DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU
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MAYOR

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DIRECTOR

ARTHUR D. CHALLACOMBE
DEPUTY DIRECTOR

2014/ED-2(MS)

May 13, 2014

Ms. Jessica Wooley
Office of Environmental Quality Control
Department of Health, State of Hawaii
235 South Beretania Street, Room 702
Honolulu, Hawaii 96813

FILE COPY

MAY 23 2014

'14 MAY 13 P12:32

Dear Ms. Wooley:

SUBJECT:	Chapter 343. Hawaii Revised Statutes Draft Environmental Assessment
Project:	Waikiki Parc Hotel Renovation
Applicant:	Halekulani Corporation
Agent:	Kusao & Kurahashi, Inc.
Location:	2233 Helemoa Road – Waikiki
Tax Map Key:	2-6-2: 11, 12, and 13
Proposal:	The renovation of the existing 22-story, 236.5-foot high hotel. The proposed work will include providing new streetscape enhancements, renovating the ground floor lobby, restrooms, back-of-house facilities, 8th floor pool deck and pool area, and 8th floor outdoor gathering area, consolidating existing 297 rooms into 126 one-bedroom and two-bedroom hotel units, providing new roof top open-air terrace and extending an elevator and stairs to roof top, providing facade improvements to the face of the parking garage and enhancing existing architectural treatments, and replacing exterior glazing of building facade and changing out all hand rails and guard rails.

We respectfully request publication of the project summary of the Draft Environmental Assessment (DEA) in the next edition of The Environmental Notice on **May 23, 2014**. Enclosed are two hard copies and one electronic copy of the DEA and the Publication Form. The Publication Form, including project summary, was also sent via electronic mail to your office.

Should you have any questions, please contact Malynne Simeon at 768-8023 or via email at msimeon@honolulu.gov.

Very truly yours,

for George I. Atta, FAICP
Director

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

APPLICANT ACTIONS
SECTION 343-5(C), HRS
PUBLICATION FORM (JANUARY 2013 REVISION)

Project Name **Waikiki Parc Hotel Renovation Project**
Island: Oahu
District: Waikiki
TMK: 2-6-2: 11, 12, and 13
Permits: Special Management Area Use Permit, Variance, Waikiki Special District Permit, Zoning Adjustment for a Sign Master Plan, and Building Permit

Approving Agency:
Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 7th Floor
Honolulu, Hawaii 96813
Malynne Simeon
Phone (808) 768-8023

Applicant:
Halekulani Corporation
2222 Kalakaua Avenue, Suite 900
Honolulu, Hawaii 96815
Peter Shaindlin
Chief Operating Officer
Phone (808) 526-1186

Consultant:
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawaii 96822
Keith Kurahashi
Phone (808) 988-2231

'14 MAY 13 P12:30

Status (check one only):

_X_DEA-AFNSI — Submit the approving agency notice of determination/transmittal on agency letterhead, a hard copy of DEA, a completed OEQC publication form, along with an electronic word processing summary and a PDF copy (you may send both summary and PDF to oeqchawaii@doh.hawaii.gov; a 30-day comment period ensues upon publication in the periodic bulletin.

__FEA-FONSI — Submit the approving agency notice of determination/transmittal on agency letterhead, a hard copy of the FEA, an OEQC publication form, along with an electronic word processing summary and a PDF copy (send both summary and PDF to oeqchawaii@doh.hawaii.gov; no comment period ensues upon publication in the periodic bulletin.

__FEA-EISPN — Submit the approving agency notice of determination/transmittal on agency letterhead, a hard copy of the FEA, an OEQC publication form, along with an electronic word processing summary and PDF copy (you may send both summary and PDF to oeqchawaii@doh.hawaii.gov; a 30-day consultation period ensues upon publication in the periodic bulletin.

__Act 172-12 EISPN — Submit the approving agency notice of determination on agency letterhead, an OEQC publication form, and an electronic word processing summary (you may send the summary to oeqchawaii@doh.hawaii.gov. NO environmental assessment is required and a 30-day consultation period upon publication in the periodic bulletin.

__DEIS — The applicant simultaneously transmits to both the OEQC and the approving agency, a hard copy of the DEIS, a completed OEQC publication form, a distribution list, along with an electronic word processing summary and PDF copy of the DEIS (you may send both the summary and PDF to oeqc@doh.hawaii.gov); a 45-day comment period ensues upon publication in the periodic bulletin.

__FEIS — The applicant simultaneously transmits to both the OEQC and the approving agency, a hard copy of the FEIS, a completed OEQC publication form, a distribution list, along with an electronic word processing summary and PDF copy of the FEIS (you may send both the summary and PDF to oeqc@doh.hawaii.gov); no comment period ensues upon publication in the periodic bulletin.

__ Section 11-200-23 Determination — The approving agency simultaneous transmits its determination of acceptance or nonacceptance (pursuant to Section 11-200-23, HAR) of the FEIS to both OEQC and the applicant. No comment period ensues upon publication in the periodic bulletin.

__Statutory hammer Acceptance — The approving agency simultaneously transmits its notice to both the applicant and the OEQC that it failed to timely make a determination on the acceptance or nonacceptance of the applicant's FEIS under Section 343-5(c), HRS, and that the applicant's FEIS is deemed accepted as a matter of law.

__Section 11-200-27 Determination

The approving agency simultaneously transmits its notice to both the applicant and the OEQC that it has reviewed (pursuant to Section 11-200-27, HAR) the previously accepted FEIS and determines that a supplemental EIS is not required. No EA is required and no comment period ensues upon publication in the periodic bulletin.

__Withdrawal (explain)

Summary:

Provide streetscape enhancements, including landscaping, special roadway paving, and improvements at pedestrian hotel entrances, drop off along Kalia Road and porte cochere on Helumoa Road; renovate ground floor lobby, restrooms, and back-of-house facilities; renovate the 8th floor pool deck including existing pool, new pool, landscaped wind screen, furniture, and existing pool bar; renovate 8th floor by removing guest rooms and providing new kitchen, dining room, fitness center, and hospitality room; renovate 8th floor outdoor gathering area with landscaped wind screens, retractable roof awning, and create a garden with furniture; consolidate existing 297 rooms into all one-bedroom and two-bedroom rooms (reducing unit count to 126 rooms); provide new roof top open-air terrace and extend one elevator and stairs to roof top; provide façade improvements to the face of the parking garage and enhance existing architectural treatment such as post and beam articulation, trellises and canopy extensions; and replace exterior glazing of building façade and change out all hand rails and guard rails. The reduction in units will result in a reduction on infrastructure requirements and traffic. Variances will allow an awning to encroach into the front yard and street setback on Kalia Road and landscape improvements in City right-of-way.

DRAFT ENVIRONMENTAL ASSESSMENT
WAIKIKI PARC HOTEL RENOVATION PROJECT
WAIKĪKĪ, HONOLULU, O'AHU, HAWAI`I

APPLICANT

HALEKULANI CORPORATION
2222 Kalakaua Avenue, Suite 900
Honolulu Hi 96815

AGENT

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

March 2014

DRAFT ENVIRONMENTAL ASSESSMENT
WAIKIKI PARC HOTEL RENOVATION PROJECT
WAIKĪKĪ, HONOLULU, O'AHU, HAWAI'I

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March 2014

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DRAFT ENVIRONMENTAL ASSESSMENT
WAIKIKI PARC HOTEL RENOVATION
WAIKĪKĪ, HONOLULU, O'AHU, HAWAI'I

1. GENERAL INFORMATION

A.	APPLICANT/LESSEE	Halekulani Corporation 2222 Kalakaua Avenue, Suite 900 Honolulu, Hawai'i 96815 Peter Shaindlin Chief Operating Officer (808) 526-1186
B.	OWNER	2-6-2: 11 Harry and Jeanette Weinberg Foundation Inc. 3660 Waialae Avenue, Suite 400 Honolulu, HI 96816-3260 Phone: 808-924-1000 Adele B. Brown Trust c/o Harry and Jeanette Weinberg Foundation Inc. 3660 Waialae Avenue, Suite 400 Honolulu, HI 96816-3260 Phone: 808-924-1000 2-6-2: 12 Carol K. Kohama Trust Melvyn R. Kohama Trust 1603 Citron Street Honolulu, HI 96826 Allan Murakami 1075 S. El Camino Viejo Road Queen Valley, AZ 85118 Arleen Murakami 1651 Hoolana Place Pearl City, HI 96782 Dr. Terri Tanaka 95-1105 Kualapa Street Mililani, HI 96789 Tod Teramoto c/o Dr. Terri Tanaka 95-1105 Kualapa Street Mililani, HI 96789

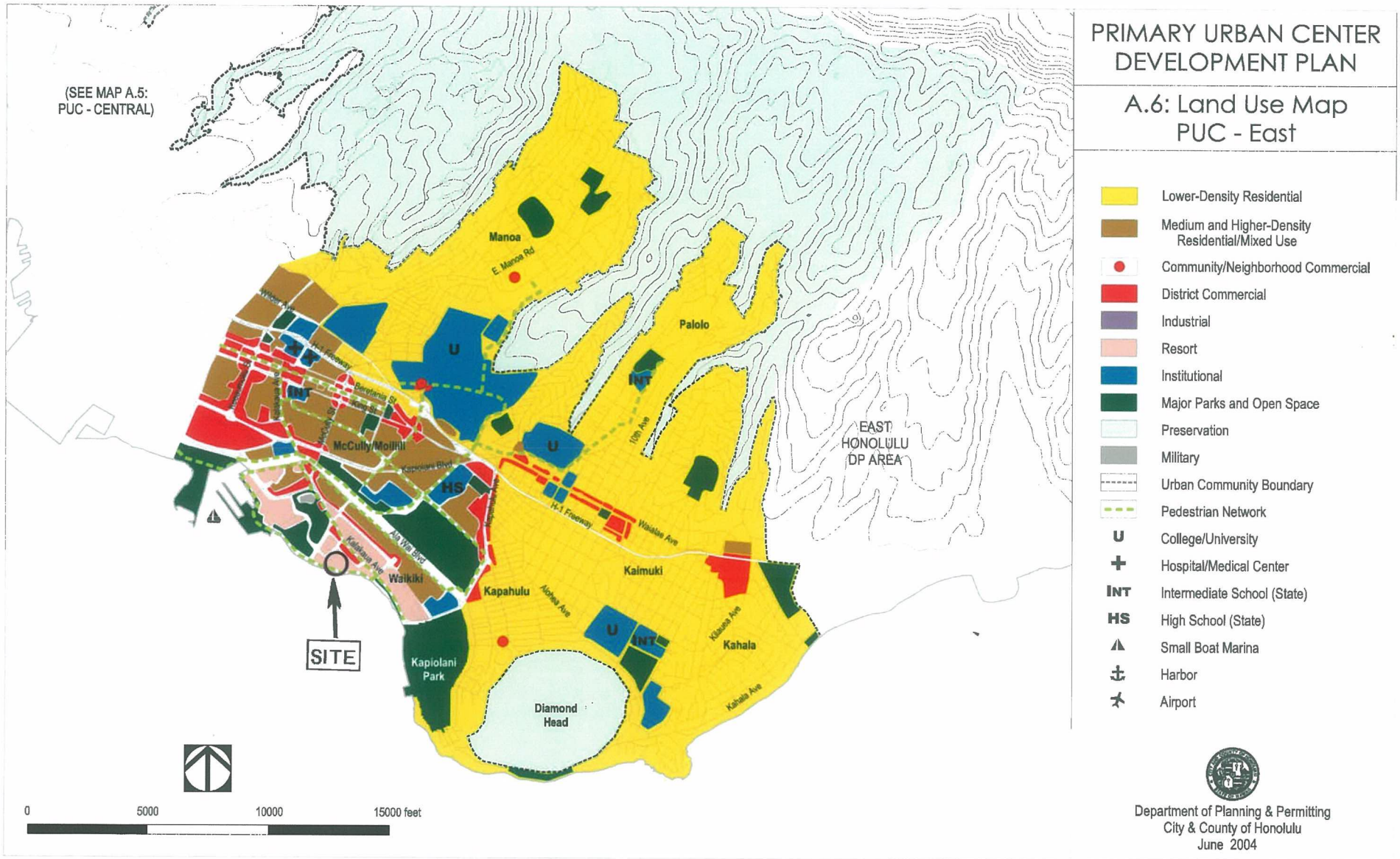
		2-6-2: 13 Helumoa Road LLC c/o Mr. Peter Nottage 44-001 Nohokai Place Kaneohe, HI 96744
C.	ACCEPTING AUTHORITY	Department of Planning & Permitting City and County of Honolulu 650 South King Street, 7th Floor Honolulu, Hawai'i 96813
D.	TAX MAP KEYS	2-6-2: 11, 12 and 13
E.	AGENT	Kusao & Kurahashi, Inc. Planning and Zoning Consultants 2752 Woodlawn Drive, Suite 5-217 Honolulu, Hawai'i 96822
F.	LOCATION	2233 Helumoa Road, Waikiki, Honolulu (Figure 1, Location and Zoning Map)
G.	LOT AREA	2-6-2: 11 21,818 square feet 2-6-2: 12 9,118 square feet 2-6-2: 13 17,475 square feet **Total 48,411 square feet**
H.	ZONING	Resort Mixed Use Precinct (Figure 1)
I.	STATE LAND USE	Urban
J.	DEVELOPMENT PLAN Land Use Map: Public Infrastructure Map:	 Resort (Figure 2) No improvements affecting the Project Site (Figure 3)
K.	SPECIAL DISTRICT	Waikiki Special District (Figure 4)
L.	EXISTING USE	Waikiki Parc Hotel
M.	AGENCIES CONSULTED PRIOR TO PREPARATION OF DRAFT ENVIRONMENTAL ASSESSMENT	City Councilmember Stanley Chang Department of Planning and Permitting Waikiki Improvement Association Waikiki Neighborhood Board Chair and Zoning Committee Chair

FIGURE 1 LOCATION AND ZONING MAP
FIGURE 2 DEVELOPMENT PLAN LAND USE MAP
FIGURE 3 PUBLIC INFRASTRUCTURE MAP
FIGURE 4 WAIKIKI SPECIAL DISTRICT MAP

WAIKIKI PARC HOTEL

FIGURE 1

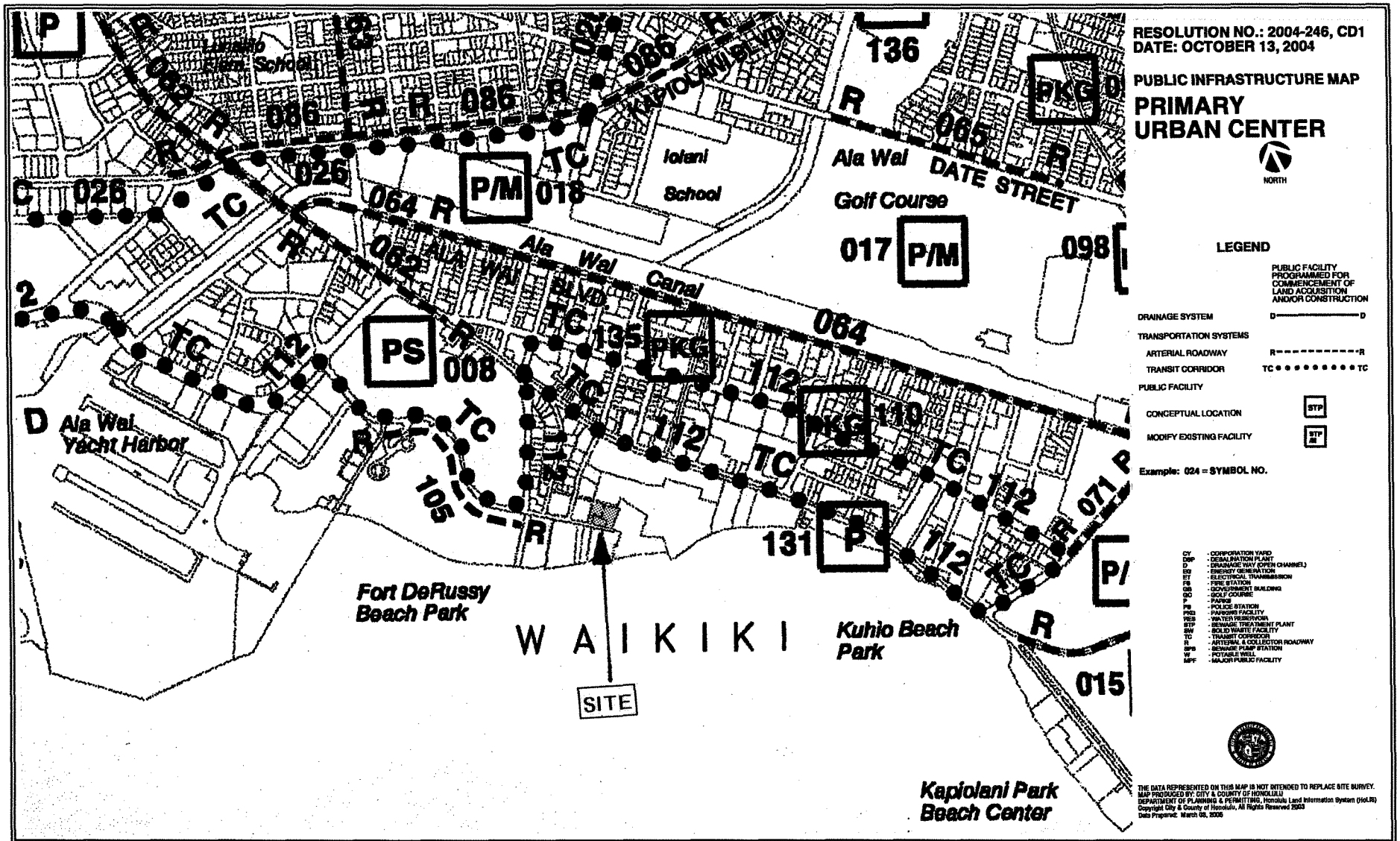
LOCATION/ZONING MAP



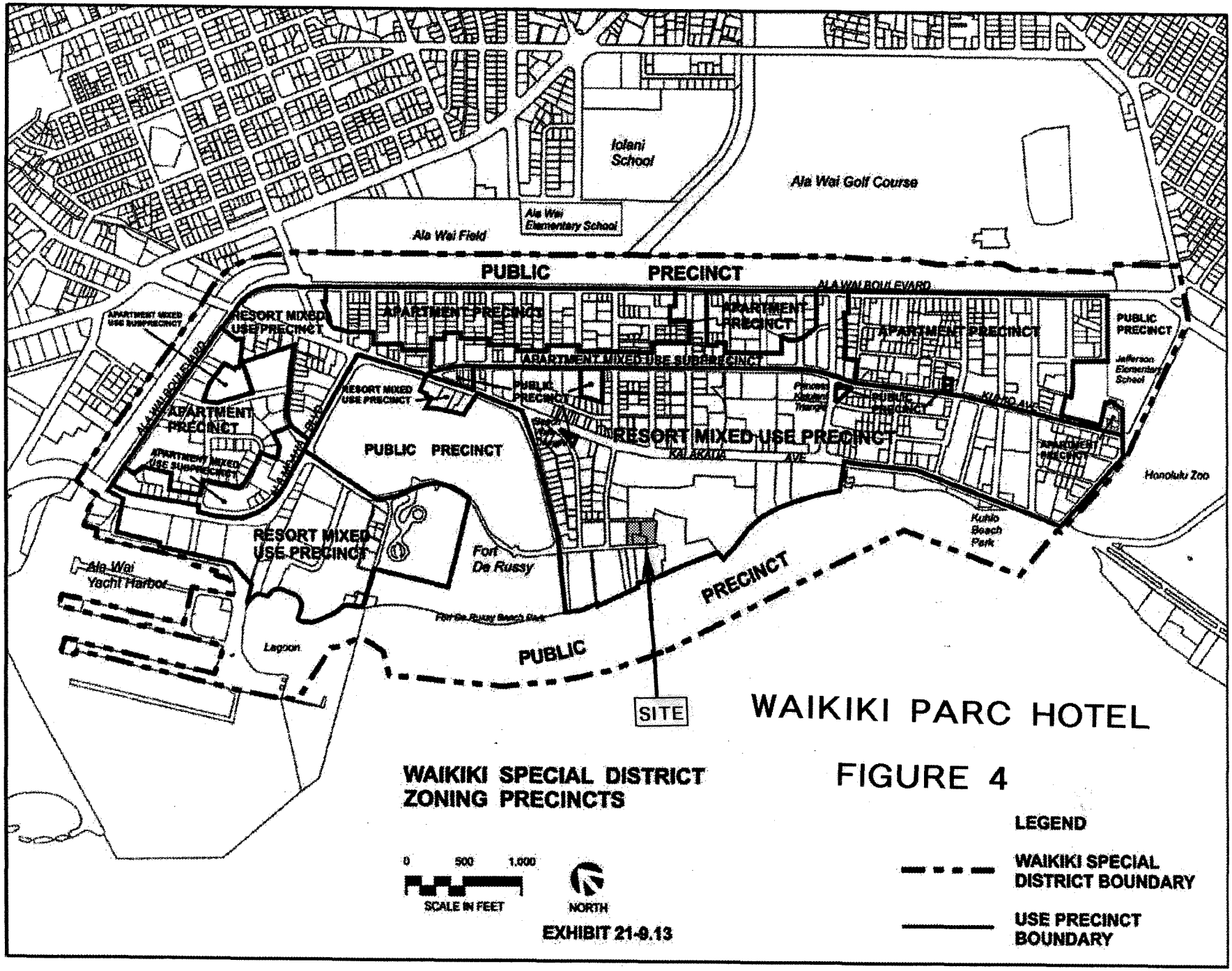
4

WAIKIKI PARC HOTEL

FIGURE 2



WAIKIKI PARC HOTEL **FIGURE 3**


Iolani School
Ala Wai Golf Course
Ala Wai Elementary School
Ala Wai Field
PUBLIC PRECINCT
ALA WAI BOULEVARD
APARTMENT MIXED USE SUBPRECINCT
RESORT MIXED USE PRECINCT
APARTMENT PRECINCT
APARTMENT PRECINCT
APARTMENT PRECINCT
PUBLIC PRECINCT
Jefferson Elementary School
APARTMENT MIXED USE SUBPRECINCT
RESORT MIXED USE PRECINCT
PUBLIC PRECINCT
PUBLIC PRECINCT
KUHIO AVE
APARTMENT PRECINCT
APARTMENT MIXED USE SUBPRECINCT
PUBLIC PRECINCT
RESORT MIXED USE PRECINCT
KALAKAUA AVE
Honolulu Zoo
RESORT MIXED USE PRECINCT
Fort De Russy
Kuhio Beach Park
Ala Wai Yacht Harbor
Fort De Russy Beach Park
Lagoon
PUBLIC PRECINCT
SITE
WAIKIKI PARC HOTEL
WAIKIKI SPECIAL DISTRICT ZONING PRECINCTS
FIGURE 4
0 500 1,000
SCALE IN FEET
NORTH
EXHIBIT 21-9.13
LEGEND
WAIKIKI SPECIAL DISTRICT BOUNDARY
USE PRECINCT BOUNDARY

2. PROJECT INFORMATION SUMMARY

The Applicant, Halekulani Corporation, proposes the Waikiki Parc Hotel Renovation Project in Waikīkī, Honolulu, on O`ahu (the "Project"). The Applicant plans to submit a Draft Environmental Assessment and Variance, Special Management Area Use Permit and Waikiki Special District Permit applications for the Waikiki Parc Hotel Renovations Project to the Department of Planning and Permitting for processing. The Project will be located on a 48,411 square foot site (Figure 1) in Waikīkī (the "Project Site") and will involve the renovation of the existing Waikiki Parc Hotel including the following:

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

The Waikiki Parc Hotel is a 22-story structure with a height of about 236.5 feet.

