
(2) Target state and local resources on efforts to reduce the incidence of violent crime and on programs relating to the apprehension and prosecution of repeat offenders.			**x**

(3) Support community and neighborhood program initiatives that enable residents to assist law enforcement agencies in preventing criminal activities.			x
(4) Reduce overcrowding or substandard conditions in correctional facilities through a comprehensive approach among all criminal justice agencies which may include sentencing law revisions and use of alternative sanctions other than incarceration for persons who pose no danger to their community.			x
(5) Provide a range of appropriate sanctions for juvenile offenders, including community-based programs and other alternative sanctions.			
(6) Increase public and private efforts to assist witnesses and victims of crimes and to minimize the costs of victimization.			
Discussion: King Kalākaua Plaza has no direct relationship to criminal justice. However KKDC has consulted the Honolulu Police Department (See Section 4.10.2.)			

HRS § 226-106: Affordable housing.			
Priority guidelines for the provision of affordable housing:			
(1) Seek to use marginal or nonessential agricultural land and public land to meet housing needs of low- and moderate-income and gap-group households.			x
(2) Encourage the use of alternative construction and development methods as a means of reducing production costs.			x
(3) Improve information and analysis relative to land availability and suitability for housing.			x
(4) Create incentives for development which would increase home ownership and rental opportunities for Hawaii's low- and moderate-income households, gap-group households, and residents with special needs.			x
(5) Encourage continued support for government or private housing programs that provide low interest mortgages to Hawaii's people for the purchase of initial owner- occupied housing.			x
(6) Encourage public and private sector cooperation in the development of rental housing alternatives.			x
(7) Encourage improved coordination between various agencies and levels of government to deal with housing policies and regulations.			x
(8) Give higher priority to the provision of quality housing that is affordable for Hawaii's residents and less priority to development of housing intended primarily for individuals outside of Hawaii.			x
Discussion: King Kalākaua Plaza has no relationship to affordable housing.			

HRS § 226-107: Quality education			
Priority guidelines to promote quality education:			
(1) Pursue effective programs which reflect the varied district, school, and student needs to strengthen basic skills achievement;			x
(2) Continue emphasis on general education "core" requirements to provide common background to students and essential support to other university programs;			x
(3) Initiate efforts to improve the quality of education by improving the capabilities of the education work force;			x
(4) Promote increased opportunities for greater autonomy and flexibility of educational institutions in their decision-making responsibilities;			x

(5) Increase and improve the use of information technology in education by the availability of telecommunications equipment for:			
(A) The electronic exchange of information;			x
(B) Statewide electronic mail; and			x
(C) Access to the Internet.			x
Encourage programs that increase the public's awareness and understanding of the impact of information technologies on our lives;			x
(6) Pursue the establishment of Hawaii's public and private universities and colleges as research and training centers of the Pacific;			x
(7) Develop resources and programs for early childhood education;			x
(8) Explore alternatives for funding and delivery of educational services to improve the overall quality of education; and			x
(9) Strengthen and expand educational programs and services for students with special needs.			x
Discussion: The renovation and repurposing of King Kalākaua Plaza for hotel use will not impact student enrollment at public or private schools as the hotel will have no permanent residents.			

HRS § 226-108: Sustainability			
Priority guidelines and principles to promote sustainability:			
(1) Encouraging balanced economic, social, community, and environmental priorities;	x		
(2) Encouraging planning that respects and promotes living within the natural resources and limits of the State;	x		
(3) Promoting a diversified and dynamic economy;	x		
(4) Encouraging respect for the host culture;	x		
(5) Promoting decisions based on meeting the needs of the present without compromising the needs of future generations;	x		
(6) Considering the principles of the ahupuaa system; and			x
(7) Emphasizing that everyone, including individuals, families, communities, businesses, and government, has the responsibility for achieving a sustainable Hawaii.	x		

Discussion: King Kalākaua Plaza will make its most significant contribution to a sustainable development by retaining the: 1) two existing underground parking floors of the building; and 2) the loading zone portion of the structure along Kūhiō Avenue. This provides a substantially reduced environmental impact compared to the complete demolition of the existing structure. Research indicates that building reuse typically reduces a building's impact by between four and 46 percent with regard to climate change, human health, ecosystem quality, and resource depletion, compared to a new construction. (National Trust for Historic Preservation, 2011)

The renovation and repurposing of King Kalākaua Plaza for hotel use is anticipated to have a positive impact on the state and local economy. The renovation for hotel use will revitalize the block with appealing, attractive, and inviting uses, creating economic activity and encouraging visitors to venture further down Kalākaua Avenue, thus creating economic value, not only for King Kalākaua Plaza, but also for other nearby properties. Besides the conversion of the King Kalākaua Plaza for hotel use, the renovations will include ground floor space for a coffee shop, café, or similar business, and if feasible, space for outdoor seating. See Section 4.9.2.

A detailed discussion of impacts to natural resources can be found in Sections 2.4 (Sustainability), 3.4 (Groundwater and Surface Water), and 3.6 (Flora and Fauna).

The design inspiration for the renovated and repurposed King Kalākaua Plaza draws from the area's history of fishponds and abundant natural wetlands. The renovations thus acknowledge and take cues related to water, aquaculture, and fishing elements and motifs, including interpretations of fish gates and nets; textures related to natural rock, wood, and plants; and woven textures and plaiting such as from lashings, nets, and baskets; and taro patches and rice paddies. This design approach fosters a Waikīkī sense of place and highlights Waikīkī's natural, historic, and cultural setting in a modern interpretation. Figure 10 references images, patterns, and textures that provide design inspiration and connote a Waikīkī sense of place.

HRS § 226-109: Climate change adaptation.			
Priority guidelines to prepare the State to address the impacts of climate change, including impacts to the areas of agriculture; conservation lands; coastal and nearshore marine areas; natural and cultural resources; education; energy; higher education; health; historic preservation; water resources; the built environment, such as housing, recreation, transportation; and the economy shall:			
(1) Ensure that Hawaii's people are educated, informed, and aware of the impacts climate change may have on their communities;			**x**
(2) Encourage community stewardship groups and local stakeholders to participate in planning and implementation of climate change policies;			**x**
(3) Invest in continued monitoring and research of Hawaii's climate and the impacts of climate change on the State;			**x**
(4) Consider native Hawaiian traditional knowledge and practices in planning for the impacts of climate change;			**x**

(5) Encourage the preservation and restoration of natural landscape features, such as coral reefs, beaches and dunes, forests, streams, floodplains, and wetlands, that have the inherent capacity to avoid, minimize, or mitigate the impacts of climate change;	**x**		
(6) Explore adaptation strategies that moderate harm or exploit beneficial opportunities in response to actual or expected climate change impacts to the natural and built environments;			**x**
(7) Promote sector resilience in areas such as water, roads, airports, and public health, by encouraging the identification of climate change threats, assessment of potential consequences, and evaluation of adaptation options;			**x**
(8) Foster cross-jurisdictional collaboration between county, state, and federal agencies and partnerships between government and private entities and other nongovernmental entities, including nonprofit entities;			**x**
(9) Use management and implementation approaches that encourage the continual collection, evaluation, and integration of new information and strategies into new and existing practices, policies, and plans; and			**x**
(10) Encourage planning and management of the natural and built environments that effectively integrate climate change policy.	**x**		
Discussion: Elevations across most of the Property are high enough above sea level that direct inundation due to sea level rise is not anticipated to be likely in the context of 21st century climate change projections and associated sea level rise. Should FIRM maps be updated to indicate that the Property resides in a higher-risk flood zone, or should increasing frequency of large storm events become a concern, mitigation strategies could include elevating electrical infrastructure for safety and to prevent water damage, reinforcing or relocating utilities as feasible, and adhering to NFIP requirements, building code updates, and/or County, State or Federal guidance. See Section 3.5 for additional information. Sections 2.4 (Sustainability), 3.4 (Groundwater and Surface Water), and 3.6 (Flora and Fauna) provide detailed discussions of impacts to natural resources.			

5.1.4 State Environmental Policy (Chapter 344)

The State's environmental policy and guidelines are set forth in HRS Chapter 344. The renovation and repurposing of King Kalākaua Plaza for hotel use (with hotel-related retail uses on the ground floor) does not conflict with any of the policies, as more fully detailed below.

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

State Environmental Policy, Chapter 344, Hawai'i Revised Statutes	S	N/S	N/A
STATE ENVIRONMENTAL POLICY			
§344-3 Environmental policy. It shall be the policy of the State, through its programs, authorities, and resources to:			
(1) Conserve the natural resources, so that land, water, mineral, visual, air and other natural resources are protected by controlling pollution, by preserving or augmenting natural resources, and by safeguarding the State's unique natural environmental characteristics in a manner which will foster and	**x**		

State Environmental Policy, Chapter 344, Hawai‘i Revised Statutes	S	N/S	N/A
promote the general welfare, create and maintain conditions under which humanity and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of the people of Hawaii.			
(2) Enhance the quality of life by:			
(A) Setting population limits so that the interaction between the natural and artificial environments and the population is mutually beneficial;			x
(B) 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;	x		
(C) Establishing communities which provide a sense of identity, wise use of land, efficient transportation, and aesthetic and social satisfaction in harmony with the natural environment which is uniquely Hawaiian; and	x		
(D) Establishing a commitment on the part of each person to protect and enhance Hawaii's environment and reduce the drain on nonrenewable resources.			x
Discussion: King Kalākaua Plaza supports the above environmental policy. A detailed discussion of impacts to natural resources can be found in Sections 2.4 (Sustainability), 3.4 (Groundwater and Surface Water), and 3.6 (Flora and Fauna). The renovation and repurposing of King Kalākaua Plaza for hotel use will revitalize this area of Waikīkī as an active, visitor-friendly block with a renewed Waikīkī sense of place. Section 4.2 describes the Property's cultural background. The renovation and repurposing of King Kalākaua Plaza for hotel use is anticipated to have a positive impact on the state and local economy. See Section 4.9.2.			
GUIDELINES			
§344-4 Guidelines. In pursuance of the state policy to conserve the natural resources and enhance the quality of life, all agencies, in the development of programs, shall, insofar as practicable, consider the following guidelines:			
(1) Population.			
(A) Recognize population impact as a major factor in environmental degradation and adopt guidelines to alleviate this impact and minimize future degradation;			x
(B) Recognize optimum population levels for counties and districts within the State, keeping in mind that these will change with technology and circumstance, and adopt guidelines to limit population to the levels determined.			x
Discussion: King Kalākaua Plaza does not impede the above guidelines. The renovation and repurposing of King Kalākaua Plaza for hotel use will not increase the permanent resident population of Waikīkī or Honolulu. Rather, it is expected to that the hotel will service business travelers and may be popular with kama‘āina travelers seeking lodging in Waikīkī in a convenient			

State Environmental Policy, Chapter 344, Hawai‘i Revised Statutes	S	N/S	N/A
location without typical resort-style amenities, although the hotel will have a pool and pool deck on the fourth floor.			
(2) Land, water, mineral, visual, air, and other natural resources.			
(A) Encourage management practices which conserve and fully utilize all natural resources;	x		
(B) Promote irrigation and waste water management practices which conserve and fully utilize vital water resources;	x		
(C) Promote the recycling of waste water;			x
(D) Encourage management practices which conserve and protect watersheds and water sources, forest, and open space areas;	x		
(E) Establish and maintain natural area preserves, wildlife preserves, forest reserves, marine preserves, and unique ecological preserves;	x		
(F) Maintain an integrated system of state land use planning which coordinates the state and county general plans;	x		
(G) Promote the optimal use of solid wastes through programs of waste prevention, energy resource recovery, and recycling so that all our wastes become utilized.			x
Discussion: King Kalākaua Plaza supports the above guidelines. A detailed discussion of impacts to natural resources can be found in Sections 2.4 (Sustainability), 3.4 (Groundwater and Surface Water), and 3.6 (Flora and Fauna).			
(3) Flora and fauna.			
(A) Protect endangered species of indigenous plants and animals and introduce new plants or animals only upon assurance of negligible ecological hazard;			x
(B) Foster the planting of native as well as other trees, shrubs, and flowering plants compatible to the enhancement of our environment.	x		
Discussion: King Kalākaua Plaza does not impede the above guidelines. A detailed discussion of impacts to flora and fauna can be found in Section 3.6.			
(4) Parks, recreation, and open space.			
(A) Establish, preserve and maintain scenic, historic, cultural, park and recreation areas, including the shorelines, for public recreational, educational, and scientific uses;			x
(B) Protect the shorelines of the State from encroachment of artificial improvements, structures, and activities;			x
(C) Promote open space in view of its natural beauty not only as a natural resource but as an ennobling, living environment for its people.	x		
Discussion: King Kalākaua Plaza does not impede the above guidelines. The renovation and repurposing of King Kalākaua Plaza for use as a hotel is not expected to have an adverse impact on nearby recreational facilities.			

State Environmental Policy, Chapter 344, Hawai‘i Revised Statutes	S	N/S	N/A
The use of King Kalākaua Plaza for a hotel will not restrict recreational opportunities for the public, and the renovations may have an indirect positive impact by providing visitor accommodations and some retail, near coastal recreation areas in Waikīkī.			
(5) Economic development.			
(A) Encourage industries in Hawaii which would be in harmony with our environment;			**x**
(B) Promote and foster the agricultural industry of the State; and preserve and conserve productive agricultural lands;			**x**
(C) Encourage federal activities in Hawaii to protect the environment;			**x**
(D) Encourage all industries including the fishing, aquaculture, oceanography, recreation, and forest products industries to protect the environment;			**x**
(E) Establish visitor destination areas with planning controls which shall include but not be limited to the number of rooms;			**x**
(F) Promote and foster the aquaculture industry of the State; and preserve and conserve productive aquacultural lands.			**x**
Discussion: King Kalākaua Plaza does not impede the above guidelines. The renovation and repurposing of King Kalākaua Plaza for hotel use is anticipated to have a positive impact on the state and local economy and will not impede the above objectives.			
(6) Transportation.			
(A) Encourage transportation systems in harmony with the lifestyle of the people and environment of the State;	**x**		
(B) Adopt guidelines to alleviate environmental degradation caused by motor vehicles;	**x**		
(C) Encourage public and private vehicles and transportation systems to conserve energy, reduce pollution emission, including noise, and provide safe and convenient accommodations for their users.			**x**
Discussion: King Kalākaua Plaza supports the above guidelines. Section 4.6 addresses roadways and traffic including public transit infrastructure.			
(7) Energy.			
(A) Encourage the efficient use of energy resources.			
Discussion: Although the renovation and repurposing for hotel use (with limited retail uses) will increase demand relative to existing conditions, it is anticipated that existing electrical and communication systems infrastructure will be adequate to accommodate the renewed demand. King Kalākaua Plaza will make its most significant contribution to a sustainable development by retaining the: 1) two existing underground parking floors of the building; and 2) the loading zone portion of the structure along Kūhiō Avenue. This provides a substantially reduced environmental impact compared to the complete demolition of the existing structure. Research indicates that			

State Environmental Policy, Chapter 344, Hawai'i Revised Statutes	S	N/S	N/A
building reuse typically reduces a building's impact by between four and 46 percent with regard to climate change, human health, ecosystem quality, and resource depletion, compared to a new construction. (National Trust for Historic Preservation, 2011).			
(8) Community life and housing.			
(A) Foster lifestyles compatible with the environment; preserve the variety of lifestyles traditional to Hawaii through the design and maintenance of neighborhoods which reflect the culture and mores of the community;			x
(B) Develop communities which provide a sense of identity and social satisfaction in harmony with the environment and provide internal opportunities for shopping, employment, education, and recreation;	x		
(C) Encourage the reduction of environmental pollution which may degrade a community;	x		
(D) Foster safe, sanitary, and decent homes;			x
(E) Recognize community appearances as major economic and aesthetic assets of the counties and the State; encourage green belts, plantings, and landscape plans and designs in urban areas; and preserve and promote mountain-to-ocean vistas.	x		
Discussion: King Kalākaua Plaza does not impede the above guidelines. A detailed discussion of impacts to natural resources can be found in Sections 2.4 (Sustainability), 3.4 (Groundwater and Surface Water), and 3.6 (Flora and Fauna). The renovation and repurposing of King Kalākaua Plaza for hotel use will revitalize this area of Waikīkī as an active, visitor-friendly block with a renewed Waikīkī sense of place. Section 4.2 describes the Property's cultural background. Figure 11 shows the site plan and conceptual landscape plan.			
(9) Education and culture.			
(A) Foster culture and the arts and promote their linkage to the enhancement of the environment;			x
(B) Encourage both formal and informal environmental education to all age groups.			x
Discussion: The proposed renovations do not include educational programs.			
(10) Citizen participation.			
(A) Encourage all individuals in the State to adopt a moral ethic to respect the natural environment; to reduce waste and excessive consumption; and to fulfill the responsibility as trustees of the environment for the present and succeeding generations; and			x
(B) Provide for expanding citizen participation in the decision making process so it continually embraces more citizens and more issues.			x

State Environmental Policy, Chapter 344, Hawai‘i Revised Statutes	S	N/S	N/A
Discussion: This EA is being made available to government agencies, community groups, and individuals for review. In addition, plans for the renovation and repurposing of King Kalākaua Plaza were presented to Waikīkī Neighborhood Board No. 9 on October 11, 2016. The Board voted in support the renovations with 14 board members in favor and one board member abstaining.			

5.2 CITY AND COUNTY OF HONOLULU

County-specific land use plans and ordinances pertaining to the Project include the O‘ahu General Plan, PUC Development Plan, and Land Use Ordinance.

5.2.1 General Plan

The General Plan for the City and County of Honolulu is the policy document for the long-range development of the Island of O‘ahu. The General Plan is a statement of social, economic, environmental, and design objectives for the general welfare and prosperity of the people of O‘ahu. These objectives outline desirable conditions achievable within a 20-year planning horizon, as well as conditions to be sought in the long term. The General Plan was originally adopted in 1977 and most recently amended in 2002. The General Plan also includes policies to help direct attainment of the plan’s objectives (City and County of Honolulu Department of Planning and Permitting, 2002).

Discussion: The renovation and repurposing of King Kalākaua Plaza for hotel use (with hotel-related retail uses on the ground floor) will be in conformance with the relevant objectives and policies of General Plan for the City and County of Honolulu. In particular, the renovations will advance the objectives related to economic activity, transportation and utilities, physical development and urban design, and public safety.

Economic Activity. The renovation and repurposing of King Kalākaua Plaza for hotel use (with hotel-related retail uses on the ground floor) will positively affect the economy. In its current vacant state, King Kalākaua Plaza generates little to no economic activity (the parking garage is still in use for paid parking). The vacant Property is unappealing, unattractive, and uninviting. This results in a “dead zone” devoid of vitality and economic activity on an entire block in a prominent location in Waikīkī. The renovation for hotel use will revitalize the block with appealing, attractive, and inviting uses, creating economic value, not only for King Kalākaua Plaza, but also for other nearby properties.

In the short-term, the renovations will create economic activity and jobs during the renovation phase, including from design and construction-related work and the multiplier effect on the local economy. The total cost for design and construction is estimated at approximately $85 million. In

the long-term, the new hotel and retail uses will create sustained economic activity and jobs related to on-going hotel and retail operations. It is estimated that the new hotel will create 70 to 75 full time equivalent jobs.

Transportation and Utilities. The TIAR (see Section 4.6 and Appendix C) concludes the renovation for hotel use: 1) will reduce vehicle trips by more that 50 percent, compared to if the building was fully occupied with commercial tenants; and 2) is not anticipated to significantly impact pedestrian, bicycle, and public transit facilities in the area. In addition, existing municipal water and wastewater systems have the capacity to accommodate the water demand and wastewater flows from the hotel (see Section 4.8 and Appendix D). Further, impacts to public services including schools, fire, and medical services are not anticipated.

Physical Development and Urban Design. The Property is densely urban Waikīkī. It is within the State Land Use Urban District and within the City and County of Honolulu's Waikīkī Special District Resort Mixed Use Precinct. The renovations will be in compliance with all relevant Waikīkī Special District requirements and design controls (§21-9.80-4, ROH) and Waikīkī Special District Guidelines. The design inspiration for the renovated King Kalākaua Plaza draws from the area's history of fishponds and abundant natural wetlands. This design approach fosters a Waikīkī sense of place and highlights Waikīkī's natural, historic, and cultural setting in a modern interpretation.

Public Safety. The renovation and repurposing of King Kalākaua Plaza for use as a hotel is expected to have positive impact on public safety by establishing a positive presence on the Property, compared to the current vacant building. While King Kalākaua Plaza is maintained, because the building is vacant, the entire property is unappealing, unattractive, and uninviting. In its current vacant state, King Kalākaua Plaza is devoid of vitality and dark and unwelcoming in the evening. The renovations will brighten and enliven the area with a distinctive, safe, secure, welcoming, and well-run hotel.

5.2.2 Primary Urban Center Development Plan

The Property is within O‘ahu's Primary Urban Center (PUC). The PUC Development Plan is intended to help guide public policy, investment, and decision-making through the 2025 planning horizon. The PUC is one of two areas on O‘ahu where major growth in population and economic activity will be directed. The PUC's Vision for Honolulu emphasizes retaining the qualities that attract both residents and visitors while encouraging growth and redevelopment to accommodate the projected increases in jobs and residential population.

The PUC Development Plan identifies Waikīkī as the State's largest and most popular visitor destination (24-30.12). One of this plan's key policies is:

Develop and implement a plan for a vibrant and livable Waikīkī : This plan needs to address the quality of the resident experience as well as the quality of the visitor experience. Based on development parameters set by the Waikīkī Special District, the plan should encompass mobility, the quality of the street environment for pedestrians, public spaces, the scale and design of new buildings, and Waikīkī's relationship to the Convention Center and neighboring districts (24-30.5, 24-30.51).

Discussion: The renovation and repurposing of King Kalākaua Plaza for hotel use (with hotel-related retail uses on the ground floor) will positively affect the economic and social welfare of Waikīkī, the State's largest and most popular visitor destination. In its current vacant state, King Kalākaua Plaza generates little to no economic activity (the parking garage is still in use for paid parking). The vacant Property is unappealing, unattractive, and uninviting. This results in a "dead zone" devoid of vitality and economic activity on an entire block in a prominent location in Waikīkī. The renovation for hotel use will revitalize the block with appealing, attractive, and inviting uses, creating economic value, not only for King Kalākaua Plaza, but also for other nearby properties. In addition, renovation to hotel use is expected to have positive impact on public safety by establishing a positive presence on the Property, compared to the current vacant building.

The renovation and repurposing of King Kalākaua Plaza for hotel use (with hotel-related retail uses on the ground floor) will be compatible with surrounding land uses and will promote the unique character of Waikīkī, emphasizing mixed uses. In addition, hotels are a "permitted principle use" within the Resort Mixed Use Precinct.

Mobility. The renovation and repurposing will contribute to enhanced mobility, as the TIAR (see Section 4.6 and Appendix C) concludes the renovation for hotel use: 1) will reduce vehicle trips by more that 50 percent, compared to if the building was fully occupied with commercial tenants; and 2) is not anticipated to significantly impact pedestrian, bicycle, and public transit facilities in the area. The renovations will include bike racks for retail and hotel users and employees.

Pedestrian Street Environment. The renovation and repurposing for hotel use (with hotel-related retail uses on the ground floor) will enhance the pedestrian-orientation in this area of Waikīkī. The vacant King Kalākaua Plaza is unappealing, unattractive, and uninviting. This results in a "dead zone" devoid of vitality and positive activity on an entire block in a prominent location in Waikīkī. This "dead zone" stops many visiting pedestrians from venturing up Kalākaua Avenue and Kūhiō Avenue north of Kālaimoku Street. The renovation for hotel use will revitalize the block with appealing, attractive, and inviting uses, creating positive activity and encouraging visitors to venture further up Kalākaua Avenue and Kūhiō Avenue.

Public Space. The renovation and repurposing for hotel use will brighten and enliven the area with a distinctive, safe, secure, welcoming, and well-run hotel. The renovations will be in compliance with all requirements regarding open space (public and private), required yards

(setbacks), density, and landscaping and will include ground floor space for a coffee shop, café, or similar business, and if feasible, space for outdoor seating. Landscape improvements will include an overall sprucing up of remaining landscaping and remaining hardscape elements will be repaired and maintained.

Building Scale and Design. Building exterior renovations will include clean, modern, vertical lines and architectural features with muted earth tones and textures, providing a modern interpretation of, and reference to, natural, historic, and cultural elements. This design approach fosters a Waikīkī sense of place and highlights Waikīkī's natural, historic, and cultural setting in a modern interpretation. Figure 10 references images, patterns, and textures that provide design inspiration and connote a Waikīkī sense of place.

The renovations will include replacing the above-ground portion of the existing building (four stories, approximately 65 feet high) with a new structure having substantially the same footprint as the existing building, a total of seven floors, and a height of approximately 85 – 100 feet. The height limit of the Property is 300 feet (per the Waikīkī Special District Urban Design Controls, Exhibit 21-9.15, ROH) and could be up to 350 feet (with the "height bonus" per Section 21-9.80-4(c)(3), ROH). Therefore the new structure will be much lower that what could be built on the Property. The increase in height of the building from approximately 65 feet to approximately 85 – 100 feet will not impact significant public views identified under Section 21-9.80-3, ROH and the PUC Development Plan's "Significant Panoramic Views" map (see Section 4.3 for additional information regarding visual impacts).

The above-ground portion of the building will be up to seven floors (compared to the exiting building with four above-ground floors). The top four floors would be provided in generally a "U" shaped configuration. The open end of the "U" would face Kalākaua Avenue and provide an opening for the pool and pool deck area on the fourth floor. This design breaks up the massing of the new floors, provides for variation, and allows for sightlines into the center of the building. An atrium will be provided through the center of the building where there will be an open-air interior courtyard for hotel guests. The atrium will also provide light and air for the interior hotel rooms.

The renovations will be in compliance with all relevant Waikīkī Special District requirements and design controls (§21-9.80-4, ROH) and Waikīkī Special District Guidelines.

5.2.3 Land Use Ordinance

The Property is within the Waikīkī Special District Resort Mixed Use Precinct (see Figure 6 and Figure 7). The following sections set forth, and provide discussion of compliance with, the Waikiki Special District Objectives (Section 21-9.80-1, ROH), the Waikīkī Special District Urban Design Controls (Exhibit 21-9.15, ROH), and the Waikīkī Special District Design Guidelines.

5.2.3.1 *Waikiki Special District Objectives*

As set forth under Section 21-9.80-1, ROH, the objectives of the Waikīkī special district are to:

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

Discussion: To ensure the renovated and repurposed King Kalākaua Plaza conveys a Waikīkī sense of place, the KKDC, the architect team, and the landscape architect team consulted with cultural practitioner Ramsay Taum. Mr. Taum's research indicates that the area of the Property was once part of the *Kālia Loko iʻa* (Kālia fishponds) a vast reserve of approximately 30 acres reserved for royalty. Three mauka streams flowed through the area before emptying into the ocean. In addition to the fishponds, the greater wetland area was used for fisheries, taro patches, and, rice paddies. With purchase of the Fort DeRussy property by the USACE in 1908, and later with completion of Ala Wai Canal by the USACE in 1924, the fishponds and wetland area were drained and filled, creating the fast land that now comprises the area of the Property and modern-day Waikīkī.

With this knowledge, the design inspiration for the renovated and repurposed King Kalākaua Plaza draws from the area's history of fishponds and abundant natural wetlands. The renovations thus acknowledge and take cues related to water, aquaculture, and fishing elements and motifs, including interpretations of fish gates and nets; textures related to natural rock, wood, and plants; and woven textures and plaiting such as from lashings, nets, and baskets; and taro patches and rice paddies. This design approach fosters a Waikīkī sense of place and highlights Waikīkī's natural, historic, and cultural setting in a modern interpretation. Figure 10 references images, patterns, and textures that provide design inspiration and connote a Waikīkī sense of place.

(b) Guide development and redevelopment in Waikīkī with due consideration to optimum community benefits. These shall include the preservation, restoration, maintenance, enhancement, and creation of natural, recreational, educational, historic, cultural, community, and scenic resources.

Discussion: The renovation and repurposing of King Kalākaua Plaza for hotel use (with hotel-related retail uses on the ground floor) will not degrade the natural, recreational, educational, historic, cultural, community, or scenic resources of Waikīkī as discussed in the following sections of this EA:

- Natural Resources: see Section 3.
- Recreational Resources: see Section 4.10.5.
- Educational Resources: see Section 4.10.1.
- Historic and Cultural Resources: see Sections 4.1 and 4.2.
- Community Resources: see Sections 4.9 and 4.10.

- Scenic Resources: see Section 4.3.

(c) Support the retention of a residential sector in order to provide stability to the neighborhoods of Waikīkī.

Discussion: The renovation and repurposing of King Kalākaua Plaza for hotel use (with hotel-related retail uses on the ground floor) will not impede retention of the residential sector in Waikīkī. The existing building is designed and permitted for retail and restaurant uses. It is anticipated that the hotel will service business travelers and may be popular with kamaʻāina travelers seeking lodging in Waikīkī in a convenient location without typical resort-style amenities, although the hotel will have a pool and pool deck on the fourth floor.

In its current vacant state, King Kalākaua Plaza is unappealing, unattractive, uninviting. The Property is devoid of vitality and dark and unwelcoming in the evening. The renovations will brighten and enliven the area with a distinctive, safe, secure, welcoming, and well-run hotel. This in turn, is expected to enhance not only the Property, but nearby properties as well, including nearby residential areas.

(d) Provide for a variety of compatible land uses which promote the unique character of Waikīkī, emphasizing mixed uses.

Discussion: The renovation and repurposing of King Kalākaua Plaza for hotel use (with hotel-related retail uses on the ground floor) will be compatible with surrounding land uses and will promote the unique character of Waikīkī, emphasizing mixed uses. In addition, hotels are a "permitted principle use" within the Resort Mixed Use Precinct. The uses surrounding the King Kalākaua Plaza block are as follows:

Across Kūhiō Avenue (Northeast/mauka)	**Existing Uses:** Kūhiō Avenue borders the Property on its mauka (northeast) edge. Across Kūhiō Avenue from the Property are the La Casa condominium complex and Maile Sky Court hotel. **Zoning:** Apartment Mixed Use Precinct
Across ʻOlohana Street (Northwest)	**Existing Uses:** ʻOlohana Street borders the Property on its northwest edge. Across ʻOlohana Street from the Property is the Waikiki Gateway Hotel. **Zoning:** Resort Mixed Use Precinct.
Across Kalākaua Avenue (Southwest/makai)	**Existing Uses:** Kalākaua Avenue borders the Property on its makai (southwest) edge, with a small City and County utility-related property (TMK 2-6-016:069) on the block. Across Kalākaua Avenue lies the Luana Waikiki hotel, Fort DeRussy Military Reservation, and United States Postal Service's Waikīkī Post Office building. **Zoning:** Resort Mixed Use Precinct (Luana Waikiki), Public Precinct (Ft. DeRussy, Post Office)

Across Kālaimoku Street (Southeast)	**Existing Uses:** Kālaimoku Street borders the Property on its southeast edge. Across Kālaimoku Street from the Property is the Luxury Row shopping complex and The Ritz-Carlton Residences, Waikiki Beach, a resort resident complex. **Zoning:** Resort Mixed Use Precinct

Figure 3 shows an aerial photo of the Property with surrounding uses labeled. Figure 9 shows photographs of the Property and surrounding area. Figure 6 shows the zoning map of the Property including the zoning of surrounding properties.

(e) Support efficient use of multimodal transportation in Waikīkī, reflecting the needs of Waikīkī workers, businesses, residents, and tourists. Encourage the use of public transit rather than the private automobile, and assist in the efficient flow of traffic.

Discussion: The renovation and repurposing for hotel use (with hotel-related retail uses on the ground floor) will not impede the efficient use of multimodal transportation in Waikīkī. King Kalākaua Plaza is well located to take advantage of existing public transit. The Property is serviced by bus stops on Kalākaua Avenue, Kūhiō Avenue, and Saratoga Road. Figure 17 shows roads, intersections, and public transit routes and stops in the vicinity of the Property. Private group transportation services such as trolleys and tour buses also provide transit in the area. Trolley access is available on ‘Olohana Street and Kālaimoku Street.

The TIAR (see Section 4.6 and Appendix C) concludes the renovation and repurposing for hotel use: 1) will reduce vehicle trips by more that 50 percent, compared to if the building was fully occupied with commercial tenants; and 2) is not anticipated to significantly impact pedestrian, bicycle, and public transit facilities in the area. The renovations will include bike racks for retail and hotel users and employees.

(f) Provide for the ability to renovate and redevelop existing structures which otherwise might experience deterioration. Waikīkī is a mature, concentrated urban area with a large number of nonconforming uses and structures. The zoning requirements of this special district should not, therefore, function as barriers to desirable restoration and redevelopment lest the physical decline of structures in Waikīkī jeopardize the desire to have a healthy, vibrant, attractive, and well-designed visitor destination.

Discussion: The renovation and repurposing of King Kalākaua Plaza for hotel use (with hotel-related retail uses on the ground floor) is an adaptive reuse of an existing building. While King Kalākaua Plaza is maintained, because the building is vacant, visually, the entire property is unappealing, unattractive, and uninviting. In its current vacant state, King Kalākaua Plaza represents an entire block devoid of interest and vitality in a prominent area of Waikiki. The

renovation will revitalize the block with positive activity, inviting uses, and attractive architecture and design elements that connote a Waikīkī sense of place.

In addition to an attractive new porte-cochere and hotel entrance along Kālaimoku Street, the renovations will include ground floor space for a coffee shop, café, or similar business, and if feasible, space for outdoor seating. Landscape improvements will include an overall sprucing up of the remaining landscaping remaining hardscape elements will be repaired and maintained. New groundcover plants, such as laua‘e fern and ‘ākia shrubs will be provided, along with new hedges and shrubs, such as naupaka and purple eranthemum. In compliance with Section 21-9.80-4(f)(6) use of fragrant, lush, tropical vegetation and native plant species will be used as appropriate.

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

Discussion: The renovation and repurposing of King Kalākaua Plaza for hotel use (with hotel-related retail uses on the ground floor) will not impede the pursuit of this objective. Capacity of existing infrastructure and utilities will sufficiently accommodate the hotel and retail operations. (See Section 4.6 and Section 4.8.)

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

Discussion: The renovation and repurposing of King Kalākaua Plaza for hotel use (with hotel-related retail uses on the ground floor) is a creative reuse of an existing vacant building that will contribute to the rejuvenation and revitalization of Waikīkī while also facilitating the desired character of Waikīkī. In its current vacant state, King Kalākaua Plaza is an entire block devoid of interest and vitality in a prominent area of Waikiki. The building generates little to no economic activity (the parking garage is still in use for paid parking) and the vacant Property is unappealing, unattractive, and uninviting. The renovation will revitalize the block with positive activity, inviting and economically viable uses, and attractive architecture and design elements that connote a Waikīkī sense of place. The renovation will create economic value and vitality, not only for King Kalākaua Plaza, but also for other nearby properties, thereby contributing to rejuvenation and revitalization of Waikīkī.

(i) Encourage architectural features in building design which complement Hawaii's tropical climate and ambience, while respecting Waikīkī's urbanized setting. The provision of building elements such as open lobbies, lanais, and sunshade devices is encouraged.

Discussion: The renovation and repurposing of King Kalākaua Plaza for hotel use (with hotel-related retail uses on the ground floor) will incorporate architectural features that complement Hawaii's tropical climate and ambience, while respecting Waikīkī's urbanized setting. The above-ground portion of the building will be up to seven floors (compared to the exiting building with four above-ground floors). The top four floors would be provided in generally a "U" shaped configuration. The open end of the "U" would face Kalākaua Avenue and provide an opening for the pool and pool deck area on the fourth floor. This design breaks up the massing of the new floors, provides for variation, and allows for sightlines into the center of the building.

KKDC will comply with all requirements regarding open space (public and private), required yards (setbacks), density, and landscaping

Building façade renovations will include clean, modern, vertical lines and architectural features with muted earth tones and textures, providing a modern interpretation of, and reference to, natural, historic, and cultural elements. The design inspiration for the renovated King Kalākaua Plaza draws from the area's history of fishponds and abundant natural wetlands. This design approach fosters a Waikīkī sense of place and highlights Waikīkī's natural, historic, and cultural setting in a modern interpretation.

In addition to an attractive new porte-cochere and hotel entrance along Kālaimoku Street, the renovations will include ground floor space for a coffee shop, café, or similar business, and if feasible, space for outdoor seating.

Landscape improvements will include an overall sprucing up of the remaining landscaping and remaining hardscape elements will be repaired and maintained. New groundcover plants, such as laua'e fern and 'ākia shrubs will be provided, along with new hedges and shrubs, such as naupaka and purple eranthemum. In compliance with Section 21-9.80-4(f)(6) use of fragrant, lush, tropical vegetation and native plant species will be used as appropriate.

The renovations will be in compliance with all relevant Waikīkī Special District requirements and design controls (§21-9.80-4, ROH) and Waikīkī Special District Guidelines.

(j) Maintain, and improve where possible: mauka views from public viewing areas in Waikīkī, especially from public streets; and a visual relationship with the ocean, as experienced from Kalākaua Avenue, Kālia Road and Ala Moana Boulevard. In addition, improve pedestrian access, both perpendicular and lateral, to the beach and the Ala Wai Canal.

Discussion: The renovation and repurposing of King Kalākaua Plaza for hotel use (with hotel-related retail uses on the ground floor), including the increase in height of the building from approximately 65 feet to approximately 85 – 100 feet, will not impede this objective. There are limited public mauka views from the Property, primarily from the edges of the Property along Kālaimoku Street, and ‘Olohana Street. King Kalākaua Plaza is mauka of Kalākaua Avenue and therefore the existing and renovated building do not, and will not, block any ocean views from Kalākaua Avenue, Kālia Road, or Ala Moana Boulevard.

As with existing conditions, the possible addition of up to three floors will not impact significant public views identified under Section 21-9.80-3, ROH and the PUC Development Plan’s “Significant Panoramic Views” map. Many other buildings in the vicinity of King Kalākaua Plaza (where the maximum building height is 300-350 feet) are much higher multi-story apartment and hotel buildings (Figure 13).

In addition, the renovations are not expected to significantly alter sidewalks around the King Kalākaua Plaza block and thus there are no anticipated negative impacts pedestrian access, both perpendicular and lateral, to the beach and the Ala Wai Canal.

(k) Maintain a substantial view of Diamond Head from the Punchbowl lookouts by controlling building heights in Waikīkī that would impinge on this view corridor.

Discussion: The renovation and repurposing of King Kalākaua Plaza for hotel use (with hotel-related retail uses on the ground floor), including t the increase in height of the building from approximately 65 feet to approximately 85 – 100 feet, will not impact significant public views identified under:

- Section 21-9.80-3, ROH, which identifies significant public views of Waikīkī landmarks, the ocean, and the mountains from public vantage points; and
- The PUC Development Plan’s “Significant Panoramic Views” map (City and County of Honolulu Department of Planning and Permitting, 2004), which identifies significant public east-west views, mauka-makai views, and continuous views.

Many other buildings in the vicinity of King Kalākaua Plaza (where the maximum building height is 300-350 feet) are much higher multi-story apartment and hotel buildings (Figure 13).

(l) Emphasize a pedestrian-orientation in Waikīkī. Acknowledge, enhance, and promote the pedestrian experience to benefit both commercial establishments and the community as a whole. Walkway systems shall be complemented by adjacent landscaping, open spaces, entryways, inviting uses at the ground level, street furniture, and human-scaled architectural details. Where appropriate, open spaces should be actively utilized to promote the pedestrian experience.

Discussion: The renovation and repurposing of King Kalākaua Plaza for hotel use (with hotel-related retail uses on the ground floor) will enhance the pedestrian-orientation in this area of. Waikīkī. The vacant Property is unappealing, unattractive, and uninviting. This results in a "dead zone" devoid of vitality and positive activity on an entire block in a prominent location in Waikiki. This "dead zone" stops many visiting pedestrians from venturing up Kalākaua Avenue and Kuhio Avenue north of Kālaimoku Street. The renovation for hotel use will revitalize the block with appealing, attractive, and inviting uses, creating positive activity and encouraging visitors to venture further up Kalākaua Avenue and Kuhio Avenue. The renovations will be in compliance with all requirements regarding open space (public and private), required yards (setbacks), density, and landscaping and will include ground floor space for a coffee shop, café, or similar business, and if feasible, space for outdoor seating. Landscape improvements will include an overall sprucing up of remaining landscaping and remaining hardscape elements will be repaired and maintained.

The renovation for hotel use is expected to have positive impact on public safety by establishing a positive presence on the Property, compared to the current vacant building. The renovations will brighten and enliven the area with a distinctive, safe, secure, welcoming, and well-run hotel.

(m) Provide people-oriented, interactive, landscaped open spaces to offset the high-density urban ambience. Open spaces are intended to serve a variety of objectives including visual relief, pedestrian orientation, social interaction, and fundamentally to promote a sense of "Hawaiianness" within the district. Open spaces, pedestrian pathways, and other ground level features should be generously supplemented with landscaping and water features to enhance their value, contribute to a lush, tropical setting and promote a Hawaiian sense of place.

Discussion: The renovation and repurposing of King Kalākaua Plaza for hotel use (with hotel-related retail uses on the ground floor) will revitalize block with attractive, inviting, and people-oriented uses that connote a Waikīkī sense of place. The existing large plaza along Kalākaua Avenue will be retained, and the renovations will include ground floor space for a coffee shop, café, or similar business, and if feasible, space for outdoor seating. Landscape improvements will include an overall sprucing up of remaining landscaping and remaining hardscape elements will be repaired and maintained. New groundcover plants, such as laua‘e fern and ‘ākia shrubs will be provided, along with new hedges and shrubs, such as naupaka and purple eranthemum. In compliance with Section 21-9.80-4(f)(6) use of fragrant, lush, tropical vegetation and native plant species will be used as appropriate.

(n) Support a complementary relationship between Waikīkī and the convention center.

Discussion: The renovation and repurposing of King Kalākaua Plaza for hotel use (with hotel-related retail uses on the ground floor) supports a complementary relationship between Waikīkī and the convention center. King Kalākaua Plaza is approximately 3,200 feet from the convention center (a little more than a half mile). This distance is easily walkable for many people, and thus many convention-goers may choose to stay at the hotel, in part, for the convenience of being able to walk to the convention center. In addition, the hotel is expected to be an extended stay class hotel which may be a popular choice for convention-goers.

5.2.3.2 Waikīkī Special District Urban Design Controls

The height limit of the Property is 300 feet (per the Waikīkī Special District Urban Design Controls, Exhibit 21-9.15, ROH) and could be up to 350 feet (with the "height bonus" per Section 21-9.80-4(c)(3), ROH). The existing King Kalākaua Plaza building, at four stories, is approximately 65 feet. The renovation will include adding up to three floors, for a total height of up to approximately 85 – 100 feet, which is well under the 300 to 350 foot height limit.

The Property is not located near any land areas recommended as open space or any of the five designated Waikīkī Gateways, nor is it located within the 100-foot shoreline setback. The Property is not located along any major view corridors. Both Kūhiō Avenue and Kapahulu Avenue are designated major streets according to the urban design controls.

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6 ALTERNATIVES

6.1 NO ACTION

Under the No Action Alternative, the King Kalākaua Plaza would remain in its current vacant condition. The renovation and repurposing the Property for hotel use, including hotel-related retail uses on the ground floor, would not take place and the entire block that comprises the Property would remain in its current unoccupied state, devoid of vitality and economic activity. The "dead zone" created by the vacant King Kalākaua Plaza would continue to stop visitors and shoppers from venturing down Kalākaua Avenue past Luxury Row. The block would continue to be unappealing, unattractive, and uninviting with little to no economic activity (most likely the parking garage would continue to be used for paid parking). In addition, the No Action Alternative would preclude the economic benefits of renovating and repurposing the Property for hotel use, including the creation of economic activity and jobs during the construction phase and sustained economic activity and jobs related to on-going hotel and retail operations. For these reasons, the No Action Alternative is undesirable.

6.2 NEW RETAIL USES

King Kalākaua Plaza contains an existing four-story building with an interior floor area of approximately 93,300 square feet. The building was built in 1998 and is fully developed and permitted for commercial uses (retail and restaurant). Formerly, the building was home to Nike Town, Banana Republic, and The All Star Café, a sports restaurant and bar. In 2009, the last of these anchor tenants moved out and the building has been vacant ever since.

The existing building could be leased to new retail and restaurant tenants, and the landowner has made efforts to re-lease the Property, however, it is clear that the retail center of Waikiki retail has migrated toward the center of Kalākaua Avenue with projects such as the new International Market Place and the complete renovation of Royal Hawaiian Shopping Center. Therefore, at this time the best use of King Kalākaua Plaza is renovating and repurposing the Property for hotel use (including hotel-related retail uses on the ground floor) King Kalākaua Plaza would remain vacant and devoid of vitality and economic activity. For these reasons, the "new retail uses" alternative is undesirable and is not being pursued.

6.3 OTHER USES AS PERMITTED IN THE RESORT MIXED USE PRECINCT

The Resort Mixed Use Precinct (Waikīkī Special District) allows for a variety of uses of the Property. As alternatives to renovating and repurposing the Property for hotel use (including hotel-related retail uses on the ground floor), several other uses may be permitted on the Property, including: amusement and recreational facilities, art galleries and museums, car rental establishments, bars, nightclubs, boarding facilities, business services, dance or music schools,

day-care facilities, multifamily dwellings, financial intuitions, medical facilities, and timeshares (see Table 21-9.6(A), ROH). Conversion of the building to any of the above uses would likely be seen as undesirable and incompatible with the surrounding neighborhood. For these reasons, the "other uses" alternative is undesirable and is not being pursued.

6.4 DEMOLISH AND REPLACE THE EXISTING BUILDING WITH A SUBTANTIALLY DIFFFERENT BUILDING

The alternative of demolishing and replacing the existing building with a substantially different building could include a significantly higher building. The height limit of the Property is 300 feet (per the Waikīkī Special District Urban Design Controls, Exhibit 21-9.15, ROH) and could be up to 350 feet (with the "height bonus" per Section 21-9.80-4(c)(3), ROH). Therefore, the existing building could be replaced with a much higher building similar to the neighboring The Ritz-Carlton Residences, across Kālaimoku Street to the southeast. As permitted in the Resort Mixed Use Precinct, uses could include retail, timeshares, multifamily dwellings, or a combination of all.

This alternative would likely result greater impacts, such as permanent residents and greater visual impacts, including impacts to significant public views identified under:

- Section 21-9.80-3, ROH, which identifies significant public views of Waikīkī landmarks, the ocean, and the mountains from public vantage points; and
- The PUC Development Plan's "Significant Panoramic Views" map (City and County of Honolulu Department of Planning and Permitting, 2004), which identifies significant public east-west views, mauka-makai views, and continuous views

For the above reasons, the alternative of demolishing and replacing the existing building with a substantially different building is undesirable and is not being pursued.

6.5 RENOVATE THE EXISTING ABOVE-GROUND STRUCTURE.

At the time the Draft EA was prepared, KKDC proposed renovating the existing above-ground portion of the existing building for hotel use, including the addition of up to three floors. However, based on structural and geotechnical analyses, KKDC and its architect determined that replacement of the above-ground portion of the building with a new structure would be more feasible than renovating the existing structure.

In addition, at the time the Draft EA was prepared, plans for renovating the existing building for hotel use included two alternatives regarding the addition of a pool: 1) pool and recreation deck area on the fourth floor; and 2) pool and recreation deck area on the ground level on the side of the building fronting Kalākaua Avenue (in the event the that it would not be structurally feasible to provide a pool and pool deck area on the fourth floor). With a pool and recreation deck area on the ground level approximately 4,000 square feet of area fronting Kalākaua Avenue would have been changed from public to private open space. The current plans eliminate the alternative for a ground-

level pool on the side of the building fronting Kalākaua Avenue. By providing a new structure, the pool can now be provided on the fourth floor with no structural issues.

Based on structural and geotechnical analyses, the alternative of renovating the existing above-ground structure is not feasible and is no longer being pursued. In addition, because a pool can now be provided on the fourth floor with no structural issues, the alternative of a pool and recreation deck area on the ground level on the side of the building fronting Kalākaua Avenue is no longer being proposed.

6.6 REPLACE THE ABOVE-GROUND PORTION OF THE EXISTING BUILDING WITH A NEW STRUCTURE

Current plans (preferred alternative) are to renovate and repurpose King Kalākaua Plaza hotel use by replacing the above-ground portion of the building with a new structure having substantially the same footprint as the existing building. The existing underground parking structure (two underground levels) will be retained. The new above ground structure will be seven floors with a height of approximately 85 – 100 feet. The existing structure is four floors with a height of approximately 65 feet.

The above-ground portion of the building will be up to seven floors (compared to the exiting building with four above-ground floors). The top four floors would be provided in generally a "U" shaped configuration. The open end of the "U" would face Kalākaua Avenue and provide an opening for a pool and pool deck area on the fourth floor. This design breaks up the massing of the new floors, provides for variation, and allows for sightlines into the center of the building. An atrium will be provided through the center of the building where there will be an open-air interior courtyard for hotel guests. The atrium will also provide light and air for the interior hotel rooms.

Replacing the above-ground portion of the building with a new structure will be substantially similar to previous plans for renovating the existing structure. The building footprint will remain substantially the same, as will the proposed square footage, floor area ratio (FAR), and number of floors. One significant benefit of a new above-ground structure will be reduced height, as compared to adding floors to the existing structure. The current building is four stories with floor plates spaced at approximately 16 feet apart, resulting in a building height of approximately 65 feet. Floor plates spaced at approximately 16 feet are not necessary for hotel use, and thus replacing the existing above-ground structure will allow for the same number of proposed floors (seven) with a total height of approximately 85 – 100 feet.

Based on structural and geotechnical analyses, the preferred alternative is to renovate and repurpose King Kalākaua Plaza hotel use by replacing the above-ground portion of the building with a new structure.

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7 FINDINGS AND DETERMINATION

To determine whether renovation and repurposing of King Kalākaua Plaza for hotel use may have a significant impact on the physical and human environment, all phases and expected consequences of the proposed project have been evaluated, including potential primary, secondary, short-range, long-range, and cumulative impacts. Based on this evaluation, DPP has issued a Finding of No Significant Impact (FONSI). The supporting rationale for this finding is presented below.

7.1 SIGNIFICANCE CRITERIA

The discussion below evaluates the significance of the Project's impacts based upon the Significance Criteria set forth in Hawaii Administrative Rules section 11-200-12.

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

Discussion: The renovation and repurposing of King Kalākaua Plaza for hotel use (with hotel-related retail uses on the ground floor) will not involve an irrevocable commitment to loss or destruction of any natural or cultural resource. The Property is fully developed with the existing King Kalākaua Plaza, which includes: a four-story retail/restaurant building, surrounding grounds (including a large paved plaza, sidewalks and walkways around the Property, and defined landscaped areas), and a two-level underground parking garage.

Approximately 83 percent of the Property is built upon and/or paved and the remaining approximately 17 percent is landscaped areas. The existing building footprint, paved areas, landscaping, and underground parking structure will remain substantially intact and no significant grading will be necessary. Some minor grading may be needed for the new porte-cochere area and landscape renovations. Limited trenching may be necessary to connect to existing underground utilities.

No rare, threatened, or endangered plants or animals are known to exist on the Property. The surrounding area is considered to contain little or no threatened and endangered species, and is not considered critical habitat for any particular plant or animal species.

The Property is not known to be used for any specific gathering, access, or other customary activities, and therefore, the renovations are not anticipated to impede the exercise of Native Hawaiian rights, or rights of any ethnic group, related to gathering, access, or other customary activities.

(2) Curtails the range of beneficial uses of the environment;

Discussion: The renovation and repurposing of King Kalākaua Plaza for hotel use (with hotel-related retail uses on the ground floor) will not curtail the range of beneficial uses of the environment. Approximately 83 percent of the Property is built upon and/or paved and the remaining approximately 17 percent is landscaped areas. The existing building, paved areas, landscaping, and underground parking structure will remain substantially intact. The renovation and repurposing for hotel use will revitalize the block with appealing, attractive, and inviting uses, creating economic value, not only for King Kalākaua Plaza, but also for other nearby properties. In this regard, compared to the existing vacant condition of the existing building on the Property, the repurposing for hotel use will expand range of beneficial uses of the existing built environment.

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

Discussion: The renovation and repurposing of King Kalākaua Plaza for hotel use (with hotel-related retail uses on the ground floor) does no conflict with the State's long term environmental policies or goals and guidelines as expressed in Chapter 344, HRS. See Section 5.1.4 for elaboration.

(4) Substantially affects the economic or social welfare of the community or State;

Discussion: The renovation and repurposing of King Kalākaua Plaza for hotel use (with hotel-related retail uses on the ground floor) will positively affect the economic and social welfare of the community and the State. In its current vacant state, King Kalākaua Plaza generates little to no economic activity (the parking garage is still in use for paid parking). The vacant Property is unappealing, unattractive, and uninviting. This results in a “dead zone” devoid of vitality and economic activity on an entire block in a prominent location in Waikiki. The renovation repurposing for hotel use will revitalize the block with appealing, attractive, and inviting uses, creating economic value, not only for King Kalākaua Plaza, but also for other nearby properties. In addition, repurposing to hotel use is expected to have positive impact on public safety by establishing a positive presence on the Property, compared to the current vacant building.

In the short-term, the renovation and repurposing of King Kalākaua Plaza for hotel use will create economic activity and jobs during the construction phase, including from design and construction-related work and the multiplier effect on the local economy. The total cost for design and construction is estimated at approximately $85 million. In the long-term, the new hotel and retail uses will create sustained economic activity and jobs related to on-going hotel and retail operations. It is estimated that the new hotel will create 70 to 75 full time equivalent jobs.

(5) Substantially affects public health;

Discussion: The renovation and repurposing of King Kalākaua Plaza for hotel use (with hotel-related retail uses on the ground floor) is not anticipated to substantially affect public health. Section 3.4 provides information on potential impacts to water resources, and no significant impacts to surface or groundwater resources are anticipated. Section 4.4 provides information on potential noise impacts and no significant long-term noise impacts are anticipated. Section 4.5 provides information on anticipated air quality impacts and no long-term impacts to air quality are anticipated.

(6) Involves substantial secondary impacts, such as population changes or effects on public facilities;

Discussion: The renovation and repurposing of King Kalākaua Plaza for hotel use (with hotel-related retail uses on the ground floor) is not anticipated to involve substantial secondary impacts. The renovation for hotel use will not increase the permanent resident population of Waikīkī or Honolulu. The TIAR (see Section 4.6 and Appendix C) concludes the renovation and repurposing for hotel use: 1) will reduce vehicle trips by more that 50 percent, compared to if the building was fully occupied with commercial tenants; and 2) is not anticipated to significantly impact pedestrian, bicycle, and public transit facilities in the area. In addition, existing municipal water and wastewater systems have the capacity to accommodate the water demand and wastewater flows from the hotel (see Section 4.8 and Appendix D). Further, impacts to public services including schools, fire, and medical services are not anticipated.

(7) Involves a substantial degradation of environmental quality;

Discussion: The renovation and repurposing of King Kalākaua Plaza for hotel use (with hotel-related retail uses on the ground floor) is not anticipated to involve degradation of environmental quality. The Property is fully developed with the existing King Kalākaua Plaza, which includes: a four-story retail/restaurant building, surrounding grounds (including a large paved plaza, sidewalks and walkways around the Property, and defined landscaped areas), and a two-level underground parking garage. Approximately 83 percent of the Property is built upon and/or paved and the remaining approximately 17 percent is landscaped areas. The existing building, paved areas, landscaping, and underground parking structure will remain substantially intact..

No rare, threatened, or endangered plants or animals are known to exist on the Property. The surrounding area is considered to contain little or no threatened and endangered species, and is not considered critical habitat for any particular plant or animal species.

No significant impacts to surface or groundwater resources are anticipated (see Section 3.4). No significant long-term noise impacts are anticipated (see Section 4.4). No long-term impacts to air quality are anticipated (see Section 4.5).

(8) Is individually limited but cumulatively has considerable effect on the environment, or involves a commitment for larger actions;

Discussion: The renovation and repurposing of King Kalākaua Plaza for hotel use (with hotel-related retail uses on the ground floor) is not anticipated to contribute toward a considerable effect on the environment, and no commitment for larger actions is involved. The renovation and repurposing for hotel use will not increase the permanent resident population of Waikīkī or Honolulu. The TIAR (see Section 4.6 and Appendix C) concludes the renovation and repurposing for hotel use: 1) will reduce vehicle trips by more that 50 percent, compared to if the building was fully occupied with commercial tenants; and 2) is not anticipated to significantly impact pedestrian, bicycle, and public transit facilities in the area. In addition, existing municipal water and wastewater systems have the capacity to accommodate the water demand and wastewater flows from the hotel (see Section 4.8 and Appendix D). Further, impacts to public services including schools, fire, and medical services are not anticipated. Therefore, there are no anticipated cumulative impacts and the renovations and repurposing for hotel use do not involve a commitment for larger actions.

(9) Substantially affects a rare, threatened, or endangered species or its habitat;

Discussion: No rare, threatened, or endangered plants or animals are known to exist on the Property. The surrounding area is considered to contain little or no threatened and endangered species, and is not considered critical habitat for any particular plant or animal species.

(10) Detrimentally affects air or water quality or ambient noise levels;

Discussion: The renovation and repurposing of King Kalākaua Plaza for hotel use (with hotel-related retail uses on the ground floor) is not anticipated to detrimentally affect air or water quality or ambient noise levels. Section 4.5 provides information on anticipated air quality impacts and no long-term impacts to air quality are anticipated. Section 3.4 provides information on potential impacts to water resources, and no significant impacts to surface or groundwater resources are anticipated. Section 4.4 provides information on potential noise impacts and no significant long-term noise impacts are anticipated.

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

Discussion: The renovation and repurposing of King Kalākaua Plaza for hotel use (with hotel-related retail uses on the ground floor) is not anticipated to affect, or likely to suffer damage, by being located in an environmentally sensitive area, such as a flood plain, tsunami zone, beach, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal waters.

The Property is designated as within Flood Zone AO, within the one-percent-annual-chance flood area, according to the FIRM prepared by FEMA. National Flood Insurance Program (NFIP) (See Figure 15). Approximately 83 percent of the Property is built upon and/or paved and the remaining approximately 17 percent is landscaped areas. The existing building, paved areas, and landscaping will remain substantially intact. Drainage after the renovations will follow the existing drainage pattern and stormwater runoff from the Property is not anticipated to increase. In renovating King Kalākaua Plaza KKDC will comply with all applicable rules and regulations regarding flooding, including the requirements of Chapter 21A, Revised Ordinances of Honolulu regarding Flood Hazard Areas.

Most of the Property is not anticipated to suffer direct seawater inundation due to sea level rise within the 21st Century (based on projections from Center for Island Climate Adaptation and Policy and the University of Hawaiʻi Sea Grant) but may begin to experience groundwater inundation if sea level rises by 1 to 2 feet. If: 1) the Property experiences near-inundation conditions and FIRM maps are updated to indicate that the Property resides in a higher-risk flood zone, or 2) increasing frequency of large storm events becomes a concern, mitigation strategies could include elevating electrical infrastructure for safety and to prevent water damage, reinforcing or relocating utilities as feasible, and adhering to NFIP requirements, building code updates, and/or County, State or Federal guidance. These mitigation measures could also be implemented should the south corner of the Property, the underground parking structure, or the building infrastructure begin to see impacts from sea level rise nearing 2100. See Section 3.5.

The Property is within the tsunami evacuation zone designated by the Hawaiʻi State Civil Defense (see Figure 16). Impacts from tsunamis will be mitigated by adherence to appropriate civil defense evacuation procedures.

The Property is not located on or near a 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;

Discussion: The renovation and repurposing of King Kalākaua Plaza for hotel use (with hotel-related retail uses on the ground floor), including increasing building height from 65 feet to

approximately 85 – 100 feet, will not impact significant public views identified under Section 21-9.80-3, ROH and the PUC Development Plan's "Significant Panoramic Views" map (see Section 4.3 for additional information regarding visual impacts). Many other buildings in the vicinity of King Kalākaua Plaza (where the maximum building height is 300-350 feet) are much higher multi-story apartment and hotel buildings (Figure 13).

(13) Requires substantial energy consumption.

Discussion: The renovation and repurposing of King Kalākaua Plaza for hotel use (with hotel-related retail uses on the ground floor) will not require substantial energy consumption. Although hotel use will increase demand relative to existing conditions, it is anticipated that existing electrical infrastructure will be adequate to accommodate the renewed demand.

7.2 DETERMINATION

Pursuant to Chapter 343, HRS, DPP has issued a Finding of No Significant Impact (FONSI) based on this EA. This finding is founded on the basis of impacts and mitigation measures examined in this document and comments received during the pre-consultation period and analyzed under the above criteria.

8 CONSULTATION

In the course of planning for the renovations and repurposing of King Kalākaua Plaza for hotel use, a pre-consultation letter was mailed out to government agencies and community stakeholders.

8.1 PRE-CONSULTATION

A pre-consultation letter regarding plans for the Property for hotel use was provided to following individuals, community organizations, private groups, and government agencies. The letter notified them that an EA was being prepared in support of a Special District Permit (Minor)[4] application, and solicited concerns or comments. Recipients that provided comments are marked with an asterisk. The comments received, and the corresponding responses are reproduced in Appendix A

8.1.1 State

- Department of Accounting and General Services *
- Department of Business, Economic Development & Tourism (DBEDT)
- DBEDT - Energy Division
- DBEDT - Office of Planning *
- Department of Defense – Hawaii National Guard
- Department of Education – Planning Section
- Department of Hawaiian Home Lands
- Department of Health
- Department of Health - Environmental Planning Office *
- Department of Health - Office of Environmental Quality Control (OEQC)
- Department of Labor and Industrial Relations
- Department of Land and Natural Resources*
- DLNR – State Historic Preservation Division
- DLNR – Land Division – Oʻahu District *
- Department of Transportation *
- Office of Hawaiian Affairs

8.1.2 Federal

- U.S. Army Corps of Engineers
- Federal Emergency Management Agency

[4] The current plan to replace the above-ground portion of the building with a new structure will require a Special District Permit Major application; however, no significant additional impacts are anticipated as compared to the previously proposed plans.

8.1.3 City and County of Honolulu

- Department of Community Services
- Department of Environmental Services
- Department of Design and Construction *
- Department of Facility Maintenance *
- Department of Parks and Recreation * (requested no further consultation)
- Department of Planning and Permitting (Approving Agency)
- Board of Water Supply *
- Fire Department *
- Police Department *
- Department of Transportation Services *

8.1.4 Elected Officials

- State Senator Brickwood Galuteria
- State Representative Tom Brower
- County Council Member Trevor Ozawa

8.1.5 Citizen Groups/Individuals, Consulted Parties

- Waikīkī Neighborhood Board No. 9
- Waikīkī Improvement Association
- Fort DeRussy
- Ritz-Carlton
- La Casa
- Maile Sky Court
- Waikiki Gateway
- 2100 Kalākaua Avenue Shops
- SMK, Inc.
- Tropic Sun
- Best Hospitality, LLC

Plans for the renovation and repurposing of King Kalākaua Plaza for hotel use were presented to Waikīkī Neighborhood Board No. 9 on October 11, 2016. The Board voted in support the renovations with 14 board members in favor and one board member abstaining.

At the time of the Neighborhood Board presentation, KKDC proposed renovating the existing above-ground portion of the existing building for hotel use, including the addition of up to three floors with a total height of up to 100 feet (the existing structure is four floors and approximately

65 feet high). Current plans are to replace the above-ground portion of the building with a new structure having substantially the same footprint as the existing building, a total of seven floors, and a total height of approximately 85 – 100 feet. The existing underground parking structure (two underground levels) will be retained. With the current plans, no significant additional impacts are anticipated as compared to the previously proposed plans.

In addition, the previously proposed plans were presented to Waikīkī Improvement Association on December 14, 2016.

8.2 DRAFT ENVIRONMENTAL ASSESSMENT

The Draft EA was published on April 8, 2017 and was distributed to the following individuals, community organizations, private groups, and government agencies. Each recipient received either a hard copy of the EA or a CD containing a digital copy. The accompanying letter from DPP notified recipients of the publication, and solicited concerns or comments. Recipients that provided comments are marked with an asterisk. The comments received and the corresponding responses are reproduced in Appendix B.

8.2.1 State

- Department of Accounting and General Services *
- Department of Business, Economic Development & Tourism (DBEDT)
- DBEDT - Energy Division
- DBEDT - Office of Planning
- Department of Defense – Hawaii National Guard *
- Department of Education
- Department of Hawaiian Home Lands
- Department of Health – Clean Air Branch
- Department of Health – Clean Water Branch *
- Department of Health – Environmental Planning Office *
- Department of Health – Solid and Hazardous Waste Branch
- Department of Health – Office of Environmental Quality Control (OEQC)
- Department of Labor and Industrial Relations
- Department of Land and Natural Resources *
- DLNR – State Historic Preservation Division
- DLNR – Land Division – Oʻahu District
- DLNR – Engineering Division
- Department of Transportation *
- Office of Hawaiian Affairs
- Land Use Commission

8.2.2 Federal

- U.S. Army Corps of Engineers
- Federal Emergency Management Agency

8.2.3 City and County of Honolulu

- Department of Community Services
- Department of Emergency Management
- Emergency Services Department
- Department of Enterprise Services
- Department of Environmental Services
- Department of Design and Construction
- Department of Facility Maintenance *
- Department of Planning and Permitting (Approving Agency) *
- Board of Water Supply *
- Fire Department *
- Police Department *
- Department of Transportation Services *

8.2.4 Elected Officials

- State Senator Brickwood Galuteria
- State Representative Tom Brower
- County Council Member Ron Menor

8.2.5 Citizen Groups/Individuals, Consulted Parties

- University of Hawaii Environmental Center
- Waikīkī Neighborhood Board No. 9 *
- Waikīkī Improvement Association
- Fort DeRussy
- CBRE (property manager for Ritz-Carlton)
- La Casa
- Maile Sky Court
- Waikiki Gateway
- 2100 Kalākaua Avenue Shops
- SMK, Inc.
- Tropic Sun
- Best Hospitality, LLC

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APPENDIX A: PRE-CONSULTATION CORRESPONDENCE

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843
www.boardofwatersupply.com

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ERNEST Y. W. LAU, P.E.
Manager and Chief Engineer

ELLEN E. KITAMURA, P.E.
Deputy Manager and Chief Engineer

October 18, 2016

Mr. Tom Schnell
PBR HAWAII & Associates, Inc.
1001 Bishop Street, Suite 650
Honolulu, Hawaii 96813-3484

Dear Mr. Schnell:

Subject: Your Letter Dated September 30, 2016 Requesting Comments on the Pre-Assessment Consultation for King Kalakaua Plaza Renovation in Waikiki, Located at 2080 Kalakaua Avenue –Tax Map Key: 2-6-016: 023 and 026

Thank you for your letter regarding the proposed renovation of King Kalakaua Plaza.

The existing water system is adequate to accommodate the proposed development. However, please be advised that this information is based upon current data, and therefore, the Board of Water Supply (BWS) reserves the right to change any position or information stated herein up until the final approval of the building permit application. The final decision on the availability of water will be confirmed when the building permit application is submitted for approval.

The construction drawings should be submitted for our review and the construction schedule should be coordinated to minimize impact to 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.

Water conservation measures are recommended for all proposed developments. These measures include low flow plumbing fixtures, utilization of non-potable water for irrigation using rain catchment and chiller/air handler condensate, cooling tower conductivity meters and water softening recycling systems, drought tolerant plants, xeriscape landscaping, efficient irrigation systems and the use of Water Sense labeled ultra-low-flow water fixtures and toilets.

High-rise buildings with booster pumps will be required to install water hammer arrestors or expansion tanks to reduce pressure spikes and potential main breaks in our water system.

The proposed project is subject to BWS Cross-Connection Control and Backflow Prevention requirements prior to the issuance of the Building Permit Applications.

If you have any questions, please contact Robert Chun, Project Review Branch of our Water Resources Division at 748-5443.

Very truly yours,

for ERNEST Y. W. LAU, P.E.
Manager and Chief Engineer

PBR HAWAII
& ASSOCIATES, INC.

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Associate

DACHENG DONG, LEED®AP
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printed on recycled paper

January 10, 2016

Mr. Ernest Y.W. Lau, P.E.
Manager and Chief Engineer
Board of Water Supply
City and County of Honolulu
630 South Beretania Street
Honolulu, Hawai'i 96843

Attn: Mr. Robert Chun, Project Review Branch, Water Resources Division

SUBJECT: PRE-ASSESSMENT CONSULTATION FOR KING KALĀKAUA PLAZA RENOVATION IN WAIKĪKĪ, TMK (1) 2-6-016:023 AND 026

Dear Mr. Lau:

Thank you for your letter dated October 18, 2016 regarding the pre-assessment consultation for King Kalākaua Plaza. As the planning consultant for the applicant, Kalaimoku-Kuhio Development Corp., we acknowledge your comments and provide the following response.

Thank you for your information that the existing water system is adequate to accommodate the proposed renovations. We acknowledge that the Board of Water Supply's final decision will be confirmed when the building permit application is submitted for approval.

As requested, at the appropriate time construction drawings will be submitted for your review and the construction schedule will be coordinated to minimize community impacts, including those to the water system.

Kalaimoku-Kuhio Development Corp. will pay all applicable fees, including Water System Facilities Charges for resource development, transmission, and daily storage.

We acknowledge your recommendation to utilize water conservation measures. As practicable King Kalākaua Plaza will implement water conservation measures, as will be discussed in the forthcoming Draft Environmental Assessment (Draft EA)

The project will comply with all applicable laws, including Cross-Connection Control and Backflow Prevention requirements prior to the issuance of building permit applications.

We value your participation in the environmental review process. Your letter will be included in the forthcoming Draft EA.

Sincerely,

PBR HAWAII

Tom Schnell, AICP
Principal

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
Phone: (808) 768-8480 • Fax: (808) 768-4567
Web site: www.honolulu.gov

KIRK CALDWELL
MAYOR

ROBERT J. KRONING, P.E.
DIRECTOR

MARK YONAMINE, P.E
DEPUTY DIRECTOR

October 25, 2016

PBR Hawaii & Associates, Inc.
Attn: Tom Schnell
1001 Bishop Street, Suite 650
Honolulu, HI 96813-3484

Dear Mr. Schnell,

Subject: Pre- Assessment Consultation for King Kalakaua Plaza Renovation in Waikiki, TMK (1) 2-6-016:023 and 026

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 further questions, please contact me at 768-8480.

Sincerely,

Robert Kroning, P.E.
Director

RJK:ms(667747)

PBR HAWAII
& ASSOCIATES, INC.

PRINCIPALS

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Senior Associate

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Associate

DACHENG DONG, LEED®AP
Associate

MARC SHIMATSU, ASLA
Associate

January 10, 2017

Mr. Robert Kroning, P.E.
Director
Department of Design and Construction
City and County of Honolulu
650 South King Street, 11th Floor
Honolulu, Hawai‘i 96813

SUBJECT: PRE-ASSESSMENT CONSULTATION FOR KING KALĀKAUA PLAZA RENOVATION IN WAIKĪKĪ, TMK (1) 2-6-016:023 AND 026

Dear Mr. Kroning:

Thank you for your letter dated October 25, 2016 regarding the pre-assessment consultation for King Kalākaua Plaza. As the planning consultant for the applicant, Kalaimoku-Kuhio Development Corp., we acknowledge that the Department of Design and Construction has no comments at this time.

We value your participation in the environmental review process. Your letter will be included in the forthcoming Draft Environmental Assessment.

Sincerely,

PBR HAWAII

Tom Schnell, AICP
Principal

HONOLULU OFFICE
1001 Bishop Street, Suite 650
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Tel: (808) 521-5631
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DEPARTMENT OF FACILITY MAINTENANCE

CITY AND COUNTY OF HONOLULU

1000 Ulu'ohia Street, Suite 215, Kapolei, Hawaii 96707
Phone: (808) 768-3343 • Fax: (808) 768-3381
Website: www.honolulu.gov

KIRK CALDWELL
MAYOR

ROSS S. SASAMURA, P.E.
DIRECTOR AND CHIEF ENGINEER

EDUARDO P. MANGLALLAN
DEPUTY DIRECTOR

IN REPLY REFER TO:
DRM 16-799

October 27, 2016

Mr. Tom Schnell, AICP
Principal
PBR Hawaii & Associates, Inc.
1001 Bishop Street, Suite 650
Honolulu, Hawaii 96813-3484

Dear Mr. Schnell:

SUBJECT: Pre-Assessment Consultation for King Kalakaua Plaza Renovation in Waikiki, TMK (1) 2-6-016:023 and 026

Thank you for the opportunity to review and provide our input regarding your letter dated September 30, 2016, on the above-subject project.

Our comments are as follows:

- Once construction phase commences, install approved Best Management Practices fronting all drainage facilities on Kuhio Avenue, Olohana Street, Kalaimoku Street, and Kalakaua Avenue.

- During construction and upon completion of the project, any damages/deficiencies to Kuhio Avenue, Olohana Street, Kalaimoku Street, and Kalakaua Avenue right-of-ways shall be corrected to City standards and accepted by the City.

If you have any questions, please contact Mr. Kyle Oyasato of the Division of Road Maintenance at 768-3697.

Sincerely,

Ross S. Sasamura, P.E.
Director and Chief Engineer

PBR HAWAII
& ASSOCIATES, INC.

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Chairman

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January 10, 2017

Ross S. Sasamura, P.E.
Director and Chief Engineer
Department of Facility Maintenance
City and County of Honolulu
630 South Beretania Street
Honolulu, Hawai'i 96843

Attn: Mr. Kyle Oyasato, Division of Road Maintenance

SUBJECT: PRE-ASSESSMENT CONSULTATION FOR KING KALĀKAUA PLAZA RENOVATION IN WAIKĪKĪ, TMK (1) 2-6-016:023 AND 026

Dear Mr. Sasamura:

Thank you for your letter dated October 27, 2016 (your reference code DRM 16-799) regarding the pre-assessment consultation for King Kalākaua Plaza. As the planning consultant for the applicant, Kalaimoku-Kuhio Development Corp., we provide the following response.

We acknowledge your comments regarding best management practices. The forthcoming Draft Environmental Assessment (Draft EA) states:

> *Once construction commences, BMPs will be installed fronting all drainage facilities, such as catch basin and drainage inlets along Kalākaua Avenue and Kūhiō Avenue. The contractor shall be responsible for clearing storm drain facilities to mitigate flooding during construction and removing BMPs upon completion of the project.*

We also acknowledge during construction and upon completion of the renovations, any damage to right-of-ways bordering the property caused by the renovation process shall be corrected to City standards and accepted by the City.

We value your participation in the environmental review process. Your letter will be included in the forthcoming Draft Environmental Assessment.

Sincerely,

PBR HAWAII

Tom Schnell, AICP
Principal

DEPARTMENT OF PARKS & RECREATION

CITY AND COUNTY OF HONOLULU

1000 Uluohia Street, Suite 309, Kapolei, Hawaii 96707
Phone: (808) 768-3003 • Fax: (808) 768-3053
Website: www.honolulu.gov

KIRK CALDWELL
MAYOR

MICHELE K. NEKOTA
DIRECTOR

JEANNE C. ISHIKAWA
DEPUTY DIRECTOR

November 4, 2016

Mr. Tom Schnell
PBR Hawaii & Associates
1001 Bishop Street, Suite 650
Honolulu, Hawaii 96813-3484

Dear Mr. Schnell:

SUBJECT: Pre-Assessment consultation for King Kalakaua Plaza Renovation in Waikiki, TMK (1) 2-6-016:023 and 026

Thank you for the opportunity to review and comment at the Pre-Consultation stage of the Environmental Assessment for the King Kalakaua Plaza Renovation.