The Project involves a net increase in floor area of 2,562 square feet, including the new roof top open-air terrace, rooftop elevator, 8th floor canopy, and improvements at the new hotel entry on Kalia Road. A preliminary concept plan showing the proposed improvements is provided in **Appendix 1**.

The Project Site is bounded Kalia Road to the southwest, the Imperial Hotel to the northwest, Helumoa Road to the northeast, and the Sheraton Waikiki Development to the southeast. Across Helumoa Road is the Sheraton Waikiki parking garage.

This Draft Environmental Assessment ("DEA") for the Project is prepared pursuant to and in accordance with the requirements of Chapter 343, Hawaii Revised Statutes ("HRS"), Chapter

200 of Title 11, Hawaii Administrative Rules - Environmental Impact Statement Rules, and Chapter 25, Special Management Area (SMA), Revised Ordinances of Honolulu ("ROH"). The actions that trigger this DEA are the proposed development in the Waikiki Special District (the "WSD"), the potential use of City lands (improvement to sidewalk areas and infrastructure within the City right-of-ways), and development within the SMA.

2.1 THE PROJECT

The Project involves the renovation of the existing Waikiki Parc Hotel, which will feature the following:

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

The Waikiki Parc Hotel is a 22-story structure with a height of about 236.5 feet.

The Project involves a net increase in floor area of 2,562 square feet, including the new open-air terrace, rooftop elevator, 8th floor canopy, and improvements at the new hotel entry on Kalia Road.

2.2 PUBLIC BENEFITS

The Project will provide multiple public benefits including:

- Improvements to Kalia Road.

- Renovate the existing hotel and conversion of existing hotel rooms into all 1- and 2-bedroom hotel rooms.
- Reduction in impacts to traffic and infrastructure, with the reduction in the number of hotel rooms.
- An economic and job-creating stimulus for the local economy, during the construction period.
- An increase in property values for the City and County of Honolulu (the "City") resulting in increased property taxes and hotel room tax and generates additional tax revenue to the State in terms of collections from General Excise Taxes ("GET") and hotel room tax.

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

The Project will comply with the WSD design guidelines providing building elements that will convey a Hawaiian sense of place.

The Project is intended to become an improved important hotel destination located in Waikīkī which meets the demands of today's urban resort destination visitor.

2.3 POTENTIAL ADVERSE IMPACTS

Potential adverse impacts include the following:

2.3.1 Temporary Loss of Hotel on the Project Site

The temporary loss of hotel associated jobs at the Waikiki Parc Hotel and the loss of GET and hotel room tax revenue during the construction period. There is a potential loss of jobs should the restaurant tenant choose to close during construction.

2.3.2 Construction Impacts

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

2.4 MITIGATION MEASURES

2.4.1 Job Replacement

The jobs temporarily lost, due to construction and renovation, are expected to be replaced with a similar number of jobs at completion of construction and employees who lost their hotel associated jobs as of the start date of the

renovations will be invited back to work in the same or similar positions. In the meantime, the employees at the hotel will continue to be informed of the progress and timing of the renovation.

2.4.2 Increased Tax Revenues

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

2.4.3 Tenant Information and Notice

The restaurant tenant has been informed and updated as renovation plans continue, and their lease and license agreement specifically acknowledge the potential for renovation.

2.4.4. Construction Practices

2.4.4.1 Noise

Y. Ebisu & Associates has prepared the "Acoustic Study for the Waikiki Parc Hotel Renovation, Waikiki, Oahu, Hawaii" ("Acoustic Study") dated December 2013. The study in its entirety is provided in **Appendix 2**.

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

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

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

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

2.4.4.2 Air Quality

Being primarily a renovation project, construction impacts are expected to be minimal, as the only ground disturbance is expected to be in the resurfacing of Kalia Road. Dust will be controlled during the resurfacing of Kalia Road by watering open areas at least twice daily.

2.4.4.3 Traffic

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

2.4.5 Traffic Improvements

Although traffic operations (level of service) with the Project in 2017 are expected to remain similar to conditions without the Project in 2017, traffic mitigation measures are planned to improve traffic circulation in the immediate surrounding area. The "Traffic Impact Report Waikiki Parc Hotel Renovation" ("Traffic Impact Report") dated November 2013 was prepared by Wilson Okamoto Corporation and is provided in **Appendix 3**. The report recommends the following traffic mitigation measures:

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

1. *Maintain sufficient sight distance for motorists to safely enter and exit all project driveways.*
2. *Maintain adequate on-site loading and off-loading service areas and limit off-site loading operations.*
3. *Maintain adequate turn-around area for service, delivery, and refuse collection vehicles to maneuver on the project site to minimize vehicle-reversing maneuvers onto public roadways.*
4. *Maintain sufficient turning radii at all project driveways to avoid or minimize vehicle encroachments to oncoming traffic lanes.*
5. *Consider providing signage along Kalia Road east of Lewers Street, east of Beach Walk, and east of Saratoga Road to provide motorists with advanced notice that the roadway is a dead end facility. During the field investigation, vehicles were observed making U-turns at the end of Kalia Road or utilizing the Halekulani Hotel porte cochere to turn around.*
6. *Consider restricting parked vehicles within the porte cochere for the Waikiki Parc Hotel and transferring all vehicles to the hotel's garage. The elimination of these vehicles would provide better visibility of and for vehicles within the hotel's porte cochere.*
7. *Maintain the existing drop-off area on Kalia Road and consider extending the length of the drop-off to continue to provide and improve the alternate arrival point utilizing Ala Moana Boulevard and Kalia Road, thereby reducing traffic demands along Kalakaua Avenue and Lewers Street.*
8. *Consider preparing a Traffic Management Plan ("TMP") for the hotel to improve circulation in the vicinity. The hotel is bounded by two "dead end" roadways that limit circulation in the vicinity. In addition, the hotel's porte cochere is located across from the exit for the Sheraton Waikiki Hotel's bus depot along a fairly narrow roadway (Helumoa Street). The preparation of a TMP for the*

Waikiki Parc Hotel could help to minimize conflicts between the hotel and adjacent uses.

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

Halekulani Corporation also intends to implement a Traffic Management Plan (TMP) which will encourage its employees to use public transit and carpools. Their existing practices include a bicycle rack on the 2nd floor that can support up to 20 bicycles; employee locker rooms that include showers; a ride sharing program; and participation in the Transit-1 program.

2.4.6 Noise (Acoustical) Long Term Impacts

Y. Ebisu & Associates has prepared the "Acoustic Study for the Waikiki Parc Hotel Renovation, Waikiki, Oahu, Hawaii" ("Acoustic Study") dated December 2013. The study in its entirety is provided in **Appendix 2**. The following details mitigation measures for potential long term noise impacts related to traffic and air conditioning equipment:

"Traffic Noise. Noise impacts from project related traffic along the roadways which are expected to service the project traffic (Kalakaua Avenue, Lewers Street, Kalia Road, and Saratoga Road) are not expected due to the reduced levels of project related traffic noise when compared to the noise levels of non-project related traffic and other noise sources. In addition, the existing resort units which are located in the immediate vicinity of the project are currently provided with air conditioning."

"For those renovated guest spaces in the Waikiki Parc Hotel, noise mitigation measures are recommended. Closure and air conditioning of the affected spaces can be an effective noise mitigation measure for this project."

2.5 UNRESOLVED ISSUES

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

- A Signage Master Plan will be submitted for review and approval by the Department of Planning and Permitting (DPP) as a Zoning Adjustment at a later date.
- A Variance application will be submitted for review and approval by DPP.
- A WSD Permit, Minor application will be submitted for review and approval by DPP.
- A Surface Encroachment Variance application will be submitted for review and approval by DPP.
- A Subdivision for Pedestrian Easement application will be submitted for review and approval by DPP.
- A Sidewalk Variance application will be submitted for review and approval by DPP.
- Building Permit applications will be submitted for review and approval by DPP.

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

2.6 COMPATIBILITY WITH LAND USE PLANS AND POLICIES

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

- General Plan - The Project will comply with policies related to improving visitor facilities and timing new development with infrastructure.

- PUCDP - The Project will comply with policies related to the support of the visitor industry with updated facilities, enhance the walking experience in Waikīkī, and comply with the land use map designation of Resort.

- Zoning - The Project will be developed in accordance with development standards of the WSD. The existing dining and hotel use are permitted uses in the Resort Mixed Use Precinct of the WSD for the specific parcels which comprise the Project Site.

2.7 REQUIRED GOVERNMENTAL PERMITS AND APPROVALS

- City: Environmental Assessment; SMA Use Permit; Variance, WSD Permit, Minor; Surface Encroachment Variance; Subdivision for Pedestrian Easement; Sidewalk Variance; Building Permits; Drain Connection; Site Development Division Master Application for Sewer Connection; Street Usage; Sign Master Plan (Zoning Adjustment); and Construction Plan Approval.

- State: Construction Noise Permit.

2.8 ALTERNATIVES CONSIDERED

2.8.1 Alternative I: No Action

The possibility of taking no action was considered and rejected, as the existing Waikiki Parc Hotel structure is dated and needs to be upgraded to be competitive in today's dynamic hotel market serving Waikīkī and O`ahu generally.

2.8.2 Alternative II: Renovation of the Existing Structures (**Preferred Alternative**)

Halekulani Corporation proposes to renovate the existing structure, to create an updated hotel product with all 1- and 2-bedroom hotel units that will upgrade the hotel into an economically viable enterprise. The projected cost for renovation would be approximately $50 to $60 million.

This alternative would provide for an improved hotel product not possible under the "No Action" alternative. The improved design will allow for conveying a Hawaiian Sense of Place and improved streetscape.

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

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

The Preferred Alternative will allow an aging structure to be renovated to create a vibrant, attractive and well-designed visitor accommodation.

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

The Preferred Alternative will not only result in an upgraded hotel product, but will also provide much needed employment opportunities both during and after the construction of the Project.

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

The Preferred Alternative would result in the rejuvenation and revitalization of the Waikiki Parc Hotel.

The Preferred Alternative will also result in implementation of the City's vision for Waikīkī as described in the Primary Urban Center (PUC) Development Plan (DP). Specifically, the vision seeks private reinvestment in the physical plant of Waikīkī to allow Waikīkī to remain the State's most popular tourist destination.

3. PURPOSE OF AND NEED FOR THE PROJECT

The Project is necessary given the age and condition of the existing structure, as well as the deteriorating economics associated with operating the same. The Waikiki Parc Hotel built in

1987 and will be 29 years old at the time of proposed construction. The renovation will result in a hotel with 126 1- and 2-bedroom hotel units, a restaurant, rooftop lounge and uses accessory to the hotel.

4. PROJECT DESCRIPTION

4.1 LOCATION

The Project Site is located in the Primary Urban Center of Honolulu. The Project is located on a 48,411 square foot lot in Waikīkī and involves renovation of the existing Waikiki Parc Hotel. The Project Site is bounded by Kalia Road to the southwest (across Kalia Road is The Halekulani), the Imperial Hotel to the northwest, Helumoa Road to the northeast, and the Sheraton Waikiki Development to the southeast. Across Helumoa Road is the Sheraton Waikiki parking garage.

4.2 GENERAL DESCRIPTION OF THE ACTION

4.2.1 Existing Condition

Waikiki Parc Hotel is located on 48,411 square feet of land and has 156,521 square feet of floor area over 22 floors. Waikiki Parc Hotel has 297 hotel rooms, each with 327 square feet of floor area.

The parking for Waikiki Parc Hotel is accessed via a driveway on Kalia Road. The parking lot provides 476 parking stalls on 6 levels.

A restaurant on the ground floor provides a fine dining complement to the hotel. In the mornings, PARC a.m. uses the restaurant dining room to provide a breakfast buffet between 6:00 a.m. to 10:00 a.m. The hotel also has a fitness center, self-serve laundry, swimming pool, business lounge, and conference room.

The hotel operates 24/7, while the ground floor restaurant is open from 5:00 p.m. to 12:00 a.m. with dinner service from 5:30 p.m. to 10:00 p.m. on Sunday through Thursday and from 5:30 p.m. to 10:30 p.m. on Friday and Saturday.

4.2.2 Proposed Renovation

The Halekulani Corporation, proposes the renovation of the Waikiki Parc Hotel including the following:

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

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

The Waikiki Parc Hotel is a 22-story structure with a height of about 236.5 feet.

The Project involves a net increase in floor area of 2,562 square feet, including the new roof top open-air terrace, rooftop elevator, 8th floor canopy, and improvements at the new hotel entry on Kalia Road.

4.3 USE OF PUBLIC FUNDS OR LANDS

The Project will not involve the use of public funds. The project may involve upgrade of infrastructure within the existing City right-of-ways and may also involve improvement of the existing sidewalk within the existing City right-of-ways. This potential use of public lands is the secondary requirement for the processing of this Environmental Assessment.

4.4 PHASING AND TIMING OF ACTION

The renovation of the Project is estimated to take approximately 16 months.

Construction is anticipated to begin in the fall of 2016, once Halekulani Corporation receives all required permits and approvals, including acceptance of the Final EA, approval of an SMA Use Permit by the City Council, approval of a variance and the Project design under the WSD provisions by the DPP, a surface encroachment variance, building permits, and construction noise permit, and the securing of project financing. If started in 2016, the Project would open early 2018.

4.5 SUMMARY OF TECHNICAL CHARACTERISTICS

4.5.1 Use Characteristics

Waikiki Parc Hotel is located on 48,411 square feet of land and has 156,521 square feet of floor area over 22 floors. Waikiki Parc Hotel has 297 hotel rooms, each with 327 square feet of floor area.

The parking for Waikiki Parc Hotel is accessed via a driveway on Kalia Road. The parking lot provides 476 parking stalls on 6 levels.

The ground floor restaurant provides a fine dining complement to the hotel. In the mornings, PARC a.m. uses the restaurant dining room to provide a breakfast buffet between 6:00 a.m. to 10:00 a.m. The hotel also has a fitness center, self-serve laundry, swimming pool, business lounge, and conference room.

The hotel operates 24/7, while the ground floor restaurant is open from 5:00 p.m. to 12:00 a.m. with dinner service from 5:30 p.m. to 10:00 p.m. on Sunday through Thursday and from 5:30 p.m. to 10:30 p.m. on Friday and Saturday.

4.5.2 Physical Characteristics

The Waikiki Parc Hotel is a 22-story, 236.5-foot tall hotel development with 297 hotel rooms.

Waikiki Parc Hotel is located on 48,411 square feet of land and has 156,521 square feet of floor area over 22 floors. Waikiki Parc Hotel has 297 hotel rooms, each with 327 square feet of floor area.

The Project will involve the renovation of the Waikiki Parc Hotel including the following:

1. Provide streetscape enhancements, landscaping and special roadway paving along Kalia and Helumoa Roads.
2. Enhance existing pedestrian hotel entrance and drop off fronting Kalia Road and porte cochere on Helumoa Road.
3. Renovate ground floor lobby, restrooms and back-of-house facilities.
4. Renovate the 8th floor pool deck to include refurbishing of the existing pool, adding a new pool, landscape wind screen, lounge chairs, poolside dining tables and chairs and renovating the existing pool bar.
5. Renovate the 8th floor by removing guest rooms and providing a new kitchen, dining room, fitness center and hospitality room.
6. Renovate the 8th floor outdoor gathering area with landscaped wind screens and retractable roof awning and create a garden with outdoor dining tables and chairs.

7. Renovating the existing 297 rooms into all 1-bedroom and 2-bedroom rooms (reducing the unit count to 126 rooms).
8. Provide a new roof top open-air terrace.
9. Extend one elevator and stairs to the roof top.
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11. Replacing the exterior glazing of the building façade and change out all hand rails and guard rails.

The Waikiki Parc Hotel is a 22-story structure with a height of about 236.5 feet.

The Project involves a net increase in floor area of 2,562 square feet, including the new roof top open-air terrace, rooftop elevator, 8th floor canopy, and improvements at the new hotel entry on Kalia Road.

4.6 HISTORIC PERSPECTIVE

Archaeological

The Project will not require any excavation other than to possibly resurface Kalia Road and repair existing underground conduits and piping that crosses Kalia Road and will involve primarily interior renovations, improvements to facades, and development on the 8th Floor rooftop and the hotel tower rooftop. As such the Project will not affect any potential archaeological finds.

5. ALTERNATIVES

The Project is not anticipated to have a significant impact on the surrounding area in terms of public services and the environment primarily because of the proposed net reduction in the total number of hotel rooms and modest increase in lounge space. Positive economic impacts are projected with the Project, with increases in construction and long-term upgraded hotel development. The Project is also anticipated to generate increased revenues from resort accommodations and dining services, resulting in tax revenue generation for the State and significant property tax revenue for the City.

5.1 ALTERNATIVE I: NO ACTION

The possibility of taking no action was considered and rejected, as the existing Waikiki Parc Hotel structure is dated and needs to be upgraded to be competitive in today's dynamic hotel market serving Waikīkī and O`ahu generally. The "no action" alternative is not an economically viable alternative; it would mean continued repair and maintenance of the existing improvements, which would only result in further aging and weakening of their competitive positioning in the market.

5.2 ALTERNATIVE II: RENOVATION OF THE EXISTING STRUCTURE **(PREFERRED ALTERNATIVE)**

Halekulani Corporation proposes to renovate the existing structure, to create an updated hotel product with 1- and 2-bedroom hotel rooms that will upgrade the hotel into an economically viable enterprise. The projected cost for renovation would be approximately $50 to $60 million.

This alternative would provide for an improved hotel product not possible under the "No Action" alternative. The improved design will allow for conveying a Hawaiian Sense of Place and improved streetscape.

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

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

The Preferred Alternative will allow an aging structure to be renovated to create a vibrant, attractive and well-designed visitor accommodation.

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

The Preferred Alternative will not only result in an upgraded hotel product, but will also provide much needed employment opportunities both during and after the construction of the Project.

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

The Preferred Alternative would result in the rejuvenation and revitalization of the Waikiki Parc Hotel.

The Preferred Alternative will also result in implementation of the City's vision for Waikīkī as described in the Primary Urban Center (PUC) Development Plan (DP). Specifically, the vision seeks private reinvestment in the physical plant of Waikīkī to allow Waikīkī to remain the State's most popular tourist destination.

6. ENVIRONMENTAL SETTING

6.1 LOCAL AND REGIONAL PERSPECTIVE

The Project is located on a 48,411 square foot site in Waikīkī and involves the renovation of the Waikiki Parc Hotel. The Project Site is bounded by Kalia Road to the southwest (across Kalia Road is The Halekulani), the Imperial Hotel to the northwest, Helumoa Road to the northeast (across Helumoa Road is the Sheraton Waikiki parking garage) and the Sheraton Waikiki Development to the southeast.

The surrounding area includes numerous other resorts and resort support uses such as retail and restaurant establishments. These include The Halekulani, Sheraton Waikiki Hotel, Imperial Resort Hotel, Outrigger Reef Hotel, Outrigger Waikiki Shore Hotel, Embassy Suites, Trump Tower, Fort DeRussy and the Waikiki Beachwalk Development.

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

6.2 RARE OR UNIQUE ENVIRONMENTAL RESOURCES

6.2.1 Flora

Landscape plantings make up the vegetation on the project site. The majority of the plants are introduced or alien species. The coconut is originally of Polynesian introduction and is widely used in landscaping in Waikiki today.

None of the plants observed on the project site is a threatened and endangered species or a species of concern. All of the plants found on the project site are widely cultivated throughout the islands.

6.2.2 Fauna

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

6.3 POPULATION AND GROWTH CHARACTERISTICS

The Project will have no impact on the number of residents in Waikīkī, since it does not include demolition or construction of any dwelling units.

The Project will reduce the visitor population potential of Waikīkī with the conversion of the existing 297 rooms into all 1-bedroom and 2-bedroom hotel rooms in 126 rooms.

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

7.1 STATE LAND USE

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

7.2 GENERAL PLAN

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

7.2.1 Economic Activity

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

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

The Project will be a significant upgrade from existing facilities and provide a high quality and safe environment for visitors in Waikīkī with security and safety lighting along the sidewalk areas and around the building. The public benefits will include improving the visitor accommodations at the Waikiki Parc; improved traffic circulation in the area with a reduction in the number of trips generated by the renovated hotel; and provision of an economic stimulus during construction. The development will also result in an increase in property values for the City and County of Honolulu (resulting in increased property taxes) and generate additional tax revenue in terms of GET to the State and hotel room tax to the City and State.

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

Halekulani Corporation will upgrade the existing hotel through a major renovation and plans to improve Kalia Road with new pavement.

Policy 5 - Prohibit further growth in the permitted number of hotel and resort condominium units in Waikīkī.

The Project will reduce by 171 the number of hotel units in Waikīkī.

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

The Project will upgrade existing facilities to improve the visitor accommodation and dining experience in Waikīkī.

7.2.2 Energy

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

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

The existing buildings that are proposed to be renovated were built in the 1980s and do not incorporate the latest energy savings measures\devices, some of which will be introduced in the newly renovated hotel.

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

7.2.3 Physical Development and Urban Design

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

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

The "Preliminary Engineering Report Waikiki Parc Hotel Renovation" attached as **Appendix 4**, notes that with the reduction in the number of hotel rooms and fixture units, there will be a reduction in water and sewage flow generated by the property. With a slight increase in landscaping, drainage needs would also be reduced, although minimally.

Halekulani Corporation's Traffic Impact Report (**Appendix 3**) indicates there will be a reduction in trips generated by the proposed renovation and reduction in hotel units. Additional measures to reduce traffic impacts will be adopted based on the recommendations provided in the Traffic Impact Report.

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

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

7.3 PUC DEVELOPMENT PLAN

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

7.3.1 The Vision For The PUC's Future

Honolulu is the Pacific's Leading City and Travel Destination

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

The proposed action will result in the renovation and improvement of this hotel. This aging and dated structure needs renovation and upgrading to keep and enhance Waikīkī as the State's most popular visitor destination.

7.3.2 Land Use and Transportation

Visitor Industry

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

Halekulani Corporation proposes to invest approximately $50 to $60 million to renovate the Waikiki Parc Hotel. This private reinvestment in Waikīkī's physical plant will implement this important vision statement of the PUC DP.

7.4 LAND USE MAP PUC – EAST

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

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

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

7.5.1.1 Promote a Hawaiian Sense of Place

The Project's limited exterior improvements include façade improvements that will add articulation to the front façade of the building and promote a Hawaiian Sense of Place.

7.5.1.2 Optimum Community Benefits

The resort community in Waikīkī will benefit from the upgraded visitor accommodations at the Waikiki Parc Hotel.

7.5.1.3 Variety of Compatible Land Uses

The Project will include visitor accommodations and dining in a mixed use venue of compatible land uses in support of the resort community in Waikīkī.

7.5.1.5 Support Visitor and Resident Needs

The Project will provide upgraded visitor accommodation support for visitors and a dining venue that will serve visitors and residents alike.

7.5.1.6 Rejuvenation and Revitalization in the Special District

The Project will rejuvenate and revitalize an aging hotel that has experienced a normal aging process and is in need of renovation.

7.5.1.7 Hawaii's Tropical Climate and Ambience

The Project will continue to take advantage of Hawaii's tropical climate and ambiance with lanais and open lounge and outdoor dining areas on the 8th floor and roof top of the hotel.

7.5.1.8 Diamond Head View from Punchbowl

The hotel renovation will add an open-air roof of the building, but will not affect views of Diamond Head from the Punchbowl Lookout.

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

The landscaped open spaces along the front yards will continue to be pedestrian oriented providing a pleasant walking experience for the residents and guests.

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

The design of the renovated structure will reflect a Hawaiian Sense of Place, through the addition of articulation in the form of trellises and canopy extensions.

7.5.2.1 Uses and Structures Allowed in Required Yards and Setbacks

On buildings over 60 feet in height, roof eaves may extend more than 42 inches into a required yard, street setback or height setback area if the resulting roof form is integral to a cohesive, coherent design character for the structure. In no case, will such extension exceed one-half the width of the required yard or height setback. Trellises and canopy extensions will provide shade and protection from the elements and will comply with the allowable extensions described herein.

7.5.2.2 Curb Cuts

Curb cuts are proposed to meet ADA requirements for pedestrian access at the proposed crosswalk. In addition, the drop off area on Kalia Road will be lengthened, but this will not create conflicts with pedestrians.

7.5.2.3 Design Guidelines.

General Guidelines. The only general guideline described in LUO Exhibit 21-9.15 that affects this Project is the 280-foot height limit. The existing Waikiki Parc Hotel is about 236.5 feet in height and the renovated hotel will be about238.5 feet in height, which will be significantly below the maximum permitted height for the Project Site.

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

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

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

Building Scale, Features and Articulation. One component of the renovation is to improve the building facade with articulation in the form of trellises and canopy extensions. Halekulani Corporation will utilize an open-air roof terrace with a shading device. These architectural elements are intended to promote a Hawaiian Sense of Place.

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

Ground Level Features.

a. The proposed renovation will improve upon the existing landscaping within the yard and along the City right-of-ways in keeping with a Hawaiian Sense of Place.
b. Existing building facades at the ground level along Helumoa Road and Kalia Road will continue to include landscape screening, some display windows and trellises and vertical open screens.
c. All commercial uses located at ground level in the Project are subject to paragraph "b".
d. Halekulani Corporation proposes to create a visual connection between Kalia Road and the improved hotel entrance, by maintaining a second entry from Kalia Road.
e. Although the buildings will not be situated between a street and the shoreline or between a street and open spaces, the ground level pedestrian way will provide a visual link between Kalia Road and the improved hotel entrance.
f. Existing blank walls fronting on Helumoa Road and Kalia Road are screened with landscaping and in some instances articulated exterior screens.
g. No ground level parking facilities are proposed.
h. Halekulani Corporation does not plan to create an open lobby at the existing hotel.

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

7.5.2.4 Landscaping.

a. Coconut trees and some others existing trees may be removed or relocated. Trees greater than six inches in trunk diameter will be relocated on site.
b. Trees proposed for removal may be relocated to another landscape area on the Project Site.
c. Halekulani Corporation proposes to screen the lower levels of the parking structure with screens.

d. Newly introduced landscape will include fragrant, lush, tropical vegetation and native plant species, where appropriate.
e. No new fences or walls are proposed.
f. All landscape areas will have an adequate irrigation system.

7.5.2.5 Height Regulations

a. Rooftop height exemptions will not be required for the proposed development which is planned at a height below the 280-foot height limit.
b. Coastal height setbacks are not applicable for this development located mauka of Kalia Road.
c. Halekulani Corporation understands that ground floor uses other than dwellings are exempt from off-street parking requirements.

7.5.2.6 Vending Carts

No vending carts are planned with this hotel renovation.

7.5.3 Resort Mixed Use Precinct

7.5.3.1 Permitted Uses

The Resort Mixed Use Precinct allows as permitted uses the Project's proposed hotel functions.

7.5.3.2 Development Standards

Development Standard	Resort Mixed Use Precinct	Waikiki Parc	Waikiki Parc + The Halekulani
Minimum lot area (square feet)	10,000	48,411	225,263
Minimum lot width and depth (feet)	50	Average - 230 and 198	Average – 350 and 290
Yards - Front (feet) - Side	15 0	Kalia Road: 15 foot front yard encroachment (variance 82/ZB-164) Helumoa St: 15 foot front yard encroachment for porte cochere (variance 85/ZBA-202)	15 foot front yard encroachment and approx. 7 foot encroachment into the road widening (variance 87/ZBA-52)
Maximum Density (FAR)	1.0 (plus 1/2 of abutting right-of-way area)	54,203 sf	240,503 sf
Open Space Bonus Max FAR	10 sf/1 sf of public open space 5 sf/1 sf of open space 3 sf/1 sf of arcade area 1 sf/1 sf of rooftop landscape 3.5	49,277 sf	399,542 sf

Development Standard	Resort Mixed Use Precinct	Waikiki Parc	Waikiki Parc + The Halekulani
Maximum Height (feet)	280 per zoning map	238.5 feet	Waikiki Parc: 238.5 feet The Halekulani 190.5 feet
Transitional Height Setback	1 foot for every 10 feet of height over 40 feet	Height encroachment outside the building envelope on Kalia Rd and Helumoa St (variance 82/ZBA-164)	Height encroachment outside the building envelope on Kalia Rd. (varance 82/ZBA-164)

7.5.3.3 Parking

The parking requirement for the Waikiki Parc Hotel, based on 297 hotel rooms is 74 stalls. The parking requirement for the renovated Waikiki Parc Hotel based on 126 rooms will be 32 stalls. The parking requirement for The Halekulani based on 453 hotel rooms is 113. Halekulani Corporation provides 476 parking spaces in the existing parking garage.

7.5.3.4 Loading

The loading requirement for the Waikiki Parc Hotel and The Halekulani based on the 637,541 square feet of floor area (634,979 square feet existing + 2,562 square feet proposed) will be 8 loading stalls, four full size (12' by 35') and four smaller loading stalls (8.5' by 19'). Halekualani will continue to provide four full size stalls and four smaller loading stalls.

7.6 WAIKIKI SPECIAL DISTRICT GUIDELINES

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

7.6.1 Hawaiian Sense of Place

The Project's design will reflect a "Hawaiian Sense of Place" by adding articulation to the exterior face of the building and additional landscaping at the ground floor and on the 8th floor and rooftop. The 8th floor and rooftop will also be developed with activity areas to encourage hotel guests to enjoy the tradewinds and the tropical ambiance created at these levels. Halekulani Corporation also plans to add water features to the Kalia Road frontage and the 8th floor to further reflect a Hawaiian Sense of Place.

7.6.2 Building Design

7.6.2.1 Orientation & Form

The Project will not affect the orientation and form of the existing structure, except to add a modest amount of floor area on the 8th floor and rooftop.

7.6.2.2 Open Space

The open space in the along the perimeter of the property will be improved with a net increase in landscaped areas. The perimeter will also be improved with public open space.

Open landscaped areas leading visitors into the Project will be provided at Helumoa Road and Kalia Road.

7.6.2.3 Parking Facilities

The existing parking structure is located off Kalia Road and will be improved with a screening element at the lower floors. The existing parking structure contains 476 parking spaces, which is 213 spaces in excess of the 263 required under the LUO.

7.6.2.4 Articulation, Scale, Material Color

The building facade will be improved with additional articulation with a proposed awning over the existing hotel entry on Kalia Road and trellises along the Kalia Road frontage.

The Project presently includes various building heights.

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

A variety of building materials will be employed, including natural materials and textured concrete and plaster. The use of reflective materials will for the most part replace existing glazing. Exterior colors will contribute to the tropical resort ambiance and complement the added landscaping. Generally neutral tones are being considered for the development.

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

7.6.2.5 Entries, Lobbies & Arcades

Halekulani Corporation will provide welcoming features at the Kalia Road entry, including an awning providing protection from the elements and will maintain the glass entry area to provide a visual connection between Kalia Road and this hotel entrance. Halekulani Corporation plans to improve the landscaped entry area at Kalia Road.

7.6.2.6 Visual Links

The improved landscaping along the Kalia Road frontage and glass entry doors will provide a visual link from Kalia Road into the hotel.

7.6.2.7 Features in Required Yards

- Walls & Fences - No new walls or fences are planned along Helumoa Road or Kalia Road.
- Shading Devices – an awning is planned at the Kalia Road entry to the hotel and in order to provide coverage and protection from the elements over this entry area, Halekulani Corporation will request a variance to encroach into the yard area and street setback.
- Outdoor Dining - Outdoor dining facilities are not proposed at the street level, but are proposed on the 8th floor and rooftop of the hotel.
- Rooftop Design and Equipment Screening - Rooftop machinery, equipment and utility installations will not exceed the established height limit and will be screened from view, as needed.

7.6.2.8 Landscaping

As indicated in the preliminary concept plan, landscaping will be provided to improve the streetscape along Kalia Road and enhance the pedestrian experience for visitors and local residents alike.

7.6.2.9 Water Features and Artwork

A water feature is proposed for the Kalia Road frotage.

No artwork is planned with this renovation Project.

7.6.2.10 Sidewalk & Paving

Private and public walkways along Kalia Road will be developed with patterned and/or textured paving materials to provide a sense of scale and rhythm appropriate to the surrounding buildings.

7.6.2.11 Signage

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

7.6.2.12 Lighting

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

7.6.3 Urban Design Controls

7.6.3.1 Waikiki Gateways and Fort DeRussy

The Project is not situated near any of the five Waikiki Gateways and is located over 500 feet away from Fort DeRussy.

7.6.3.2 Major Streets

The Project does not abut nor is in close proximity to the major streets designated in the WSD Design Guidelines.

7.6.3.3 Waikiki Promenade

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

7.6.3.4 Coastal Height Setback

The Project is an existing structure located about 270 feet from the shoreline and is not subject to a coastal height setback.

7.6.3.5 Mini Parks

No mini parks are planned at the Project.

7.6.3.6 Significant Public Views

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

7.6.3.7 Public Pedestrian Access

The Project does not provide any public pedestrian access.

7.6.3.8 Historic Structures, Significant Sites and Landmarks

The Project Site is not listed as historic on either the State or Federal Register of Historic Properties.

7.7 LIST OF NECESSARY APPROVALS

The Project will require a finding of "Finding of No Significant Impact" (FONSI) by the DPP. The following is a preliminary list of the anticipated permits, approvals and reviews that are required prior to construction of the Project.

7.7.1 City and County of Honolulu

- Variance
- WSD Permit, Minor
- Surface Encroachment Variance
- Subdivision for Pedestrian Easement
- Sidewalk Variance
- Building Permits
- Grading Permit
- Drain Connection
- Site Development Division Master Application for Sewer Connection
- Street Usage
- Sign Master Plan Approval (Zoning Adjustment)
- Construction Plan Approval

7.7.2 State of Hawaii

- Construction Noise Permit

8. PROBABLE IMPACTS

8.1 IMPACTS OF THE NATURAL OR HUMAN ENVIRONMENT ON THE PROJECT

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

8.2 DIRECT AND INDIRECT IMPACTS

The Traffic Impact Report attached as **Appendix 3** indicates there will be no significant impact on traffic, related to level of service at surrounding intersections.

The Preliminary Engineering Report attached as **Appendix 4** indicates the Project will result in a reduction in water and wastewater demand.

The Project will result in a reduction of the number of hotel rooms on the Project Site from 297 to 126 and will result in a reduction in trips generated by the project and a reduction in water and wastewater demand.

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

8.3 GENERAL PUBLIC BENEFITS

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

8.3.1 Economic Boost

The Project will provide an economic and job-creating stimulus for the local economy, during the construction period.

Upon completion of the renovation the Project will provide an increase in property values for the City and County of Honolulu (the "City") resulting in increased property taxes and hotel room tax and generates additional tax revenue to the State in terms of collections from General Excise Taxes ("GET") and hotel room tax.

8.3.2 Sustainable Strategies

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

8.3.3 Waikiki Special District

The Project will achieve several of the key objectives of the WSD guidelines and result in demonstrable contributions that benefit the community and the stability,

function and overall ambiance of Waikīkī. The following are anticipated public benefits:

8.3.3.1 Enhanced Open Space

The Project will result in increased and enhanced open space along Kalia Road and Helumoa Road that is usable and visible to the public and that creates visual relief.

The modest increase in open space available to the public and landscaping along these roadways will enhance the pedestrian experience through Waikīkī by providing relief from the urban forms that affect much of the street level experience in Waikīkī.

8.3.3.2 Improved Traffic Circulation

The reduction in trips generated will serve to relieve traffic in the surrounding area. The proposal to provide Dead End warning signs at the Kalia Road intersection with Saratoga Road, Beach Walk and Lewers Street will serve to eliminate some of traffic from motorists unfamiliar with the area that do not realize that Kalia Road is a dead end from Saratoga Road traveling in the diamond head direction.

8.3.3.3 Hawaiian Sense of Place

The Project will enhance the "Hawaiian Sense of Place" of the area.

The Project's design will reflect a "Hawaiian Sense of Place" by adding articulation to the exterior face of the building and additional landscaping at the ground floor and on the 8th floor and rooftop. The 8th floor and rooftop will also be developed with activity areas to encourage hotel guests to enjoy the tradewinds and the tropical ambiance created at these levels. Halekulani Corporation also plans to add water features to the Kalia Road frontage and the 8th floor to further reflect a Hawaiian Sense of Place.

8.4 DEMOGRAPHIC IMPACTS

8.4.1 Residential Population

The Project will have no impact on the number of residents in Waikīkī as it does not include demolition or construction of any dwelling units.

8.4.2 Visitor Population

The Project will reduce the visitor population potential of Waikīkī with the conversion of 297 hotel rooms to 126 one- and two-bedroom hotel rooms.

8.4.3 Character or Culture of the Neighborhood

The character and culture of the surrounding neighborhood will not change, as the existing renovation will continue to offer visitor accommodations and dining similar to that provided by the existing hotel.

8.4.4 Displacement of Tenants

The tenant has the option to remain open during construction. Should they choose to remain open, temporary utility connections will be accommodated.

8.5 HOUSING IMPACTS

The Project will not affect housing in the area as no existing dwelling units are being removed and no new dwelling units are planned.

8.6 PUBLIC SERVICES

8.6.1 Access and Transportation

The "Traffic Impact Report Waikiki Parc Hotel Renovation" ("Traffic Impact Report") dated November 2013 was prepared by Wilson Okamoto Corporation and is provided in **Appendix 3**.

8.6.1.1 Area Roadway System

The area roadway system is described as follows:

"The Waikiki Parc Hotel is located adjacent to Kalia Road, a predominantly two-lane, two-way roadway generally oriented in the east-west direction in the vicinity of the project site. West of the hotel, Kalia Road intersects Saratoga Road. At this signalized T-intersection, the eastbound approach of Kalia Road has a shared left-turn and through lane while the westbound approach had one through lane and an exclusive right-turn lane (see Figure 3). Saratoga Road is a predominantly four-lane, two-way roadway that serves as a connector roadway between Kalia Road and Kalakaua Avenue. At the intersection with Kalia Road, the Saratoga Road approach has exclusive left-turn and right-turn lanes.

"East of the intersection with Saratoga Road, Kalia Road intersects Lewers Street. At this all-way stop controlled intersection, both approaches of Kalia Road have one lane that serve through movements. Lewers Street originates at Kalia Road as a two-lane, one-way (southbound) roadway that transitions to a two-way roadway between Don Ho Lane and Kalakaua Avenue. North of Kalakaua Avenue, Lewers continues on as a predominantly one-lane, one-way (northbound) roadway. At the intersection with Kalia Road, the Lewers Street approach has exclusive turning lanes.

"North of the intersection with Kalia Road, Lewers Street intersects Kalakaua Avenue. At this signalized intersection, the northbound approach of Lewers Street had one through lane and an exclusive right-turn lane. Kalakaua Avenue is a predominantly four-lane, one-way (eastbound) roadway generally oriented in the east-west direction that with Ala Wai Boulevard forms a couplet system that provides access through Waikiki. At the intersection with Lewers Street, the Kalakaua Avenue approach has a shared left-turn and through lane, two through lanes, and a shared through and right-turn lane."

8.6.1.2 Traffic Impacts

The Traffic Impact Report's "Conclusion" states:

"VII. CONCLUSION

The Waikiki Parc Hotel currently includes standard hotel rooms, a restaurant, and other amenities. The proposed renovation is expected to convert the existing hotel rooms into suites thereby reducing the hotel's overall room count. With the proposed project, traffic operations in the vicinity of the proposed renovations are expected to remain similar to existing and without project conditions. As such, with the implementation of the aforementioned recommendations, the proposed Waikiki Parc Hotel renovation is not expected to have a significant impact on traffic operations in the vicinity.

8.6.1.3 Traffic Mitigation Measures

Although traffic operations (level of service) with the Project in 2017 are expected to remain similar to conditions without the Project in 2017, traffic mitigation measures are planned to improve traffic circulation in the immediate surrounding area. The "Traffic Impact Report Waikiki Parc Hotel Renovation" ("Traffic Impact Report") dated November 2013 was prepared by Wilson Okamoto Corporation and is provided in **Appendix 3**. The report recommends the following traffic mitigation measures:

The Traffic Impact Report section titled "Recommendation" states as follows:

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

1. *Maintain sufficient sight distance for motorists to safely enter and exit all project driveways.*
2. *Maintain adequate on-site loading and off-loading service areas and limit off-site loading operations.*
3. *Maintain adequate turn-around area for service, delivery, and refuse collection vehicles to maneuver on the project site to minimize vehicle-reversing maneuvers onto public roadways.*

4. *Maintain sufficient turning radii at all project driveways to avoid or minimize vehicle encroachments to oncoming traffic lanes.*
5. *Consider providing signage along Kalia Road east of Lewers Street, east of Beach Walk, and east of Saratoga Road to provide motorists with advanced notice that the roadway is a dead end facility. During the field investigation, vehicles were observed making U-turns at the end of Kalia Road or utilizing the Halekulani Hotel porte cochere to turn around.*
6. *Consider restricting parked vehicles within the porte cochere for the Waikiki Parc Hotel and transferring all vehicles to the hotel's garage. The elimination of these vehicles would provide better visibility of and for vehicles within the hotel's porte cochere.*
7. *Maintain the existing drop-off area on Kalia Road and consider extending the length of the drop-off to continue to provide and improve the alternate arrival point utilizing Ala Moana Boulevard and Kalia Road, thereby reducing traffic demands along Kalakaua Avenue and Lewers Street.*
8. *Consider preparing a Traffic Management Plan ("TMP") for the hotel to improve circulation in the vicinity. The hotel is bounded by two "dead end" roadways that limit circulation in the vicinity. In addition, the hotel's porte cochere is located across from the exit for the Sheraton Waikiki Hotel's bus depot along a fairly narrow roadway (Helumoa Street). The preparation of a TMP for the Waikiki Parc Hotel could help to minimize conflicts between the hotel and adjacent uses.*

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

Halekulani Corporation also intends to implement a Traffic Management Plan (TMP) which will encourage its employees to use public transit and carpools. Their existing practices include a bicycle rack on the 2nd floor that can support up to 20 bicycles; employee locker rooms that include showers; a ride sharing program; and participation in the Transit-1 program.