The Department of Parks and Recreation has no comment. As the proposed project will have no impact on any program or facility of the Department, you may remove us as a consulted party to the balance of the EIS process.

Should you have any questions, please contact Mr. John Reid, Planner at 768-3017.

Sincerely,

Michele K, Nekota
Director

MKN:jr
(667739)

W/King Kalakaua Plaza

PBR HAWAII
& ASSOCIATES, INC.

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DACHENG DONG, LEED®AP
Associate

MARC SHIMATSU, ASLA
Associate

January 10, 2017

Ms. Michelle K Nekota
Director
Department of Parks and Recreation
City and County of Honolulu
1000 Uluohia Street
Kapolei, Hawai‘i 96707

Attn: Mr. John Reid, Planner

SUBJECT: SUBJECT: PRE-ASSESSMENT CONSULTATION FOR KING KALĀKAUA PLAZA RENOVATION IN WAIKĪKĪ, TMK (1) 2-6-016:023 AND 026

Dear Ms. Nekota:

Thank you for your letter dated November 4, 2016 regarding the pre-assessment consultation for King Kalākaua Plaza.

As the planning consultant for the applicant, Kalaimoku-Kuhio Development Corp., we acknowledge that: 1) the Department of Parks and Recreation (Department) has no comment; and 2) the proposed project will have no impact on any program or facility of the Department.

As you request in your letter, the Department will be removed as a consulted party for the remainder of the EA/AIS process for this project.

We value your participation in the environmental review process. Your letter will be included in the forthcoming Draft Environmental Assessment.

Sincerely,

PBR HAWAII

Tom Schnell
Principal

HONOLULU OFFICE
1001 Bishop Street, Suite 650
Honolulu, Hawai‘i 96813-3484
Tel: (808) 521-5631
Fax: (808) 523-1402
E-mail: sysadmin@pbrhawaii.com

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DEPARTMENT OF TRANSPORTATION SERVICES
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

KIRK CALDWELL
MAYOR

MARK N GARRITY AICP
ACTING DIRECTOR

TP10/16-667743R

November 15, 2016

Mr. Tom Schnell, AICP
Principal
PBR Hawaii & Associates, Inc.
1001 Bishop Street, Suite 650
Honolulu, Hawaii 96813-3484

Dear Mr. Schnell:

SUBJECT: Pre-Assessment Consultation for King Kalakaua Plaza Renovation in Waikiki, Tax Map Key: (1) 2-6-016:023 and 026

In response to your letter dated September 30, 2016, we have the following comments:

1. The Draft Environmental Assessment (DEA) should include a Traffic Impact Analysis Report (TIAR), which evaluates existing traffic conditions of the surrounding City roadways, possible impacts to the traffic and pedestrian patterns especially during construction, and possible mitigation measures.

2. Any new driveways must be constructed to current City standards and provide safe pedestrian conditions while crossing.

3. Complete Streets improvements should be addressed with the project and included where feasible.

4. The project should provide ample bicycle parking facilities.

5. Be aware, there is another improvement project (hotel/restaurant renovations) near the Luana.

6. The affected Neighborhood Board, as well as the area residents, businesses, etc., should be kept apprised of the details and any local impacts of the proposed project.

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

8. Any construction materials and equipment should be transferred to and from the project sites during off-peak traffic hours (8:30 a.m. to 3:30 p.m.) to minimize any possible disruption to traffic on the local streets.

We reserve further comment pending submission of the DEA.

Thank you for the opportunity to review this matter. Should you have any further questions, please contact Michael Murphy of my staff at 768-8359.

Very truly yours,

for Mark N Garrity AICP
Acting Director

PBR HAWAII
& ASSOCIATES, INC.

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December 20, 2016

Mark N. Garrity, AICP
Department of Transportation Services
City and County of Honolulu
650 South King Street
Honolulu, Hawai'i 96813

Attn: Michael Murphy

SUBJECT: PRE-ASSESSMENT CONSULTATION FOR KING KALĀKAUA PLAZA RENOVATION IN WAIKĪKĪ, TMK (1) 2-6-016:023 and 026

Dear Mr. Garrity:

Thank you for your letter dated November 18, 2016 (your reference code TP10/16-667743R) regarding the pre-assessment consultation for King Kalākaua Plaza. As the planning consultant for the applicant, Kalaimoku-Kuhio Development Corp., we acknowledge your comments and provide the following response.

1. The forthcoming Draft Environmental Assessment (Draft EA) will include a Traffic Impact Assessment Report (TIAR) that addresses existing traffic conditions, possible impacts, and mitigation measures.
2. Any new driveways will be constructed to City standards and provide safe conditions for crossing pedestrians.
3. The proposed improvements generally retain the existing building footprint, therefore sidewalks around the property are not anticipated to change significantly.
4. The renovations will include bike racks for retail and hotel users and employees.
5. The TIAR addresses future developments that may affect the property.
6. Plans for King Kalākaua Plaza were presented to Waikīkī Neighborhood Board No. 9 on October 11, 2016. The Board voted in support the renovations with 14 board members in favor and one board member abstaining.
7. A street usage permit will be obtained for any construction-related work that may require the temporary closure of any traffic land on a City street.
8. To minimize impact to roadways and traffic conditions during the construction phase, construction materials and equipment will be transferred to and from the Property during off-peak traffic hours whenever possible.

We value your participation in the environmental review process. Your letter will be included in the forthcoming Draft EA.

Sincerely,

PBR HAWAII

Tom Schnell, AICP
Principal

HONOLULU FIRE DEPARTMENT

CITY AND COUNTY OF HONOLULU

636 South Street
Honolulu, Hawaii 96813-5007
Phone: 808-723-7139 Fax: 808-723-7111 Internet: www.honolulu.gov/hfd

KIRK CALDWELL
MAYOR

MANUEL P. NEVES
FIRE CHIEF

LIONEL CAMARA JR.
DEPUTY FIRE CHIEF

October 25, 2016

Mr. Tom Schnell, AICP
Principal
PBR HAWAII & Associates, Inc.
1001 Bishop Street, Suite 650
Honolulu, Hawaii 96813-3484

Dear Mr. Schnell:

Subject: Preassessment Consultation
King Kalakaua Plaza Renovation in Waikiki
Tax Map Keys: 2-6-016: 023 and 026

In response to your letter dated September 30, 2016, regarding the above-mentioned subject, the Honolulu Fire Department reviewed the information provided and determined that the project shall comply with all requirements of the Fire Code of the City and County of Honolulu for high-rise buildings, for change of use, and for change of occupancy.

Should you have questions, please contact Battalion Chief Terry Seelig of our Fire Prevention Bureau at 723-7151 or tseelig@honolulu.gov.

Sincerely,

SOCRATES D. BRATAKOS
Assistant Chief

SDB/SY:bh

PBR HAWAII
& ASSOCIATES, INC.

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President

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Chairman Emeritus

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Associate

DACHENG DONG, LEED®AP
Associate

MARC SHIMATSU, ASLA
Associate

January 10, 2017

Mr. Socrates Bratakos
Assistant Chief
Honolulu Fire Department
City and County of Honolulu
636 South Street
Honolulu, Hawai‘i 96813-5007

Attn: Battalion Chief Terry Seelig, Fire Prevention Bureau

SUBJECT: PRE-ASSESSMENT CONSULTATION FOR KING KALĀKAUA PLAZA RENOVATION IN WAIKĪKĪ, TMK (1) 2-6-016:023 AND 026

Dear Assistant Chief Bratakos:

Thank you for your letter dated October 25, 2016 regarding the pre-assessment consultation for King Kalākaua Plaza. As the planning consultant for the applicant, Kalaimoku-Kuhio Development Corp., we acknowledge your comments.

The renovations will be designed and built in accordance with all applicable provisions of the Fire Code of the City and County of Honolulu for high-rise buildings, change of use, and change of occupancy.

We value your participation in the environmental review process. Your letter will be included in the forthcoming Draft Environmental Assessment.

Sincerely,

PBR HAWAII

Tom Schnell, AICP
Principal

HONOLULU OFFICE
1001 Bishop Street, Suite 650
Honolulu, Hawai‘i 96813-3484
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POLICE DEPARTMENT

CITY AND COUNTY OF HONOLULU

801 SOUTH BERETANIA STREET · HONOLULU, HAWAII 96813
TELEPHONE: (808) 529-3111 · INTERNET: www.honolulupd.org

KIRK CALDWELL
MAYOR

LOUIS M. KEALOHA
CHIEF

MARIE A. McCAULEY
CARY OKIMOTO
DEPUTY CHIEFS

OUR REFERENCE MT-DK

October 18, 2016

Mr. Thomas Schnell
PBR HAWAII & Associates, Inc.
1001 Bishop Street, Suite 650
Honolulu, Hawaii 96813-3484

Dear Mr. Schnell:

This is in response to your letter dated September 30, 2016, requesting comments a Pre-Assessment Consultation for the King Kalakaua Plaza Renovation project in Waikiki.

Based on the information provided, the Honolulu Police Department has concerns regarding the safe flow of traffic and parking at the project site.

We recommend that the developer evaluate the outcome of the traffic flow affected by construction vehicles commuting to the project location. Additionally, we oppose any changes to the existing street signage and traffic patterns around the project site. The developer should also consider the effects to the community caused by vehicles moving in and out of the area during the construction phases of this project, particularly during peak traffic hours. This area will require a sufficient amount of traffic safety oversights and controls (e.g., barricades, cones, signage, flag persons or traffic monitors, special duty officers, etc.) to accommodate the construction vehicles driving to and from the work site, especially on Kalakaua and Kuhio Avenues. This will ensure a safe means of ingress/egress for construction vehicles, motorists, and pedestrians in the vicinity.

Contractors should remind their personnel not to utilize public parks as a parking area for their personal or company vehicles while working at the project site, unless they have obtained prior permission to use the park as a parking space. Arrangements should be made for parking areas for construction personnel.

Additionally, advance notice informing the public of the construction occurrences will allow the community to be prepared for construction-related debris, noise, and traffic.

If there are any questions, please call Major Clyde Ho of District 6 (Waikiki) at 723-3345.

Thank you for the opportunity to review this project.

Sincerely,

LOUIS M. KEALOHA
Chief of Police

By
MARK TSUYEMURA
Management Analyst VI
Office of the Chief

PBR HAWAII
& ASSOCIATES, INC.

PRINCIPALS

THOMAS S. WITTEN, FASLA
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MARC SHIMATSU, ASLA
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E-mail: sysadmin@pbrhawaii.com

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January 10, 2017

Mark Tsuyemura, Office of the Chief
Honolulu Police Department
City and County of Honolulu
801 South Beretania Street
Honolulu, Hawai'i 96813

Attn: Major Clyde Ho, District 6 (Waikiki)

SUBJECT: PRE-ASSESSMENT CONSULTATION FOR KING KALĀKAUA PLAZA RENOVATION IN WAIKĪKĪ, TMK (1) 2-6-016:023 AND 026

Dear Mr. Tsuyemura:

Thank you for the Honolulu Police Department's (HPD) letter dated October 18, 2016 (HPD reference code MT-DK) regarding the pre-assessment consultation for King Kalākaua Plaza. As the planning consultant for the applicant, Kalaimoku-Kuhio Development Corp., we respond to HPD's comments.

Austin, Tsutsumi & Associates prepared a traffic impact analysis report (TIAR) to assess traffic impacts related to the renovation of King Kalākaua Plaza for use as a hotel. The TIAR concludes the renovation of King Kalākaua Plaza for hotel use will reduce vehicle trips by more that 50 percent, compared to if the building was fully occupied under its intended use with commercial tenants. This conclusion is based on a comparative analysis using: 1) Institute of Transportation Engineers (ITE) trip generation codes and 2) Waikīkī-specific trip generation rates.

In addition to decreasing traffic impacts due to converting the building from commercial use to hotel use, to further minimize traffic impacts the renovations will include an on-site porte-cochere along Kālaimoku Street for loading/unloading hotel operations. The porte-cochere will allow vehicles to pull off of Kālaimoku Street and minimize impacts from loading/unloading of passengers and luggage.

To minimize impact to roadways and traffic conditions during the construction phase, construction materials and equipment will be transferred to and from the Property during off-peak traffic hours whenever possible. Should any construction-related work require the temporary closure of any traffic lane on a City street, a street usage permit will be obtained from the City and County of Honolulu Department of Transportation Services. Further, contractors will remind their personnel not to utilize public parks as a parking area for their personal or company vehicles while working at the project site, unless they have obtained prior permission to use the park as a parking space.

We value HPD's participation in the environmental review process. Your letter will be included in the forthcoming Draft EA.

Sincerely,

PBR HAWAII

Tom Schnell, AICP
Principal

DAVID Y. IGE
GOVERNOR

DOUGLAS MURDOCK
COMPTROLLER

AUDREY HIDANO
Deputy Comptroller

STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
P.O. BOX 119, HONOLULU, HAWAII 96810-0119

OCT 14 2016

(P)1287.6

Mr. Tom Schnell, AICP, Principal
PBR HAWAII & Associates, Inc.
1001 Bishop Street, Suite 650
Honolulu, Hawaii 96813-3484

Dear Mr. Schnell:

Subject: Pre-Assessment Consultation for
King Kalakaua Plaza Renovation
Waikiki, Oahu
TMK: (1) 2-6-016: 023 and (1) 2-6-16: 026

Thank you for the opportunity to comment on the subject project. We have no comments to offer at this time as the proposed project does not impact any of the Department of Accounting and General Services' projects or existing facilities.

If you have any questions, your staff may contact Ms. Gayle Takasaki of the Public Works Division at 586-0584.

Sincerely,

for DOUGLAS MURDOCK
Comptroller

PBR HAWAII
& ASSOCIATES, INC.

PRINCIPALS

THOMAS S. WITTEN, FASLA
Chairman

R. STAN DUNCAN, ASLA
President

RUSSELL Y. J. CHUNG, FASLA, LEED®AP BD+C
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TOM SCHNELL, AICP
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Senior Associate

SCOTT MURAKAMI, ASLA, LEED®AP
Associate

DACHENG DONG, LEED®AP
Associate

MARC SHIMATSU, ASLA
Associate

January 10, 2016

Mr. Douglas Murdock, Comptroller
State of Hawai‘i
Department of Accounting and General Services
P.O. Box 119
Honolulu, Hawai‘i 96810-0119

Attn: Ms. Gayle Takasaki, Public Works Division

SUBJECT: PRE-ASSESSMENT CONSULTATION FOR KING KALĀKAUA PLAZA RENOVATION IN WAIKĪKĪ, TMK (1) 2-6-016:023 AND 026

Dear Mr. Murdock:

Thank you for your letter (your reference number (P)1287.6) dated October 14, 2016 regarding the pre-assessment consultation for King Kalākaua Plaza.

As the planning consultant for the applicant, Kalaimoku-Kuhio Development Corp., we acknowledge that you have no comments to offer at this time as the proposed project does not impact any of your Department's projects or existing facilities.

We value your participation in the environmental review process. Your letter will be included in the forthcoming Draft Environmental Assessment.

Sincerely,

PBR HAWAII

Tom Schnell, AICP
Principal

HONOLULU OFFICE
1001 Bishop Street, Suite 650
Honolulu, Hawai‘i 96813-3484
Tel: (808) 521-5631
Fax: (808) 523-1402
E-mail: sysadmin@pbrhawaii.com

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DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE
MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

October 28, 2016

PBR Hawaii & Associates, Inc.
Attention: Mr. Tom Schnell, AICP, Principal
1001 Bishop Street, Suite 650
Honolulu, Hawaii 96813-3484

via email: tschnell@pbrhawaii.com

Dear Mr. Schnell:

SUBJECT: Pre-Assessment Consultation for King Kalakaua Plaza Renovation

Thank you for the opportunity to review and comment on the subject matter. The Department of Land and Natural Resources' (DLNR) Land Division distributed or made available a copy of your report pertaining to the subject matter to DLNR Divisions for their review and comments.

At this time, enclosed are comments from the (a) Engineering Division and (b) Land Division – Oahu District on the subject matter. Should you have any questions, please feel free to call Lydia Morikawa at 587-0410. Thank you.

Sincerely,

Russell Y. Tsuji
Land Administrator

Enclosure(s)
cc: Central Files

DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

RECEIVED
LAND DIVISION
2016 OCT 27 AM 9:23
DEPT. OF LAND & NATURAL RESOURCES STATE OF HAWAII

'16 OCT-4 AM11:18 ENGINEERING

October 3, 2016

MEMORANDUM

TO:

DLNR Agencies:
___Div. of Aquatic Resources
___Div. of Boating & Ocean Recreation
X Engineering Division
___Div. of Forestry & Wildlife
___Div. of State Parks
X Commission on Water Resource Management
___ Office of Conservation & Coastal Lands
X Land Division – Oahu District
X Historic Preservation

FROM: TO: Russell Y. Tsuji, Land Administrator
SUBJECT: Pre-Assessment Consultation for King Kalakaua Plaza Renovation
LOCATION: Waikiki, Island of Oahu; TMK: (1) 2-6-016:023 & 026
APPLICANT: Kalaimoku-Kuhio Development Corp.

Transmitted for your review and comment is information on the above-referenced project. We would appreciate your comments on this project. Please submit any comments by **October 27, 2016**.

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Lydia Morikawa at 587-0410. Thank you.

Attachments

( ) We have no objections.
( ) We have no comments.
(✓) Comments are attached.

Signed: _____

Print Name: Carty S. Chang, Chief Engineer
Date: OCT 13 2016

cc: Central Files

DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION

To: Land Division
Ref: Pre-Assessment Consultation for King Kalakaua Plaza Renovation in Waikiki

COMMENTS

The rules and regulations of the National Flood Insurance Program (NFIP), Title 44 of the Code of Federal Regulations (44CFR), are in effect when development falls within a designated Flood Hazard.

The owner or the project property and/or their representative is responsible to research the Flood Hazard Zone designation for the project. Flood Hazard Zone designations can be found using the Flood Insurance Rate Map (FIRM), which can be accessed through the Flood Hazard Assessment Tool (FHAT) (http://gis.hawaiinfip.org/FHAT).

National Flood Insurance Program establishes the rules and regulations of the NFIP - Title 44 of the Code of Federal Regulations (44CFR). The NFIP Zone X is a designation where there is no perceived flood impact. Therefore, the NFIP does not regulate any development within a Zone X designation.

Be advised that 44CFR reflects the minimum standards as set forth by the NFIP. Local community flood ordinances may take precedence over the NFIP standards as local designations prove to be more restrictive. If there are questions regarding the local flood ordinances, please contact the applicable County NFIP Coordinators below:

- Oahu: City and County of Honolulu, Department of Planning and Permitting (808) 768-8098.
- Hawaii Island: County of Hawaii, Department of Public Works (808) 961-8327.
- Maui/Molokai/Lanai County of Maui, Department of Planning (808) 270-7253.
- Kauai: County of Kauai, Department of Public Works (808) 241-4846.

Signed: _____
CARTY S. CHANG, CHIEF ENGINEER

Date: OCT 13 2016

DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE
MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

October 3, 2016

RECEIVED
LAND DIVISION
2016 OCT -5 AM 8:09
DEPT. OF LAND &
NATURAL RESOURCES
STATE OF HAWAII

MEMORANDUM

TO: **DLNR Agencies:**
___Div. of Aquatic Resources
___Div. of Boating & Ocean Recreation
X Engineering Division
___Div. of Forestry & Wildlife
___Div. of State Parks
X Commission on Water Resource Management
___ Office of Conservation & Coastal Lands
X Land Division – Oahu District
X Historic Preservation

FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: Pre-Assessment Consultation for King Kalakaua Plaza Renovation
LOCATION: Waikiki, Island of Oahu; TMK: (1) 2-6-016:023 & 026
APPLICANT: Kalaimoku-Kuhio Development Corp.

Transmitted for your review and comment is information on the above-referenced project. We would appreciate your comments on this project. Please submit any comments by **October 27, 2016**.

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Lydia Morikawa at 587-0410. Thank you.

Attachments

( ) We have no objections.
(X) We have no comments.
( ) Comments are attached.

Signed: Barry Cheung
Print Name: Barry Cheung
Date: 10/5/16

cc: Central Files

PBR HAWAII
& ASSOCIATES, INC.

PRINCIPALS

THOMAS S. WITTEN, FASLA
Chairman

R. STAN DUNCAN, ASLA
President

RUSSELL Y. J. CHUNG, FASLA, LEED®AP BD+C
Executive Vice-President

VINCENT SHIGEKUNI
Vice-President

GRANT T. MURAKAMI, AICP, LEED®AP BD+C
Vice-President

TOM SCHNELL, AICP
Principal

KIMI MIKAMI YUEN, LEED®AP BD+C
Principal

W. FRANK BRANDT, FASLA
Chairman Emeritus

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RAYMOND T. HIGA, ASLA
Senior Associate

CATIE CULLISON, AICP
Senior Associate

SCOTT MURAKAMI, ASLA, LEED®AP
Associate

DACHENG DONG, LEED®AP
Associate

MARC SHIMATSU, ASLA
Associate

January 10, 2016

Mr. Russell Y. Tsuji
Land Administrator
State of Hawai‘i
Department of Land and Natural Resources
P.O. Box 621
Honolulu, Hawai‘i 96809

Attn: Lydia Morikawa
Attn: Barry Cheung
Attn: Carty S. Chang, Chief Engineer

SUBJECT: PRE-ASSESSMENT CONSULTATION FOR KING KALĀKAUA PLAZA RENOVATION IN WAIKĪKĪ, TMK (1) 2-6-016:023 AND 026

Dear Mr. Tsuji:

Thank you for your letter dated October 3, 2016 regarding the pre-assessment consultation for King Kalākaua Plaza. As the planning consultant for the applicant, Kalaimoku-Kuhio Development Corp., we acknowledge the responses provided by the Engineering Division and Land Division – Oahu District, and provide the following response.

Engineering Division
We acknowledge the Engineering Division’s comment that the rules and regulations of the National Flood Insurance Program (NFIP), Title 44 of the Code of Federal Regulations, are in effect when development falls within a designated Flood Hazard.

King Kalākaua Plaza will comply with all applicable Federal, State, and county regulations, including NFIP. The forthcoming Draft Environmental Assessment (Draft EA) addresses flooding concerns at the Property.

Land Division – Oahu District
We acknowledge that the Land Division has no comments to offer at this time.

HONOLULU OFFICE
1001 Bishop Street, Suite 650
Honolulu, Hawai‘i 96813-3484
Tel: (808) 521-5631
Fax: (808) 523-1402
E-mail: sysadmin@pbrhawaii.com

printed on recycled paper

We appreciate your participation in the environmental review process, and the information provided. Your letter will be included in the Draft Environmental Assessment (EA).

Sincerely,

PBR HAWAII

Tom Schnell, AICP
Principal

DAVID Y. IGE
GOVERNOR OF HAWAII

VIRGINIA PRESSLER, M.D.
DIRECTOR OF HEALTH

STATE OF HAWAII
DEPARTMENT OF HEALTH
P. O. BOX 3378
HONOLULU, HI 96801-3378

In reply, please refer to:
File:

EPO 16-345

October 7, 2016

Mr. Tom Schnell, AICP
PBR Hawaii & Associates, Inc.
1001 Bishop Street, Suite 650
Honolulu, Hawaii 96813-3484

Dear Mr. Schnell:

SUBJECT: Pre- Assessment Consultation (PAC) for King Kalakaua Plaza Renovation in Waikiki
TMK: (1) 2-6-016: 023 and 026

The Department of Health (DOH), Environmental Planning Office (EPO), acknowledges receipt of your PAC to our office on October 4, 2016.

We understand that Kalaimoku-Kuhio Development Corp. is proposing to renovate the existing King Kalakaua Plaza building for use as a hotel and hotel-related uses. King Kalakaua Plaza is located in Waikiki on the block bounded by Kalakaua Avenue, Kalaimoku Street, Kuhio Avenue, and Olohana Street. The property is approximately 1.05 acres and consists of two Tax Map Key parcels.

The renovation will convert the building to hotel use with some retail uses on the ground floor. The existing roof will be removed and three new floors will be added, bringing the total building height to approximately seven stories. The existing landscape is expected to remain, although some landscape improvements are being contemplated.

In the development and implementation of all projects, EPO strongly recommends regular review of State and Federal environmental health land use guidance. State standard comments and available strategies to support sustainable and healthy design are provided at: http://health.hawaii.gov/epo/landuse. Projects are required to adhere to all applicable standard comments.

Hawaii's climate is changing. Sea level rise and the associated coastal impacts have the potential to harm an array of natural and built environments in Hawaii. For additional information on projected Sea level rise in Hawaii, EPO recommends that you visit the following informative links.

1. State of Hawaii Climate Adaptation Portal: http://climateadaptation.hawaii.gov/
2. University of Hawaii, Manoa, School of Ocean and Earth Sciences and Technology, Coastal Geology Group: http://www.soest.hawaii.edu/coasts/index.html
3. US Environmental Protection Agency – Climate Impacts on Coastal Areas: https://www.epa.gov/climate-impacts/climate-impacts-coastal-areas

EPO has recently updated the environmental Geographic Information System (GIS) website page. It now compiles various maps and viewers from our environmental health programs. The eGIS website page is continually updated so please visit it regularly at: http://health.hawaii.gov/epo/egis.

EPO also encourages you to examine and utilize the Hawaii Environmental Health Portal at: https://eha-cloud.doh.hawaii.gov. This site provides links to our e-Permitting Portal, Environmental Health Warehouse, Groundwater Contamination Viewer, Hawaii Emergency Response Exchange, Hawaii State and Local Emission Inventory System, Water Pollution Control Viewer, Water Quality Data, Warnings, Advisories and Postings.

If noise created during the construction phase of the project may exceed the maximum allowable levels as set forth in Hawaii Administrative Rules, Chapter 11-46, "Community Noise Control". A noise permit may be required and should be obtained before the commencement of work. Please call the Indoor and Radiological Health Branch at (808) 586-4700 and review relevant information online at: http://health.hawaii.gov/irhb/noise.

You may also wish to review the draft Office of Environmental Quality Control (OEQC) viewer at: http://eha-web.doh.hawaii.gov/oeqc-viewer. This viewer geographically shows where some previous Hawaii Environmental Policy Act (HEPA) {Hawaii Revised Statutes, Chapter 343} documents have been prepared.

In order to better protect public health and the environment, the U.S. Environmental Protection Agency (EPA) has developed a new environmental justice (EJ) mapping and screening tool called EJSCREEN. It is based on nationally consistent data and combines environmental and demographic indicators in maps and reports. EPO encourages you to explore, launch and utilize this powerful tool in planning your project. The EPA EJSCREEN tool is available at: http://www.epa.gov/ejscreen.

We request that you utilize all of this information on your proposed project to increase sustainable, innovative, inspirational, transparent and healthy design. Thank you for the opportunity to comment.

Mahalo nui loa,

Laura Leialoha Phillips McIntyre, AICP
Program Manager, Environmental Planning Office

LM:nn

c: DOH: IRHB {via email only}

Attachment: EJ Screen Standard Report

EJSCREEN Report (Version 2016)

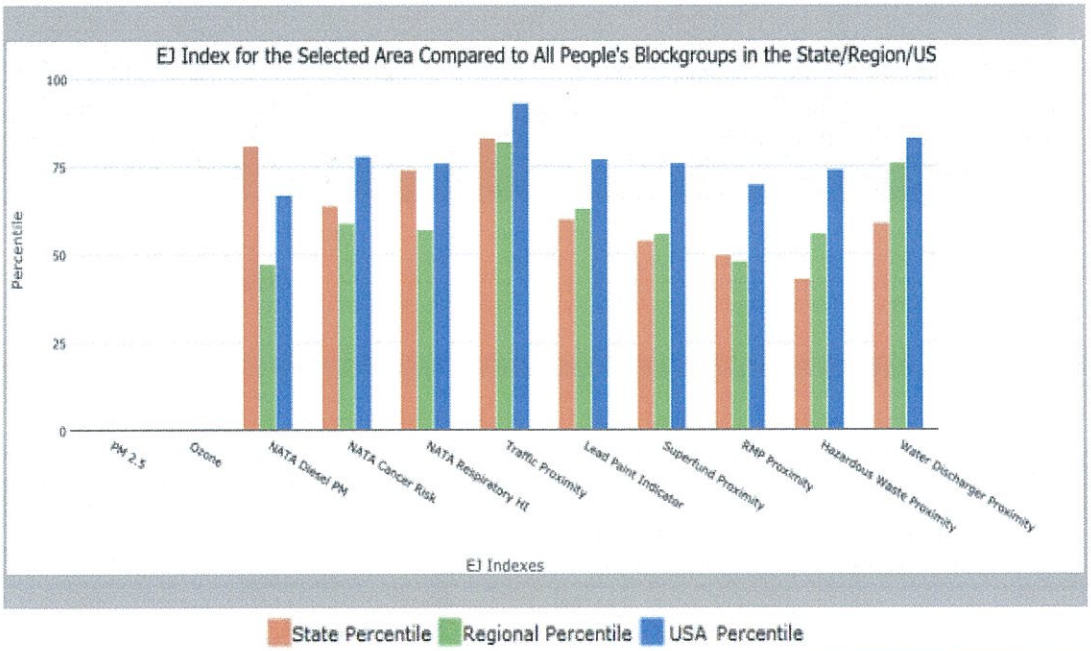
1 mile Ring around the Corridor, HAWAII, EPA Region 9

Approximate Population: 55,164

Input Area (sq. miles): 3.35

King Kalakaua Plaza Renovation

Selected Variables	State Percentile	EPA Region Percentile	USA Percentile
EJ Indexes			
EJ Index for PM2.5	N/A	N/A	N/A
EJ Index for Ozone	N/A	N/A	N/A
EJ Index for NATA* Diesel PM	81	47	67
EJ Index for NATA* Air Toxics Cancer Risk	64	59	78
EJ Index for NATA* Respiratory Hazard Index	74	57	76
EJ Index for Traffic Proximity and Volume	83	82	93
EJ Index for Lead Paint Indicator	60	63	77
EJ Index for Superfund Proximity	54	56	76
EJ Index for RMP Proximity	50	48	70
EJ Index for Hazardous Waste Proximity*	43	56	74
EJ Index for Water Discharger Proximity	59	76	83



This report shows the values for environmental and demographic indicators and EJSCREEN indexes. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 95th percentile nationwide, this means that only 5 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports.

EJSCREEN Report (Version 2016)

1 mile Ring around the Corridor, HAWAII, EPA Region 9

Approximate Population: 55,164

Input Area (sq. miles): 3.35

King Kalakaua Plaza Renovation

October 7, 2016

Digitized Line

1:1,128

Sites reporting to EPA	
Superfund NPL	0
Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)	0
National Pollutant Discharge Elimination System (NPDES)	0

EJSCREEN Report (Version 2016)

1 mile Ring around the Corridor, HAWAII, EPA Region 9

Approximate Population: 55,164

Input Area (sq. miles): 3.35

King Kalakaua Plaza Renovation

Selected Variables	Value	State Avg.	%ile in State	EPA Region Avg.	%ile in EPA Region	USA Avg.	%ile in USA
Environmental Indicators							
Particulate Matter (PM 2.5 in µg/m³)	N/A	N/A	N/A	9.37	N/A	9.32	N/A
Ozone (ppb)	N/A	N/A	N/A	51	N/A	47.4	N/A
NATA* Diesel PM (µg/m³)	0.318	0.149	90	0.978	<50th	0.937	<50th
NATA* Cancer Risk (lifetime risk per million)	51	34	93	43	70-80th	40	80-90th
NATA* Respiratory Hazard Index	2	1	94	2	50-60th	1.8	60-70th
Traffic Proximity and Volume (daily traffic count/distance to road)	2100	990	87	1100	85	590	93
Lead Paint Indicator (% Pre-1960 Housing)	0.15	0.16	59	0.24	51	0.3	44
Superfund Proximity (site count/km distance)	0.051	0.098	46	0.15	37	0.13	43
RMP Proximity (facility count/km distance)	0.099	0.19	52	0.57	19	0.43	27
Hazardous Waste Proximity+ (facility count/km distance)	0.073	0.14	43	0.14	47	0.11	53
Water Discharger Proximity (facility count/km distance)	0.27	0.34	59	0.2	82	0.31	72
Demographic Indicators							
Demographic Index	54%	52%	58	47%	61	36%	76
Minority Population	73%	77%	32	58%	63	37%	81
Low Income Population	34%	26%	70	36%	51	35%	53
Linguistically Isolated Population	15%	6%	88	9%	77	5%	89
Population With Less Than High School Education	9%	9%	58	17%	37	14%	43
Population Under 5 years of age	4%	6%	22	7%	23	6%	25
Population over 64 years of age	18%	15%	65	13%	79	14%	75

* The National-Scale Air Toxics Assessment (NATA) is EPA's ongoing, comprehensive evaluation of air toxics in the United States. EPA developed the NATA to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that NATA provides broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. More information on the NATA analysis can be found at: https://www.epa.gov/national-air-toxics-assessment.

+ The hazardous waste environmental indicator and the corresponding EJ index will appear as N/A if there are no hazardous waste facilities within 50 km of a selected location.

For additional information, see: www.epa.gov/environmentaljustice

EJSCREEN is a screening tool for pre-decisional use only. It can help identify areas that may warrant additional consideration, analysis, or outreach. It does not provide a basis for decision-making, but it may help identify potential areas of EJ concern. Users should keep in mind that screening tools are subject to substantial uncertainty in their demographic and environmental data, particularly when looking at small geographic areas. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports. This screening tool does not provide data on every environmental impact and demographic factor that may be relevant to a particular location. EJSCREEN outputs should be supplemented with additional information and local knowledge before taking any action to address potential EJ concerns.

PBR HAWAII
& ASSOCIATES, INC.

PRINCIPALS

THOMAS S. WITTEN, FASLA
Chairman

R. STAN DUNCAN, ASLA
President

RUSSELL Y. J. CHUNG, FASLA, LEED®AP BD+C
Executive Vice-President

VINCENT SHIGEKUNI
Vice-President

GRANT T. MURAKAMI, AICP, LEED®AP BD+C
Vice-President

TOM SCHNELL, AICP
Principal

KIMI MIKAMI YUEN, LEED®AP BD+C
Principal

W. FRANK BRANDT, FASLA
Chairman Emeritus

ASSOCIATES

RAYMOND T. HIGA, ASLA
Senior Associate

CATIE CULLISON, AICP
Senior Associate

SCOTT MURAKAMI, ASLA, LEED®AP
Associate

DACHENG DONG, LEED®AP
Associate

MARC SHIMATSU, ASLA
Associate

HONOLULU OFFICE
1001 Bishop Street, Suite 650
Honolulu, Hawai'i 96813-3484
Tel: (808) 521-5631
Fax: (808) 523-1402
E-mail: sysadmin@pbrhawaii.com

printed on recycled paper

January 10, 2017

Ms. Laura Leialoha Phillips McIntyre, AICP
Program Manager
Environmental Planning Office
State of Hawai'i
630 South Beretania Street
Honolulu, Hawai'i 96843

SUBJECT: PRE-ASSESSMENT CONSULTATION FOR KING KALĀKAUA PLAZA RENOVATION IN WAIKĪKĪ, TMK (1) 2-6-016:023 AND 026

Dear Ms. McIntyre:

Thank you for your letter (your reference code EPO 16-345) dated October 7, 2016 regarding the pre-assessment consultation for King Kalākaua Plaza. As the planning consultant for the applicant, Kalaimoku-Kuhio Development Corp., we acknowledge your comments and provide the following response.

We have reviewed the standard comments on the DOH EPO website for applicability to the project.

The forthcoming Draft Environmental Assessment (Draft EA) addresses natural disasters including anthropogenic climate change and associated sea level rise.

We have reviewed the EPO GIS website and the Hawaii Environmental Health Portal and its links to various sources of state environmental data. We have also reviewed the materials available on EJSCREEN and the OEQC viewer. The forthcoming Draft EA will include any relevant information from these sources.

King Kalākaua Plaza will comply with all applicable rules including Community Noise Control rules (Chapter 11-46, Hawai'i Administrative Rules). The Draft EA addresses potential noise impacts and mitigation strategies, and includes the statement:

> *All hotel operations will be in compliance with State DOH community noise control requirements as specified under Section 11-46-4, HAR. This regulation requires that stationary noise sources in areas designed for multi-family dwellings, apartments, businesses, commercial uses, hotel uses, and resort uses be limited to maximum permissible sound levels of 60 decibels (dBA) from 7 am to 10 pm and 50 dBA from 10 pm to 7 am).*

We value your participation in the environmental review process. Your letter will be included in the forthcoming Draft EA.

Sincerely,

PBR HAWAII

Tom Schnell, AICP
Principal

DAVID Y. IGE
GOVERNOR

FORD N. FUCHIGAMI
DIRECTOR

Deputy Directors
JADE T. BUTAY
ROSS M. HIGASHI
EDWIN H. SNIFFEN
DARRELL T. YOUNG

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

IN REPLY REFER TO:
DIR 1347
HWY-PS 2.3595

November 9, 2016

Mr. Tom Schnell
PBR Hawaii
1001 Bishop Street, Suite 650
Honolulu, Hawaii 96813

Dear Mr. Schnell:

Subject: Pre-Assessment Consultation for King Kalakaua Plaza Renovation
Kalakaua Avenue, Kalaimoku Street, Kuhio Avenue and Olohana Street
Waikiki, Honolulu, Hawaii, TMK: (1) 2-6-016:023 and 026

Thank you for consulting with the Hawaii Department of Transportation regarding your request for pre-consultation on the preparation of a Draft Environmental Assessment (DEA) required by Chapter 343, Hawaii Revised Statutes.

The proposed work will involve the renovation of an existing four-story retail building into a seven-story hotel with limited retail spaces totaling 144,000 sq. ft. of floor area. The combined parcels with approximately one-acre that makes up the project site, is bounded by County roads; Kalakaua Avenue to the west, Olohana Street to the north, Kuhio Street to the east, and Kalaimoku Street to the south.

Ala Moana Boulevard (Route 92), a State highway facility, is within two blocks from the project site. Therefore, please include this in the project study area and any impacts to this nearby State facility in the Traffic Impact Analysis Report.

If you have any questions, please contact Ken Tatsuguchi, Engineering Program Manager, Highways Division, Planning Branch at (808) 587-1830. Please reference file review number PS 2016-188.

Sincerely,

FOR FORD N. FUCHIGAMI
Director of Transportation

PBR HAWAII
& ASSOCIATES, INC.

PRINCIPALS

THOMAS S. WITTEN, FASLA
Chairman

R. STAN DUNCAN, ASLA
President

RUSSELL Y. J. CHUNG, FASLA, LEED®AP BD+C
Executive Vice-President

VINCENT SHIGEKUNI
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Associate

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Associate

MARC SHIMATSU, ASLA
Associate

HONOLULU OFFICE
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Tel: (808) 521-5631
Fax: (808) 523-1402
E-mail: sysadmin@pbrhawaii.com

printed on recycled paper

January 10, 2017

Mr. Ford Fuchigami, Director
Department of Transportation
State of Hawaii
869 Punchbowl Street
Honolulu, Hawai'i 96813-5097

Attn: Jade Butay

SUBJECT: PRE-ASSESSMENT CONSULTATION FOR KING KALĀKAUA PLAZA RENOVATION IN WAIKĪKĪ, TMK (1) 2-6-016:023 AND 026

Dear Mr. Fuchigami:

Thank you for your letter dated November 9, 2016 (your reference code DIR 1347 HWY-PS 2.3595) regarding the pre-assessment consultation for King Kalākaua Plaza. As the planning consultant for the applicant, Kalaimoku-Kuhio Development Corp., we acknowledge your comments and provide the following response.

The forthcoming Draft Environmental Assessment (Draft EA) includes a Traffic Impact Analysis Report (TIAR) that addresses existing and future traffic conditions at the property, along with potential impacts from the renovations. According to the TIAR, the proposed renovations are anticipated to contribute between three and four percent of the traffic along Ala Moana Boulevard which is less than the daily fluctuation. Therefore, Ala Moana Boulevard is not anticipated to experience impacts from King Kalākaua Plaza.

We value your participation in the environmental review process. Your letter will be included in the forthcoming Draft EA. When available, we will send a copy of the Draft EA, which will include the TIAR, to Department of Transportation for comment.

Sincerely,

PBR HAWAII

Tom Schnell
Principal

OFFICE OF PLANNING
STATE OF HAWAII

DAVID Y. IGE
GOVERNOR

LEO R. ASUNCION
DIRECTOR
OFFICE OF PLANNING

235 South Beretania Street, 6th Floor, Honolulu, Hawaii 96813
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

Telephone: (808) 587-2846
Fax: (808) 587-2824
Web: http://planning.hawaii.gov/

Ref. No. P-15348

October 26, 2016

Mr. Tom Schnell, AICP
Principal
PBR HAWAII & Associates, Inc.
1001 Bishop Street, Suite 650
Honolulu, Hawaii 96813-3484

Dear Mr. Schnell:

Subject: Pre-Consultation Draft Environmental Assessment for the King Kalakaua Plaza Renovations in Waikiki, Oahu, Hawaii; TMKs: (1) 2-6-016: 023 and (1) 2-6-016: 026

Thank you for the opportunity to provide comments on the pre-assessment consultation request for the King Kalakaua Plaza Renovations, located in Waikiki, Oahu. The pre-consultation review material was transmitted to our office via letter dated September 30, 2016.

It is our understanding that the applicant, the Kalaimoku-Kuhio Development Corporation, proposes to renovate the existing King Kalakaua Plaza building and transform the building into a hotel and related uses. The proposed renovation will add three new floors to the building and enhance the ground floor with retail space. The renovated building will comprise of seven stories (total height of 100 feet), with a total area of 144,000 square feet.

The Office of Planning (OP) has reviewed the transmitted material and has the following comments to offer:

1. Pursuant to Hawaii Administrative Rules (HAR) § 11-200-10(4) – the general description of the action's technical, economic, social, and environmental characteristics; this project must demonstrate that it is consistent with a number of state environmental, social, economic goals, and policies for land use. Hawaii Revised Statutes (HRS) Chapter 226, the Hawaii State Planning Act, provides goals, objectives, policies, and priority guidelines for growth, development, and the allocation of resources throughout the state. These include, but are not limited to, the economy, agriculture, the visitor industry, federal expenditure, the physical environment, facility systems, socio-cultural advancement, climate change adaptation, and sustainability.

   The Draft Environmental Assessment (Draft EA) should include an analysis that

addresses whether the proposed project conforms to or is in conflict with the goals, objectives, policies, and priority guidelines listed in the Hawaii State Planning Act. This analysis should address the projects' consistency with HRS Chapter 226 in its entirety. If any of the themes listed within the Hawaii State Planning Act are not applicable, the Draft EA should affirmatively state such determination. The most efficient method is summarizing these in tabular form, followed by discussion paragraphs.

2. The coastal zone management (CZM) area is defined as "all lands of the State and the area extending seaward from the shoreline to the limit of the State's police power and management authority, including the U.S. territorial sea" (see HRS § 205A-1, definition of "coastal zone management area").

   HRS Chapter 205A-5(b) requires all state and county agencies to enforce the objectives and policies of the Hawaii CZM program. The Draft EA should include an assessment as to how the proposed project conforms to the CZM objectives and its supporting policies set forth in HRS § 205A-2. These objectives and policies are an important component for satisfying the requirements of HRS Chapter 343.

3. Pursuant to HAR § 11-200-10(6) – the identification and summary of impacts and alternatives considered; in order to ensure that the nearshore environment of the south shore of Oahu remains protected, the cumulative effects and impact of stormwater inundation and land-based pollutants on coastal resources should be evaluated in the Draft EA. The project area is located in an area classified in the State Land Use Urban District, with land use activity associated with urban areas (e.g., developed non-permeable surfaces, roadways with storm gutter systems, and stormwater collecting systems that quickly transport stormwater to low-lying areas). Activities related to this project may cause upslope sediment, land-based pollutants, and toxins to be transported by drainage systems to nearshore waters.

   The Draft EA should examine potential benefits and/or negative impacts resulting from this project on coastal and marine resources and examine the cumulative impact on coastal resources from polluted runoff. It should take into account the natural features of the area, undeveloped open spaces, soil absorption rates, and non-permeable surfaces that have a cumulative effect on volume and speed of storm runoff. While a National Pollutant Discharge Elimination System permit requires the use of erosion control practices during the construction phase, the Draft EA should consider long-term stormwater control methods and strategies.

Since this project involves the possible expansion and re-design of the landscaped areas near the Kalakaua Plaza, the project could benefit from low impact development design features such as permeable surfaces, enhanced landscaping, rain gardens, and grassed filter strips to collect and treat rainfall in place, rather than allow the stormwater to flow offsite.

OP has created guidance documents to assist in the development of projects which promote sediment control, stormwater mitigation, and fosters the protection of the nearshore environment. OP recommends reviewing these guidance documents when developing strategies to address polluted runoff. They offer useful techniques to keep land-based pollutants and sediment in place, thus preventing the contamination of nearshore waters.

- Stormwater Impact Assessments can be used to identify and evaluate information on hydrology, stressors, sensitivity of aquatic and riparian resources, and management measures to control runoff, as well as consider secondary and cumulative impacts to the area http://files.hawaii.gov/dbedt/op/czm/initiative/stomwater_imapct/final_storm water_impact_assessments_guidance.pdf

- Low Impact Development (LID), A Practitioners Guide covers a range of structural best management practices (BMP's) for stormwater control management, roadway development, and urban layout that minimizes negative environmental impacts http://files.hawaii.gov/dbedt/op/czm/initiative/lid/lid_guide_2006.pdf

If you have any questions regarding this comment letter, please contact Joshua Hekekia of our office at (808) 587-2845.

Sincerely,

Leo R. Asuncion
Director

PBR HAWAII
& ASSOCIATES, INC.

PRINCIPALS

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January 10, 2017

Mr. Leo R. Asuncion, Acting Director
Office of Planning
State of Hawai‘i
P.O. Box 2359
Honolulu, Hawai‘i 96804

Attn: Mr. Joshua Hekekia

SUBJECT: PRE-ASSESSMENT CONSULTATION FOR KING KALĀKAUA PLAZA RENOVATION IN WAIKĪKĪ, TMK (1) 2-6-016:023 AND 026

Dear Mr. Asuncion:

Thank you for your letter (your reference number P-15348) dated October 26, 2016 regarding the pre-assessment consultation for King Kalākaua Plaza. As the planning consultant for the applicant, Kalaimoku-Kuhio Development Corp. (KKDC), we acknowledge your comments and provide the following response.

1. The forthcoming Draft Environmental Assessment (Draft EA) addresses conformance with Chapter 226, Hawai‘i Revised Statutes (HRS). The Draft EA discusses the extent to which the proposed renovations support, do not support, and/or are not applicable regarding the goals, objectives, and policies of Chapter 226, HRS. This information is provided in tabular form followed by discussion paragraphs.

2. The forthcoming Draft EA addresses conformance with the objectives and policies of Chapter 205A, HRS.

3. The forthcoming Draft EA identifies potential impacts to surface and groundwater and identifies potential mitigation measures both during and after construction.

   It is important to note that under existing conditions the block in Waikiki that King Kalākaua Plaza occupies is fully developed and contains an existing building, paved areas, landscaping, and an underground parking structure, all of which will remain substantially intact. As such, no significant grading or any other ground disruption will be necessary. Drainage for the renovated King Kalākaua Plaza will follow the existing drainage pattern and stormwater runoff from the Property and is not anticipated to increase. Stormwater runoff may slightly decrease due to the addition of new landscaping areas. Changes to the existing curbs, gutters, and catch basins are not proposed.

It is recognized that urban areas are one of the main contributors to nonpoint source pollution in the state, and KKDC recognizes the role played by individual properties in the health of urbanized watersheds. In the short term, to mitigate impacts related to construction, BMPs will be incorporated during the renovation to prevent stormwater discharges and contaminants such as sediment, pollutants, petroleum products, and debris from affecting coastal water quality. For the long-term, where applicable and feasible, KKDC will follow State guidance on Stormwater Impact Assessments (State of Hawai‘i Office of Planning, State Coastal Zone Management Program, 2013), Hawai‘i Watershed Guidance (State Hawai‘i Office of Planning, State Coastal Zone Management Program, 2010), and Low Impact Development (State of Hawai‘i Office of Planning, State Coastal Zone Management Program, 2006),

We value your participation in the environmental review process. Your letter will be included in the forthcoming Draft Environmental Assessment.

Sincerely,

PBR HAWAII

Tom Schnell
Principal

APPENDIX B:
DRAFT ENVIRONMENTAL ASSESSMENT CORRESPONDENCE

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843
www.boardofwatersupply.com

April 25, 2017

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ERNEST Y. W. LAU, P.E.
Manager and Chief Engineer

ELLEN E. KITAMURA, P.E.
Deputy Manager and Chief Engineer

TO: KATHY K. SOKUGAWA, ACTING DIRECTOR
DEPARTMENT OF PLANNING AND PERMITTING

ATTN: JOETTE YAGO

FROM: ERNEST Y. W. LAU, P.E., MANAGER AND CHIEF ENGINEER

SUBJECT: LETTER DATED MARCH 29, 2017 REGARDING DRAFT ENVIRONMENTAL ASSESSMENT FOR KING KALAKAUA PLAZA RENOVATIONS IN WAIKIKI - TAX MAP KEY: 2-6-016: 023 & 026

The comments in our previous letters regarding this project, dated October 18, 2016 and included in the DEA, are still applicable.

If you have any questions, please contact Robert Chun, Project Review Branch of our Water Resources Division at 748-5443.

cc: Tom Schnell, PBR Hawaii & Associates, Inc.

PBR HAWAII
& ASSOCIATES, INC.

THOMAS S. WITTEN, FASLA
Chairman / Principal

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RAMSAY R. M. TAUM
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December 15, 2017

Ernest Y. W. Lau, P.E.
Manager and Chief Engineer
City and County of Honolulu
Board of Water Supply
630 South Beretania Street
Honolulu, HI 96843

Attn: Engineering Section, Clean Water Branch

SUBJECT: COMMENTS ON THE DRAFT ENVIRONMENTAL ASSESSMENT FOR KING KALĀKAUA PLAZA RENOVATION IN WAIKĪKĪ, TMK (1) 2-6-016:023 and 026

Dear Mr. Lau,

Thank you for your letter dated April 25, 2017 regarding the Draft Environmental Assessment (Draft EA) for the proposed King Kalākaua Plaza Renovation. As the planning consultant for Kalaimoku-Kuhio Development Corp. (KKDC), we acknowledge that your previous comments dated October 18, 2016 are still applicable.

In our letter dated January 10, 2017 we responded to your previous comments. Our responses have not changed and are repeated below:

Existing Water System Adequate
Thank you for your information that the existing water system is adequate to accommodate the proposed renovations. We acknowledge that the Board of Water Supply's final decision will be confirmed when the building permit application is submitted for approval.

Construction Drawings
As requested, at the appropriate time construction drawings will be submitted for your review and the construction schedule will be coordinated to minimize community impacts, including those to the water system.

Applicable Fees
KKDC will pay all applicable fees, including Water System Facilities Charges for resource development, transmission, and daily storage.

Water Conservation Measures
We acknowledge your recommendation to utilize water conservation measures. As practicable King Kalākaua Plaza will implement water conservation measures, as discussed in the Draft EA.

Compliance with Applicable Laws

The project will comply with all applicable laws, including Cross-Connection Control and Backflow Prevention requirements prior to the issuance of building permit applications.

We value your participation in the environmental review process. Your letters dated October 18, 2016 and April 25, 2017, along with our response dated January 10, 2017, and this response letter will be included in the Final Environmental Assessment.

Sincerely,

Tom Schnell, AICP
Principal

cc: Kalaimoku-Kuhio Development Corp.
City and County of Honolulu DPP

DEPARTMENT OF FACILITY MAINTENANCE

CITY AND COUNTY OF HONOLULU

1000 Ulu`ohia Street, Suite 215, Kapolei, Hawaii 96707
Phone: (808) 768-3343 • Fax: (808) 768-3381
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KIRK CALDWELL
MAYOR

ROSS S. SASAMURA, P.E.
DIRECTOR AND CHIEF ENGINEER

EDUARDO P. MANGLALLAN
DEPUTY DIRECTOR

IN REPLY REFER TO:
DRM 17-220

April 20, 2017

Mr. Tom Schnell, AICP
Principal
PBR Hawaii and Associates, Inc.
1001 Bishop Street, Suite 650
Honolulu, Hawaii 96813-3484

Dear Mr. Schnell:

SUBJECT: Draft Environmental Assessment for King Kalakaua Plaza Renovation in Waikiki, TMK: (1) 2-6-016:023 and 026

Thank you for the opportunity to review and provide our input regarding the above-subject project.

Our comments are as follows:

- Once construction phase commences, install approved Best Management Practices fronting all drainage facilities on Kuhio Avenue, Olohana Street, Kalaimoku Street, and Kalakaua Avenue.

- During construction and upon completion of the project, any damages/deficiencies to Kuhio Avenue, Olohana Street, Kalaimoku Street, and Kalakaua Avenue right-of-ways shall be corrected to City standards and accepted by the City.

If you have any questions, please contact Mr. Kyle Oyasato of the Division of Road Maintenance at 768-3697.

Sincerely,

Ross S. Sasamura, P.E.
Director and Chief Engineer

cc: Department of Planning Permitting
Urban Design Branch

PBR HAWAII
& ASSOCIATES, INC.

THOMAS S. WITTEN, FASLA
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Associate

DACHENG DONG, LEED®AP
Associate

MARC SHIMATSU, ASLA
Associate

MICAH McMILLEN, ASLA, LEED®AP
Associate

December 15, 2017

Ross S. Sasamura, P.E.
Director and Chief Engineer
City and County of Honolulu
Department of Facility Maintenance
100 Ulu‘ohia Street, Suite 215
Kapolei, HI 96707

Attn: Kyle Oyasato, Division of Road Maintenance

SUBJECT: COMMENTS ON THE DRAFT ENVIRONMENTAL ASSESSMENT FOR KING KALĀKAUA PLAZA RENOVATION IN WAIKĪKĪ, TMK (1) 2-6-016:023 and 026

Dear Mr. Sasamura,

Thank you for your letter dated April 20, 2017 regarding the Draft Environmental Assessment (EA) for the proposed King Kalākaua Plaza Renovation. As the planning consultant for Kalaimoku-Kuhio Development Corp. (KKDC) are responding to your comments.

Best Management Practices

Regarding best management practices (BMPs), the Final EA will state: “Before construction commences, BMPs will be installed fronting all drainage facilities, such as catch basin and drainage inlets along Kalākaua Avenue and Kūhiō Avenue.”

Damages/Deficiencies

The renovations to King Kalākaua Plaza will only require modifications to an approximate 170’ length of sidewalk area along Kālaimoku Street. In this area driveways will be created to provide access into and out of the porte-cochere. The new driveways will be constructed to current City standards and will comply with ADA requirements.

The existing sidewalks and ramps along other streets (Kalākaua Avenue, Kūhiō Avenue, and ‘Olohana Street) do not require changes due to the renovations and will remain as is. KKDC will repair damages (if any) cause by construction.

We value your participation in the environmental review process. Your letter will be included in the Final EA.

Sincerely,

Tom Schnell, AICP
Principal

cc: Kalaimoku-Kuhio Development Corp.
City and County of Honolulu DPP

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DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU
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KIRK CALDWELL
MAYOR

KATHY K. SOKUGAWA
ACTING DIRECTOR

TIMOTHY F. T. HIU
DEPUTY DIRECTOR

May 12, 2017

2017/ED-1(JY)

Mr. Tom Schnell
PBR Hawaii and Associates, Inc.
1001 Bishop Street, Suite 650
Honolulu, Hawaii 96813

Dear Mr. Schnell:

SUBJECT: Chapter 343, Hawaii Revised Statues
Draft Environmental Assessment
King Kalakaua Plaza Renovation
2080 Kalakaua Avenue - Waikiki
Tax Map Key 2-6-016: 023 and 026

We have reviewed the above Draft Environmental Assessment (DEA), received March 20, 2017, for the above-mentioned Project, and have the following comments:

A. Site Development Division:

1. Civil Engineering Branch:

a. The Project shall comply with the prevailing soil erosion and storm water quality standards at the time the construction/grading plans are submitted to the Department of Planning and Permitting for review and approval. Be advised that the current soil erosion and water quality standards will be superseded in its entirety with The Rules Relating to Water Quality, effective August 16, 2017.

b. Page 17, "Building Renovations/New Floors": Be advised that there exists an 8' wide pedestrian easement in favor of the City along Kalakaua Avenue. That easement shall be respected in the event that the ground level pool alternative is pursued.

c. Page 32, 1st Paragraph: Best Management Practices shall be installed PRIOR TO, not AFTER the commencement of construction activities.

2. Wastewater Branch: We do not have any objections to the proposed 230-room King Kalakaua Plaza Renovation. The Sewer Connection Application (2016/SCA-1443) was approved on 9/27/2016.

3. Subdivision Branch: The Project is subject to compliance with flood hazard area requirements. A new flood fringe certification will be required for the proposed renovation.

4. Traffic Review Branch:

   a. A time line or phasing plan of the anticipated dates to obtain major building permit(s) for demolition/construction work, including the projected date of occupancy, shall be prepared by the Applicant in a format acceptable to the Department. The time line should identify when the construction management plan (CMP), the traffic management plan (TMP) and updates/revisions, if any, to the initial traffic impact analysis report (TIAR) dated March 20, 2017 will be submitted for review and approval. Typically, the CMP should be submitted for review and approval prior to the issuance of demolition/building permits for major construction work. The TMP or subsequent updates should be submitted and approved prior to the issuance of the (temporary) certificate of occupancy. The TIAR, including supplemental studies or subsequent updates, should be submitted and approved prior to the commencement of each major phase of work, as required. A new TIAR may be required if there is a significant change to the scope or timing of the major work items contained in the initial report.

   b. A CMP should identify the type, frequency and routing of heavy trucks and construction related vehicles. Every effort shall be made to minimize impacts from these vehicles and related construction activities. The CMP should identify and limit vehicular activity related to construction to periods outside of the peak periods of traffic, utilizing alternate routes for heavy trucks, provisions for either on-site or off-site staging areas for construction related workers and vehicles to limit the use of on-street parking around the Project site and other mitigation measures related to traffic and potential neighborhood impacts. Preliminary or conceptual traffic control plans should also be included in the CMP. The Applicant should document the condition of roadways prior to the start of construction activities and provide remedial measures, as necessary, such as restriping, road resurfacing and/or reconstruction if the condition of the roadways has deteriorated as a result of the related construction activities.

   c. A TMP shall include traffic demand management (TDM) strategies to minimize the amount of vehicular trips for daily activities and large events. TDM strategies could include carpooling and ride sharing programs, transit, bicycle and pedestrian incentives and other similar TDM

measures. A pedestrian circulation plan should also be included to provide accessibility and connectivity to the surrounding public sidewalks. The TMP should address the porte-cochere and loading/trash pick-up operations. A post TMP will be required approximately one year after the issuance of the certificate of occupancy to validate the relative effectiveness of the various strategies identified in the initial report.

d. All internal walkways shall direct pedestrians to the corner of street intersections to minimize the potential for unintended mid-block crossings.

e. Bicycle parking or bike racks shall be provided within this Project and shall be located in a safe and convenient location.

f. The length of porte-cochere shall be designed to prevent any over flow of vehicles onto Kalaimoku Street and shall be wide enough to allow a moving vehicle to safely pass a stationary parked vehicle. A width of 20-feet is typically acceptable for this maneuver, including provisions for vehicles turning into and out of the porte-cochere. Vehicle turning templates should be used to demonstrate that these can be adequately achieved. The TMP should address minimizing the average dwell time for users of the porte-cochere, to assure vehicles do not queue onto Kalaimoku Street. The shared use of the one-way in driveway on Kalaimoku Street for both the loading and port-cochere should be clarified.

g. The design for all aspects along Kalaimoku Street should take into consideration the possible future two-way conversion of Kalaimoku Street. This will minimize the impacts to the site, and site operations, should this conversion occur.

h. 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 back of the designated pedestrian walkway. Entry gates and ticket dispensers should be recessed as far into the driveway as necessary to avoid any queuing onto public streets. All loading and parking areas shall be designed such that vehicles enter and exit front first.

B. Planning Division - Development Plans and Zone Change Branch: The analysis of Sea Level Rise (SLR) in the DEA is inadequate because it does not assess the impact of specific water levels on the basis that "sea level rise models are inherently uncertain." The appropriate response when the probability of a hazard like SLR is

uncertain is to provide an assessment of the Project response over the range of plausible future levels of SLR.

The DEA should include an analysis of the potential impact on the Project of coastal flooding, especially groundwater inundation, based on existing nationally recognized SLR projections for Honolulu such as the Honolulu SLR projections used by the US Army Corps of Engineers (US ACE) in planning their projects. It should discuss how project risk can be reduced and resiliency improved during the economic life of the Project in light of those projections.

The analysis should also consider the recent University of Hawaii study for Honolulu and Waikiki which provides projections and mappings of the impact of SLR on groundwater inundation (Shellie Habel, et. al., "Development of a Model to Simulate Groundwater Inundation Induced by Sea-Level Rise and High Tides," Water Research, 2017.)

A more detailed discussion has been attached.

C. Land Use Permits Division - Urban Design Branch: Provide the following additional information:

1. Conceptual site plan, floor plans, building elevations, and building sections. Site plan (without rendered landscaping) should show streets, curbs, sidewalks, driveways, property lines, required yards, open space, and building(s). The ground floor plan should show any proposed retail shops, restaurants, hotel lobby, porte cochere, and back-of-house facilities. The building elevations and sections should show transitional height setbacks and height limit.

2. Provide preliminary floor area and parking tabulations for all proposed uses, i.e., hotel, retail establishments, restaurants, and other facilities.

3. Discuss the existing Conditional Use Permit (Minor) for off-site parking for 2100 Kalakaua located across Kalaimoku Street and how the existing parking agreement will be resolved with the completion of the Ritz Carlton Residences.

4. Discuss in more detail how the potential traffic impacts of the proposed porte cochere along Kalaimoku Street, located right across from the existing porte cochere for 2100 Kalakaua and Ritz Carlton Residences, will be mitigated. Discuss how the various vehicles will be accommodated and managed at the porte cochere, i.e., taxis, airport shuttles, rental cars, tour buses, and trolleys.

The Project is classified as major exterior alterations and additions of a non-historic building and will require a Special District Permit, Minor.

We have enclosed the receipts for the application fees and comment letters received for your response. Should you have any further questions, please contact Joette Yago of our Urban Design Branch at 768-8034 or jyago@honolulu.gov.

Very truly yours,

Anthony X. Ching

FOR Kathy K. Sokugawa
Acting Director

Enclosure: Receipt Nos. 112129 & 112130
Agency Comments

Doc1455556

Comments on 2017/ED-1
Prepared by Bob Stanfield
Development Plans and Zone Change Branch
Planning Division, DPP

May 3, 2017

The analysis of Sea Level Rise (SLR) in the Draft Environmental Assessment (DEA) is inadequate because it does not assess the impact of specific water levels on the basis that "sea level rise models are inherently uncertain." The appropriate response when the probability of a hazard like SLR is uncertain is to provide an assessment of the project response over the range of plausible future levels of SLR.

The DEA should include an analysis of the potential impact on the project of coastal flooding, especially groundwater inundation, based on existing nationally recognized SLR projections for Honolulu such as the Honolulu SLR projections used by the US Army Corps of Engineers (US ACE) in planning their projects. It should discuss how project risk can be reduced and resiliency improved during the economic life of the project in light of those projections.

The analysis should also consider the recent University of Hawaii study for Honolulu and Waikiki which provides projections and mappings of the impact of SLR on groundwater inundation (Shellie Habel, et. al., "Development of a Model to Simulate Groundwater Inundation Induced by Sea-Level Rise and High Tides," **Water Research**, 2017.).

Discussion:

The DEA notes on p. 34 that in 2011, a University of Hawaii (UH) report recommended planning for one foot of SLR in 2050 and three feet in 2100, but then states that "specific water levels should not be anticipated because sea level rise models are inherently uncertain."

Beyond the argument that it is not possible to anticipate a specific sea level rise for the project site, the DEA argues that "no direct inundation due to sea level rise" is expected before 2100 since the lowest elevation of the project site is three feet above sea level. Consequently, the DEA says "no mitigation measures are planned or warranted at this time", but if flooding becomes a concern, mitigations could include elevation of electrical infrastructure, reinforcing or relocating utilities and adhering to regulatory changes or governmental guidance.

Some uncertainty is an aspect of any science based projection of vulnerability to natural hazards. As recommended by the US Army Corps of Engineers (US ACE), uncertainty about the future level of SLR can be addressed by analyzing how the project design will be impacted over the range of projected SLR from high probability low damage outcomes to low probability high damage outcomes. (See USACE Engineering Technical Letter "Procedures to Evaluate Sea Level Change" ETL 1100-2-1, June 30, 2014.)

According to a January 2017 National Oceanic and Atmospheric Administration report (Global and Regional Sea Level Rise Scenarios for the United States), SLR in Hawaii is quite likely (73 to 96%) to be at least 1.6 feet higher than 1992 levels by 2100, and there is a significant chance (17%) that it will be more than four feet higher.

The US ACE provides an on-line SLR calculator, found at http://www.corpsclimate.us/ccaceslcurves.cfm. The calculator can be used to provide high and intermediate projections of SLR for Honolulu projects at five year intervals through 2100. (The projections incorporate the historic rate of SLR from the Honolulu Harbor tidal gauge records.)

The US ACE intermediate projection for the Honolulu, using the on-line SLR calculator, is for one foot of SLR over 1992 levels by 2075 and 1.4 feet by 2100; the high projection is for one foot of SLR by 2040, two feet by 2060, three feet by 2075, four feet by 2090, and 4.9 feet by 2100. See the attached tables and curves for details.

The US ACE SLR projections provide a range that can be used to assess the potential vulnerability to coastal flooding and groundwater inundation during the project's expected life, to identify thresholds and tipping points that would affect project vulnerability and resiliency, and to determine how adaptive design and adaptive operations might reduce exposure and improve resiliency.

A recent study of groundwater inundation for Honolulu and Waikiki shows that much of Waikiki is vulnerable to groundwater inundation as groundwater is lifted above the ground surface due to sea level rise (See Shellie Habel, Charles H. Fletcher, Kolja Rotzoll, Aly I. El-Kadi, "Development of a Model to Simulate Groundwater Inundation Induced by Sea-Level Rise and High Tides," Water Research, 2017.)

The attached mappings show the Waikiki areas, including the project site, likely to be impacted by groundwater inundation at one, two, and three feet of SLR.

Because it is likely that the project site will experience groundwater inundation due to SLR during the life of the project, the FEA should address the potential impact of groundwater inundation on the site, particularly the two story underground garage, and better discuss adaptations such as waterproofing underground and first floor fixtures, movement of key utilities and facilities to higher floors, pumping of stormwater and seawater, and installation of flapper valves to prevent backflows through drains which might reduce risk and improve resiliency.

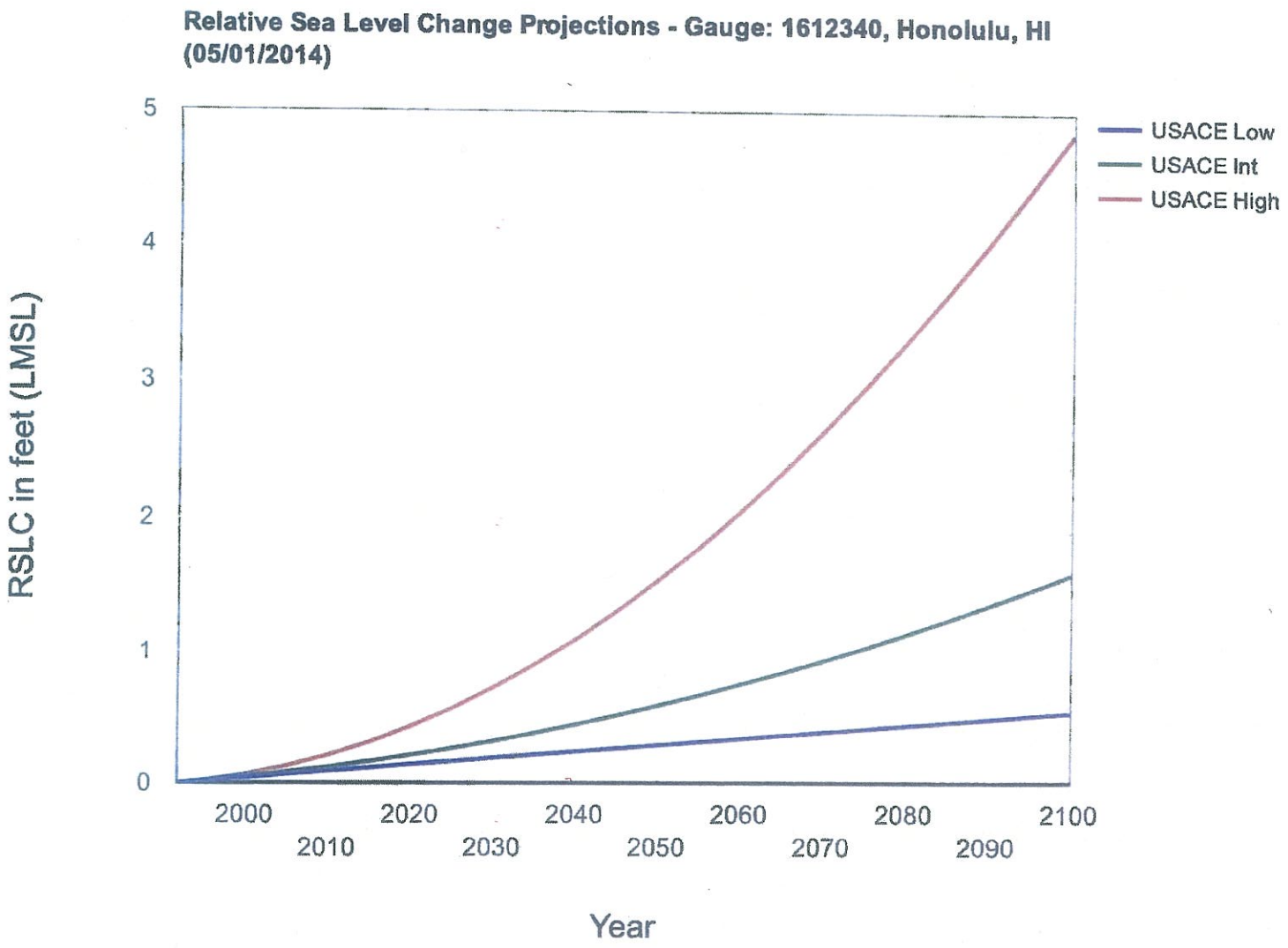
These "no regrets" adaptations to the possibility of groundwater inundation from SLR would also reduce the exposure and increase the resilience of the project to flooding from high-intensity storms which are expected to increase with climate change. (There is a one percent chance each year that the site will be under two feet of floodwater which translates to a 40 percent chance that the project will experience that amount of flooding sometime during the 50 years following renovation.)