8.6.2 Water

Imata and Associates has prepared a "Preliminary Engineering Report - Waikiki Parc Hotel" dated March 3, 2014 for the Project that is included in its entirety in **Appendix 4**. Included in this Report is the following discussion on water demand:

"Potable water service is provided and operated by the City and County of Honolulu's Board of Water Supply (BWS). Potable service is currently adequate to support the proposed development. Since the renovated hotel will reduce the water usage by consolidating the number of guest rooms, there should be no increase in water demand.

"Based on City and County Board of Water Supply demand factors, an average daily demand of 76,620 gallons per day (gpd) was determined for the renovation project. This average daily demand represents a 23% decrease compared to the existing demand of 99,580 gpd.

"Premises Identification Code: PID: 3335963392 1063034 (old)
Meter No.: M/N: 85159601 6" Detector Check Meter (Fire)

"PID: 6277245894 1063031(old)
M/N: 03124157 4" Compound (Domestic)

"Water for both domestic and fire flow use are provided from the 12" PVC BWS main on Kalia Road. There are several fire hydrants along the property frontage. FH 1031 and 7261 are near the Kalia Road intersection with Lewers Street. FH 1032 is on the Halekulani side of Kalia Road across from the Parc Hotel and FH 6106 is on Helumoa Street across from the Parc Hotel. All fire hydrants belong to the Board of Water Supply."

8.6.3 Wastewater

Imata and Associates has prepared a "Preliminary Engineering Report - Waikiki Parc Hotel" dated March 3, 2014 for the Project that is included in its entirety in **Appendix 4**. Included in this Report is the following discussion on wastewater demand:

"Domestic wastes from the hotel's operation are disposed through a sewer lateral to the 8" municipal sewer system on Kalia Road. The Kalia Road 8" sewer is connected to the City's 10" vitrified clay pipe (vcp) sewer that traverses mauka along Lewers Street across Kalakaua Avenue where it turns into an 18" concrete sewer along Lewers Street to Kuhio Avenue. At the corner of Kuhio and Lewers is a municipal parking lot where the city's Beach Walk sewer pumping station is located. We understand that the sewer line on Lewers Street between Kalakaua and Kuhio Avenue is at capacity and no additional flows tributary to this section of sewer line will be accepted. The Halekulani and Waikiki Parc Hotel are within the tributary area.

"Although portions of the City's collection system downstream of the project site is at or near capacity, we do not anticipate any off-site sewer improvements since the wastewater flow generated under the proposed project is less than is presently generated. A new Site Development Division Master Application for Sewer Connection will be submitted to confirm adequacy of the City's sewer collection system to support the revitalization project.

"An average sanitary sewer flow of 94,320 gpd is projected for the redevelopment project based on City and County guidelines for wastewater contribution. The

projected sewer flow is approximately 20% lower than the existing flow of 117,280 gpd."

8.6.4 Drainage and Storm Water Quality

Imata and Associates has prepared a "Preliminary Engineering Report - Waikiki Parc Hotel" dated March 3, 2014 for the Project that is included in its entirety in **Appendix 4**. Included in this Report is the following discussion on drainage and stormwater quality:

"Since the hotel site encumbers most of the property, storm runoff from the roof and upper parking deck downspout system drops to surface drains in the planting area between the Sheraton's service driveway and the Parc Hotel. The storm runoff from these downspouts flow into the planting area and percolates into the ground. Excess runoff flows onto Kalia Road.

"There is no municipal storm drain on either Kalia or Helumoa Roads. The nearest municipal storm drain system is a 5.25'x 2' reinforced concrete box drain on Lewers Street. The nearest catch basins and storm water inlets are located at the Kalia Road and Helumoa Road corners with Lewers Street. The existing municipal storm drains are very shallow and there does not appear to be any opportunity to develop new storm drain systems along Kalia and Helumoa Roads to gravity flow to the municipal system.

"The City's existing storm drainage system appears to be functioning adequately for the collection of rainfall runoff in the area and delivery of the flow to the ocean outfall seaward of Saratoga Avenue.

"During the design phase of the project, a Storm Drain Report will be required to confirm the pre and post storm water flows generated by the site including a detailed breakdown of the distribution of flows to the City system. Since the existing site is an urbanized, fully developed and built up district, we do not expect any increase in the storm water quantity or quality generated by the proposed project. The proposed storm drain flow pattern will follow the existing conditions to avoid redistribution of the project storm water flow to the City's drainage system.

"A Drain Connection License will be obtained from the DPP in the event that any new drain connections are required for the project. Development of the project's storm drains will conform with the Low Impact Development (LID) measures which are required by the City's MS4 permit."

8.6.5 Solid Waste Disposal

The DES, Refuse Collection and Disposal Division manages solid waste disposal facilities for the Island of O`ahu. There are two City solid waste disposal facilities: the H-POWER refuse to energy plant at Campbell Industrial Park and Waimānalo Gulch Landfill. PVT Land Company operates a privately owned and operated, licensed, solid waste facility for recovery of recyclable materials and disposal of construction and demolition materials. The PVT Landfill accepts wastes on a pre-arranged basis from haulers and contractors registered with them. Waste loads are screened with recyclable materials removed for sale/reuse and the remaining wastes land filled. The capacity of the PVT Landfill as currently licensed is about 20 years, with expansion areas available.

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

Halekulani Corporation currently manages a recycling program targeting bottles, cans, cardboard, paper, cooking oils, and kitchen wet wastes. Halekulani Corporation will encourage its tenants to utilize bio-degradable food containers and to minimize the use of plastic bags. Following completion of the Project, Halekulani Corporation will continue to maintain a waste management recycling system.

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

8.6.6 Public Schools

The Project will not affect the population of school age children and will not impact the local school system.

8.6.7 Parks

The Project will not impact the demand for existing parks or recreation areas in the surrounding neighborhood

8.6.8 Police

Initial response will be provided by patrol officers assigned to District 6, which operates out of the Police Substation located at 2405 Kalākaua Avenue next to Kūhiō Beach, approximately 0.9 miles away from the Project Site. The administrative offices for District 6 operate out of the Alapai Headquarters.

8.6.9 Fire

The Waikiki Fire Station 7 with its engine and ladder company will provide primary response in case of an emergency. The Waikiki Fire Station is located approximately 1.8 miles away and will be able to quickly respond to a fire on the Project Site.

8.6.10 Utilities

8.6.10.1 Electricity

HECO has existing power lines serving this area including the Project Site and Halekulani Corporation will coordinate the timing of the development with HECO to ensure that the power lines will be adequate to support the Project and that HECO facilities are not be adversely impacted. The demand for electrical service is not anticipated to change significantly.

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

8.6.10.2 Telephone

Hawaiian Telcom currently serves the Project Site and has existing utility service lines in the area. It is expected that these existing lines will continue to be used to service the Project. No off-site work is expected.

8.6.10.3 Cable/Satellite Television and High-speed Internet Access

Cable/Satellite television and high-speed internet access service is currently provided to the hotel rooms in the Project.

8.6.10.4 Gas

Imata and Associates has prepared a "Preliminary Engineering Report - Waikiki Parc Hotel" dated March 3, 2014 for the Project that is included in its entirety in **Appendix 4**. Included in this Report is the following discussion on gas lines:

"A 1" gas line enters the property near the southwest corner of the property from the Gas Company 4" gas line on Kalia Road."

8.6.11 Accessibility (Americans with Disabilities Act)

Imata and Associates has prepared a "Preliminary Engineering Report - Waikiki Parc Hotel" dated March 3, 2014 for the Project that is included in its entirety in **Appendix 4**. Included in this Report is the following discussion on accessibility and the Americans with Disabilities Act (ADA):

"The ADA consultant has completed a survey of the accessible routes outside and within the hotel and has recommended that a new curb ramp be provided at the Hotel entry on Kalia Road. The curb line and drop-off area is recessed from the Kalia Road right-of-way on Parc Hotel land and can be constructed without City approval. The existing curb ramp near the parking garage entrance is non-compliant because the grade of 11.6% exceeds the 8.33% maximum allowable. This curb ramp can be reconstructed also without seeking City approval because the ramp is wholly on Parc Hotel property.

.....

"Correction of onsite ADA issues, particularly the accessible routes should be addressed since non-compliant elements could ultimately lead to civil lawsuits."

Halekulani Corporation will address ADA issues with this Project.

8.7 ENVIRONMENTAL IMPACTS

8.7.1 Environmentally Sensitive Area

The Project is not in an environmentally sensitive area. Since there is no endangered flora or fauna on the Project Site and no other environmentally sensitive features on the Project Site, the Project Site, except for potential burials, is not considered to be environmentally sensitive. Since no excavation other than shallow depths for repaving of Kalia Road and reconstruction of existing underground conduits and piping across Kalia Road, potential burials will not be disturbed.

8.7.2 Historical and Archaeological Resources

With no significant excavation planned and no changes to the footprint of the building at the Project Site, the Project will not affect Historical or Archaeological Resources.

8.7.3 Natural Resources

8.7.3.1 Water Resources

There are no potable or surface fresh water resources on the Project Site. The Project Site is located in Waikīkī, on the mauka side of Kalia Road, about 270 feet from the shoreline. The waters off the south shore of O`ahu, including

Waikīkī, are designated Class A by the State DOH. Rules of the State DOH indicate that the purpose of the Class A designation is to protect these waters for recreational use and aesthetic enjoyment. Because there are no fresh water features on the sites, the Project is not anticipated to adversely impact these resources.

8.7.3.2 Flood Plain Management

Imata and Associates has prepared a "Preliminary Engineering Report - Waikiki Parc Hotel" dated March 3, 2014 for the Project that is included in its entirety in **Appendix 4**. Included in this Report is a discussion on flood designations, summarized below:

"According to Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Panel 15003C0368G dated January 19, 2011, the Parc Hotel property is subject to FEMA Zone AE flooding with flood elevation of 7 feet. Across Kalia Road, the Halekulani Hotel is subject to AE flood elevation of 8 feet. The AE designation is the area subject to the 1% annual flood (100-year flood).

"It appears that the flood elevation designation is due to run up of a tsunami wave along the shoreline. The FEMA Zone VE elevation 12 off shore degrades to an AE 8 in the Halekulani property, then AE 7 in the Waikiki Parc parcel and continues on to AE 6 and AE 5 further inland, whereas much of the remainder of Waikiki is subject to Flood Designation AO Depth 2 feet, due to the storm water overflow of the Ala Wai Canal.

.....

"With the hotel finish floor of 5.25 and the FEMA flood water surface elevation of 7, the hotel would be subject to flooding by approximately 2 feet of water during the 100 year event. Flood barriers or other mitigation measures can be employed to prevent flood waters from damaging the hotels interior and reducing the time needed after the flood event for the hotel to return to service."

Halekulani Corporation will consider feasible mitigation measures, including flood barriers, to mitigate potential damage from future flooding.

The Project will comply with flood hazard requirements, if any, for the proposed renovation.

8.7.3.3 Topography and Soils

In general, the Project Site is relatively flat with ground elevations along the Helumoa Road frontage at between 4.85 and 4.25 feet mean sea level (MSL). Along Kalia Road, the ground elevations range between 4.20 and 3.70 feet MSL.

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

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

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

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

8.7.3.4 Noise

Y. Ebisu & Associates has prepared the "Acoustic Study for the Waikiki Parc Hotel Renovation, Waikiki, Oahu, Hawaii" ("Acoustic Study") dated December 2013. The study in its entirety is provided in **Appendix 2**.

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

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

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

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

Y. Ebisu & Associates has prepared an Acoustic Study. The study in its entirety is provided in **Appendix 2**. The following are excerpts from the report:

SUMMARY

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

"The existing and future traffic noise levels in the vicinity of the proposed Waikiki Parc Hotel Renovation Project in Waikiki (see FIGURE 1) were evaluated for their potential noise impacts and their relationships to current FHA/HUD noise standards. The traffic noise level increases along the major access roadways to and from the project site were calculated. No significant increases in traffic noise are predicted to occur along Kalakaua Avenue, Lewers Street, Kalia Road and Saratoga Road as a result of project traffic following project build-out by CY 2017. Traffic noise from Kalakaua Avenue, Lewers Street, Kalia Road and Saratoga Road and Kuhio Avenue will continue to control background ambient noise levels in the project environs, with traffic noise levels exceeding 65 DNL at existing resort units which front these roadways.

"Project traffic will reduce rather than add to existing traffic noise levels along the roadways in the project environs. This will result in decreases in total (project plus non-project) traffic noise levels following completion of the project, except along Kalakaua Avenue, where future traffic noise levels will increase due to non-project related traffic."

"The proposed renovation should not result in long term adverse noise impacts on adjacent resort and commercial establishments. The future activities anticipated to occur within the project area are very similar to existing resort activities, so maintaining the status quo in respect to noise emissions should not be difficult. Unavoidable, but temporary, noise impacts may occur during the demolition and construction activities at the exterior work areas. Because construction activities are predicted to be audible within the project site and at adjoining properties, the quality of the acoustic environment may be degraded during periods of construction. Mitigation measures to reduce construction noise to inaudible levels will not be practical in all cases, but the use of quiet equipment (i.e., construction equipment with factory supplied mufflers and with enclosed engine compartments) is recommended as a standard mitigation measure. The implementation of Hawaii State Department of Health permit procedures and curfew periods for construction activities is also expected for this project."

MITIGATION MEASURES

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

"Traffic Noise. Noise impacts from project related traffic along the roadways which are expected to service the project traffic (Kalakaua Avenue, Lewers Street, Kalia Road, and Saratoga Road are not expected due to the reduced levels of project related traffic noise when compared to the noise levels of non-project related traffic and other noise sources. In addition, the existing resort units which are located in the immediate vicinity of the project are currently provided with air conditioning.

"For those renovated guest spaces in the Waikiki Parc Hotel, noise mitigation measures are recommended. Closure and air conditioning of the affected spaces can be an effective noise mitigation measure for this project."

"General Construction Noise. Audible construction noise will probably be unavoidable during the entire project construction period.

.....

"The resort and commercial establishments which are adjacent to the project site are predicted to experience the highest noise levels during construction activities due to their close proximity to the construction sites. Adverse impacts from construction noise are not expected to be in the "public health and welfare" category due to the temporary nature of the work, the availability of closure and air conditioning for noise mitigation at the majority of the resort and commercial units in the project area, and due to the administrative controls available for regulation of construction noise. Instead, these impacts will probably be limited to the temporary degradation of the quality of the acoustic environment in the immediate vicinity of the project site.

"Mitigation of construction noise to inaudible levels will not be practical in all cases due to the intensity of construction noise sources (80 to 90+ dB at 50 FT distance), and due to the exterior nature of the work (demolition, excavation, grading, trenching, concrete pouring, hammering, etc.). The use of properly muffled construction equipment should be required on the job site.

"Severe noise impacts are not expected to occur inside air conditioned structures which are beyond 70 to 450 FT of the project construction sites. Inside naturally ventilated structures, interior noise levels (with windows or doors opened) are estimated to range between 73 to 55 dBA at 70 FT to 450 FT distances from the construction site. Closure of all doors and windows facing the construction site would generally reduce interior noise levels by an additional 5 to 10 dBA.

"The incorporation of State Department of Health construction noise limits and curfew times, which are applicable throughout the State of Hawaii (Reference 4), is another noise mitigation measure which is normally applied to construction activities. FIGURE 10 depicts the normally permitted hours of construction. Noisy construction activities are not allowed on Sundays and holidays, during the early morning, and during the late evening and nighttime periods under the DOH permit procedures.

8.7.3.5 Air Quality

Being primarily a renovation project, construction impacts are expected to be minimal, as the only ground disturbance is expected to be in the resurfacing of Kalia Road. Dust will be controlled during the resurfacing of Kalia Road by watering open areas at least twice daily.

After construction, the long term impacts would be related to emissions from vehicles generated by the renovated hotel. As noted in the traffic study, the trips generated by the renovated hotel will be less than the trips generated by the existing hotel and as such air quality impacts will be reduced in the long term.

8.7.3.6 Visual Impacts

The Project's will add limited floor area on the roof top which will not have a significant impact on the views from surrounding structures.

8.8 COASTAL ZONE MANAGEMENT

The Project Site is within the coastal zone management area and within the City's Special Management Area. As such, a Special Management Area Use Permit will be required, and the Project is subject to permit requirements under Chapter 25, Revised Ordinances of Honolulu.

The Project is located about 270 feet from the shoreline on the mauka side of Kalia Road. Development on the makai side of Kalia Road, specifically The Halekulani provides a buffer for any impacts from the Project Site on the ocean and shoreline area. The proposed development will not affect coastal views, coastal recreation, coastal ecosystems, or coastal hazards.

8.9 CUMULATIVE IMPACTS WITH OTHER RELATED PROJECTS

No other improvement projects are planned in the immediate area during the same construction period and there will not be cumulative impacts from concurrent construction periods.

8.10 POPULATION AND GROWTH IMPACTS

The Project will not result in the demolition or construction of dwelling units and will not affect residential population in Waikīkī.

8.11 CULTURAL IMPACT ASSESSMENT

This hotel renovation project will not affect existing access to and through the project and will not affecting existing cultural practices that may presently occur.

9. CONFORMANCE WITH SMA GUIDELINES

The Project Site is within the City's Special Management Area. As such, a Special Management Area Use Permit will be required. The City's SMA Guidelines are contained in Chapter 25, ROH, as amended, and are the counterparts to the State's Coastal Zone Management Guidelines set forth in Chapter 205A, HRS. The following discussion describes how the Project satisfies the City's SMA Guidelines.

9.1 TERMS AND CONDITIONS OF DEVELOPMENT

• **Adequate access, by dedication or other means, to publicly owned or used beaches, recreation areas and natural reserves is provided to the extent consistent with sound conservation principles.** The proposed Project will not adversely impact access to any public recreation area or shoreline. Kalia Road is located about 270 feet from the shoreline and proposed repaving improvements to Kalia Road will not have an impact on access to the shoreline, which is provided through a pedestrian easement along the ewa boundary of The Halekulani.

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

• **Provisions are made for solid and liquid waste treatment, disposition and management which will minimize adverse effects upon special management area resources.** Halekulani Corporation will apply for a sewer connection permit, which in light of the proposed reduction in flows is expected to be approved. A recycling program is already established for the Hotel and additional waste management measures will be implemented for the new restaurant.

• **Alterations to existing land forms and vegetation, except crops, and construction of structures shall cause minimum adverse effect to water resources and scenic and recreational amenities and minimum danger of floods, landslides, erosion, siltation or failure in the event of earthquake.** The Project is in a highly urbanized area with no significant land forms, water resources or scenic and recreational amenities nearby that would be affected by the Project. The existing vegetation/landscaping will be enhanced and increased with this

Project. The renovation Project will not affect the current potential for or impact from floods, landslides, erosion, siltation or failure in the event of earthquake.

9.2 REQUIRED COUNCIL FINDINGS

• **The development will not have any substantial adverse environmental or ecological effect except as such adverse effect is minimized to the extent practicable and clearly outweighed by public health and safety, or compelling public interest.** As discussed throughout this DEA, this renovation Project is not expected to have substantial environmental or ecological effects due to (i) the nature of the Project involving significant interior renovations, no new structural footprint, improvements at the existing pool recreation area on the 8th floor, and limited new floor area improvements on the 8th floor at an existing stage and entertainment area and on the rooftop of the existing structure; (ii) its location among existing resort developments in the central part of urbanized Waikīkī; and (iii) the increase in landscaped open space, as well as public open space. Drainage impacts during construction of the Project will be mitigated to ensure that no adverse impact to the coastal waters will occur.

• **The development is consistent with the objectives and policies set forth in Section 25-3.1 and area guidelines contained in HRS Section 205A-26.** ROH Sec. 25-3.1 provides that the objectives and policies of ROH Chapter 25 shall be those contained in HRS Section 205A-2. The Project is consistent with policy HRS 205A-2(b)(5)(A), which states "Provide public or private facilities and improvements important to the State's economy in suitable locations." The Project will be important to the State and City's economy in many different respects. As noted elsewhere in this document, new construction jobs will be created, real property tax values (and hence tax revenues) will increase, and additional GET and TAT revenues will also increase.

• **The development is consistent with the county general plan, development plans and zoning.** The proposed project is consistent with the County General Plan, Development Plan and Zoning.

General Plan

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

PUCDP

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

Zoning

The Project is within the Resort Mixed Use Precinct with a 280-foot height limit. The proposed uses are consistent with this zoning precinct, which allows hotels and commercial establishments. Conceptual Plans of the Project, providing verification of

compliance with the development standards of the Resort Mixed Use Precinct, are provided in Appendix 1.

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

The Project will renovate an existing urban resort developments that has long been established on the Project Site and contributed to the long-term productivity of the property. The proposed renovation of the Project Site is important to the maintenance and enhancement of the long-term productivity of this property.

11. DESCRIPTION OF IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

The Project Site has long been designated for Resort development. The Waikiki Parc Hotel represents an existing irreversible and irretrievable commitment of the land to urban resort and commercial development. The hotel is in need of repair and renovation to ensure its continued economic viability.

This action will allow a development that complies with the LUO and WSD requirements and standards, provide an opportunity for enhanced open space.

12. PROBABLE ADVERSE ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED

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

12.1 TEMPORARY LOSS OF THE HOTEL ON THE PROJECT SITE

The temporary loss of the hotel associated jobs at the Project Site and the loss of GET revenue during the construction period.

12.2 DISPLACEMENT OF EXISTING TENANTS

The tenant has the option to remain open during construction. Tenant status is not required to be confirmed until 180 days prior to end of current lease period.

12.3 CONSTRUCTION IMPACTS

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

13. MITIGATION MEASURES

13.1 JOB REPLACEMENT

The same or similar hotel associated jobs which currently exist on the Project Site will similarly be required for the staffing of the hotel at the end of the construction period.

13.2 INCREASED TAX REVENUES

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

13.3 CONSTRUCTION PRACTICES

13.3.1 NOISE

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

"Traffic Noise. Noise impacts from project related traffic along the roadways which are expected to service the project traffic (Kalakaua Avenue, Lewers Street, Kalia Road, and Saratoga Road) are not expected due to the reduced levels of project related traffic noise when compared to the noise levels of non-project related traffic and other noise sources. In addition, the existing resort units which are located in the immediate vicinity of the project are currently provided with air conditioning.

"For those renovated guest spaces in the Waikiki Parc Hotel, noise mitigation measures are recommended. Closure and air conditioning of the affected spaces can be an effective noise mitigation measure for this project."

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the temporary degradation of the quality of the acoustic environment in the immediate vicinity of the project site.

"Mitigation of construction noise to inaudible levels will not be practical in all cases due to the intensity of construction noise sources (80 to 90+ dB at 50 FT distance), and due to the exterior nature of the work (demolition, excavation, grading, trenching, concrete pouring, hammering, etc.). The use of properly muffled construction equipment should be required on the job site.

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13.3.2 Air Quality

Being primarily a renovation project, construction impacts are expected to be minimal, as the only ground disturbance is expected to be in the resurfacing of Kalia Road. Dust will be controlled during the resurfacing of Kalia Road by watering open areas at least twice daily.

After construction, the long term impacts would be related to emissions from vehicles generated by the renovated hotel. As noted in the traffic study, the trips generated by the renovated hotel will be less than the trips generated by the existing hotel and as such air quality impacts will be reduced in the long term.

13.3.3 Traffic

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

13.4 TRAFFIC IMPROVEMENTS

Although traffic operations (level of service) with the Project in 2017 are expected to remain similar to conditions without the Project in 2017. Traffic mitigation measures are

planned to improve traffic circulation in the area, as discussed earlier, and are included in the Traffic Impact Report.

14. SUMMARY OF UNRESOLVED ISSUES

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

- A Signage Master Plan will be submitted for review and approval by the Department of Planning and Permitting (DPP) as a Zoning Adjustment at a later date.
- A Variance application will be submitted for review and approval by DPP.
- A WSD Permit, Minor application will be submitted for review and approval by DPP.
- A Surface Encroachment Variance application will be submitted for review and approval by DPP.
- A Subdivision for Pedestrian Easement application will be submitted for review and approval by DPP.
- A Sidewalk Variance application will be submitted for review and approval by DPP.
- Building Permit applications will be submitted for review and approval by DPP.
- A Drain Connection application will be submitted for review and approval by DPP.
- A Site Development Division Master Application for Sewer Connection will be submitted for review and approval by DPP.
- A Street Usage application will be submitted for review and approval by DPP.
- A Construction Plan Approval application will be submitted for review and approval by DPP.
- State: Construction Noise Permit application will be submitted for review and approval by the Department of Health.

15. COMMUNITY INPUT

15.1 WAIKIKI NEIGHBORHOOD BOARD

A meeting was conducted with Mr. Robert Finley, Chair of the Waikiki Neighborhood Board No. 9 and Mr. Jeff Merz (Chair of the New Projects Committee) on February 14 , 2014 to discuss the Project in anticipation of appearing at the March 11, 2014 Board meeting. At the March 11, 2014 Board meeting, a presentation of the Project was made by Keith Kurahashi, agent for Halekulani Corporation. Chair Finley explained that due to a clerical error, the Waikiki Parc Hotel was not listed on the Agenda and a Board vote on the project could not be taken. Following the presentation the Board asked the following questions and Mr. Kurahashi responded (italics):

1. Will the building height be increased? *At the roofline, the building height will increase by about two feet.*
2. What is the schedule for construction? *The construction will begin in fall of 2016 and the hotel will open in early 2018.*
3. Will the hotel be closed during construction? *Yes.*

The Chair Finley asked and Mr. Kurahashi agreed to return to the April Board meeting, at which time the Board expects to vote on the project. The Board action will be reported in the Final Environmental Assessment.

15.2 WAIKIKI IMPROVEMENT ASSOCIATION

A presentation of the Project was made to Mr. Rick Egged, President of the Waikiki Improvement Association, on February 19, 2014.

15.3 DEPARTMENT OF PLANNING AND PERMITTING

Met with Mr. Tony Ching, Chief of the Urban Design Branch of the Department of Planning and Permitting on February 12, 2014 to present the Project and request clarification on our open space diagrams.

15.4 COUNCILMEMBER STANLEY CHANG

Spoke with Councilmember Stanley Chang on March 10, 2014 and provided project information and plans in emails dated March 10 and March 11, 2014.

16. PARTIES TO BE CONSULTED

The following agencies, organizations and public utilities will be provided copies (cd's or hard copies) of this Draft EA (their timely comments will be included and responded to in the Final EA):

Federal

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

State of Hawaii

Department of Accounting & General Services
Department of Business, Economic Development & Tourism
  Energy, Resources & Technology Division
  Office of Planning
Department of Education
Department of Hawaiian Home Lands
Department of Health - Environmental Planning Office
Department of Land & Natural Resources
  State Historic Preservation Division
Office of Environmental Quality Control
Department of Transportation
Office of Hawaiian Affairs
UHM Water Resources Research Center

UHM Environmental Center
Senator (Brickwood Galuteria)
Representative (Tom Brower)
Office of the Governor

City and County of Honolulu

Board of Water Supply
Department of Design & Construction
Department of Environmental Services
Department of Facility Maintenance
Department of Parks and Recreation
Department of Planning & Permitting
- Zoning Plans Review Branch
- Civil Engineering Branch
- Subdivision Branch
- Traffic Review Branch
- Wastewater Branch
- Land Use Permits Division
- Planning Division

Department of Transportation Services
Honolulu Fire Department
Honolulu Police Department
Office of Economic Development - Waikiki
Ala Moana Satellite City Hall
Waikiki Neighborhood Board
Office of the Mayor
Members of the City Council

Organizations

Hawaiian Electric Company
Historic Hawaii Foundation
Honolulu Star Advertiser
The Outdoor Circle
Waikiki Improvement Association
Kawaiahao Church

Libraries

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

Landowners

2-6-2: 11
Harry and Jeanette Weinberg Foundation Inc.
3660 Waialae Avenue, Suite 400
Honolulu, HI 96816-3260
Phone: 808-924-1000

Adele B. Brown Trust
c/o Harry and Jeanette Weinberg Foundation Inc.
3660 Waialae Avenue, Suite 400
Honolulu, HI 96816-3260
Phone: 808-924-1000

2-6-2: 12
Carol K. Kohama Trust
Melvyn R. Kohama Trust
1603 Citron Street
Honolulu, HI 96826

Allan Murakami
1075 S. El Camino Viejo Road
Queen Valley, AZ 85118

Arleen Murakami
1651 Hoolana Place
Pearl City, HI 96782

Dr. Terri Tanaka
95-1105 Kualapa Street
Mililani, HI 96789

Tod Teramoto
c/o Dr. Terri Tanaka
95-1105 Kualapa Street
Mililani, HI 96789

2-6-2: 13
Helumoa Road LLC
c/o Mr. Peter Nottage
44-001 Nohokai Place
Kaneohe, HI 96744

17. PERSONS AND FIRMS PREPARING THIS DRAFT EA

Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawai`i 96822

Halekulani Corporation
2222 Kalakaua Avenue, Suite 900
Honolulu, Hawaii 96815

Anbe, Aruga & Ishizu, Architects, Inc.
1441 Kapiolani Boulevard, Suite 206
Honolulu, HI 96814

Imata & Associates, Inc.
1750 Kalakaua Avenue, Suite 115
Honolulu, HI 96826

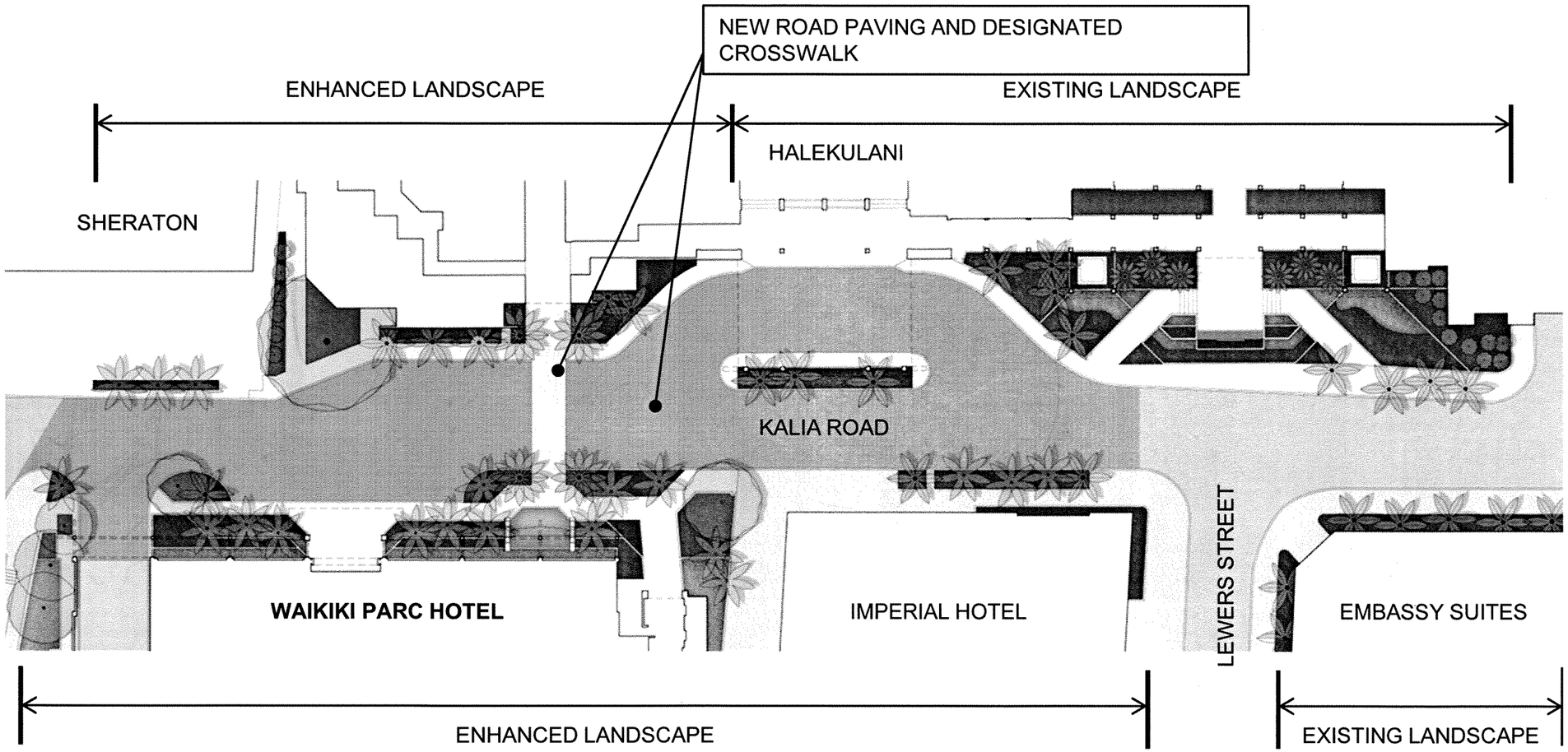
Y. Ebisu & Associates
1126 12th Avenue, Suite 305
Honolulu, HI 96816

Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, HI 96826

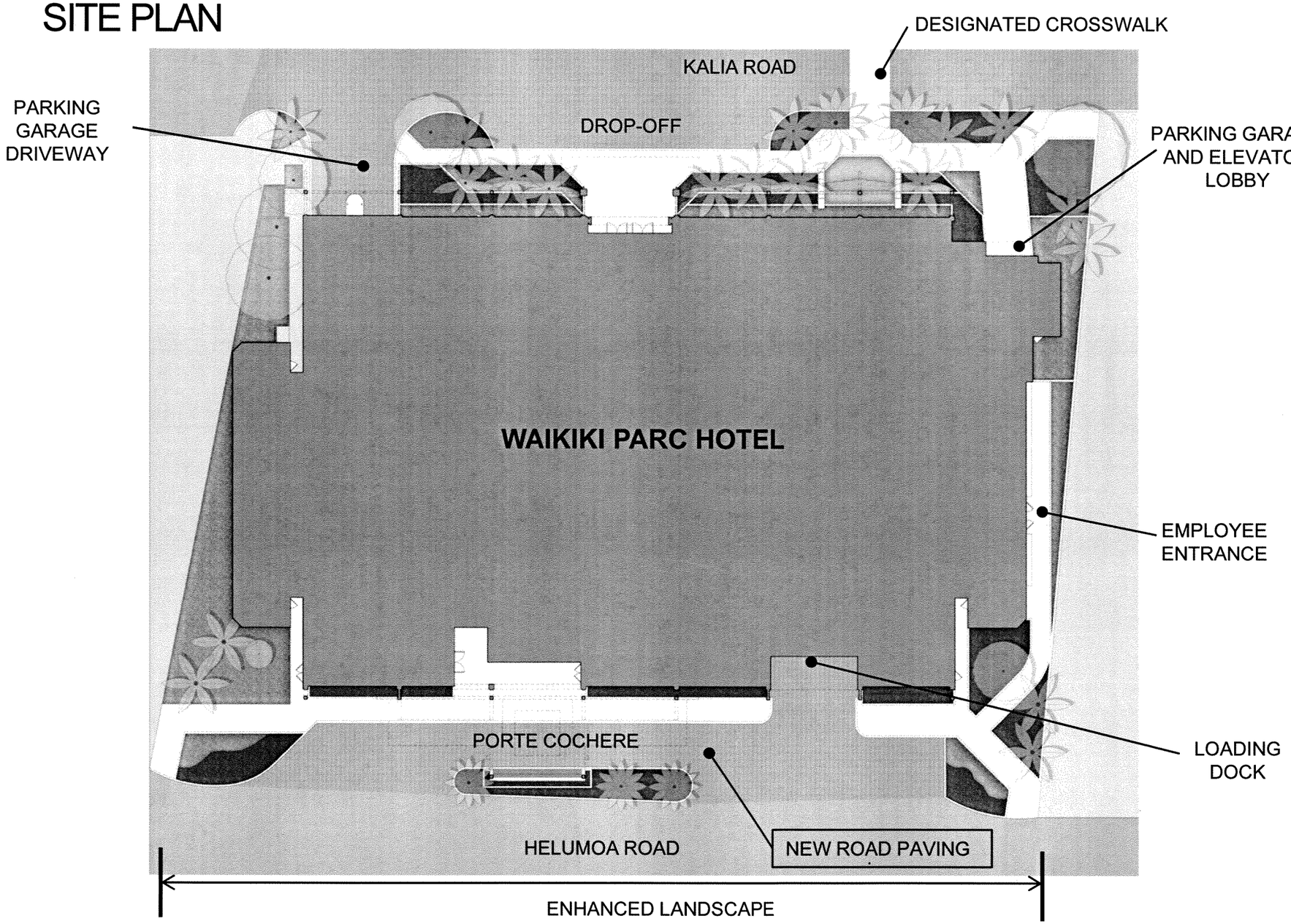
APPENDIX 1

APPENDIX 1
CONCEPT PLANS

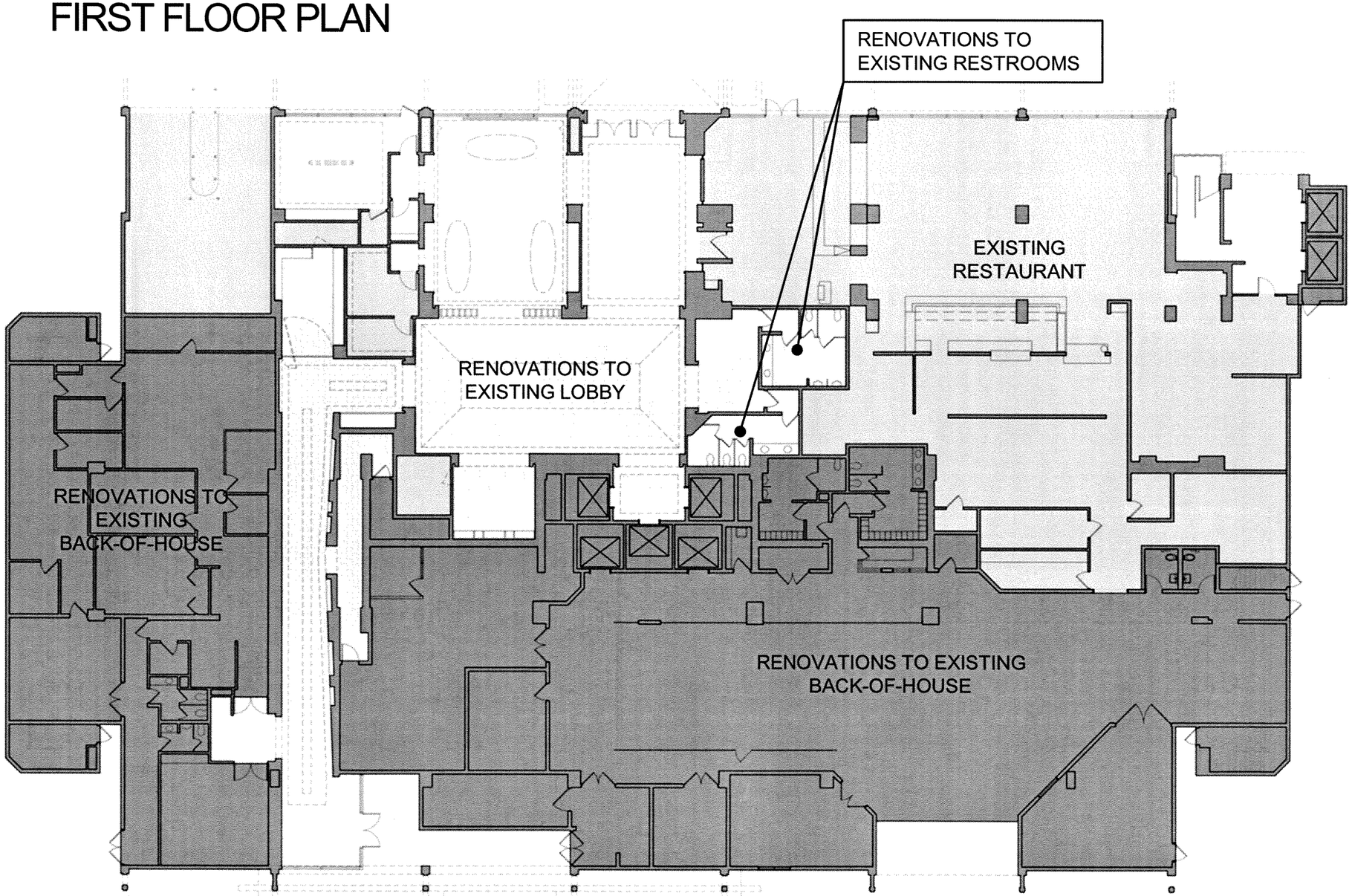
LANDSCAPE CONCEPT



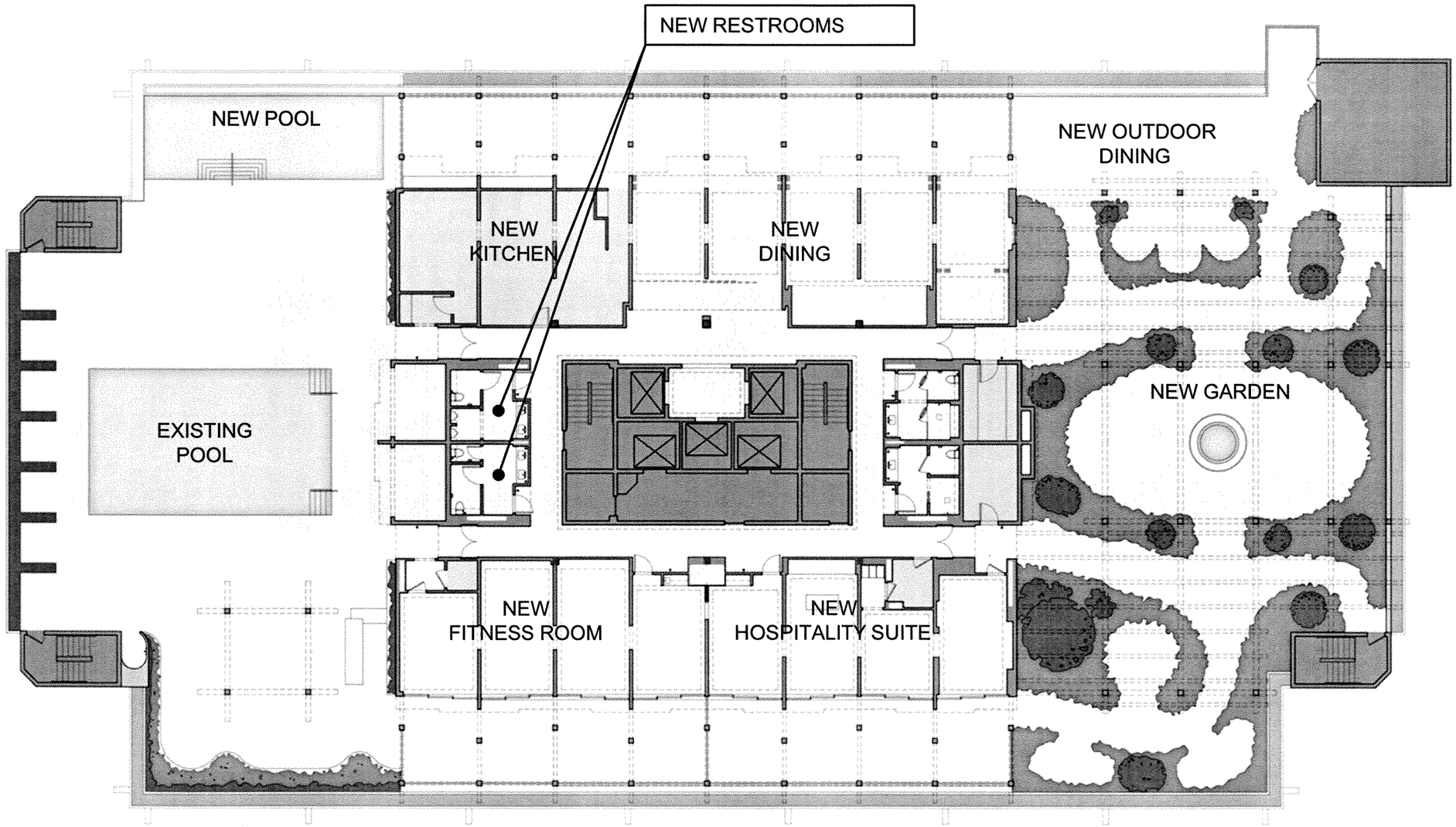
SITE PLAN


DESIGNATED CROSSWALK
KALIA ROAD
PARKING GARAGE DRIVEWAY
DROP-OFF
PARKING GARAGE AND ELEVATOR LOBBY
WAIKIKI PARC HOTEL
EMPLOYEE ENTRANCE
PORTE COCHERE
LOADING DOCK
HELUMOA ROAD
NEW ROAD PAVING
ENHANCED LANDSCAPE