Estimated Sea Level Change
from 1992 to 2100
1612340, Honolulu, HI
NOAA's Published Rate: 0.00492 feet/yr
All values are expressed in feet relative to LMSL

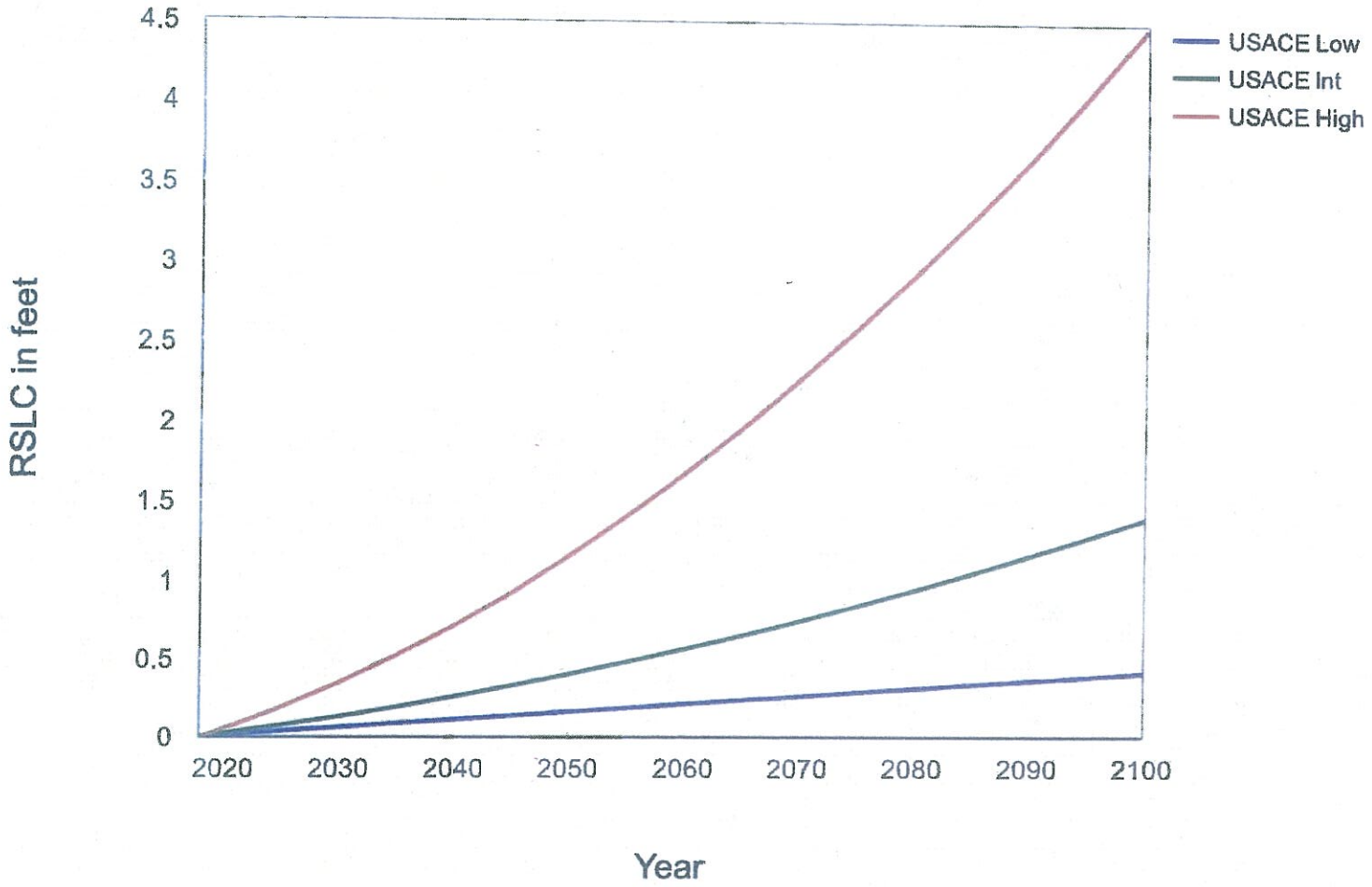
Year	USACE Low	USACE Int	USACE High
2018	0.1	0.2	0.4
2020	0.1	0.2	0.4
2025	0.2	0.3	0.6
2030	0.2	0.3	0.7
2035	0.2	0.4	0.9
2040	0.2	0.4	1.1
2045	0.3	0.5	1.3
2050	0.3	0.6	1.5
2055	0.3	0.7	1.8
2060	0.3	0.7	2.0
2065	0.4	0.8	2.3
2070	0.4	0.9	2.6
2075	0.4	1.0	3.0
2080	0.4	1.1	3.3
2085	0.5	1.2	3.7
2090	0.5	1.3	4.0
2095	0.5	1.5	4.4
2100	0.5	1.6	4.9

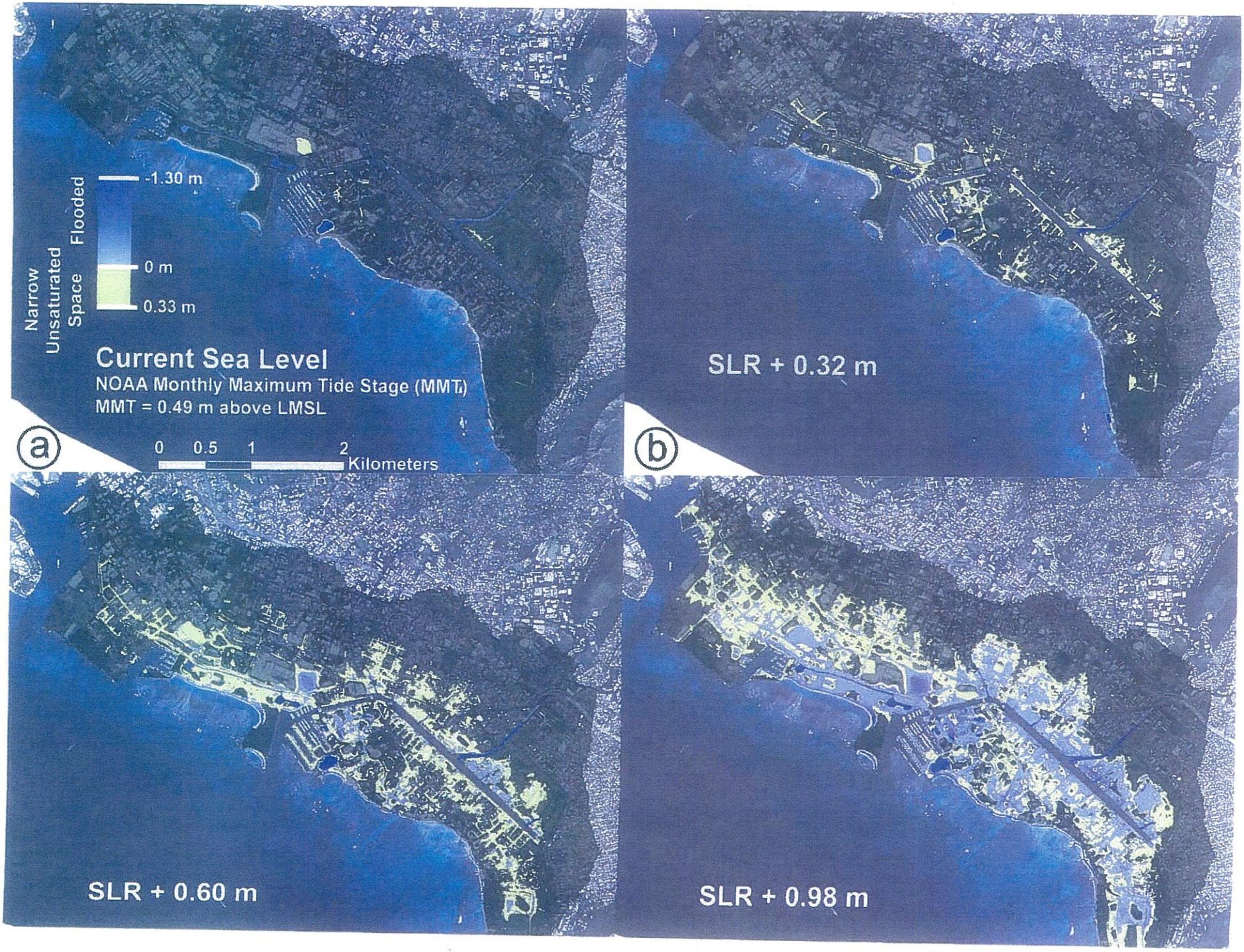
Estimated Relative Sea Level Change
from 2018 To 2100
1612340, Honolulu, HI
NOAA's Published Rate: 0.00492 feet/yr
All values are expressed in feet

Year	USACE Low	USACE Int	USACE High
2018	0.0	0.0	0.0
2020	0.0	0.0	0.1
2025	0.0	0.1	0.2
2030	0.1	0.1	0.3
2035	0.1	0.2	0.5
2040	0.1	0.3	0.7
2045	0.1	0.3	0.9
2050	0.2	0.4	1.2
2055	0.2	0.5	1.4
2060	0.2	0.6	1.7
2065	0.2	0.6	2.0
2070	0.3	0.7	2.3
2075	0.3	0.8	2.6
2080	0.3	0.9	2.9
2085	0.3	1.0	3.3
2090	0.4	1.1	3.7
2095	0.4	1.3	4.1
2100	0.4	1.4	4.5


Relative Sea Level Change Projections - Gauge: 1612340, Honolulu, HI (05/01/2014)
RSLC in feet (LMSL)
0
1
2
3
4
5
2000
2010
2020
2030
2040
2050
2060
2070
2080
2090
2100
Year
USACE Low
USACE Int
USACE High

Estimated Relative Sea Level Change Projections From 2018 To 2100 - Gauge: 1612340, Honolulu, HI (1.5 mm/yr)




-1.30 m
0 m
0.33 m
Flooded
Narrow Unsaturated Space
Current Sea Level
NOAA Monthly Maximum Tide Stage (MMT)
MMT = 0.49 m above LMSL
a
0 0.5 1 2 Kilometers
SLR + 0.32 m
b
SLR + 0.60 m
SLR + 0.98 m

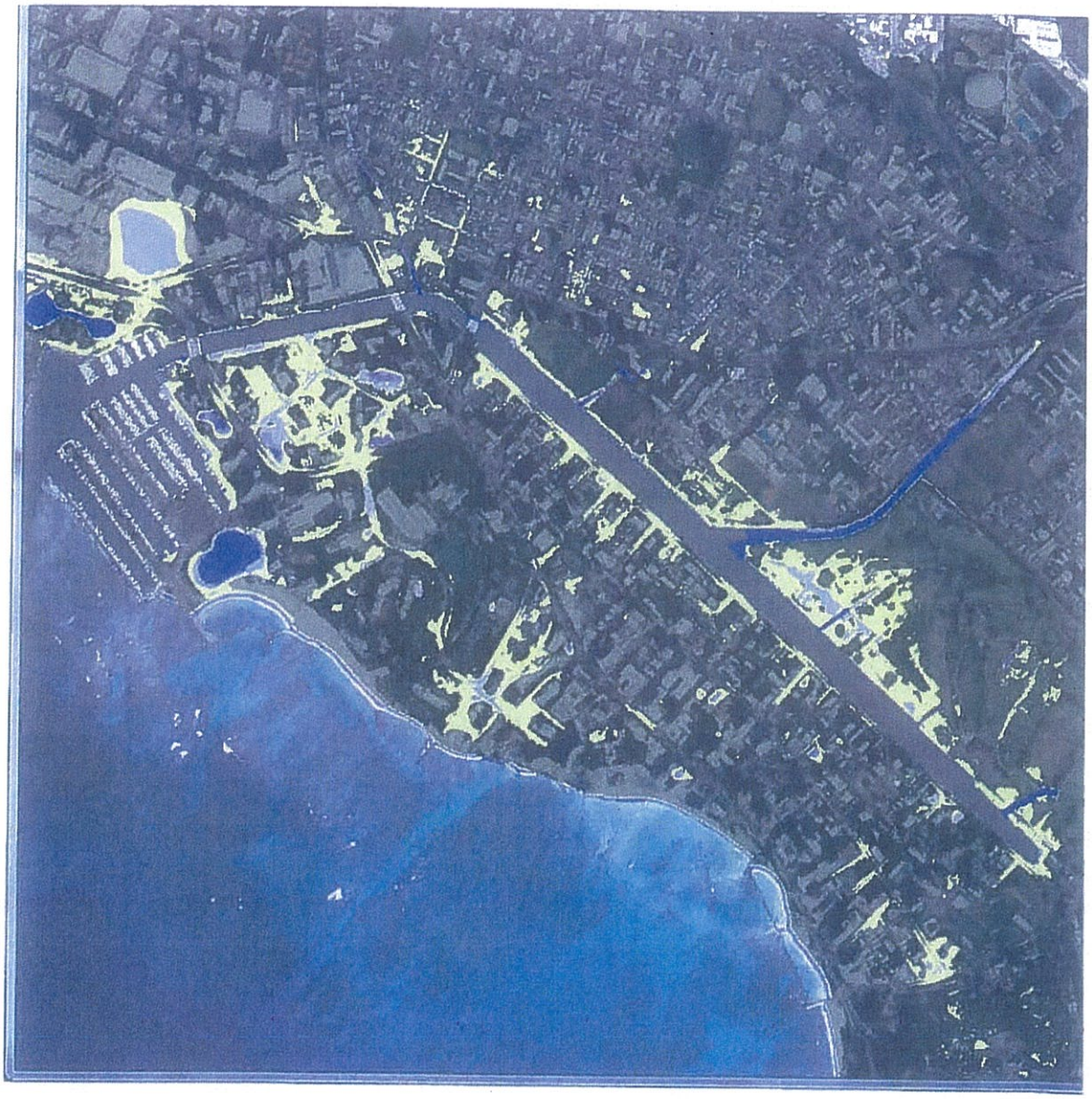


Figure 7:b (portion) Groundwater Inundation with 0.32 meter (approx. 1 ft) of SLR

Key Subject to Flooding Narrow unsaturated space (two feet or less between surface and water table

Source: Shellie Habel, Charles Fletcher, Kolja Rotzoll, Aly I. El-Kadi. "Development of a model to simulate groundwater inundation induced by sea-level rise and high tides in Honolulu, Hawaii." **Water Research**, 2017

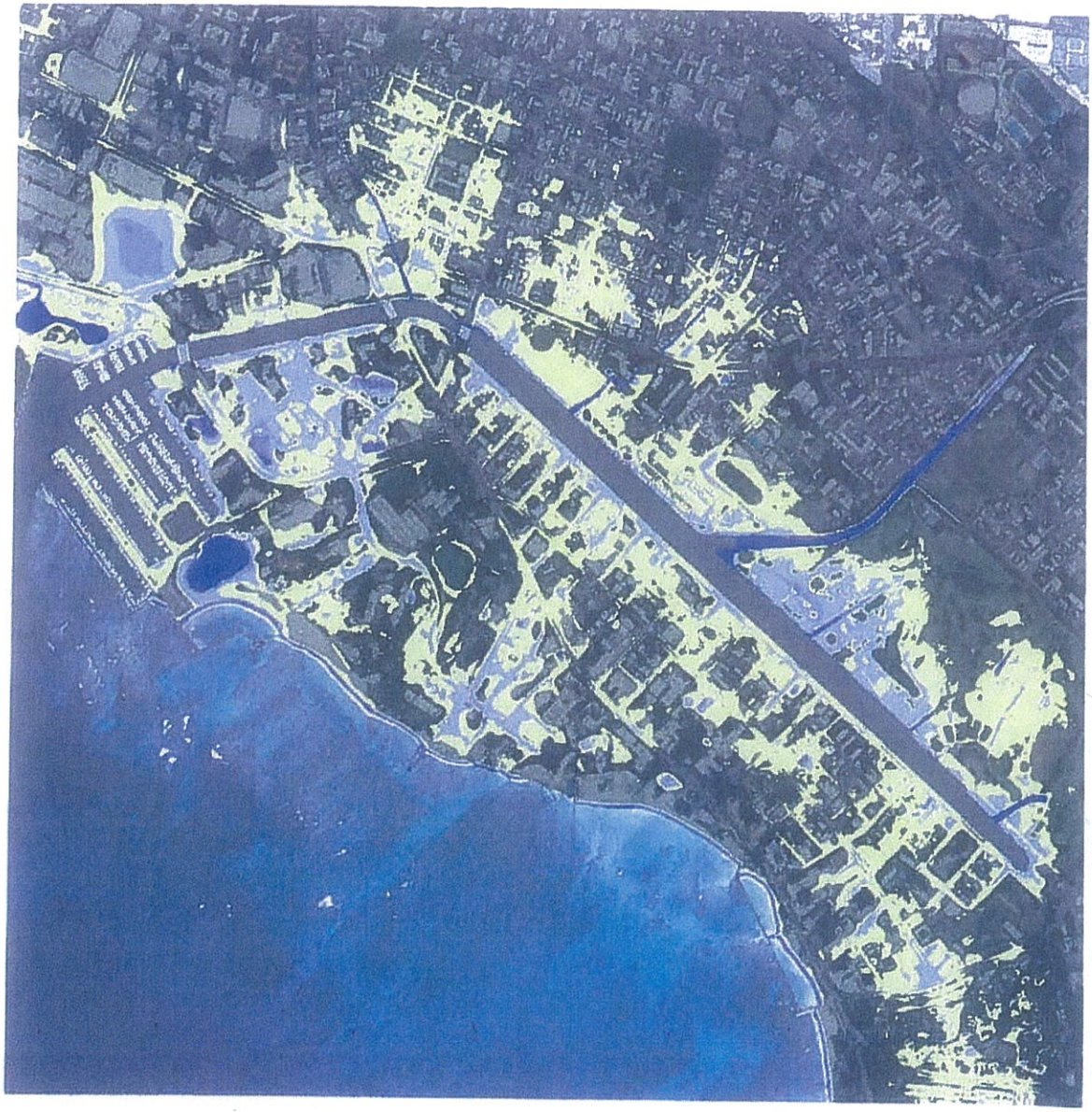


Figure 7:c (portion) Groundwater Inundation with 0.60 meter (approx. 2 ft) of SLR

Key Subject to Flooding Narrow unsaturated space (two feet or less between surface and water table

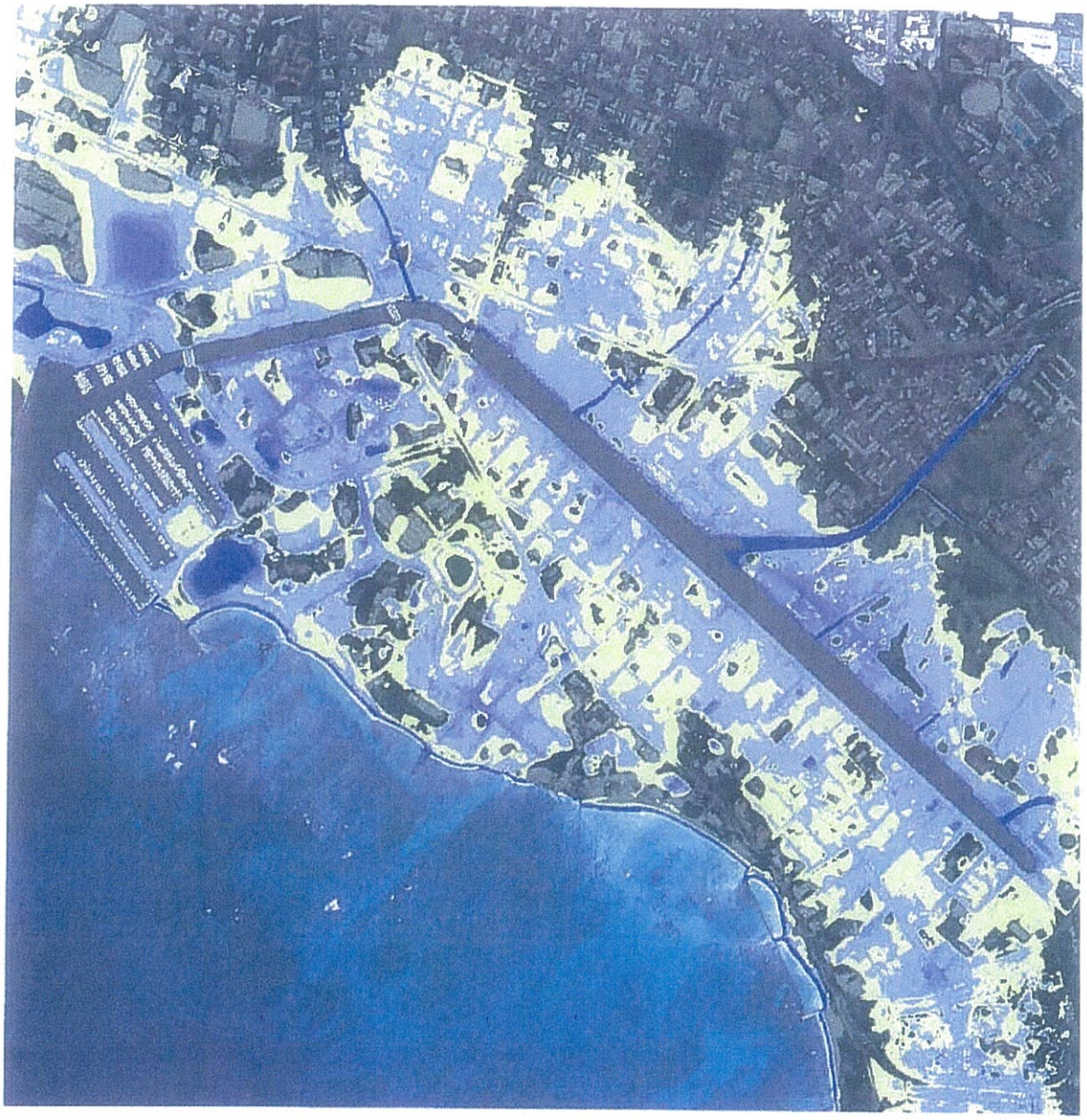


Figure 7:d (portion) Groundwater Inundation with 0.98 meter (approx. 3 ft) of SLR

Key Subject to Flooding Narrow unsaturated space (two feet or less between surface and water table

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Associate

December 15, 2017

Kathy K. Sokugawa
Acting Director
City and County of Honolulu
Department of Planning and Permitting
650 South King Street, 7th Floor
Honolulu, HI 96813

Attn: Joette Yago, Urban Design Branch

SUBJECT: COMMENTS ON THE DRAFT ENVIRONMENTAL ASSESSMENT FOR KING KALĀKAUA PLAZA RENOVATION IN WAIKĪKĪ, TMK (1) 2-6-016:023 and 026

Dear Ms. Sokugawa,

Thank you for your letter dated May 12, 2017 regarding the Draft Environmental Assessment (EA) for the King Kalākaua Plaza Renovation. As the planning consultant for Kalaimoku-Kuhio Development Corp. (KKDC), we are responding to the Department of Planning and Permitting's (DPP) comments (copied below, along with our response).

A. Site Development Division

1. Civil Engineering Branch

a. *The project shall comply with the prevailing soil erosion and storm water quality standards at the time the construction/grading plans are submitted to the Department of Planning and Permitting for review and approval. Be advised that the current soil erosion and water quality standards will be superseded in its entirety with The Rules Relating to Water Quality, effective August 16, 2017.*

Response: KKDC will comply with the prevailing soil erosion and storm water quality standards at the time the construction/grading plans are submitted to the Department of Planning and Permitting for review and approval, including the City and County of Honolulu *Rules Relating to Water Quality*, effective August 16, 2017.

b. *Page 17 "Building Renovations/New Floors": Be advised that there exists an 8' wide pedestrian easement in favor of the City along Kalakaua Avenue. That easement shall be respected in the event that the ground level pool alternative is pursued.*

Response: KKDC is no longer pursuing the ground level pool alternative and the Final EA will be revised accordingly. KKDC will respect the 8' wide pedestrian easement in favor of the City along Kalākaua Avenue.

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c. *Page 32, 1st Paragraph: Best Management Practices shall be installed PRIOR TO, not AFTER the commencement of construction activities.*

Response: The Final EA will state: "Before construction commences, BMPs will be installed fronting all drainage facilities, such as catch basin and drainage inlets along Kalākaua Avenue and Kūhiō Avenue."

2. Wastewater Branch: *We do not have any objections to the proposed 230-room King Kalakaua Plaza Renovation. The Sewer Connection Application (2016/SCA-1443) was approved on 9/27/2016.*

   Response: We acknowledge that Wastewater Branch does not have any objections to the King Kalākaua Plaza renovation.

3. Subdivision Branch: *The Project is subject to compliance with flood hazard area requirements. A new flood fringe certification will be required for the proposed renovation.*

   Response: In renovating King Kalākaua Plaza KKDC will comply with all applicable rules and regulations regarding flood zones, including the requirements of Chapter 21A, Revised Ordinances of Honolulu (ROH) regarding Flood Hazard Areas.

4. Traffic Review Branch:

   a. *A time line or phasing plan of the anticipated dates to obtain major building permit(s) for demolition/construction work, including the projected date of occupancy, shall be prepared by the Applicant in a format acceptable to the Department. The time line should identify when the construction management plan (CMP), the traffic management plan (TMP) and updates/revisions, if any, to the initial traffic impact analysis report (TIAR) dated March 20,2017 will be submitted for review and approval. Typically, the CMP should be submitted for review and approval prior to the issuance of demolition/building permits for major construction work. The TMP or subsequent updates should be submitted and approved prior to the issuance of the (temporary) certificate of occupancy. The TIAR, including supplemental studies or subsequent updates, should be submitted and approved prior to the commencement of each major phase of work, as required. A new TIAR may be required if there is a significant change to the scope of timing of the major work items contained in the initial report.*

   Response: After the Waikīkī Special District Permit is obtained, KKDC or its consultants and contractors will provide to DPP a time line or phasing plan of the anticipated dates to obtain major building permit(s) for demolition/construction work. In addition, as may be required, KKDC or its consultants and contractors will provide to DPP for review and approval: 1) a construction management plan (CMP); 2) a traffic

management plan (TMP), and; 3) any updates/revisions to the traffic impact analysis report (TIAR) as may be necessary. Please note that the Final EA will include an updated TIAR with a TMP section on proposed traffic management strategies. Also, it should be noted that the TIAR concludes that the use of King Kalākaua Plaza for a hotel will reduce vehicles trip by more than 50 percent, compared to if the building was fully occupied with commercial tenants.

b. *A CMP should identify the type, frequency and routing of heavy trucks and construction related vehicles. Every effort shall be made to minimize the impacts from these vehicles and related construction activities. the CMP should identify and limit vehicular activity related to construction to periods outside of the peak periods of traffic, utilizing alternate routes for heavy trucks, provisions for either on-site or off-site staging areas for construction related workers and vehicles to limit the use of on-street parking around the Project site and other mitigation measures related to traffic and potential neighborhood impacts. Preliminary or conceptual traffic control plans should also be included in the CMP. The Applicant should document the condition of roadways prior to the start of construction activities and provide remedial measures, as necessary, such as restriping, road resurfacing and/or reconstruction if the condition of the roadways has deteriorated as a result of the related construction activities*.

Response: After the Waikīkī Special District Permit is obtained, KKDC or its consultants and contractors will provide a construction management plan (CMP) to DPP for review and approval. The CMP is anticipated to: 1) identify the type, frequency and routing of construction-related vehicles; 2) provide recommendations to minimize the impacts from construction-related vehicles and related construction activities; 3) recommend limiting construction-related vehicular activity to periods outside of peak traffic periods; and 4) include preliminary or conceptual traffic control plans. The Final EA will include this information.

c. *A TMP shall include traffic demand management (TDM) strategies to minimize the amount of vehicular trips for daily activities and large events. TDM strategies could include carpooling and ride sharing programs, transit, bicycle and pedestrian incentives and other similar TDM measures. A pedestrian circulation plan should also be included to provide accessibility and connectivity to the surrounding public sidewalks. The TMP should address the porte-cochere and loading/trash pick-up operations. A post TMP will be required approximately one year after the issuance of the certificate of occupancy to validate the relative effectiveness of the various strategies identified in the initial report*.

Response: The TMP will include TDM strategies and a pedestrian circulation plan. We acknowledge that a post TMP will be required. The Final EA will include an updated TIAR with a section on proposed traffic management strategies. The TMP will include

recommendations for: 1) loading zone and porte-cochere operations; 2) traffic demand management (TDM) strategies to minimize vehicular trips, such as carpooling and ride sharing programs; and 3) incentives to encourage transit, bicycle, and pedestrian access.

d. *All internal walkways shall direct pedestrians to the corner of street intersections to minimize the potential for unintended mid-block crossings*.

Response: Under existing conditions on the block containing King Kalākaua Plaza, all sidewalks direct pedestrians to the corner of the street intersections by having trees and landscaping on the outer skirt of the sidewalks. The sidewalks around King Kalākaua Plaza generally meet ADA requirements. Trees are present along all sidewalks and landscaping is present on along Kūhiō Avenue and Kalākaua Avenue. On the south side of Kālaimoku Street, the likelihood of midblock crossings is reduced by the Ritz Carlton porte-cochere and landscaped area in between the sidewalk and the street. Along Olohana Street, straight sidewalk pathways lined with trees direct pedestrians to the corner of the intersections. In general, the renovations to King Kalākaua Plaza will not change these existing conditions.

e. *Bicycle parking or bike racks shall be provided within this Project and shall be located in a safe and convenient location*.

Response: Bike racks will be located in safe and convenient locations.

f. *The length of porte-cochere shall be designed to prevent any over flow of vehicles onto Kalaimoku Street and shall be wide enough to allow a moving vehicle to safely pass a stationary parked vehicle. A width of 20-feet is typically acceptable for this maneuver, including provisions for vehicles turning into and out of the porte-cochere. Vehicle turning templates should be used to demonstrate that these can be adequately achieved. The TMP should address minimizing the average dwell time for users of the porte-cochere, to assure vehicles do not queue into Kalaimoku Street. The shared use of the one-way in driveway on Kalaimoku Street for both the loading and porte-cochere should be clarified*.

Response: The porte-cochere will be designed to be wide enough to allow a moving vehicle to safely pass a stationary parked vehicle, including space for vehicles turning into and out of the porte-cochere. This two-lane design will be long enough for two vehicles in each lane, with additional space on the entering and exiting curves for two additional vehicles, for a total capacity of six vehicles. The Final EA will include an updated TIAR with vehicle turning templates for the porte-cochere.

Hotel staff will minimize queueing from the porte-cochere and parking garage to maintain smooth operations along Kālaimoku Street. The updated TIAR (dated July 5,

2017) in the Final EA will include a section on proposed traffic management strategies, including noting that hotel staff shall minimize queueing along Kālaimoku Street.

g. *The design for all aspects along Kalaimoku Street should take into consideration the possible future two-way conversion of Kalaimoku Street. This will minimize the impacts to the site, and site operations, should this conversion occur*.

Response: The design of the renovated King Kalākaua Plaza along Kālaimoku Street can accommodate the possible future two-way conversion of Kālaimoku Street. If this occurs, the porte-cochere can accommodate two-way traffic on Kālaimoku Street; although porte-cochere operations (entrance and exit) would have to be reversed and some turn restrictions on Kālaimoku Street may be necessary to limit queuing issues. The Final EA will include an updated TIAR with a section on the possible future two-way conversion of Kālaimoku Street.

h. *Construction plans for all work within or affecting public streets should be submitted for review and approval. Traffic control plans during construction should 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 hall not exceed five percent (5%) for a minimum distance of 25-feet from the back of the designated pedestrian walkway. Entry gates and ticket dispensers should be recessed as far into the driveway as necessary to avoid any queuing onto public streets. All loading and parking areas shall be designed such that vehicles enter and exit front first*.

Response: Construction plans for all work within or affecting public streets will be submitted for review and approval. In addition, as may be required, KKDC or its consultants and contractors will provide to DPP for review and approval a: 1) construction management plan (CMP); and 2) traffic management plan (TMP).

Regarding vehicle access points, new access driveways for the porte-cochere will be constructed as standard City dropped driveways with adequate vehicular sight distances. As the existing parking garage will be retained, the parking entrance ramp will remain as is, with vehicles continuing to enter/exit front first and the ticket dispensers located at the bottom of the ramp approximately 120 feet inside from the building wall. The existing slopes will also remain; the first 14 feet at five percent (5%) and the next 20 feet to the building wall at 11percent (11%).

Regarding loading, currently there are five existing and permitted loading zones (see attached Reference Site Plan from the 1997 King Kalākaua Plaza permit set):

- Two large loading zones accessible from Kūhiō Avenue (these are the main loading zones);
- Two loading zones accessible from Kālaimoku Street, including maneuvering space so that delivery vehicles do not have to reverse onto Kālaimoku Street; and
- One loading zone accessible from Kālaimoku Street and situated at the entrance to the underground parking area

Based on the Land Use Ordinance (LUO) sections regarding off-street loading requirements (LUO Sections 21-6.100 to 21-6.120) the proposed uses would require four loading zones. To meet this requirement, four of the five existing and permitted and loading zones will be retained:

- Two large loading zones accessible from Kūhiō Avenue; and
- Two loading areas accessible from Kālaimoku Street.

Because the footprint of the existing building will maintain substantially the same, there are no feasible options for re-reorienting the existing loading zones. The two existing and permitted loading zones along Kūhiō Avenue will remain unchanged with trucks having to reverse into the stalls. It is anticipated the hotel will have single truck deliveries approximately twice a day. Therefore, schedules can be arranged to minimize impact to traffic. The Kālaimoku Street loading zones will remain unchanged. The Kālaimoku Street loading zones will remain unchanged and have maneuvering space so that delivery vehicles do not have to reverse onto Kālaimoku Street.

B. <u>Planning Division – Development Plans and Zone Change Branch</u>: *The analysis of Sea Level Rise (SLR) is inadequate because it does not assess the impact of specific water levels on the basis that "sea level rise models are inherently uncertain." The appropriate response when the probability of a hazard like SLR is uncertain is to provide an assessment of the Project response over the range of plausible future levels of SLR.*

The DEA should include an analysis of the potential impact on the Project of coastal flooding, especially groundwater inundation, based on existing nationally recognized SLR projections for Honolulu such as the Honolulu SLR projections used by the US Army Corps of Engineers (USACE) in planning their projects. It should discuss how project risk can be reduced and resiliency improved during the economic life of the Project in light of those projections.

The analysis should also consider the recent University of Hawaii study for Honolulu and Waikiki which provides projections and mappings of the impact of SLR on groundwater inundation (Shellie Habel, et al., "Development of a Model to Simulate Groundwater Inundation Induced by Sea-Level Rise and High Tides," Water Research, 2017.)

A more detailed discussion has been attached.

Response: We acknowledge your comments that the EA should: 1) provide an assessment of the potential impact on the project over the range of plausible future levels of Sea Level Rise (SLR), including USACE projections, and related mitigation strategies; and 2) consider the findings of the recent University of Hawaii study for Honolulu and Waikīkī (Habel et al.), and specifically, the study's groundwater inundation maps corresponding to a range of SLR scenarios.

To address your comments, in the Final EA, the sections on sea level rise will be revised to read as follows:

Sea Level Rise

Elevations across most of the Property are high enough above sea level that direct inundation due to sea level rise is not anticipated to be likely in the context of moderate 21st century climate change projections and associated sea level rise. The elevation of the Property varies between three and nine feet above mean sea level. The elevation at the south corner of the Property is three feet, and the elevation at the north corner of the Property is nine feet. According to U.S. Army Corps of Engineers (USACE) projections, sea level is anticipated to rise an additional 0.4 to 4.5 feet between 2018 and 2100.

The Center for Island Climate Adaptation and Policy and the University of Hawai‘i Sea Grant notes that sea level is expected to rise one foot by 2050 and three feet by 2100, and recommends that state and local governments plan accordingly (Center for Island Climate Adaptation and Policy, 2011). While an accelerating rise in local sea level should be planned for, the occurrence of specific water levels at specific times should not be anticipated because sea level rise models are inherently uncertain. Sources of this uncertainty include sparse local data, intrinsic uncertainty in climate warming and ice melt models, and prospective shifts in human behavior to curb green-house gas emissions.

A recent hydrogeological study of Honolulu indicated that flooding due to groundwater inundation may occur at the Property as sea level rises (Shellie Habel, 2017). Rather than look solely at ground elevation relative to sea level, the model accounts for the impacts of sea level rise (SLR) on groundwater levels in urban Honolulu to determine areas that maybe inundated by groundwater under various SLR scenarios. According to the model, at 0.32m (1.0 feet) SLR, the Property may experience "narrow unsaturated space" (near-inundation) along Kālaimoku Street and to a lesser degree along Olohana Street. At 0.60m (2.0 feet) SLR, the Property may experience near-inundation along all boundaries, and may experience groundwater inundation along Kālaimoku Street. At 0.98m (3.2 feet) SLR, the Property may experience groundwater inundation along all boundaries and near-inundation across the majority of the Property.

Potential Impacts and Mitigation Measures

Most of the Property is not anticipated to suffer direct seawater inundation due to sea level rise within the 21st Century (based on projections from Center for Island Climate Adaptation and Policy and the University of Hawai‘i Sea Grant) but may begin to experience groundwater inundation if sea level rises by 1 to 2 feet. ~~Should~~ If: 1) the Property experiences near-inundation conditions and FIRM maps ~~be~~ are updated to indicate that the Property resides in a higher-risk flood zone, or ~~should~~ 2) increasing frequency of large storm events becomes a concern, mitigation strategies could include elevating electrical infrastructure for safety and to prevent water damage, reinforcing or relocating utilities as feasible, and adhering to NFIP requirements, building code updates, and/or County, State or Federal guidance. These mitigation measures could also be implemented should the south corner of the

Property, the underground parking structure, or the building infrastructure ~~of the building~~ begin to see impacts from sea level rise nearing 2100.

C. Land Use Permits Division – Urban Design Branch: *Provide the following additional information:*

1. *Conceptual site plan, floor plans, building elevations, and building sections. Site plan (without rendered landscaping) should show streets, curbs, sidewalks, driveways, property lines, required yards, open space, and building(s). The ground floor plan should show any proposed retail shops, restaurants, hotel lobby, porte cochere, and back-of-house facilities. The building elevations and sections should show transitional height setbacks and height limit.*

Response: The requested information will be provided as part of the Special District Permit Application.

2. *Provide preliminary floor area and parking tabulations for all proposed uses, i.e., hotel, retail establishments, restaurants, and other facilities.*

Response: The requested information will be provided as part of the Special District Permit Application.

3. *Discuss the existing Conditional Use Permit (Minor) for off-site parking for 2100 Kalakaua located across Kalaimoku Street and how he existing parking agreement will be resolved with the completion of the Ritz Carlton Residences.*

Response: As a result of King Kalākaua Plaza's foreclosure proceedings in 2009, the off-site parking agreement with the 2100 Kalākaua Retail Development project was extinguished and the 2100 Kalākaua Retail Development project made other arrangements to meet its parking requirements. While KKDC currently rents some parking spaces to the 2100 Kalākaua Retail Development on a month-to-month basis for employee parking, KKDC has no obligation to provide any parking for the 2100 Kalākaua Retail Development.

Based on information in Final EA for the 2121 Kūhiō (Ritz Carlton Residences) project[1], it is our understanding that PACEP LLC, the developer of the 2121 Kūhiō (Ritz Carlton Residences) project, is obligated to provide 45 parking spaces for the 2100 Kalākaua Retail Development project as part of the 2121 Kūhiō (Ritz Carlton Residences) project. See attached relevant pages from the Final EA for the 2121 Kūhiō (Ritz Carlton Residences) project and related letters regarding this issue.

4. *Discuss in more detail how the potential traffic impacts of the proposed porte cochere*

[1] See *Final Environmental Assessment 2121 Kuhio Waikiki, Honolulu, Hawaii Tax Map Key 2-6-18: 10, 42, 43, and 53* October 2012, prepared by Kuso & Kurahashi, Inc. for PACEP LLC.

along Kalaimoku Street, located right across from the existing porte cochere for 2100 Kalakaua and Ritz Carlton Residences, will be mitigated. Discuss how the various vehicles will be accommodated and managed at the porte cochere, i.e.,, taxis, airport shuttles, rental cars, tour buses, and trolleys.

Response: The porte-cochere driveways have been designed to line up with existing driveways across Kālaimoku Street. Since Kālaimoku Street is a one-way street, the porte-cochere will also be one-way with the makai driveway providing ingress (left-in movements only) and the mauka driveway providing egress (left-out movements only). If Kālaimoku Street is converted to a two-way street in the future, the porte-cochere can accommodate two-way traffic on Kālaimoku Street; although porte-cochere operations (entrance and exit) would have to be reversed and some turn restrictions on Kālaimoku Street may be necessary to limit queuing issues.

The porte-cochere will be designed to be wide enough to allow a moving vehicle to safely pass a stationary parked vehicle, including space for vehicles turning into and out of the porte-cochere. This two-lane design will be long enough for two vehicles in each lane, with additional space on the entering and exiting curves for two additional vehicles, for a total capacity of six vehicles.

Hotel staff will minimize queueing from the porte-cochere and parking garage to maintain smooth operations along Kālaimoku Street. The updated TIAR in the Final EA will include a section on proposed traffic management strategies, including noting that hotel staff shall minimize queueing along Kālaimoku Street.

The Project is classified as major exterior alternations and additions of a non-historic building and will require a Special District Permit, Minor.

Response: At the time the Draft EA was prepared, KKDC proposed renovating the existing above-ground portion of the existing building for hotel use, including the addition of up to three floors. However, based on structural and geotechnical analyses, KKDC and its architect determined that replacement of the above-ground portion of the building with a new structure would be more feasible than renovating the existing structure. Therefore, current plans are to replace the above-ground portion of the building with a new structure having substantially the same footprint as the existing building. The existing underground parking structure (two underground levels) will be retained.

Replacing the above-ground portion of the building with a new structure will be substantially similar to previous plans for renovating the existing structure. The building footprint will remain substantially the same, as will the proposed square footage, floor area ratio (FAR), and number of floors. One significant benefit of a new above-ground structure will be reduced height, as compared to adding floors to the existing structure. The current building is four stories with floor plates spaced at approximately 16 feet apart, resulting in a building height of approximately 65

feet. Floor plates spaced at approximately 16 feet are not necessary for hotel use, and thus replacing the existing above-ground structure will allow for the same number of proposed floors (seven) with a total height of approximately 85 feet, compared to approximately 100 feet under the previous plans.

In addition, at the time the Draft EA was prepared, plans for renovating the existing building for hotel use included two alternatives regarding the addition of a pool: 1) pool and recreation deck area on the fourth floor; and 2) pool and recreation deck area on the ground level on the side of the building fronting Kalākaua Avenue (in the event the that it would not be structurally feasible to provide a pool and pool deck area on the fourth floor). With a pool and recreation deck area on the ground level approximately 4,000 square feet of area fronting Kalākaua Avenue would have been changed from public to private open space. The current plans eliminate the alternative for a ground-level pool on the side of the building fronting Kalākaua Avenue. By providing a new structure, the pool can now be provided on the fourth floor with no structural issues.

The Final EA will be revised to reflect the above plan changes. In a letter dated November 2, 2017, PBR HAWAII requested a determination from DPP regarding if these plan changes would trigger the need for a Special District Permit, Major, rather than a Special District Permit, Minor. In a letter dated November 28, 2017 DPP determined that a Special District Permit, Major would be required. As such KKDC will apply for a Special District Permit, Major.

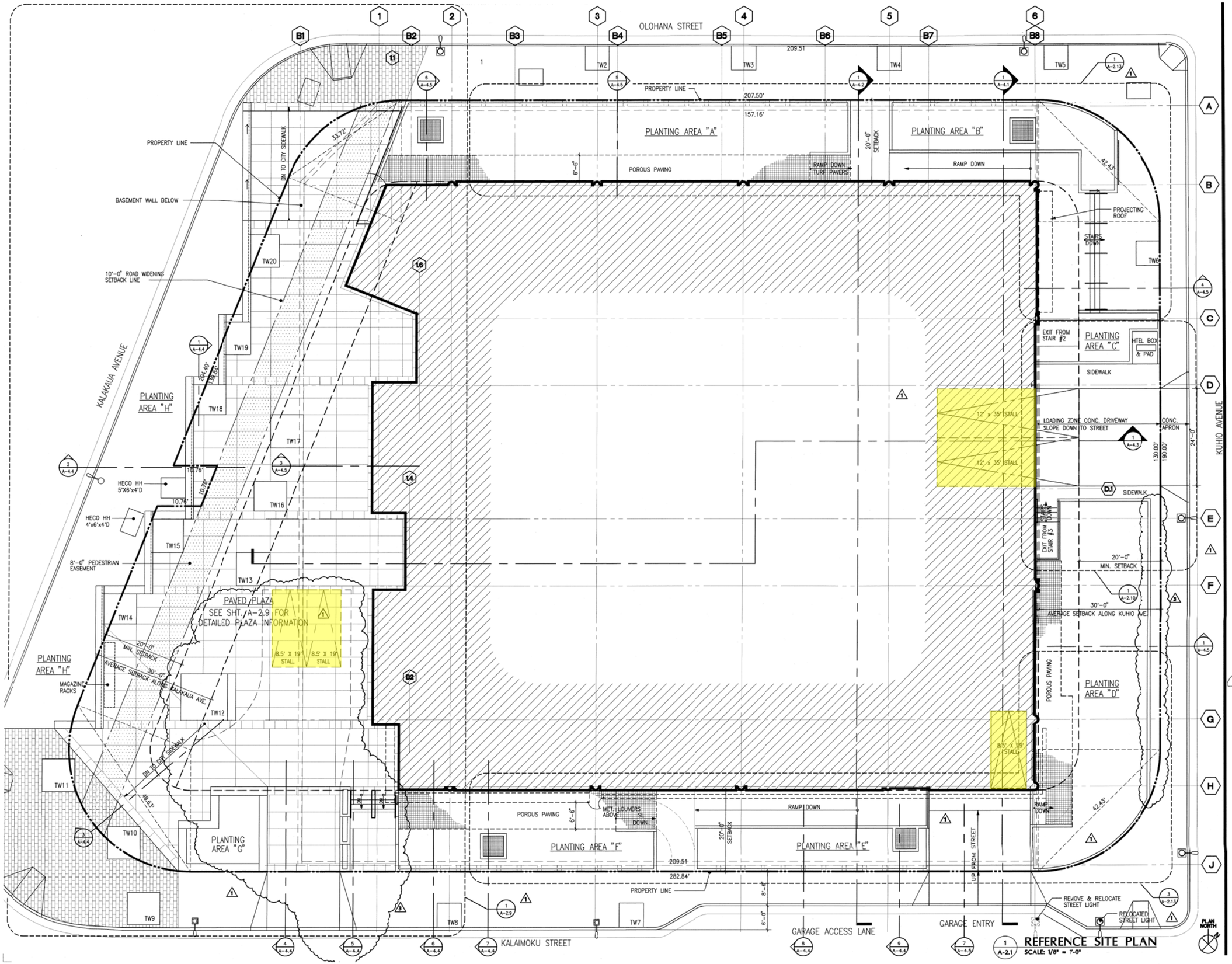
We value your participation in the environmental review process. Your letter will be included in the Final Environmental Assessment.

Sincerely,

Tom Schnell, AICP
Principal

Attachments: Reference Site Plan from the 1997 King Kalākaua Plaza permit set
Pages from the Final EA for the 2121 Kūhiō (Ritz Carlton Residences) project and related letters;

cc: Kalaimoku-Kuhio Development Corp.



1 A-2.1 REFERENCE SITE PLAN
SCALE: 1/8" = 1'-0"

Design Architects
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675 CALIFORNIA STREET
SAN FRANCISCO, CA. 94108
VOICE 415.434.8462
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KING KALAKAUA PLAZA
HONOLULU, HAWAII

K. YOUNG KALAKAUA PARTNERS, INC.
DEVELOPER

PERMIT SET

DAVID A. MILLER
LICENSED PROFESSIONAL ARCHITECT
No. 3067
HAWAII, U.S.A.

This work was prepared by me or under my supervision and construction of this project will be under my observation. (Observation of construction as defined in Chapter 16-115 Subchapter 1 Definitions of the Hawaii Administrative Rules "Professional Engineers, Architects, Surveyors, and Landscape Architects.")

Signature

NOTE: Contractor to check and verify all dimensions at job before proceeding with work.

REFERENCE SITE PLAN

Revision
1 10-16-96
2 1-22-97

Designed by	TK
Drawn by	MG,FTC
Project No.	4334
Date	8-1-96
Drawing No.	A-2.1
of	Sheets

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

OCTOBER 2012

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).

PBR HAWAII
& ASSOCIATES, INC.

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RUSSELL Y. J. CHUNG, FASLA, LEED®AP BD+C
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printed on recycled paper

August 17, 2012

Mr. Keith Kurahashi
Kusao & Kurahashi
2752 Woodland Drive, Suite 5-202
Honolulu, Hawai'i, 96822

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT: 2121 KŪHIŌ WAIKĪKĪ, HONOLULU, HAWAI'I (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, Kālaimoku – Kūhiō Development Corp (KKDC), is the property owner of King Kalākaua Plaza, which is directly across Kālaimoku 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

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 Kālaimoku 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 Kālaimoku 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, Kālaimoku – 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
Kālaimoku – Kūhiō Development Corp.

KUSAO & KURAHASHI, INC.
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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.

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 TRANSPORTATION SERVICES
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

KIRK CALDWELL
MAYOR

WES FRYSZTACKI
DIRECTOR

JON Y. NOUCHI
DEPUTY DIRECTOR

TP4/17-667743R

May 5, 2017

Mr. Tom Schnell, AICP
Principal
PBR HAWAII & Associates, Inc.
1001 Bishop Street, Suite 650
Honolulu, Hawaii 96813

Dear Mr. Schnell:

SUBJECT: Draft Environmental Assessment (DEA) for King Kalakaua Plaza Renovation, Waikiki, Oahu, Hawaii

This is in response to a letter that we received from the Department of Planning and Permitting dated March 29, 2017, requesting our review and comments on the subject project. We have the following comments:

1. The existing commercial development building that is currently vacant was constructed in 1998. The new developer should revise the Traffic Impact Analysis Report (TIAR) to include analysis of:

   a. Complete streets principles as prescribed in the Honolulu Complete Streets Design Manual found at www.honolulu.gov/completestreets;

   b. The surrounding sidewalks, ramps at intersections, and driveways for any deficiencies and to ensure that the area meets current City standards and the Americans with Disabilities Act (ADA) requirements;

   c. Modifying Kalaimoku Street to a two-way street as an extension of Saratoga Road to Kuhio Avenue; and

   d. An assessment of porte cochere capacity.

2. We have the following comments regarding the porte cochere and loading areas for this project site:

   a. All loading and unloading needs, including hotel patrons, service and refuse vehicles should be handled on-site, rather than on City roadways.

   b. We have traffic and pedestrian safety concerns with the inclusion of a porte cochere in high pedestrian traffic areas. The project should design for adequate sight distances and supplementary safety measures such as electronic devices at the driveways to warn pedestrians of vehicles moving in and out of driveways.

   c. The porte cochere should be designed to accommodate TheHandi-Van para-transit vehicles on-site, which require a minimum 31-foot turning radius, a 10-foot, 6-inch height clearance, and the ability to exit the site without reversing onto public roadways.

   d. The porte cochere should be designed to accommodate the possible change of Kalaimoku Street to a two-way street.

   e. The DEA states at various locations that there will be four loading stalls/areas provided, two off of Kuhio Avenue and two off of Kalaimoku Street. Locate the two loading stalls off of Kalaimoku Street on the site plan and provide a description of how the drivers will safely use and maneuver their vehicles in the loading area. The City does not recommend reversing of vehicles onto public roadways.

3. The DEA, page 45, and the Appendix B TIAR, page 9, states that the weekday AM peak hour is from 7:30 am to 8:30 am and the PM peak hour is from 3:30 pm to 4:30 pm, which is not consistent with the data in Figure 2.1 and Appendix A Traffic Count Data.

4. Section 4.6 Roadways and Traffic, Potential Impacts and Mitigation Measures, Roadway and Traffic Conditions, page 47, last paragraph, states that renovations will include bike racks for retail, hotel users and employees. Provide a description of where the bike racks will be located and include the location on the site plan.

5. Section 4.6 Roadways and Traffic, Potential Impacts and Mitigation Measures, Roadway and Traffic Conditions, page 48, first paragraph,

regarding delivery of materials and equipment during off-peak traffic hours, remove "whenever possible."

6. The bus stops on Olohana and Kalaimoku Streets are no longer in existence. Please remove from the DEA document on pages 25 and 46 and on the TIAR document on page 49.

7. The Traffic Management Plan (TMP) should include the following traffic mitigation measures:

   a. The TMP includes mitigation measures for long-term impacts after construction, but should also include a discussion of the short-term traffic impacts to the surrounding City roadways during construction with corresponding measures to mitigate these impacts by applying complete streets principles.

   b. Bikeshare Hawaii has a plan that will launch this summer to install 100 self-service biki stops between Chinatown and Diamond Head, which includes numerous locations in Waikiki. The developer should contact Bikeshare Hawaii to confirm status of nearby stations and to consider hosting a bikeshare station on their property if needed. For more information, go to www.bikesharehawaii.org.

   c. Inform employees of the City's vanpool program and provide subsidized transit passes to encourage use of public transit.

8. Best Management Practice controls should be included at construction site to prevent trailing of dirt and debris on City roadways.

9. Any damage to the existing roadway and sidewalk area caused by the project should be repaired to current City standards as well as meet ADA requirements.

10. The area Neighborhood Board, as well as the area residents, businesses, emergency personnel (fire, ambulance and police), Oahu Transit Services, Inc. (TheBus and TheHandi-Van), etc., should continue to be kept apprised of the details of the proposed project and the impacts that the project may have on the adjoining local street area network.

11. Plans should be reviewed and approved by the Disability and Communication Access Board to ensure full compliance with the ADA.

Thank you for the opportunity to review this matter. Should you have any questions, please contact Renee Yamasaki of my staff at 768-8383.

Very truly yours,

Wes Frysztacki
Director

cc: Urban Design Branch, Department of Planning and Permitting

PBR HAWAII
& ASSOCIATES, INC.

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Chairman / Principal

R. STAN DUNCAN, ASLA
President / Principal

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printed on recycled paper

December 15, 2017

Wes Frysztacki, Director
City and County of Honolulu
Department of Transportation Services
650 South King Street, 3rd Floor
Honolulu, HI 96813

Attn: Renee Yamasaki

SUBJECT: COMMENTS ON THE DRAFT ENVIRONMENTAL ASSESSMENT FOR KING KALĀKAUA PLAZA RENOVATION IN WAIKĪKĪ, TMK (1) 2-6-016:023 and 026

Dear Mr. Frysztacki,

Thank you for your letter dated May 5, 2017 regarding the Draft Environmental Assessment (EA) for the proposed King Kalākaua Plaza renovation. As the planning consultant for Kalaimoku-Kuhio Development Corp. (KKDC), we are responding to the Department of Transportation Services' (DTS) comments (copied below, along with our response).

1. *The existing commercial development building that is currently vacant was constructed in 1998, The new developer should revise the Traffic Impact Analysis Report (TIAR) to include analysis of:*

   a. *Complete streets principles as prescribed in the Honolulu Complete Streets Design Manual found at www.honolulu/gov/completestreets;*

   Response: The Draft EA included a TIAR dated March 20, 2017, which included a section on Sustainable Transportation and Complete Streets. Final EA will include an updated TIAR with an expanded section on Sustainable Transportation and Complete Streets concepts.

   b. *The surrounding sidewalks, ramps at intersections, and driveways for any deficiencies and to ensure that the area meets current City standards and the Americans with Disabilities Act (ADA) requirements;*

   Response: The renovations to King Kalākaua Plaza will only require modifications to an approximate 170' length of sidewalk area along Kālaimoku Street. In this area driveways will be created to provide access into and out of the porte-cochere. The new driveways will be constructed to current City standards and will comply with ADA requirements.

   The existing sidewalks and ramps along other streets (Kalākaua Avenue, Kūhiō Avenue, and 'Olohana Street) do not require changes due to the renovations and will remain as is.

c. *Modifying Kalaimoku Street to a two-way street as an extension of Saratoga Road to Kuhio Avenue;*

Response: Final EA will include an updated TIAR with a section on the possible future conversion of Kālaimoku Street to a two-way street.

d. *An assessment of Porte Cochere capacity.*

Response: The Final EA will include an updated TIAR with an assessment of the porte-cochere capacity and vehicle turning templates. The porte-cochere will be designed to be wide enough to allow a moving vehicle to safely pass a stationary parked vehicle, including space for vehicles turning into and out of the porte-cochere. This two-lane design will be long enough for two vehicles in each lane, with additional space on the entering and exiting curves for two additional vehicles, for a total capacity of six vehicles.

2. *We have the following comments regarding the Porte Cochere and loading areas for the project site:*

a. *All loading and unloading needs, including hotel patrons, service and refuse vehicles should be handled on-site, rather than on City roadways.*

Response: The porte-cochere will provide for loading and unloading needs of hotel patrons.

Regarding loading zones, currently there are five existing and permitted loading zones (see attached Reference Site Plan from the 1997 King Kalākaua Plaza permit set):

- Two large loading zones accessible from Kūhiō Avenue (these are the main loading zones);
- Two loading zones accessible from Kālaimoku Street, including maneuvering space so that delivery vehicles do not have to reverse onto Kālaimoku Street; and
- One loading zone accessible from Kālaimoku Street and situated at the entrance to the underground parking area

Based on the Land Use Ordinance (LUO) sections regarding off-street loading requirements (LUO Sections 21-6.100 to 21-6.120) the proposed uses would require four loading zones. To meet this requirement, four of the five existing and permitted and loading zones will be retained:

- Two large loading zones accessible from Kūhiō Avenue; and
- Two loading areas accessible from Kālaimoku Street, including maneuvering space so that delivery vehicles do not have to reverse onto Kālaimoku Street.

Because the footprint of the existing building will maintain substantially the same, there are no feasible options for re-reorienting the existing loading zones. The two existing and permitted loading zones along Kūhiō Avenue will remain unchanged with trucks having to

reverse into the stalls. It is anticipated the hotel will have single truck deliveries approximately twice a day. Therefore, schedules can be arranged to minimize impact to traffic. The Kālaimoku Street loading zones will remain unchanged. The Kālaimoku Street loading zones will remain unchanged and have maneuvering space so that delivery vehicles do not have to reverse onto Kālaimoku Street.

b. We have traffic and pedestrian safety concerns with the inclusion of a Porte Cochere in high pedestrian traffic areas. The project should design for adequate sight distances and supplementary safety measures such as electronic devices at the driveways to warn pedestrians of vehicles moving in and out driveways.

Response: The new access driveways for the porte-cochere will be constructed to current City standards with adequate vehicular sight distances. If warranted, supplementary safety measures such as electronic devices can be provided at the driveways to warn pedestrians of vehicles moving in and out.

c. The Porte Cochere should be designed to accommodate TheHandi-Van para-transit vehicles on-site, which require a minimum 31-foot tuning radius, a 10-foot, 6-inch height clearance, and the ability to exit the site without reversing onto public roadways.

Response: The porte-cochere will be designed to accommodate TheHandi-Van para-transit vehicles. The porte-cochere will operate in a one-way direction with ingress and egress driveways. The Final EA will include an updated TIAR with porte-cochere vehicle turning templates.

d. The Porte Cochere should be designed to accommodate the possible change of Kalaimoku Street to a two-way street.

Response: The design of the porte-cochere can accommodate the possible change of Kālaimoku Street to a two-way street. If this occurs, porte-cochere operations (ingress and egress) would have to be reversed and some turn restrictions on Kālaimoku Street may be necessary to limit queuing issues. The Final EA will include an updated TIAR with a section on the possible change of Kālaimoku Street to a two-way street.

e. The DEA states at various locations that there will be four loading stalls/areas provided, two off of Kuhio Avenue and two off of Kalaimoku Street. Locate the two loading stalls off of Kalaimoku Street on the site plan and provide a description of how the drivers will safely maneuver their vehicles in the loading area. The City does not recommend reversing of vehicles onto public roadways.

Response: See response to DTS comment 2.a above.

3. *The DEA, page 45, and the Appendix B TIAR, page 9, states that the weekday AM peak hour is from 7:30-8:30am and the PM peak hour is from 3:30-4:30pm, which is not consistent with the data in Figure 2.1 and Appendix A Traffic Count Data.*

   Response: The Final EA and the updated TIAR will note that the correct AM and PM peak hours are from 8:00am-9:00am and 3:45pm-4:45pm, respectively. In addition, in the updated TIAR, Figure 2.1 will reflect the peak hours stated in the Traffic Count Data. The TIAR analysis used the correct volumes.

4. *Section 4.6 Roadways and Traffic, Potential Impacts and Mitigation Measures, Roadway and Traffic Conditions, page 47, last paragraph, states that renovations will include bike racks for retail, hotel users and employees. Provide a description of where the bike racks will be located and include the location on the site plan.*

   Response: Final plans for the renovation, with details like location of bike racks, have not been prepared, but bike racks will be located in safe and convenient locations.

5. *Section 4.6 Roadways and Traffic, Potential Impacts and Mitigation Measures, Roadway and Traffic Conditions, page 48, first paragraph, regarding delivery of materials and equipment during off-peak traffic hours, remove "whenever possible."*

   Response: After the Waikīkī Special District Permit is obtained, KKDC or its consultants and contractors will provide a construction management plan (CMP) to DPP for review and approval. The CMP is anticipated to: 1) identify the type, frequency and routing of construction-related vehicles; 2) provide recommendations to minimize the impacts from construction-related vehicles and related construction activities; 3) recommend limiting construction-related vehicle activity to periods outside of peak traffic periods; and 4) include preliminary or conceptual traffic control plans.

   To include this information in the Final EA the paragraph you note will be revised as follows:

   > To minimize impact to roadways and traffic conditions during the construction phase, ~~construction materials and equipment will be transferred to and from the Property during off-peak traffic hours whenever possible.~~ after the Waikīkī Special District Permit is obtained, KKDC or its consultants and contractors will provide a construction management plan (CMP) to DPP for review and approval. The CMP is anticipated to: 1) identify the type, frequency and routing of construction-related vehicles; 2) provide recommendations to minimize the impacts from construction-related vehicles and related construction activities; 3) recommend limiting construction-related vehicular activity to periods outside of peak traffic periods; and 4) include preliminary or conceptual traffic control plans.

6. *The bus stops on Olohana and Kalaimoku Streets are no longer in existence. Please remove from the DEA document on pages 25 and 46 and on the TIAR document on page 49.*

   Response: The Final EA and the updated TIAR will reflect that there are no bus stops on ‘Olohana Street and Kālaimoku Street.

7. *The Traffic Management Plan (TMP) should include the following traffic mitigation measures:*

   a. *The TMP includes mitigation measures for long-term impacts after construction, but should also include a discussion of the short-term traffic impacts to the surrounding City roadways during construction with corresponding measures to mitigate these impacts by applying complete streets principals."*

   Response: Although the TIAR concludes that the renovation and repurposing of King Kalākaua Plaza for hotel use will reduce vehicles trip by more than 50 percent, compared to if the building was fully occupied with commercial tenants, to further reduce traffic impacts, after the Waikīkī Special District Permit is obtained, KKDC or its consultants and contractors will provide a traffic management plan (TMP) to DPP for review and approval. The TMP will include recommendations for: 1) loading zone and porte-cochere operations; 2) traffic demand management (TDM) strategies to minimize vehicular trips, such as carpooling and ride sharing programs; and 3) incentives to encourage transit, bicycle, and pedestrian access.

   b. *Bikeshare Hawaii has a plan that will launch this summer to install 100 self-service biki stops between Chinatown and Diamond Head, which includes numerous locations in Waikiki. The developer should contact Bikeshare Hawaii to confirm status of nearby stations and to consider hosting a bikeshare station on their property if needed. For more information, go to* www.bikesharehawaii.org.

   Response: There are four Bikeshare Hawaii biki stations in very close proximity to King Kalākaua Plaza: 1) biki station #314 at Saragota Road and Kalākaua Avenue; 2) biki station #316 at Beach Walk and Kalākaua Avenue; 3) biki station #311 at Kalākaua Avenue and Gateway Park; and 4) biki station #312 at ʻOlohana Street and Kūhiō Avenue.

   c. *Inform employees of the City's vanpool program and provide subsidized transit passes to encourage use of public transit.*

   Response: The TMP will include recommended strategies to minimize vehicular trips to and from King Kalākaua Plaza, which may include informing employees of the City's vanpool program and providing employees with subsidized transit passes to encourage use of public transit.

8. *Best Management Practice controls should be included at construction site to prevent trailing of dirt and debris on City roadways.*

   Response: The Final EA will state: "Before construction commences, BMPs will be installed fronting all drainage facilities, such as catch basin and drainage inlets along Kalākaua Avenue and Kūhiō Avenue."

9. *Any damage to the existing roadway and sidewalk area caused by the project should be repaired to current City standards as well as meet ADA requirements.*

   Response: See response to DTS comment 1.b. above.

10. *The area Neighborhood Board, as well as the area residents, businesses, emergency personnel (fire, ambulance and police), Oahu Transit Services, Inc. (TheBus and TheHandi-Van), etc., should continue to be kept apprised of the details of the proposed project and the impacts that the project may have on the adjoining local street area network.*

    Response: As needed, KKDC or its consultants and contractors will keep County agencies, community groups, and neighbors appraised of details of the King Kalākaua Plaza renovations. After the Waikīkī Special District Permit is obtained, KKDC or its consultants and contractors will provide a CMP and TMP to DPP for review and approval.

11. *Plans should be reviewed and approved by the Disability and Communication Access Board to ensure full compliance with the ADA.*

    Response: KKDC will comply with all applicable ADA requirements. We note that per Section 103-50, Hawaii Revised Statutes, review and approval of plans by the Disability and Communication Access Board is only mandated for State and County buildings, facilities, and sites.

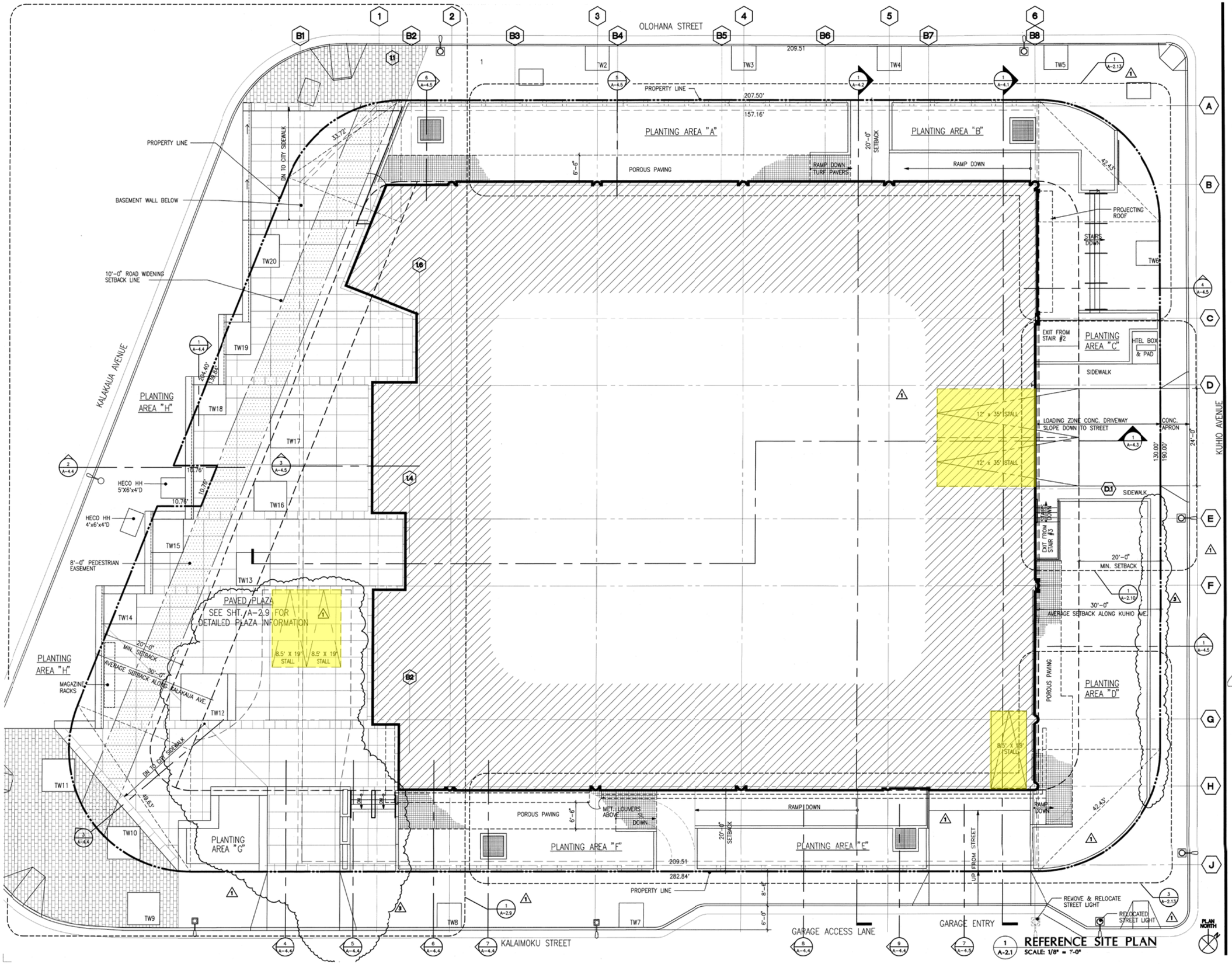
We value your participation in the environmental review process. Your letter will be included in the Final Environmental Assessment.

Sincerely,

Tom Schnell, AICP
Principal

cc: Kalaimoku-Kuhio Development Corp.
City and County of Honolulu DPP

Attachment: Reference Site Plan from the 1997 King Kalākaua Plaza permit set



1 A-2.1 REFERENCE SITE PLAN
SCALE: 1/8" = 1'-0"

Design Architects
eight inc.
675 CALIFORNIA STREET
SAN FRANCISCO, CA. 94108
VOICE 415.434.8462
FAX 415.434.8464
E-MAIL eight@conet.com

Associated Architects
ARCHITECTS HAWAII LIMITED
Pacific Tower, Suite 300
1001 Bishop Street
Honolulu, Hawaii 96813
Telephone: (808) 523-9636
FAX: (808) 521-3280

KING KALAKAUA PLAZA
HONOLULU, HAWAII

K. YOUNG KALAKAUA PARTNERS, INC.
DEVELOPER

PERMIT SET

DAVID A. MILLER
LICENSED PROFESSIONAL ARCHITECT
No. 3067
HAWAII, U.S.A.

This work was prepared by me or under my supervision and construction of this project will be under my observation. (Observation of construction as defined in Chapter 16-115 Subchapter 1 Definitions of the Hawaii Administrative Rules "Professional Engineers, Architects, Surveyors, and Landscape Architects.")

Signature

NOTE: Contractor to check and verify all dimensions at job before proceeding with work.

REFERENCE SITE PLAN

Revision
1 10-16-96
2 1-22-97

Designed by	TK
Drawn by	MG,FTC
Project No.	4334
Date	8-1-96
Drawing No.	A-2.1
of	Sheets

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HONOLULU FIRE DEPARTMENT

CITY AND COUNTY OF HONOLULU

636 South Street
Honolulu, Hawaii 96813-5007
Phone: 808-723-7139 Fax: 808-723-7111 Internet: www.honolulu.gov/hfd

KIRK CALDWELL
MAYOR

MANUEL P. NEVES
FIRE CHIEF

LIONEL CAMARA JR.
DEPUTY FIRE CHIEF

April 27, 2017

Mr. Tom Schnell, AICP
PBR HAWAII & Associates, Inc.
1001 Bishop Street, Suite 650
Honolulu, Hawaii 96813

Dear Mr. Schnell:

Subject: Draft Environmental Assessment
King Kalakaua Plaza Renovation
Tax Map Keys: 2-6-016: 023 and 026

In response to a letter from Ms. Kathy Sokugawa, Director of the City and County of Honolulu's Department of Planning and Permitting (DPP) dated March 29, 2017, regarding the above-mentioned subject, the Honolulu Fire Department requires that the project comply with all requirements of the Fire Code of the City and County of Honolulu, including those triggered by the renovation. The requirements may include those for high rise buildings, for change of use, and for change of occupancy.

Should you have questions, please contact Battalion Chief Wayne Masuda of our Fire Prevention Bureau at 723-7151 or wmasuda@honolulu.gov.

Sincerely,

SOCRATES D. BRATAKOS
Assistant Chief

SDB/SY:ps

cc: Kathy Sokugawa, DPP

PBR HAWAII
& ASSOCIATES, INC.

THOMAS S. WITTEN, FASLA
Chairman / Principal

R. STAN DUNCAN, ASLA
President / Principal

RUSSELL Y. J. CHUNG, FASLA, LEED®AP BD+C
Executive Vice-President / Principal

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Vice-President / Principal

TOM SCHNELL, AICP
Principal

KIMI MIKAMI YUEN, LEED®AP BD+C
Principal

W. FRANK BRANDT, FASLA
Chairman Emeritus

ANN MIKIKO BOUSLOG, PhD
Project Director

RAMSAY R. M. TAUM
Cultural Sustainability Planner

RAYMOND T. HIGA, ASLA
Senior Associate

CATIE CULLISON, AICP
Senior Associate

SCOTT MURAKAMI, ASLA, LEED®AP
Associate

DACHENG DONG, LEED®AP
Associate

MARC SHIMATSU, ASLA
Associate

MICAH McMILLEN, ASLA, LEED®AP
Associate

December 15, 2017

Socrates D. Bratakos
Assistant Chief
City and County of Honolulu
Honolulu Fire Department
636 South King Street
Honolulu, HI 96813

Attn: Battalion Chief Wayne Masuda, Fire Prevention Bureau

SUBJECT: COMMENTS ON THE DRAFT ENVIRONMENTAL ASSESSMENT FOR KING KALĀKAUA PLAZA RENOVATION IN WAIKĪKĪ, TMK (1) 2-6-016:023 and 026

Dear Assistant Chief Bratakos,

Thank you for your letter dated April 27, 2017 regarding the Draft Environmental Assessment for the proposed King Kalākaua Plaza Renovation.

As the planning consultant for Kalaimoku-Kuhio Development Corp. (KKDC), we acknowledge your comments; the Project will comply with all requirements of the Fire Code of the City and County of Honolulu, including those triggered by the renovation.

We value your participation in the environmental review process. Your letter will be included in the Final Environmental Assessment.

Sincerely,

Tom Schnell, AICP
Principal

cc: Kalaimoku-Kuhio Development Corp.
City and County of Honolulu DPP

HONOLULU OFFICE
1001 Bishop Street, Suite 650
Honolulu, Hawai'i 96813-3484
Tel: (808) 521-5631
Fax: (808) 523-1402
E-mail: sysadmin@pbrhawaii.com

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DEPARTMENT OF PARKS & RECREATION

CITY AND COUNTY OF HONOLULU

1000 Uluohia Street, Suite 309, Kapolei, Hawaii 96707
Phone: (808) 768-3003 • Fax: (808) 768-3053
Website: www.honolulu.gov

KIRK CALDWELL
MAYOR

MICHELE K. NEKOTA
DIRECTOR

JEANNE C. ISHIKAWA
DEPUTY DIRECTOR

April 26, 2017

Mr. Tom Schnell
PBR HAWAII and Associates Inc.
1001 Bishop Street, Suite 650
Honolulu, Hawaii 96813

Dear Mr. Schnell:

SUBJECT: Draft Environmental Assessment
King Kalakaua Plaza Renovation

Thank you for the opportunity to review and comment on the Draft Environmental Assessment for the commercial renovation of King Kalakaua Plaza.

The Department of Parks and Recreation has no comment.

Should you have any questions, please contact Mr. John Reid, Planner at 768-3017.

Sincerely,

Michele K, Nekota
Director

MKN:jr
(685372)

cc: Kathy Sokugawa, Acting Director Department of Planning and Permitting

PBR HAWAII
& ASSOCIATES, INC.

THOMAS S. WITTEN, FASLA
Chairman / Principal

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TOM SCHNELL, AICP
Principal

KIMI MIKAMI YUEN, LEED®AP BD+C
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Project Director

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Cultural Sustainability Planner

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Associate

DACHENG DONG, LEED®AP
Associate

MARC SHIMATSU, ASLA
Associate

MICAH McMILLEN, ASLA, LEED®AP
Associate

December 15, 2017

Michele K. Nekota
Director
City and County of Honolulu
Department of Parks and Recreation
1000 Ulu‘ohia Street, Suite 309
Kapolei, HI 96797

Attn: John Reid, Planner

SUBJECT: COMMENTS ON THE DRAFT ENVIRONMENTAL ASSESSMENT FOR KING KALĀKAUA PLAZA RENOVATION IN WAIKĪKĪ, TMK (1) 2-6-016:023 and 026

Dear Ms. Nekota,

Thank you for your letter dated April 26, 2017 regarding the Draft Environmental Assessment for the proposed King Kalākaua Plaza Renovation.

As the planning consultant for Kalaimoku-Kuhio Development Corp. (KKDC), we acknowledge that the Department of Parks and Recreation has no comment.

We value your participation in the environmental review process. Your letter will be included in the Final Environmental Assessment.

Sincerely,

Tom Schnell, AICP
Principal

cc: Kalaimoku-Kuhio Development Corp.
City and County of Honolulu DPP

HONOLULU OFFICE
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POLICE DEPARTMENT

CITY AND COUNTY OF HONOLULU

801 SOUTH BERETANIA STREET · HONOLULU, HAWAII 96813
TELEPHONE: (808) 529-3111 · INTERNET: www.honolulupd.org

KIRK CALDWELL
MAYOR

~~LOUIS M. KEALOHA~~
CHIEF

CARY OKIMOTO
JERRY INOUYE
DEPUTY CHIEFS

OUR REFERENCE MT-DK

April 25, 2017

Mr. Thomas Schnell
PBR HAWAII & Associates, Inc.
1001 Bishop Street, Suite 650
Honolulu, Hawaii 96813

Dear Mr. Schnell:

This is in response to a letter (dated March 29, 2017) from the Department of Planning and Permitting (DPP), City and County of Honolulu, requesting comments a Draft Environmental Assessment for the King Kalakaua Plaza Renovation project in Waikiki.

Based on the information provided, the Honolulu Police Department has concerns regarding the safe flow of traffic at the project site.

The developer should consider the traffic effects to the community caused by vehicles moving in and out of the project area. Because the project site is located in an area of high-vehicular/ pedestrian activity, any obstruction to a thoroughfare will hinder the flow of vehicular and pedestrian traffic. Also, any increase in the current traffic volume at the intersection of Kalakaua Avenue, Kalaimoku Street, and Saratoga Road will cause gridlocks. As a result, drivers may encounter a lengthy travel time delay, especially during peak traffic hours.

If there are any questions, please call Major Roy Sugimoto of District 6 (Waikiki) at 723-3345.

Thank you for the opportunity to review this project.

Sincerely,

CARY OKIMOTO
Acting Chief of Police

By
MARK TSUYEMURA
Management Analyst VI
Office of the Chief

cc: DPP (Urban Branch)

Serving and Protecting With Aloha

PBR HAWAII
& ASSOCIATES, INC.