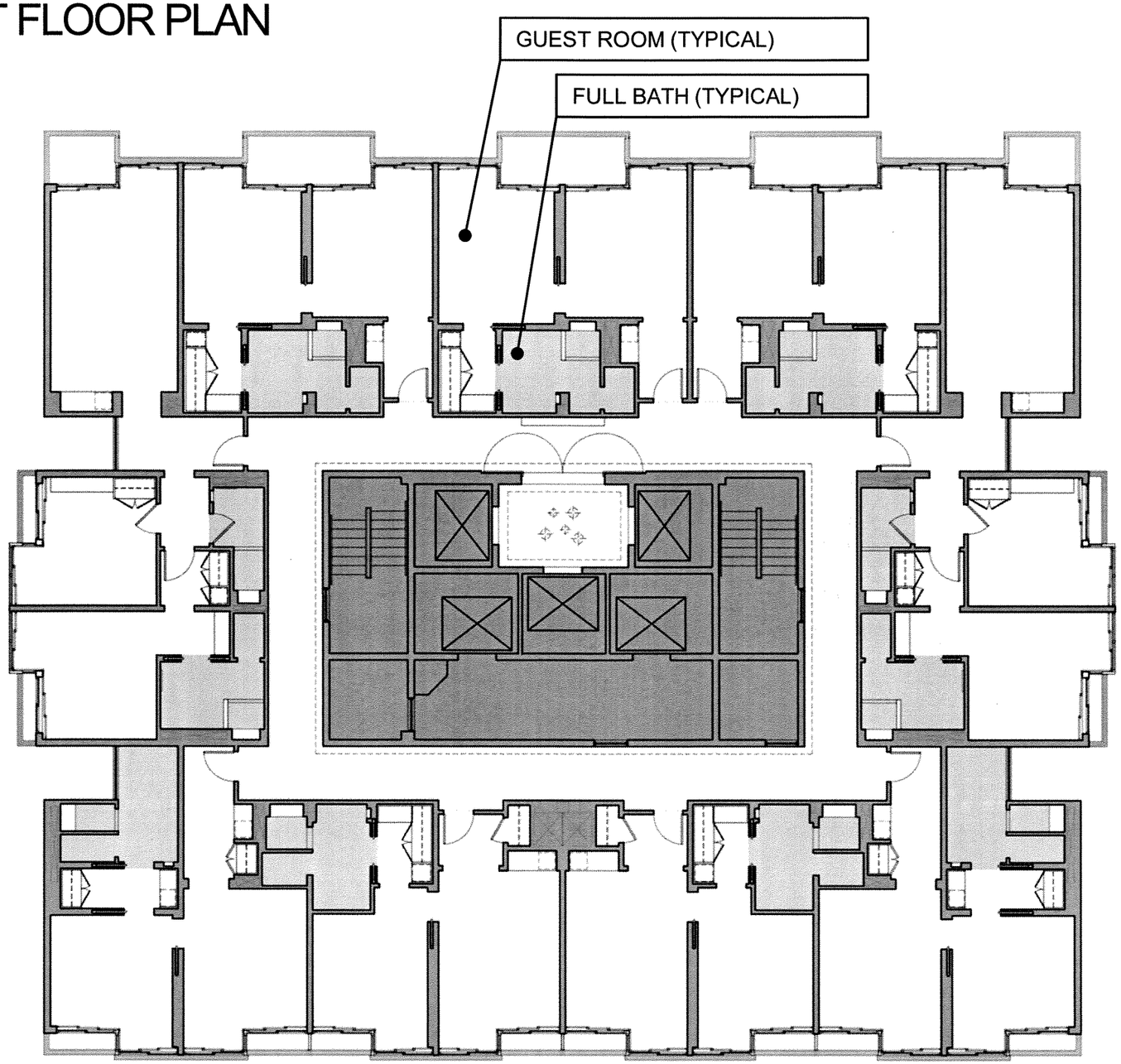
FIRST FLOOR PLAN



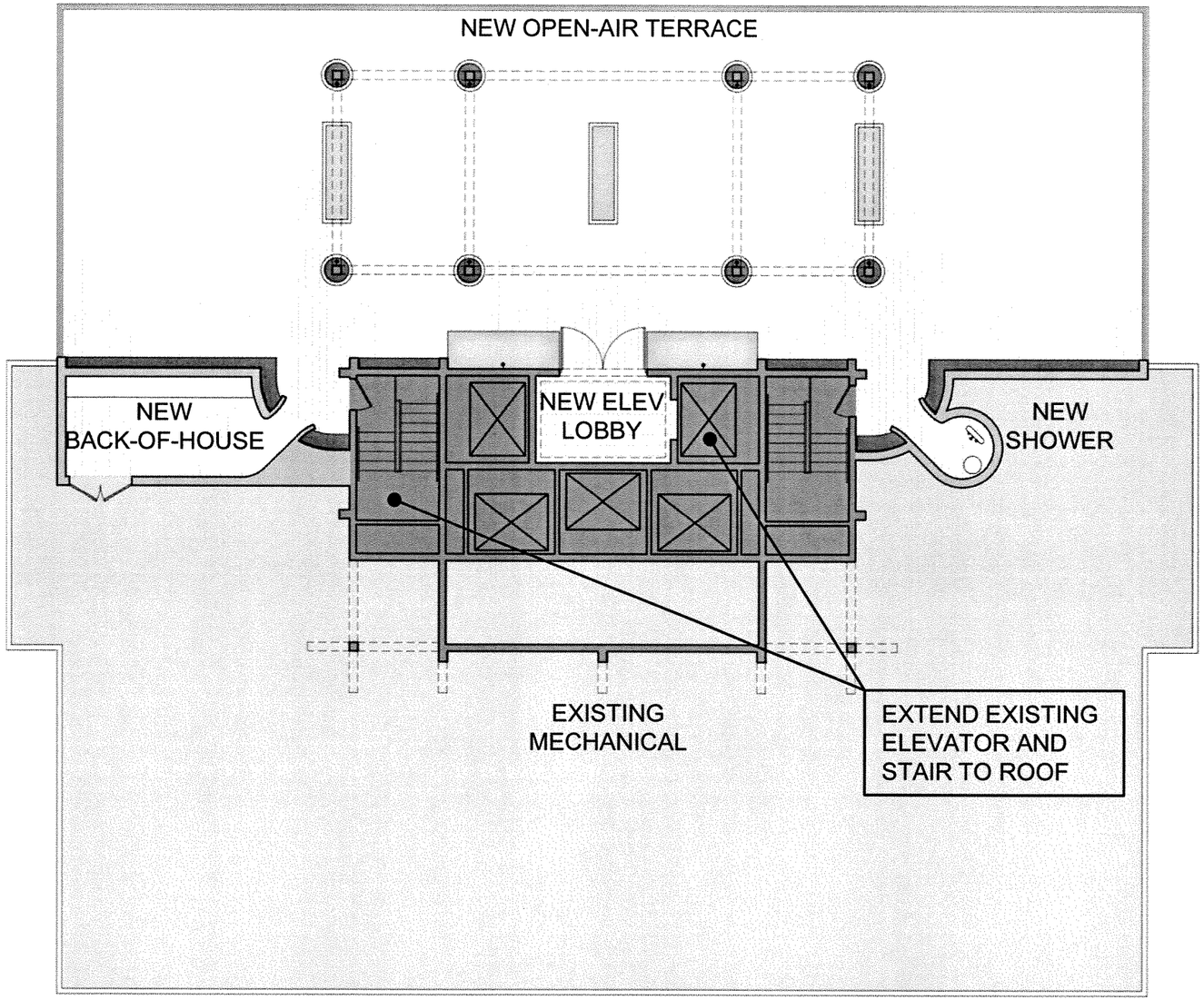
8TH FLOOR PLAN



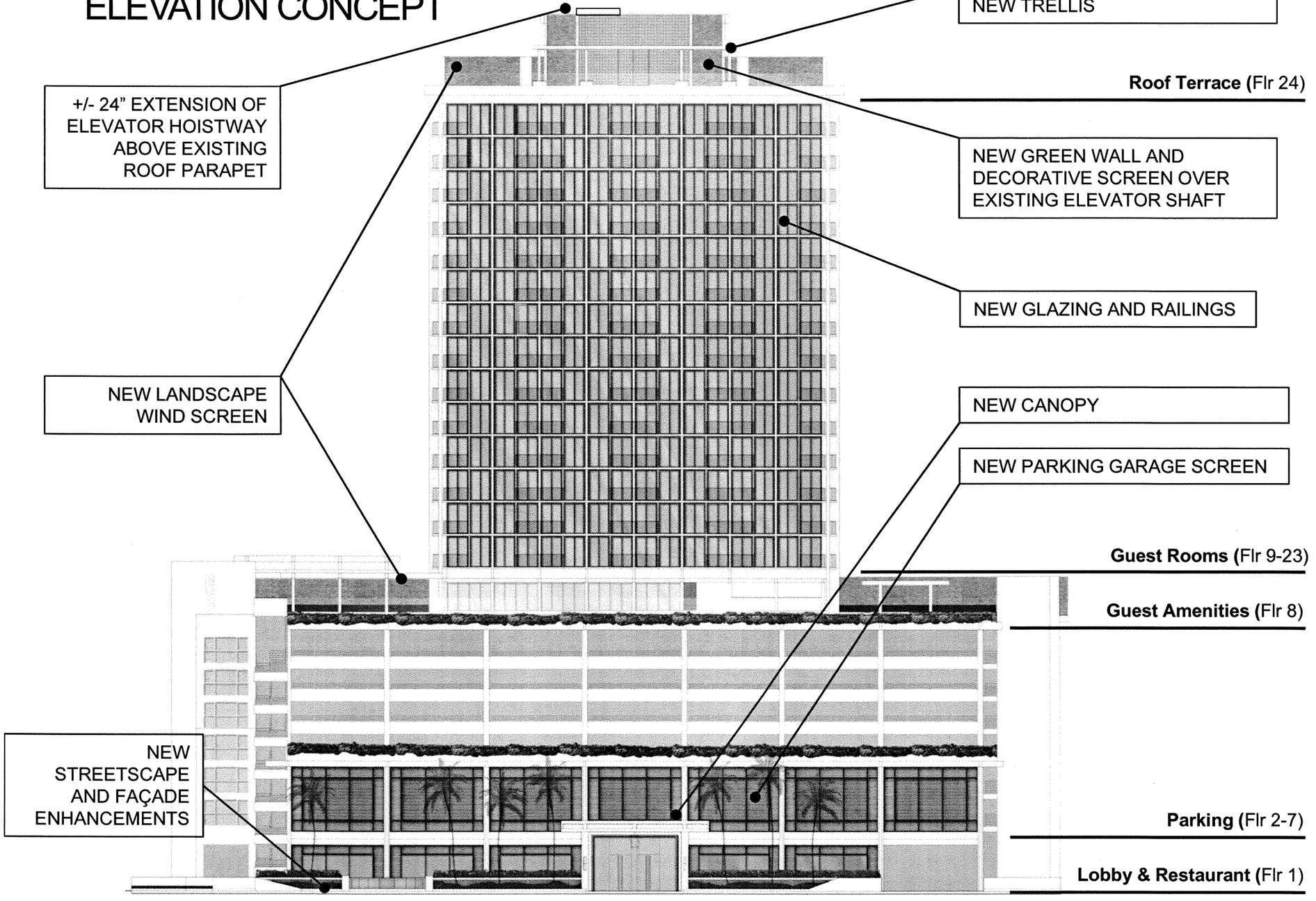
GUEST FLOOR PLAN



ROOF PLAN

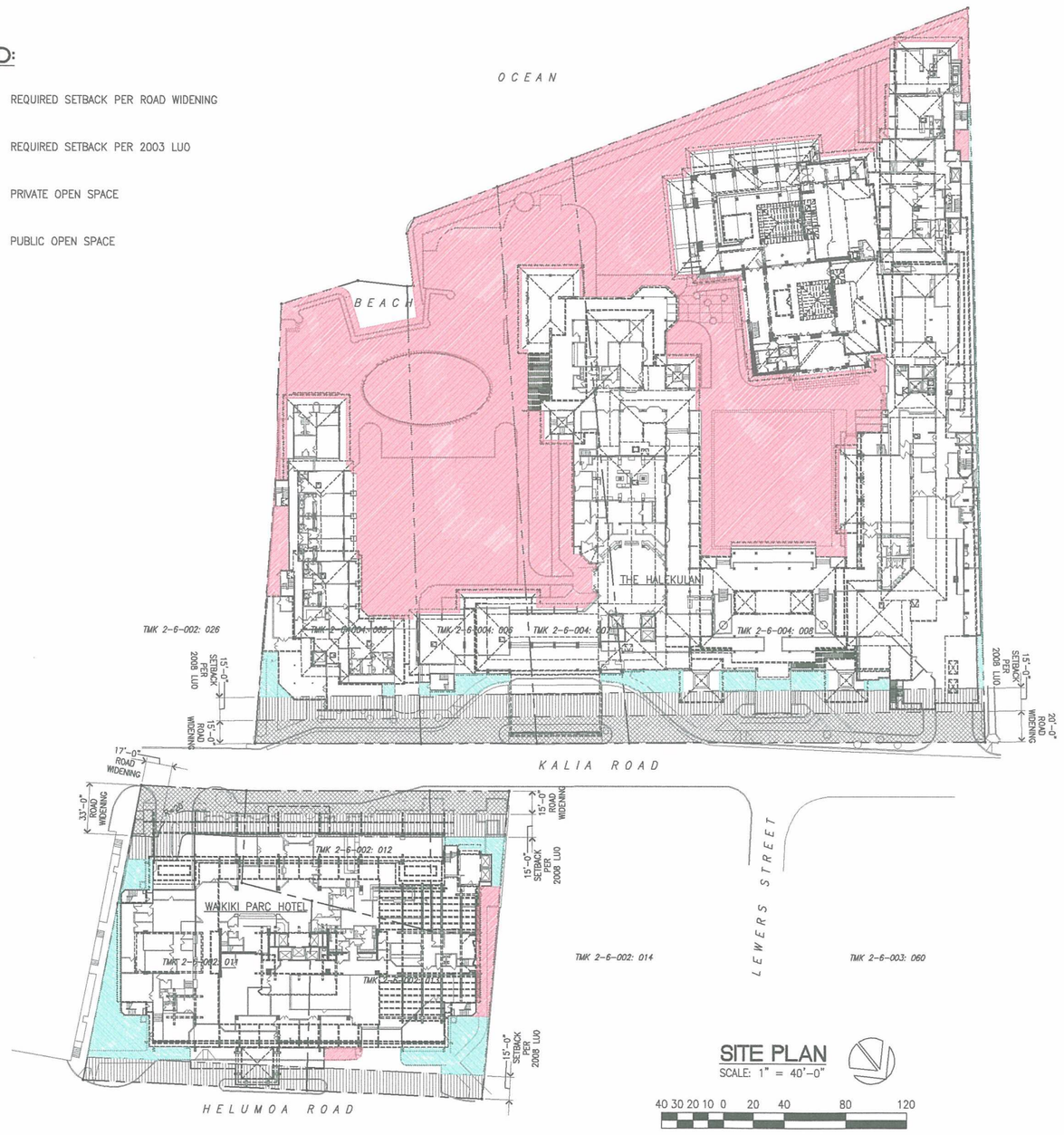

NEW OPEN-AIR TERRACE
NEW
BACK-OF-HOUSE
NEW ELEV
LOBBY
NEW
SHOWER
EXISTING
MECHANICAL
EXTEND EXISTING
ELEVATOR AND
STAIR TO ROOF

ELEVATION CONCEPT



LEGEND:

- REQUIRED SETBACK PER ROAD WIDENING
- REQUIRED SETBACK PER 2003 LUO
- PRIVATE OPEN SPACE
- PUBLIC OPEN SPACE



SITE PLAN
SCALE: 1" = 40'-0"

40 30 20 10 0 20 40 80 120

ZONING INFORMATION
2008 Land Use Ordinance (LUO)

Property Name:	Waikiki Parc Hotel
Tax Map Key:	2-6-002: 011, 012 & 013
Street Address:	2233 Helumoa Road Honolulu, Hawaii 96815
Lot Area:	48,411 S.F.

Property Name:	The Halekulani
Tax Map Key:	2-6-004 005, 006, 007 & 008
Street Address:	2199 Kalia Road Honolulu, Hawaii 96815
Lot Area:	176,852 S.F.

Joint Development No. 85, WSDD-9

Zoning:	Resort Mixed Use Precinct
Principal Use:	Resort, Hotel
Special District:	Waikiki Special District
Historic:	No
State Land Use:	Urban District
SMA/Shoreline:	Yes
Flood Zone:	Firm Zone AO, AE
Road Widening:	Yes, Kalia Road
Lot Restrictions:	Declaration of Restrictive Covenants
Height Limit:	280 Feet

Calculation of Allowable Floor Area per Variance (84/ZBA-154)

Lot Area of Waikiki Parc Hotel & The Halekulani:	225,263 S.F.
Abutting Right-Of-Way Bonus Area:	15,280 S.F.
Total Lot Area:	240,543 S.F.
Maximum Permitted FA: 240,543 x 2.8 (FAR) =	673,521 S.F.
Actual Developed FA for the Halekulani:	536,177 S.F.
Allowable Developed FA for Waikiki Parc Hotel:	137,344 S.F.
Permitted Excess FA for Waikiki Parc Hotel per Variance (84/ZBA-154):	19,177 S.F.
Total Actual Developed FA for Waikiki Parc Hotel and The Halekulani:	692,698 S.F.

Recalculation of Allowable Floor Area per 2008 LUO and Amendments:

Lot Area of Waikiki Parc Hotel & The Halekulani:	225,263 S.F.
Abutting Right-Of-Way Bonus Area:	+15,280 S.F.
Total Lot Area:	240,543 S.F.
Floor Area Bonus Calculations per Bill 52 (Amendment to LUO):	
Total Public Open Space:	6,679 S.F.
Bonus Factor:	10 : 1
Bonus Floor Area:	66,790 S.F.
Total Private Open Space:	65,925 S.F.
Bonus Factor:	5 : 1
Bonus Floor Area:	329,625 S.F.
Total Rooftop Landscaped Area (8th Floor):	3,127 S.F.
Bonus Factor:	1 : 1
Bonus Floor Area:	3,127 S.F.
Total Bonus Floor Area:	399,542 S.F.
Total Allowable Floor Area: 240,543 S.F. + 399,542 S.F. =	640,085 S.F.
Deduction of Lanais and Balconies per Table 21-9.6(B):	
Waikiki Parc Hotel (8th thru 23rd Floors):	8,094 S.F.
The Halekulani (1st thru 17th Floors):	49,625 S.F.
Total Area of Lanais and Balconies:	57,719 S.F.
Total Actual Developed FA for Waikiki Parc Hotel and The Halekulani per Variance (84/ZBA-154):	692,698 S.F.
less Lanais Balconies:	57,719 S.F.
Total Actual Developed FA:	634,979 S.F.
Total Allowable Floor Area:	640,085 S.F.
Allowable Undeveloped FA:	5,106 S.F.

REVISIONS

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND I ACCEPT FULL RESPONSIBILITY FOR THIS PROJECT WILL BE UNDER MY OBSERVATION

EXP. DATE: 04-30-12

ANBE, ARUGA & ISHIZU, ARCHITECTS, INC.
1441 KAPIOLANI BLVD. SUITE 206 HONOLULU, HAWAII 96814

SITE PLAN

WAIKIKI PARC HOTEL
2016 MAJOR RENOVATION
T.M.K. 2-6-002: 011, 012 & 013
2233 HELUMOA RD. HONOLULU, OAHU, HAWAII

Designed by: **	Checked by: C.I.	Scale: As Noted	
Drawn by: B.K.	Approved by: C.I.	Project No.:	

MARCH 2014
DATE

SHEET NO.
A1.0
OF *** SHEETS

APPENDIX 2

APPENDIX 2

ACOUSTIC STUDY FOR THE WAIKIKI PARC HOTEL RENOVATION, WAIKIKI, OAHU, HAWAII

ACOUSTIC STUDY FOR THE WAIKIKI PARC HOTEL RENOVATION WAIKIKI, OAHU, HAWAII

Prepared for:

ANBE, ARUGA & ISHIZU, ARCHITECTS, INC.

Prepared by:

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Honolulu, Hawaii 96816

DECEMBER 2013

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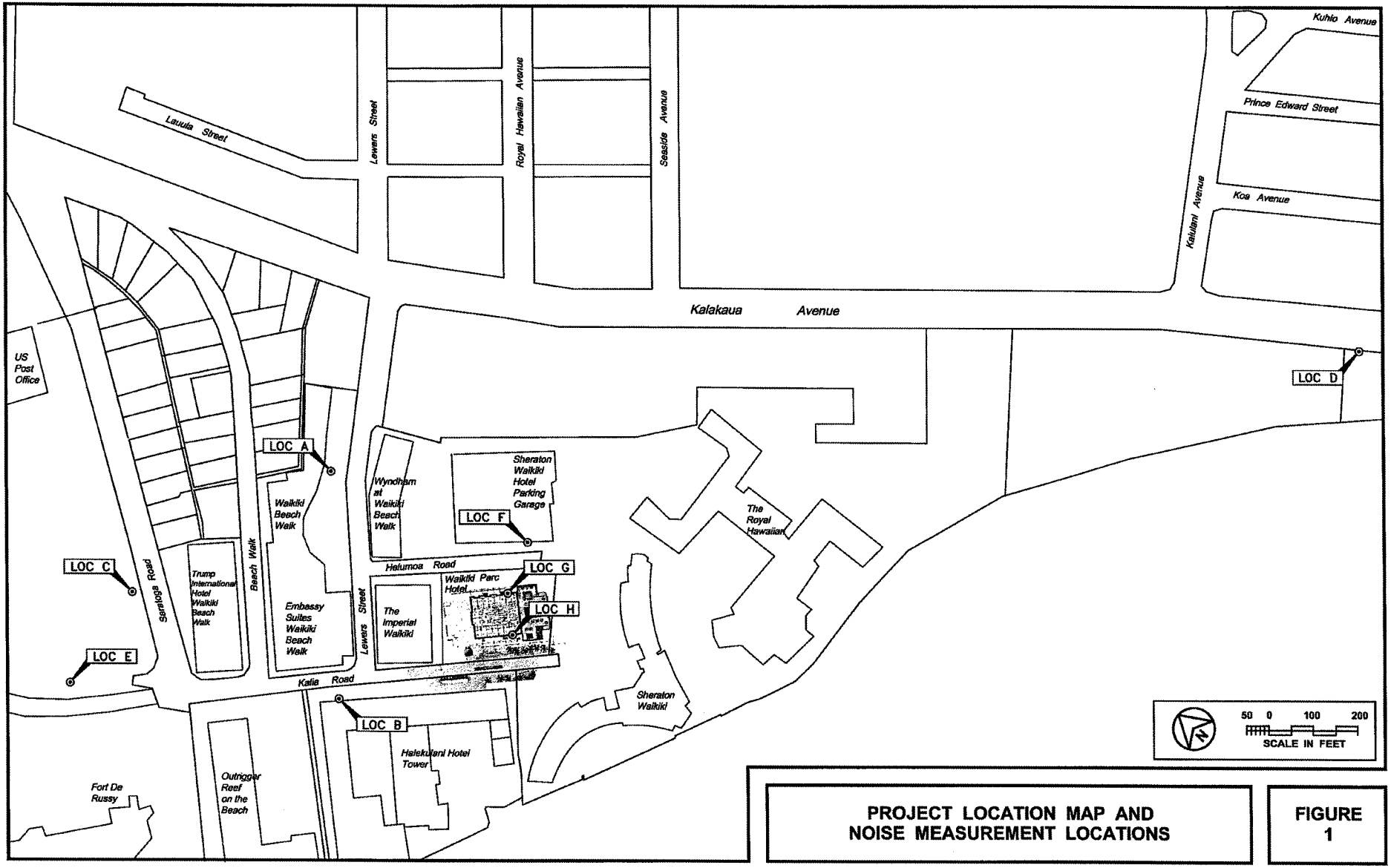
CHAPTER I. SUMMARY

The existing and future traffic noise levels in the vicinity of the proposed Waikiki Parc Hotel Renovation Project in Waikiki (see Figure 1) were evaluated for their potential noise impacts and their relationships to current FHA/HUD noise standards. The traffic noise level increases along the major access roadways to and from the project site were calculated. No significant increases in traffic noise are predicted to occur along Kalakaua Avenue, Lewers Street, Kalia Road, and Saratoga Road as a result of project traffic following project build-out by CY 2017. Traffic noise from Kalakaua Avenue, Lewers Street, Kalia Road, and Saratoga Road will continue to control background ambient noise levels in the project environs, with traffic noise levels exceeding 65 DNL at existing resort units which front these roadways.

Project traffic will reduce rather than add to existing traffic noise levels along the roadways in the project environs. This will result in decreases in total (project plus non-project) traffic noise levels following completion of the project, except along Kalakaua Avenue, where future traffic noise levels will increase due to non-project traffic.

The proposed renovation project should not result in long term adverse noise impacts on adjacent resort and commercial establishments. The future activities anticipated to occur within the project area are very similar to existing resort activities, so maintaining the status quo in respect to noise emissions should not be difficult. Unavoidable, but temporary, noise impacts may occur during the demolition and construction activities at the exterior work areas. Because construction activities are predicted to be audible within the project site and at adjoining properties, the quality of the acoustic environment may be degraded during periods of construction. Mitigation measures to reduce construction noise to inaudible levels will not be practical in all cases, but the use of quiet equipment (i.e., construction equipment with factory supplied mufflers and with enclosed engine compartments) is recommended as a standard mitigation measure. The implementation of Hawaii State Department of Health permit procedures and curfew periods for construction activities is also expected for this project.



PROJECT LOCATION MAP AND NOISE MEASUREMENT LOCATIONS

FIGURE 1

CHAPTER II. PURPOSE

The primary objective of this study was to describe the existing and future noise environment in the environs of the proposed Waikiki Parc Hotel Renovation Project in Waikiki on the island of Oahu. Traffic noise level increases and impacts associated with the proposed renovations were to be determined along the public roadways which are expected to service the project related traffic. A specific objective was to determine future traffic noise level increases associated with both project and non-project traffic, and the potential noise impacts associated with these increases.

Potential noise impacts from the activities at the renovated Pool Deck on the Eighth Floor were also evaluated. Assessments of possible future impacts from short term construction noise at the project site were also included as noise study objectives. Recommendations for minimizing identified noise impacts were also to be provided as required.

CHAPTER III. NOISE DESCRIPTORS AND THEIR RELATIONSHIP TO LAND USE COMPATIBILITY

The noise descriptor currently used by federal agencies (such as FHA/HUD) to assess environmental noise is the Day-Night Average Sound Level (Ldn or DNL). This descriptor incorporates a 24-hour average of instantaneous A-Weighted Sound Levels as read on a standard Sound Level Meter. By definition, the minimum averaging period for the DNL descriptor is 24 hours. Additionally, sound levels which occur during the nighttime hours of 10:00 PM to 7:00 AM are increased by 10 decibels (dB) prior to computing the 24-hour average by the DNL descriptor. A more complete list of noise descriptors is provided in Appendix B to this report.

Table 1, derived from Reference 1, presents current federal noise standards and acceptability criteria for residential land uses. Land use compatibility guidelines for various levels of environmental noise as measured by the DNL descriptor system are shown in Figure 2. As a general rule, noise levels of 55 DNL or less occur in rural areas, or in areas which are removed from high volume roadways. In urbanized areas which are shielded from high volume streets, DNL levels generally range from 55 to 65 DNL, and are usually controlled by motor vehicle traffic noise. Buildings which front major roadways are generally exposed to levels of 65 DNL, and as high as 75 DNL when the roadway is a high speed freeway.

In the project area, traffic noise levels associated with Kalakaua Avenue are greater than 70 DNL along its Rights-of-Way due to the large volumes of traffic and heavy vehicles (trucks and buses) on this major thoroughfare. Adding to the traffic noise from the roadways are the relatively high noise levels of sirens on police and emergency vehicles, outdoor mechanical equipment (fans and air conditioning equipment) at the commercial and resort buildings, maintenance activities, and refuse pickup and delivery truck operations.

For purposes of determining noise acceptability for funding assistance from federal agencies (FHA/HUD and VA), an exterior noise level of 65 DNL or less is considered acceptable for noise sensitive properties. This standard is applied nationally (Reference 2), including Hawaii. Because of our open-living conditions, the predominant use of naturally ventilated dwellings, and the relatively low exterior-to-interior sound attenuation afforded by these naturally ventilated structures, an exterior noise level of 65 DNL does not eliminate all risks of noise impacts. Because of these factors, and as recommended in Reference 3, a lower level of 55 DNL is considered as the "Unconditionally Acceptable" (or "Near-Zero Risk") level of exterior noise. However, after considering the cost and feasibility of applying the lower level of 55 DNL, government agencies such as FHA/HUD and VA have selected 65 DNL as a more appropriate regulatory standard.

For commercial, industrial, and other non-noise sensitive land uses, exterior noise levels as high as 75 DNL are generally considered acceptable. Exceptions to this

TABLE 1

EXTERIOR NOISE EXPOSURE CLASSIFICATION (RESIDENTIAL LAND USE)

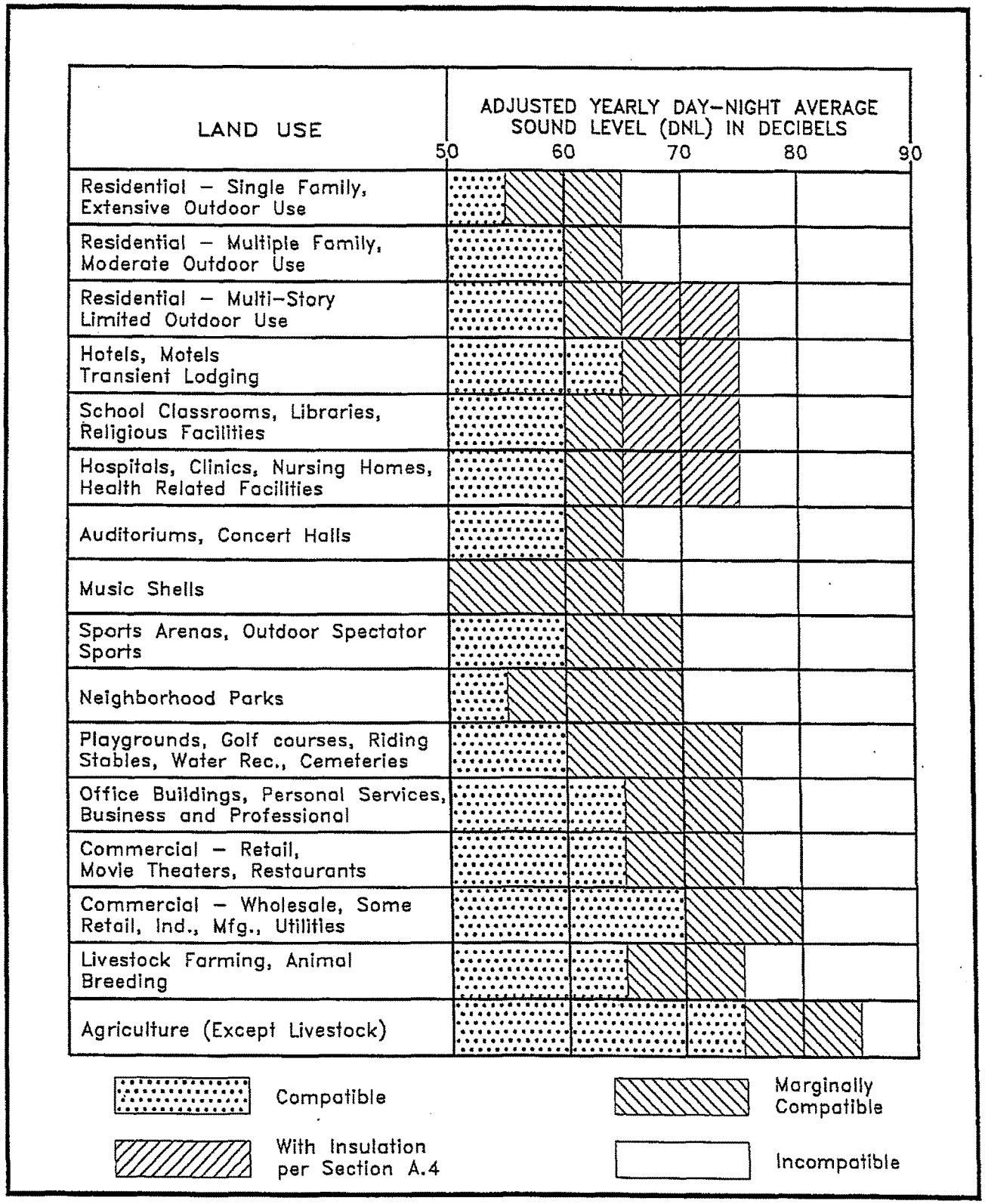
NOISE EXPOSURE CLASS	DAY–NIGHT SOUND LEVEL	EQUIVALENT SOUND LEVEL	FEDERAL (1) STANDARD
Minimal Exposure	Not Exceeding 55 DNL	Not Exceeding 55 Leq	Unconditionally Acceptable
Moderate Exposure	Above 55 DNL But Not Above 65 DNL	Above 55 Leq But Not Above 65 Leq	Acceptable(2)
Significant Exposure	Above 65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

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

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

occur when naturally ventilated office and other commercial establishments are exposed to exterior levels which exceed 65 DNL.

On the island of Oahu, the State Department of Health (DOH) regulates noise from fixed mechanical equipment and construction activities. State DOH noise regulations are expressed in maximum allowable noise limits rather than DNL (see Reference 4). Although they are not directly comparable to noise criteria expressed in DNL, State DOH noise limits for single family residential lands equate to approximately 55 DNL. For multifamily residential, commercial, and resort lands, the State DOH noise limits equate to approximately 60 DNL. For light and heavy industrial lands, the State DOH noise limits equate to approximately 76 DNL. Construction activities, which are typically noisier than the State DOH noise limits, are regulated through the issuance of permits for allowing excessive construction noise during limited time periods.



LAND USE COMPATIBILITY WITH YEARLY AVERAGE DAY-NIGHT AVERAGE SOUND LEVEL (DNL) AT A SITE FOR BUILDINGS AS COMMONLY CONSTRUCTED.
(Source: American National Standards Institute S12.9-1998/Part 5)

FIGURE 2

CHAPTER IV. GENERAL STUDY METHODOLOGY

Existing traffic and background ambient noise levels were obtained in the project environs between November and December 2013. These readings were used to provide a basis for describing the existing noise environment in the project environs. Traffic noise measurements along Kalalaua Avenue were obtained at Location D as shown in Table 2. Traffic noise measurements along Lewers Street, Kalia Road, and Saratoga Road were obtained at Locations A, B, C, and E. Background ambient noise measurements were obtained at Locations F, G, and H. The locations of these measurement sites are shown in Figure 1. Locations B, C, D, and E were at street level. Location A was at the second level of the Waikiki Beachwalk shopping complex; Location F was on the upper parking level of the Sheraton Waikiki parking structure; and Locations G and H were at the 21st and 17th floor lanais of the Waikiki Parc Hotel guest suites. Daytime and nighttime background ambient noise measurements were obtained at Locations F, G, and H.

Traffic noise calculations for the existing conditions as well as noise predictions for CY 2017 were performed using the Federal Highway Administration (FHWA) Traffic Noise Model Version 2.5 (Reference 5). Traffic data entered into the noise prediction model were: roadway and receiver locations; hourly traffic volumes, average vehicle speeds; estimates of traffic mix; and "Pavement" propagation loss factor. The traffic data and forecasts for the project (Reference 6) were the primary sources of data inputs to the model. Appendix C summarizes the AM and PM peak hour traffic volumes for CY 2013 and 2017 which were available from the project's traffic study. For existing and future traffic along the streets surrounding the project site, it was assumed that the average noise levels, or Leq(h), during the peak traffic hour were approximately 1.9 dB less than the 24-hour DNL along the roadways evaluated. This assumption was based on calculated traffic noise levels using the traffic counts from Reference 7, which are shown graphically in Figure 3.

Traffic noise calculations for both the existing and future conditions in the project environs were developed at various distances from the centerlines of the roadways. Traffic noise levels were also calculated for future conditions with (Build Alternative) and without (No Build Alternative) the proposed renovation project. The forecasted changes in traffic noise levels over existing levels were calculated with and without the project, and noise impact risks evaluated. The relative contributions of non-project and project traffic to the total noise levels were also calculated, and an evaluation of possible traffic noise impacts was made.

In addition to the traffic noise measurements, background ambient noise measurements were obtained at Locations F, G, and H (see Figure 1), where the noise from distant traffic, refuse trucks, emergency sirens, outdoor mechanical equipment, and loud voices controlled the background ambient noise levels. The results of these measurements plus the results of the traffic noise measurements and predictions were used to describe the existing and future noise levels in the project environs.

TABLE 2

TRAFFIC AND BACKGROUND NOISE MEASUREMENT RESULTS

LOCATION	Time of Day (HRS)	Ave. Speed (MPH)	Hourly Traffic Volume AUTO	M.TRUCK	H.TRUCK	Measured Leq (dB)	Predicted Leq (dB)
A. 57 FT from the center-line of Lewers Street (9/27/13)	1509 TO 1609	35	213	8	0	64.6	64.6
B. 42 FT from the center-line of Kalia Road (9/27/13)	1617 TO 1717	35	253	27	23	67.6	67.6
C. 50 FT from the center-line of Saratoga Road (12/09/13)	1600 TO 1700	25	642	28	125	66.4	66.4
D. 55 FT from the center-line of Kalakaua Ave. (11/21/13)	0700 TO 0800	36	630	28	48	65.8	65.9
D. 55 FT from the center-line of Kalakaua Ave. (11/21/13)	1200 TO 1300	36	683	28	86	67.7	67.4
D. 55 FT from the center-line of Kalakaua Ave. (11/21/13)	1553 TO 1653	36	1,055	20	67	67.2	67.4

TABLE 2 (CONTINUED)

TRAFFIC AND BACKGROUND NOISE MEASUREMENT RESULTS

LOCATION	Time of Day (HRS)	Ave. Speed (MPH)	Hourly Traffic Volume AUTO	M.TRUCK	H.TRUCK	Measured Leq (dB)	Predicted Leq (dB)
E. 50 FT from the center-line of Kalia Road (12/09/13)	1430 TO 1530	25	484	38	144	64.6	64.9
F. On upper level of Sheraton Waikiki Parking Structure (9/01/13)	1444 TO 1733	N/A	N/A	N/A	N/A	62.6	N/A
G. On lanai of Suite 2113 Waikiki Parc Hotel (9/27-28/13)	2200 TO 0700	N/A	N/A	N/A	N/A	63.2	N/A
G. On lanai of Suite 2113 Waikiki Parc Hotel (9/27-28/13)	0700 TO 2200	N/A	N/A	N/A	N/A	65.6	N/A
H. On lanai of Suite 1718 Waikiki Parc Hotel (9/28-29/13)	2200 TO 0700	N/A	N/A	N/A	N/A	59.5	N/A
H. On lanai of Suite 1718 Waikiki Parc Hotel (9/28-29/13)	0700 TO 2200	N/A	N/A	N/A	N/A	62.1	N/A

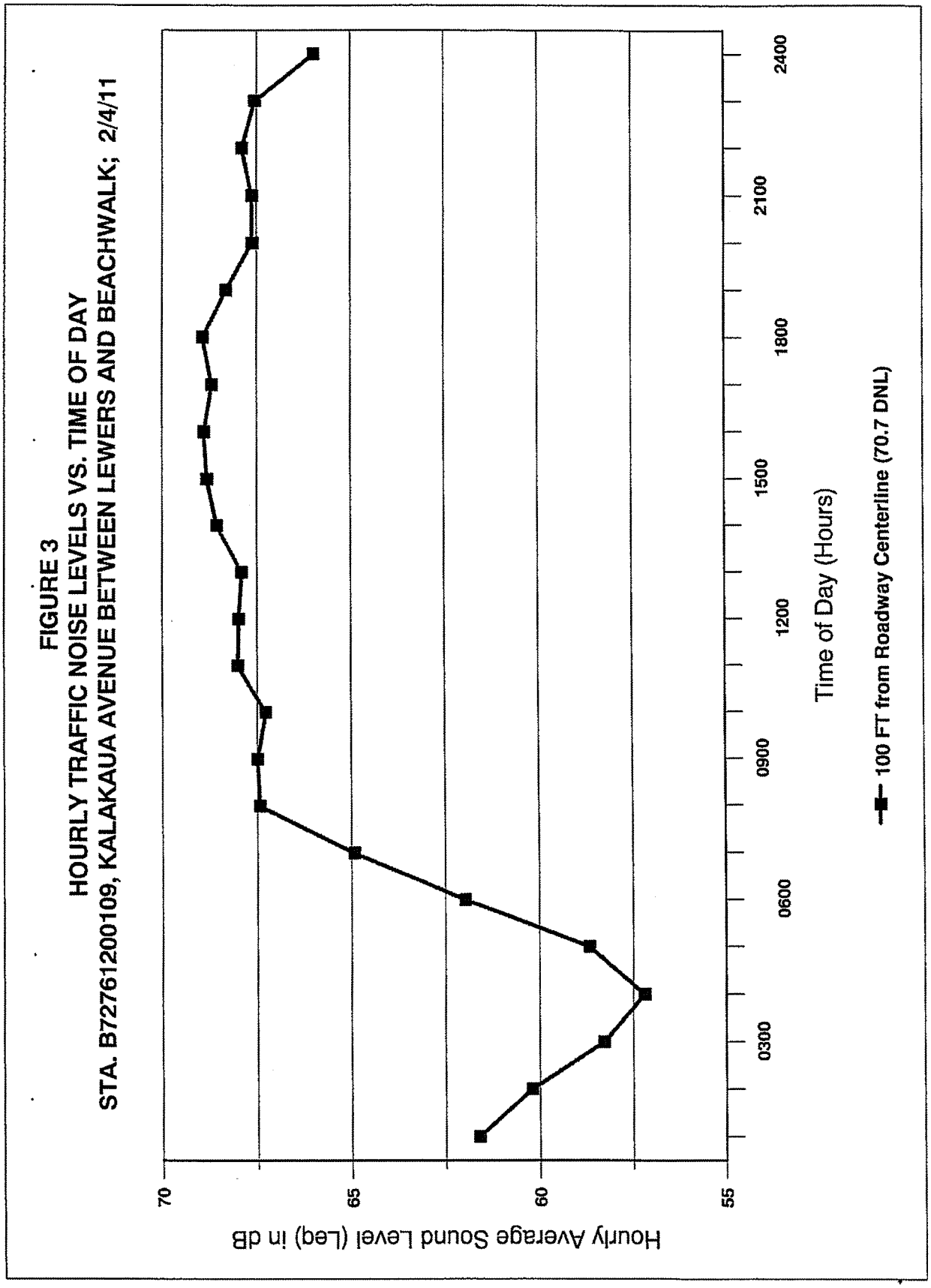


FIGURE 3
HOURLY TRAFFIC NOISE LEVELS VS. TIME OF DAY
STA. B72761200109, KALAKAUA AVENUE BETWEEN LEWERS AND BEACHWALK; 2/4/11
Hourly Average Sound Level (Leq) in dB
70
65
60
55
0300
0600
0900
1200
1500
1800
2100
2400
Time of Day (Hours)
100 FT from Roadway Centerline (70.7 DNL)

Calculations of average exterior and interior noise levels from construction activities were performed for typical naturally ventilated and air conditioned living units. Predicted noise levels were compared with existing background ambient noise levels, and the potential for noise impacts was assessed.