THOMAS S. WITTEN, FASLA
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MARC SHIMATSU, ASLA
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December 15, 2017

Susan Ballard, Chief of Police
City and County of Honolulu
Police Department
801 South Beretania Street
Honolulu, HI 96813

Attn: Mark Tsuyemura, Office of the Chief
Major Roy Sugimoto, District 6

SUBJECT: COMMENTS ON THE DRAFT ENVIRONMENTAL ASSESSMENT FOR KING KALĀKAUA PLAZA RENOVATION IN WAIKĪKĪ, TMK (1) 2-6-016:023 and 026

Dear Chief Ballard,

Thank you for the Police Department's letter (from Acting Chief of Police Cary Okimoto) dated April 25, 2017 (your reference MT-DK) regarding the Draft Environmental Assessment for the proposed King Kalākaua Plaza Renovation. As the planning consultant for Kalaimoku-Kuhio Development Corp. (KKDC), we are responding to the Police Department's comments.

The findings of the traffic impact analysis report (TIAR) for the King Kālakaua Plaza Renovation (the "Project"), are that upon completion of the Project, all study intersections are forecast to operate similar to existing conditions by the year 2020 buildout of the Project. The Project will reduce vehicle trips by more than 50%, compared to if the building was fully occupied with commercial tenants. The Project will also include a porte-cochere for allow hotel drop-offs/pick-ups and pedestrian walkways around the Project will be maintained.

As required by the City and County of Honolulu Department of Planning and Permitting Traffic Review Branch, after the Waikīkī Special District Permit is obtained, KKDC or its consultants and contractors will provide to DPP for review and approval: 1) a construction management plan (CMP); 2) a traffic management plan (TMP), and; 3) any updates/revisions to the TIAR as may be necessary.

The CMP is anticipated to: 1) identify the type, frequency and routing of construction-related vehicles; 2) provide recommendations to minimize the impacts from construction-related vehicles and related construction activities; 3) recommend limiting construction-related vehicular activity to periods outside of peak traffic periods; and 4) include preliminary or conceptual traffic control plans.

The TMP will include traffic demand management (TDM) strategies and a pedestrian circulation plan. To reduce traffic impacts, the following traffic management measures are being considered:

- Scheduling hotel employee shift changes outside of peak periods;
- Providing bike racks for hotel users and employees;
- Hotel valet staff to minimize queuing from the porte-cochere and parking garage to maintain smooth operations along Kālaimoku Street; and
- Monitoring loading area operations and scheduling or modifying deliveries as necessary.

We value your participation in the environmental review process. Your letter will be included in the Final Environmental Assessment.

Sincerely,

Tom Schnell, AICP
Principal

cc: Kalaimoku-Kuhio Development Corp.
City and County of Honolulu DPP

DAVID Y. IGE
GOVERNOR

RODERICK K. BECKER
Comptroller

AUDREY HIDANO
Deputy Comptroller

STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
P.O. BOX 119, HONOLULU, HAWAII 96810-0119

APR 07 2017

(P)1166.7

Mr. Tom Schnell
PBR Hawaii and Associates, Inc.
1001 Bishop Street, Suite 650
Honolulu, Hawaii 96813

Dear Mr. Schnell:

Subject: King Kalakaua Plaza Renovation
TMK: 2-6-016:023

Thank you for the opportunity to comment on the subject project. Based on the information provided, we have no comments to offer at this time as the proposed project does not impact any of the Department of Accounting and General Services' projects or existing facilities.

If you have any questions, your staff may contact Mr. Kimo Marion of the Planning Branch at 586-0491.

Sincerely,

KEITH S. KOGACHI
Acting Public Works Administrator

KM:lnn

PBR HAWAII
& ASSOCIATES, INC.

THOMAS S. WITTEN, FASLA
Chairman / Principal

R. STAN DUNCAN, ASLA
President / Principal

RUSSELL Y. J. CHUNG, FASLA, LEED®AP BD+C
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Vice-President / Principal

TOM SCHNELL, AICP
Principal

KIMI MIKAMI YUEN, LEED®AP BD+C
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Project Director

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Associate

DACHENG DONG, LEED®AP
Associate

MARC SHIMATSU, ASLA
Associate

MICAH McMILLEN, ASLA, LEED®AP
Associate

December 15, 2017

Keith S. Kogachi
Acting Public Works Administrator
State of Hawai‘i
Department of Accounting and General Services
P.O. Box 119
Honolulu, HI 96810

Attn: Kimo Marion, Planning Branch

SUBJECT: COMMENTS ON THE DRAFT ENVIRONMENTAL ASSESSMENT FOR KING KALĀKAUA PLAZA RENOVATION IN WAIKĪKĪ, TMK (1) 2-6-016:023 and 026

Dear Mr. Kogachi,

Thank you for your letter dated April 7, 2017 regarding the Draft Environmental Assessment for the proposed King Kalākaua Plaza Renovation.

As the planning consultant for Kalaimoku-Kuhio Development Corp. (KKDC), we acknowledge that you have no comments to offer at this time as the proposed project does not impact any of the Department of Accounting and General Services' projects or existing facilities.

We value your participation in the environmental review process. Your letter will be included in the Final Environmental Assessment.

Sincerely,

Tom Schnell, AICP
Principal

cc: Kalaimoku-Kuhio Development Corp.
City and County of Honolulu DPP

HONOLULU OFFICE
1001 Bishop Street, Suite 650
Honolulu, Hawai'i 96813-3484
Tel: (808) 521-5631
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DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE
MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

May 5, 2017

PBR Hawaii & Associates, Inc.
Attention: Mr. Tom Schnell, AICP, Principal
1001 Bishop Street, Suite 650
Honolulu, Hawaii 96813-3484

via email: tschnell@pbrhawaii.com

Dear Mr. Schnell:

SUBJECT: Draft Environmental Assessment (DEA) for the King Kalakaua Plaza Renovation

Thank you for the opportunity to review and comment on the subject matter. The Department of Land and Natural Resources' (DLNR) Land Division distributed or made available a copy of your report pertaining to the subject matter to DLNR Divisions for their review and comments.

At this time, enclosed are comments from the (a) Engineering Division and (b) Land Division – Oahu District on the subject matter. Should you have any questions, please feel free to call Lydia Morikawa at 587-0410. Thank you.

Sincerely,

for Russell Y. Tsuji
Land Administrator

Enclosure(s)
cc: Central Files

DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE
MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

RECEIVED
LAND DIVISION
2017 APR 20 AM 7:00
DEPT. OF LAND &
NATURAL RESOURCES
STATE OF HAWAII

April 10, 2017

MEMORANDUM

TO: **DLNR Agencies:**
___Div. of Aquatic Resources
___Div. of Boating & Ocean Recreation
X Engineering Division
___Div. of Forestry & Wildlife
___Div. of State Parks
X Commission on Water Resource Management
___Office of Conservation & Coastal Lands
X Land Division – Oahu District
X Historic Preservation

FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: Draft Environmental Assessment (DEA) for the King Kalakaua Plaza Renovation
LOCATION: Waikiki, Island of Oahu; TMK No. (1) 2-6-016:023 & 026
APPLICANT: Kalaimoku-Kuhio Development Corp.

Transmitted for your review and comment is information on the above-referenced project. We would appreciate your comments on this project. Please submit any comments by **May 4, 2017.**

The DEA can be found on-line at: http://health.hawaii.gov/oeqc/ (Click on the Current Environmental Notice in the middle of the page.)

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Lydia Morikawa at 587-0410. Thank you.

Attachments

( ) We have no objections.
(x) We have no comments.
( ) Comments are attached.

Signed: Darlene Bryant-Takamatsu

Print Name: Darlene Bryant-Takamatsu
Date: 4/19/17

cc: Central Files

DAVID Y. IGE
GOVERNOR OF HAWAII

'17 APR 11 AM 10:55 ENGINEERING

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE
MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

April 10, 2017

MEMORANDUM

TO: **DLNR Agencies:**
___Div. of Aquatic Resources
___Div. of Boating & Ocean Recreation
From: X Engineering Division
___Div. of Forestry & Wildlife
___Div. of State Parks
X Commission on Water Resource Management
___Office of Conservation & Coastal Lands
X Land Division – Oahu District
X Historic Preservation

FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: Draft Environmental Assessment (DEA) for the King Kalakaua Plaza Renovation
LOCATION: Waikiki, Island of Oahu; TMK No. (1) 2-6-016:023 & 026
APPLICANT: Kalaimoku-Kuhio Development Corp.

Transmitted for your review and comment is information on the above-referenced project. We would appreciate your comments on this project. Please submit any comments by **May 4, 2017.**

The DEA can be found on-line at: http://health.hawaii.gov/oeqc/ (Click on the Current Environmental Notice in the middle of the page.)

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Lydia Morikawa at 587-0410. Thank you.

Attachments

( ) We have no objections.
(X) We have no additional comments.
( ) Comments are attached.

Signed: _____

Print Name: Carty S. Chang, Chief Engineer
Date: 4/24/17

cc: Central Files

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& ASSOCIATES, INC.

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Principal

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Project Director

RAMSAY R. M. TAUM
Cultural Sustainability Planner

RAYMOND T. HIGA, ASLA
Senior Associate

CATIE CULLISON, AICP
Senior Associate

SCOTT MURAKAMI, ASLA, LEED®AP
Associate

DACHENG DONG, LEED®AP
Associate

MARC SHIMATSU, ASLA
Associate

MICAH McMILLEN, ASLA, LEED®AP
Associate

December 15, 2017

Russell Y. Tsuji
Land Administrator
State of Hawai‘i
Department of Land and Natural Resources
P.O. Box 621
Honolulu, Hawai‘i 96809

Attn: Lydia Morikawa

SUBJECT: COMMENTS ON THE DRAFT ENVIRONMENTAL ASSESSMENT FOR KING KALĀKAUA PLAZA RENOVATION IN WAIKĪKĪ, TMK (1) 2-6-016:023 and 026

Dear Mr. Tsuji,

Thank you for your letter dated May 5, 2017 regarding the Draft Environmental Assessment for the proposed King Kalākaua Plaza Renovation.

As the planning consultant for Kalaimoku-Kuhio Development Corp. (KKDC), we acknowledge that the (a) Engineering Division and (b) Land Division – O‘ahu District have no additional comments to offer at this time.

We value your participation in the environmental review process. Your letter will be included in the Final Environmental Assessment.

Sincerely,

Tom Schnell, AICP
Principal

cc: Kalaimoku-Kuhio Development Corp.
City and County of Honolulu DPP

HONOLULU OFFICE
1001 Bishop Street, Suite 650
Honolulu, Hawai‘i 96813-3484
Tel: (808) 521-5631
Fax: (808) 523-1402
E-mail: sysadmin@pbrhawaii.com

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GOVERNOR

ARTHUR J. LOGAN
MAJOR GENERAL
ADJUTANT GENERAL

KENNETH S. HARA
BRIGADIER GENERAL
DEPUTY ADJUTANT GENERAL

J4

2017 APR 10 AM 10: 05
DEPT OF PLANNING
AND PERMITTING
CITY & COUNTY OF HONOLULU

STATE OF HAWAII
DEPARTMENT OF DEFENSE
OFFICE OF THE ADJUTANT GENERAL
3949 DIAMOND HEAD ROAD
HONOLULU, HAWAII 96816-4495

April 5, 2017

Ms. Kathy Sokugawa, Acting Director
Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 7th Floor
Honolulu, Hawaii 96813

Dear Ms. Sokugawa:

Subject: Draft Environmental Impact Statement, King Kalakaua Plaza Renovation, 2080 Kalakaua Avenue, Honolulu, Oahu, Hawaii, TMK (1)2-6-016:023 and 026

Thank you for the opportunity to comment on the above project. The State of Hawaii Department of Defense has no comments to offer relative to the project.

If you have any questions or concerns, please have your staff contact Mr. Lloyd Maki, Assistant Chief Engineering Officer at (808) 733-8441.

Sincerely,

NEAL S. MITSUYOSHI, P. E.
Colonel, Hawaii National Guard
Chief Engineering Officer

c: Ms. Havinne Okamura, Hawaii Emergency Management Agency

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& ASSOCIATES, INC.

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Associate

MARC SHIMATSU, ASLA
Associate

MICAH McMILLEN, ASLA, LEED®AP
Associate

December 15, 2017

Neal S. Mitsuyoshi, P.E.
Chief Engineering Officer
State of Hawai‘i
Department of Defense
Office of the Adjutant General
3949 Diamond Head Road
Honolulu, HI 96816

Attn: Mr. Lloyd Maki, Assistant Chief Engineering Officer

SUBJECT: COMMENTS ON THE DRAFT ENVIRONMENTAL ASSESSMENT FOR KING KALĀKAUA PLAZA RENOVATION IN WAIKĪKĪ, TMK (1) 2-6-016:023 and 026

Dear Colonel Mitsuyoshi,

Thank you for your letter dated April 5, 2017 regarding the Draft Environmental Assessment for the proposed King Kalākaua Plaza Renovation.

As the planning consultant for Kalaimoku-Kuhio Development Corp. (KKDC), we acknowledge that you have no comments to offer relative to the Project.

We value your participation in the environmental review process. Your letter will be included in the Final Environmental Assessment.

Sincerely,

Tom Schnell, AICP
Principal

cc: Kalaimoku-Kuhio Development Corp.
City and County of Honolulu DPP

HONOLULU OFFICE
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Honolulu, Hawai‘i 96813-3484
Tel: (808) 521-5631
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DAVID Y. IGE
GOVERNOR OF HAWAII

VIRGINIA PRESSLER, M.D.
DIRECTOR OF HEALTH

STATE OF HAWAII
DEPARTMENT OF HEALTH
P. O. BOX 3378
HONOLULU, HI 96801-3378

In reply, please refer to:
EMD/CWB

04016PNN.17

April 7, 2017

Mr. Tom Schnell
PBR Hawaii and Associates, Inc.
1001 Bishop Street, Suite 650
Honolulu, Hawaii 96813

Dear Mr. Schnell:

SUBJECT: Comments on the Draft Environmental Assessment for the King Kalakaua Plaza Renovation Project
TMKs: (1) 2-6-016:023 and 026
Waikiki, Island of Oahu, Hawaii

The Department of Health (DOH), Clean Water Branch (CWB), acknowledges receipt of the subject document on April 3, 2017. The DOH-CWB has reviewed the subject document and offers these comments. Please note that our review is based solely on the information provided in the subject document and its compliance with the Hawaii Administrative Rules (HAR), Chapters 11-54 and 11-55. You may be responsible for fulfilling additional requirements related to our program. We recommend that you also read our standard comments on our website at: http://health.hawaii.gov/epo/files/2013/05/Clean-Water-Branch-Std-Comments.pdf.

1. Any project and its potential impacts to State waters must meet the following criteria:

   a. Antidegradation policy (HAR, Section 11-54-1.1), which requires that the existing uses and the level of water quality necessary to protect the existing uses of the receiving State water be maintained and protected.

   b. Designated uses (HAR, Section 11-54-3), as determined by the classification of the receiving State waters.

   c. Water quality criteria (HAR, Sections 11-54-4 through 11-54-8).

2. You may be required to obtain National Pollutant Discharge Elimination System (NPDES) permit coverage for discharges of wastewater, including storm water runoff, into State surface waters (HAR, Chapter 11-55).

For NPDES general permit coverage, a Notice of Intent (NOI) form must be submitted at least 30 calendar days before the commencement of the discharge. An application for an NPDES individual permit must be submitted at least 180 calendar days before the commencement of the discharge. To request NPDES permit coverage, you must submit the applicable form ("CWB Individual NPDES Form" or "CWB NOI Form") through the e-Permitting Portal and the hard copy certification statement with the respective filing fee ($1,000 for an individual NPDES permit or $500 for a Notice of General Permit Coverage). Please open the e-Permitting Portal website located at: https://eha-cloud.doh.hawaii.gov/epermit/. You will be asked to do a one-time registration to obtain your login and password. After you register, click on the Application Finder tool and locate the appropriate form. Follow the instructions to complete and submit the form.

3. If your project involves work in, over, or under waters of the United States, it is highly recommended that you contact the Army Corp of Engineers, Regulatory Branch (Tel: 835-4303) regarding their permitting requirements.

   Pursuant to Federal Water Pollution Control Act [commonly known as the "Clean Water Act" (CWA)], Paragraph 401(a)(1), a Section 401 Water Quality Certification (WQC) is required for "[a]ny applicant for Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may **result** in any discharge into the navigable waters..." (emphasis added). The term "discharge" is defined in CWA, Subsections 502(16), 502(12), and 502(6); Title 40 of the Code of Federal Regulations, Section 122.2; and HAR, Chapter 11-54.

4. Please note that all discharges related to the project construction or operation activities, whether or not NPDES permit coverage and/or Section 401 WQC are required, must comply with the State's Water Quality Standards. Noncompliance with water quality requirements contained in HAR, Chapter 11-54, and/or permitting requirements, specified in HAR, Chapter 11-55, may be subject to penalties of $25,000 per day per violation.

5. It is the State's position that all projects must reduce, reuse, and recycle to protect, restore, and sustain water quality and beneficial uses of State waters. Project planning should:

   a. Treat storm water as a resource to be protected by integrating it into project planning and permitting. Storm water has long been recognized as a source of irrigation that will not deplete potable water resources. What is often overlooked is that storm water recharges ground water supplies and feeds streams and estuaries; to ensure that these water cycles are not disrupted, storm water

cannot be relegated as a waste product of impervious surfaces. Any project planning must recognize storm water as an asset that sustains and protects natural ecosystems and traditional beneficial uses of State waters, like community beautification, beach going, swimming, and fishing. The approaches necessary to do so, including low impact development methods or ecological bio-engineering of drainage ways must be identified in the planning stages to allow designers opportunity to include those approaches up front, prior to seeking zoning, construction, or building permits.

b. Clearly articulate the State's position on water quality and the beneficial uses of State waters. The plan should include statements regarding the implementation of methods to conserve natural resources (e.g., minimizing potable water for irrigation, gray water re-use options, energy conservation through smart design) and improve water quality.

c. Consider storm water Best Management Practice (BMP) approaches that minimize the use of potable water for irrigation through storm water storage and reuse, percolate storm water to recharge groundwater to revitalize natural hydrology, and treat storm water which is to be discharged.

d. Consider the use of green building practices, such as pervious pavement and landscaping with native vegetation, to improve water quality by reducing excessive runoff and the need for excessive fertilization, respectively.

e. Identify opportunities for retrofitting or bio-engineering existing storm water infrastructure to restore ecological function while maintaining, or even enhancing, hydraulic capacity. Particular consideration should be given to areas prone to flooding, or where the infrastructure is aged and will need to be rehabilitated.

If you have any questions, please visit our website at: http://health.hawaii.gov/cwb, or contact the Engineering Section, CWB, at (808) 586-4309.

Sincerely,

Alec Wong

ALEC WONG, P.E., CHIEF
Clean Water Branch

NN:ak

c: DOH-EPO [via e-mail Noella.Narimatsu@doh.hawaii.gov only]
Ms. Joette Yago, CCH-DPP [via e-mail jyago@honolulu.gov only]

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& ASSOCIATES, INC.

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December 15, 2017

Alec Wong, P.E., Chief
State of Hawai'i
Department of Health – Clean Water Branch
P.O. Box 3378
Honolulu, HI 96801

Attn: Engineering Section, Clean Water Branch

SUBJECT: COMMENTS ON THE DRAFT ENVIRONMENTAL ASSESSMENT FOR KING KALĀKAUA PLAZA RENOVATION IN WAIKĪKĪ, TMK (1) 2-6-016:023 and 026

Dear Mr. Wong,

Thank you for your letter dated April 7, 2017 (your reference 04016PNN.17) regarding the Draft Environmental Assessment (Draft EA) for the proposed King Kalākaua Plaza Renovation. As the planning consultant for Kalaimoku-Kuhio Development Corp. (KKDC), we are responding to your comments.

1. Potential Impacts to State Waters
   We have reviewed the requirements of Hawaii Administrative Rules (HAR), Chapter 54, Water Quality Standards. KKDC will comply will all applicable Federal, State, and County requirements regarding water quality, including HAR, Section 11-54-1.1 regarding water quality antitradition, HAR Section 11-54-3, regarding classification of water uses, and HAR Sections 11-54-4 through 11-54-8, regarding water quality criteria.

   The property is within the Ala Wai Watershed. There are no surface water resources on the property. The nearest stream as classified by the Hawai'i Department of Aquatic Resources is the Ala Wai Canal, located approximately 735 feet mauka of the property. The nearest surface water body is the Pacific Ocean, located approximately 2,000 feet makai of the property. The Ala Wai Canal is a Class 2 inland water and the portion of the Pacific Ocean near the Property is a Class A marine water.

   As stated in the Draft EA, no impacts on surface water resources are anticipated. The Ala Wai Canal is located upgradient of the Property, and therefore no impact from King Kalākaua Plaza is anticipated. To mitigate construction-related, short-term impacts, best management practices (BMPs) will be incorporated during construction to prevent stormwater discharges and contaminants such as sediment, pollutants, petroleum products, and debris from affecting coastal water quality. Before construction commences, BMPs will be installed fronting all drainage facilities, such as catch basin and drainage inlets along Kalākaua Avenue and Kūhiō Avenue. The contractor shall be responsible for clearing storm drain facilities to mitigate flooding during construction and removing BMPs upon completion of the project.

2. National Pollutant Discharge Elimination System (NPDES) Requirements
   A National Pollutant Discharge Elimination System (NPDES) permit for construction activities is not likely to be required for the renovations since the disturbed areas related to the work is less than one acre.

3. Waters of the United States
   The project does not involve work in, over, or under waters of the United States. The U.S. Army Corps of Engineers received pre-assessment consultation and a copy of the Draft EA.

4. State Water Quality Standards
   KKDC will comply will all applicable Federal, State, and County requirements regarding water quality, including HAR, Chapter 54, and Water Quality Standards.

5. State's Position on Reduction, Reuse, and Recycling
   KKDC will comply will all applicable Federal, State, and County requirements regarding water quality. No impacts on ground or surface water resources are anticipated. In acknowledgement of the State's position that all projects must reduce, reuse, and recycle to protect, restore, and sustain water quality and beneficial uses of State waters, the Draft EA and the Final EA include the following statements:

   Below are the policies of the Hawai'i Department of Health Clean Water Branch, which are applicable to all projects in the State of Hawai'i:
   - *It is the State's position that all projects must reduce, reuse and recycle water to protect, restore and sustain water quality and beneficial uses of State waters.*
   - *State policy encourages stormwater infiltration through Low Impact Development (LID) practices, and discourages the treatment of stormwater as a waste product off impervious surfaces.*
   - *This Environmental Assessment recognizes stormwater as:*
     - *a potential source of irrigation*
     - *a source of groundwater recharge and stream base flow*
     - *an asset that sustains and protects natural ecosystems and traditional beneficial uses of State waters*

   In addition, the State has a General Policy of Water Quality Antidegradation (§11-54-1.1, HAR), which states that existing uses and the level of water quality necessary to protect them, shall be maintained and protected. In the case that water quality exceeds levels necessary to protect aquatic habitats, water quality may not be degraded without director approval.

We value your participation in the environmental review process. Your letter will be included in the Final Environmental Assessment.

Sincerely,

Tom Schnell, AICP
Principal

cc: Kalaimoku-Kuhio Development Corp.
City and County of Honolulu DPP

DAVID Y. IGE
GOVERNOR OF HAWAII

VIRGINIA PRESSLER, M.D.
DIRECTOR OF HEALTH

STATE OF HAWAII
DEPARTMENT OF HEALTH
P. O. BOX 3378
HONOLULU, HI 96801-3378

In reply, please refer to:
File:

EPO 17-081

April 24, 2017

Mr. Tom Schnell
PBR Hawaii and Associates, Inc.
1001 Bishop Street, Suite 650
Honolulu, Hawaii 96813
Email: tschnell@pbrhawaii.com

Dear Mr. Schnell:

SUBJECT: Draft Environmental Assessment (DEA) for King Kalakaua Plaza Renovation, Oahu
TMK: 2-6-16: 23 and 26

The Department of Health (DOH), Environmental Planning Office (EPO), acknowledges receipt of your DEA to our office via the OEQC link: http://oeqc.doh.hawaii.gov/Shared%20Documents/EA_and_EIS_Online_Library/Oahu/2010s/2017-04-08-OA-5E-DEA-King-Kalakaua-Plaza-Renovation.pdf

We understand from the OEQC publication form project summary that "*Kalaimoku-Kuhio Development Corp. intends to renovate the existing building for use as a hotel and hotel-related retail uses on the ground floor. As part of the renovation up to three new floors may be added, for a total of up to seven floors. The renovations represent an investment in the long-term well-being of the surrounding community, and ensure that the building is a sustainable improvement to Waikīkī. By renovating and adaptively reusing an existing building, King Kalākaua Plaza provides a substantially reduced environmental impact compared to demolition and new construction. The building footprint will not be enlarged, with the additional floor area coming from the possible addition of up to three new floors. As much of the existing grounds will be retained as feasible and per code, and renovations will include landscape improvements for all planting areas surrounding the building.*"

In the development and implementation of all projects, EPO strongly recommends regular review of State and Federal environmental health land use guidance. State standard comments and available strategies to support sustainable and healthy design are provided at: http://health.hawaii.gov/epo/landuse. Projects are required to adhere to all applicable standard comments. EPO has recently updated the environmental Geographic Information System (GIS) website page. It now compiles various maps and viewers from our environmental health programs. The eGIS website page is continually updated so please visit it regularly at: http://health.hawaii.gov/epo/egis

In 2015, Hawaii passed Act 97 which amended Hawaii's Renewable Portfolio Standards by setting a goal for Hawaii to become one hundred percent renewable by the year 2045. To reach this goal Hawaii should transform its transportation sector from the use of fossil fuels to renewable fuel, electric vehicles (EV)s, and public transit systems including bikeshare programs. To address "range anxiety" and facilitate the adoption of EVs, it is essential that EV charging stations be added to any planned parking areas open to the EV driving public. All future plans should strive to encourage the use of personal bicycles though the development of designated bike lanes and class A bike trails. All efforts should be made to reduce harmful vehicle emissions, reduce vehicle miles travelled (VMT's), encourage alternative modes of transport and increase physical activity.

To motivate people to use bicycle transportation, Honolulu's new Bikeshare Program (initially from Downtown Honolulu to Waikiki) will introduce "Biki" to Honolulu using the newest generation of bikes. For additional information on bikeshare Hawaii, "Biki", please go to: http://www.bikesharehawaii.org

EPO also encourages you to examine and utilize the Hawaii Environmental Health Portal at: https://eha-cloud.doh.hawaii.gov. This site provides links to our e-Permitting Portal, Environmental Health Warehouse, Groundwater Contamination Viewer, Hawaii Emergency Response Exchange, Hawaii State and Local Emission Inventory System, Water Pollution Control Viewer, Water Quality Data, Warnings, Advisories and Postings.

We suggest you review the requirements of the Clean Water Branch (Hawaii Administrative Rules {HAR}, Chapter 11-54-1.1, -3, 4-8) and/or the National Pollutant Discharge Elimination System (NPDES) permit (HAR, Chapter 11-55) at: http://health.hawaii.gov/cwb. If you have any questions, please contact the Clean Water Branch (CWB), Engineering Section at (808) 586-4309 or cleanwaterbranch@doh.hawaii.gov. If your project involves waters of the U.S., it is highly recommended that you contact the Army Corps of Engineers, Regulatory Branch at: (808) 835-4303.

Any construction waste generated by the project needs to be disposed of at a solid waste disposal facility that complies with the applicable provisions (HAR, Chapter 11-58.1 "Solid Waste Management Control"). The open burning of any of these wastes, on or off site, is strictly prohibited. Additional information is accessible at: http://health.hawaii.gov/shwb. For specific questions call (808) 586-4226.

If temporary fugitive dust emissions could be emitted when the project site is prepared for construction and/or when construction activities occur, we recommend you review the need and/or requirements for a Clean Air Branch (CAB) permit (HAR, Chapter 11-60.1 "Air Pollution Control"). Effective air pollution control measures need to be provided to prevent or minimize any fugitive dust emissions caused by construction work from affecting the surrounding areas. This includes the off-site roadways used to enter/exit the project. The control measures could include, but are not limited to, the use of water wagons, sprinkler systems, and dust fences. For questions contact the Clean Air Branch via e-mail at: Cab.General@doh.hawaii.gov or call (808) 586-4200.

If noise created during the construction phase of the project may exceed the maximum allowable levels (HAR, Chapter 11-46, "Community Noise Control") then a noise permit may be required and needs to be obtained before the commencement of work. Relevant information is online at: http://health.hawaii.gov/irhb/noise EPO recommends you contact the Indoor and Radiological Health Branch (IRHB) at (808) 586-4700 with any specific questions.

You may also wish to review the draft Office of Environmental Quality Control (OEQC) viewer at: http://eha-web.doh.hawaii.gov/oeqc-viewer. This viewer geographically shows where some previous Hawaii Environmental Policy Act (HEPA) {Hawaii Revised Statutes, Chapter 343} documents have been prepared.

To better protect public health and the environment, the U.S. Environmental Protection Agency (EPA) has developed a new environmental justice (EJ) mapping and screening tool called EJSCREEN. It is based on nationally consistent data and combines environmental and demographic indicators in maps and reports. EPO encourages you to explore, launch and utilize this powerful tool in planning your project. The EPA EJSCREEN tool is available at: http://www.epa.gov/ejscreen.

We request that you utilize all this information on your proposed project to increase sustainable, innovative, inspirational, transparent and healthy design. Thank you for the opportunity to comment.

Mahalo nui loa,

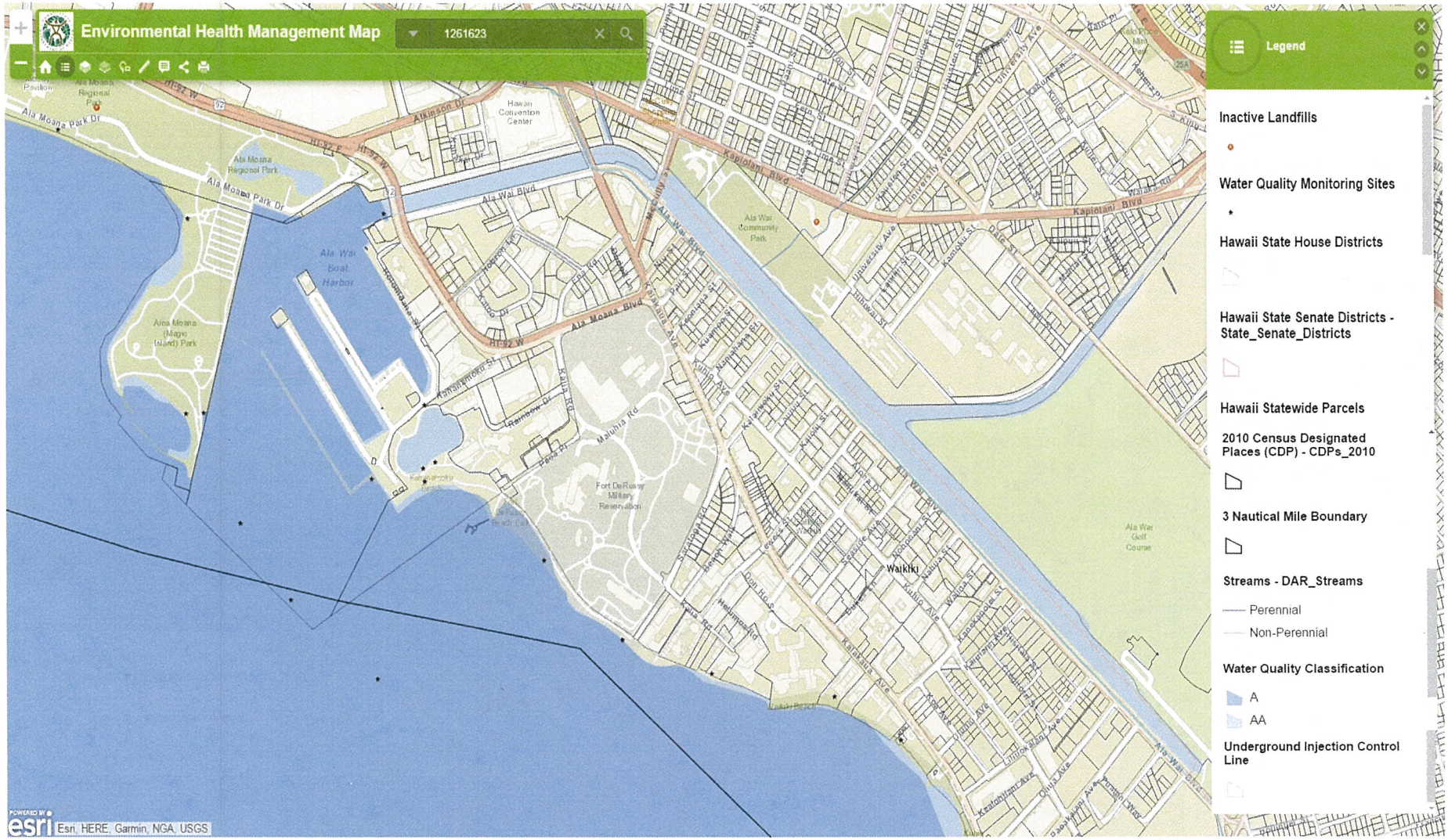
Laura Leialoha Phillips McIntyre, AICP
Program Manager, Environmental Planning Office

LM:nn

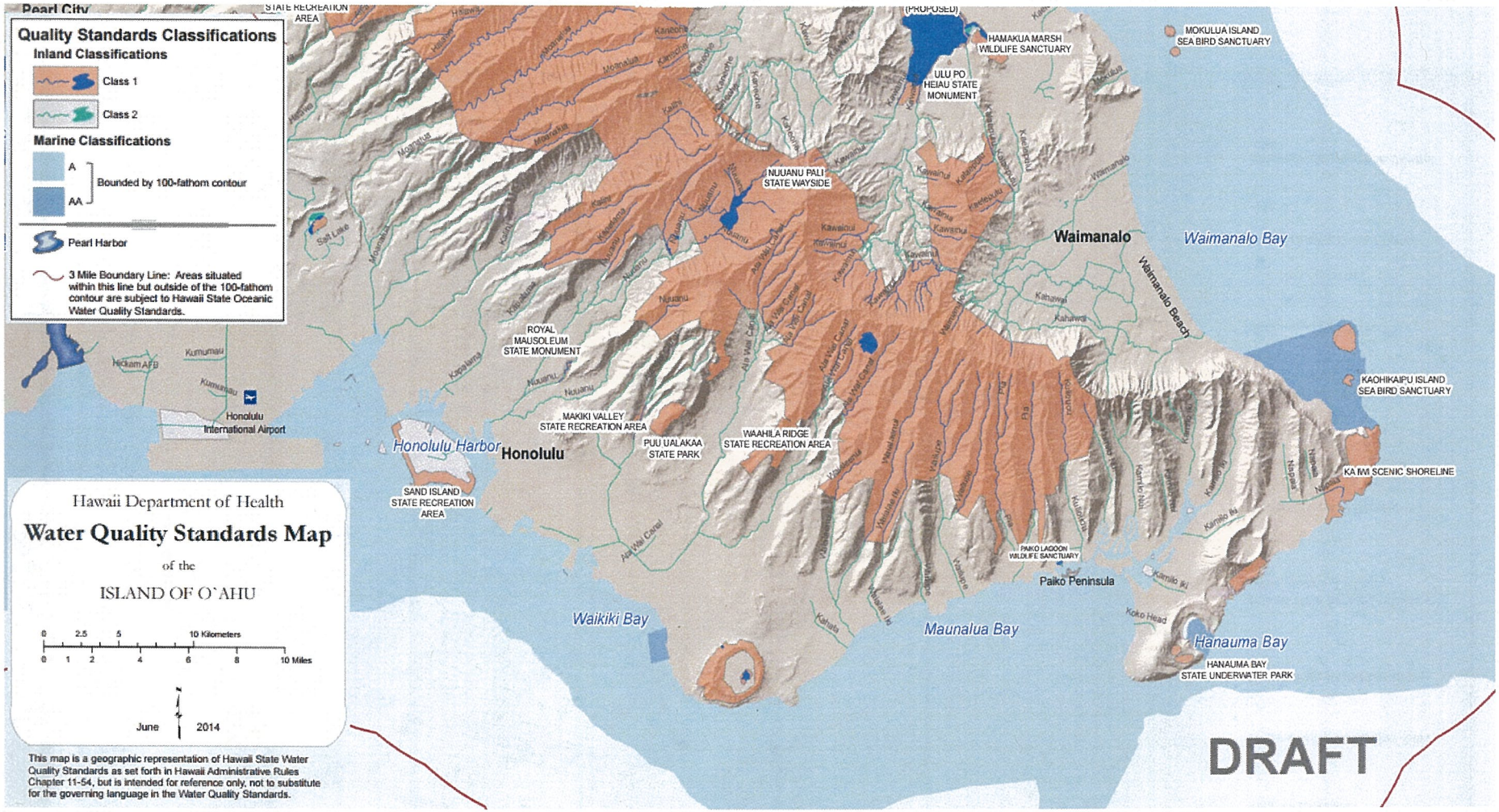
Attachment 1: Environmental Health Management Web App Snipit of Project Area: http://health.hawaii.gov/epo/egis
Attachment 2: Clean Water Branch: Water Quality Standards Map
Attachment 3: U.S. EPA EJSCREEN Report for Project Area

c: John M. Manavian, Kalaimoku-Kuhio Development Corp. (via email: tschnell@pbr.hawaii.com)
Joette Yago, Urban Design Branch (via email: jyago@honolulu.gov)
DOH: CWB, WWB, CAB, IRHB, SHWB {via email only}

Attachment 1: Environmental Health Management Web App Snipit of Project Area: http://health.hawaii.gov/epo/egis



Attachment 2: Clean Water Branch: Water Quality Standards Map



Attachment 3: U.S. EPA EJSCREEN Report for Project Area

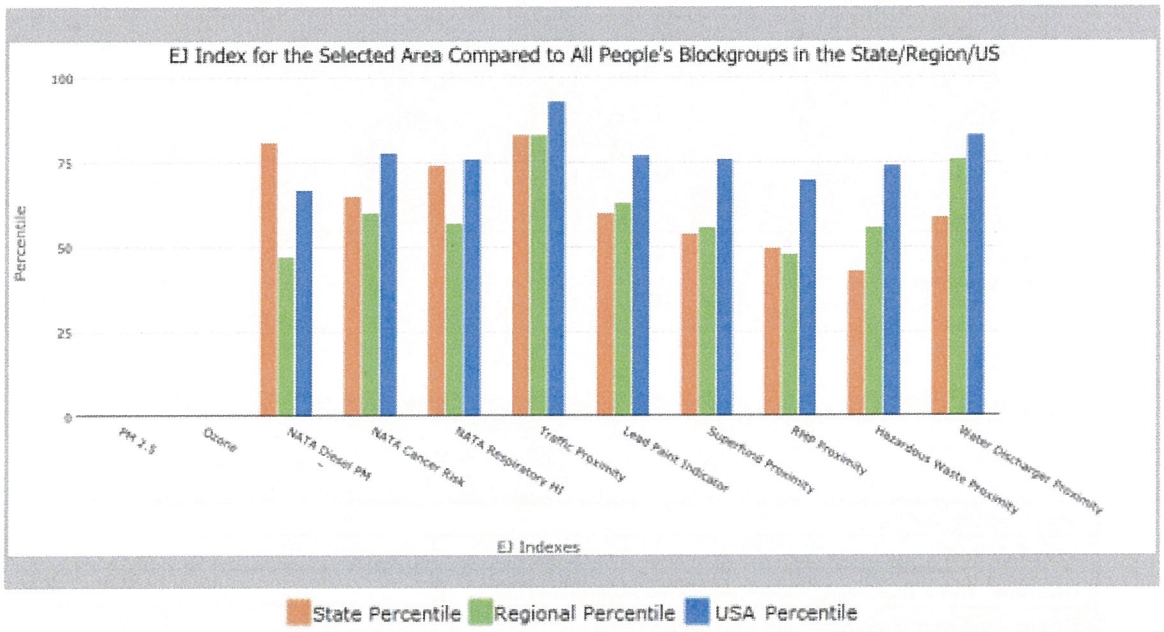
EJSCREEN Report (Version 2016)

1 mile Ring Centered at 21.282935,-157.831187, HAWAII, EPA Region 9

Approximate Population: 53,351

Input Area (sq. miles): 3.14

Selected Variables	State Percentile	EPA Region Percentile	USA Percentile
EJ Indexes			
EJ Index for PM2.5	N/A	N/A	N/A
EJ Index for Ozone	N/A	N/A	N/A
EJ Index for NATA* Diesel PM	81	47	67
EJ Index for NATA* Air Toxics Cancer Risk	65	60	78
EJ Index for NATA* Respiratory Hazard Index	74	57	76
EJ Index for Traffic Proximity and Volume	83	83	93
EJ Index for Lead Paint Indicator	60	63	77
EJ Index for Superfund Proximity	54	56	76
EJ Index for RMP Proximity	50	48	70
EJ Index for Hazardous Waste Proximity*	43	56	74
EJ Index for Water Discharger Proximity	59	76	83



This report shows the values for environmental and demographic indicators and EJSCREEN indexes. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 95th percentile nationwide, this means that only 5 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports.

EJSCREEN Report (Version 2016)

1 mile Ring Centered at 21.282935,-157.831187, HAWAII, EPA Region 9

Approximate Population: 53,351

Input Area (sq. miles): 3.14

April 18, 2017

Digitized Point

1:1,128

Sites reporting to EPA	
Superfund NPL	0
Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)	0
National Pollutant Discharge Elimination System (NPDES)	0

EJSCREEN Report (Version 2016)

1 mile Ring Centered at 21.282935,-157.831187, HAWAII, EPA Region 9

Approximate Population: 53,351

Input Area (sq. miles): 3.14

Selected Variables	Value	State Avg.	%ile in State	EPA Region Avg.	%ile in EPA Region	USA Avg.	%ile in USA
Environmental Indicators							
Particulate Matter (PM 2.5 in µg/m³)	N/A	N/A	N/A	9.37	N/A	9.32	N/A
Ozone (ppb)	N/A	N/A	N/A	51	N/A	47.4	N/A
NATA* Diesel PM (µg/m³)	0.319	0.149	90	0.978	<50th	0.937	<50th
NATA* Cancer Risk (lifetime risk per million)	51	34	93	43	80-90th	40	80-90th
NATA* Respiratory Hazard Index	2	1	94	2	50-60th	1.8	60-70th
Traffic Proximity and Volume (daily traffic count/distance to road)	2100	990	87	1100	84	590	93
Lead Paint Indicator (% Pre-1960 Housing)	0.15	0.16	59	0.24	51	0.3	44
Superfund Proximity (site count/km distance)	0.051	0.098	46	0.15	37	0.13	43
RMP Proximity (facility count/km distance)	0.099	0.19	52	0.57	19	0.43	27
Hazardous Waste Proximity+ (facility count/km distance)	0.073	0.14	43	0.14	47	0.11	53
Water Discharger Proximity (facility count/km distance)	0.26	0.34	59	0.2	82	0.31	71
Demographic Indicators							
Demographic Index	54%	52%	58	47%	61	36%	76
Minority Population	73%	77%	32	58%	63	37%	81
Low Income Population	34%	26%	71	36%	51	35%	54
Linguistically Isolated Population	15%	6%	88	9%	77	5%	89
Population With Less Than High School Education	9%	9%	58	17%	37	14%	43
Population Under 5 years of age	4%	6%	22	7%	23	6%	25
Population over 64 years of age	18%	15%	65	13%	79	14%	75

* The National-Scale Air Toxics Assessment (NATA) is EPA's ongoing, comprehensive evaluation of air toxics in the United States. EPA developed the NATA to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that NATA provides broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. More information on the NATA analysis can be found at: https://www.epa.gov/national-air-toxics-assessment.

+ The hazardous waste environmental indicator and the corresponding EJ index will appear as N/A if there are no hazardous waste facilities within 50 km of a selected location.

For additional information, see: www.epa.gov/environmentaljustice

EJSCREEN is a screening tool for pre-decisional use only. It can help identify areas that may warrant additional consideration, analysis, or outreach. It does not provide a basis for decision-making, but it may help identify potential areas of EJ concern. Users should keep in mind that screening tools are subject to substantial uncertainty in their demographic and environmental data, particularly when looking at small geographic areas. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports. This screening tool does not provide data on every environmental impact and demographic factor that may be relevant to a particular location. EJSCREEN outputs should be supplemented with additional information and local knowledge before taking any action to address potential EJ concerns.

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printed on recycled paper

December 15, 2017

Laura McIntyre, AICP
Program Manager
State of Hawai'i
Department of Health – Environmental Protection Office
P.O. Box 3378
Honolulu, HI 96801

SUBJECT: COMMENTS ON THE DRAFT ENVIRONMENTAL ASSESSMENT FOR KING KALĀKAUA PLAZA RENOVATION IN WAIKĪKĪ, TMK (1) 2-6-016:023 and 026

Dear Ms. McIntyre,

Thank you for your letter dated April 24, 2017 (your reference EPO 17-081) regarding the Draft Environmental Assessment (Draft EA) for the proposed King Kalākaua Plaza Renovation. As the planning consultant for Kalaimoku-Kuhio Development Corp. (KKDC), we are responding to your comments.

DOH Standard Comments

We have reviewed the standard comments on the DOH EPO website for applicability to the project. We have reviewed the EPO GIS website and the Hawaii Environmental Health Portal and its links to various sources of state environmental data. We have also reviewed the materials available on EJSCREEN and the OEQC viewer. KKDC will comply will all Federal, State, and County requirements.

Electric Vehicle Charging Stations

KKDC will comply with Section 291-71, Hawaii Revised Statutes, as applicable, regarding the designation of parking spaces for electric vehicles.

Bicycle Transportation and Bikeshare Hawaii

In the Draft EA it is noted that the makai side of Kalākaua Avenue contains an eastbound bicycle lane which runs from Ala Moana Boulevard to Kapahulu Avenue. A westbound bicycle lane runs on Ala Wai Boulevard from 'Āinakea Way to Keoniana Street. It was also noted that the renovations will include bike racks for retail and hotel users and employees. This information will be retained in the Final EA.

There are four Bikeshare Hawaii biki stations in very close proximity to King Kalākaua Plaza: 1) biki station #314 at Saragota Road and Kalākaua Avenue; 2) biki station #316 at Beach Walk and Kalākaua Avenue; 3) biki station #311 at Kalākaua Avenue and Gateway Park; and 4) biki station #312 at 'Olohana Street and Kūhiō Avenue. This information will be included in the Final EA.

DOH-Clean Water Branch

We have reviewed the requirements of: 1) the Clean Water Branch (Hawaii Administrative Rules (HAR), Chapter 11-54-1.1, -3, 4-8); and 2) the National Pollutant Discharge Elimination System (NPDES) permit (HAR, Chapter 11-55). KKDC will comply will all Federal, State, and County requirements regarding water quality. In addition, comments received from DOH-Clean Water Branch will be included in the Final EA, along with our response. A National Pollutant Discharge Elimination System (NPDES) permit for construction activities is not likely to be required for the renovations since the disturbed areas related to the work is less than one acre.

Construction Waste

KKDC will comply with the applicable provisions of Hawaii Administrative Rules (HAR), Chapter 11-58.1, Solid Waste Management Control, regarding construction waste.

DOH- Clean Air Branch

KKDC will comply with the applicable provisions of HAR, Chapter 11-60.1, Air Pollution Control, regarding fugitive dust from construction.

Noise

KKDC will comply with the applicable provisions of HAR, Chapter 11-46, Community Noise Control, regarding construction noise.

We value your participation in the environmental review process. Your letter will be included in the Final Environmental Assessment.

Sincerely,

Tom Schnell, AICP
Principal

cc: Kalaimoku-Kuhio Development Corp.
City and County of Honolulu DPP

DAVID Y. IGE
GOVERNOR

FORD N. FUCHIGAMI
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DARRELL T. YOUNG

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

IN REPLY REFER TO:
DIR 0505
HWY-PS 2.4744

May 15, 2017

Mr. Tom Schnell
PBR Hawaii & Associates, Inc.
1001 Bishop Street, Suite 650
Honolulu, Hawaii 96813

Dear Mr. Schnell:

Subject: Draft Environmental Assessment
King Kalakaua Plaza Renovation
Kalakaua Avenue, Kalaimoku Street, Kuhio Avenue and Olohana Street
Waikiki, Honolulu, Hawaii
TMK: (1) 2-6-016: 023 and 026

We received your request for the review of a Draft Environmental Assessment (DEA) required by Chapter 343, Hawaii Revised Statutes, which also contain a Traffic Impact Analysis Report (TIAR) dated March 20, 2017. The one-acre, hotel expansion project is within 2-blocks from the Ala Moana Boulevard and is bounded by County Roads; Kalakaua Avenue to the West, Olahana Street to the North, Kalaimoku Street to the East, and Kalaimoku Street to the South.

We also acknowledge the receipt of your response letter dated January 10, 2017, to the Hawaii Department of Transportation's (HDOT) prior comments (dated November 9, 2016) to include the Ala Moana Boulevard in the project study area and any impacts to this nearby State facility in the TIAR. However, your letter states that:

> "According to the TIAR, the proposed renovations are anticipated to contribute between three to four percent of the traffic along Ala Moana Boulevard which is less than the daily fluctuation. Therefore, Ala Moana Boulevard is not anticipated to experience impacts from King Kalakaua Plaza."

While the project is not anticipated to have significant traffic impact to the State highway facilities, we are not able to find any reference to this discussion in the TIAR. Therefore, the HDOT would like it in the documentation, with emphasis on traffic impacts to the a.m. peak and p.m. peak rather than the daily traffic volume/fluctuation you referenced.

If you have any questions, please contact Ken Tatsuguchi, Engineering Program Manager, Highways Division, Planning Branch, at (808) 587-1830. Please reference file review number PS 2016-188.

Sincerely,

FORD N. FUCHIGAMI
Director of Transportation

c: Joette Yago, City and County of Honolulu, DPP
Office of Environmental Quality Control

PBR HAWAII
& ASSOCIATES, INC.

THOMAS S. WITTEN, FASLA
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December 15, 2017

Jade Butay, Interim Director
Director of Transportation
State of Hawai‘i
Department of Transportation
869 Punchbowl Street
Honolulu, HI 96813

Attn: Ken Tatsuguchi, Engineering Program Manager, Highways Division, Planning Branch

SUBJECT: COMMENTS ON THE DRAFT ENVIRONMENTAL ASSESSMENT FOR KING KALĀKAUA PLAZA RENOVATION IN WAIKĪKĪ, TMK (1) 2-6-016:023 and 026

Dear Mr. Butay,

Thank you for your letter dated May 15, 2017 (your reference/file review number PS 2016-188) regarding the Draft Environmental Assessment (EA) for the proposed King Kalākaua Plaza Renovation. As the planning consultant for Kālaimoku-Kūhiō Development Corp. (KKDC), we are responding to your comment.

The Final EA will include an updated Traffic Impact Analysis Report (TIAR) with this statement:

> In response to the State Department of Transportation comment letters dated November 9, 2016 and May 15, 2017 regarding the Ala Moana Boulevard/Kalakaua Avenue intersection: Project trips are anticipated to contribute 3 to 4 percent to the Kalakaua Avenue/Ala Moana Boulevard intersection during the AM and PM peak hours of traffic; less than a typical 10 percent daily fluctuation. Therefore, the Kalakaua Avenue/Ala Moana Boulevard intersection was not one of the study intersections.

The information will also be included in the Final EA.

We value your participation in the environmental review process. Your letter will be included in the Final Environmental Assessment.

Sincerely,

Tom Schnell, AICP
Principal

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cc: Kalaimoku-Kuhio Development Corp.
City and County of Honolulu DPP

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WAIKIKI NEIGHBORHOOD BOARD NO. 9

c/o NEIGHBORHOOD COMMISSION • 530 SOUTH KING STREET ROOM 406 •
HONOLULU, HAWAII, 96813
PHONE (808) 768-3710 • FAX (808) 768-3711 • INTERNET: http://www.honolulu.gov

May 2, 2017

Mr. Tom Schnell, Principal
PBR Hawaii and Associates
1001 Bishop Street, Suite 650
Honolulu, Hawaii 96813

Ms. Joette Yago, Urban Design Branch
Department of Planning and Permitting
650 S. King Street, 7th Floor
Honolulu, Hawaii 96813

Mr. Scott Glenn, Director
State of Hawaii – Department of Health
Office of Environmental Quality Control
235 South Beretania Street, Suite 702
Honolulu, HI 96813

Re: Draft Environmental Assessment – King Kalakaua Plaza Renovation – 2080 Kalakaua Avenue– Review and Comments from the Waikiki Neighborhood Board

Thank you for including the Waikiki Neighborhood Board in the review process for the above-referenced Draft Environmental Assessment. The Waikiki Neighborhood Board supports developments that are sustainable, functionally efficient, culturally appropriate, contextually sensitive and add to the increasingly rich pedestrian experience in our neighborhood.

The following comments address compliance with the Land Use Ordinance and the Waikiki Special District Design Guidelines within the context of HRS Chapter 343.

General Project Comments:
The reuse and repurposing of existing and viable structures in Waikiki is to be commended. In addition, the developer's approach in limiting the height of the structure far below what may be permitted under current zoning, results in an aesthetically and contextually sensitive design that blends in well with the surrounding urbanscape.

Page 15 – Section 2.2
This section correctly notes that this renovation will "activate" this section of Waikiki, which, since this retail facility closed, has drawn trespassers, homeless individuals, and increasing amounts of rubbish and storage of personal items.

Page 17 Section 2.3
If the ground level pool option is pursued, ensure that the Final EA demonstrates via scaled drawings how the structure will still meet zoning setback, density, publicly accessible open space, and landscaping requirements.

Page 19 Section 2.3
Your discussion and approach to lighting is well-received by this Board. New technology LED lighting being installed throughout our neighborhood is frequently resulting in harsh glare, loss of ambiance and spill over to adjoining properties while seemingly not providing any added safety to residents and visitors. We encourage the developer to install appropriate lighting required for safety and security, while minimizing light pollution and its associated impacts.

Page 20 Section 2.4

Finally, the Board appreciates your thorough discussion analyzing sustainable planning and design, a Hawaiian sense of place, tie-in to existing and future public transit projects, impacts from climate change/sea level rise, and the proposed project's consistency with zoning and design criteria for Waikiki. While Honolulu does not require LEED certification for new developments at this time, we encourage you to exhaust all possible sustainable features as described in your draft EA, for the development and operation of your proposed facility.

Mahalo for your consideration of the above comments on the Draft EA. We look forward to publication of the final EA which adequately addresses any concerns noted by agencies and the general public.

Sincerely,

Jeff Merz AICP, LEED AP
Waikiki Neighborhood Board
Development Review

PBR HAWAII
& ASSOCIATES, INC.

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Chairman / Principal

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December 15, 2017

Jeff Merz AICP, LEED AP
Waikīkī Neighborhood Board No. 9
Development Review
c/o Neighborhood Commission
530 South King Street, Room 406
Honolulu, HI 96813

SUBJECT: COMMENTS ON THE DRAFT ENVIRONMENTAL ASSESSMENT FOR KING KALĀKAUA PLAZA RENOVATION IN WAIKĪKĪ, TMK (1) 2-6-016:023 and 026

Dear Mr. Merz,

Thank you for your letter dated May 2, 2017 regarding the Draft Environmental Assessment (Draft EA) for the proposed King Kalākaua Plaza Renovation. As the planning consultant for Kalaimoku-Kuhio Development Corp. (KKDC), we acknowledge your comments and thank you the Waikīkī Neighborhood Board's overall support.

At the time the Draft EA was prepared, KKDC proposed renovating the existing above-ground portion of the existing building for hotel use, including the addition of up to three floors. However, based on structural and geotechnical analyses, KKDC and its architect determined that replacement of the above-ground portion of the building with a new structure would be more feasible than renovating the existing structure. Therefore, current plans are to replace the above-ground portion of the building with a new structure having substantially the same footprint as the existing building. The existing underground parking structure (two underground levels) will be retained.

Replacing the above-ground portion of the building with a new structure will be substantially similar to previous plans for renovating the existing structure. The building footprint will remain substantially the same, as will the proposed square footage, floor area ratio (FAR), and number of floors. One significant benefit of a new above-ground structure will be reduced height, as compared to adding floors to the existing structure. The current building is four stories with floor plates spaced at approximately 16 feet apart, resulting in a building height of approximately 65 feet. Floor plates spaced at approximately 16 feet are not necessary for hotel use, and thus replacing the existing above-ground structure will allow for the same number of proposed floors (seven) with a total height of approximately 85 feet, compared to approximately 100 feet under the previous plans.

In addition, at the time the Draft EA was prepared, plans for renovating the existing building for hotel use included two alternatives regarding the addition of a pool: 1) pool and recreation deck area on the fourth floor; and 2) pool and recreation deck area on the ground level on the side of the building fronting Kalākaua Avenue (in the event that it would not be structurally feasible to provide a pool and pool deck area on the fourth floor).

With a pool and recreation deck area on the ground level approximately 4,000 square feet of area fronting Kalākaua Avenue would have been changed from public to private open space. The current plans eliminate the alternative for a ground-level pool on the side of the building fronting Kalākaua Avenue. By providing a new structure, the pool can now be provided on the fourth floor with no structural issues.

The Final EA will be revised to reflect the above plan changes. In a letter dated November 2, 2017, PBR HAWAII requested a determination from DPP regarding if these plan changes would trigger the need for a Special District Permit, Major, rather than a Special District Permit, Minor. In a letter dated November 28, 2017 DPP determined that a Special District Permit, Major would be required. As such KKDC will apply for a Special District Permit, Major. As part of the Special District Permit, Major process we will request that we may be able to present the current plans to the Waikīkī Neighborhood Board No. 9.

We value your participation in the environmental review process. Your letter will be included in the Final EA.

Sincerely,

Tom Schnell, AICP
Principal

cc: Kalaimoku-Kuhio Development Corp.
City and County of Honolulu DPP

APPENDIX C:
TRAFFIC IMPACT ANALYSIS REPORT

KING KALAKAUA PLAZA RENOVATION TRAFFIC IMPACT ANALYSIS REPORT

Waikiki, Honolulu, Oahu, Hawaii

November 29, 2017

Prepared for:

Kalaimoku/Kuhio Development Corporation
120 North Robertson Boulevard
Los Angeles, California 90048-3115

Austin, Tsutsumi & Associates, Inc.
Civil Engineers • Surveyors
501 Sumner Street, Suite 521
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KING KALAKAUA PLAZA RENOVATION TRAFFIC IMPACT ANALYSIS REPORT

Waikiki, Honolulu, Oahu, Hawaii

Prepared for

Kalaimoku/Kuhio Development Corporation

Prepared by
Austin, Tsutsumi & Associates, Inc.

Civil Engineers • Surveyors
Honolulu • Wailuku • Hilo, Hawaii

November 29, 2017

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AUSTIN, TSUTSUMI & ASSOCIATES, INC. CIVIL ENGINEERS • SURVEYORS
CONTINUING THE ENGINEERING PRACTICE FOUNDED BY H. A. R. AUSTIN IN 1934

TERRANCE S. ARASHIRO, P.E.
ADRIENNE W.L.H. WONG, P.E., LEED AP
DEANNA M.R. HAYASHI, P.E.
PAUL K. ARITA, P.E.
ERIK S. KANESHIRO, L.P.L.S., LEED AP
MATT K. NAKAMOTO, P.E.
GARRETT K. TOKUOKA, P.E.

KING KALAKAUA PLAZA RENOVATION
TRAFFIC IMPACT ANALYSIS REPORT
Waikiki, Honolulu, Oahu, Hawaii

EXECUTIVE SUMMARY

This report analyzes the traffic impacts of renovating the existing King Kalakaua Plaza commercial (retail/restaurant) building within Waikiki into an up-to-230 room hotel with limited retail uses on the ground floor. As built, the King Kalakaua Plaza building contains approximately 92,000 square feet (sq ft) of commercial (retail/restaurant) space. The building has been vacant of commercial tenants since 2009. However, if commercial tenants leased the space, no traffic analysis would be required as the building is fully developed and permitted for commercial uses.

The use of building for a hotel will reduce vehicle trips to and from King Kalakaua Plaza by more than 50 percent, compared to if the building was fully occupied with commercial tenants. This conclusion is based on a comparative analysis using: 1) Institute of Transportation Engineers (ITE) trip generation codes; and 2) Waikiki-specific trip generation rates which were also validated from vehicle counts at existing similar-type hotels in the vicinity.

With the hotel anticipated completion by year 2020, overall traffic operations in the vicinity are projected be similar to existing conditions:

- AM peak hour traffic – traffic operations are anticipated to continue operating smoothly similar to existing conditions.

- PM peak hour of traffic – traffic operations along Kalakaua Avenue at the Kalaimoku Street intersection will continue to occasionally queue, blocking through movement from Saratoga Road.

Traffic mitigation measures related to the renovation of the commercial building into hotel use include:

- Adding an on-site Porte-Cochere area along Kalaimoku Street, allowing vehicles to pull off of the road for loading/unloading hotel operations. The addition of the Porte-Cochere minimizes the potential impacts of hotel guest vehicles, hotel transit vehicles, and delivery vehicles from loading and unloading along Kalaimoku Street; and

- Retaining the existing number of loading areas, including the two large loading areas accessed from Kuhio Avenue.

In addition to decreasing traffic impacts due to converting the existing building from commercial use to hotel use (which has a significantly lower trip generation rates than commercial use), the Porte-Cochere and use of the loading areas will help minimize traffic impacts. The Project would also maintain wide sidewalks along its perimeter.

To further reduce traffic impacts, the following transportation management measures are provided for consideration:

- Schedule hotel employee shift changes outside of the peak periods.
- Provide bike racks for hotel uses and employees.
- Hotel staff to minimize queueing from the Porte-Cochere and parking garage to maintain smooth operations along Kalaimoku Sreet.
- Monitor loading area operations and schedule or modify deliveries as necessary.

1. INTRODUCTION

This report documents the findings of a traffic study conducted by Austin, Tsutsumi, and Associates, Inc. (ATA) to evaluate traffic impacts resulting from the renovation of the King Kalakaua Plaza (KKP) building (hereinafter referred to as the "Project") from commercial (retail/restaurant) uses to a hotel with limited retail uses on the ground floor. The KKP building formerly home to retail tenants Nike Town, Banana Republic and a restaurant tenant (The All Star Café). The last of the building tenants moved out in 2009. Since then the building has been vacant of commercial uses. However, if commercial tenants leased the space, no traffic analysis would be required as the building is fully developed and permitted for commercial uses.

1.1 Project Location

The Project is located near the west end of Kuhio Avenue in Waikiki on the island of Oahu on parcels identified as TMKs: (1) 2-6-016:023 and (1) 2-6-016:026 (hereinafter collectively referred to as "the Property"). The Property is bounded by Kuhio Avenue to the north, Kalakaua Avenue to the south, Olohana Street to the west, and Kalaimoku Street to the east. Primary access to the Project will continue to be provided via a driveway off Kalaimoku Street. See Figure 1.1 for the Project location.

1.2 Project Description

The existing 92,000 square feet (sq ft) KKP building includes two levels of underground parking (205 parking stalls) with an entrance and exit access on Kalaimoku Street. However, during this study, the building was vacant and the parking garage was used as a paid public parking facility.

The Project entails renovating the existing KKP commercial (retail/restaurant) building into a business-class hotel, which will include up to approximately 230 hotels rooms, office/service and meeting rooms for hotel users, and approximately 3,000 sq ft of retail uses on the ground floor. As part of the renovation up to three new floors will be added. In addition, a new drop-off area or "Porte-Cochere" will be created along Kalaimoku Street generally across the Ritz Carlton Residences driveway/drop-off. Parking will be provided in the existing 205-stall parking garage. Hotel deliveries will occur within the two existing loading areas along Kuhio Avenue and retail deliveries are expected to occur within the two existing loading areas near the Porte-Cochere accessed from Kalaimoku Street. The Project is expected to be completed by the Year 2020. See Figure 1.2 for Project Site Plan.

1.3 Study Methodology

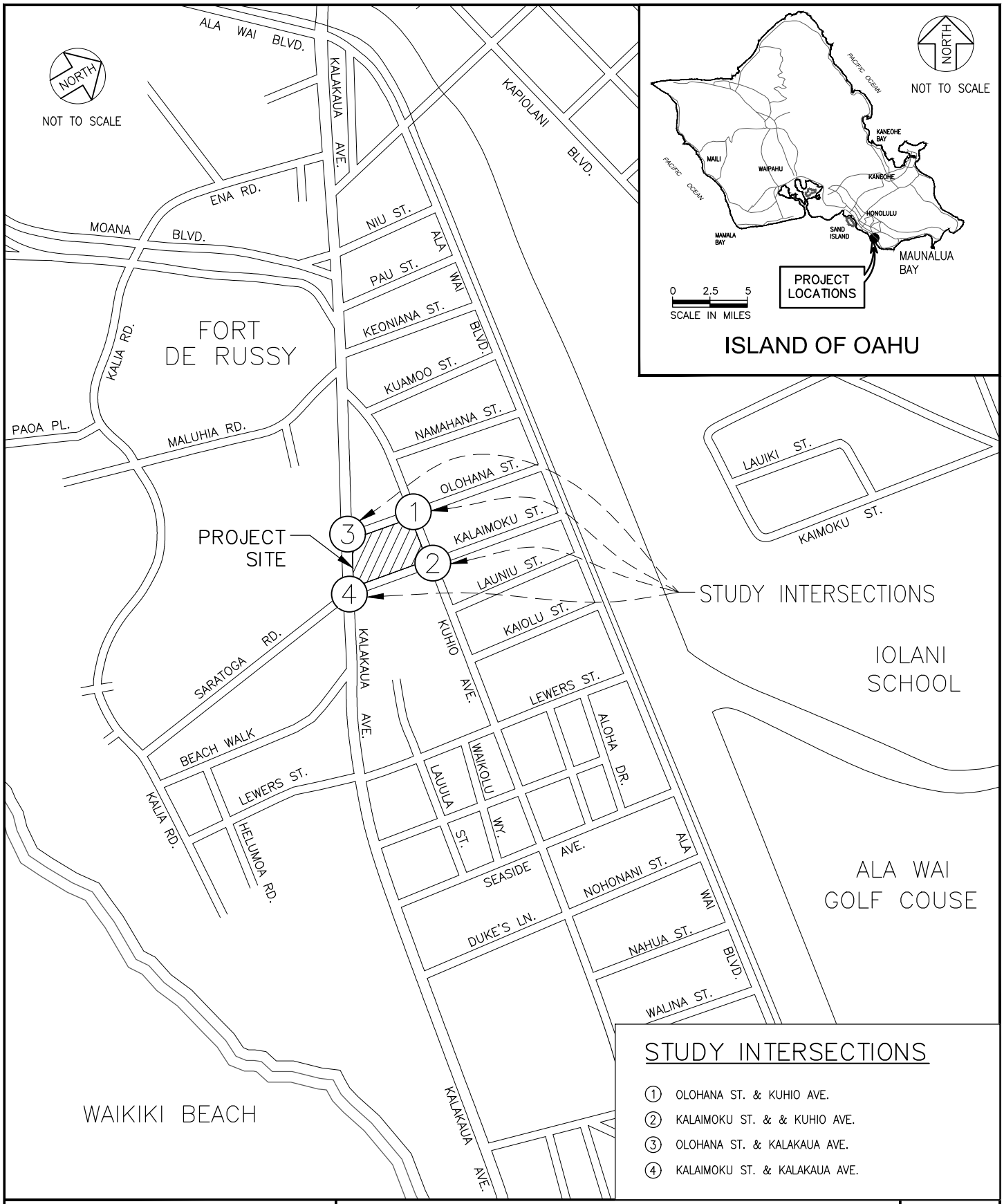
This study addresses:

- Existing traffic operating conditions during the weekday AM and PM peak hours of traffic within the study area (see Section 2.3 for intersections studied).
- Traffic Projections for Base Year 2020 (without the Project).
- Estimate the vehicular trips that will be generated by the Project
- Compare the Project generated trips to the allowable existing commercial use.
- Traffic projections for the Project for Future Year 2020 (with the Project).
- Recommendations for roadway improvements or other mitigation measures, as appropriate, to reduce or eliminate impacts resulting from traffic generated by the Project.
- Recommendations for intersection improvements or other mitigation measures, as appropriate, to reduce or eliminate impacts resulting from traffic generated by the Project.

1.4 Analysis Methodology

Level of Service (LOS) is a qualitative measure used to describe the conditions of traffic flow at intersections, with values ranging from free-flow conditions at LOS A to congested conditions at LOS F. The Highway Capacity Manual (HCM), dated 2010, includes methods for calculating volume to capacity ratios, delays, and corresponding Levels of Service that were utilized in this study. See Appendix B for Level of Service Criteria.

Analyses for the study intersections (see below) were performed using the traffic analysis software Synchro, which is able to prepare reports based on the methodologies described in the HCM. These reports contain control delay results as based on intersection lane geometry, signal timing, and hourly traffic volumes. Based on the vehicular delay at each intersection, a LOS is assigned to each approach and intersection movement as a qualitative measure of performance. These results, as confirmed or refined by field observations, constitute the technical analysis that form the basis of the recommendations provided in this report.



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LOCATION MAP

FIGURE 1.1

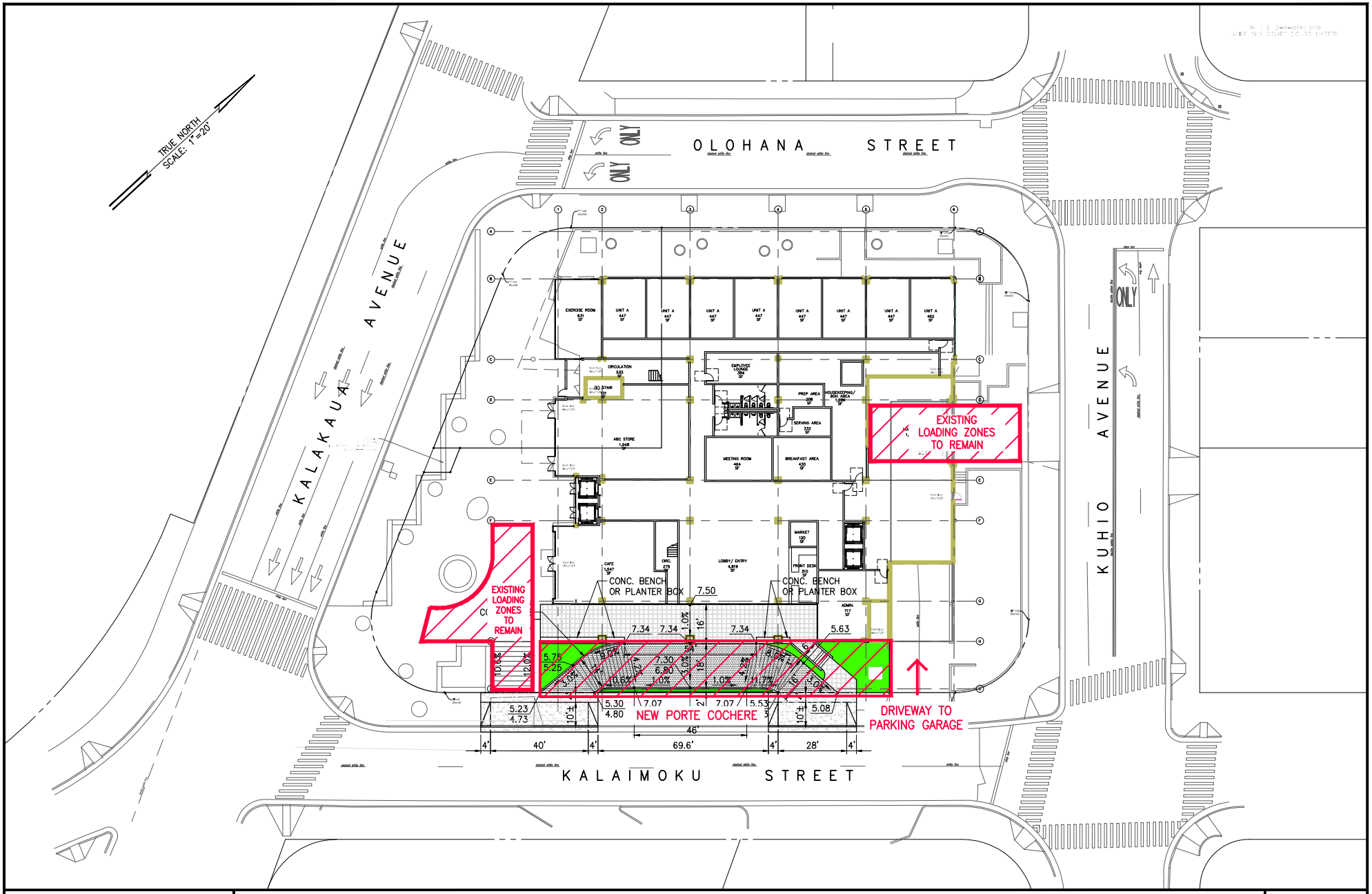

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FIGURE 1.2

SITE PLAN

2. EXISTING TRAFFIC CONDITIONS

2.1 Roadway System

The following are brief descriptions of the existing roadways studied within the vicinity of the Project:

Kalakaua Avenue is an eastbound, one-way, four-lane road in the vicinity of the study intersections that provides access through Waikiki. This roadway begins to the west at its intersection with South Beretania Street and terminates to the east at a T-intersection with Paki Avenue and Diamond Head Road. From Beretania Street to McCully Street, Kalakaua Avenue is a two-way roadway providing between two (2) to four (4) lanes in each direction. Between McCully Street and Monsarrat Avenue, it operates as a one-way (eastbound) street with four (4) travel lanes. The posted speed limit along this roadway in the vicinity of the Project is 25 miles per hour (mph).

Kuhio Avenue is an east-west, two-way, four-lane roadway that runs parallel to Kalakaua Avenue and Ala Wai Boulevard. This roadway begins to the west at its intersection with Kalakaua Avenue and terminates to the east at an intersection with Kapahulu Avenue. Within the study area, the posted speed limit along this roadway is 25 mph.

Saratoga Road is a north-south, two-way, four-lane roadway from Kalia Road to Kalakaua Avenue. This roadway begins as a three-lane roadway between Kaila Road and the U.S. Post Office Driveway due to parallel parking on one (1) lane, and then widens out to four (4) lanes at Kalakaua Avenue. This roadway becomes Kalaimoku Street north of the intersection with Kalakaua Avenue. It has a posted speed limit of 25 mph.

Kalaimoku Street is a northbound, one-way, two-lane roadway that provides a link between Kalakaua Avenue to Ala Wai Boulevard. This roadway provides access to the Project and Ritz Carlton Residences. The posted speed limit along this roadway is 25 mph.

Olohana Street is a southbound, two-lane, one-way roadway that provides a link between Ala Wai Boulevard to Kalakaua Avenue. This roadway provides access to the Waikiki Gateway Hotel. The posted speed limit along this roadway is 25 mph.

2.2 Sustainable Transportation

2.2.1 Complete Streets

While transportation planning has traditionally focused on automobile travel, recent “Complete Streets” policies also recognize the numerous benefits of encouraging the use of alternative modes of transportation. “Complete Streets” policies encourage the provision of equitable, accessible, and safe transportation for all modes and ages.

Hawaii State Senate Bill 718 (2009) required that the Hawaii Department of Transportation (HDOT) and the County transportation departments:

“…adopt a complete streets policy that seeks to reasonably accommodate convenient access and mobility for all users of the public highways within their respective jurisdictions…”

2.2.2 Pedestrian Accessibility

The Project is located in the Waikiki Special District, which serves as the anchor for the state's tourist industry. Heavy pedestrian activity is generated by the surrounding retail, restaurant, and hotel facilities.

The sidewalks provide access to the numerous retail, restaurant, and hotel facilities and are heavily used by pedestrians. The heaviest pedestrian use (approximately 249 AM (263 PM) pedestrians) was observed along the Kalakaua Avenue makai sidewalk. While pedestrians had to wait to cross the street at intersections with signals, all pedestrians were able to walk unimpeded to their destination due to wide crosswalks accommodating large groups of pedestrians

Within the Project vicinity, there are sidewalks along both sides of Kalakaua Avenue, Kuhio Avenue, Olohana Street, Kalaimoku Street, and Saratoga Road. The sidewalks along the Kalakaua Avenue corridor are wide and well maintained. Within public right-of-way, the sidewalks along Kalaimoku Street and Olohana Street, adjacent to the Project, are generally 14 feet wide. Along Kuhio Avenue, the sidewalk is generally 10 feet wide. The sidewalk along Kalakaua Avenue is on private property and provides over 15 feet of sidewalk space. The sidewalks surrounding the project currently generally accommodate the 6-8 feet wide pedestrian zone recommended[1] in the Honolulu Complete Street Design Manual dated September 2016 and accessible ramps are located at each of the studied intersections; therefore, meeting ADA standards. Furthermore, trees are present on all sidewalks surrounding the project site providing shade for a pleasant pedestrian experience.

With the Project, the only change to the existing sidewalk width will occur along Kalaimoku Street fronting the new Porte Cochere. The sidewalk would generally be 14 feet wide with a minimum of 10 feet and generally providing 7 feet of pedestrian zone.

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2.2.3 Bicycle Accessibility

Within the Project vicinity, an eastbound bicycle lane exists along the makai side of Kalakaua Avenue. This bicycle lane begins to the west at Kalakaua Avenue's intersection with Ala Moana Boulevard and terminates to the east at Kalakaua Avenue's intersection with Kapahulu Avenue. Additionally, a westbound bicycle lane is provided along the mauka side of Ala Wai Boulevard that extends approximately 1.1 miles from Ainakea Way to Keoniana Street. Bicycle lanes were not observed to be present along Kuhio Avenue, Olohana Street, Kalaimoku Street, and Saratoga Road. However, a few bicyclists were observed riding along Kuhio Avenue. The heaviest bicycle use was observed along Kalakaua Avenue, approximately 36(17) during the AM(PM) peak.

In order to improve multimodal access, striping along both Olohana Street and Kalaimoku Street could be modified to provide a bike lane as the travel lanes can be narrowed. However, along Kuhio Avenue, sharrows would be more appropriate due to the narrower travel lanes.

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[1] Based on Main Street/Transit Oriented Districts and Avenue/Street Land Use context from Table 7-2 of the Honolulu Complete Street Design Manual, 2016.

As discussed later in the report, Kalaimoku Street may be converted into a two-lane, two-way street between Kalakaua Avenue and Kuhio Avenue. With the conversion, sharrows would likely be more appropriate.

2.2.4 Public Transit

Oahu Transit Services (OTS) operates TheBus, which currently operates a fleet of 519 buses servicing the most populated areas of the island. TheBus is the primary form of public transit on Oahu. The cost of service is $2.50 for each 1-way ride (with one free transfer), $60 for a monthly pass, and $660 for an annual pass[2].

Within the Project vicinity, access to TheBus is provided via bus stops along Kalakaua Avenue, Kuhio Avenue, Olohana Street (discontinued as of December 4, 2016), and Saratoga Road. Routes serviced by those bus stops are Routes 8, 13, 19, 20, 22, 23, 42, E and 2L.

Private transportation services such as trolleys and tour buses were also observed within the Project vicinity. Convenient access to the trolleys is provided via stops along Olohana Street and Kalaimoku Street, adjacent to the Project. Tour buses were observed along Olohana Street, adjacent to Waikiki Gateway Hotel, loading passengers at the curb near the bus stop.

See Figure 2.1 for the pedestrian and bicycle volumes.

2.3 Existing Traffic Volumes

The hourly traffic volume data utilized in this report (as well as pedestrian and bicycle observations) were collected on Tuesday, July 26, 2016. Updated counts were taken on September 15, 2016, when schools were in session to determine if traffic differed significantly from summer counts. In general, it was found that traffic volumes along Kuhio Avenue were higher when schools were in session, while traffic volumes along Kalakaua Avenue were higher in the summer. Therefore, since Kalakaua Avenue is the critical roadway, the summer counts were used for analysis.

The study area intersections are listed below[3]. See the traffic count data provided in Appendix A for more information on existing intersections studied and their corresponding traffic count data.

- Olohana Street/Kuhio Avenue (Signalized)
- Kalaimoku Street/Kuhio Avenue (Signalized)
- Kalaimoku Street/Saratoga Road/Kalakaua Avenue (Signalized)
- Olohana Street/Kalakaua Avenue (Signalized)
- Kalaimoku Street/Project Driveway (Unsignalized)
- Kalaimoku Street/Ritz Carlton Driveway (Unsignalized)

Based on the traffic count data, the weekday AM and PM peak hours of traffic were determined to occur between 8:00 AM and 9:00 AM and between 3:45 PM to 4:45 PM, respectively.

[2] Based on 2016 TheBus information.

[3] In response to the State Department of Transportation letter comment dated November 9, 2016 and May 15, 2017 regarding the Ala Moana Boulevard/Kalakaua Avenue intersection: Project trips are anticipated to contribute 3 to 4 percent to the Kalakaua Avenue/Ala Moana Boulevard intersection during the AM and PM peak hours of traffic; less than a typical 10 percent daily fluctuation. Therefore, the Kalakaua Avenue/Ala Moana Boulevard intersection was not part of the study intersections.

2.4 Existing Observations and Analysis

2.4.1 Intersection Observations and Analysis

The study intersections carry significant amount of City buses, tour buses, and delivery trucks. Therefore, heavy vehicle counts were accounted for in the analysis.

Kalaimoku Street & Kuhio Avenue – This signalized intersection is coordinated with other signalized intersections along Kuhio Avenue during the AM and PM peak hours of traffic. All movements currently operate at LOS C or better. No significant delays or queuing were observed at this intersection during peak hours of traffic.

Olohana Street & Kuhio Avenue – This signalized intersection is coordinated with other intersections along Kuhio Avenue during the AM and PM peak hours of traffic. All movements currently operate at LOS D or better. Some queuing from the Olohana Street/Kalakaua Avenue intersection along Olohana Street was observed to occasionally extend into its intersection with Kuhio Avenue during both peak hours but would clear and not impact traffic operations.

Kalaimoku Street/Saratoga Road & Kalakaua Avenue – This signalized intersection is coordinated with intersections along Kalakaua Avenue. Pedestrians phase was observed to be actuated for every cycle on all approaches during both peak hours. As described above, queuing was observed during the AM and PM peak. However, vehicles during the PM peak were observed to not always clear the intersection blocking the Saratoga Road northbound approach. The northbound approach was not always able to clear yielding LOS F and overcapacity conditions. No issues were observed during the AM peak hour of traffic.

Olohana Street & Kalakaua Avenue – This signalized intersection is coordinated with intersections along Kalakaua Avenue. Pedestrians phase was observed to be actuated for every cycle on all approaches during both peak hours. No issues were observed during the AM peak hour of traffic. During the PM peak hour of traffic, vehicle queues were observed along Kalakaua Avenue extending to the Kalakaua Avenue/Kuhio Avenue split. Queues along Olohana Street extended to Kuhio Avenue. A bus stop is located along Olohana Street which causes some of the congestion.

Kalaimoku Street & Project Driveway – This driveway off of Kalaimoku Street provides access to the existing parking garage. During the data collection, construction workers as well as tourists from neighboring hotels were observed using the parking garage. No issues were observed.

Kalaimoku Street & Ritz Carlton Driveway – Across the Project parking garage is the Ritz Carlton valet driveway which operates as a valet drop-off area. No issues were observed.

Queuing along Kalakaua Avenue is generally from delivery vehicles parked on the side of the road, high traffic volume, and the traffic signals being in close proximity to each other. During the AM peak hour of traffic, queues were generally observed to clear within a cycle at the study intersections. During the PM peak hour of traffic, queuing was observed along Kalakaua Avenue extending to the split between Kalakaua Avenue and Kuhio Avenue. At the intersection of Kalakaua Avenue/Kalaimoku Street/Saratoga Road, due to high volumes, queues were not always cleared on Kalakaua Avenue and would occasionally extend into the intersection, partially blocking the through movement on Saratoga Road.

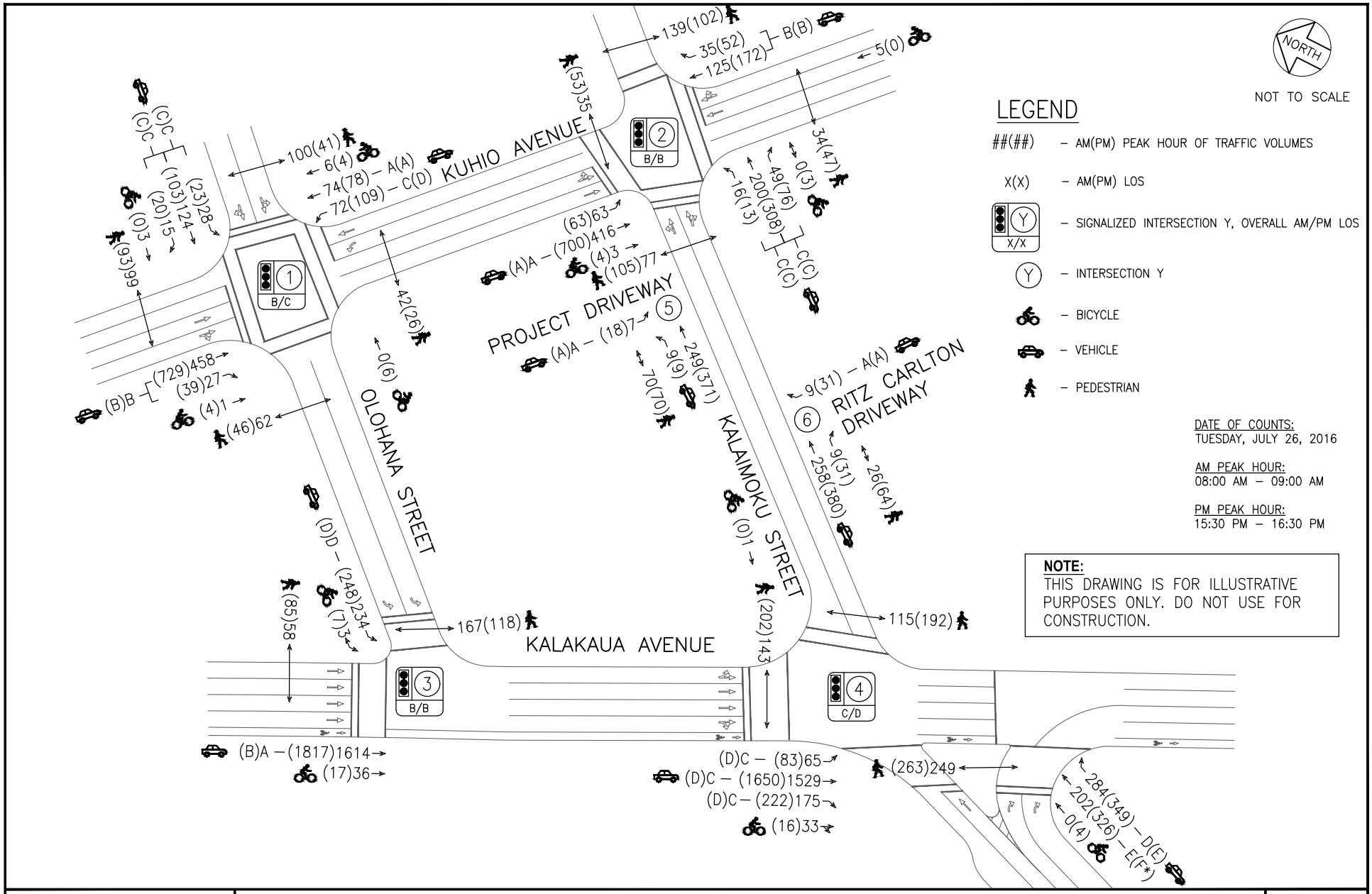

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FIGURE 2.1

EXISTING LANE CONFIGURATION, TRAFFIC VOLUMES AND LOS

Table 2.1: Existing 2016 Level of Service Summary

Intersection	Existing Conditions					
	AM			PM		
	HCM Delay	v/c Ratio	LOS	HCM Delay	v/c Ratio	LOS
1: Olohana St & Kuhio Ave						
EB TH/RT	13	0.34	B	17	0.51	B
WB LT	35	0.46	C	41	0.60	D
WB TH	4	0.07	A	4	0.07	A
SB LT/TH	28	0.29	C	31	0.25	C
SB TH/RT	28	0.28	C	32	0.26	C
Overall	18	-	B	21	-	C
2: Kalaimoku St & Kuhio Ave						
NB LT/TH	31	0.53	C	30	0.62	C
NB TH/RT	31	0.50	C	29	0.58	C
EB TH	5	0.20	A	7	0.34	A
WB TH/RT	17	0.14	B	14	0.18	B
Overall	15	-	B	15	-	B
3: Kalakaua Ave & Olohana St						
EB TH	5	0.54	A	12	0.77	B
SB LT	51	0.78	D	48	0.88	D
Overall	10	-	B	16	-	B
4: Saratoga Rd/Kalaimoku St & Kalakaua Ave						
NB TH	60	0.88	E	94	1.02	F*
NB RT	51	0.82	D	62	0.92	E
EB TH	27	0.53	C	37	0.72	D
EB LT/TH	27	0.52	C	37	0.70	D
EB TH/RT	28	0.53	C	38	0.72	D
Overall	30	-	C	45	-	D
10: Kalaimoku St & Project Drwy						
EB LT	9	0.01	A	10	0.03	A
11: Kalaimoku St & Ritz Carlton Drwy						
WB RT	9	0.01	A	10	0.04	A

* Denotes overcapacity condition, v/c ≥ 1.0

3. BASE YEAR 2020 TRAFFIC CONDITIONS

The Year 2020 was selected to reflect the Project completion year. The Base Year 2020 scenario represents the projected traffic conditions within the study area without the Project. Traffic projections were formulated by applying a de facto growth rate to the existing 2016 traffic count volumes and adding trips projected to be generated by known future developments in the vicinity of the Project.

3.1 De facto Growth Rate

Projections for Base Year 2020 traffic were based upon traffic counts performed by the State of Hawaii Department of Transportation and traffic projections from known nearby future developments in the vicinity of the Project. The resulting annual growth rate along Kalakaua Avenue and Kuhio Avenue was determined to be approximately 2 percent per year. This growth rate was applied on all movements to represent regional traffic growth in the vicinity of the Project through Year 2020.

3.2 Traffic Forecasts for Known Developments

By the year 2020, several developments are forecast to be complete within the Project study area. The known developments that are projected to be complete by Year 2020 and generate traffic within the Project study area are listed below:

- *Luxury Row Tower Phase 2* (the second The Ritz-Carlton Residences tower) –Phase 2 of the development entails a second condo-hotel tower including 268 condo-hotel units, a restaurant, amenities (such as recreational areas, a theater, and a kid's room), expansion of the fitness/wellness center, and a parking structure. The development is expected to be completed and occupied by the Year 2019. The project details were obtained from the Traffic Impact Report Luxury Row Tower Phase 2 published by Wilson Okamoto Corporation in November 2013. Traffic volumes obtained were included in the Base Year 2020 traffic projections.

- *International Market Place* –The development entails a new retail complex that includes approximately 355,000 sq ft of retail/restaurant space. The project details were obtained from the Traffic Impact Report International Market Place Revitalization Project published by Wilson Okamoto Corporation in October 2011. Traffic volumes obtained were included in the Base Year 2020 traffic projections.

- *Waikiki Parc Hotel Renovation* –The development includes approximately 297 hotel rooms, a restaurant, and other amenities. The development is expected to be completed and occupied by the Year 2017. The project details were obtained from the Traffic Impact Report Waikiki Parc Hotel Renovation published by Wilson Okamoto Corporation on February 2014. Traffic volumes obtained from this development were included in the Base Year 2020 traffic projections.

- *Hyatt Regency Waikiki Beach Resort Redevelopment* –The development entails the redevelopment of the resort located west of Uluniu Avenue, which includes approximately 1,230 hotel rooms, meeting rooms, and approximately 69,468 sq ft of commercial/retail uses. The development is expected to be completed and occupied by the Year 2017. The project details were obtained from the Traffic Impact Report Hyatt Regency Waikiki Beach Resort Redevelopment published by Wilson Okamoto Corporation on June 2014. Traffic volumes obtained from this development were included in the Base Year 2020 traffic projections.

- *Park Kalia Waikiki* –The development entails the replacement of the former Kyo-ya restaurant building with a new condo-hotel, which includes a maximum of 180 units with recreational amenities and on-site parking. The development is expected to be completed and occupied by the Year 2018. The project details were obtained from the Traffic Impact Report Park Kalia - Waikiki published by Wilson Okamoto Corporation on November 2015. Traffic volumes obtained from this development were included in the Base Year 2020 traffic projections.

- *Hyatt Centric* – The development entails the conversion of the Waikiki Trade Center office building into a 230 room hotel with 55,000 sq ft of retail space including the 34,000 sq ft Nordstrom Rack which opened on September 1, 2016. The remaining retail and hotel are set to be completed in 2018. Traffic volumes for this development were generated and included in the Base Year 2020 traffic projections.

See Figure 3.1 for the location of the above projects.

3.3 Base Year 2020 Analysis (without Project)

For Base Year 2020 all study intersections are forecasted to operate with LOS similar to existing conditions. Intersection movements operating at LOS F and/or overcapacity in existing conditions will continue to operate at LOS F and/or overcapacity conditions in the Base Year 2020 scenario. In general, the mainline through movements will experience some increase in delay over existing conditions.

Kalaimoku Street & Kuhio Avenue – The intersection will continue to operate at LOS C or better during the AM and PM peak hour of traffic.

Olohana Street & Kuhio Avenue – The intersection will continue to operate at LOS D or better during the AM and PM peak hour of traffic.

Kalaimoku Street/Saratoga Road & Kalakaua Avenue– The northbound through movement will continue to experience LOS E and F during the AM and PM peak hours of traffic, respectively. The intersection will continue to operate at LOS D or better on its mainline movement.

Olohana Street & Kalakaua Avenue – The intersection will continue to operate at LOS D or better during the AM and PM peak hour of traffic.

Kalaimoku Street & Project Driveway – The eastbound left turn movement will continue to operate LOS B or better during the AM and PM peak hour of traffic.

Kalaimoku Street & Ritz Carlton Driveway – The westbound right turn movement will continue to operate LOS B or better during the AM and PM peak hour of traffic.

Figure 3.1 illustrates the background projects within the vicinity of the Project. Figure 3.2 illustrates the Base Year 2020 forecast traffic volumes and LOS for the study intersection movements. Table 3.1 summarizes the Base Year 2020 LOS at the study intersections compared to existing conditions. LOS worksheets are provided in Appendix C.

LEGEND

- PROJECT LOCATION
- LUXURY ROW TOWER PHASE 1 (GRAND OPENING ON JULY 18, 2016)
- LUXURY ROW TOWER PHASE 2
- WAIKIKI PARC HOTEL RENOVATION
- HYATT REGENCY WAIKIKI BEACH RESORT REDEVELOPMENT
- PARK KALIA WAIKIKI
- INTERNATIONAL MARKET PLACE
- HYATT CENTRIC WAIKIKI BEACH

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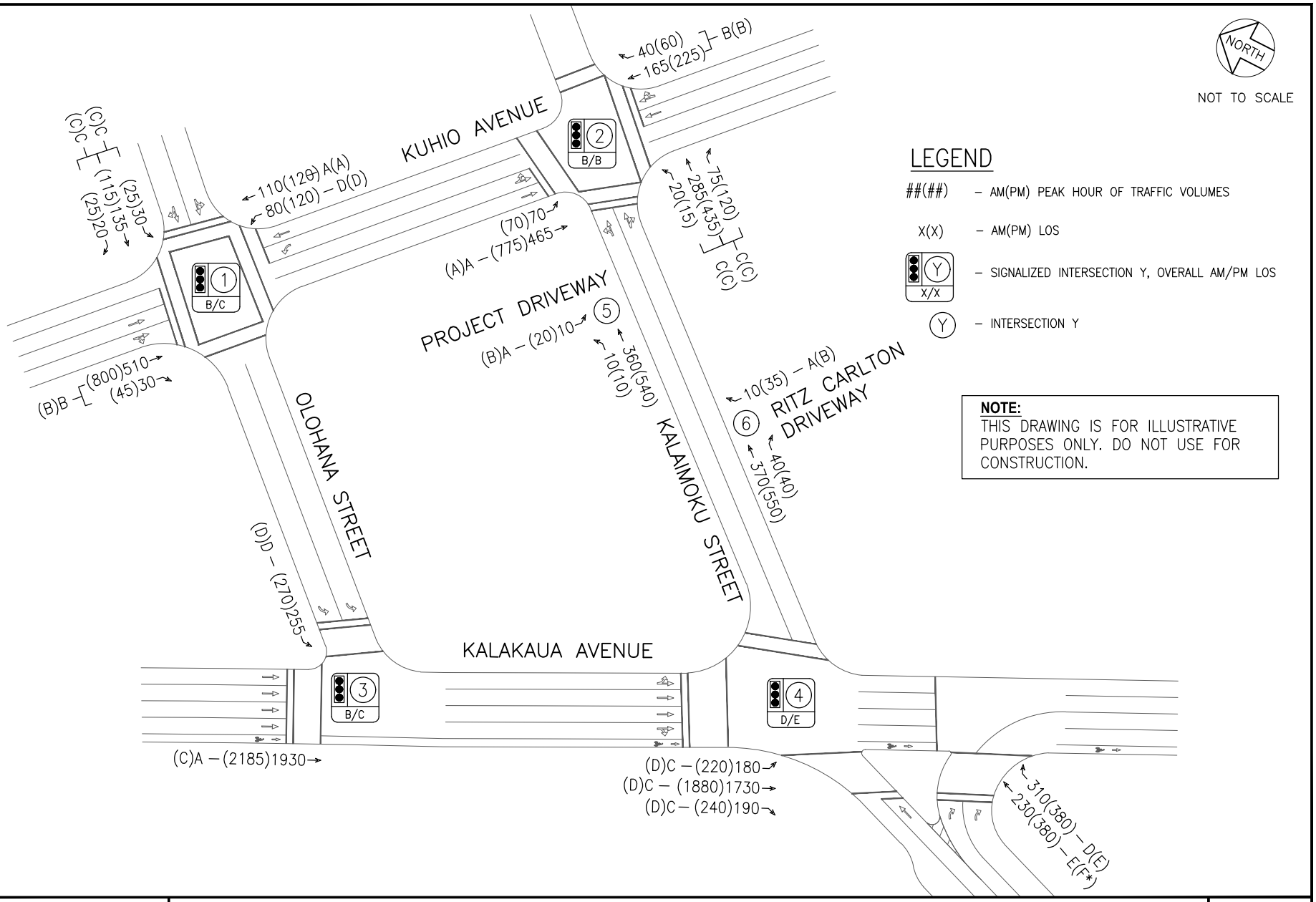
BACKGROUND PROJECTS

FIGURE 3.1



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BASE YEAR 2020 LANE CONFIGURATION, TRAFFIC VOLUMES AND LOS

FIGURE 3.2

Table 3.1: Existing and Base Year 2020 Level of Service Summary

Intersection	Existing Conditions						Base Year 2020					
	AM			PM			AM			PM		
	HCM Delay	v/c Ratio	LOS	HCM Delay	v/c Ratio	LOS	HCM Delay	v/c Ratio	LOS	HCM Delay	v/c Ratio	LOS
1: Olohana St & Kuhio Ave												
EB TH/RT	13	0.34	B	17	0.51	B	14	0.38	B	18	0.56	B
WB LT	35	0.46	C	41	0.60	D	37	0.53	D	45	0.67	D
WB TH	4	0.07	A	4	0.07	A	5	0.10	A	5	0.11	A
SB LT/TH	28	0.29	C	31	0.25	C	28	0.32	C	32	0.28	C
SB TH/RT	28	0.28	C	32	0.26	C	28	0.31	C	32	0.29	C
Overall	18	-	B	21	-	C	18	-	B	21	-	C
2: Kalaimoku St & Kuhio Ave												
NB LT/TH	31	0.53	C	30	0.62	C	31	0.65	C	33	0.77	C
NB TH/RT	31	0.50	C	29	0.58	C	30	0.61	C	31	0.72	C
EB TH	5	0.20	A	7	0.34	A	6	0.24	A	8	0.39	A
WB TH/RT	17	0.14	B	14	0.18	B	17	0.18	B	15	0.23	B
Overall	15	-	B	15	-	B	17	-	B	18	-	B
3: Kalakaua Ave & Olohana St												
EB TH	5	0.54	A	12	0.77	B	6	0.65	A	23	0.94	C
SB LT	51	0.78	D	48	0.88	D	51	0.79	D	46	0.89	D
Overall	10	-	B	16	-	B	11	-	B	26	-	C
4: Saratoga Rd/Kalaimoku St & Kalakaua Ave												
NB TH	60	0.88	E	94	1.02	F*	63	0.90	E	151	1.19	F*
NB RT	51	0.82	D	62	0.92	E	50	0.83	D	64	0.93	E
EB TH	27	0.53	C	37	0.72	D	32	0.66	C	42	0.87	D
EB LT/TH	27	0.52	C	37	0.70	D	33	0.64	C	42	0.85	D
EB TH/RT	28	0.53	C	38	0.72	D	33	0.66	C	43	0.88	D
Overall	30	-	C	45	-	D	35	-	D	57	-	E
10: Kalaimoku St & Project Drwy												
EB LT	9	0.01	A	10	0.03	A	10	0.01	A	11	0.03	B
11: Kalaimoku St & Ritz Carlton Drwy												
WB RT	9	0.01	A	10	0.04	A	10	0.01	A	11	0.06	B

* Denotes overcapacity condition, v/c ≥ 1.0

4. FUTURE YEAR 2020 TRAFFIC CONDITIONS

The Future Year 2020 scenario represents the traffic conditions within the Project study area with the completion and use of the Project.

4.1 Background

The Project entails renovating the existing KPP commercial (retail/restaurant) building into a business-class hotel, which will include up to approximately 230 hotel rooms, office/service and meeting rooms, and approximately 3,000 sq ft of retail uses on the ground floor. The Project will not enlarge the building's existing footprint and will retain the existing 205-stall garage. As part of the renovation up to three new floors will be added. The Project is expected to be completed by the end of Year 2020.

4.2 Travel Demand Estimations

4.2.1 Trip Generation

The Institute of Transportation Engineers (ITE) publishes a book based on empirical data compiled from a body of more than 4,250 trip generation studies submitted by public agencies, developers, consulting firms, and associations. This publication, titled Trip Generation Manual, 9th Edition, provides trip rates and/or formulae based on graphs that correlate vehicular trips with independent variables. The independent variables can range from Dwelling Units (DU) for single-family rooms to Gross Floor Area (GFA) for commercial or office development.

Based on the ITE trip generation rates the Project is forecast to generate approximately 133 vehicle trips during the AM peak traffic hour and 143 vehicle trips during the PM peak traffic hour.

See Tables 4.1 and 4.2 for Trip Generation formula and projections for the Project.

Table 4.1: Project Trip Generation Rates

Land Use (ITE Code)	Independent Variable	Weekday AM Peak Hour		Weekday PM Peak Hour	
		Trip Rate	% Enter	Trip Rate	% Enter
Business Hotel (312)	Rooms	0.58	59%	0.62	60%

Table 4.2: Project-Generated Trips

Land Use Type (ITE Code)	Independent Variable (DU)	Weekday AM Peak Hour			Weekday PM Peak Hour		
		Enter (vph)	Exit (vph)	Total (vph)	Enter (vph)	Exit (vph)	Total (vph)
Business Hotel (312)	230	79	55	133	86	57	143

4.2.2 Trip Distribution & Assignment

Trips generated by the Project were assigned throughout the study area based upon existing travel patterns. The traffic generated by the Project was added to the forecast Base Year 2020 traffic volumes within the vicinity of the Project to constitute the traffic volumes for the Future Year 2020 traffic conditions. Figure 4.1 illustrates the Project-generated trip distribution.

4.3 Future Year 2020 Analysis (with Project)

The Project will convert the existing KKP building from commercial use to hotel use, which has a significantly lower trip generation rate than commercial use.

As discussed in Section 5 below, the use of building for a hotel will reduce vehicle trips to and from King Kalakaua Plaza by more than 50 percent during the PM peak hour, compared to if the building was fully occupied with commercial tenants. Based on the worst case trip generation scenario, during the weekday AM peak hour approximately 79 vehicles are expected to enter the Project and approximately 55 vehicles are expected to exit (total 133 vehicles). During the weekday PM peak hour approximately 86 vehicles are expected to enter and approximately 57 are projected to exit (total 143 vehicles).

Upon completion of the Project (and taking into account protected traffic growth rates and traffic projected from proposed developments in the vicinity), all study intersections are forecast to operate with LOS similar to Base Year 2020 conditions, with nearly all movements continuing to operate at LOS E or better during the AM and PM peak hours of traffic, except for the northbound through movement on the Kalaimoku Street/Saratoga Road and Kalakaua Avenue intersection, which will continue to experience LOS F during the PM peak traffic hour.

In addition to decreasing traffic impacts due to converting the building from commercial use to hotel use, the Project will include a Porte-Cochere along Kalaimoku Street for pick-up/drop off. To create the porte-cochere ingress, an existing driveway curb cut access will be expanded and a new curb cut will be provided for the egress. These curb cuts have been designed to line up with existing driveways across Kalaimoku Street. The Porte-Cochere will be a one-way circulation in the northbound direction with its entry at the Makai driveway and exiting at the Mauka driveway. At maximum capacity, the Porte Cochere will be able to fit approximately six (6) vehicles. A total of four (4) vehicles will fit in the drop off area of the Porte-Cochere, with two (2) vehicles parallel to each other. The other two (2) vehicles will fit at the entrance and exit of the Porte-Cochere. Only one (1) vehicle will be able to enter and exit at a time. To minimize queuing from entering vehicles along Kalaimoku Street, hotel staff should be readily available to: 1) assist with loading/unloading; 2) direct vehicles to the parking garage; and/or 3) direct vehicles to circulate around the block if necessary. Additionally, in order to minimize vehicle/pedestrian conflicts some type of signage will be provided.

The two existing loading areas along Kuhio Avenue are proposed to remain, and will continue to be used for deliveries, with anticipated single unit delivery truck approximately twice per day. The existing two-vehicle loading area located along Kalaimoku Street, with its access next to the future Porte-Cochere driveway, will be generally maintained. This existing configuration would not require vehicles to reverse onto or off of Kalaimoku Street to enter or exit the loading areas. Both loading areas are anticipated to have minimal deliveries, therefore, no issues are expected, but should be monitored and adjusted as necessary.

Vehicular access to the Project parking garage will continue to be from Kalaimoku Street.

See Figure 4.2 for the Future Year 2020 with Project traffic volumes and LOS. Table 4.3 summarizes the Existing, Base Year 2020, and Future Year 2020 with Project LOS at the study intersections. LOS worksheets are provided in Appendix C. See Appendix E for Turning Movement Templates from the Porte-Cochere.

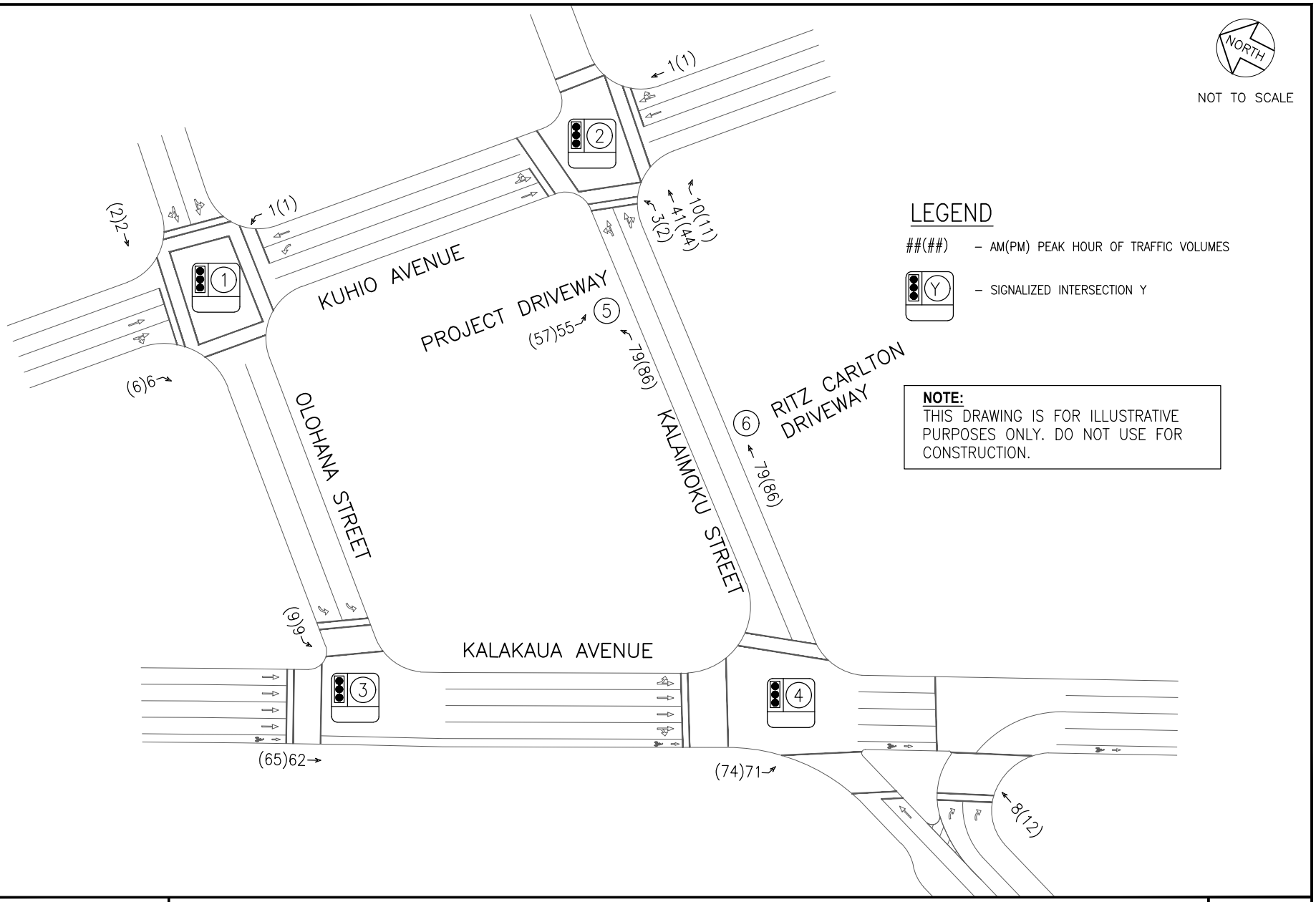

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FIGURE 4.1

PROJECT - GENERATED TRAFFIC VOLUMES

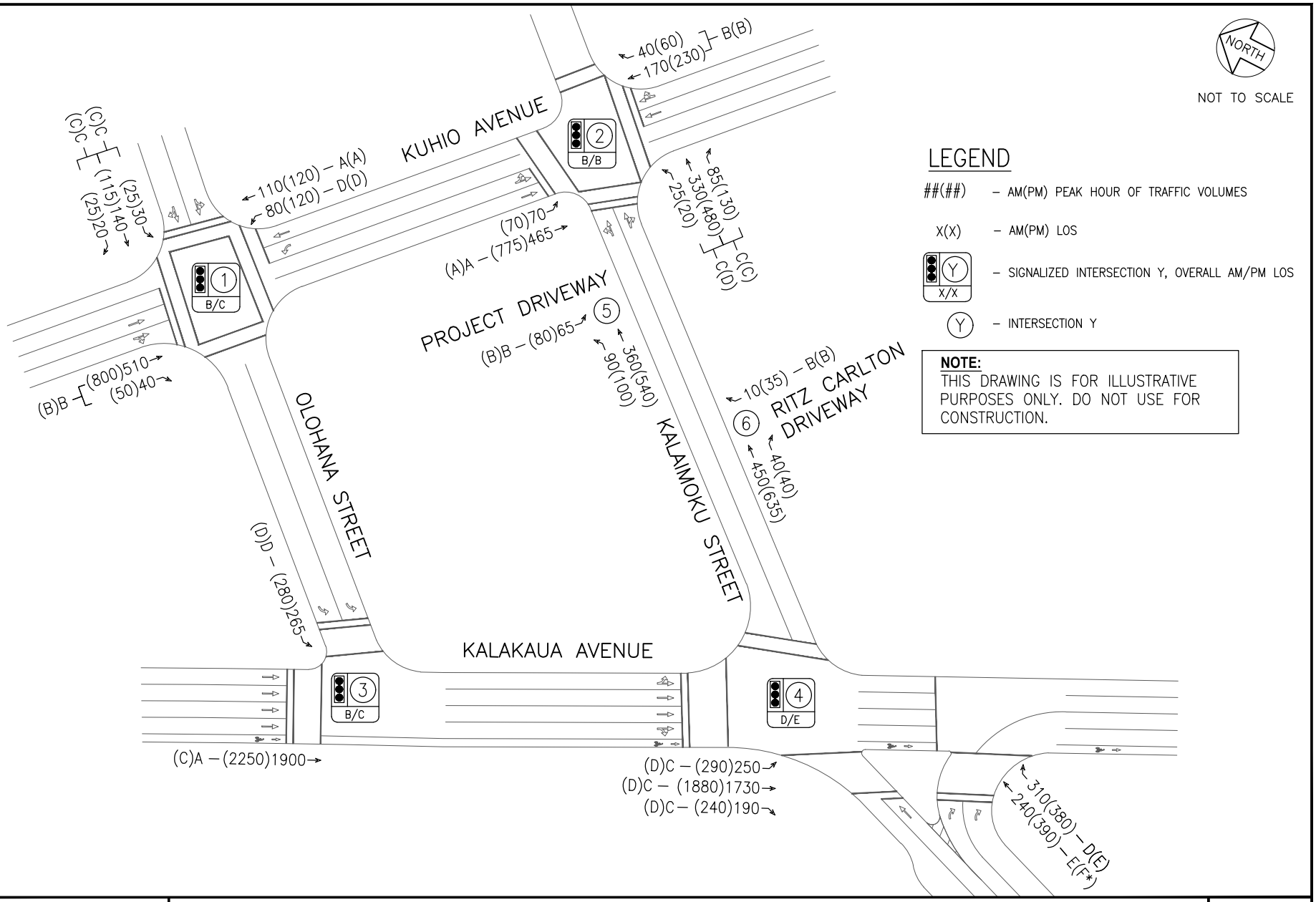

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FIGURE 4.2

FUTURE YEAR 2020 LANE CONFIGURATION, TRAFFIC VOLUMES AND LOS

Table 4.3: Existing, Base Year 2020 and Year 2020 with Project Level of Service Summary

Intersection	Existing Conditions						Base Year 2020						Year 2020 with Project					
	AM			PM			AM			PM			AM			PM		
	HCM Delay	v/c Ratio	LOS	HCM Delay	v/c Ratio	LOS	HCM Delay	v/c Ratio	LOS	HCM Delay	v/c Ratio	LOS	HCM Delay	v/c Ratio	LOS	HCM Delay	v/c Ratio	LOS
1: Olohana St & Kuhio Ave																		
EB TH/RT	13	0.34	B	17	0.51	B	14	0.38	B	18	0.56	B	14	0.39	B	18	0.56	B
WB LT	35	0.46	C	41	0.60	D	37	0.53	D	45	0.67	D	37	0.53	D	45	0.67	D
WB TH	4	0.07	A	4	0.07	A	5	0.10	A	5	0.11	A	5	0.10	A	5	0.11	A
SB LT/TH	28	0.29	C	31	0.25	C	28	0.32	C	32	0.28	C	28	0.33	C	32	0.28	C
SB TH/RT	28	0.28	C	32	0.26	C	28	0.31	C	32	0.29	C	28	0.32	C	32	0.29	C
Overall	18	-	B	21	-	C	18	-	B	21	-	C	18	-	B	21	-	C
2: Kalaimoku St & Kuhio Ave																		
NB LT/TH	31	0.53	C	30	0.62	C	31	0.65	C	33	0.77	C	31	0.70	C	36	0.82	D
NB TH/RT	31	0.50	C	29	0.58	C	30	0.61	C	31	0.72	C	30	0.65	C	33	0.76	C
EB TH	5	0.20	A	7	0.34	A	6	0.24	A	8	0.39	A	6	0.24	A	9	0.40	A
WB TH/RT	17	0.14	B	14	0.18	B	17	0.18	B	15	0.23	B	18	0.19	B	15	0.23	B
Overall	15	-	B	15	-	B	17	-	B	18	-	B	18	-	B	19	-	B
3: Kalakaua Ave & Olohana St																		
EB TH	5	0.54	A	12	0.77	B	6	0.65	A	23	0.94	C	6	0.68	A	27	0.97	C
SB LT	51	0.78	D	48	0.88	D	51	0.79	D	46	0.89	D	51	0.80	D	47	0.89	D
Overall	10	-	B	16	-	B	11	-	B	26	-	C	12	-	B	29	-	C
4: Saratoga Rd/Kalaimoku St & Kalakaua Ave																		
NB TH	60	0.88	E	94	1.02	F*	63	0.90	E	151	1.19	F*	64	0.90	E	163	1.22	F*
NB RT	51	0.82	D	62	0.92	E	50	0.83	D	64	0.93	E	50	0.83	D	64	0.93	E
EB TH	27	0.53	C	37	0.72	D	32	0.66	C	42	0.87	D	33	0.69	C	43	0.89	D
EB LT/TH	27	0.52	C	37	0.70	D	33	0.64	C	42	0.85	D	35	0.68	C	43	0.88	D
EB TH/RT	28	0.53	C	38	0.72	D	33	0.66	C	43	0.88	D	35	0.70	C	44	0.91	D
Overall	30	-	C	45	-	D	35	-	D	57	-	E	37	-	D	59	-	E
10: Kalaimoku St & Project Drwy																		
EB LT	9	0.01	A	10	0.03	A	10	0.01	A	11	0.03	B	12	0.12	B	14	0.18	B
11: Kalaimoku St & Ritz Carlton Drwy																		
WB RT	9	0.01	A	10	0.04	A	10	0.01	A	11	0.06	B	10	0.02	B	11	0.06	B

* Denotes overcapacity condition, v/c ≥ 1.0

5. COMPARATIVE ANALYSIS

This section provides an analysis regarding vehicle trips generated from commercial use of the building (if fully occupied with commercial tenants) compared with the proposed use as a business-class hotel with limited retail uses.

Based on the ITE trip generation rates for commercial and hotel uses, the existing commercial building could generate 567 vehicle trips during the PM peak hour (if fully occupied by commercial tenants), while a 230-room hotel could generate 143 PM trips during the PM peak hour. In other words, the hotel would generate approximately 75 percent fewer vehicle trips than the existing commercial building (if fully occupied by commercial tenants). However, based on existing hotel uses in Waikiki, the hotel is likely to generate fewer trips than the ITE projections.

Waikiki is not a typical commercial and hotel trip generator due to the fact that Waikiki is an approximately 1.5 mile long touristy area comprising of various types of hotels (ranging from resort to business hotels), commercial areas, and attractions such as the Honolulu Zoo and beaches. Therefore, a significant amount of trips are via walking and transit. Trip rates obtained from the International Market Place (IMP) TIAR were used to generate more Waikiki-specific projections. Based on the IMP trip generation rates for commercial and hotel uses, the existing commercial building could generate 89 vehicle trips during the PM peak hour, while the hotel could generate 41 trips during the PM peak hour. In other words, the hotel could reduce vehicle trips by more than 50 percent, compared to if the building was fully occupied with commercial tenants.

As a further comparison, vehicle counts taken at the nearby Luana Hotel (233 rooms) and Waikiki Gateway Hotel (181 rooms) (which are similar to the proposed hotel) show that these hotels generate approximately 20 trips (Luana Hotel) and 9 trips (Gateway Hotel) trips during the PM peak (see Table 5.1 below for AM peak hour counts). Based on these traffic counts, it is likely that the hotel could generate 22 vehicle trips during the AM peak hour and 21 vehicle trips in the PM peak hour.

The comparisons show that the renovation of the building for hotel use will generate fewer trips than the existing commercial building (if fully occupied by commercial tenants), and therefore the hotel will result in a reduction of traffic in the vicinity, compared to if the building was fully occupied by commercial tenants.

Table 5.1 summarizes: 1) the comparison between commercial and hotel uses based on the ITE and IMP trip generation rates; and 2) vehicle counts from existing, similar-type hotels in the vicinity.

Table 5.1: Trip Generation Comparison

Land Use Type	Independent Variable	Weekday AM Peak Hour			Weekday PM Peak Hour		
		Enter (vph)	Exit (vph)	Total (vph)	Enter (vph)	Exit (vph)	Total (vph)
Comparison using ITE rates							
Existing Commercial Building (ITE Shopping Center code 820)	92k sq ft	92	57	149	272	295	567
Proposed Project (Hotel) (ITE Business Hotel code 312)	230 Rooms	79	55	133	86	57	143
Comparison using International Market Place Rates							
Existing Commercial Building (International Market Place Rates)	92k sq ft	N/A			51	52	102
Proposed Project (Hotel) (International Market Place Rates)	230 Rooms	N/A			22	19	41
Existing Surrounding Hotels Trip Generation							
Luana Hotel	223 Rooms	13	8	21	12	8	20
Waikiki Gateway Hotel	181 Rooms	3	11	14	5	4	9

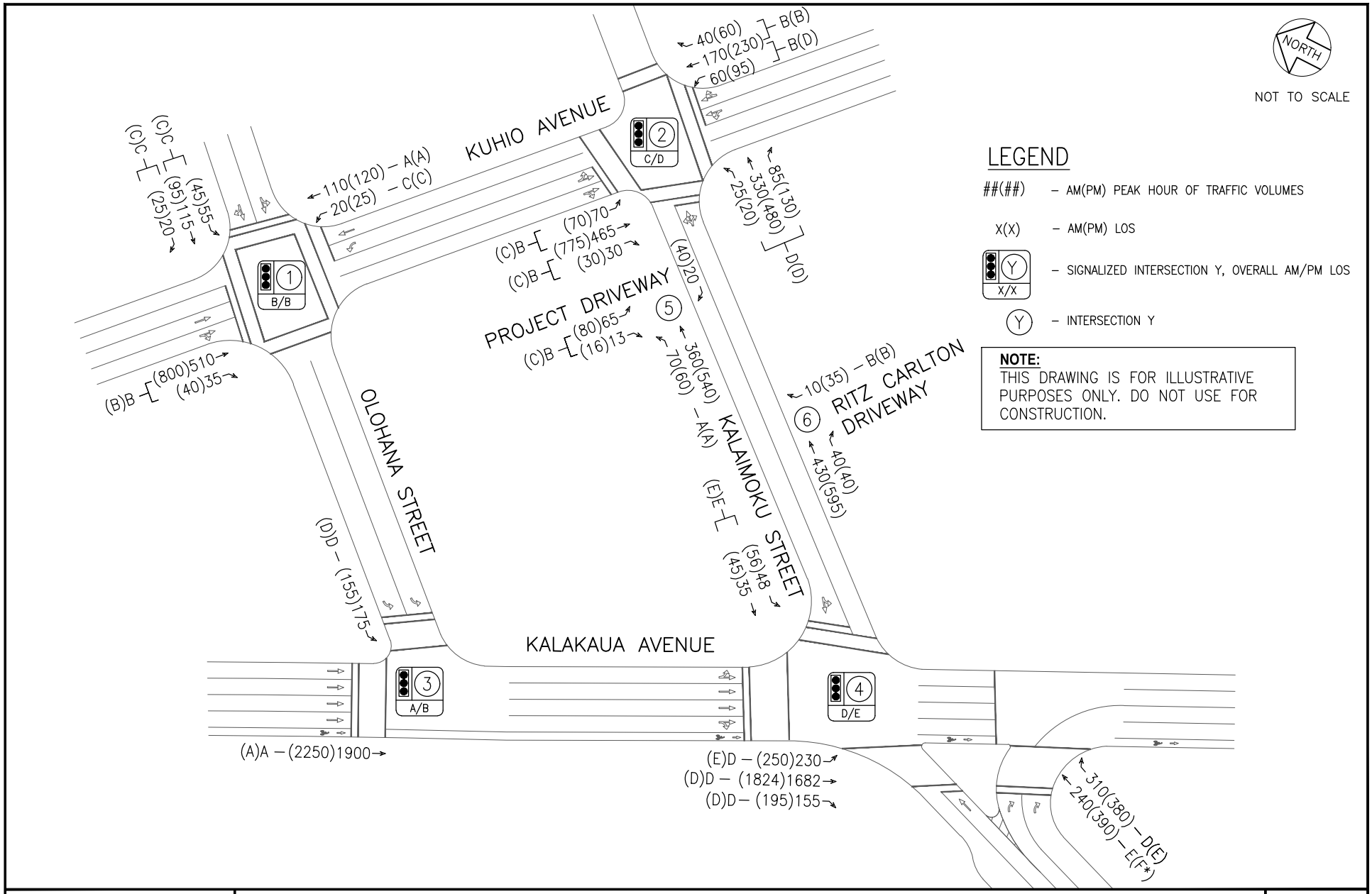
6. KALAIMOKU STREET TWO-WAY CONVERSION

Although no current plans are in place to convert Kalaimoku Street between Kalakaua Avenue and Kuhio Avenue to a two-lane, two-way street; an analysis using Future Year 2020 with Project traffic projections was conducted to determine the impacts of the potential conversion. With the conversion, the assumptions are that one lane would be restriped to accommodate the southbound traffic along Kalaimoku Street as a shared left/through lane at its intersection with Kalakaua Avenue. The other lane would remain as a northbound lane and be converted into a shared left/through/right-turn lane. To allow access onto southbound Kalaimoku Street, Kuhio eastbound through lane would be striped to allow right-turns, similarly the westbound through lane striped to allow left-turns. Traffic signal modifications/additions would also be necessary at the Kuhio Avenue and Kalakaua Avenue intersections to accommodate the conversion.

Based on the anticipated reroutes, the Kalaimoku Street intersection with Kuhio Avenue and Kalakaua Avenue would experience longer delays during both peak periods. With the Kalaimoku Street conversion, its intersection with Kalakaua Avenue would likely be operating with a split phasing due to the conflicting southbound left-turn and northbound through movements and queuing along Kalakaua Avenue. As a result, the intersection delay increases and capacity reduces. Additionally, the northbound queue along Kalaimoku Street is forecast to extend to Kalakaua Avenue. In fact, existing AM and PM peak volumes indicate that the conversion would already cause the queue to extend near the intersection.

An analysis which considers surrounding intersections as potential alternate routes could better determine the potential impacts of the conversion. However, for the purpose of this study, the intersections considered show that a conversion would cause additional delays and queues.

The Porte Cochere operation would have to be reversed with the entrance on the Mauka side and the exit on at the Makai driveway. Based on queues and traffic operations, turn restrictions may be necessary.



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FUTURE YEAR 2020 LANE CONFIGURATION, TRAFFIC VOLUMES AND LOS with KALAIMOKU STREET TWO-WAY CONVERSION

FIGURE 6.1

Table 6.1: Year 2020 with Project and Year 2020 with Project and Kalaimoku Street Conversion Level of Service Summary

Intersection	Year 2020 with Project						Year 2020 with Project and Kalaimoku Street Conversion					
	AM			PM			AM			PM		
	HCM Delay	v/c Ratio	LOS	HCM Delay	v/c Ratio	LOS	HCM Delay	v/c Ratio	LOS	HCM Delay	v/c Ratio	LOS
1: Olohana St & Kuhio Ave												
EB TH/RT	14	0.39	B	18	0.56	B	14	0.38	B	18	0.55	B
WB LT	37	0.53	D	45	0.67	D	32	0.13	C	34	0.14	C
WB TH	5	0.10	A	5	0.11	A	5	0.10	A	5	0.11	A
SB LT/TH	28	0.33	C	32	0.28	C	28	0.33	C	32	0.28	C
SB TH/RT	28	0.32	C	32	0.29	C	28	0.32	C	32	0.29	C
Overall	18	-	B	21	-	C	16	-	B	19	-	B
2: Kalaimoku St & Kuhio Ave												
NB LT/TH	31	0.70	C	36	0.82	D	-	-	-	-	-	-
NB TH/RT	30	0.65	C	33	0.76	C	-	-	-	-	-	-
NB LT/TH/RT	-	-	-	-	-	-	39	0.90	D	50	0.99	D
EB TH	6	0.24	A	9	0.40	A	-	-	-	-	-	-
EB LT/TH	-	-	-	-	-	-	12	0.37	B	29	0.78	C
EB TH/RT	-	-	-	-	-	-	11	0.38	B	26	0.75	C
WB LT/TH	-	-	-	-	-	-	12	0.23	B	49	0.75	D
WB TH/RT	18	0.19	B	15	0.23	B	10	0.20	B	19	0.48	B
Overall	18	-	B	19	-	B	21	-	C	36	-	D
3: Kalakaua Ave & Olohana St												
EB TH	6	0.68	A	27	0.97	C	5	0.65	A	13	0.90	B
SB LT	51	0.80	D	47	0.89	D	53	0.74	D	46	0.81	D
Overall	12	-	B	29	-	C	9	-	A	15	-	B
4: Saratoga Rd/Kalaimoku St & Kalakaua Ave												
NB TH	64	0.90	E	163	1.22	F*	76	0.93	E	181	1.26	F*
NB RT	50	0.83	D	64	0.93	E	50	0.83	D	64	0.93	E
EB TH	33	0.69	C	43	0.89	D	37	0.69	D	46	0.91	D
EB LT/TH	35	0.68	C	43	0.88	D	41	0.76	D	61	0.99	E
EB TH/RT	35	0.70	C	44	0.91	D	38	0.69	D	47	0.92	D
SB LT/TH	-	-	-	-	-	-	60	0.76	E	59	0.78	E
Overall	37	-	D	59	-	E	43	-	D	69	-	E
10: Kalaimoku St & Project Drwy												
NB LT	-	-	-	-	-	-	8	0.05	A	8	0.05	A
EB LT	12	0.12	B	14	0.18	B	-	-	-	-	-	-
EB LT/TH	-	-	-	-	-	-	14	0.16	B	18	0.24	C
11: Kalaimoku St & Ritz Carlton Drwy												
WB RT	10	0.02	B	11	0.06	B	11	0.02	B	14	0.08	B

* Denotes overcapacity condition, v/c ≥ 1.0

7. TRAFFIC MANAGEMENT PLAN

Although use of the KKP building for a hotel will reduce vehicles trip by more than 50 percent, compared to if the building was fully occupied with commercial tenants, to further reduce the traffic impacts, the following transportation management measures are provided for consideration:

- Scheduling hotel employee shift start and end times to be outside of the peak hours
- Providing bike racks for hotel users and employees
- Hotel staff to minimize queueing from the Porte-Cochere and parking garage to maintain smooth operations along Kalaimoku Sreet.
- Monitor loading area operations and schedule or modify deliveries as necessary

8. CONCLUSIONS AND RECOMMENDATIONS

The Project proposes to renovate the existing commercial KKP building into a business-class hotel, which will include up to approximately 230 hotel rooms, office/service and meeting rooms, and approximately 3,000 sq ft of commercial/retail uses. The proposed renovations are expected to be completed by Year 2020.

8.1 Conclusions

8.1.1 Existing Conditions

All traffic movements at the study intersections currently operate at overall LOS D or better during the AM and PM peak hours of traffic, except at Saratoga Road/Kalaimoku Street and Kalakaua Avenue, where the northbound through and right turn movement crossing Kalakaua Avenue experiences LOS F overcapacity conditions and LOS E conditions respectively during the PM peak hour of traffic.

Bicycle lanes are provided in the eastbound direction along Kalakaua Avenue and in the westbound direction along Ala Wai Avenue. Sidewalks are provided on all the study roadways with wide sidewalks along Kalakaua Avenue. The heaviest bike and pedestrian usage (bikes 36 AM/17 PM) (pedestrians 249 AM/263 PM) was observed along Kalakaua Avenue.

8.1.2 Base Year 2020

Projections for Base Year 2020 traffic were based upon historical traffic counts performed by the State of Hawaii Department of Transportation and traffic projections from known nearby developments in the vicinity of the Project. The resulting annual growth rate along Kalakaua Avenue and Kuhio Avenue was determined to be approximately 2 percent per year. This growth rate was applied on all movements to represent regional traffic growth in the vicinity of the Project through Year 2020.

8.1.3 Future Year 2020

The use of the KKP building for a hotel will reduce vehicle trips by more that 50 percent, compared to if the building was fully occupied with commercial tenants. This conclusion is based on a comparative analysis using: 1) Institute of Transportation Engineers (ITE) trip

generation codes; and 2) Waikiki-specific trip generation rates which were also validated from vehicle counts from existing, similar-type hotels in the vicinity.

After the renovation of the building for hotel use (and taking into account projected traffic growth rates and traffic projected from proposed developments in the vicinity), all study intersections are forecast to operate with LOS similar to existing conditions, with all movements operating at LOS E or better during the AM and PM peak hour of traffic, except for the northbound through movement on the Kalaimoku Street/Saratoga Road and Kalakaua Avenue intersection, which, as is the case under existing conditions, will continue to experience LOS F during the PM peak traffic hour.

With the potential Kalaimoku Street conversion into a two-way street, traffic operations are anticipated to worsen at its intersection with Kalakaua Avenue and Kuhio Avenue with queues extending from Kuhio Avenue onto Kalakaua Avenue during the AM and PM peak hours. To accommodate the conversion, the Porte Cochere circulation would need to be reversed and some turn restrictions may be necessary. However, unless a larger study is performed it is anticipated that the conversion would cause additional delays and queues.

8.2 Recommendations

Due to the limited right-of-way and intersection skew, no improvements are recommended at the Kalaimoku Street/Saratoga Road and Kalakaua Avenue intersection.

In addition to decreasing traffic impacts due to converting the building from commercial use to hotel use, to further minimize traffic impacts the Project will include an on-site Porte-Cochere along Kalaimoku Street for loading/unloading hotel operations. At maximum capacity, the Porte Cochere will be able to fit approximately six (6) vehicles. A total of four (4) vehicles will fit in the drop off area of the Porte-Cochere, with two (2) vehicles parallel to each other. The other two (2) vehicles will fit at the entrance and exit of the Porte-Cochere. Only one (1) vehicle will be able to enter and exit at a time. To minimize queuing from entering vehicles along Kalaimoku Street, hotel staff should be readily available to: 1) assist with loading/unloading; 2) direct vehicles to the parking garage; and/or 3) direct vehicles to circulate around the block if necessary.

It is anticipated that Waikiki's pedestrian, bicycle, and public transit facilities will not be significantly impacted due the renovation of the KKP building for hotel use. Overall, the existing sidewalk and the modified area fronting Kalaimoku Street will provide the 6-8 feet wide pedestrian zone recommended in the Honolulu Complete Street Design Manual. Bike lanes could be added along Kalaimoku Street and Olohana Street while sharrows would be preferred along Kuhio Avenue.

Some traffic management measures are provided below for consideration:

- Schedule hotel employee shift changes outside of the peak periods.
- Provide bike racks for hotel uses and employees.
- Hotel staff to minimize queueing from the Porte-Cochere and parking garage to maintain smooth operations along Kalaimoku Sreet.
- Monitor loading area operations and schedule or modify deliveries as necessary.

9. REFERENCES

1. City and County of Honolulu, Honolulu Complete Street Design Manual, 2016

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A P P E N D I C E S

APPENDIX A

TRAFFIC COUNT DATA

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501 Sumner Street, Suite 521
Honolulu, HI 96817-5031
Phone: (808) 533-3646 Fax: (808) 526-1267

File Name : Kalaimoku St - Kalakaua Ave
Site Code : 00000000
Start Date : 7/26/2016
Page No : 1

Groups Printed- Unshifted - Bank 1

	KALAIMOKU ST Southbound				KALAKAUA AVE Westbound				SARATOGA RD Northbound				KALAKAUA AVE Eastbound				
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Total
06:45 AM	0	0	0	33	0	0	0	0	46	29	0	43	48	287	15	24	525
Total	0	0	0	33	0	0	0	0	46	29	0	43	48	287	15	24	525
07:00 AM	0	0	0	36	0	0	0	0	41	42	0	38	27	305	13	27	529
07:15 AM	0	0	0	26	0	0	0	0	58	42	0	48	58	327	13	21	593
07:30 AM	0	0	0	32	0	0	0	0	55	29	0	65	63	396	16	29	685
07:45 AM	0	0	0	40	0	0	0	0	59	45	0	55	50	391	13	28	681
Total	0	0	0	134	0	0	0	0	213	158	0	206	198	1419	55	105	2488
08:00 AM	0	0	0	38	0	0	0	0	66	53	0	52	38	357	13	32	649
08:15 AM	0	0	0	32	0	0	0	0	66	46	0	58	42	388	11	36	679
08:30 AM	0	0	0	25	0	0	0	0	71	52	0	72	34	413	16	41	724
08:45 AM	0	0	0	20	0	0	0	0	81	51	0	67	61	371	25	34	710
Total	0	0	0	115	0	0	0	0	284	202	0	249	175	1529	65	143	2762
Grand Total	0	0	0	282	0	0	0	0	543	389	0	498	421	3235	135	272	5775
Apprch %	0	0	0	100	0	0	0	0	38	27.2	0	34.8	10.4	79.6	3.3	6.7	
Total %	0	0	0	4.9	0	0	0	0	9.4	6.7	0	8.6	7.3	56	2.3	4.7	
Unshifted	0	0	0	282	0	0	0	0	543	389	0	498	421	3235	135	272	5775
% Unshifted	0	0	0	100	0	0	0	0	100	100	0	100	100	100	100	100	100
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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File Name : Kalaimoku St - Kalakaua Ave
Site Code : 00000000
Start Date : 7/26/2016
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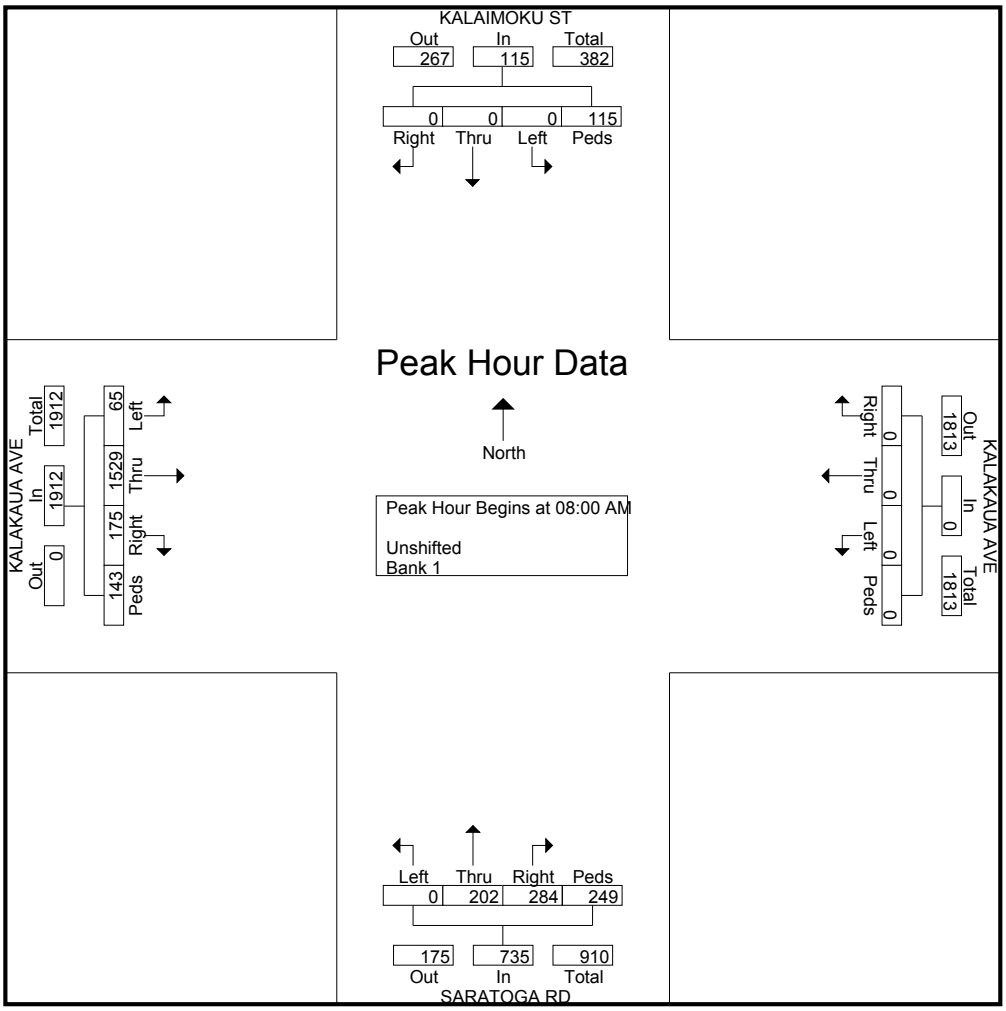
	KALAIMOKU ST Southbound					KALAKAUA AVE Westbound					SARATOGA RD Northbound					KALAKAUA AVE Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 08:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	0	0	0	**38**	**38**	0	0	0	0	0	66	**53**	0	52	171	38	357	13	32	440	649
08:15 AM	0	0	0	32	32	0	0	0	0	0	66	46	0	58	170	42	388	11	36	477	679
08:30 AM	0	0	0	25	25	0	0	0	0	0	71	52	0	**72**	195	34	**413**	16	**41**	**504**	**724**
08:45 AM	0	0	0	20	20	0	0	0	0	0	**81**	51	0	67	**199**	**61**	371	**25**	34	491	710
Total Volume	0	0	0	115	115	0	0	0	0	0	284	202	0	249	735	175	1529	65	143	1912	2762
% App. Total	0	0	0	100		0	0	0	0		38.6	27.5	0	33.9		9.2	80	3.4	7.5		
PHF	.000	.000	.000	.757	.757	.000	.000	.000	.000	.000	.877	.953	.000	.865	.923	.717	.926	.650	.872	.948	.954



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File Name : Kalaimoku St - Kuhio Ave
Site Code : 00000000
Start Date : 7/26/2016
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Groups Printed- Unshifted - Bank 1

	KALAIMOKU ST Southbound				KUHIO AVE Westbound				KALAIMOKU ST Northbound				KUHIO AVE Eastbound				
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Total
06:45 AM	0	0	0	27	7	29	0	10	14	17	3	12	1	110	7	8	245
Total	0	0	0	27	7	29	0	10	14	17	3	12	1	110	7	8	245
07:00 AM	0	0	0	10	3	27	0	8	9	38	6	9	0	89	10	9	218
07:15 AM	0	0	0	32	6	15	0	3	10	41	3	17	0	103	17	11	258
07:30 AM	0	0	0	28	14	24	0	8	6	32	3	19	0	116	9	9	268
07:45 AM	0	0	0	32	15	41	0	13	8	49	3	19	0	115	15	6	316
Total	0	0	0	102	38	107	0	32	33	160	15	64	0	423	51	35	1060
08:00 AM	0	0	0	24	9	31	0	7	15	51	6	13	0	109	12	10	287
08:15 AM	0	0	0	39	12	29	0	9	11	47	3	18	0	99	14	6	287
08:30 AM	0	0	0	45	6	27	0	10	9	46	5	26	0	91	15	10	290
08:45 AM	0	0	0	31	8	38	0	8	14	56	2	20	1	117	22	9	326
Total	0	0	0	139	35	125	0	34	49	200	16	77	1	416	63	35	1190
Grand Total	0	0	0	268	80	261	0	76	96	377	34	153	2	949	121	78	2495
Apprch %	0	0	0	100	19.2	62.6	0	18.2	14.5	57.1	5.2	23.2	0.2	82.5	10.5	6.8	
Total %	0	0	0	10.7	3.2	10.5	0	3	3.8	15.1	1.4	6.1	0.1	38	4.8	3.1	
Unshifted	0	0	0	268	80	261	0	76	96	377	34	153	2	949	121	78	2495
% Unshifted	0	0	0	100	100	100	0	100	100	100	100	100	100	100	100	100	100
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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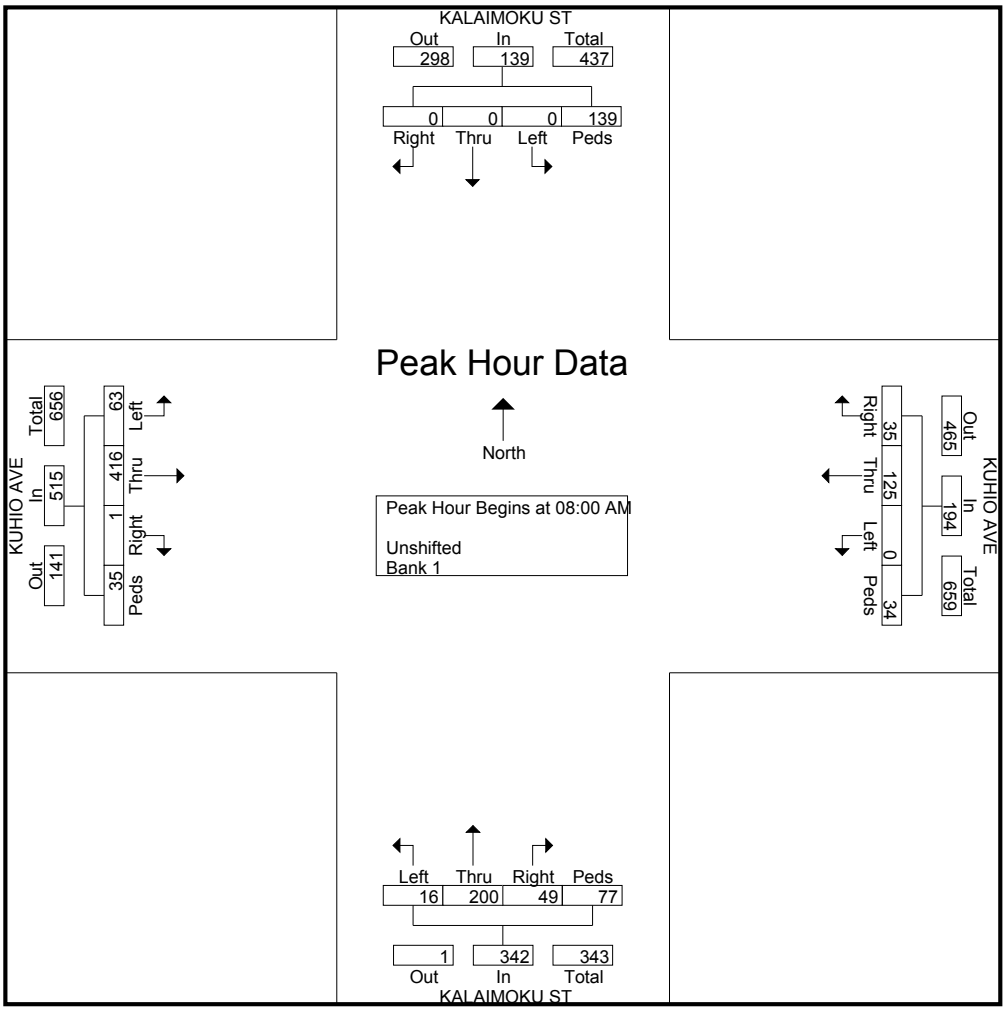
File Name : Kalaimoku St - Kuhio Ave
Site Code : 00000000
Start Date : 7/26/2016
Page No : 2

	KALAIMOKU ST Southbound					KUHIO AVE Westbound					KALAIMOKU ST Northbound					KUHIO AVE Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
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																					
08:00 AM	0	0	0	24	24	9	31	0	7	47	**15**	51	**6**	13	85	0	109	12	**10**	131	287
08:15 AM	0	0	0	39	39	**12**	29	0	9	50	11	47	3	18	79	0	99	14	6	119	287
08:30 AM	0	0	0	**45**	**45**	6	27	0	**10**	43	9	46	5	**26**	86	0	91	15	10	116	290
08:45 AM	0	0	0	31	31	8	**38**	0	8	**54**	14	**56**	2	20	**92**	**1**	**117**	**22**	9	**149**	**326**
Total Volume	0	0	0	139	139	35	125	0	34	194	49	200	16	77	342	1	416	63	35	515	1190
% App. Total	0	0	0	100		18	64.4	0	17.5		14.3	58.5	4.7	22.5		0.2	80.8	12.2	6.8		
PHF	.000	.000	.000	.772	.772	.729	.822	.000	.850	.898	.817	.893	.667	.740	.929	.250	.889	.716	.875	.864	.913



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File Name : AM_Kalaimoku St - Project Dwy 800-900
Site Code : 00000000
Start Date : 7/26/2016
Page No : 1

Groups Printed- Class 1

	Southbound				Westbound				kALAIMOKU ST Northbound				PROJECT DWY Eastbound				
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Total
08:00 AM	0	0	0	0	0	0	0	0	0	61	3	0	0	0	3	10	77
08:15 AM	0	0	0	0	0	0	0	0	0	55	2	0	0	0	1	12	70
08:30 AM	0	0	0	0	0	0	0	0	0	63	1	0	0	0	2	16	82
08:45 AM	0	0	0	0	0	0	0	0	0	70	3	0	0	0	1	12	86
Total	0	0	0	0	0	0	0	0	0	249	9	0	0	0	7	50	315
Grand Total	0	0	0	0	0	0	0	0	0	249	9	0	0	0	7	50	315
Apprch %	0	0	0	0	0	0	0	0	0	96.5	3.5	0	0	0	12.3	87.7	
Total %	0	0	0	0	0	0	0	0	0	79	2.9	0	0	0	2.2	15.9	

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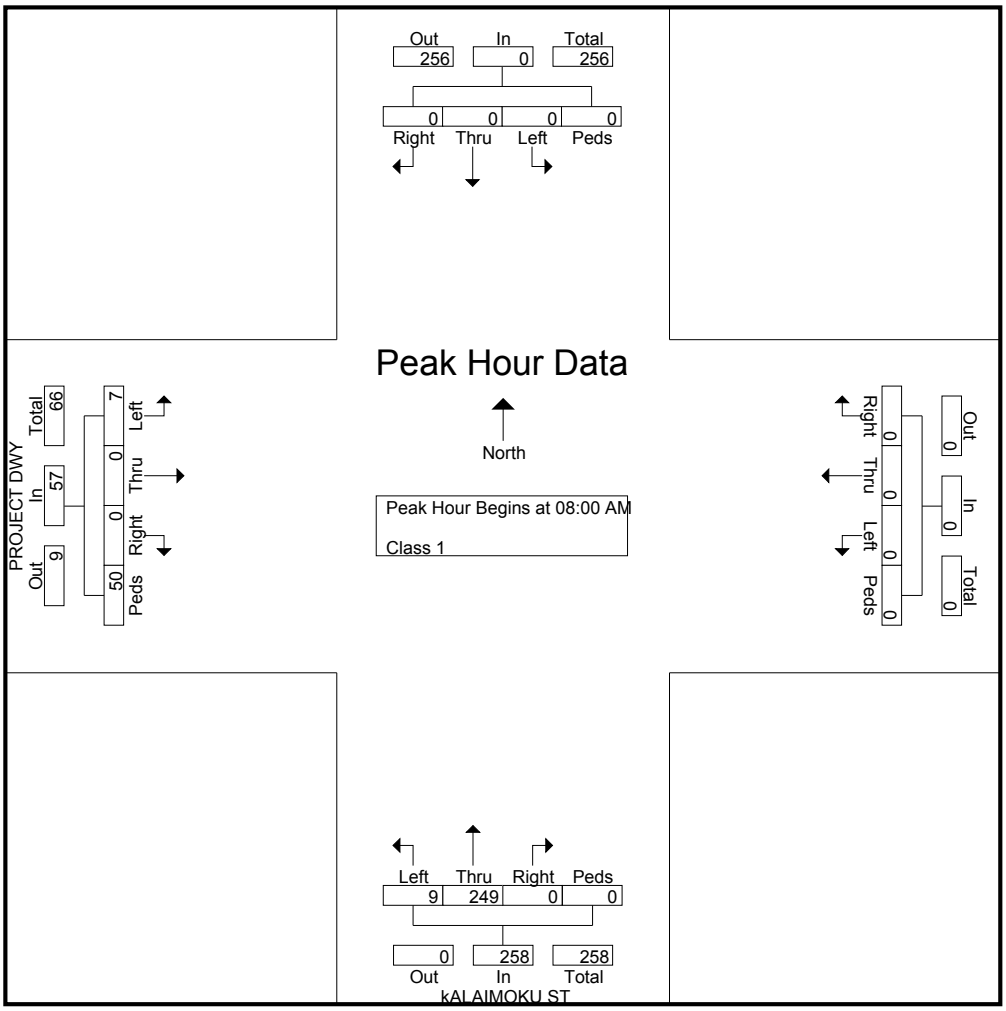
File Name : AM_Kalaimoku St - Project Dwy 800-900
Site Code : 00000000
Start Date : 7/26/2016
Page No : 2

	Southbound					Westbound					kALAIMOKU ST Northbound					PROJECT DWY Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
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																					
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	61	**3**	0	64	0	0	**3**	10	13	77
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	55	2	0	57	0	0	1	12	13	70
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	63	1	0	64	0	0	2	**16**	**18**	82
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	**70**	3	0	**73**	0	0	1	12	13	**86**
Total Volume	0	0	0	0	0	0	0	0	0	0	0	249	9	0	258	0	0	7	50	57	315
% App. Total	0	0	0	0		0	0	0	0		0	96.5	3.5	0		0	0	12.3	87.7		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.889	.750	.000	.884	.000	.000	.583	.781	.792	.916



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File Name : AM_Kalaimoku St - Ritz Carlton Residence Dwy 800-900
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Start Date : 7/26/2016
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Groups Printed- Class 1

	Southbound				RITZ CARLTON RESIDENCE DWY Westbound				kALAIMOKU ST Northbound				Eastbound				
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Total
08:00 AM	0	0	0	0	1	0	0	8	2	64	0	0	0	0	0	0	75
08:15 AM	0	0	0	0	1	0	0	6	0	57	0	0	0	0	0	0	64
08:30 AM	0	0	0	0	4	0	0	5	4	64	0	0	0	0	0	0	77
08:45 AM	0	0	0	0	3	0	0	7	3	73	0	0	0	0	0	0	86
Total	0	0	0	0	9	0	0	26	9	258	0	0	0	0	0	0	302
Grand Total	0	0	0	0	9	0	0	26	9	258	0	0	0	0	0	0	302
Apprch %	0	0	0	0	25.7	0	0	74.3	3.4	96.6	0	0	0	0	0	0	
Total %	0	0	0	0	3	0	0	8.6	3	85.4	0	0	0	0	0	0	

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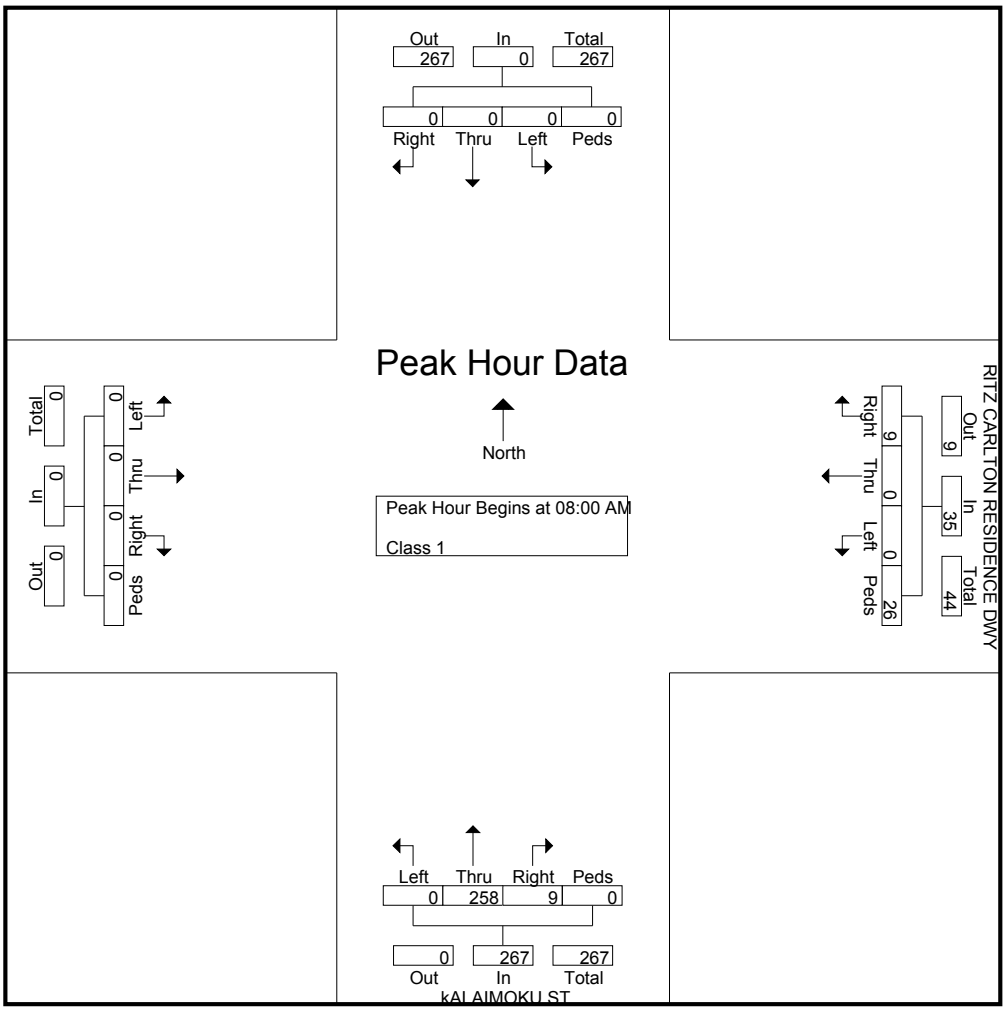
File Name : AM_Kalaimoku St - Ritz Carlton Residence Dwy 800-900
Site Code : 00000000
Start Date : 7/26/2016
Page No : 2

	Southbound					RITZ CARLTON RESIDENCE DWY Westbound					kALAIMOKU ST Northbound					Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
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																					
08:00 AM	0	0	0	0	0	1	0	0	**8**	9	2	64	0	0	66	0	0	0	0	0	75
08:15 AM	0	0	0	0	0	1	0	0	6	7	0	57	0	0	57	0	0	0	0	0	64
08:30 AM	0	0	0	0	0	**4**	0	0	5	9	**4**	64	0	0	68	0	0	0	0	0	77
08:45 AM	0	0	0	0	0	3	0	0	7	**10**	3	**73**	0	0	**76**	0	0	0	0	0	**86**
Total Volume	0	0	0	0	0	9	0	0	26	35	9	258	0	0	267	0	0	0	0	0	302
% App. Total	0	0	0	0		25.7	0	0	74.3		3.4	96.6	0	0		0	0	0	0		
PHF	.000	.000	.000	.000	.000	.563	.000	.000	.813	.875	.563	.884	.000	.000	.878	.000	.000	.000	.000	.000	.878



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File Name : Olohana St - Kalakaua Ave
Site Code : 00000000
Start Date : 7/26/2016
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Groups Printed- Unshifted - Bank 1

	OLOHANA ST Southbound				KALAKAUA AVE Westbound				Northbound				KALAKAUA AVE Eastbound				
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Total
06:45 AM	0	0	42	28	0	0	0	0	0	0	0	0	0	312	0	18	400
Total	0	0	42	28	0	0	0	0	0	0	0	0	0	312	0	18	400
07:00 AM	0	0	51	18	0	0	0	0	0	0	0	0	0	316	0	17	402
07:15 AM	0	0	42	17	0	0	0	0	0	0	0	0	0	359	0	19	437
07:30 AM	0	0	58	33	0	0	0	0	0	0	0	0	0	428	0	19	538
07:45 AM	0	0	60	21	0	0	0	0	0	0	0	0	0	391	0	24	496
Total	0	0	211	89	0	0	0	0	0	0	0	0	0	1494	0	79	1873
08:00 AM	0	0	53	22	0	0	0	0	0	0	0	0	0	380	0	20	475
08:15 AM	0	0	64	30	0	0	0	0	0	0	0	0	0	400	0	14	508
08:30 AM	0	0	43	52	0	0	0	0	0	0	0	0	0	433	0	15	543
08:45 AM	0	0	74	63	0	0	0	0	0	0	0	0	0	401	0	9	547
Total	0	0	234	167	0	0	0	0	0	0	0	0	0	1614	0	58	2073
Grand Total	0	0	487	284	0	0	0	0	0	0	0	0	0	3420	0	155	4346
Apprch %	0	0	63.2	36.8	0	0	0	0	0	0	0	0	0	95.7	0	4.3	
Total %	0	0	11.2	6.5	0	0	0	0	0	0	0	0	0	78.7	0	3.6	
Unshifted	0	0	487	284	0	0	0	0	0	0	0	0	0	3420	0	155	4346
% Unshifted	0	0	100	100	0	0	0	0	0	0	0	0	0	100	0	100	100
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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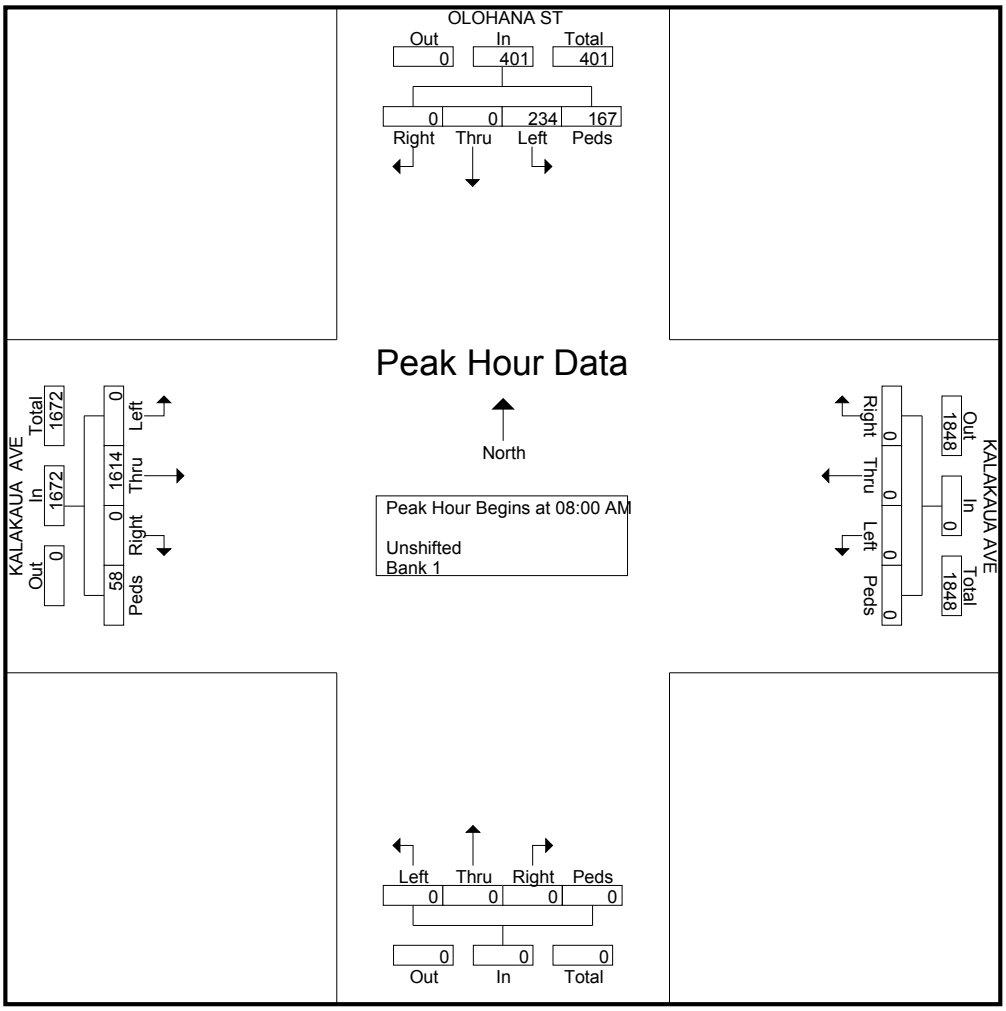
File Name : Olohana St - Kalakaua Ave
Site Code : 00000000
Start Date : 7/26/2016
Page No : 2

	OLOHANA ST Southbound					KALAKAUA AVE Westbound					Northbound					KALAKAUA AVE Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
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																					
08:00 AM	0	0	53	22	75	0	0	0	0	0	0	0	0	0	0	0	380	0	**20**	400	475
08:15 AM	0	0	64	30	94	0	0	0	0	0	0	0	0	0	0	0	400	0	14	414	508
08:30 AM	0	0	43	52	95	0	0	0	0	0	0	0	0	0	0	0	**433**	0	15	**448**	543
08:45 AM	0	0	**74**	**63**	**137**	0	0	0	0	0	0	0	0	0	0	0	401	0	9	410	**547**
Total Volume	0	0	234	167	401	0	0	0	0	0	0	0	0	0	0	0	1614	0	58	1672	2073
% App. Total	0	0	58.4	41.6		0	0	0	0		0	0	0	0		0	96.5	0	3.5		
PHF	.000	.000	.791	.663	.732	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.932	.000	.725	.933	.947



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File Name : Olohana St - Kuhio Ave
Site Code : 00000000
Start Date : 7/26/2016
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Groups Printed- Unshifted - Bank 1

	Southbound				KUHIO AVE Westbound				OLOHANA ST Northbound				KUHIO AVE Eastbound				
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Total
06:45 AM	6	24	2	14	0	13	19	2	0	0	0	10	3	110	0	14	217
Total	6	24	2	14	0	13	19	2	0	0	0	10	3	110	0	14	217
07:00 AM	2	26	6	16	0	13	19	2	0	0	0	10	4	98	0	7	203
07:15 AM	3	25	3	6	0	11	9	2	0	0	0	18	3	119	0	35	234
07:30 AM	4	38	2	32	0	12	15	5	0	0	0	13	6	126	0	13	266
07:45 AM	6	28	2	22	0	15	26	4	0	0	0	12	10	135	0	23	283
Total	15	117	13	76	0	51	69	13	0	0	0	53	23	478	0	78	986
08:00 AM	4	30	5	20	0	22	17	2	0	0	0	15	3	115	0	22	255
08:15 AM	4	26	7	26	0	13	20	8	0	0	0	14	12	109	0	41	280
08:30 AM	0	30	4	32	0	20	13	15	0	0	0	14	4	103	0	18	253
08:45 AM	7	38	12	22	0	19	22	17	0	0	0	19	8	131	2	18	315
Total	15	124	28	100	0	74	72	42	0	0	0	62	27	458	2	99	1103
Grand Total	36	265	43	190	0	138	160	57	0	0	0	125	53	1046	2	191	2306
Apprch %	6.7	49.6	8.1	35.6	0	38.9	45.1	16.1	0	0	0	100	4.1	81	0.2	14.8	
Total %	1.6	11.5	1.9	8.2	0	6	6.9	2.5	0	0	0	5.4	2.3	45.4	0.1	8.3	
Unshifted	36	265	43	190	0	138	160	57	0	0	0	125	53	1046	2	191	2306
% Unshifted	100	100	100	100	0	100	100	100	0	0	0	100	100	100	100	100	100
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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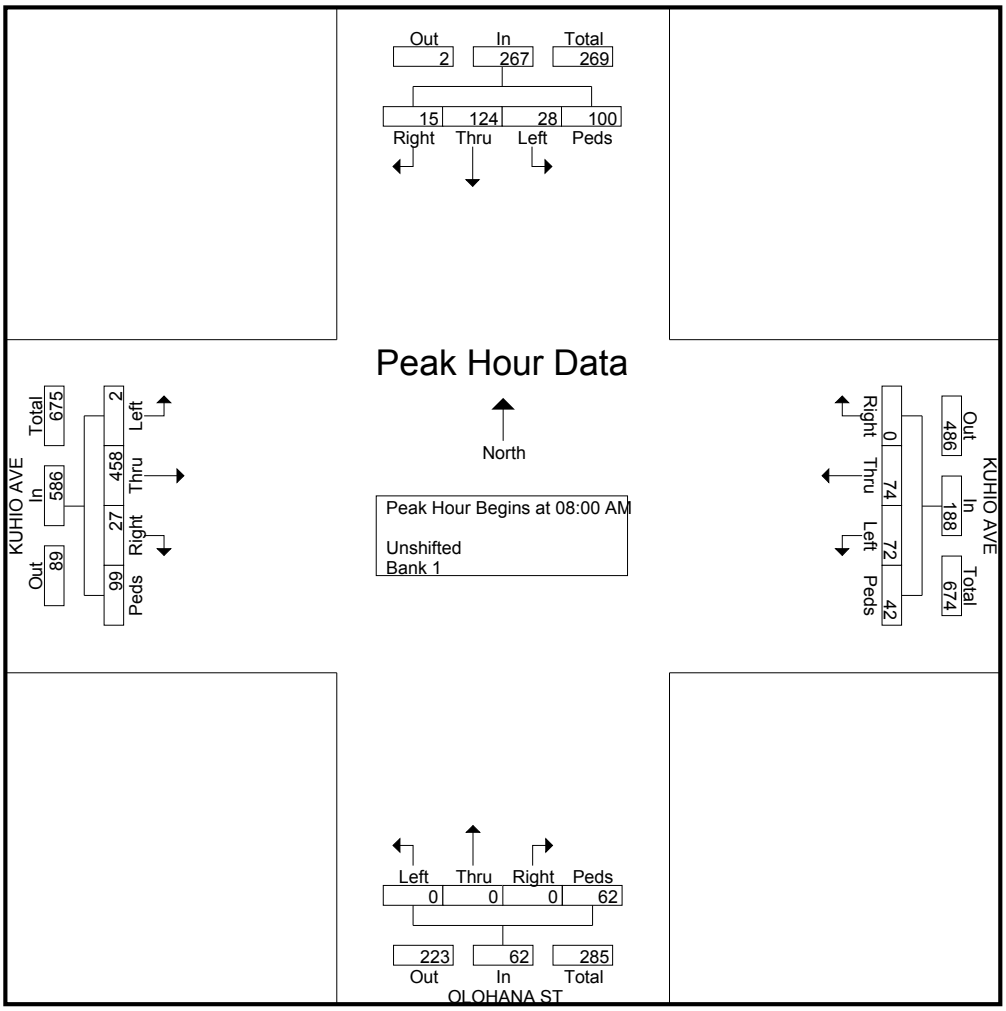
File Name : Olohana St - Kuhio Ave
Site Code : 00000000
Start Date : 7/26/2016
Page No : 2

	Southbound					KUHIO AVE Westbound					OLOHANA ST Northbound					KUHIO AVE Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
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																					
08:00 AM	4	30	5	20	59	0	**22**	17	2	41	0	0	0	15	15	3	115	0	22	140	255
08:15 AM	4	26	7	26	63	0	13	20	8	41	0	0	0	14	14	**12**	109	0	**41**	**162**	280
08:30 AM	0	30	4	**32**	66	0	20	13	15	48	0	0	0	14	14	4	103	0	18	125	253
08:45 AM	**7**	**38**	**12**	22	**79**	0	19	**22**	**17**	**58**	0	0	0	**19**	**19**	8	**131**	**2**	18	159	**315**
Total Volume	15	124	28	100	267	0	74	72	42	188	0	0	0	62	62	27	458	2	99	586	1103
% App. Total	5.6	46.4	10.5	37.5		0	39.4	38.3	22.3		0	0	0	100		4.6	78.2	0.3	16.9		
PHF	.536	.816	.583	.781	.845	.000	.841	.818	.618	.810	.000	.000	.000	.816	.816	.563	.874	.250	.604	.904	.875



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File Name : Kalaimoku St - Kalakaua Ave
Site Code : 00000000
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Groups Printed- Unshifted - Bank 1

	KALAIMOKU ST Southbound				KALAKAUA AVE Westbound				SARATOGA RD Northbound				KALAKAUA AVE Eastbound				
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Total
03:00 PM	0	0	0	49	0	0	0	0	114	67	0	80	54	394	9	55	822
03:15 PM	0	0	0	36	0	0	0	0	96	80	0	69	54	398	24	44	801
03:30 PM	0	0	0	44	0	0	0	0	75	80	0	35	54	432	15	22	757
03:45 PM	0	0	0	31	0	0	0	0	81	69	0	63	58	411	18	37	768
Total	0	0	0	160	0	0	0	0	366	296	0	247	220	1635	66	158	3148
04:00 PM	0	0	0	62	0	0	0	0	76	84	0	68	55	473	23	49	890
04:15 PM	0	0	0	53	0	0	0	0	86	76	0	62	59	377	23	62	798
04:30 PM	0	0	0	46	0	0	0	0	106	97	0	70	50	389	19	54	831
04:45 PM	0	0	0	88	0	0	0	0	90	80	0	101	38	435	18	57	907
Total	0	0	0	249	0	0	0	0	358	337	0	301	202	1674	83	222	3426
05:00 PM	0	0	0	72	0	0	0	0	58	54	0	106	40	251	10	40	631
05:15 PM	0	0	0	68	0	0	0	0	96	60	0	121	42	416	18	44	865
05:30 PM	0	0	0	72	0	0	0	0	101	58	0	135	38	383	11	73	871
05:45 PM	0	0	0	74	0	0	0	0	67	55	0	151	38	430	17	56	888
Total	0	0	0	286	0	0	0	0	322	227	0	513	158	1480	56	213	3255
Grand Total	0	0	0	695	0	0	0	0	1046	860	0	1061	580	4789	205	593	9829
Apprch %	0	0	0	100	0	0	0	0	35.3	29	0	35.8	9.4	77.7	3.3	9.6	
Total %	0	0	0	7.1	0	0	0	0	10.6	8.7	0	10.8	5.9	48.7	2.1	6	
Unshifted	0	0	0	695	0	0	0	0	1046	860	0	1061	580	4789	205	593	9829
% Unshifted	0	0	0	100	0	0	0	0	100	100	0	100	100	100	100	100	100
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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File Name : Kalaimoku St - Kalakaua Ave
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Start Date : 7/26/2016
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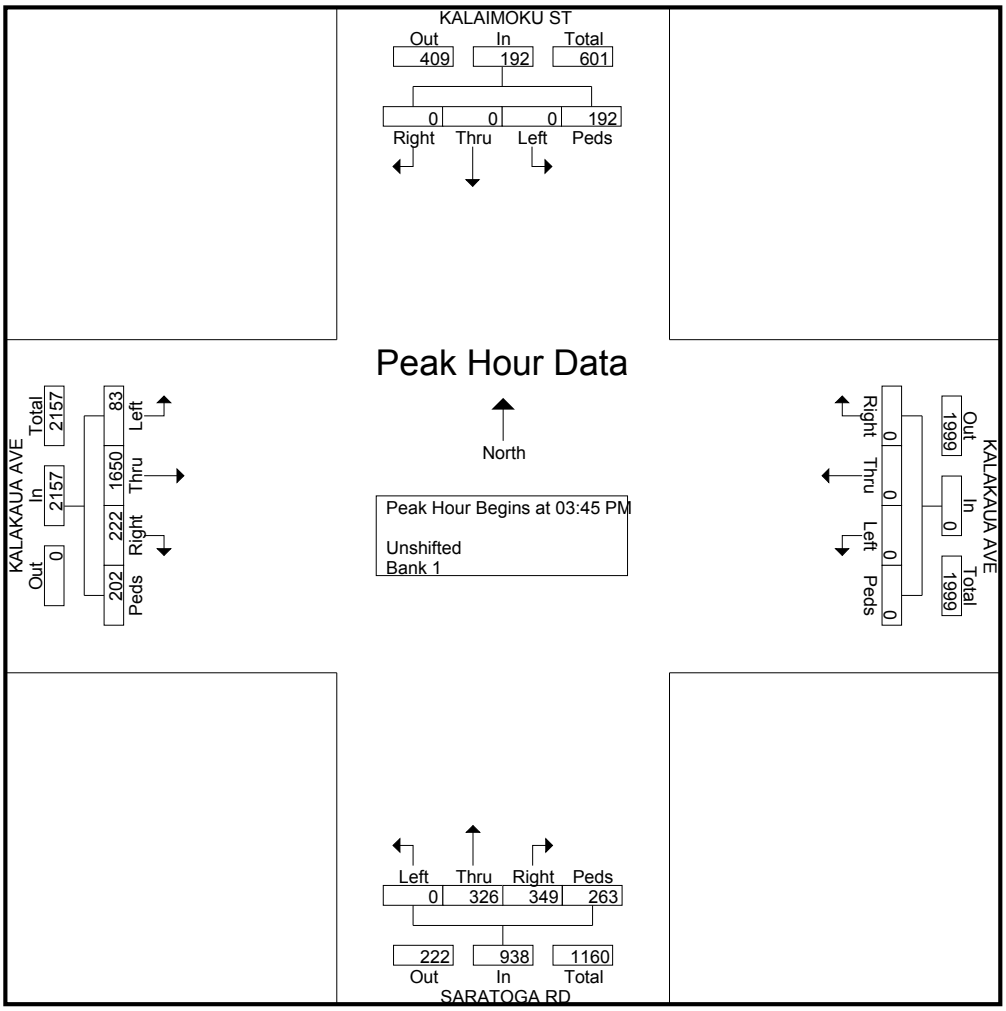
	KALAIMOKU ST Southbound					KALAKAUA AVE Westbound					SARATOGA RD Northbound					KALAKAUA AVE Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:45 PM to 04:30 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 03:45 PM																					
03:45 PM	0	0	0	31	31	0	0	0	0	0	81	69	0	63	213	58	411	18	37	524	768
04:00 PM	0	0	0	**62**	**62**	0	0	0	0	0	76	84	0	68	228	55	**473**	**23**	49	**600**	**890**
04:15 PM	0	0	0	53	53	0	0	0	0	0	86	76	0	62	224	**59**	377	23	**62**	521	798
04:30 PM	0	0	0	46	46	0	0	0	0	0	**106**	**97**	0	**70**	**273**	50	389	19	54	512	831
Total Volume	0	0	0	192	192	0	0	0	0	0	349	326	0	263	938	222	1650	83	202	2157	3287
% App. Total	0	0	0	100		0	0	0	0		37.2	34.8	0	28		10.3	76.5	3.8	9.4		
PHF	.000	.000	.000	.774	.774	.000	.000	.000	.000	.000	.823	.840	.000	.939	.859	.941	.872	.902	.815	.899	.923



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File Name : Kalaimoku St - Kuhio Ave
Site Code : 00000000
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Groups Printed- Unshifted - Bank 1

	KALAIMOKU ST Southbound				KUHIO AVE Westbound				KALAIMOKU ST Northbound				KUHIO AVE Eastbound				
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Total
03:00 PM	0	0	0	21	11	38	0	8	12	52	3	27	0	131	13	12	328
03:15 PM	0	0	0	33	11	43	0	5	17	84	7	31	0	158	10	11	410
03:30 PM	0	0	0	39	12	56	0	13	18	92	7	31	0	137	12	19	436
03:45 PM	0	0	0	17	11	45	0	14	22	65	2	32	0	160	17	28	413
Total	0	0	0	110	45	182	0	40	69	293	19	121	0	586	52	70	1587
04:00 PM	0	0	0	25	19	37	0	9	17	84	4	38	0	198	13	9	453
04:15 PM	0	0	0	28	14	50	0	10	23	78	2	22	0	187	14	11	439
04:30 PM	0	0	0	32	8	40	0	14	14	81	5	13	0	155	19	5	386
04:45 PM	0	0	0	44	9	44	0	8	18	77	7	23	0	184	12	19	445
Total	0	0	0	129	50	171	0	41	72	320	18	96	0	724	58	44	1723
05:00 PM	0	0	0	34	17	37	0	15	15	70	3	22	0	206	13	19	451
05:15 PM	0	0	0	45	17	39	0	13	17	66	5	27	0	189	12	16	446
05:30 PM	0	0	0	40	18	49	0	12	17	55	3	38	0	196	11	18	457
05:45 PM	0	0	0	53	6	48	0	13	13	57	6	37	0	177	17	21	448
Total	0	0	0	172	58	173	0	53	62	248	17	124	0	768	53	74	1802
Grand Total	0	0	0	411	153	526	0	134	203	861	54	341	0	2078	163	188	5112
Apprch %	0	0	0	100	18.8	64.7	0	16.5	13.9	59	3.7	23.4	0	85.5	6.7	7.7	
Total %	0	0	0	8	3	10.3	0	2.6	4	16.8	1.1	6.7	0	40.6	3.2	3.7	
Unshifted	0	0	0	411	153	526	0	134	203	861	54	341	0	2078	163	188	5112
% Unshifted	0	0	0	100	100	100	0	100	100	100	100	100	0	100	100	100	100
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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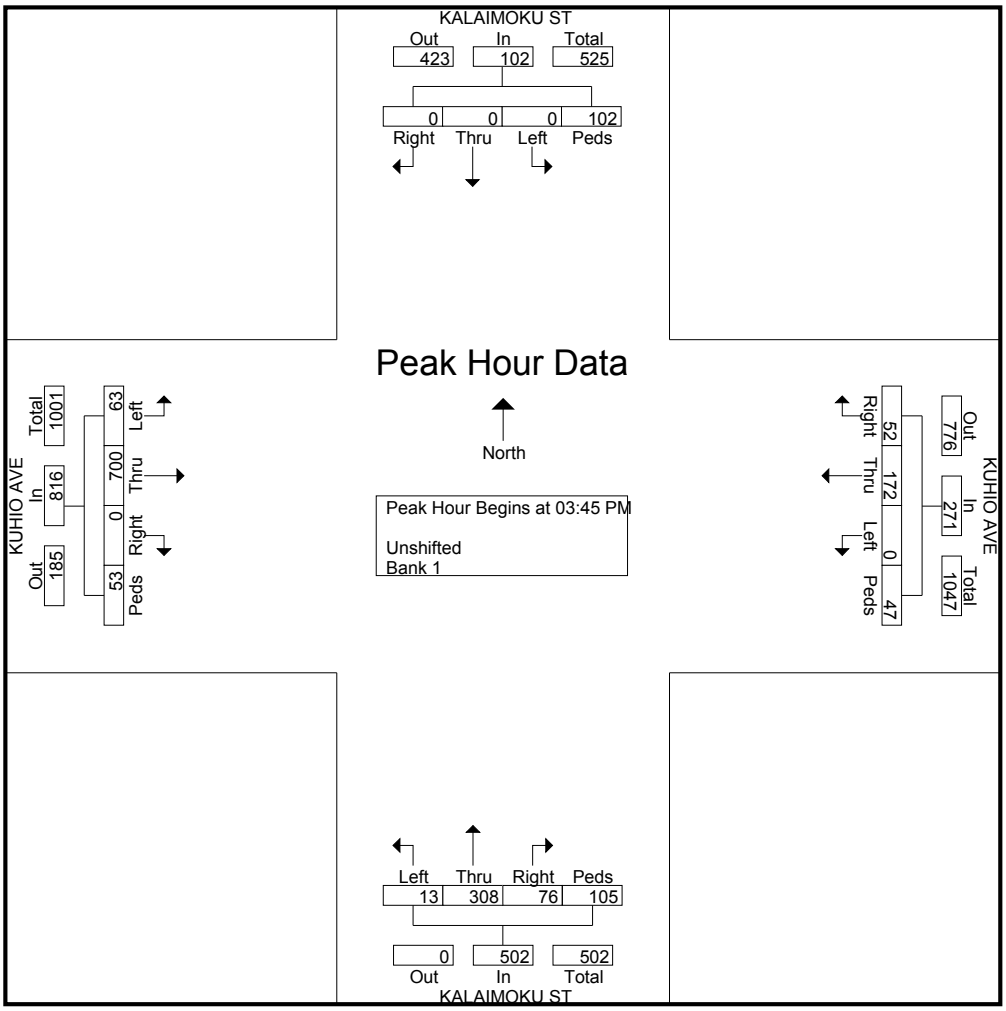
	KALAIMOKU ST Southbound					KUHIO AVE Westbound					KALAIMOKU ST Northbound					KUHIO AVE Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:45 PM to 04:30 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 03:45 PM																					
03:45 PM	0	0	0	17	17	11	45	0	**14**	70	22	65	2	32	121	0	160	17	**28**	205	413
04:00 PM	0	0	0	25	25	**19**	37	0	9	65	17	**84**	4	**38**	**143**	0	**198**	13	9	**220**	**453**
04:15 PM	0	0	0	28	28	14	**50**	0	10	**74**	**23**	78	2	22	125	0	187	14	11	212	439
04:30 PM	0	0	0	**32**	**32**	8	40	0	14	62	14	81	**5**	13	113	0	155	**19**	5	179	386
Total Volume	0	0	0	102	102	52	172	0	47	271	76	308	13	105	502	0	700	63	53	816	1691
% App. Total	0	0	0	100		19.2	63.5	0	17.3		15.1	61.4	2.6	20.9		0	85.8	7.7	6.5		
PHF	.000	.000	.000	.797	.797	.684	.860	.000	.839	.916	.826	.917	.650	.691	.878	.000	.884	.829	.473	.927	.933



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File Name : PM_Kalaimoku St - Project Dwy 1545-1645
Site Code : 00000000
Start Date : 7/26/2016
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Groups Printed- Class 1

	Southbound				Westbound				kALAIMOKU ST Northbound				PROJECT DWY Eastbound				
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Total
03:45 PM	0	0	0	0	0	0	0	0	0	72	3	0	0	0	4	17	96
Total	0	0	0	0	0	0	0	0	0	72	3	0	0	0	4	17	96
04:00 PM	0	0	0	0	0	0	0	0	0	99	2	0	0	0	2	18	121
04:15 PM	0	0	0	0	0	0	0	0	0	94	1	0	0	0	2	19	116
04:30 PM	0	0	0	0	0	0	0	0	0	106	3	0	0	0	10	16	135
Grand Total	0	0	0	0	0	0	0	0	0	371	9	0	0	0	18	70	468
Apprch %	0	0	0	0	0	0	0	0	0	97.6	2.4	0	0	0	20.5	79.5	
Total %	0	0	0	0	0	0	0	0	0	79.3	1.9	0	0	0	3.8	15	

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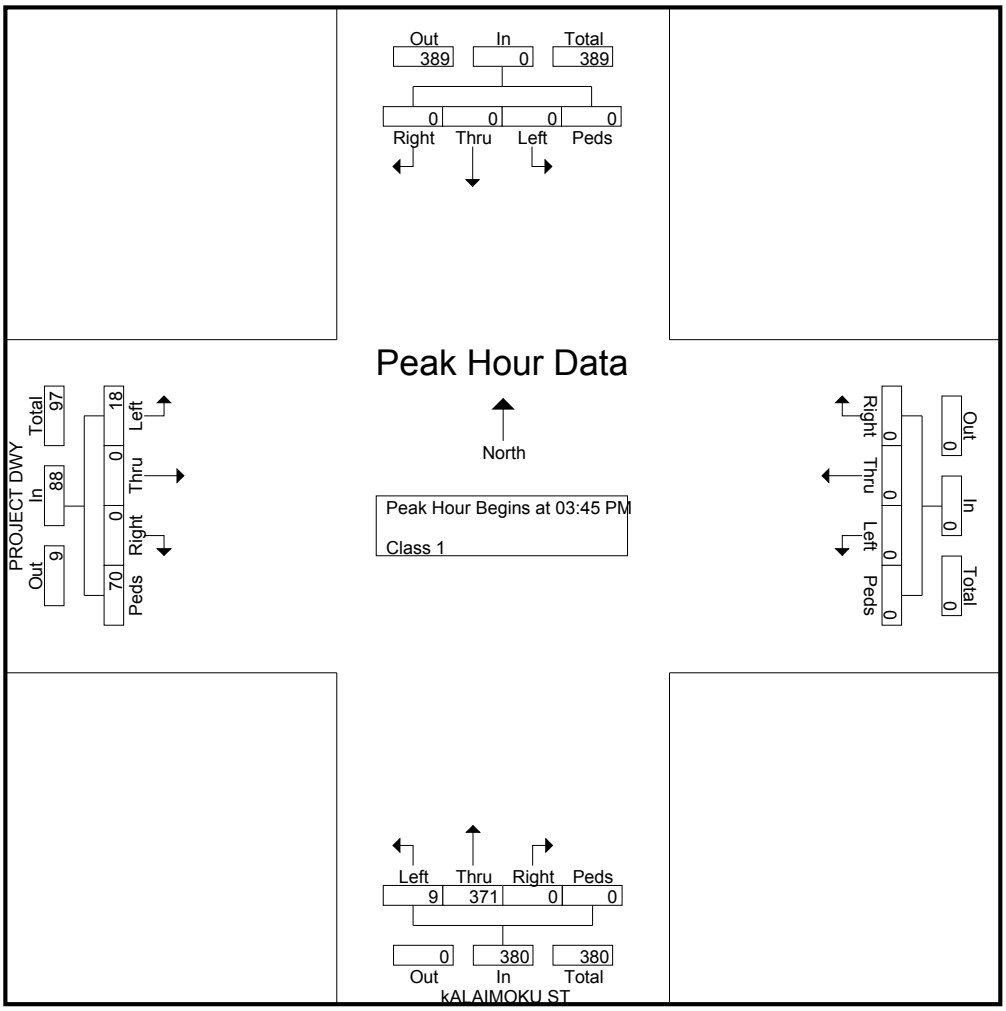
File Name : PM_Kalaimoku St - Project Dwy 1545-1645
Site Code : 00000000
Start Date : 7/26/2016
Page No : 2

	Southbound					Westbound					kALAIMOKU ST Northbound					PROJECT DWY Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
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																					
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	72	**3**	0	75	0	0	4	17	21	96
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	99	2	0	101	0	0	2	18	20	121
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	94	1	0	95	0	0	2	**19**	21	116
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	**106**	3	0	**109**	0	0	**10**	16	**26**	**135**
Total Volume	0	0	0	0	0	0	0	0	0	0	0	371	9	0	380	0	0	18	70	88	468
% App. Total	0	0	0	0		0	0	0	0		0	97.6	2.4	0		0	0	20.5	79.5		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.875	.750	.000	.872	.000	.000	.450	.921	.846	.867



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File Name : PM_Kalaimoku St - Ritz Carlton Residence Dwy 1545-1645
Site Code : 00000000
Start Date : 7/26/2016
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Groups Printed- Class 1

	Southbound				RITZ CARLTON RESIDENCE DWY Westbound				kALAIMOKU ST Northbound				Eastbound				
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Total
03:45 PM	0	0	0	0	12	0	0	32	9	75	0	0	0	0	0	0	128
Total	0	0	0	0	12	0	0	32	9	75	0	0	0	0	0	0	128
04:00 PM	0	0	0	0	7	0	0	10	6	101	0	0	0	0	0	0	124
04:15 PM	0	0	0	0	6	0	0	8	4	95	0	0	0	0	0	0	113
04:30 PM	0	0	0	0	6	0	0	14	7	109	0	0	0	0	0	0	136
Grand Total	0	0	0	0	31	0	0	64	26	380	0	0	0	0	0	0	501
Apprch %	0	0	0	0	32.6	0	0	67.4	6.4	93.6	0	0	0	0	0	0	
Total %	0	0	0	0	6.2	0	0	12.8	5.2	75.8	0	0	0	0	0	0	

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Site Code : 00000000
Start Date : 7/26/2016
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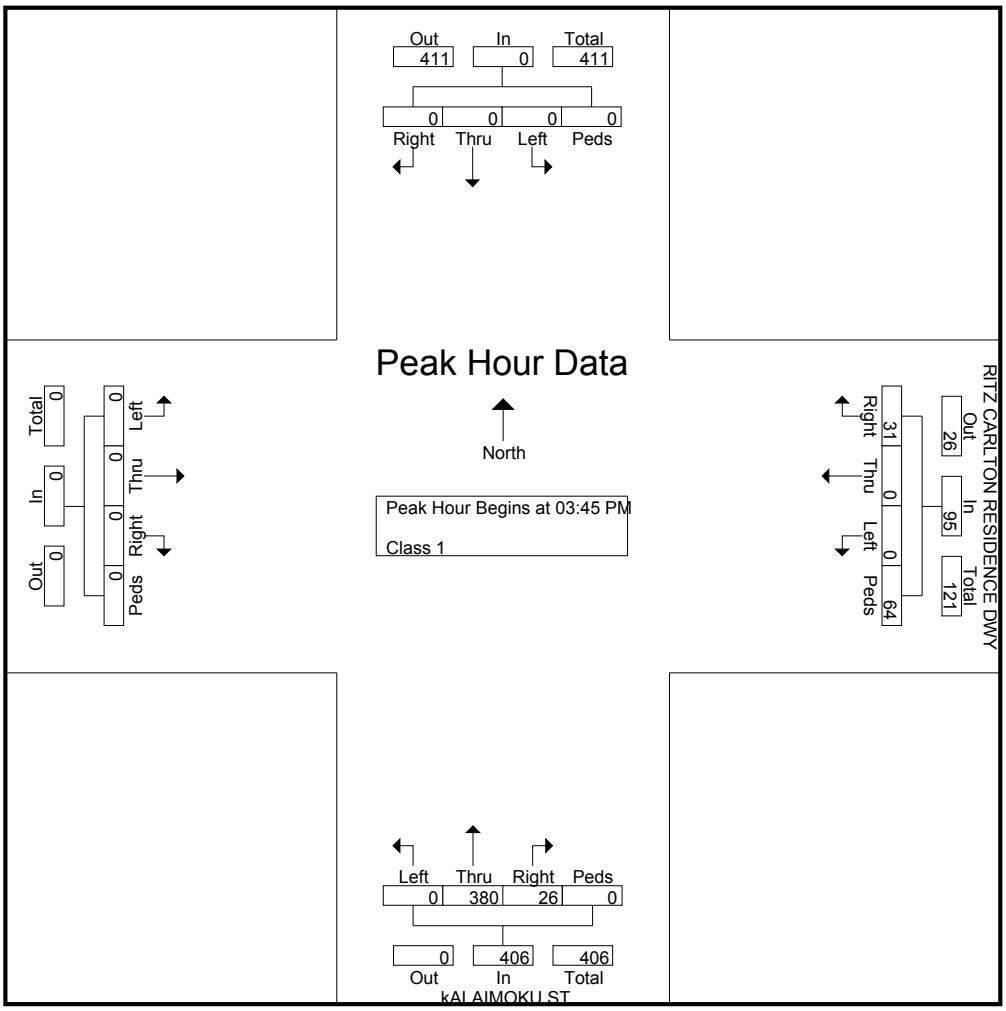
	Southbound					RITZ CARLTON RESIDENCE DWY Westbound					kALAIMOKU ST Northbound					Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:45 PM to 04:30 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 03:45 PM																					
03:45 PM	0	0	0	0	0	**12**	0	0	**32**	**44**	**9**	75	0	0	84	0	0	0	0	0	128
04:00 PM	0	0	0	0	0	7	0	0	10	17	6	101	0	0	107	0	0	0	0	0	124
04:15 PM	0	0	0	0	0	6	0	0	8	14	4	95	0	0	99	0	0	0	0	0	113
04:30 PM	0	0	0	0	0	6	0	0	14	20	7	**109**	0	0	**116**	0	0	0	0	0	**136**
Total Volume	0	0	0	0	0	31	0	0	64	95	26	380	0	0	406	0	0	0	0	0	501
% App. Total	0	0	0	0		32.6	0	0	67.4		6.4	93.6	0	0		0	0	0	0		
PHF	.000	.000	.000	.000	.000	.646	.000	.000	.500	.540	.722	.872	.000	.000	.875	.000	.000	.000	.000	.000	.921



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File Name : Olohana St - Kalakaua Ave
Site Code : 00000000
Start Date : 7/26/2016
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Groups Printed- Unshifted - Bank 1

	OLOHANA ST Southbound				KALAKAUA AVE Westbound				Northbound				KALAKAUA AVE Eastbound				
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Total
03:00 PM	0	0	56	29	0	0	0	0	0	0	0	0	0	391	0	23	499
03:15 PM	0	0	57	25	0	0	0	0	0	0	0	0	0	426	0	19	527
03:30 PM	0	0	74	39	0	0	0	0	0	0	0	0	0	439	0	8	560
03:45 PM	0	0	66	18	0	0	0	0	0	0	0	0	0	482	0	14	580
Total	0	0	253	111	0	0	0	0	0	0	0	0	0	1738	0	64	2166
04:00 PM	0	0	71	36	0	0	0	0	0	0	0	0	0	517	0	26	650
04:15 PM	0	0	57	41	0	0	0	0	0	0	0	0	0	428	0	27	553
04:30 PM	0	0	54	23	0	0	0	0	0	0	0	0	0	390	0	18	485
04:45 PM	0	0	52	32	0	0	0	0	0	0	0	0	0	435	0	9	528
Total	0	0	234	132	0	0	0	0	0	0	0	0	0	1770	0	80	2216
05:00 PM	0	0	50	34	0	0	0	0	0	0	0	0	0	426	0	31	541
05:15 PM	0	0	51	50	0	0	0	0	0	0	0	0	0	424	0	22	547
05:30 PM	0	0	45	82	0	0	0	0	0	0	0	0	0	389	0	21	537
05:45 PM	0	0	70	40	0	0	0	0	0	0	0	0	0	416	0	21	547
Total	0	0	216	206	0	0	0	0	0	0	0	0	0	1655	0	95	2172
Grand Total	0	0	703	449	0	0	0	0	0	0	0	0	0	5163	0	239	6554
Apprch %	0	0	61	39	0	0	0	0	0	0	0	0	0	95.6	0	4.4	
Total %	0	0	10.7	6.9	0	0	0	0	0	0	0	0	0	78.8	0	3.6	
Unshifted	0	0	703	449	0	0	0	0	0	0	0	0	0	5163	0	239	6554
% Unshifted	0	0	100	100	0	0	0	0	0	0	0	0	0	100	0	100	100
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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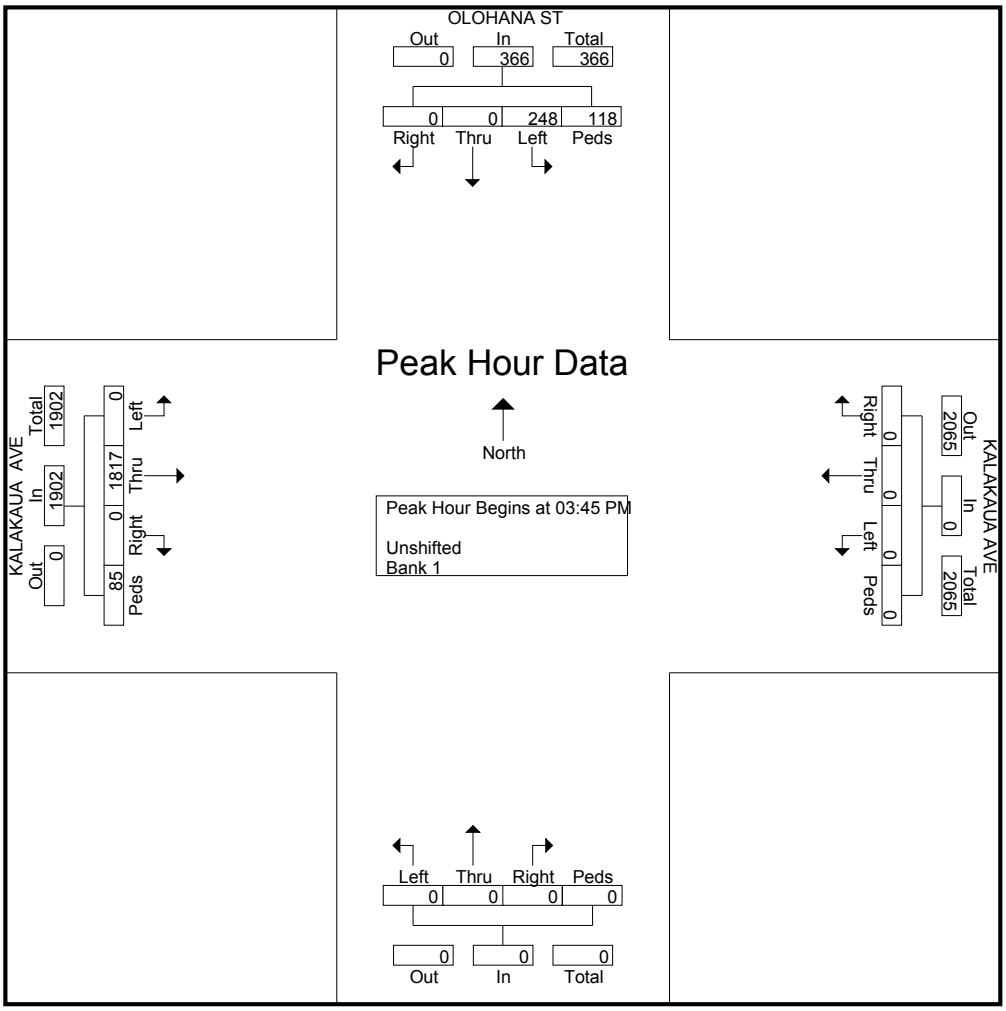
	OLOHANA ST Southbound					KALAKAUA AVE Westbound					Northbound					KALAKAUA AVE Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:45 PM to 04:30 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 03:45 PM																					
03:45 PM	0	0	66	18	84	0	0	0	0	0	0	0	0	0	0	0	482	0	14	496	580
04:00 PM	0	0	**71**	36	**107**	0	0	0	0	0	0	0	0	0	0	0	**517**	0	26	**543**	**650**
04:15 PM	0	0	57	**41**	98	0	0	0	0	0	0	0	0	0	0	0	428	0	**27**	455	553
04:30 PM	0	0	54	23	77	0	0	0	0	0	0	0	0	0	0	0	390	0	18	408	485
Total Volume	0	0	248	118	366	0	0	0	0	0	0	0	0	0	0	0	1817	0	85	1902	2268
% App. Total	0	0	67.8	32.2		0	0	0	0		0	0	0	0		0	95.5	0	4.5		
PHF	.000	.000	.873	.720	.855	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.879	.000	.787	.876	.872



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File Name : Olohana St - Kuhio Ave
Site Code : 00000000
Start Date : 7/26/2016
Page No : 1

Groups Printed- Unshifted - Bank 1

	Southbound				KUHIO AVE Westbound				OLOHANA ST Northbound				KUHIO AVE Eastbound				
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Total
03:00 PM	1	23	6	22	0	18	26	17	0	0	0	29	3	139	0	13	297
03:15 PM	2	24	7	17	0	22	31	7	0	0	0	24	4	162	0	10	310
03:30 PM	4	25	5	10	0	23	36	13	0	0	0	21	5	136	0	11	289
03:45 PM	4	30	3	16	0	16	23	8	0	0	0	5	6	151	0	14	276
Total	11	102	21	65	0	79	116	45	0	0	0	79	18	588	0	48	1172
04:00 PM	7	24	8	6	0	19	28	7	0	0	0	17	18	199	0	8	341
04:15 PM	6	30	7	2	0	23	25	0	0	0	0	9	13	195	0	16	326
04:30 PM	3	19	5	17	0	20	33	11	0	0	0	15	2	184	0	55	364
04:45 PM	3	32	5	27	0	28	25	15	0	0	0	19	3	202	0	26	385
Total	19	105	25	52	0	90	111	33	0	0	0	60	36	780	0	105	1416
05:00 PM	8	18	6	43	0	17	22	35	0	0	0	15	3	213	0	25	405
05:15 PM	6	26	8	31	0	20	19	7	0	0	0	14	4	193	0	38	366
05:30 PM	5	18	9	38	0	23	22	19	0	0	0	20	9	188	0	16	367
05:45 PM	2	20	4	23	0	21	35	14	0	0	0	20	9	202	0	22	372
Total	21	82	27	135	0	81	98	75	0	0	0	69	25	796	0	101	1510
Grand Total	51	289	73	252	0	250	325	153	0	0	0	208	79	2164	0	254	4098
Apprch %	7.7	43.5	11	37.9	0	34.3	44.6	21	0	0	0	100	3.2	86.7	0	10.2	
Total %	1.2	7.1	1.8	6.1	0	6.1	7.9	3.7	0	0	0	5.1	1.9	52.8	0	6.2	
Unshifted	51	289	73	252	0	250	325	153	0	0	0	208	79	2164	0	254	4098
% Unshifted	100	100	100	100	0	100	100	100	0	0	0	100	100	100	0	100	100
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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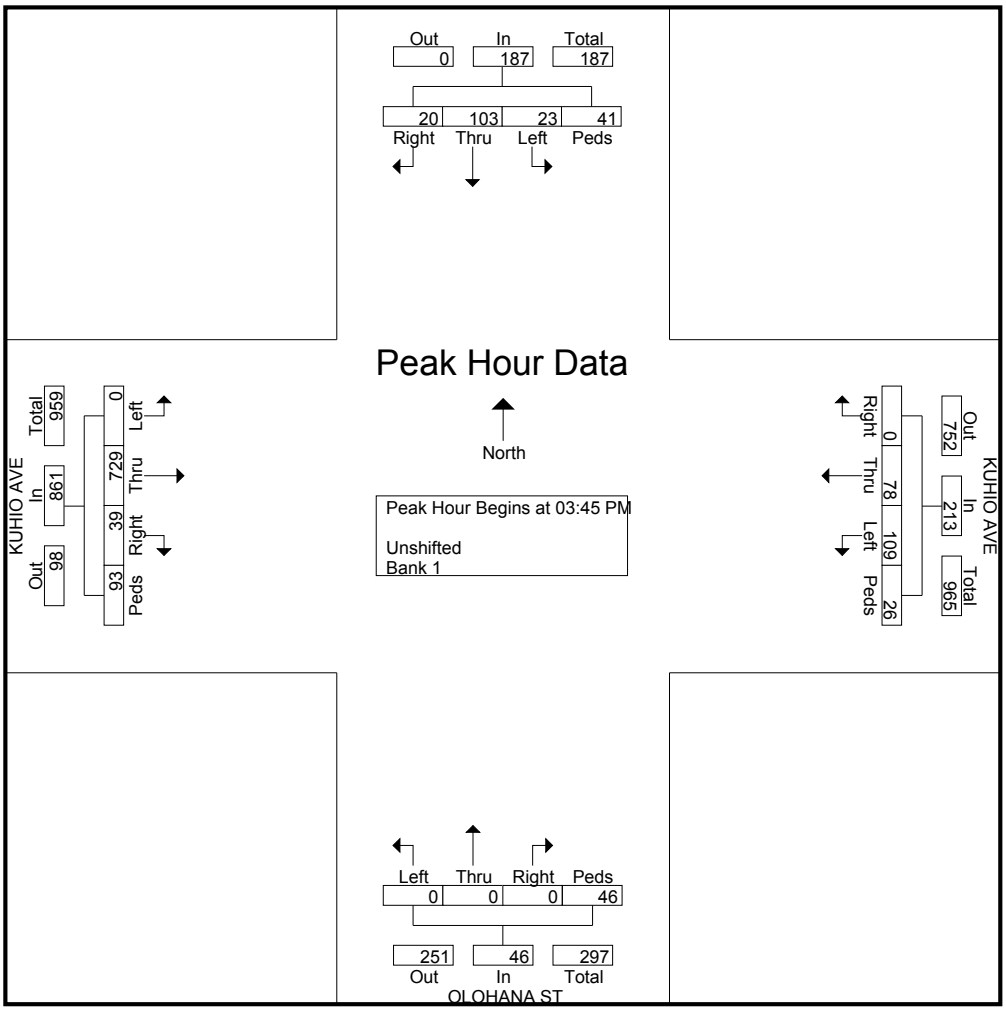
	Southbound					KUHIO AVE Westbound					OLOHANA ST Northbound					KUHIO AVE Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:45 PM to 04:30 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 03:45 PM																					
03:45 PM	4	**30**	3	16	**53**	0	16	23	8	47	0	0	0	5	5	6	151	0	14	171	276
04:00 PM	**7**	24	**8**	6	45	0	19	28	7	54	0	0	0	**17**	**17**	**18**	**199**	0	8	225	341
04:15 PM	6	30	7	2	45	0	**23**	25	0	48	0	0	0	9	9	13	195	0	16	224	326
04:30 PM	3	19	5	**17**	44	0	20	**33**	**11**	**64**	0	0	0	15	15	2	184	0	**55**	**241**	**364**
Total Volume	20	103	23	41	187	0	78	109	26	213	0	0	0	46	46	39	729	0	93	861	1307
% App. Total	10.7	55.1	12.3	21.9		0	36.6	51.2	12.2		0	0	0	100		4.5	84.7	0	10.8		
PHF	.714	.858	.719	.603	.882	.000	.848	.826	.591	.832	.000	.000	.000	.676	.676	.542	.916	.000	.423	.893	.898



APPENDIX B

LEVEL OF SERVICE CRITERIA

APPENDIX B – LEVEL OF SERVICE (LOS) CRITERIA

VEHICULAR LEVEL OF SERVICE FOR SIGNALIZED INTERSECTIONS (HCM 2010)

Level of service for vehicles at signalized intersections is directly related to delay values and is assigned on that basis. Level of Service is a measure of the acceptability of delay values to motorists at a given intersection. The criteria are given in the table below.

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 is dependent 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 or approach in question.

VEHICULAR LEVEL OF SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS (HCM 2010)

The level of service criteria for vehicles at unsignalized intersections is defined as the average control delay, in seconds per vehicle.

LOS delay threshold values are lower for two-way stop-controlled (TWSC) and all-way stop-controlled (AWSC) intersections than those of signalized intersections. This is because more vehicles pass through signalized intersections, and therefore, drivers expect and tolerate greater delays. While the criteria for level of service for TWSC and AWSC intersections are the same, procedures to calculate the average total delay may differ.

Level of Service Criteria for Two-Way Stop-Controlled Intersections

Level of Service	Average Control Delay (sec/veh)
A	≤ 10
B	>10 and ≤15
C	>15 and ≤25
D	>25 and ≤35
E	>35 and ≤50
F	> 50

APPENDIX C

LEVEL OF SERVICE CALCULATIONS

APPENDIX C

LEVEL OF SERVICE CALCULATIONS

- Existing Conditions

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	458	27	72	74	0	0	0	0	28	124	15
Future Volume (veh/h)	0	458	27	72	74	0	0	0	0	28	124	15
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		1.00				1.00		0.73
Parking Bus, Adj	1.00	1.00	0.90	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1688	1900	1508	1743	0				1900	1731	1900
Adj Flow Rate, veh/h	0	498	29	78	80	0				30	135	16
Adj No. of Lanes	0	2	0	1	1	0				0	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	12	12	26	9	0				0	10	0
Cap, veh/h	0	1457	85	168	1185	0				104	475	57
Arrive On Green	0.00	0.50	0.50	0.12	0.68	0.00				0.20	0.20	0.20
Sat Flow, veh/h	0	2998	169	1436	1743	0				531	2431	293
Grp Volume(v), veh/h	0	273	254	78	80	0				96	0	85
Grp Sat Flow(s),veh/h/ln	0	1604	1479	1436	1743	0				1704	0	1550
Q Serve(g_s), s	0.0	8.2	8.3	4.1	1.2	0.0				3.9	0.0	3.7
Cycle Q Clear(g_c), s	0.0	8.2	8.3	4.1	1.2	0.0				3.9	0.0	3.7
Prop In Lane	0.00		0.11	1.00		0.00				0.31		0.19
Lane Grp Cap(c), veh/h	0	802	740	168	1185	0				333	0	303
V/C Ratio(X)	0.00	0.34	0.34	0.46	0.07	0.00				0.29	0.00	0.28
Avail Cap(c_a), veh/h	0	802	740	168	1185	0				426	0	388
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	12.1	12.1	33.0	4.3	0.0				27.5	0.0	27.4
Incr Delay (d2), s/veh	0.0	1.2	1.3	2.0	0.0	0.0				0.5	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.9	3.6	1.7	0.6	0.0				1.9	0.0	1.6
LnGrp Delay(d),s/veh	0.0	13.2	13.3	34.9	4.3	0.0				27.9	0.0	27.9
LnGrp LOS		B	B	C	A					C		C
Approach Vol, veh/h		527			158						181	
Approach Delay, s/veh		13.3			19.4						27.9	
Approach LOS		B			B						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	14.4	45.0		20.6		59.4		
Change Period (Y+Rc), s	5.0	5.0		5.0		5.0		
Max Green Setting (Gmax), s	5.0	40.0		20.0		50.0		
Max Q Clear Time (g_c+I1), s	6.1	10.3		5.9		3.2		
Green Ext Time (p_c), s	0.0	3.7		0.8		0.7		

Intersection Summary	
HCM 2010 Ctrl Delay	17.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	416	0	0	125	35	16	200	49	0	0	0
Future Volume (veh/h)	63	416	0	0	125	35	16	200	49	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.88	1.00		0.94			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1900	1703	0	0	1704	1900	1900	1634	1900			
Adj Flow Rate, veh/h	68	452	0	0	136	38	17	217	53			
Adj No. of Lanes	0	2	0	0	2	0	0	2	0			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	10	10	0	0	1	1	0	11	0			
Cap, veh/h	0	2253	0	0	921	242	32	419	106			
Arrive On Green	0.26	0.70	0.00	0.00	0.38	0.38	0.18	0.18	0.18			
Sat Flow, veh/h	0	3321	0	0	2541	647	180	2342	591			
Grp Volume(v), veh/h	0	452	0	0	87	87	154	0	133			
Grp Sat Flow(s),veh/h/ln	0	1618	0	0	1619	1483	1625	0	1487			
Q Serve(g_s), s	0.0	3.9	0.0	0.0	2.8	3.1	6.9	0.0	6.5			
Cycle Q Clear(g_c), s	0.0	3.9	0.0	0.0	2.8	3.1	6.9	0.0	6.5			
Prop In Lane	0.00		0.00	0.00		0.44	0.11		0.40			
Lane Grp Cap(c), veh/h	0	2253	0	0	607	556	291	0	266			
V/C Ratio(X)	0.00	0.20	0.00	0.00	0.14	0.16	0.53	0.00	0.50			
Avail Cap(c_a), veh/h	0	2253	0	0	607	556	610	0	558			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.97	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	4.3	0.0	0.0	16.5	16.6	29.8	0.0	29.6			
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.5	0.6	1.5	0.0	1.5			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	1.8	0.0	0.0	1.3	1.4	3.2	0.0	2.8			
LnGrp Delay(d),s/veh	0.0	4.5	0.0	0.0	17.0	17.2	31.3	0.0	31.1			
LnGrp LOS		A			B	B	C		C			
Approach Vol, veh/h		452			174			287				
Approach Delay, s/veh		4.5			17.1			31.2				
Approach LOS		A			B			C				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		60.7			25.7	35.0		19.3
Change Period (Y+Rc), s		5.0			5.0	5.0		5.0
Max Green Setting (Gmax), s		40.0			5.0	30.0		30.0
Max Q Clear Time (g_c+I1), s		5.9			0.0	5.1		8.9
Green Ext Time (p_c), s		3.5			0.0	1.0		1.7

Intersection Summary	
HCM 2010 Ctrl Delay	15.3
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1614	0	0	0	0	0	0	0	234	0	0
Future Volume (veh/h)	0	1614	0	0	0	0	0	0	0	234	0	0
Number	5	2	12							7	4	14
Initial Q (Qb), veh	0	0	0							0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00							1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00							1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1179	0							1638	1863	0
Adj Flow Rate, veh/h	0	1754	0							254	0	0
Adj No. of Lanes	0	4	0							2	1	0
Peak Hour Factor	0.92	0.92	0.92							0.92	0.92	0.92
Percent Heavy Veh, %	0	6	0							16	2	0
Cap, veh/h	0	3252	0							325	200	0
Arrive On Green	0.00	0.80	0.00							0.11	0.00	0.00
Sat Flow, veh/h	0	4387	0							3026	1863	0
Grp Volume(v), veh/h	0	1754	0							254	0	0
Grp Sat Flow(s),veh/h/ln	0	1014	0							1513	1863	0
Q Serve(g_s), s	0.0	16.6	0.0							9.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	16.6	0.0							9.0	0.0	0.0
Prop In Lane	0.00		0.00							1.00		0.00
Lane Grp Cap(c), veh/h	0	3252	0							325	200	0
V/C Ratio(X)	0.00	0.54	0.00							0.78	0.00	0.00
Avail Cap(c_a), veh/h	0	3252	0							825	508	0
HCM Platoon Ratio	1.00	1.00	1.00							1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00							0.88	0.00	0.00
Uniform Delay (d), s/veh	0.0	3.8	0.0							47.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.6	0.0							3.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0							0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.7	0.0							3.9	0.0	0.0
LnGrp Delay(d),s/veh	0.0	4.5	0.0							51.4	0.0	0.0
LnGrp LOS		A								D		
Approach Vol, veh/h		1754									254	
Approach Delay, s/veh		4.5									51.4	
Approach LOS		A									D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				
Phs Duration (G+Y+Rc), s		93.2		16.8				
Change Period (Y+Rc), s		5.0		5.0				
Max Green Setting (Gmax), s		70.0		30.0				
Max Q Clear Time (g_c+I1), s		18.6		11.0				
Green Ext Time (p_c), s		23.4		0.8				

Intersection Summary	
HCM 2010 Ctrl Delay	10.4
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	1529	175	0	0	0	0	202	0	0	0	0
Future Volume (veh/h)	65	1529	175	0	0	0	0	202	0	0	0	0
Number	5	2	12				3	8	18			
Initial Q (Qb), veh	0	0	0				0	0	0			
Ped-Bike Adj(A_pbT)	1.00		0.92				1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1900	1485	1900				0	1336	0			
Adj Flow Rate, veh/h	71	1662	190				0	220	0			
Adj No. of Lanes	0	4	0				0	1	0			
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92			
Percent Heavy Veh, %	7	7	7				0	16	0			
Cap, veh/h	146	3131	356				0	249	0			
Arrive On Green	0.24	0.24	0.24				0.00	0.19	0.00			
Sat Flow, veh/h	151	4332	492				0	1336	0			
Grp Volume(v), veh/h	557	897	469				0	220	0			
Grp Sat Flow(s),veh/h/ln	1437	1162	1214				0	1336	0			
Q Serve(g_s), s	23.3	37.1	37.1				0.0	17.6	0.0			
Cycle Q Clear(g_c), s	36.9	37.1	37.1				0.0	17.6	0.0			
Prop In Lane	0.13		0.41				0.00		0.00			
Lane Grp Cap(c), veh/h	1075	1680	878				0	249	0			
V/C Ratio(X)	0.52	0.53	0.53				0.00	0.88	0.00			
Avail Cap(c_a), veh/h	1075	1680	878				0	364	0			
HCM Platoon Ratio	0.33	0.33	0.33				1.00	1.00	1.00			
Upstream Filter(I)	0.79	0.79	0.79				0.00	1.00	0.00			
Uniform Delay (d), s/veh	25.5	25.7	25.7				0.0	43.6	0.0			
Incr Delay (d2), s/veh	1.4	1.0	1.8				0.0	15.9	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	15.3	12.2	12.9				0.0	7.6	0.0			
LnGrp Delay(d),s/veh	26.9	26.7	27.6				0.0	59.5	0.0			
LnGrp LOS	C	C	C					E				
Approach Vol, veh/h		1923						220				
Approach Delay, s/veh		27.0						59.5				
Approach LOS		C						E				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2						8
Phs Duration (G+Y+Rc), s		84.5						25.5
Change Period (Y+Rc), s		5.0						5.0
Max Green Setting (Gmax), s		70.0						30.0
Max Q Clear Time (g_c+I1), s		39.1						19.6
Green Ext Time (p_c), s		18.5						0.9

Intersection Summary	
HCM 2010 Ctrl Delay	30.3
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1529	0	0	0	0	0	0	284	0	0	0
Future Volume (veh/h)	0	1529	0	0	0	0	0	0	284	0	0	0
Number	5	2	12				7	4	14			
Initial Q (Qb), veh	0	0	0				0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	0	1863	0				0	1863	1863			
Adj Flow Rate, veh/h	0	1662	0				0	0	309			
Adj No. of Lanes	0	4	0				0	1	2			
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92			
Percent Heavy Veh, %	0	2	0				0	2	2			
Cap, veh/h	0	4956	0				0	253	378			
Arrive On Green	0.00	0.77	0.00				0.00	0.00	0.14			
Sat Flow, veh/h	0	6929	0				0	1863	2787			
Grp Volume(v), veh/h	0	1662	0				0	0	309			
Grp Sat Flow(s),veh/h/ln	0	1602	0				0	1863	1393			
Q Serve(g_s), s	0.0	8.7	0.0				0.0	0.0	11.9			
Cycle Q Clear(g_c), s	0.0	8.7	0.0				0.0	0.0	11.9			
Prop In Lane	0.00		0.00				0.00		1.00			
Lane Grp Cap(c), veh/h	0	4956	0				0	253	378			
V/C Ratio(X)	0.00	0.34	0.00				0.00	0.00	0.82			
Avail Cap(c_a), veh/h	0	4956	0				0	508	760			
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00			
Upstream Filter(I)	0.00	1.00	0.00				0.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	3.8	0.0				0.0	0.0	46.2			
Incr Delay (d2), s/veh	0.0	0.2	0.0				0.0	0.0	4.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	3.9	0.0				0.0	0.0	4.8			
LnGrp Delay(d),s/veh	0.0	4.0	0.0				0.0	0.0	50.6			
LnGrp LOS		A							D			
Approach Vol, veh/h		1662						309				
Approach Delay, s/veh		4.0						50.6				
Approach LOS		A						D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				
Phs Duration (G+Y+Rc), s		90.1		19.9				
Change Period (Y+Rc), s		5.0		5.0				
Max Green Setting (Gmax), s		70.0		30.0				
Max Q Clear Time (g_c+I1), s		10.7		13.9				
Green Ext Time (p_c), s		21.0		1.1				

Intersection Summary	
HCM 2010 Ctrl Delay	11.3
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	0	9	249	0	0
Future Vol, veh/h	7	0	9	249	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	0	10	271	0	0

Major/Minor	Minor2		Major1	
Conflicting Flow All	155	-	0	0
Stage 1	0	-	-	-
Stage 2	155	-	-	-
Critical Hdwy	6.84	-	4.14	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-
Follow-up Hdwy	3.52	-	2.22	-
Pot Cap-1 Maneuver	821	0	-	-
Stage 1	-	0	-	-
Stage 2	857	0	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	821	-	-	-
Mov Cap-2 Maneuver	821	-	-	-
Stage 1	-	-	-	-
Stage 2	857	-	-	-

Approach	EB	NB
HCM Control Delay, s	9.4	
HCM LOS	A	

Minor Lane/Major Mvmt	NBL	NBT	EBLn1
Capacity (veh/h)	-	-	821
HCM Lane V/C Ratio	-	-	0.009
HCM Control Delay (s)	-	-	9.4
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	9	258	9	0	0
Future Vol, veh/h	0	9	258	9	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	-
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	10	280	10	0	0

Major/Minor	Minor1		Major1	
Conflicting Flow All	-	145	0	0
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	-	6.94	-	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	3.32	-	-
Pot Cap-1 Maneuver	0	876	-	-
Stage 1	0	-	-	-
Stage 2	0	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	-	876	-	-
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	WB	NB
HCM Control Delay, s	9.2	0
HCM LOS	A	

Minor Lane/Major Mvmt	NBT	NBR	WBLn1
Capacity (veh/h)	-	-	876
HCM Lane V/C Ratio	-	-	0.011
HCM Control Delay (s)	-	-	9.2
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	729	39	109	78	0	0	0	0	23	103	20
Future Volume (veh/h)	0	729	39	109	78	0	0	0	0	23	103	20
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		1.00				1.00		0.68
Parking Bus, Adj	1.00	1.00	0.90	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1802	1900	1439	1624	0				1900	1823	1900
Adj Flow Rate, veh/h	0	792	42	118	85	0				25	112	22
Adj No. of Lanes	0	2	0	1	1	0				0	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	4	4	32	17	0				0	6	0
Cap, veh/h	0	1564	83	196	1134	0				100	442	85
Arrive On Green	0.00	0.50	0.50	0.14	0.70	0.00				0.19	0.19	0.19
Sat Flow, veh/h	0	3218	166	1371	1624	0				525	2319	448
Grp Volume(v), veh/h	0	433	401	118	85	0				86	0	73
Grp Sat Flow(s),veh/h/ln	0	1712	1582	1371	1624	0				1797	0	1496
Q Serve(g_s), s	0.0	15.3	15.3	7.3	1.5	0.0				3.6	0.0	3.8
Cycle Q Clear(g_c), s	0.0	15.3	15.3	7.3	1.5	0.0				3.6	0.0	3.8
Prop In Lane	0.00		0.10	1.00		0.00				0.29		0.30
Lane Grp Cap(c), veh/h	0	856	791	196	1134	0				342	0	285
V/C Ratio(X)	0.00	0.51	0.51	0.60	0.07	0.00				0.25	0.00	0.26
Avail Cap(c_a), veh/h	0	856	791	196	1134	0				499	0	415
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	15.1	15.1	36.2	4.3	0.0				31.0	0.0	31.0
Incr Delay (d2), s/veh	0.0	2.1	2.3	5.1	0.0	0.0				0.4	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	7.6	7.1	3.0	0.7	0.0				1.8	0.0	1.6
LnGrp Delay(d),s/veh	0.0	17.2	17.4	41.3	4.3	0.0				31.3	0.0	31.5
LnGrp LOS		B	B	D	A					C		C
Approach Vol, veh/h		834			203						159	
Approach Delay, s/veh		17.3			25.8						31.4	
Approach LOS		B			C						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	17.9	50.0		22.1		67.9		
Change Period (Y+Rc), s	5.0	5.0		5.0		5.0		
Max Green Setting (Gmax), s	5.0	45.0		25.0		55.0		
Max Q Clear Time (g_c+I1), s	9.3	17.3		5.8		3.5		
Green Ext Time (p_c), s	0.0	6.3		0.8		0.9		

Intersection Summary	
HCM 2010 Ctrl Delay	20.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	700	0	0	172	52	13	308	76	0	0	0
Future Volume (veh/h)	63	700	0	0	172	52	13	308	76	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.91	1.00		0.91			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1900	1825	0	0	1626	1900	1900	1721	1900			
Adj Flow Rate, veh/h	68	761	0	0	187	57	14	335	83			
Adj No. of Lanes	0	2	0	0	2	0	0	2	0			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	4	4	0	0	1	1	0	3	0			
Cap, veh/h	0	2266	0	0	1007	293	23	555	143			
Arrive On Green	0.15	0.65	0.00	0.00	0.44	0.44	0.22	0.22	0.22			
Sat Flow, veh/h	0	3560	0	0	2382	669	102	2503	646			
Grp Volume(v), veh/h	0	761	0	0	123	121	235	0	197			
Grp Sat Flow(s),veh/h/ln	0	1734	0	0	1544	1425	1716	0	1535			
Q Serve(g_s), s	0.0	7.8	0.0	0.0	3.9	4.2	9.9	0.0	9.2			
Cycle Q Clear(g_c), s	0.0	7.8	0.0	0.0	3.9	4.2	9.9	0.0	9.2			
Prop In Lane	0.00		0.00	0.00		0.47	0.06		0.42			
Lane Grp Cap(c), veh/h	0	2266	0	0	676	624	380	0	340			
V/C Ratio(X)	0.00	0.34	0.00	0.00	0.18	0.19	0.62	0.00	0.58			
Avail Cap(c_a), veh/h	0	2266	0	0	676	624	536	0	480			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.92	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	6.2	0.0	0.0	13.7	13.8	28.1	0.0	27.8			
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.0	0.6	0.7	1.6	0.0	1.6			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	3.8	0.0	0.0	1.7	1.8	4.9	0.0	4.0			
LnGrp Delay(d),s/veh	0.0	6.5	0.0	0.0	14.3	14.5	29.7	0.0	29.4			
LnGrp LOS		A			B	B	C		C			
Approach Vol, veh/h		761			244			432				
Approach Delay, s/veh		6.5			14.4			29.6				
Approach LOS		A			B			C				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		57.3			17.3	40.0		22.7
Change Period (Y+Rc), s		5.0			5.0	5.0		5.0
Max Green Setting (Gmax), s		45.0			5.0	35.0		25.0
Max Q Clear Time (g_c+I1), s		9.8			0.0	6.2		11.9
Green Ext Time (p_c), s		6.6			0.0	1.6		2.3

Intersection Summary	
HCM 2010 Ctrl Delay	14.8
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1817	0	0	0	0	0	0	0	248	0	0
Future Volume (veh/h)	0	1817	0	0	0	0	0	0	0	248	0	0
Number	5	2	12							7	4	14
Initial Q (Qb), veh	0	10	0							0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00							1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00							0.94	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1078	0							984	1863	0
Adj Flow Rate, veh/h	0	2065	0							270	0	0
Adj No. of Lanes	0	4	0							2	1	0
Peak Hour Factor	0.92	0.88	0.92							0.92	0.92	0.92
Percent Heavy Veh, %	0	2	0							22	2	0
Cap, veh/h	0	2697	0							307	334	0
Arrive On Green	0.00	0.73	0.00							0.18	0.00	0.00
Sat Flow, veh/h	0	4012	0							1709	1863	0
Grp Volume(v), veh/h	0	2065	0							270	0	0
Grp Sat Flow(s),veh/h/ln	0	927	0							855	1863	0
Q Serve(g_s), s	0.0	36.7	0.0							16.5	0.0	0.0
Cycle Q Clear(g_c), s	0.0	36.7	0.0							16.5	0.0	0.0
Prop In Lane	0.00		0.00							1.00		0.00
Lane Grp Cap(c), veh/h	0	2697	0							307	334	0
V/C Ratio(X)	0.00	0.77	0.00							0.88	0.00	0.00
Avail Cap(c_a), veh/h	0	2697	0							479	522	0
HCM Platoon Ratio	1.00	1.00	1.00							1.00	1.00	1.00
Upstream Filter(I)	0.00	0.96	0.00							0.43	0.00	0.00
Uniform Delay (d), s/veh	0.0	9.3	0.0							42.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.1	0.0							5.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.4	0.0							0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	10.3	0.0							4.1	0.0	0.0
LnGrp Delay(d),s/veh	0.0	11.8	0.0							48.1	0.0	0.0
LnGrp LOS		B								D		
Approach Vol, veh/h		2065									270	
Approach Delay, s/veh		11.8									48.1	
Approach LOS		B									D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				
Phs Duration (G+Y+Rc), s		82.8		24.2				
Change Period (Y+Rc), s		5.0		5.0				
Max Green Setting (Gmax), s		67.0		30.0				
Max Q Clear Time (g_c+I1), s		38.7		18.5				
Green Ext Time (p_c), s		20.4		0.7				

Intersection Summary	
HCM 2010 Ctrl Delay	16.0
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	1650	222	0	0	0	0	326	0	0	0	0
Future Volume (veh/h)	83	1650	222	0	0	0	0	326	0	0	0	0
Number	5	2	12				3	8	18			
Initial Q (Qb), veh	0	10	0				0	0	0			
Ped-Bike Adj(A_pbT)	1.00		0.81				1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1900	1584	1900				0	1318	0			
Adj Flow Rate, veh/h	94	1875	252				0	354	0			
Adj No. of Lanes	0	4	0				0	1	0			
Peak Hour Factor	0.88	0.88	0.88				0.92	0.92	0.92			
Percent Heavy Veh, %	3	3	3				0	10	0			
Cap, veh/h	147	2627	340				0	348	0			
Arrive On Green	0.21	0.21	0.21				0.00	0.26	0.00			
Sat Flow, veh/h	174	4030	538				0	1318	0			
Grp Volume(v), veh/h	718	943	560				0	354	0			
Grp Sat Flow(s),veh/h/ln	1529	1009	1195				0	1318	0			
Q Serve(g_s), s	39.1	47.8	48.0				0.0	29.0	0.0			
Cycle Q Clear(g_c), s	48.0	47.8	48.0				0.0	29.0	0.0			
Prop In Lane	0.13		0.45				0.00		0.00			
Lane Grp Cap(c), veh/h	1024	1303	775				0	348	0			
V/C Ratio(X)	0.70	0.72	0.72				0.00	1.02	0.00			
Avail Cap(c_a), veh/h	1024	1303	771				0	348	0			
HCM Platoon Ratio	0.33	0.33	0.33				1.00	1.00	1.00			
Upstream Filter(I)	0.51	0.51	0.51				0.00	1.00	0.00			
Uniform Delay (d), s/veh	34.4	34.7	34.5				0.0	40.5	0.0			
Incr Delay (d2), s/veh	2.1	1.8	3.0				0.0	53.1	0.0			
Initial Q Delay(d3),s/veh	0.1	0.4	0.3				0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	21.3	14.1	16.9				0.0	15.6	0.0			
LnGrp Delay(d),s/veh	36.6	36.9	37.8				0.0	93.6	0.0			
LnGrp LOS	D	D	D					F				
Approach Vol, veh/h		2221						354				
Approach Delay, s/veh		37.0						93.6				
Approach LOS		D						F				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2						8
Phs Duration (G+Y+Rc), s		76.0						34.0
Change Period (Y+Rc), s		5.0						5.0
Max Green Setting (Gmax), s		71.0						29.0
Max Q Clear Time (g_c+I1), s		50.0						31.0
Green Ext Time (p_c), s		16.3						0.0

Intersection Summary	
HCM 2010 Ctrl Delay	44.8
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1650	0	0	0	0	0	0	349	0	0	0
Future Volume (veh/h)	0	1650	0	0	0	0	0	0	349	0	0	0
Number	5	2	12				3	8	18			
Initial Q (Qb), veh	0	0	0				0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	0	1618	0				0	1863	1176			
Adj Flow Rate, veh/h	0	1793	0				0	0	379			
Adj No. of Lanes	0	4	0				0	1	2			
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92			
Percent Heavy Veh, %	0	2	0				0	2	2			
Cap, veh/h	0	3753	0				0	437	413			
Arrive On Green	0.00	0.67	0.00				0.00	0.00	0.23			
Sat Flow, veh/h	0	6018	0				0	1863	1760			
Grp Volume(v), veh/h	0	1793	0				0	0	379			
Grp Sat Flow(s),veh/h/ln	0	1391	0				0	1863	880			
Q Serve(g_s), s	0.0	17.0	0.0				0.0	0.0	23.1			
Cycle Q Clear(g_c), s	0.0	17.0	0.0				0.0	0.0	23.1			
Prop In Lane	0.00		0.00				0.00		1.00			
Lane Grp Cap(c), veh/h	0	3753	0				0	437	413			
V/C Ratio(X)	0.00	0.48	0.00				0.00	0.00	0.92			
Avail Cap(c_a), veh/h	0	3753	0				0	508	480			
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00			
Upstream Filter(I)	0.00	1.00	0.00				0.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	8.6	0.0				0.0	0.0	41.1			
Incr Delay (d2), s/veh	0.0	0.4	0.0				0.0	0.0	20.9			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	6.6	0.0				0.0	0.0	6.8			
LnGrp Delay(d),s/veh	0.0	9.0	0.0				0.0	0.0	62.0			
LnGrp LOS		A							E			
Approach Vol, veh/h		1793						379				
Approach Delay, s/veh		9.0						62.0				
Approach LOS		A						E				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2						8
Phs Duration (G+Y+Rc), s		79.2						30.8
Change Period (Y+Rc), s		5.0						5.0
Max Green Setting (Gmax), s		70.0						30.0
Max Q Clear Time (g_c+I1), s		19.0						25.1
Green Ext Time (p_c), s		22.8						0.7

Intersection Summary	
HCM 2010 Ctrl Delay	18.3
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	18	0	9	371	0	0
Future Vol, veh/h	18	0	9	371	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	0	10	403	0	0

Major/Minor	Minor2		Major1	
Conflicting Flow All	221	-	0	0
Stage 1	0	-	-	-
Stage 2	221	-	-	-
Critical Hdwy	6.84	-	4.14	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-
Follow-up Hdwy	3.52	-	2.22	-
Pot Cap-1 Maneuver	747	0	-	-
Stage 1	-	0	-	-
Stage 2	795	0	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	747	-	-	-
Mov Cap-2 Maneuver	747	-	-	-
Stage 1	-	-	-	-
Stage 2	795	-	-	-

Approach	EB	NB
HCM Control Delay, s	9.9	
HCM LOS	A	

Minor Lane/Major Mvmt	NBL	NBT	EBLn1
Capacity (veh/h)	-	-	747
HCM Lane V/C Ratio	-	-	0.026
HCM Control Delay (s)	-	-	9.9
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0.1

Intersection	
Int Delay, s/veh	0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	31	380	26	0	0
Future Vol, veh/h	0	31	380	26	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	-
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	34	413	28	0	0

Major/Minor	Minor1		Major1	
Conflicting Flow All	-	221	0	0
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	-	6.94	-	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	3.32	-	-
Pot Cap-1 Maneuver	0	783	-	-
Stage 1	0	-	-	-
Stage 2	0	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	-	783	-	-
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	WB	NB
HCM Control Delay, s	9.8	0
HCM LOS	A	

Minor Lane/Major Mvmt	NBT	NBR	WBLn1
Capacity (veh/h)	-	-	783
HCM Lane V/C Ratio	-	-	0.043
HCM Control Delay (s)	-	-	9.8
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0.1

APPENDIX C

LEVEL OF SERVICE CALCULATIONS

- Base Year 2020 Traffic Operation without Project-Generated Traffic

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	510	30	80	110	0	0	0	0	30	135	20
Future Volume (veh/h)	0	510	30	80	110	0	0	0	0	30	135	20
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		1.00				1.00		0.73
Parking Bus, Adj	1.00	1.00	0.90	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1688	1900	1508	1743	0				1900	1730	1900
Adj Flow Rate, veh/h	0	554	33	87	120	0				33	147	22
Adj No. of Lanes	0	2	0	1	1	0				0	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	12	12	26	9	0				0	10	0
Cap, veh/h	0	1454	86	165	1180	0				103	464	70
Arrive On Green	0.00	0.50	0.50	0.11	0.68	0.00				0.20	0.20	0.20
Sat Flow, veh/h	0	2993	173	1436	1743	0				520	2343	355
Grp Volume(v), veh/h	0	305	282	87	120	0				108	0	94
Grp Sat Flow(s),veh/h/ln	0	1604	1478	1436	1743	0				1704	0	1514
Q Serve(g_s), s	0.0	9.4	9.4	4.6	1.9	0.0				4.3	0.0	4.2
Cycle Q Clear(g_c), s	0.0	9.4	9.4	4.6	1.9	0.0				4.3	0.0	4.2
Prop In Lane	0.00		0.12	1.00		0.00				0.31		0.23
Lane Grp Cap(c), veh/h	0	802	739	165	1180	0				337	0	300
V/C Ratio(X)	0.00	0.38	0.38	0.53	0.10	0.00				0.32	0.00	0.31
Avail Cap(c_a), veh/h	0	802	739	165	1180	0				426	0	378
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	12.3	12.4	33.4	4.5	0.0				27.5	0.0	27.4
Incr Delay (d2), s/veh	0.0	1.4	1.5	3.1	0.0	0.0				0.5	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.5	4.1	2.0	0.9	0.0				2.1	0.0	1.8
LnGrp Delay(d),s/veh	0.0	13.7	13.9	36.5	4.5	0.0				28.0	0.0	28.0
LnGrp LOS		B	B	D	A					C		C
Approach Vol, veh/h		587			207						202	
Approach Delay, s/veh		13.8			18.0						28.0	
Approach LOS		B			B						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	14.2	45.0		20.8		59.2		
Change Period (Y+Rc), s	5.0	5.0		5.0		5.0		
Max Green Setting (Gmax), s	5.0	40.0		20.0		50.0		
Max Q Clear Time (g_c+I1), s	6.6	11.4		6.3		3.9		
Green Ext Time (p_c), s	0.0	4.1		0.9		1.0		

Intersection Summary	
HCM 2010 Ctrl Delay	17.5
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	465	0	0	165	40	20	285	75	0	0	0
Future Volume (veh/h)	70	465	0	0	165	40	20	285	75	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.88	1.00		0.95			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1900	1703	0	0	1723	1900	1900	1628	1900			
Adj Flow Rate, veh/h	76	505	0	0	179	43	22	310	82			
Adj No. of Lanes	0	2	0	0	2	0	0	2	0			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	10	10	0	0	1	1	0	11	0			
Cap, veh/h	0	2144	0	0	963	221	34	489	135			
Arrive On Green	0.23	0.66	0.00	0.00	0.38	0.38	0.21	0.21	0.21			
Sat Flow, veh/h	0	3321	0	0	2654	589	160	2303	635			
Grp Volume(v), veh/h	0	505	0	0	111	111	223	0	191			
Grp Sat Flow(s),veh/h/ln	0	1618	0	0	1636	1521	1620	0	1477			
Q Serve(g_s), s	0.0	5.0	0.0	0.0	3.6	3.9	10.1	0.0	9.3			
Cycle Q Clear(g_c), s	0.0	5.0	0.0	0.0	3.6	3.9	10.1	0.0	9.3			
Prop In Lane	0.00		0.00	0.00		0.39	0.10		0.43			
Lane Grp Cap(c), veh/h	0	2144	0	0	614	570	344	0	314			
V/C Ratio(X)	0.00	0.24	0.00	0.00	0.18	0.19	0.65	0.00	0.61			
Avail Cap(c_a), veh/h	0	2144	0	0	614	570	608	0	554			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.95	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	5.4	0.0	0.0	16.8	16.9	28.8	0.0	28.5			
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.6	0.8	2.1	0.0	1.9			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	2.2	0.0	0.0	1.7	1.8	4.7	0.0	4.0			
LnGrp Delay(d),s/veh	0.0	5.6	0.0	0.0	17.4	17.6	30.8	0.0	30.4			
LnGrp LOS		A			B	B	C		C			
Approach Vol, veh/h		505			222			414				
Approach Delay, s/veh		5.6			17.5			30.6				
Approach LOS		A			B			C				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		58.0			23.0	35.0		22.0
Change Period (Y+Rc), s		5.0			5.0	5.0		5.0
Max Green Setting (Gmax), s		40.0			5.0	30.0		30.0
Max Q Clear Time (g_c+I1), s		7.0			0.0	5.9		12.1
Green Ext Time (p_c), s		4.0			0.0	1.3		2.5

Intersection Summary	
HCM 2010 Ctrl Delay	17.0
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1930	0	0	0	0	0	0	0	255	0	0
Future Volume (veh/h)	0	1930	0	0	0	0	0	0	0	255	0	0
Number	5	2	12							7	4	14
Initial Q (Qb), veh	0	0	0							0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00							1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00							1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1179	0							1638	1863	0
Adj Flow Rate, veh/h	0	2098	0							277	0	0
Adj No. of Lanes	0	4	0							2	1	0
Peak Hour Factor	0.92	0.92	0.92							0.92	0.92	0.92
Percent Heavy Veh, %	0	6	0							16	2	0
Cap, veh/h	0	3219	0							349	215	0
Arrive On Green	0.00	0.79	0.00							0.12	0.00	0.00
Sat Flow, veh/h	0	4387	0							3026	1863	0
Grp Volume(v), veh/h	0	2098	0							277	0	0
Grp Sat Flow(s),veh/h/ln	0	1014	0							1513	1863	0
Q Serve(g_s), s	0.0	24.3	0.0							9.8	0.0	0.0
Cycle Q Clear(g_c), s	0.0	24.3	0.0							9.8	0.0	0.0
Prop In Lane	0.00		0.00							1.00		0.00
Lane Grp Cap(c), veh/h	0	3219	0							349	215	0
V/C Ratio(X)	0.00	0.65	0.00							0.79	0.00	0.00
Avail Cap(c_a), veh/h	0	3219	0							825	508	0
HCM Platoon Ratio	1.00	1.00	1.00							1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00							0.84	0.00	0.00
Uniform Delay (d), s/veh	0.0	4.9	0.0							47.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.0	0.0							3.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0							0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	6.9	0.0							4.3	0.0	0.0
LnGrp Delay(d),s/veh	0.0	5.9	0.0							50.8	0.0	0.0
LnGrp LOS		A								D		
Approach Vol, veh/h		2098									277	
Approach Delay, s/veh		5.9									50.8	
Approach LOS		A									D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				
Phs Duration (G+Y+Rc), s		92.3		17.7				
Change Period (Y+Rc), s		5.0		5.0				
Max Green Setting (Gmax), s		70.0		30.0				
Max Q Clear Time (g_c+I1), s		26.3		11.8				
Green Ext Time (p_c), s		28.1		0.9				

Intersection Summary	
HCM 2010 Ctrl Delay	11.1
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	1730	190	0	0	0	0	230	0	0	0	0
Future Volume (veh/h)	180	1730	190	0	0	0	0	230	0	0	0	0
Number	5	2	12				3	8	18			
Initial Q (Qb), veh	0	0	0				0	0	0			
Ped-Bike Adj(A_pbT)	1.00		0.92				1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1900	1484	1900				0	1336	0			
Adj Flow Rate, veh/h	196	1880	207				0	250	0			
Adj No. of Lanes	0	4	0				0	1	0			
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92			
Percent Heavy Veh, %	7	7	7				0	16	0			
Cap, veh/h	329	2836	312				0	278	0			
Arrive On Green	0.23	0.23	0.23				0.00	0.21	0.00			
Sat Flow, veh/h	409	4047	446				0	1336	0			
Grp Volume(v), veh/h	637	1076	569				0	250	0			
Grp Sat Flow(s),veh/h/ln	1353	1161	1225				0	1336	0			
Q Serve(g_s), s	45.9	46.3	46.4				0.0	20.0	0.0			
Cycle Q Clear(g_c), s	47.1	46.3	46.4				0.0	20.0	0.0			
Prop In Lane	0.31		0.36				0.00		0.00			
Lane Grp Cap(c), veh/h	991	1628	859				0	278	0			
V/C Ratio(X)	0.64	0.66	0.66				0.00	0.90	0.00			
Avail Cap(c_a), veh/h	991	1628	859				0	364	0			
HCM Platoon Ratio	0.33	0.33	0.33				1.00	1.00	1.00			
Upstream Filter(I)	0.66	0.66	0.66				0.00	1.00	0.00			
Uniform Delay (d), s/veh	30.7	30.4	30.5				0.0	42.4	0.0			
Incr Delay (d2), s/veh	2.1	1.4	2.7				0.0	20.2	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	18.4	15.3	16.4				0.0	8.9	0.0			
LnGrp Delay(d),s/veh	32.8	31.8	33.2				0.0	62.6	0.0			
LnGrp LOS	C	C	C					E				
Approach Vol, veh/h		2283						250				
Approach Delay, s/veh		32.5						62.6				
Approach LOS		C						E				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2						8
Phs Duration (G+Y+Rc), s		82.1						27.9
Change Period (Y+Rc), s		5.0						5.0
Max Green Setting (Gmax), s		70.0						30.0
Max Q Clear Time (g_c+I1), s		49.1						22.0
Green Ext Time (p_c), s		16.5						0.9

Intersection Summary	
HCM 2010 Ctrl Delay	35.4
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1730	0	0	0	0	0	0	310	0	0	0
Future Volume (veh/h)	0	1730	0	0	0	0	0	0	310	0	0	0
Number	5	2	12				7	4	14			
Initial Q (Qb), veh	0	0	0				0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	0	1863	0				0	1863	1863			
Adj Flow Rate, veh/h	0	1880	0				0	0	337			
Adj No. of Lanes	0	4	0				0	1	2			
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92			
Percent Heavy Veh, %	0	2	0				0	2	2			
Cap, veh/h	0	4888	0				0	272	407			
Arrive On Green	0.00	0.76	0.00				0.00	0.00	0.15			
Sat Flow, veh/h	0	6929	0				0	1863	2787			
Grp Volume(v), veh/h	0	1880	0				0	0	337			
Grp Sat Flow(s),veh/h/ln	0	1602	0				0	1863	1393			
Q Serve(g_s), s	0.0	10.8	0.0				0.0	0.0	12.9			
Cycle Q Clear(g_c), s	0.0	10.8	0.0				0.0	0.0	12.9			
Prop In Lane	0.00		0.00				0.00		1.00			
Lane Grp Cap(c), veh/h	0	4888	0				0	272	407			
V/C Ratio(X)	0.00	0.38	0.00				0.00	0.00	0.83			
Avail Cap(c_a), veh/h	0	4888	0				0	508	760			
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00			
Upstream Filter(I)	0.00	1.00	0.00				0.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	4.4	0.0				0.0	0.0	45.6			
Incr Delay (d2), s/veh	0.0	0.2	0.0				0.0	0.0	4.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	4.8	0.0				0.0	0.0	5.2			
LnGrp Delay(d),s/veh	0.0	4.6	0.0				0.0	0.0	49.9			
LnGrp LOS		A							D			
Approach Vol, veh/h		1880						337				
Approach Delay, s/veh		4.6						49.9				
Approach LOS		A						D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				
Phs Duration (G+Y+Rc), s		88.9		21.1				
Change Period (Y+Rc), s		5.0		5.0				
Max Green Setting (Gmax), s		70.0		30.0				
Max Q Clear Time (g_c+I1), s		12.8		14.9				
Green Ext Time (p_c), s		25.8		1.2				

Intersection Summary	
HCM 2010 Ctrl Delay	11.5
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	0	10	360	0	0
Future Vol, veh/h	10	0	10	360	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	0	11	391	0	0

Major/Minor	Minor2		Major1	
Conflicting Flow All	217	-	0	0
Stage 1	0	-	-	-
Stage 2	217	-	-	-
Critical Hdwy	6.84	-	4.14	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-
Follow-up Hdwy	3.52	-	2.22	-
Pot Cap-1 Maneuver	752	0	-	-
Stage 1	-	0	-	-
Stage 2	798	0	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	752	-	-	-
Mov Cap-2 Maneuver	752	-	-	-
Stage 1	-	-	-	-
Stage 2	798	-	-	-

Approach	EB	NB
HCM Control Delay, s	9.9	
HCM LOS	A	

Minor Lane/Major Mvmt	NBL	NBT	EBLn1
Capacity (veh/h)	-	-	752
HCM Lane V/C Ratio	-	-	0.014
HCM Control Delay (s)	-	-	9.9
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	10	370	40	0	0
Future Vol, veh/h	0	10	370	40	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	-
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	11	402	43	0	0

Major/Minor	Minor1		Major1	
Conflicting Flow All	-	223	0	0
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	-	6.94	-	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	3.32	-	-
Pot Cap-1 Maneuver	0	780	-	-
Stage 1	0	-	-	-
Stage 2	0	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	-	780	-	-
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	WB	NB
HCM Control Delay, s	9.7	0
HCM LOS	A	

Minor Lane/Major Mvmt	NBT	NBR	WBLn1
Capacity (veh/h)	-	-	780
HCM Lane V/C Ratio	-	-	0.014
HCM Control Delay (s)	-	-	9.7
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	800	45	120	120	0	0	0	0	25	115	25
Future Volume (veh/h)	0	800	45	120	120	0	0	0	0	25	115	25
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		1.00				1.00		0.68
Parking Bus, Adj	1.00	1.00	0.90	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1800	1900	1439	1624	0				1900	1824	1900
Adj Flow Rate, veh/h	0	870	49	130	130	0				27	125	27
Adj No. of Lanes	0	2	0	1	1	0				0	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	4	4	32	17	0				0	6	0
Cap, veh/h	0	1557	88	194	1131	0				96	439	93
Arrive On Green	0.00	0.50	0.50	0.14	0.70	0.00				0.19	0.19	0.19
Sat Flow, veh/h	0	3204	175	1371	1624	0				501	2286	485
Grp Volume(v), veh/h	0	478	441	130	130	0				97	0	82
Grp Sat Flow(s),veh/h/ln	0	1710	1579	1371	1624	0				1799	0	1473
Q Serve(g_s), s	0.0	17.4	17.4	8.1	2.4	0.0				4.1	0.0	4.3
Cycle Q Clear(g_c), s	0.0	17.4	17.4	8.1	2.4	0.0				4.1	0.0	4.3
Prop In Lane	0.00		0.11	1.00		0.00				0.28		0.33
Lane Grp Cap(c), veh/h	0	855	789	194	1131	0				346	0	283
V/C Ratio(X)	0.00	0.56	0.56	0.67	0.11	0.00				0.28	0.00	0.29
Avail Cap(c_a), veh/h	0	855	789	194	1131	0				500	0	409
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.99	0.99	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	15.6	15.6	36.7	4.5	0.0				31.0	0.0	31.1
Incr Delay (d2), s/veh	0.0	2.6	2.8	8.7	0.0	0.0				0.4	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	8.9	8.2	3.5	1.1	0.0				2.1	0.0	1.8
LnGrp Delay(d),s/veh	0.0	18.2	18.5	45.3	4.5	0.0				31.5	0.0	31.7
LnGrp LOS		B	B	D	A					C		C
Approach Vol, veh/h		919			260						179	
Approach Delay, s/veh		18.3			24.9						31.6	
Approach LOS		B			C						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	17.7	50.0		22.3		67.7		
Change Period (Y+Rc), s	5.0	5.0		5.0		5.0		
Max Green Setting (Gmax), s	5.0	45.0		25.0		55.0		
Max Q Clear Time (g_c+I1), s	10.1	19.4		6.3		4.4		
Green Ext Time (p_c), s	0.0	6.9		1.0		1.3		

Intersection Summary	
HCM 2010 Ctrl Delay	21.3
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	775	0	0	225	60	15	435	120	0	0	0
Future Volume (veh/h)	70	775	0	0	225	60	15	435	120	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.91	1.00		0.92			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1900	1825	0	0	1648	1900	1900	1712	1900			
Adj Flow Rate, veh/h	76	842	0	0	245	65	16	473	130			
Adj No. of Lanes	0	2	0	0	2	0	0	2	0			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	4	4	0	0	1	1	0	3	0			
Cap, veh/h	0	2143	0	0	1055	270	21	627	182			
Arrive On Green	0.12	0.62	0.00	0.00	0.44	0.44	0.26	0.26	0.26			
Sat Flow, veh/h	0	3560	0	0	2494	618	80	2438	707			
Grp Volume(v), veh/h	0	842	0	0	156	154	340	0	279			
Grp Sat Flow(s),veh/h/ln	0	1734	0	0	1566	1463	1708	0	1518			
Q Serve(g_s), s	0.0	9.8	0.0	0.0	5.0	5.3	14.8	0.0	13.4			
Cycle Q Clear(g_c), s	0.0	9.8	0.0	0.0	5.0	5.3	14.8	0.0	13.4			
Prop In Lane	0.00		0.00	0.00		0.42	0.05		0.47			
Lane Grp Cap(c), veh/h	0	2143	0	0	685	640	439	0	390			
V/C Ratio(X)	0.00	0.39	0.00	0.00	0.23	0.24	0.77	0.00	0.72			
Avail Cap(c_a), veh/h	0	2143	0	0	685	640	534	0	474			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.90	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	7.7	0.0	0.0	14.1	14.1	27.6	0.0	27.1			
Incr Delay (d2), s/veh	0.0	0.5	0.0	0.0	0.8	0.9	5.7	0.0	4.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	4.8	0.0	0.0	2.3	2.3	7.7	0.0	6.0			
LnGrp Delay(d),s/veh	0.0	8.2	0.0	0.0	14.8	15.0	33.3	0.0	31.0			
LnGrp LOS		A			B	B	C		C			
Approach Vol, veh/h		842			310			619				
Approach Delay, s/veh		8.2			14.9			32.3				
Approach LOS		A			B			C				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		54.4			14.4	40.0		25.6
Change Period (Y+Rc), s		5.0			5.0	5.0		5.0
Max Green Setting (Gmax), s		45.0			5.0	35.0		25.0
Max Q Clear Time (g_c+I1), s		11.8			0.0	7.3		16.8
Green Ext Time (p_c), s		7.4			0.0	2.0		2.6

Intersection Summary	
HCM 2010 Ctrl Delay	17.8
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	2185	0	0	0	0	0	0	0	270	0	0
Future Volume (veh/h)	0	2185	0	0	0	0	0	0	0	270	0	0
Number	5	2	12							7	4	14
Initial Q (Qb), veh	0	10	0							0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00							1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00							0.94	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1078	0							984	1863	0
Adj Flow Rate, veh/h	0	2483	0							293	0	0
Adj No. of Lanes	0	4	0							2	1	0
Peak Hour Factor	0.92	0.88	0.92							0.92	0.92	0.92
Percent Heavy Veh, %	0	2	0							22	2	0
Cap, veh/h	0	2648	0							330	359	0
Arrive On Green	0.00	0.71	0.00							0.19	0.00	0.00
Sat Flow, veh/h	0	4012	0							1709	1863	0
Grp Volume(v), veh/h	0	2483	0							293	0	0
Grp Sat Flow(s),veh/h/ln	0	927	0							855	1863	0
Q Serve(g_s), s	0.0	62.0	0.0							17.9	0.0	0.0
Cycle Q Clear(g_c), s	0.0	62.0	0.0							17.9	0.0	0.0
Prop In Lane	0.00		0.00							1.00		0.00
Lane Grp Cap(c), veh/h	0	2648	0							330	359	0
V/C Ratio(X)	0.00	0.94	0.00							0.89	0.00	0.00
Avail Cap(c_a), veh/h	0	2648	0							479	522	0
HCM Platoon Ratio	1.00	1.00	1.00							1.00	1.00	1.00
Upstream Filter(I)	0.00	0.94	0.00							0.28	0.00	0.00
Uniform Delay (d), s/veh	0.0	13.8	0.0							42.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	7.6	0.0							4.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	1.7	0.0							0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	18.1	0.0							4.4	0.0	0.0
LnGrp Delay(d),s/veh	0.0	23.0	0.0							46.4	0.0	0.0
LnGrp LOS		C								D		
Approach Vol, veh/h		2483									293	
Approach Delay, s/veh		23.0									46.4	
Approach LOS		C									D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				
Phs Duration (G+Y+Rc), s		81.4		25.6				
Change Period (Y+Rc), s		5.0		5.0				
Max Green Setting (Gmax), s		67.0		30.0				
Max Q Clear Time (g_c+I1), s		64.0		19.9				
Green Ext Time (p_c), s		2.9		0.8				

Intersection Summary	
HCM 2010 Ctrl Delay	25.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	220	1880	240	0	0	0	0	380	0	0	0	0
Future Volume (veh/h)	220	1880	240	0	0	0	0	380	0	0	0	0
Number	5	2	12				3	8	18			
Initial Q (Qb), veh	0	10	0				0	0	0			
Ped-Bike Adj(A_pbT)	1.00		0.81				1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1900	1586	1900				0	1318	0			
Adj Flow Rate, veh/h	250	2136	273				0	413	0			
Adj No. of Lanes	0	4	0				0	1	0			
Peak Hour Factor	0.88	0.88	0.88				0.92	0.92	0.92			
Percent Heavy Veh, %	3	3	3				0	10	0			
Cap, veh/h	314	2499	298				0	348	0			
Arrive On Green	0.21	0.21	0.21				0.00	0.26	0.00			
Sat Flow, veh/h	436	3778	478				0	1318	0			
Grp Volume(v), veh/h	830	1130	699				0	413	0			
Grp Sat Flow(s),veh/h/ln	1447	1010	1224				0	1318	0			
Q Serve(g_s), s	61.3	59.4	60.9				0.0	29.0	0.0			
Cycle Q Clear(g_c), s	61.3	59.4	60.9				0.0	29.0	0.0			
Prop In Lane	0.30		0.39				0.00		0.00			
Lane Grp Cap(c), veh/h	979	1304	795				0	348	0			
V/C Ratio(X)	0.85	0.87	0.88				0.00	1.19	0.00			
Avail Cap(c_a), veh/h	977	1304	790				0	348	0			
HCM Platoon Ratio	0.33	0.33	0.33				1.00	1.00	1.00			
Upstream Filter(I)	0.20	0.20	0.20				0.00	1.00	0.00			
Uniform Delay (d), s/veh	39.7	39.2	39.5				0.0	40.5	0.0			
Incr Delay (d2), s/veh	2.0	1.8	3.2				0.0	110.0	0.0			
Initial Q Delay(d3),s/veh	0.3	0.8	0.6				0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	25.6	17.5	21.8				0.0	21.1	0.0			
LnGrp Delay(d),s/veh	42.0	41.8	43.3				0.0	150.5	0.0			
LnGrp LOS	D	D	D					F				
Approach Vol, veh/h		2659						413				
Approach Delay, s/veh		42.3						150.5				
Approach LOS		D						F				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2						8
Phs Duration (G+Y+Rc), s		76.0						34.0
Change Period (Y+Rc), s		5.0						5.0
Max Green Setting (Gmax), s		71.0						29.0
Max Q Clear Time (g_c+I1), s		63.3						31.0
Green Ext Time (p_c), s		7.3						0.0

Intersection Summary	
HCM 2010 Ctrl Delay	56.8
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1880	0	0	0	0	0	0	380	0	0	0
Future Volume (veh/h)	0	1880	0	0	0	0	0	0	380	0	0	0
Number	5	2	12				3	8	18			
Initial Q (Qb), veh	0	0	0				0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	0	1618	0				0	1863	1176			
Adj Flow Rate, veh/h	0	2043	0				0	0	413			
Adj No. of Lanes	0	4	0				0	1	2			
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92			
Percent Heavy Veh, %	0	2	0				0	2	2			
Cap, veh/h	0	3657	0				0	469	444			
Arrive On Green	0.00	0.66	0.00				0.00	0.00	0.25			
Sat Flow, veh/h	0	6018	0				0	1863	1760			
Grp Volume(v), veh/h	0	2043	0				0	0	413			
Grp Sat Flow(s),veh/h/ln	0	1391	0				0	1863	880			
Q Serve(g_s), s	0.0	21.9	0.0				0.0	0.0	25.2			
Cycle Q Clear(g_c), s	0.0	21.9	0.0				0.0	0.0	25.2			
Prop In Lane	0.00		0.00				0.00		1.00			
Lane Grp Cap(c), veh/h	0	3657	0				0	469	444			
V/C Ratio(X)	0.00	0.56	0.00				0.00	0.00	0.93			
Avail Cap(c_a), veh/h	0	3657	0				0	508	480			
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00			
Upstream Filter(I)	0.00	1.00	0.00				0.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	10.2	0.0				0.0	0.0	40.2			
Incr Delay (d2), s/veh	0.0	0.6	0.0				0.0	0.0	24.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	8.5	0.0				0.0	0.0	7.6			
LnGrp Delay(d),s/veh	0.0	10.8	0.0				0.0	0.0	64.3			
LnGrp LOS		B							E			
Approach Vol, veh/h		2043						413				
Approach Delay, s/veh		10.8						64.3				
Approach LOS		B						E				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2						8
Phs Duration (G+Y+Rc), s		77.3						32.7
Change Period (Y+Rc), s		5.0						5.0
Max Green Setting (Gmax), s		70.0						30.0
Max Q Clear Time (g_c+I1), s		23.9						27.2
Green Ext Time (p_c), s		26.7						0.5

Intersection Summary	
HCM 2010 Ctrl Delay	19.8
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	20	0	10	540	0	0
Future Vol, veh/h	20	0	10	540	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	0	11	587	0	0

Major/Minor	Minor2		Major1	
Conflicting Flow All	315	-	0	0
Stage 1	0	-	-	-
Stage 2	315	-	-	-
Critical Hdwy	6.84	-	4.14	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-
Follow-up Hdwy	3.52	-	2.22	-
Pot Cap-1 Maneuver	653	0	-	-
Stage 1	-	0	-	-
Stage 2	713	0	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	653	-	-	-
Mov Cap-2 Maneuver	653	-	-	-
Stage 1	-	-	-	-
Stage 2	713	-	-	-

Approach	EB	NB
HCM Control Delay, s	10.7	
HCM LOS	B	

Minor Lane/Major Mvmt	NBL	NBT	EBLn1
Capacity (veh/h)	-	-	653
HCM Lane V/C Ratio	-	-	0.033
HCM Control Delay (s)	-	-	10.7
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0.1

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	35	550	40	0	0
Future Vol, veh/h	0	35	550	40	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	-
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	38	598	43	0	0

Major/Minor	Minor1		Major1	
Conflicting Flow All	-	321	0	0
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	-	6.94	-	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	3.32	-	-
Pot Cap-1 Maneuver	0	675	-	-
Stage 1	0	-	-	-
Stage 2	0	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	-	675	-	-
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	WB	NB
HCM Control Delay, s	10.7	0
HCM LOS	B	

Minor Lane/Major Mvmt	NBT	NBR	WBLn1
Capacity (veh/h)	-	-	675
HCM Lane V/C Ratio	-	-	0.056
HCM Control Delay (s)	-	-	10.7
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0.2

APPENDIX C

LEVEL OF SERVICE CALCULATIONS

- Year 2020 Traffic Operation with Project-Generated Traffic

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	510	40	80	110	0	0	0	0	30	140	20
Future Volume (veh/h)	0	510	40	80	110	0	0	0	0	30	140	20
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		1.00				1.00		0.73
Parking Bus, Adj	1.00	1.00	0.90	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1686	1900	1508	1743	0				1900	1730	1900
Adj Flow Rate, veh/h	0	554	43	87	120	0				33	152	22
Adj No. of Lanes	0	2	0	1	1	0				0	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	12	12	26	9	0				0	10	0
Cap, veh/h	0	1423	110	164	1179	0				101	470	69
Arrive On Green	0.00	0.50	0.50	0.11	0.68	0.00				0.20	0.20	0.20
Sat Flow, veh/h	0	2930	220	1436	1743	0				508	2368	347
Grp Volume(v), veh/h	0	311	286	87	120	0				111	0	96
Grp Sat Flow(s),veh/h/ln	0	1601	1465	1436	1743	0				1704	0	1519
Q Serve(g_s), s	0.0	9.6	9.7	4.6	1.9	0.0				4.5	0.0	4.3
Cycle Q Clear(g_c), s	0.0	9.6	9.7	4.6	1.9	0.0				4.5	0.0	4.3
Prop In Lane	0.00		0.15	1.00		0.00				0.30		0.23
Lane Grp Cap(c), veh/h	0	801	732	164	1179	0				338	0	301
V/C Ratio(X)	0.00	0.39	0.39	0.53	0.10	0.00				0.33	0.00	0.32
Avail Cap(c_a), veh/h	0	801	732	164	1179	0				426	0	380
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	12.4	12.4	33.4	4.5	0.0				27.5	0.0	27.4
Incr Delay (d2), s/veh	0.0	1.4	1.6	3.2	0.0	0.0				0.6	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.5	4.2	2.0	0.9	0.0				2.1	0.0	1.9
LnGrp Delay(d),s/veh	0.0	13.8	14.0	36.7	4.5	0.0				28.0	0.0	28.0
LnGrp LOS		B	B	D	A					C		C
Approach Vol, veh/h		597			207						207	
Approach Delay, s/veh		13.9			18.0						28.0	
Approach LOS		B			B						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	14.1	45.0		20.9		59.1		
Change Period (Y+Rc), s	5.0	5.0		5.0		5.0		
Max Green Setting (Gmax), s	5.0	40.0		20.0		50.0		
Max Q Clear Time (g_c+I1), s	6.6	11.7		6.5		3.9		
Green Ext Time (p_c), s	0.0	4.2		1.0		1.0		

Intersection Summary	
HCM 2010 Ctrl Delay	17.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	465	0	0	170	40	25	330	85	0	0	0
Future Volume (veh/h)	70	465	0	0	170	40	25	330	85	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.88	1.00		0.95			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1900	1703	0	0	1726	1900	1900	1631	1900			
Adj Flow Rate, veh/h	76	505	0	0	185	43	27	359	92			
Adj No. of Lanes	0	2	0	0	2	0	0	2	0			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	10	10	0	0	1	1	0	11	0			
Cap, veh/h	0	2091	0	0	972	216	39	530	142			
Arrive On Green	0.21	0.65	0.00	0.00	0.38	0.38	0.23	0.23	0.23			
Sat Flow, veh/h	0	3321	0	0	2679	577	170	2317	622			
Grp Volume(v), veh/h	0	505	0	0	114	114	258	0	220			
Grp Sat Flow(s),veh/h/ln	0	1618	0	0	1640	1529	1623	0	1486			
Q Serve(g_s), s	0.0	5.2	0.0	0.0	3.7	4.0	11.7	0.0	10.7			
Cycle Q Clear(g_c), s	0.0	5.2	0.0	0.0	3.7	4.0	11.7	0.0	10.7			
Prop In Lane	0.00		0.00	0.00		0.38	0.10		0.42			
Lane Grp Cap(c), veh/h	0	2091	0	0	615	573	371	0	340			
V/C Ratio(X)	0.00	0.24	0.00	0.00	0.19	0.20	0.70	0.00	0.65			
Avail Cap(c_a), veh/h	0	2091	0	0	615	573	608	0	557			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.95	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	5.9	0.0	0.0	16.8	16.9	28.3	0.0	27.9			
Incr Delay (d2), s/veh	0.0	0.3	0.0	0.0	0.7	0.8	2.4	0.0	2.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	2.4	0.0	0.0	1.8	1.8	5.5	0.0	4.6			
LnGrp Delay(d),s/veh	0.0	6.2	0.0	0.0	17.5	17.7	30.7	0.0	30.0			
LnGrp LOS		A			B	B	C		C			
Approach Vol, veh/h		505			228			478				
Approach Delay, s/veh		6.2			17.6			30.4				
Approach LOS		A			B			C				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		56.7			21.7	35.0		23.3
Change Period (Y+Rc), s		5.0			5.0	5.0		5.0
Max Green Setting (Gmax), s		40.0			5.0	30.0		30.0
Max Q Clear Time (g_c+I1), s		7.2			0.0	6.0		13.7
Green Ext Time (p_c), s		4.0			0.0	1.4		2.8

Intersection Summary	
HCM 2010 Ctrl Delay	17.9
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1990	0	0	0	0	0	0	0	265	0	0
Future Volume (veh/h)	0	1990	0	0	0	0	0	0	0	265	0	0
Number	5	2	12							7	4	14
Initial Q (Qb), veh	0	0	0							0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00							1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00							1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1179	0							1638	1863	0
Adj Flow Rate, veh/h	0	2163	0							288	0	0
Adj No. of Lanes	0	4	0							2	1	0
Peak Hour Factor	0.92	0.92	0.92							0.92	0.92	0.92
Percent Heavy Veh, %	0	6	0							16	2	0
Cap, veh/h	0	3204	0							361	222	0
Arrive On Green	0.00	0.79	0.00							0.12	0.00	0.00
Sat Flow, veh/h	0	4387	0							3026	1863	0
Grp Volume(v), veh/h	0	2163	0							288	0	0
Grp Sat Flow(s),veh/h/ln	0	1014	0							1513	1863	0
Q Serve(g_s), s	0.0	26.4	0.0							10.2	0.0	0.0
Cycle Q Clear(g_c), s	0.0	26.4	0.0							10.2	0.0	0.0
Prop In Lane	0.00		0.00							1.00		0.00
Lane Grp Cap(c), veh/h	0	3204	0							361	222	0
V/C Ratio(X)	0.00	0.68	0.00							0.80	0.00	0.00
Avail Cap(c_a), veh/h	0	3204	0							825	508	0
HCM Platoon Ratio	1.00	1.00	1.00							1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00							0.83	0.00	0.00
Uniform Delay (d), s/veh	0.0	5.2	0.0							47.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.2	0.0							3.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0							0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	7.5	0.0							4.4	0.0	0.0
LnGrp Delay(d),s/veh	0.0	6.4	0.0							50.6	0.0	0.0
LnGrp LOS		A								D		
Approach Vol, veh/h		2163									288	
Approach Delay, s/veh		6.4									50.6	
Approach LOS		A									D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				
Phs Duration (G+Y+Rc), s		91.9		18.1				
Change Period (Y+Rc), s		5.0		5.0				
Max Green Setting (Gmax), s		70.0		30.0				
Max Q Clear Time (g_c+I1), s		28.4		12.2				
Green Ext Time (p_c), s		28.3		0.9				

Intersection Summary	
HCM 2010 Ctrl Delay	11.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	250	1730	190	0	0	0	0	240	0	0	0	0
Future Volume (veh/h)	250	1730	190	0	0	0	0	240	0	0	0	0
Number	5	2	12				3	8	18			
Initial Q (Qb), veh	0	0	0				0	0	0			
Ped-Bike Adj(A_pbT)	1.00		0.92				1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1900	1484	1900				0	1336	0			
Adj Flow Rate, veh/h	272	1880	207				0	261	0			
Adj No. of Lanes	0	4	0				0	1	0			
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92			
Percent Heavy Veh, %	7	7	7				0	16	0			
Cap, veh/h	428	2689	297				0	289	0			
Arrive On Green	0.23	0.23	0.23				0.00	0.22	0.00			
Sat Flow, veh/h	550	3881	428				0	1336	0			
Grp Volume(v), veh/h	647	1118	594				0	261	0			
Grp Sat Flow(s),veh/h/ln	1308	1161	1229				0	1336	0			
Q Serve(g_s), s	50.1	48.6	48.8				0.0	20.9	0.0			
Cycle Q Clear(g_c), s	50.1	48.6	48.8				0.0	20.9	0.0			
Prop In Lane	0.42		0.35				0.00		0.00			
Lane Grp Cap(c), veh/h	953	1609	852				0	289	0			
V/C Ratio(X)	0.68	0.69	0.70				0.00	0.90	0.00			
Avail Cap(c_a), veh/h	953	1609	852				0	364	0			
HCM Platoon Ratio	0.33	0.33	0.33				1.00	1.00	1.00			
Upstream Filter(I)	0.63	0.63	0.63				0.00	1.00	0.00			
Uniform Delay (d), s/veh	32.4	31.8	31.8				0.0	42.0	0.0			
Incr Delay (d2), s/veh	2.5	1.6	3.0				0.0	21.7	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	18.8	16.0	17.4				0.0	9.5	0.0			
LnGrp Delay(d),s/veh	34.8	33.4	34.9				0.0	63.7	0.0			
LnGrp LOS	C	C	C					E				
Approach Vol, veh/h		2359						261				
Approach Delay, s/veh		34.1						63.7				
Approach LOS		C						E				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2						8
Phs Duration (G+Y+Rc), s		81.2						28.8
Change Period (Y+Rc), s		5.0						5.0
Max Green Setting (Gmax), s		70.0						30.0
Max Q Clear Time (g_c+I1), s		52.1						22.9
Green Ext Time (p_c), s		14.8						0.8

Intersection Summary	
HCM 2010 Ctrl Delay	37.1
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1730	0	0	0	0	0	0	310	0	0	0
Future Volume (veh/h)	0	1730	0	0	0	0	0	0	310	0	0	0
Number	5	2	12				7	4	14			
Initial Q (Qb), veh	0	0	0				0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	0	1863	0				0	1863	1863			
Adj Flow Rate, veh/h	0	1880	0				0	0	337			
Adj No. of Lanes	0	4	0				0	1	2			
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92			
Percent Heavy Veh, %	0	2	0				0	2	2			
Cap, veh/h	0	4888	0				0	272	407			
Arrive On Green	0.00	0.76	0.00				0.00	0.00	0.15			
Sat Flow, veh/h	0	6929	0				0	1863	2787			
Grp Volume(v), veh/h	0	1880	0				0	0	337			
Grp Sat Flow(s),veh/h/ln	0	1602	0				0	1863	1393			
Q Serve(g_s), s	0.0	10.8	0.0				0.0	0.0	12.9			
Cycle Q Clear(g_c), s	0.0	10.8	0.0				0.0	0.0	12.9			
Prop In Lane	0.00		0.00				0.00		1.00			
Lane Grp Cap(c), veh/h	0	4888	0				0	272	407			
V/C Ratio(X)	0.00	0.38	0.00				0.00	0.00	0.83			
Avail Cap(c_a), veh/h	0	4888	0				0	508	760			
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00			
Upstream Filter(I)	0.00	1.00	0.00				0.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	4.4	0.0				0.0	0.0	45.6			
Incr Delay (d2), s/veh	0.0	0.2	0.0				0.0	0.0	4.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	4.8	0.0				0.0	0.0	5.2			
LnGrp Delay(d),s/veh	0.0	4.6	0.0				0.0	0.0	49.9			
LnGrp LOS		A							D			
Approach Vol, veh/h		1880						337				
Approach Delay, s/veh		4.6						49.9				
Approach LOS		A						D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				
Phs Duration (G+Y+Rc), s		88.9		21.1				
Change Period (Y+Rc), s		5.0		5.0				
Max Green Setting (Gmax), s		70.0		30.0				
Max Q Clear Time (g_c+I1), s		12.8		14.9				
Green Ext Time (p_c), s		25.8		1.2				

Intersection Summary	
HCM 2010 Ctrl Delay	11.5
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	65	0	90	360	0	0
Future Vol, veh/h	65	0	90	360	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	71	0	98	391	0	0

Major/Minor	Minor2		Major1	
Conflicting Flow All	391	-	0	0
Stage 1	0	-	-	-
Stage 2	391	-	-	-
Critical Hdwy	6.84	-	4.14	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-
Follow-up Hdwy	3.52	-	2.22	-
Pot Cap-1 Maneuver	585	0	-	-
Stage 1	-	0	-	-
Stage 2	653	0	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	585	-	-	-
Mov Cap-2 Maneuver	585	-	-	-
Stage 1	-	-	-	-
Stage 2	653	-	-	-

Approach	EB	NB
HCM Control Delay, s	12	
HCM LOS	B	

Minor Lane/Major Mvmt	NBL	NBT	EBLn1
Capacity (veh/h)	-	-	585
HCM Lane V/C Ratio	-	-	0.121
HCM Control Delay (s)	-	-	12
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0.4

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	10	450	40	0	0
Future Vol, veh/h	0	10	450	40	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	-
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	11	489	43	0	0

Major/Minor	Minor1		Major1	
Conflicting Flow All	-	266	0	0
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	-	6.94	-	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	3.32	-	-
Pot Cap-1 Maneuver	0	732	-	-
Stage 1	0	-	-	-
Stage 2	0	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	-	732	-	-
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	WB	NB
HCM Control Delay, s	10	0
HCM LOS	B	

Minor Lane/Major Mvmt	NBT	NBR	WBLn1
Capacity (veh/h)	-	-	732
HCM Lane V/C Ratio	-	-	0.015
HCM Control Delay (s)	-	-	10
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	800	50	120	120	0	0	0	0	25	115	25
Future Volume (veh/h)	0	800	50	120	120	0	0	0	0	25	115	25
Number	5	2	12	1	6	16				7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		1.00				1.00		0.68
Parking Bus, Adj	1.00	1.00	0.90	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1798	1900	1439	1624	0				1900	1824	1900
Adj Flow Rate, veh/h	0	870	54	130	130	0				27	125	27
Adj No. of Lanes	0	2	0	1	1	0				0	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	4	4	32	17	0				0	6	0
Cap, veh/h	0	1544	96	194	1131	0				96	439	93
Arrive On Green	0.00	0.50	0.50	0.14	0.70	0.00				0.19	0.19	0.19
Sat Flow, veh/h	0	3179	192	1371	1624	0				501	2286	485
Grp Volume(v), veh/h	0	481	443	130	130	0				97	0	82
Grp Sat Flow(s),veh/h/ln	0	1708	1573	1371	1624	0				1799	0	1473
Q Serve(g_s), s	0.0	17.6	17.6	8.1	2.4	0.0				4.1	0.0	4.3
Cycle Q Clear(g_c), s	0.0	17.6	17.6	8.1	2.4	0.0				4.1	0.0	4.3
Prop In Lane	0.00		0.12	1.00		0.00				0.28		0.33
Lane Grp Cap(c), veh/h	0	854	786	194	1131	0				346	0	283
V/C Ratio(X)	0.00	0.56	0.56	0.67	0.11	0.00				0.28	0.00	0.29
Avail Cap(c_a), veh/h	0	854	786	194	1131	0				500	0	409
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.99	0.99	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	15.7	15.7	36.7	4.5	0.0				31.0	0.0	31.1
Incr Delay (d2), s/veh	0.0	2.7	2.9	8.6	0.0	0.0				0.4	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	8.9	8.3	3.5	1.1	0.0				2.1	0.0	1.8
LnGrp Delay(d),s/veh	0.0	18.3	18.6	45.3	4.5	0.0				31.5	0.0	31.7
LnGrp LOS		B	B	D	A					C		C
Approach Vol, veh/h		924			260						179	
Approach Delay, s/veh		18.5			24.9						31.6	
Approach LOS		B			C						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		
Phs Duration (G+Y+Rc), s	17.7	50.0		22.3		67.7		
Change Period (Y+Rc), s	5.0	5.0		5.0		5.0		
Max Green Setting (Gmax), s	5.0	45.0		25.0		55.0		
Max Q Clear Time (g_c+I1), s	10.1	19.6		6.3		4.4		
Green Ext Time (p_c), s	0.0	7.0		1.0		1.3		

Intersection Summary	
HCM 2010 Ctrl Delay	21.4
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	775	0	0	230	60	20	480	130	0	0	0
Future Volume (veh/h)	70	775	0	0	230	60	20	480	130	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.91	1.00		0.93			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1900	1825	0	0	1652	1900	1900	1713	1900			
Adj Flow Rate, veh/h	76	842	0	0	250	65	22	522	141			
Adj No. of Lanes	0	2	0	0	2	0	0	2	0			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	4	4	0	0	1	1	0	3	0			
Cap, veh/h	0	2105	0	0	1062	267	27	653	187			
Arrive On Green	0.11	0.61	0.00	0.00	0.44	0.44	0.27	0.27	0.27			
Sat Flow, veh/h	0	3560	0	0	2510	611	100	2437	697			
Grp Volume(v), veh/h	0	842	0	0	159	156	376	0	309			
Grp Sat Flow(s),veh/h/ln	0	1734	0	0	1569	1469	1708	0	1525			
Q Serve(g_s), s	0.0	10.1	0.0	0.0	5.1	5.4	16.5	0.0	14.9			
Cycle Q Clear(g_c), s	0.0	10.1	0.0	0.0	5.1	5.4	16.5	0.0	14.9			
Prop In Lane	0.00		0.00	0.00		0.42	0.06		0.46			
Lane Grp Cap(c), veh/h	0	2105	0	0	686	643	458	0	409			
V/C Ratio(X)	0.00	0.40	0.00	0.00	0.23	0.24	0.82	0.00	0.76			
Avail Cap(c_a), veh/h	0	2105	0	0	686	643	534	0	477			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.89	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	8.2	0.0	0.0	14.1	14.2	27.5	0.0	26.9			
Incr Delay (d2), s/veh	0.0	0.5	0.0	0.0	0.8	0.9	8.8	0.0	5.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	4.9	0.0	0.0	2.3	2.3	8.9	0.0	6.9			
LnGrp Delay(d),s/veh	0.0	8.7	0.0	0.0	14.9	15.1	36.3	0.0	32.7			
LnGrp LOS		A			B	B	D		C			
Approach Vol, veh/h		842			315			685				
Approach Delay, s/veh		8.7			15.0			34.7				
Approach LOS		A			B			C				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2			5	6		8
Phs Duration (G+Y+Rc), s		53.6			13.6	40.0		26.4
Change Period (Y+Rc), s		5.0			5.0	5.0		5.0
Max Green Setting (Gmax), s		45.0			5.0	35.0		25.0
Max Q Clear Time (g_c+I1), s		12.1			0.0	7.4		18.5
Green Ext Time (p_c), s		7.4			0.0	2.0		2.4

Intersection Summary	
HCM 2010 Ctrl Delay	19.4
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	2250	0	0	0	0	0	0	0	280	0	0
Future Volume (veh/h)	0	2250	0	0	0	0	0	0	0	280	0	0
Number	5	2	12							7	4	14
Initial Q (Qb), veh	0	0	0							0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00							1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00							0.94	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1078	0							984	1863	0
Adj Flow Rate, veh/h	0	2557	0							304	0	0
Adj No. of Lanes	0	4	0							2	1	0
Peak Hour Factor	0.92	0.88	0.92							0.92	0.92	0.92
Percent Heavy Veh, %	0	2	0							22	2	0
Cap, veh/h	0	2624	0							340	371	0
Arrive On Green	0.00	0.71	0.00							0.20	0.00	0.00
Sat Flow, veh/h	0	4012	0							1709	1863	0
Grp Volume(v), veh/h	0	2557	0							304	0	0
Grp Sat Flow(s),veh/h/ln	0	927	0							855	1863	0
Q Serve(g_s), s	0.0	69.5	0.0							18.5	0.0	0.0
Cycle Q Clear(g_c), s	0.0	69.5	0.0							18.5	0.0	0.0
Prop In Lane	0.00		0.00							1.00		0.00
Lane Grp Cap(c), veh/h	0	2624	0							340	371	0
V/C Ratio(X)	0.00	0.97	0.00							0.89	0.00	0.00
Avail Cap(c_a), veh/h	0	2624	0							479	522	0
HCM Platoon Ratio	1.00	1.00	1.00							1.00	1.00	1.00
Upstream Filter(I)	0.00	0.94	0.00							0.28	0.00	0.00
Uniform Delay (d), s/veh	0.0	14.7	0.0							41.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	12.0	0.0							4.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0							0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	19.6	0.0							4.6	0.0	0.0
LnGrp Delay(d),s/veh	0.0	26.7	0.0							46.5	0.0	0.0
LnGrp LOS		C								D		
Approach Vol, veh/h		2557									304	
Approach Delay, s/veh		26.7									46.5	
Approach LOS		C									D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				
Phs Duration (G+Y+Rc), s		80.7		26.3				
Change Period (Y+Rc), s		5.0		5.0				
Max Green Setting (Gmax), s		67.0		30.0				
Max Q Clear Time (g_c+I1), s		71.5		20.5				
Green Ext Time (p_c), s		0.0		0.8				

Intersection Summary	
HCM 2010 Ctrl Delay	28.8
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	290	1880	240	0	0	0	0	390	0	0	0	0
Future Volume (veh/h)	290	1880	240	0	0	0	0	390	0	0	0	0
Number	5	2	12				3	8	18			
Initial Q (Qb), veh	0	10	0				0	0	0			
Ped-Bike Adj(A_pbT)	1.00		0.81				1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1900	1587	1900				0	1318	0			
Adj Flow Rate, veh/h	330	2136	273				0	424	0			
Adj No. of Lanes	0	4	0				0	1	0			
Peak Hour Factor	0.88	0.88	0.88				0.92	0.92	0.92			
Percent Heavy Veh, %	3	3	3				0	10	0			
Cap, veh/h	388	2439	286				0	348	0			
Arrive On Green	0.21	0.21	0.21				0.00	0.26	0.00			
Sat Flow, veh/h	551	3651	462				0	1318	0			
Grp Volume(v), veh/h	845	1166	728				0	424	0			
Grp Sat Flow(s),veh/h/ln	1411	1011	1232				0	1318	0			
Q Serve(g_s), s	64.6	61.7	63.6				0.0	29.0	0.0			
Cycle Q Clear(g_c), s	64.6	61.7	63.6				0.0	29.0	0.0			
Prop In Lane	0.39		0.37				0.00		0.00			
Lane Grp Cap(c), veh/h	960	1305	801				0	348	0			
V/C Ratio(X)	0.88	0.89	0.91				0.00	1.22	0.00			
Avail Cap(c_a), veh/h	956	1305	795				0	348	0			
HCM Platoon Ratio	0.33	0.33	0.33				1.00	1.00	1.00			
Upstream Filter(I)	0.13	0.13	0.13				0.00	1.00	0.00			
Uniform Delay (d), s/veh	41.0	40.1	40.6				0.0	40.5	0.0			
Incr Delay (d2), s/veh	1.8	1.5	2.8				0.0	122.3	0.0			
Initial Q Delay(d3),s/veh	0.4	1.0	0.8				0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	26.2	18.1	22.8				0.0	22.3	0.0			
LnGrp Delay(d),s/veh	43.2	42.6	44.1				0.0	162.8	0.0			
LnGrp LOS	D	D	D					F				
Approach Vol, veh/h		2739						424				
Approach Delay, s/veh		43.2						162.8				
Approach LOS		D						F				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2						8
Phs Duration (G+Y+Rc), s		76.0						34.0
Change Period (Y+Rc), s		5.0						5.0
Max Green Setting (Gmax), s		71.0						29.0
Max Q Clear Time (g_c+I1), s		66.6						31.0
Green Ext Time (p_c), s		4.2						0.0

Intersection Summary	
HCM 2010 Ctrl Delay	59.2
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1880	0	0	0	0	0	0	380	0	0	0
Future Volume (veh/h)	0	1880	0	0	0	0	0	0	380	0	0	0
Number	5	2	12				3	8	18			
Initial Q (Qb), veh	0	0	0				0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	0	1618	0				0	1863	1176			
Adj Flow Rate, veh/h	0	2043	0				0	0	413			
Adj No. of Lanes	0	4	0				0	1	2			
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92			
Percent Heavy Veh, %	0	2	0				0	2	2			
Cap, veh/h	0	3657	0				0	469	444			
Arrive On Green	0.00	0.66	0.00				0.00	0.00	0.25			
Sat Flow, veh/h	0	6018	0				0	1863	1760			
Grp Volume(v), veh/h	0	2043	0				0	0	413			
Grp Sat Flow(s),veh/h/ln	0	1391	0				0	1863	880			
Q Serve(g_s), s	0.0	21.9	0.0				0.0	0.0	25.2			
Cycle Q Clear(g_c), s	0.0	21.9	0.0				0.0	0.0	25.2			
Prop In Lane	0.00		0.00				0.00		1.00			
Lane Grp Cap(c), veh/h	0	3657	0				0	469	444			
V/C Ratio(X)	0.00	0.56	0.00				0.00	0.00	0.93			
Avail Cap(c_a), veh/h	0	3657	0				0	508	480			
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00			
Upstream Filter(I)	0.00	1.00	0.00				0.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	10.2	0.0				0.0	0.0	40.2			
Incr Delay (d2), s/veh	0.0	0.6	0.0				0.0	0.0	24.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	8.5	0.0				0.0	0.0	7.6			
LnGrp Delay(d),s/veh	0.0	10.8	0.0				0.0	0.0	64.3			
LnGrp LOS		B							E			
Approach Vol, veh/h		2043						413				
Approach Delay, s/veh		10.8						64.3				
Approach LOS		B						E				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2						8
Phs Duration (G+Y+Rc), s		77.3						32.7
Change Period (Y+Rc), s		5.0						5.0
Max Green Setting (Gmax), s		70.0						30.0
Max Q Clear Time (g_c+I1), s		23.9						27.2
Green Ext Time (p_c), s		26.7						0.5

Intersection Summary	
HCM 2010 Ctrl Delay	19.8
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	80	0	100	540	0	0
Future Vol, veh/h	80	0	100	540	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	87	0	109	587	0	0

Major/Minor	Minor2		Major1	
Conflicting Flow All	511	-	0	0
Stage 1	0	-	-	-
Stage 2	511	-	-	-
Critical Hdwy	6.84	-	4.14	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-
Follow-up Hdwy	3.52	-	2.22	-
Pot Cap-1 Maneuver	492	0	-	-
Stage 1	-	0	-	-
Stage 2	567	0	-	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	492	-	-	-
Mov Cap-2 Maneuver	492	-	-	-
Stage 1	-	-	-	-
Stage 2	567	-	-	-

Approach	EB	NB
HCM Control Delay, s	13.9	
HCM LOS	B	

Minor Lane/Major Mvmt	NBL	NBT	EBLn1
Capacity (veh/h)	-	-	492
HCM Lane V/C Ratio	-	-	0.177
HCM Control Delay (s)	-	-	13.9
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0.6

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	35	635	40	0	0
Future Vol, veh/h	0	35	635	40	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	-
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	38	690	43	0	0

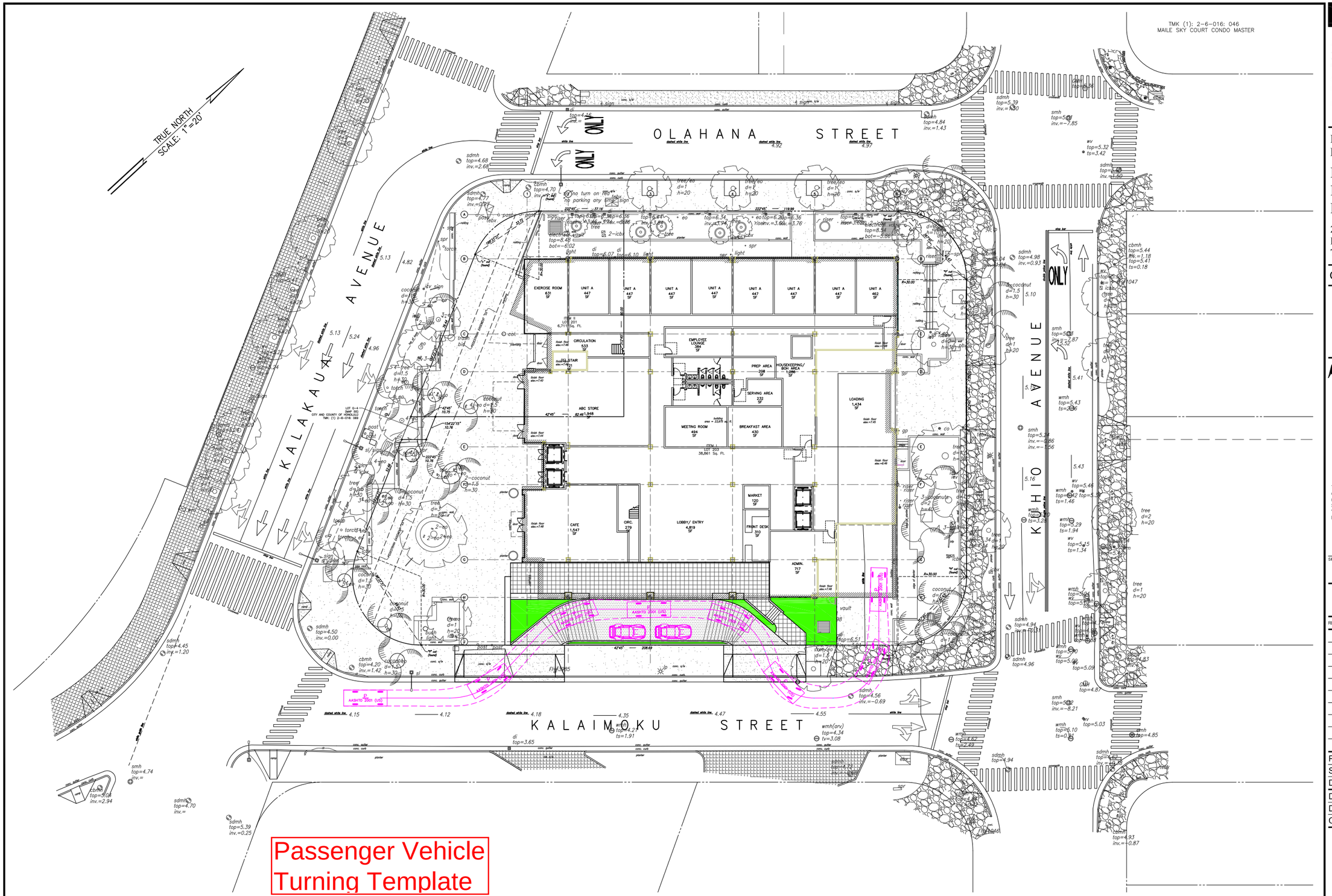
Major/Minor	Minor1		Major1	
Conflicting Flow All	-	367	0	0
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	-	6.94	-	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	3.32	-	-
Pot Cap-1 Maneuver	0	630	-	-
Stage 1	0	-	-	-
Stage 2	0	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	-	630	-	-
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	WB	NB
HCM Control Delay, s	11.1	0
HCM LOS	B	

Minor Lane/Major Mvmt	NBT	NBR	WBLn1
Capacity (veh/h)	-	-	630
HCM Lane V/C Ratio	-	-	0.06
HCM Control Delay (s)	-	-	11.1
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0.2

APPENDIX E

TURNING MOVEMENT TEMPLATES FROM THE PORTE-COCHERE



SITE PLAN
SCALE: 1"=20'

JOB NO. 15-041.000 September 25, 2017
FN: Y:\2015\15-041\DRAWINGS\SITE PLAN-AUTOTURN.DWG

AustinTsutsumi & ASSOCIATES, INC.
CIVIL ENGINEERS I SURVEYORS
HONOLULU I WAILUKU I HILO, HAWAII

501 SUMNER STREET, SUITE 521
HONOLULU, HAWAII 96817

PHONE: 808-533-3646
FAX: 808-526-1267

KALAIMOKU / KUHIO DEVELOPMENT CORP.

KING KALAKAUA PLAZA REDEVELOPMENT

2080 KALAKAUA AVENUE
HONOLULU, HAWAII
TMK: (1) 2-6-016:023 & 026

ONSITE IMPROVEMENTS

AUSTIN, TSUTSUMI & ASSOC., INC.
ENGINEERS, SURVEYORS • HONOLULU, HAWAII

DONOHUE M. FUJII
LICENSED PROFESSIONAL ENGINEER
No. 7245-C
HAWAII, U.S.A.

This work was prepared by me or under my supervision and construction of this project will be under my observation. (Observation of construction as defined in Chapter 16-115 Subchapter 1 Definitions of the Hawaii Administrative Rules "Professional Engineers, Architects, Surveyors, and Landscape Architects.")

APRIL 30, 2018
SIGNATURE — EXP. DATE OF THE LICENSE

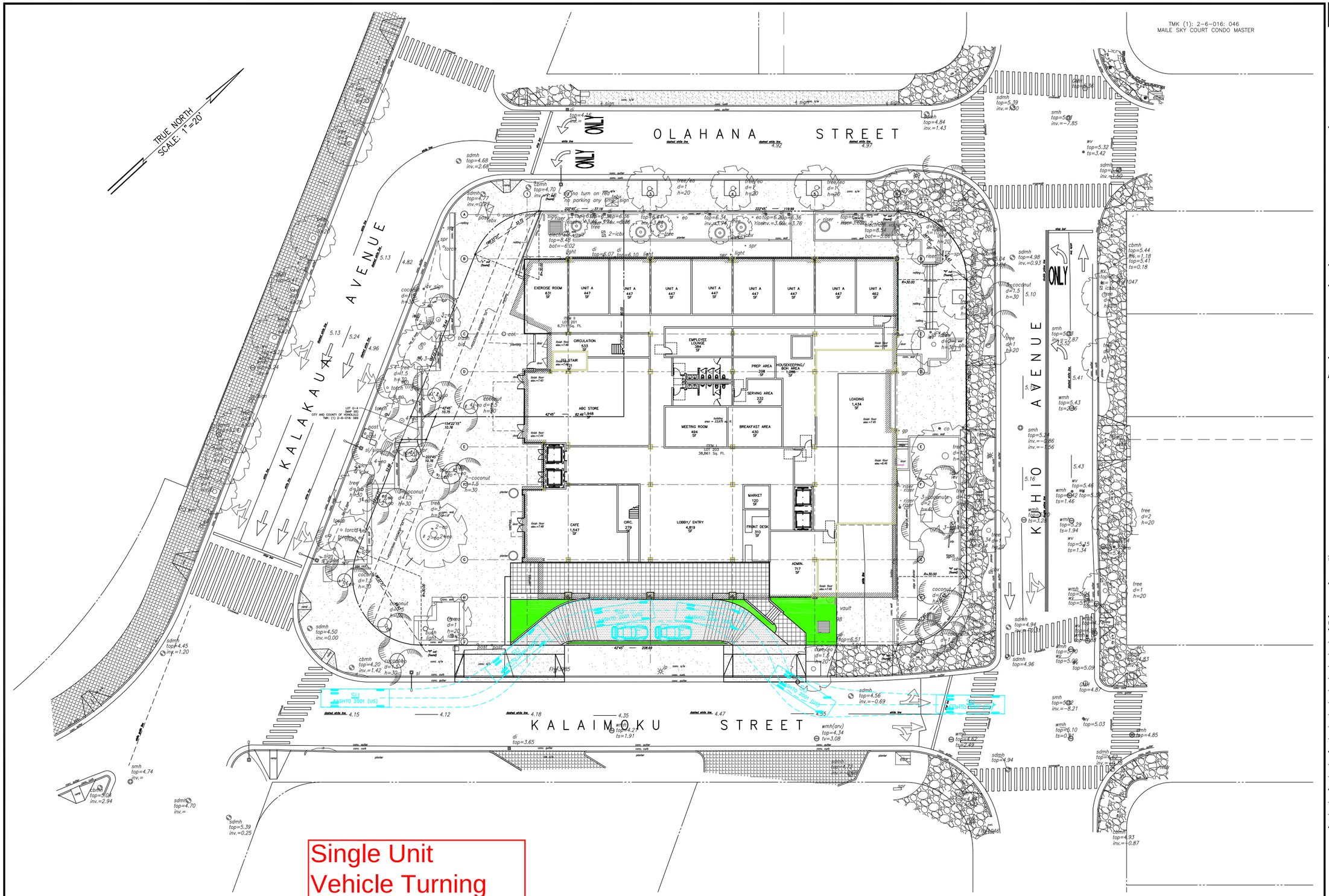
0 1 2
LINE IS 2 INCHES AT FULL SIZE
(If NOT 2-inches : Scale Accordingly)

REVISION	DATE	BRIEF	BY

Project No:	15-041.000
Scale:	AS NOTED
Date:	09/25/17
Designed By:	DMF, MVV
Drawn By:	MVV
Checked By:	DMF

SITE PLAN

DWG. NO.
C-1
SHEET X OF XX



SITE PLAN
SCALE: 1"=20'

JOB NO. 15-041.000 September 25, 2017
FN: Y:\2015\15-041\DRAWINGS\SITE PLAN-AUTOTURN.DWG

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(If NOT 2-inches : Scale Accordingly)

REVISION	DATE	BRIEF	BY

Project No:	15-041.000
Scale:	AS NOTED
Date:	09/25/17
Designed By:	DMF, MVV
Drawn By:	MVV
Checked By:	DMF

SITE PLAN

DWG. NO.
C-1
SHEET X OF XX

APPENDIX D:
PRELIMINARY ENGINEERING REPORT

PRELIMINARY ENGINEERING REPORT
For
KING KALAKAUA PLAZA RENOVATION
WAIKIKI, OAHU, HAWAII

March 20, 2017

Prepared for:

KALAIMOKU/KUHIO DEVELOPMENT CORP.
120 N. Robertson Boulevard
Los Angeles, CA 90048-113

Austin, Tsutsumi & Associates, Inc.
Civil Engineers • Surveyors
501 Sumner Street, Suite 521
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Honolulu • Wailuku • Hilo, Hawaii

PRELIMINARY ENGINEERING REPORT
For
KING KALAKAUA PLAZA RENOVATION
WAIKIKI, OAHU, HAWAII

Prepared for:

KALAIMOKU/KUHIO DEVELOPMENT CORP.

Prepared by:

Austin, Tsutsumi & Associates, Inc.
Civil Engineers • Surveyors
Honolulu • Wailuku • Hilo, Hawaii

March 20, 2017

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PRELIMINARY ENGINEERING REPORT

FOR

KING KALAKAUA PLAZA RENOVATION
WAIKIKI, OAHU, HAWAII

I. INTRODUCTION

The purpose of this report is to summarize the existing site and civil engineering design criteria for the proposed improvements at the existing King Kalakaua Plaza Site in Waikiki, Oahu, Hawaii. The report will evaluate the existing site conditions and define project requirements for grading, drainage, roadway, and utility provisions for the proposed renovation.

II. PROPOSED PROJECT

A. Location

The project site is located in the parcels of land bound by Kalaimoku Street to the south, Kalakaua Avenue to the west, Kuhio Avenue to the east, and Olohana Street to the north. The vast majority of the work will occur within the existing parcels designated by Tax Map Key (1) 2-6-016: 023 and 026 (collectively referred to as “the Property”). The Property is approximately 1.05 acres. Refer to Exhibit 1 for the Property location and vicinity map.

B. Project Description

The proposed project will include the renovation of the existing retail and restaurant building into a seven-story hotel with retail space on the ground floor. The existing building shell will remain intact; however the Developer is proposing three (3) additional floors on top of the existing structure. General site improvements include a new Porte-Cochere as well as general landscaping improvements. New utilities for the renovated building would include a new sewer lateral connection to the existing City and County of Honolulu (City) 16-inch sewer main on Kuhio Avenue. Based on the anticipated demand, the renovated building will utilize the existing Board of Water Supply (BWS) water

connections for both domestic and fire protection water demands, unless the existing meters are required to be upgraded. However, an upgrade to the existing water meters does not appear to be necessary at this time. Refer to Exhibits 2 and 3 for the existing site layout and proposed improvements.

III. EXISTING CONDITIONS

A. Adjacent Land Uses

The areas to the west, east, and north surrounding the Property include resorts, restaurants and retail stores as well as the Fort DeRussy Military Reservation to the south. The Property is zoned (City LUO Zoning) as Resort Mixed Use and is located in the Waikiki Special District. The State Land Use designation is Urban District. The Property building height limit is 300 feet.

B. Topography and Soil Conditions

The Property is relatively flat as the Property has been graded and developed, and includes retaining walls, enclosed planter strip areas and open space areas for pedestrians. Existing slopes within the Property range between 0 to 4 percent. Elevation on the Property ranges from 3 feet mean sea level (msl) at the south corner of the Property to 9 feet msl at the north corner of the Property.

The major soil classification of the Property is Fill Land, mixed (FL) and is part of hydrologic Soils Group B. This land type consists of areas filled with material dredged from the ocean or hauled from nearby areas, and general material from other sources. All soils contained in the Property are moderately well drained or well drained, have moderate permeability, have moderately fine texture to moderately coarse texture and a moderate infiltration rate when thoroughly wet. See Exhibit 4 for the Soils Map.

C. Drainage

The Property is on the Makai side of the Ala Wai Canal and the Property is developed with curb and gutters on all sides and catch basins at each corner that collect runoff from the Property. Existing runoff flows to the existing curb and gutter, and is collected by the existing catch basins and routed into the City and County of Honolulu Drainage System. The City Drainage System outflows into the Ala Wai Canal to the northeast. Under its existing developed conditions, the Property is approximately 17.1% pervious area and 82.9% impervious area and the calculated runoff generated during a 1-hour, 10-year design storm is 6.36 cfs.

D. Wastewater

Wastewater service for the Property is provided by the City Sewer System through an existing 6-inch sewer lateral connected to an existing 18-inch sewer main line that runs along Kuhio Avenue.

E. Water

Domestic water service for the Property is provided by an existing 16-inch water line that runs along Kuhio Avenue. There are two existing water meters along Kuhio Avenue that service the Property, a 4-inch domestic meter and a 6-inch DC-fire meter. The serial numbers of the 4” domestic meter and 6” DC-fire meter are 04124024 and 96159613, respectively. The P/ID number for both meters is 3803451443. The existing water lateral for both meters is 6 inches. There are two existing fire hydrants located in the sidewalk area that surrounds the Property. The first hydrant is located along Kalakaua Avenue fronting the Property approximately 80 feet from the south corner of the Property. The second hydrant is located along Kalaimoku Street fronting the Property approximately 100 feet from the south corner of the Property.

F. Flood Zone

The Property is within the Flood Zone designated “AO” by the Flood Insurance Rate Map, Map Number 15003C0366G. The Federal Emergency Management Agency (FEMA) describes Zone “AO” as areas subject to inundation by 1-percent-annual-chance shallow flooding (usually sheet flow on sloping terrain) where average depths are between one and three feet. Average

flood depths derived from detailed hydraulic analyses are shown in this zone on the flood map. Flood insurance purchase requirements and floodplain management standards may apply.

Some Zone AO areas have been designated in areas with high flood velocities such as alluvial fans and washes. See Exhibit 5 for the Flood Zone Map.

G. Landscaping

The existing landscaping within the Property includes grass, hedges, and various trees, and is considered to be moderate to high maintenance. There is an existing irrigation system but it is unclear if the system has a separate water meter as detailed information of the system is not available at this time.

H. Traffic

The Property is located in an area of high vehicular and pedestrian activity. The surrounding transportation network consists of a gridded network of streets along the major roadways of Kalakaua Avenue and Kuhio Avenue. Access to the parking garage is provided via Kalaimoku Street and access to two existing loading areas is via Kuhio Avenue.

Oahu Transit Services (OTS) operates TheBus. Within the Property vicinity, access to TheBus is provided via bus stops along Kalakaua Avenue, Kuhio Avenue, Olohana Street, and Saratoga Road. Private transportation services such as trolleys and tour buses operate within the Property vicinity. Convenient access to the trolleys is provided via stops along Olohana Street and Kalaimoku Street, adjacent to the Property.

Sidewalks are provided along both sides of Kalakaua Avenue, Kuhio Avenue, Olohana Street, Kalaimoku Street, and Saratoga Road. The sidewalks along Kalakaua Avenue corridor are wide and well maintained. The sidewalks provide access to the numerous retail, restaurant, and hotel facilities that are heavily used by pedestrians.

Bicycle facilities are provided in the eastbound direction, along Kalakaua Avenue beginning at Ala Moana and terminating to the east at Kapahulu Avenue, and in the westbound direction, along Ala Wai Boulevard extending approximately 1.1 miles from Ainakea Way to Keoniana Street.

I. Natural Gas

Natural gas for the area is provided by Hawaii Gas The Clean Energy Company. Gas for the Property is provided by an existing 2-inch lateral connected to the existing 6-inch main gas line that runs along the south side of Kalaimoku Street located approximately 50 feet from the Property line. There is also an existing 6-inch main gas line that runs along Kuhio Avenue located approximately 50 feet from the Property line. However, the 1-inch lateral connection to that line was abandoned and is no longer available for connection.

J. Electrical System

Hawaiian Electric Company (HECO) presently serves the Property from two (2) 1,500 kVA transformers, located in a basement vault within the existing building. These transformers and a switchgear are presently connected to the 12.47 kV circuits in HECO's Kalakaua Avenue underground duct system. HECO presently services the Waikiki area from its Ena and Waikiki Substations.

K. Telecommunication System

Hawaiian Telcom (HTCO) and Charter Communications (Charter fka Oceanic Time Warner Cable) presently serve the Property from HTCO's underground duct system located within Kalakaua Avenue. HTCO existing service to the existing building consists of copper pairs and fiber optic cables to the building telecommunications service demarcation point. Charter service consists of fiber optic cable extending to the building telecommunication service demarcation point. The Charter cables in the vicinity of the building are collocated within HTCO's duct system.

IV. PROPOSED GRADING AND DRAINAGE PLAN

A. Grading Plan

Under the proposed condition, the existing building footprint and surrounding areas will remain intact and significant grading improvements will not be required; therefore the Property grades will largely remain the same as the existing condition. Some minor grading may occur as the renovations are proposed to include a Porte Cochere and/or reconstructed planter walls for the

addition of new or increased landscaping areas. Detailed information on proposed landscaping improvements is not available at this time.

Erosion control measures will be incorporated during the construction period to minimize soil loss and erosion hazards. Compost filter socks and periodic water spraying will be provided to minimize dust disturbances to adjoining properties. A National Pollutant Discharge Elimination System (NPDES) permit for construction activities is not likely to be required for the renovations since the disturbed areas related to the work is less than one acre.

B. Drainage Plan

Drainage for the renovated building and grounds will follow the existing drainage pattern and is not expected to increase compared to existing conditions. Runoff from the Property will flow to the existing curb and gutter, be collected by the corner catch basins and discharge into the City Drainage System. The proposed site improvements will provide 17.1% pervious areas and 82.9% impervious areas (the same as the existing developed conditions) and the expected runoff generated during a 1-hour, 10-year storm is 6.36 cfs (the same as the existing developed conditions). The addition of new or increased landscaping areas and low impact drainage improvements may help decrease runoff generated on the Property. Therefore, it is estimated that the proposed improvements will produce equal or less runoff than the existing condition.

V. PROPOSED UTILITY IMPROVEMENTS

A. Water

Per the Board of Water Supply (BWS) in their response letter for water availability for the project dated September 2, 2016, the existing BWS Water System is adequate to provide domestic and offsite fire protection for the renovation of the building for hotel uses. BWS noted that they reserve the right to change any position or information stated herein up until the final approval of the building permit application. The final decision on the availability of water will be confirmed when the building permit application is submitted for approval.

The existing 4-inch domestic water meter and 6” fire water meter will continue to be used for the renovated building and grounds, and there are no plans to upgrade the existing meters. Per BWS, water conservation measures

are recommended for all proposed developments. These measures include low flow plumbing fixtures, utilization of non-potable water for irrigation using catchment and chiller/air handler condensate, cooling tower conductivity meters and water softening recycling systems, drought tolerant plants, xeriscape landscaping, efficient irrigation systems and the use of Water Sense labeled ultra-low-flow water fixtures and toilets. High-rise buildings with booster pumps will be required to install water hammer arrestors or expansion tanks to reduce pressure spikes and potential main breaks in the BWS Water System.

There are two nearby fire hydrants located close to the Property. Fire Hydrant No. M01057 is located along Kalakaua Avenue and Fire Hydrant M03985 is located along Kalaimoku Street. Both fire hydrants have a static pressure of 76 psi and a flowrate of 4000 gpm. However, the hydrant data is based on the existing water system and the static pressure is not indicative of actual pressure in the field. Therefore, field tests are required to determine the actual flows that are available to the Property. There are no plans to upgrade or construct new fire hydrants as part of the project. See Appendix for BWS water availability letter dated September 2, 2016.

B. Wastewater

From discussions with the City, the existing sewer connection for the Property will need to be improved to accommodate the anticipated increase in effluent generated by renovation of the building for hotel use. The Developer will not be allowed to connect to the existing 18-inch main sewer line in Kuhio Avenue as that line is scheduled to be abandoned. The Developer will be allowed to connect to the existing 16-inch City Sewer System main line in Kuhio Avenue. Sewer Connection Application No. 2016/SCA-1443 has been approved by the City with conditions. A $366,168 wastewater facilities charge, a new sewer lateral connecting to the existing 16-inch main on Kuhio Avenue and submittal of construction plans to the City for review and approval are required as part of the approval conditions of the approved sewer connection application. See Appendix for approved sewer connection application. At this time, the new sewer lateral within Kuhio Avenue is expected to be the lone off-site utility improvement required for the project.

C. Natural Gas

Natural gas for the renovation will be provided by Hawaii Gas The Clean Energy Company. Gas for the Property will continue to be provided by the existing 2-inch lateral connected to the existing 6-inch main gas line that runs along the south side of Kalaimoku Street located approximately 50 feet from the Property line. No connection to the existing 6-inch main gas line that runs along Kuhio Avenue is anticipated at this time.

D. Electrical Systems

It appears that during the original building design, the HECO service was designed around serving a larger load than what was constructed, as the provision of two-1,500 kVA transformers for the existing building appears to be generous. During the design of the proposed improvements, a service request and building plans detailing the proposed floor area increases will be submitted for HECO review and comment to confirm that their existing two-1,500 kVA transformers will have sufficient capacity for the added floor area.

E. Telecommunications System

Based on the anticipated increased building floor area, the existing telecommunications service conduits appear to be adequate to accommodate the increased telecommunications requirements. Both HTCO and Charter would, if necessary, reinforce their existing service cabling to the renovated building.

PROPOSED ROADWAY AND LANDSCAPING IMPROVEMENTS

A. Landscaping

Information related to the proposed landscaping is not available at this time. The project landscape architect will provide a description of the proposed landscape work.

B. Roadway Improvements

New offsite roadway improvements are not anticipated for the project, except for new driveway aprons necessary for the Porte-Cochere.

C. Traffic

A separate Traffic Impact Analysis Report was completed for the project. The evaluation of the proposed hotel used ITE trip rates for Business Hotel to generate the hotel trips. The evaluation showed the traffic operations with the renovation of the building for hotel use would be similar to existing conditions with traffic along Kalakaua Avenue extending to the Kalakaua Avenue/Kuhio Avenue split during the PM peak period. Traffic conditions during the AM peak period are anticipated to continue operating smoothly.

The proposed hotel will use the existing underground building parking garage accessed from Kalaimoku Street and the existing loading areas accessed from Kuhio Avenue. There are also two existing loading areas accessible from Kalaimoku Street.

In addition, the new Porte-Cochere along Kalaimoku Street will allow vehicles to pull off of the main road for loading/unloading hotel operations. The Porte-Cochere will minimize the potential impact of delivery and hotel transit vehicles from loading and unloading along Kalaimoku Street.

Additional transportation management measures should be considered to further reduce the project's traffic impacts. For the complete traffic evaluation and a description of transportation management measures, refer to King Kalakaua Plaza Renovation Traffic Impact Analysis Report, dated November 23, 2016 by Austin, Tsutsumi & Associates, Inc.

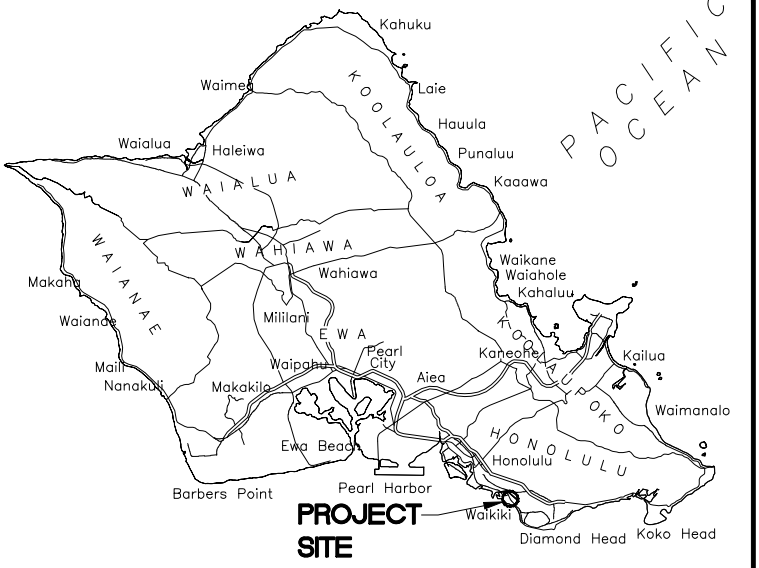
CONCLUSION

The proposed renovation of the existing building and grounds will be designed to produce no adverse affects to existing facilities or the surrounding properties and environment. Improvements will be designed in accordance with applicable City and State regulatory agencies.

REFERENCES

1. "Rules Relating to Storm Drainage Standards." Department of Planning and Permitting, City and County of Honolulu, January 2000.
2. "Soil Survey of the Islands of Kauai, Oahu, Maui, Molokai and Lanai, State of Hawaii." Soil Conservation Service, U.S. Department of Agriculture, August 1972.

EXHIBITS

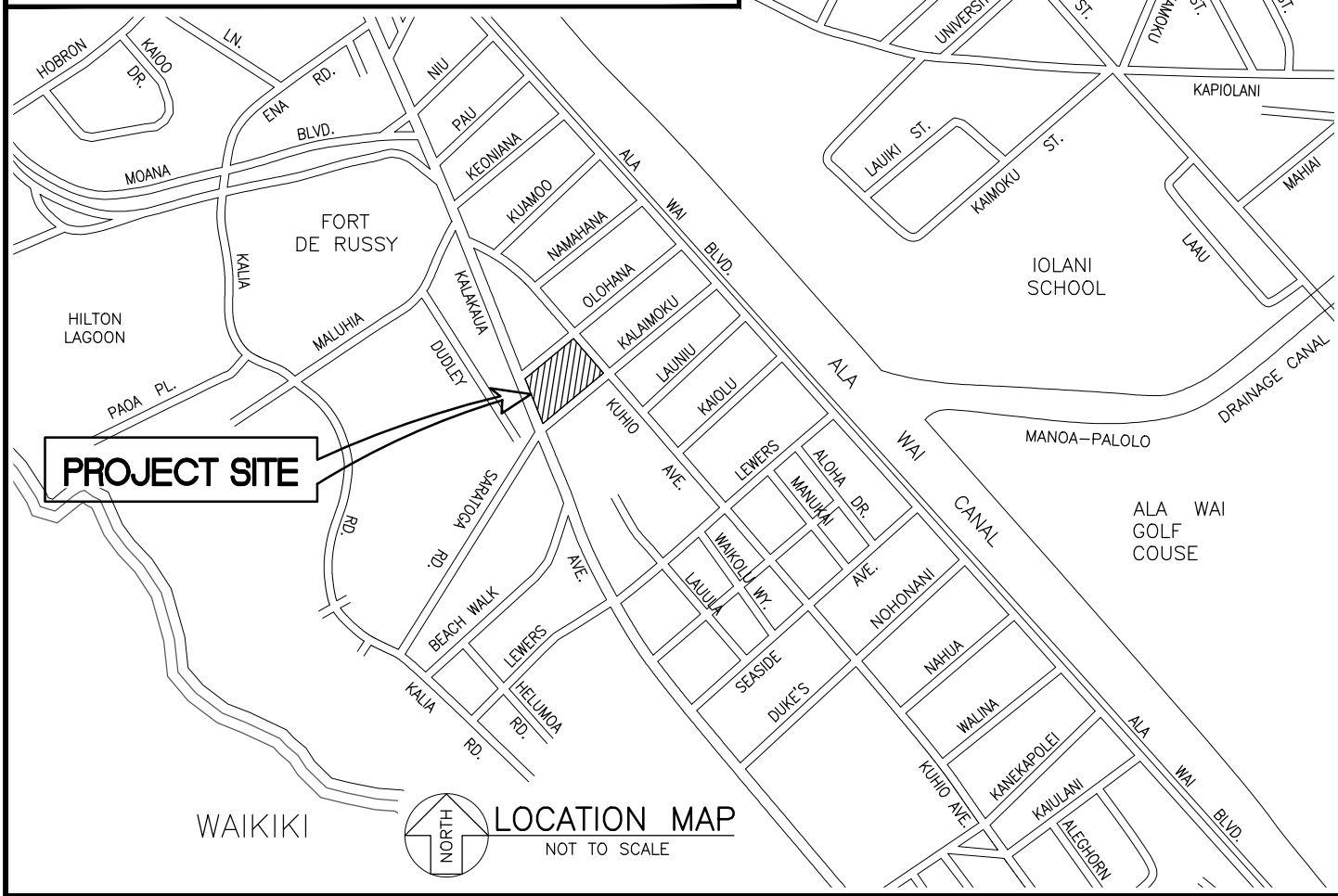


ISLAND OF O'AHU

NORTH

VICINITY MAP

NOT TO SCALE



NORTH

LOCATION MAP

NOT TO SCALE

PRELIMINARY ENGINEERING REPORT

KING KALAKAUA PLAZA RENOVATION

WAIKIKI, OAHU, HAWAI'I

AUSTIN, TSUTSUMI & ASSOCIATES, INC.
ENGINEERS, SURVEYORS ● HONOLULU, WAILUKU, HILO, HAWAII

VICINITY AND LOCATION MAP

EXHIBIT

1

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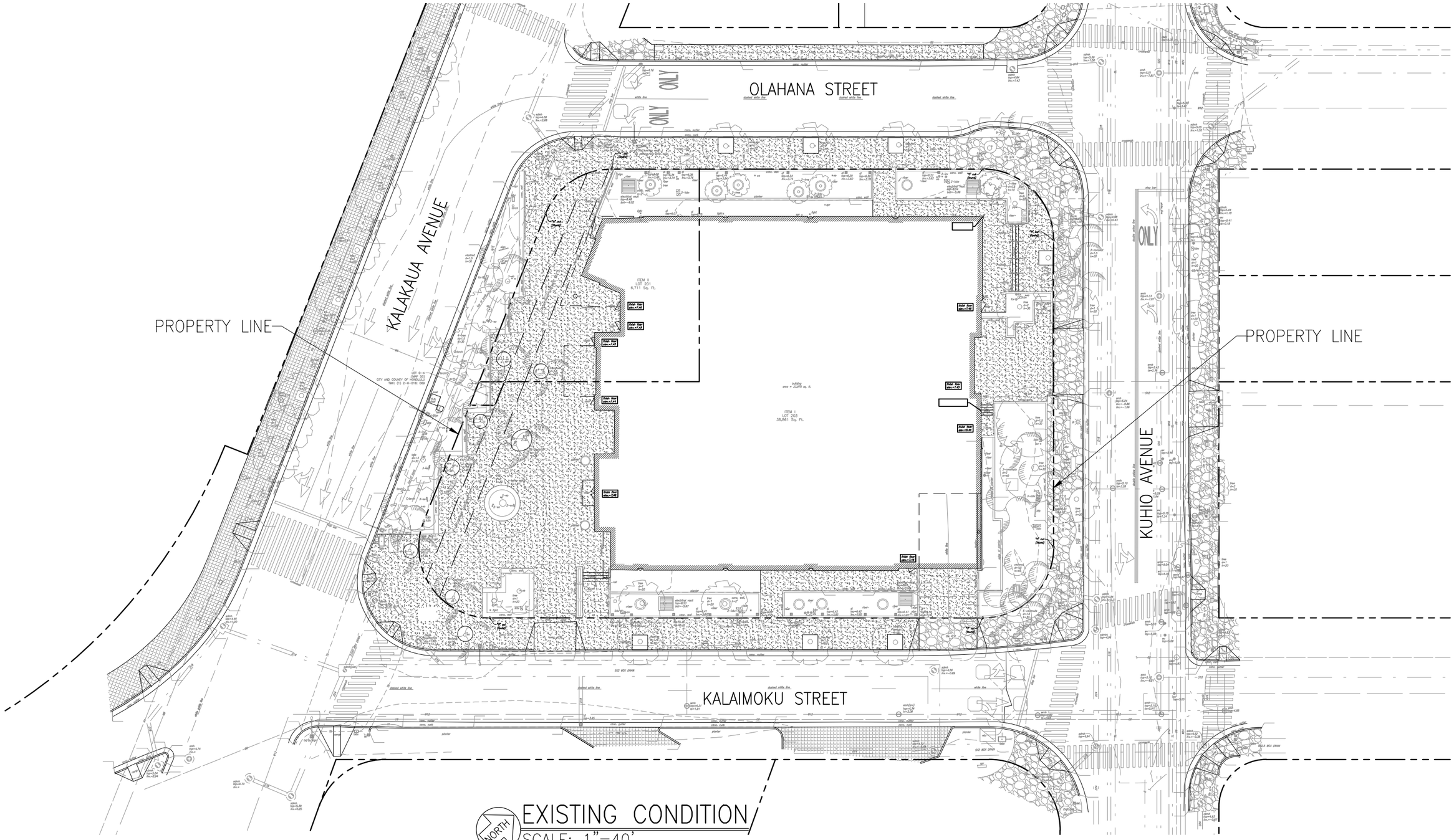
DECEMBER, 2016



EXISTING CONDITION

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(If NOT 1-inch : Scale Accordingly)

PRELIMINARY ENGINEERING REPORT

KING KALAKAUA PLAZA RENOVATION

WAIKIKI, OAHU, HAWAI'I

AUSTIN, TSUTSUMI & ASSOCIATES, INC.
ENGINEERS,SURVEYORS ● HONOLULU, WAILUKU, HILO, HAWAII

EXISTING CONDITION

EXHIBIT

2

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JOB NO. 15-081

DECEMBER 2016

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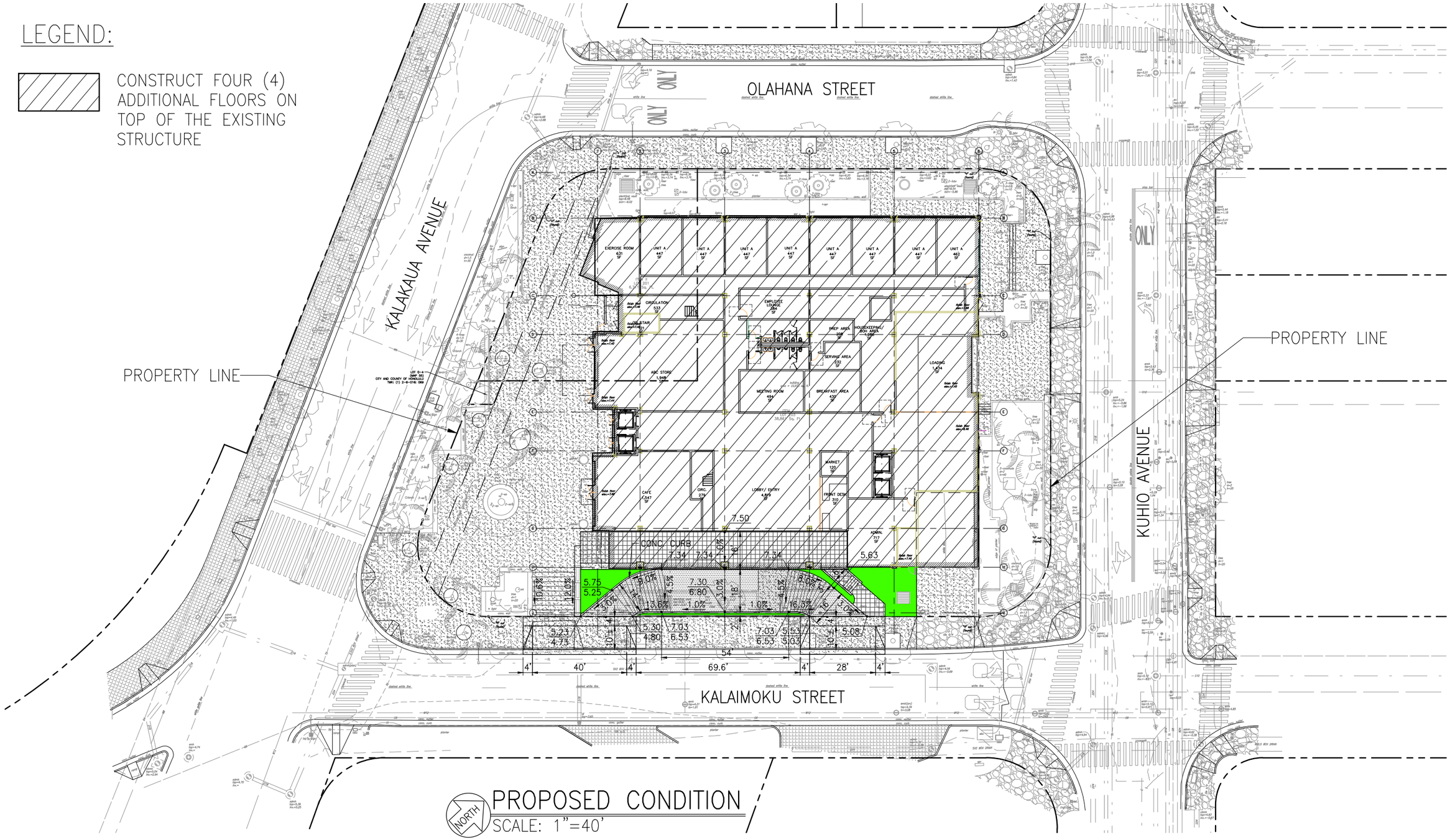

PROPOSED CONDITION
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(If NOT 1-inch : Scale Accordingly)

PRELIMINARY ENGINEERING REPORT

KING KALAKAUA PLAZA RENOVATION

WAIKIKI, OAHU, HAWAI'I

AUSTIN, TSUTSUMI & ASSOCIATES, INC.
ENGINEERS,SURVEYORS • HONOLULU, WAILUKU, HILO, HAWAII

PROPOSED CONDITION

EXHIBIT

3

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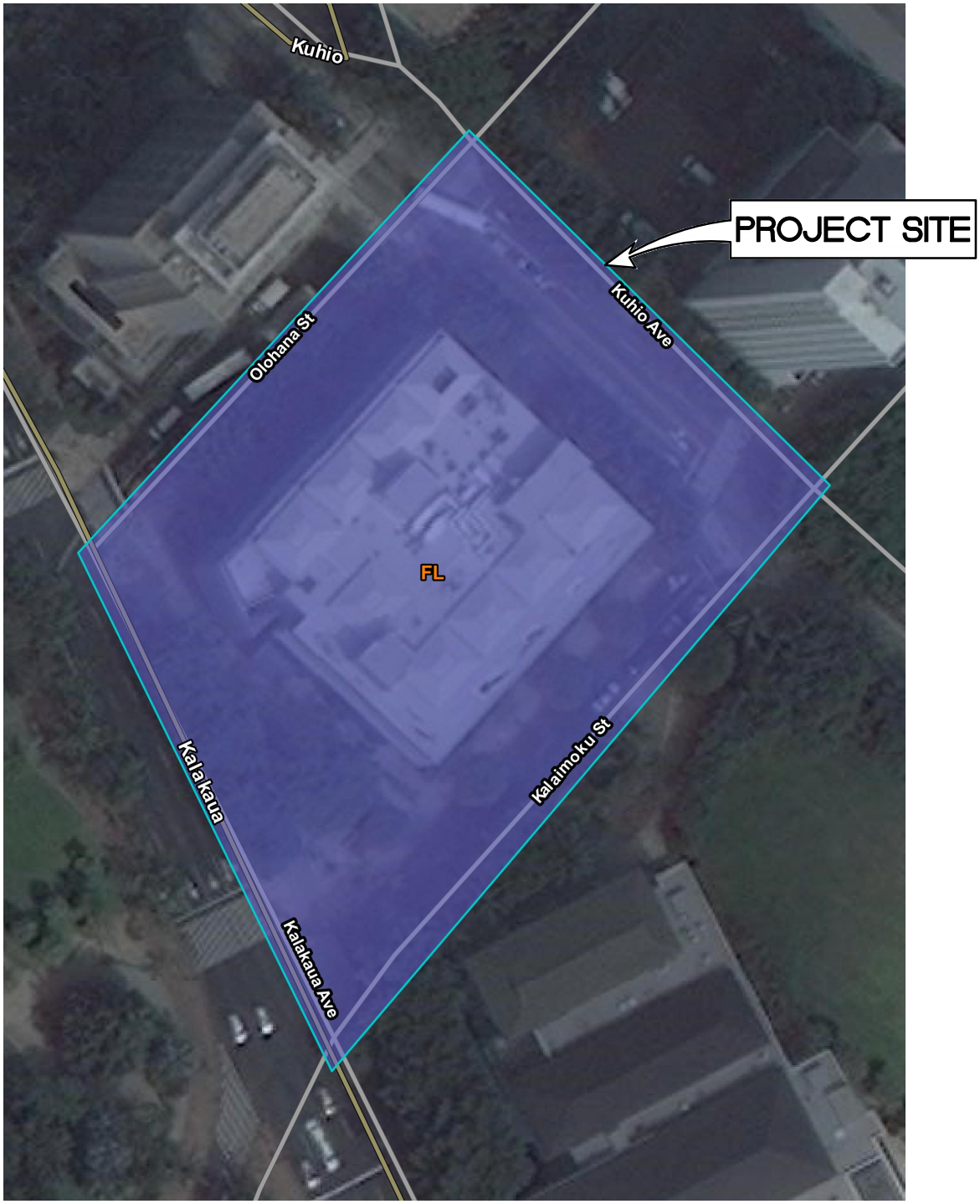
JOB NO. 15-081

DECEMBER 2016



LEGEND:

REF: WEB SOIL SURVEY, NATIONAL COOPERATIVE SOIL SURVEY, NATURAL RESOURCES CONSERVATION SERVICE

FL: FILL LAND, MIXED

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(If NOT 1-inch : Scale Accordingly)

NORTH

SOILS MAP
NOT TO SCALE

PRELIMINARY ENGINEERING REPORT

KING KALAKAUA PLAZA RENOVATION

WAIKIKI, OAHU, HAWAI'I

AUSTIN, TSUTSUMI & ASSOCIATES, INC.
ENGINEERS,SURVEYORS ● HONOLULU, WAILUKU, HILO, HAWAII

SOILS MAP

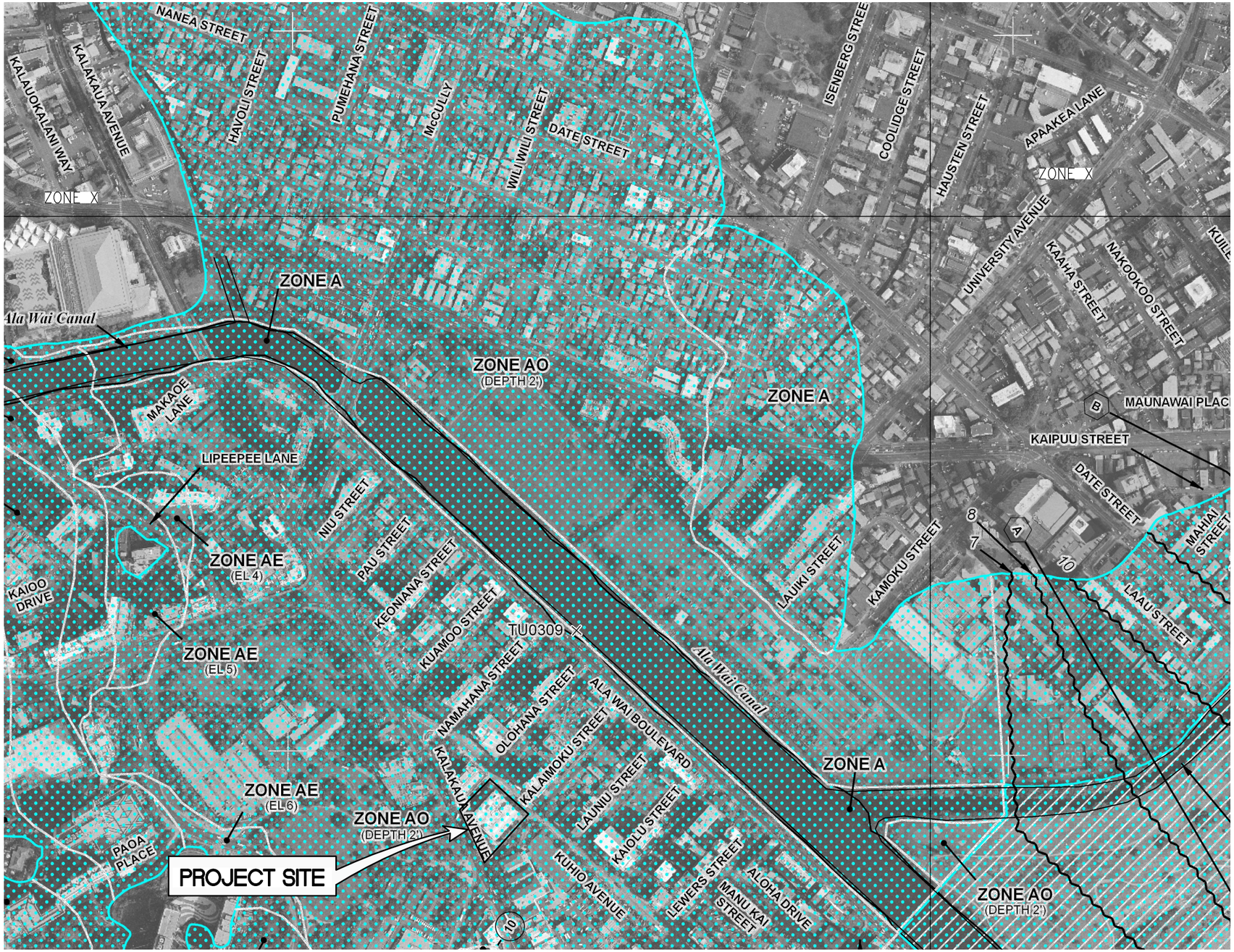
EXHIBIT

4

FILENAME: Y:\2015\15-041\ENGINEERING\REPORTS\EXHIBITS\DWG\EXH-04 SOILS MAP.DWG Dec 09, 2016-11:33 AM

JOB NO. 15-081

DECEMBER, 2016



NORTH

MAP SCALE: 1" = 500'

250 0 500 1000 FEET

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0366G

FIRM

FLOOD INSURANCE RATE MAP

CITY AND COUNTY OF HONOLULU, HAWAII

PANEL 366 OF 395

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
HONOLULU, CITY AND COUNTY OF	150001	0366	G

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER 15003C0366G

MAP REVISED JANUARY 19, 2011

Federal Emergency Management Agency

LEGEND:

ZONE A: NO BASE FLOOD ELEVATIONS DETERMINED.
ZONE AE: BASE FLOOD ELEVATIONS DETERMINED.
ZONE AO: FLOOD DEPTHS OF 1 TO 3 FEET (USUALLY SHEET FLOW ON SLOPING TERRAIN); AVERAGE DEPTHS DETERMINED. FOR AREAS OF ALLUVIAL FAN FLOODING, VELOCITIES ALSO DETRMINED.
ZONE X : AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.

0 1
LINE IS 1 INCH AT FULL SIZE
(If NOT 1-inch : Scale Accordingly)

PRELIMINARY ENGINEERING REPORT

KING KALAKAUA PLAZA RENOVATION

WAIKIKI, OAHU, HAWAI'I

AUSTIN, TSUTSUMI & ASSOCIATES, INC.
ENGINEERS,SURVEYORS • HONOLULU, WAILUKU, HILO, HAWAII

FLOOD MAP

EXHIBIT 5

FILENAME: Y:\2015\15-041\ENGINEERING\REPORTS\EXHIBITS\DWG\EXH-03 FLOOD MAP.DWG Dec 09, 2016-11:43 AM

JOB NO. 15-081

DECEMBER 2016

APPENDICES

APPENDIX A

KING KALAKAUA PLAZA REDEVELOPMENT

RUNOFF SUMMARY
STORM DRAIN DRAINAGE AREAS
EXISTING CONDITIONS (10-YEAR DESIGN STORM)

Drainage Area Label	Flows To	Area (sf)	"A" Area (acres)	"C" 10-Yr Runoff Coeff.	Tc (min)	"I" 10-Yr Rainfall Intensity (in/hr)	"Q" 10-Yr Runoff Rate (cfs)
Pervious Areas	CITY CB	7,772	0.18	0.20	5.0	7.39	**0.26**
Impervious Areas	CITY CB	37,798	0.87	0.95	5.0	7.39	**6.09**
Total Site	CITY CB	45,570	1.05	0.82	5.0	7.39	**6.36**

RUNOFF SUMMARY
STORM DRAIN DRAINAGE AREAS
PROPOSED CONDITIONS (10-YEAR DESIGN STORM)

Drainage Area Label	Flows To	Area (sf)	"A" Area (acres)	"C" 10-Yr Runoff Coeff.	Tc (min)	"I" 10-Yr Rainfall Intensity (in/hr)	"Q" 10-Yr Runoff Rate (cfs)
Pervious Areas	CITY CB	7,772	0.18	0.20	5.0	7.39	**0.26**
Impervious Areas	CITY CB	37,798	0.87	0.95	5.0	7.39	**6.09**
Total Site	CITY CB	45,570	1.05	0.82	5.0	7.39	**6.36**

Notes:

1. 10-year design is used in the runoff calculations.
2. Refer to Appendix B, Runoff Coefficient Calculations for "C" values.
3. The Time of Concentration "Tc" is assumed to be 5 minutes minimum.
4. Rainfall Intensity obtained from the NOAA Precipitation Frequency Data Server (PFDS), available online at: http://hdsc.nws.noaa.gov/hdsc/pfds The PFDS is based on data from NOAA Atlas 14, Volume 4, Version 3
5. The Rational Method is used to determine Runoff: Q = CIA.
6. The above runoff calculations are for onsite improvements only and the limits are the property boundaries of TMK: (1) 2-6-016: 023 and 026.

APPENDIX B
King Kalakaua Plaza Redevelopment
Drainage Areas and Runoff Coefficient "C" Values

KKP REDEVELOPMENT DRAINAGE AREAS

	SQ FT	ACRES	NOTES
TOTAL AREA	45570.17	1.05	FROM AUTOCAD
PERVIOUS AREA	7772.37	0.18	FROM AUTOCAD
IMPERVIOUS AREA	37797.81	0.87	TOTAL - PERVIOUS

% PERVIOUS	**17.06%**
% IMPERVIOUS	**82.94%**

WEIGHTED "C" VALUE

PERVIOUS SURFACE:	**Cpervious = 0.20**
IMPERVIOUS SURFACE:	**Cimpervious = 0.95**
SITE SURFACE:	**Csite = 0.82**

DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET * HONOLULU, HAWAII 96813
Phone: (808) 768-8209 * Fax: (808) 768-4210

SEWER CONNECTION APPLICATION

APPLICATION NO.: **2015/SCA-0496** STATUS: **Approved with conditions**

DATE RECEIVED: **06/23/2015** IWDP APP. NO.:

PROJECT NAME: **2015/SCA-0496 King Kalakaua Plaza**

$366,168.00
Estimated Wastewater System Facility Charge*

LOCATION:

Zone	Section	Plat	Parcel		
2	6	016	023	2080 KALAKAUA AVE Honolulu / W	38,861 Sq. Ft.
2	6	016	026	2080 KALAKAUA AVE Honolulu / W	6,711 Sq. Ft.

SPECIFIC LOCATION: **2080 Kalakaua Ave.**

APPLICANT: **Austin, Tsutsumi & Associates Inc.**
Attn: Donohue Fujii
501 Sumner Street, Suite 521
Honolulu, HI 96817

DEVELOPMENT TYPE: **Hotel** SEWER CONNECTION WORK DESIRED: **Existing**

OTHER USES: **210 Rooms**
Retail

NON-RESIDENTIAL AREA: **15,000.00** s.f. APPROXIMATE DATE OF CONNECTION: **05/15/2016**

PROPOSED UNITS	EXISTING UNITS	UNITS TO BE DEMOLISHED
No. of New Units: **0**	No. of Existing Units: **0**	No. of Units to be Demolished: **0**
Studios:	Studios:	Studios:
1-Bedroom:	1-Bedroom:	1-Bedroom:
2-Bedroom:	2-Bedroom:	2-Bedroom:
3-Bedroom:	3-Bedroom:	3-Bedroom:
4-Bedroom:	4-Bedroom:	4-Bedroom:
5-Bedroom:	5-Bedroom:	5-Bedroom:
6-Bedroom:	6-Bedroom:	6-Bedroom:

REMARKS **A new sewer lateral connecting to the 16-inch main on Kuhio Avenue is required. Submit construction plans for review and approval.**

APPROVAL DATE: **05/18/2016**

EXPIRATION DATE: **05/18/2018**

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.*

REVIEWED BY: ***Keith Miyashiro***

Site Development Division, Wastewater Branch

ExternalID: **055304193-001** JobId: **55304193**

Initial Print Date: Wednesday May 18, 2016 2:08 pm

DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET * HONOLULU, HAWAII 96813
Phone: (808) 768-8209 * Fax: (808) 768-4210

SEWER CONNECTION APPLICATION

APPLICATION NO.: **2016/SCA-1443** STATUS: **Approved with conditions**

DATE RECEIVED: **09/20/2016** IWDP APP. NO.:

PROJECT NAME: **2016/SCA-1443 King Kalakaua Plaza: Hotel and Retail Conversion**

LOCATION:

Zone	Section	Plat	Parcel		
2	6	016	023	2080 KALAKAUA AVE Honolulu / W	38,861 Sq. Ft.
2	6	016	026	2080 KALAKAUA AVE Honolulu / W	6,711 Sq. Ft.

SPECIFIC LOCATION: **2080 Kalakaua Avenue**

APPLICANT: **Austin, Tsutsumi & Associates**
ATTN. Donohue Fujii
501 Sumner Street
Honolulu, HI 96817

DEVELOPMENT TYPE: **Hotel** SEWER CONNECTION WORK DESIRED:

OTHER USES: **230 rooms**
Retail, 15,000 SF

NON-RESIDENTIAL AREA: s.f. APPROXIMATE DATE OF CONNECTION: **03/01/2019**

PROPOSED UNITS	EXISTING UNITS	UNITS TO BE DEMOLISHED
No. of New Units: **0**	No. of Existing Units: **0**	No. of Units to be Demolished: **0**
Studios:	Studios:	Studios:
1-Bedroom:	1-Bedroom:	1-Bedroom:
2-Bedroom:	2-Bedroom:	2-Bedroom:
3-Bedroom:	3-Bedroom:	3-Bedroom:
4-Bedroom:	4-Bedroom:	4-Bedroom:
5-Bedroom:	5-Bedroom:	5-Bedroom:
6-Bedroom:	6-Bedroom:	6-Bedroom:

REMARKS **Application supersedes 2015/SCA-0496. A new sewer lateral connecting to the 16-inch main on Kuhio Avenue is required. Submit construction plans for review and approval.**

APPROVAL DATE: **09/27/2016**

EXPIRATION DATE: **09/27/2018**

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.*

REVIEWED BY: ***Keith Miyashiro***

Site Development Division, Wastewater Branch

ExternalID: **058533829-001** JobId: **58533829**

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843
www.boardofwatersupply.com

KIRK CALDWELL, MAYOR

DUANE R. MIYASHIRO, Chair
ADAM C. WONG, Vice Chair
DAVID C. HULIHEE
KAPUA SPROAT
BRYAN P. ANDAYA

ROSS S. SASAMURA, Ex-Officio
FORD N. FUCHIGAMI, Ex-Officio

ERNEST Y. W. LAU, P.E.
Manager and Chief Engineer

ELLEN E. KITAMURA, P.E.
Deputy Manager and Chief Engineer

September 2, 2016

RECEIVED
SEP 08 2016
AUSTIN, TSUTSUMI & ASSOCIATES, INC.
Honolulu, Hawaii 96817-5031

Mr. Kimo Unten, P.E.
Austin, Tsutsumi & Associates, Inc.
501 Sumner Street, Suite 521
Honolulu, Hawaii 96817

Dear Mr. Unten:

Subject: Your Letter Dated August 26, 2016 Requesting Water Availability and Fire Flow and Pressure Data for the Proposed King Kalakaua Plaza Redevelopment Project on 2080 Kalakaua Avenue – Tax Map Key: 2-6-016: 023 and 026

Thank you for your letter regarding the proposed redevelopment of King Kalakaua Plaza into a seven-story hotel with retail space.

The existing water system is adequate to provide domestic and off-site fire protection to the proposed development. However, please be advised that this information is based upon current data, and therefore, the Board of Water Supply (BWS) reserves the right to change any position or information stated herein up until the final approval of the building permit application. The final decision on the availability of water will be confirmed when the building permit application is submitted for approval.

The construction drawings should be submitted for our review and the construction schedule should be coordinated to minimize impact to 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.

Water conservation measures are recommended for all proposed developments. These measures include low flow plumbing fixtures, utilization of non-potable water for irrigation using rain catchment and chiller/air handler condensate, cooling tower conductivity meters and water softening recycling systems, drought tolerant plants, xeriscape landscaping, efficient irrigation systems and the use of Water Sense labeled ultra-low-flow water fixtures and toilets.

High-rise buildings with booster pumps will be required to install water hammer arrestors or expansion tanks to reduce pressure spikes and potential main breaks in our water system.

The BWS suspended fire flow tests on fire hydrants as a water conservation measure. However, you may use the following calculated flow data for Fire Hydrant No. M01057 and M03985:

Fire Hydrant Number	Location	Static Pressure (psi)	Residual Pressure (psi)	Flow (gpm)
M01057	Kalakaua Avenue	76	30	4000
M03985	Kalaimoku Street	76	61	4000

The data are based on the existing water system, and the static pressure represents the theoretical pressure at the point of calculation with the reservoir full and no demands on the water system. The static pressure is not indicative of the actual pressure in the field. Therefore, in order to determine the flows that are available to the site, you will have to determine the actual field pressure by taking on-site pressure readings at various times of the day and correlating that field data with the above hydraulic design data.

The map showing the location of the fire hydrant is attached.

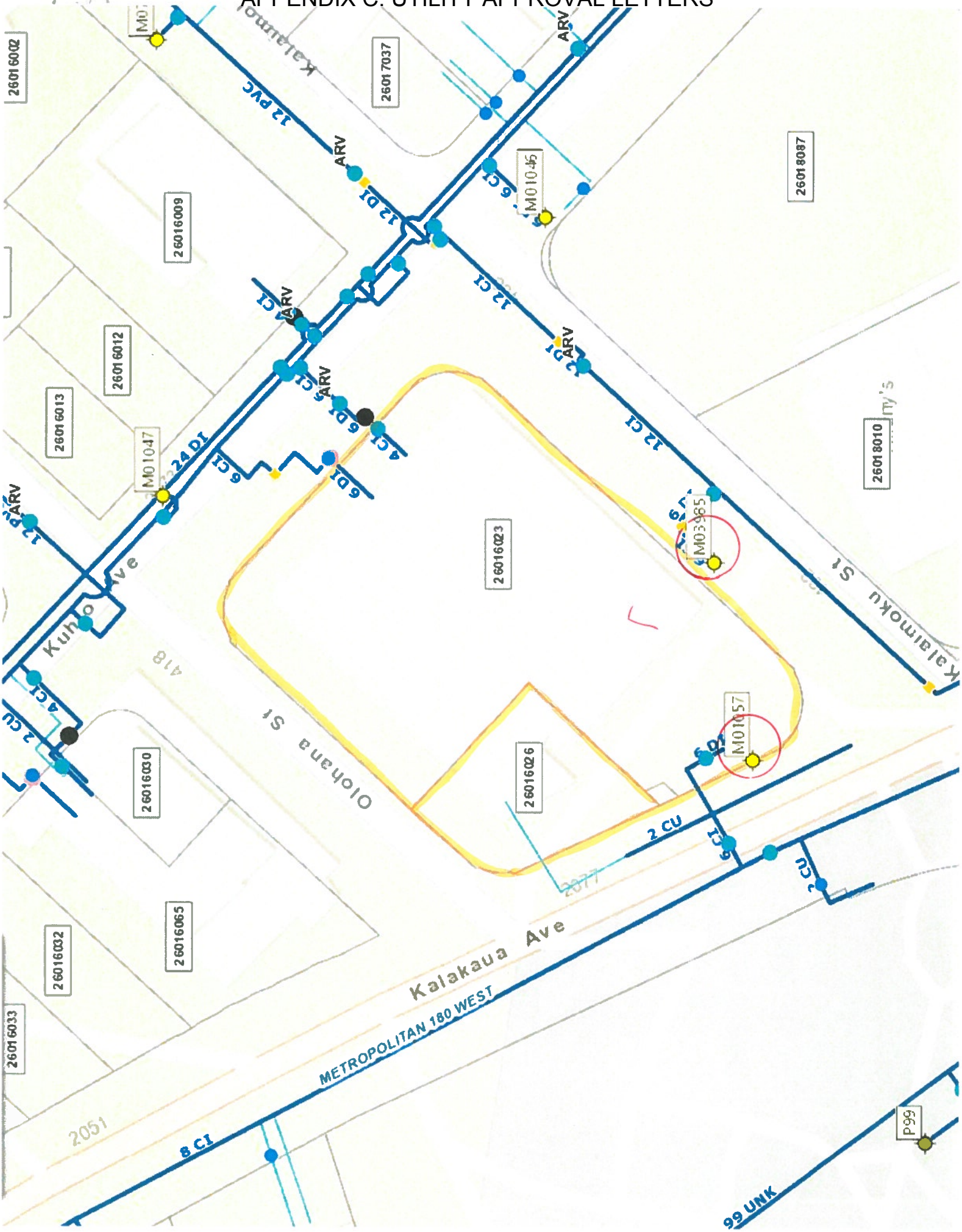
If you have any questions, please contact Robert Chun, Project Review Branch of our Water Resources Division at 748-5443.

Very truly yours,

for ERNEST Y. W. LAU, P.E.
Manager and Chief Engineer

Attachment

APPENDIX C: UTILITY APPROVAL LETTERS



APPENDIX E:
ARBORIST'S REPORT

Steve Nimz and Associates Inc.
Consulting Arborist Services
PO BOX 10026 Honolulu, Hawaii 96816
Office # (808) 734-5963
Email: Steve@stevenimz.com

September 28, 2016

Tom Schnell
PBR Hawaii
1001 Bishop Street # 650
Honolulu, Hawaii 96813

Re: King Kalakaua Plaza Tree Assessment

Dear Mr. Schnell:

The following Tree Assessment Report and Inventory was requested by PBR Hawaii regarding tree and palm vegetation around the perimeter of the King Kalakaua Plaza in Waikiki. The complex incorporated one block boarded by Kalakaua Avenue Kalanimoku Street, Kuhio Avenue and Olohana Street. The assessment included plaza major planting and City and County of Honolulu street tree plantings located outside the boundary line on the site map.

Eighty-six (86) trees and palms were inventoried and assessed. The existing planting scheme creates a thick border of tree vegetation around the building perimeter.

The trees and palms are numbered on the site map with 1-57 within the property boundaries and 58-86 on the public right-of-way. The detailed spreadsheet corresponds to the site map numbers providing:

- Tree number
- Species
- Tree attributes (diameter, height, crown spread)
- Condition rating (Health, structure)
- Mitigation (Preserve, prune, remove, transplant)
- Comments

There are twelve (12) Singapore Plumeria trees in circular planters on Kalaimoku Street and Olohana Street, of those seven (7) are candidates for transplant (see spreadsheet).

The Shower tree plantings on Kalakaua Avenue and Kuhio Avenue are planted close together creating a thick screen for the building. Selective removal along with crown thinning and raising would provide an open appearance.

The large Monkeypod in the raised planter circle and walkway on Kalakaua Avenue was cut back severely during transplant. Many of the branches are decayed with poor branch connections. The tree is large in a confined area growing into the building and adjacent Shower trees. Sections of concrete are uplifting.

The majority of the Coconut palms are not good transplant candidates based on heights, curved trunks, hourglassing, penciling upper trunks. The palms should be preserved or selectively removed based on landscape design.

If you have any questions, please contact my office at 808-734-5963.

Respectfully yours,

Steve Nimz,
ASCA Consulting Arborist

ISA Certified Arborist # WE- 0314AM
ISA PNW Certified Tree Risk Assessor # 419

King Kalakaua Plaza

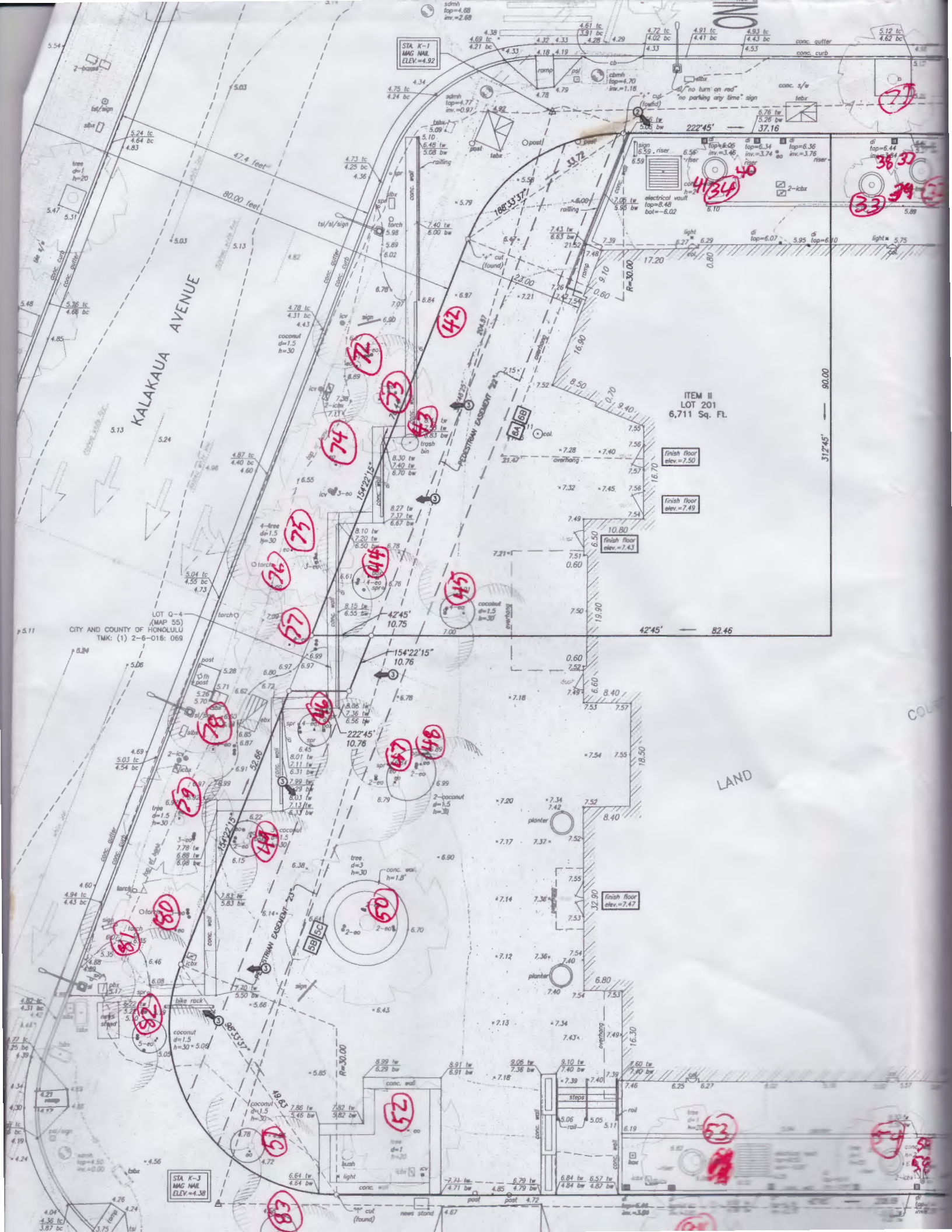
Tree #	Species	Diameter (inches)	Height (feet)	Crown Spead (feet)	Health Condition	Structural Condition	Preserve, Remove, Transplant	Comments
1	Coconut palm		35		Good	Good	pr, tp	
2	Coconut palm		40		Good	Good	pr, re	
3	Coconut palm		25		Good	Fair	pr, re	Curved, hourglass trunk
4	Coconut palm		25		Good	Good	pr, re	Hourglass trunk
5	Coconut palm		25		Good	Fair	pr, re	Curved, hourglass trunk
6	Coconut palm		25		Good	Fair	pr, re	Curved, hourglass trunk
7	Shower	18	35	30	Good	Good	pr, tp	
8	Coconut palm		60		Good	Good	pr, re	
9	Coconut palm		50		Good	Good	pr, re	
10	Coconut palm		50		Good	Good	pr, re	
11	Shower	16	30	20	Good	Good	pr, tp	
12	Shower	16	30	25	Good	Good	pr, tp	Asymetric
13-22	(10) Phoenix Palm		5		Fair	Fair		
23	Shower	14	30	30	Good	Good	pr, tp	
24	Shower	14	35	30	Good	Good	pr, tp	
25	Singapore Plumeria	20	25	30	Good	Good	pr, re	Multi-trunk (3)
26-28	Phoenix Palm		5		Fair	Fair		
29	Singapore Plumeria	12	20	30	Good	Good	pr, tp	In container
30	Singapore Plumeria	14	20	30	Good	Good	pr, tp	In container
31	Singapore Plumeria	12	20	20	Good	Fair	pr, re	In container, double trunk
32	Singapore Plumeria	12	20	20	Good	Good	pr, re	In container, large lower wound
33	Singapore Plumeria	16	15	20	Good	Good	pr, tp	In container, double trunk
34	Singapore Plumeria	16	15	20	Good	Good	pr, tp	In container
35-41	Phoenix Palm		4-6		Fair	Fair		
42	Coconut palm		45		Good	Fair	pr, re	Penciling upper trunk

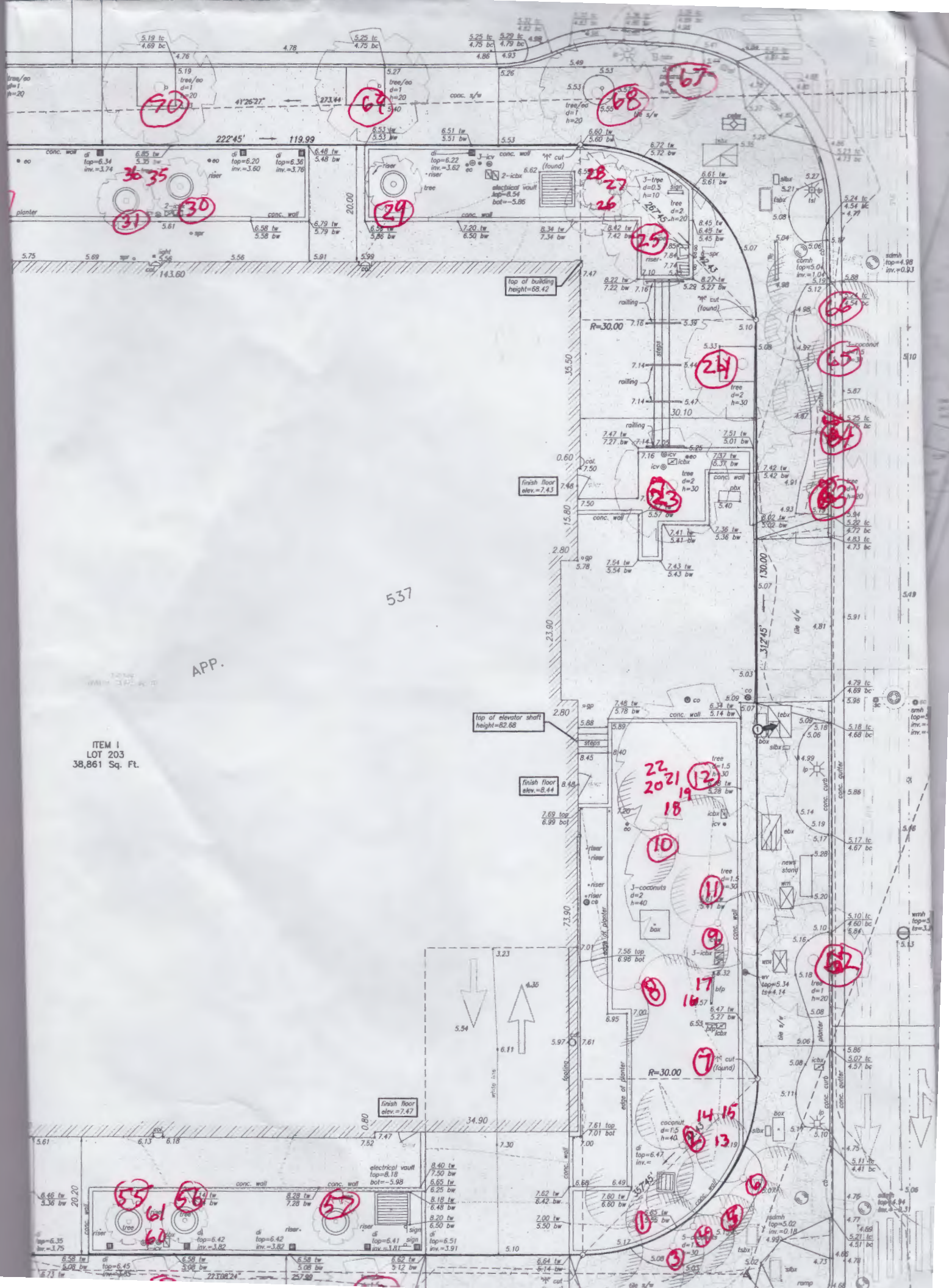
King Kalakaua Plaza

Tree #	Species	Diameter (inches)	Height (feet)	Crown Spead (feet)	Health Condition	Structural Condition	Preserve, Remove, Transplant	Comments
43	Coconut palm		45		Good	Fair	pr, re	Hourglassing upper trunk
44	Coconut palm		40		Good	Fair	pr, re	Penciling upper trunk
45	Coconut palm		45		Good	Fair	pr, re	Penciling upper trunk
46	Coconut palm		40		Good	Fair	pr, re	Penciling upper trunk
47	Coconut palm		45		Good	Fair	pr, re	Penciling upper trunk
48	Coconut palm		40		Good	Fair	pr, re	Penciling upper trunk
49	Coconut palm		45		Good	Fair	pr, re	Penciling upper trunk
50	Monkeypod	36	50	50	Good	Fair	re	Severely stump packed in raised planter
51	Coconut palm		45		Good	Fair	pr, re	Penciling upper trunk
52	Shower	12	20	20	Good	Good	Pr, tp	
53	Singapore Plumeria	18	20	30	Good	Fair	pr, re	In planter, asymetric
54	Singapore Plumeria	14	20	20	Good	Good	pr, tp	In planter, asymetric
55	Singapore Plumeria	15	15	20	Fair	Fair	pr, re	In planter, 3-trunks
56	Singapore Plumeria	14	15	20	Good	Fair	pr, tp	In planter, 2-trunks
57	Singapore Plumeria	10	15	20	Good	Good	pr, tp	In planter
58-61	(4) Phoenix palms		5		Fair	Fair		
62	Shower	8	15	10	Good	Good	pr, tp	
63	Shower	10	20	15	Good	Good	pr, tp	
64	Coconut palm		20		Good	Good	pr, re	Curved trunk, narrow planter
65	Coconut palm		25		Good	Good	pr, re	Narrow planter
66	Coconut palm		25		Good	Good	pr, re	Narrow planter

King Kalakaua Plaza

Tree #	Species	Diameter (inches)	Height (feet)	Crown Spead (feet)	Health Condition	Structural Condition	Preserve, Remove, Transplant	Comments
67	Coconut palm		25		Good	Good	pr, re	Narrow planter strip
68	Shower	12	25	20	Good	Good	pr, tp	
69	Shower	14	25	25	Good	Fair	pr, re	Large trunk wound
70	Shower	12	25	25	Good	Good	pr, tp	
71	Shower	14	30	25	Good	Good	pr, tp	
72	Coconut palm		45		Good	Good	pr, re	
73	Shower	18	35	30	Fair	Fair	pr, re	
74	Shower	16	25	20	Fair	Fair	pr, re	
75	Shower	14	25	30	Fair	Good	pr, re	
76	Coconut palm		50		Good	Good	pr, re	
77	Shower	18	30	20	Good	Good	pr, tp	
78	Coconut palm		40		Good	Good	pr, re	
79	Shower	16	35	30	Good	Good	pr, tp	
80	Shower	18	35	30	Good	Good	pr, tp	
81	Coconut palm		40		Good	Fair	pr, re	Penciling
82	Coconut palm		40		Good	Fair	pr, re	Penciling
83	Coconut palm		40		Good	Fair	pr, re	Penciling
84	Shower	18	35	30	Good	Good	pr, tp	
85	Shower	18	35	30	Good	Good	pr, tp	
86	Shower	16	35	30	Good	Good	pr, tp	


KALAKAUA AVENUE
ITEM II
LOT 201
6,711 Sq. Ft.
LOT Q-4
(MAP 55)
CITY AND COUNTY OF HONOLULU
TMK: (1) 2-6-016: 069
STA. K-1
MAG NAIL
ELEV.=4.92
STA. K-3
MAG NAIL
ELEV.=4.38
PEDESTRIAN EASEMENT 22'
PEDESTRIAN EASEMENT 23'
47.4 feet
80.00 feet
222°45'
37.16
42°45'
82.46
312°45'
90.00
17.20
23.00
10.75
10.76
154°22'15"
188°33'37"
R=30.00
finish floor elev.=7.50
finish floor elev.=7.49
finish floor elev.=7.43
finish floor elev.=7.47
electrical vault
news stand
bike rack
trash bin
LAND


537
APP.
ITEM I
LOT 203
38,861 Sq. Ft.
top of building height=88.42
top of elevator shaft height=82.68
finish floor elev.=7.43
finish floor elev.=8.44
finish floor elev.=7.47
R=30.00
222'45'
119.99
41°26'27"
273.44
312'45'
130.00
143.60
35.50
30.10
20.00
15.80
23.90
73.90
34.90
20.20
conc. wall
conc. s/w
conc. curb
conc. gutter
planter
edge of planter
electrical vault top=8.18 bot=-5.98
electrical vault top=8.54 bot=-5.86
ramp

Should you have any further questions on this matter, please contact Joette Yago of our Urban Design Branch, at 768-8034 or jyago@honolulu.gov.

Very truly yours,

FOR Kathy K. Sokugawa
Acting Director

Enclosure: Final EA
Publication Form
Disc of Final EA and Publication Form

APPLICANT
PUBLICATION FORM

Project Name:	King Kalākaua Plaza Renovation
Project Short Name:	King Kalākaua Plaza Renovation
HRS §343-5 Trigger(s):	§343-5(a)(5): Proposed use within Waikīkī Special District
Island(s):	O'ahu
Judicial District(s):	Honolulu
TMK(s):	2-6-016:023 and 2-6-016:026
Permit(s)/Approval(s):	Special District Permit (Major) Building Permit Sewer Connection Application Trenching Permit Grading Permit (if necessary) Street Usage Permit Modification to existing Joint Development Agreement (if necessary) Modification to existing Surface Encroachment Variance (if necessary)
Approving Agency:	City and County of Honolulu – Department of Planning and Permitting
Contact Name, Email, Telephone, Address	Joette Yago, Urban Design Branch 650 S. King Street, 7th Floor Honolulu, HI 96813 Phone: (808) 768-8020 Email: jyago@honolulu.gov.
Applicant:	Kalaimoku-Kuhio Development Corp.
Contact Name, Email, Telephone, Address	John M. Manavian 120 N. Robertson Boulevard Los Angeles, CA 90048 Phone: (310) 855-8484 Fax: (310) 652-8538 Email: tschnell@pbrhawaii.com
Consultant:	PBR HAWAII & Associates, Inc.
Contact Name, Email, Telephone, Address	Tom Schnell, Principal 1001 Bishop Street, Suite 650 Honolulu, HI 96813 Phone: (808) 521-5631 Fax: (808) 523-1402 Email: tschnell@pbrhawaii.com

Status (select one)	**Submittal Requirements**
____DEA-AFNSI	Submit 1) the approving agency notice of determination/transmittal letter on agency letterhead, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the DEA, and 4) a searchable PDF of the DEA; a 30-day comment period follows from the date of publication in the Notice.
_X_ FEA-FONSI	Submit 1) the approving agency notice of determination/transmittal letter on agency letterhead, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the FEA, and 4) a searchable PDF of the FEA; no comment period follows from publication in the Notice.
____ FEA-EISPN	Submit 1) the approving agency notice of determination/transmittal letter on agency letterhead, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the FEA, and 4) a searchable PDF of the FEA; a 30-day comment period follows from the date of publication in the Notice.
____ Act 172-12 EISPN ("Direct to EIS")	Submit 1) the approving agency notice of determination letter on agency letterhead and 2) this completed OEQC publication form as a Word file; no EA is required and a 30-day comment period follows from the date of publication in the Notice.
____ DEIS	Submit 1) a transmittal letter to the OEQC and to the approving agency, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the DEIS, 4) a searchable PDF of the DEIS, and 5) a

	searchable PDF of the distribution list; a 45-day comment period follows from the date of publication in the Notice.
____ FEIS	Submit 1) a transmittal letter to the OEQC and to the approving agency, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the FEIS, 4) a searchable PDF of the FEIS, and 5) a searchable PDF of the distribution list; no comment period follows from publication in the Notice.
____ FEIS Acceptance Determination	The approving agency simultaneously transmits to both the OEQC and the applicant a letter of its determination of acceptance or nonacceptance (pursuant to Section 11-200-23, HAR) of the FEIS; no comment period ensues upon publication in the Notice.
____ FEIS Statutory Acceptance	The approving agency simultaneously transmits to both the OEQC and the applicant a notice that it did not make a timely determination on the acceptance or nonacceptance of the applicant's FEIS under Section 343-5(c), HRS, and therefore the applicant's FEIS is deemed accepted as a matter of law.
____ Supplemental EIS Determination	The approving agency simultaneously transmits its notice to both the applicant and the OEQC that it has reviewed (pursuant to Section 11-200-27, HAR) the previously accepted FEIS and determines that a supplemental EIS is or is not required; no EA is required and no comment period ensues upon publication in the Notice.
____ Withdrawal	Identify the specific document(s) to withdraw and explain in the project summary section.
____ Other	Contact the OEQC if your action is not one of the above items.

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

KKDC intends to renovate and repurpose King Kalākaua Plaza for hotel use, with hotel-related retail uses on the ground floor. The renovation includes: 1) replacing the above-ground portion of the existing building with a new structure having substantially the same footprint as the existing building, a total of seven floors, and a height of approximately 85 – 100 feet; 2) a new porte-cochere; and 3) landscaping improvements. The underground portion of the existing, containing, two existing underground parking floors will be retained.

To determine whether renovating and repurposing the property for hotel use may significantly impact the physical and human environment, all phases and expected consequences of the proposed project have been evaluated, including potential primary, secondary, short-range, long-range, and cumulative impacts.

The renovations represent an investment in the long-term well-being of the surrounding community, and ensure that the building is a sustainable improvement to Waikīkī. King Kalākaua Plaza will make its most significant contribution to a sustainable development by retaining the: 1) two existing underground parking floors of the building; and 2) the loading zone portion of the structure along Kūhiō Avenue. This provides a substantially reduced environmental impact compared to the complete demolition of the existing structure.