V. EXISTING ACOUSTICAL ENVIRONMENT

Major contributors to the existing background ambient noise levels within the project area are: traffic along Kalakaua Avenue, Saratoga Road, Kalia Road, and Lewers Street; refuse collection trucks; tour buses and delivery trucks which are idling or positioning at curbside; loud motorcycles; the sirens of emergency and police vehicles; outdoor mechanical equipment, and nearby construction activities. The louder events, such as the sirens, refuse trucks, and live music, were clearly audible above the other background ambient noise sources.

The typical hourly variations in noise levels within the project environs are controlled by motor vehicle traffic along the high volume roadways such as Kalakaua Avenue, loud sirens, outdoor entertainment events at the Halekulani Hotel, or by nearby operating mechanical equipment. Background ambient noise levels tend to be lowest during the early morning hours between 3:00 and 5:00 AM, and are typically near 60 dBA during the quietist periods. The early morning background ambient noise levels during the quieter periods are typically controlled by operating mechanical equipment.

Traffic noise levels tend to be lowest during the early morning hours between 3:00 and 5:00 AM, and tend to be highest during the PM commuting hours. Superimposed on the hourly variations associated with traffic noise are the very large increases in average hourly noise levels caused by the louder noise sources, such as the emergency sirens and refuse trucks.

The existing traffic volumes and their noise contributions at 50, 75, and 100 feet setback distances from the centerlines of the roadways servicing the project are shown in Table 3 for the weekday peak traffic hour. The corresponding setback distances from the roadways' centerlines to their corresponding 65, 70, and 75 DNL traffic noise contours for ground level receptors are shown in Table 4. Based on the results shown in Tables 3 and 4, as well as the predicted and measured sound levels at the various locations along the major roadways, it was concluded that existing background noise levels in the project environs currently exceed 65 DNL at essentially all buildings which front Kalakaua Avenue. In addition, at the upper floors of buildings located between Kalakaua Avenue and Kalia Road, distant traffic plus the other non-traffic noise sources in the area cause ambient noise levels to exceed 65 DNL. At those receptor locations which front Kalakaua Avenue, existing background ambient noise levels exceed 70 DNL, but are less than 75 DNL. For those high-rise receptor locations with visual line of sight to Kalakaua Avenue, background ambient noise levels can be expected to exceed 65 DNL due to the extremely large setback distances from this roadway to its 65 DNL noise level contour.

At receptor locations in the project environs, emergency and police vehicles, noisy motorcycles, mopeds, and buses, and refuse trucks are typically the loudest noise sources, with intermittent noise levels ranging as high as 90 to 95 dBA. Parked tour buses idling at curbside are also relatively noisy at 70 to 80 dBA. Noise from delivery truck movements and loading dock activities can also be relatively loud at 70 to 90 dBA.

TABLE 3

EXISTING (CY 2013) TRAFFIC VOLUMES AND NOISE LEVELS ALONG ROADWAYS IN PROJECT AREA (AM OR PM PEAK HOUR)

LOCATION	SPEED (MPH)	TOTAL VPH	****** VOLUMES (VPH) ******** AUTOS	M TRUCKS	H TRUCKS	50' Leq	75' Leq	100' Leq
Kalakaua Ave. W. of Lewers St., PM	36	1,860	1,711	37	112	70.2	68.3	67.0
Kalakaua Ave. E. of Lewers St., PM	36	1,520	1,399	30	91	69.3	67.4	66.1
Lewers St. S. of Kalakaua Ave., PM	35	410	395	15	0	67.9	66.3	65.1
Lewers St. N. of Kalia Rd., AM	35	196	189	7	0	64.7	63.1	61.9
Kalia Rd. W. of Lewers St., PM	35	335	278	30	27	67.6	65.8	64.6
Kalia Rd. E. of Lewers St., PM	35	188	156	17	15	65.1	63.3	62.1
Kalia Rd. W. of Saratoga Rd., PM	25	716	515	43	158	65.3	63.5	62.2
Kalia Rd. E. of Saratoga Rd., PM	35	622	516	56	50	66.4	64.6	63.4
Saratoga Rd. N. of Kalia Rd., PM	25	798	646	28	124	66.4	64.5	63.3

TABLE 4

EXISTING AND CY 2017 DISTANCES TO 65, 70, AND 75 DNL CONTOURS

STREET SECTION	65 DNL SETBACK (FT) EXISTING	65 DNL SETBACK (FT) CY 2017	70 DNL SETBACK (FT) EXISTING	70 DNL SETBACK (FT) CY 2017	75 DNL SETBACK (FT) EXISTING	75 DNL SETBACK (FT) CY 2017
Kalakaua Ave. W. of Lewers St.	237	248	78	82	27	28
Kalakaua Ave. E. of Lewers St.	194	208	65	69	22	24
Lewers St. S. of Kalakaua Ave.	162	149	48	46	13	13
Lewers St. N. of Kalia Rd.	75	70	21	21	< 12	< 12
Kalia Rd. W. of Lewers St.	143	118	45	36	14	< 12
Kalia Rd. E. of Lewers St.	79	51	25	16	< 12	< 12
Kalia Rd. W. of Saratoga Rd.	82	81	27	26	< 12	< 12
Kalia Rd. E. of Saratoga Rd.	107	98	34	32	< 12	< 12
Saratoga Rd. N. of Kalia Rd.	105	102	35	34	12	12

Notes:

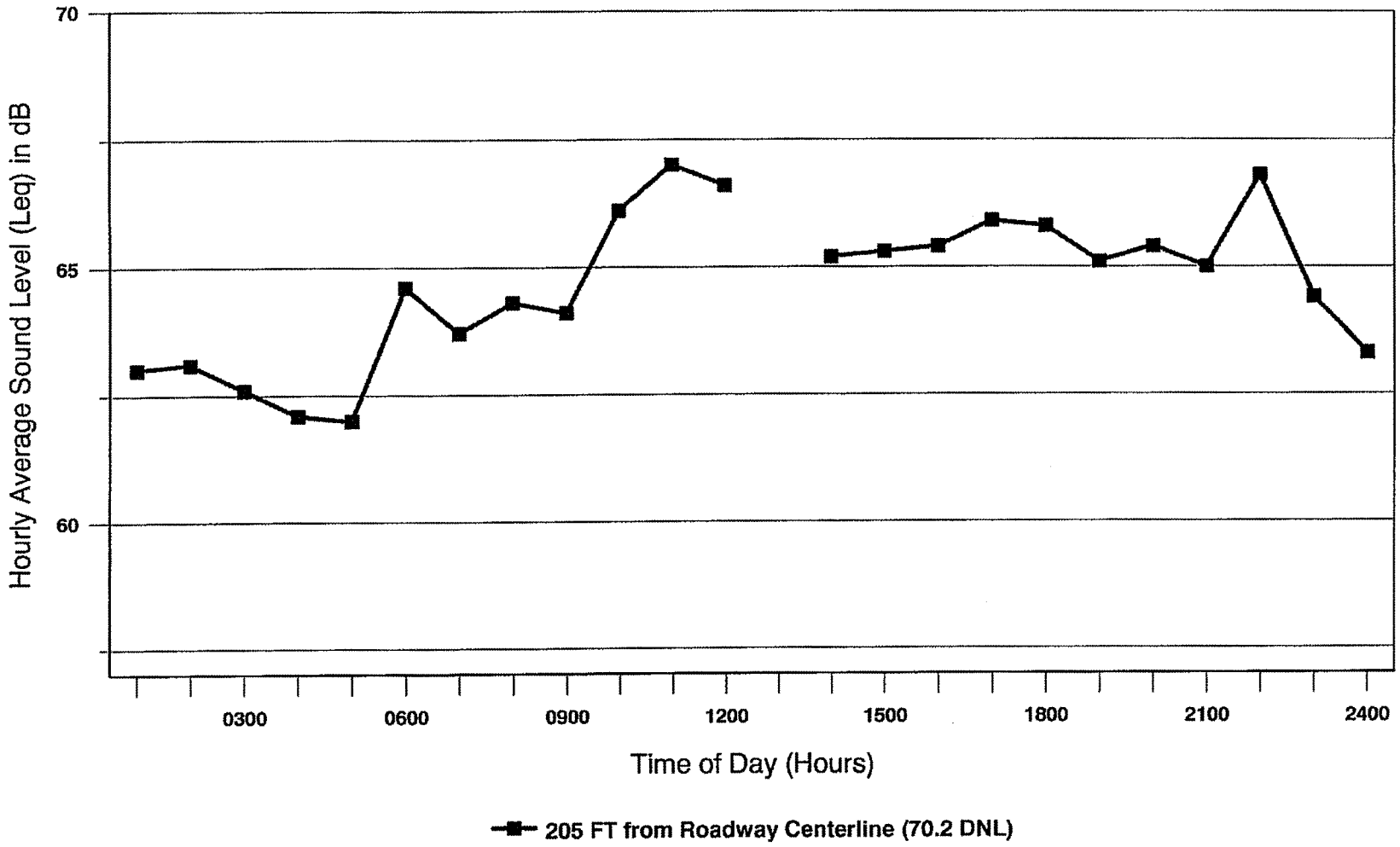
(1) All setback distances are from the roadways' centerlines.
(2) See Tables 3 and 5 for traffic volume, speed, and mix assumptions.
(3) Setback distances are for ground level receptors.
(4) "Pavement" conditions assumed along all roadways.

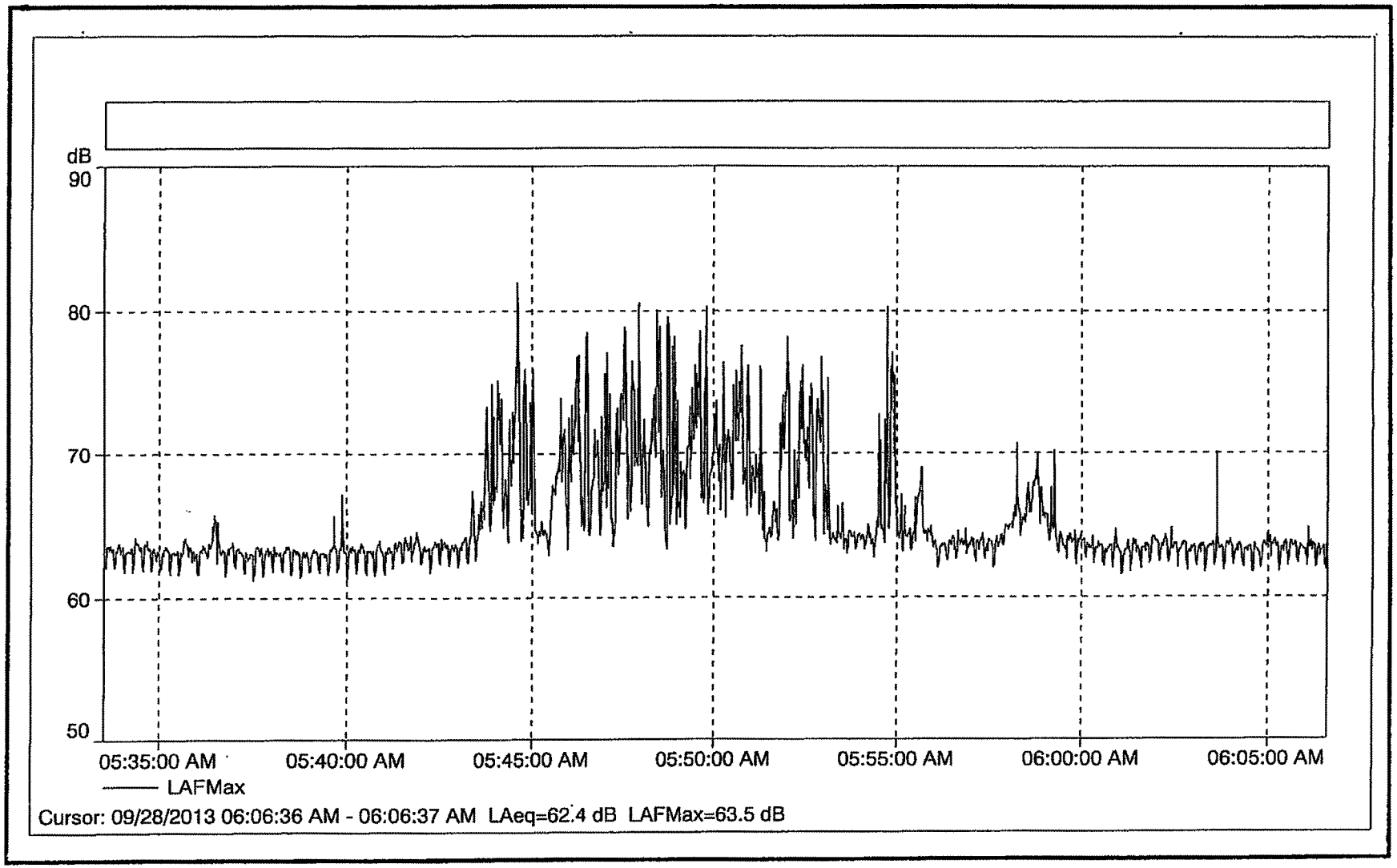
At receptor locations which are shielded from a high volume roadway or loading area noise, existing background ambient noise levels are lower due to the noise shielding effects of surrounding buildings. Noise reductions of 5 to 20 dBA can be expected from these noise shielding effects. Background ambient noise levels at these locations can range from 60 to 70 DNL, and are controlled by nearby mechanical equipment or nearby human activities rather than by traffic noise. At receptor locations which are more elevated above ground level, the noise shielding effects from surrounding buildings can diminish as the visual field of views to nearby roadways (and resulting noise levels) increase with increasing elevations. Under these conditions with unobstructed field of views, the traffic noise level contributions and setback distances will tend to approach those for the ground level receptors shown in Table 4.

The existing background noise levels at the Parc Hotel are higher on the mauka face of the tower building due to the traffic noise contributions from Kalakaua Avenue and Helumoa Road. In addition, the mechanical equipment noise levels from nearby buildings were approximately 3 dBA higher than those on the makai face of the tower building. The measured background noise level at Location G was approximately 70 DNL, and approximately 66 DNL at Location H.

Figure 4 depicts the variations in hourly average sound level at the 21st floor lanai on the mauka face of the Waikiki Parc Hotel. The increase in nighttime noise level from 5:00 to 6:00 am was caused by refuse pickup operations on Helumoa Road (see Figure 5). Figure 6 depicts the noise from the evening fireworks show at the Hawaiian Village Hotel. And Figure 7 depicts a loud emergency siren event which cause the hourly noise level to increase sharply between 9:00 and 10:00 pm in Figure 4.

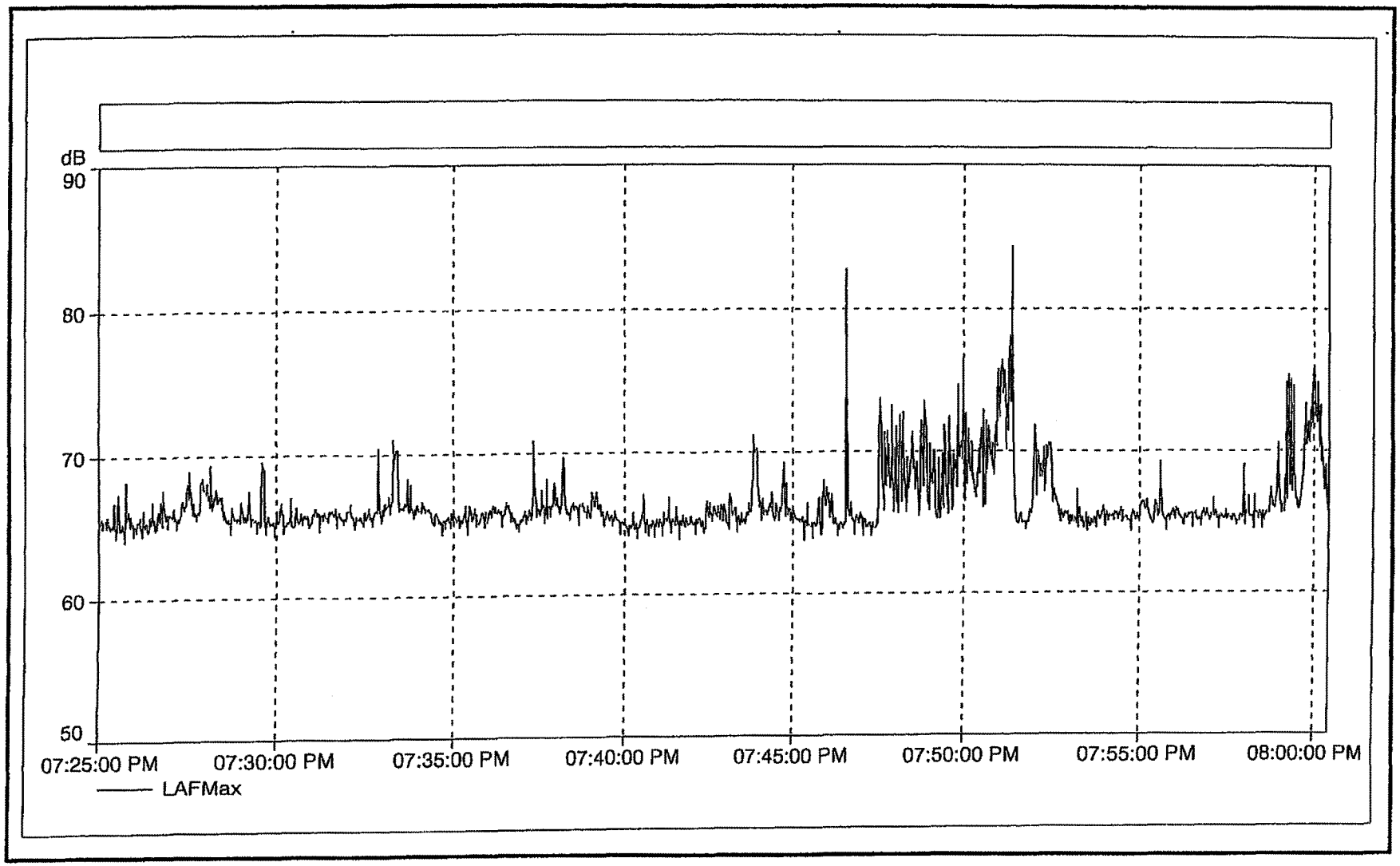
FIGURE 4
HOURLY BACKGROUND NOISE LEVELS VS. TIME OF DAY
LANAI OF SUITE 2113; WAIKIKI PARC HOTEL; 9/27-28/13





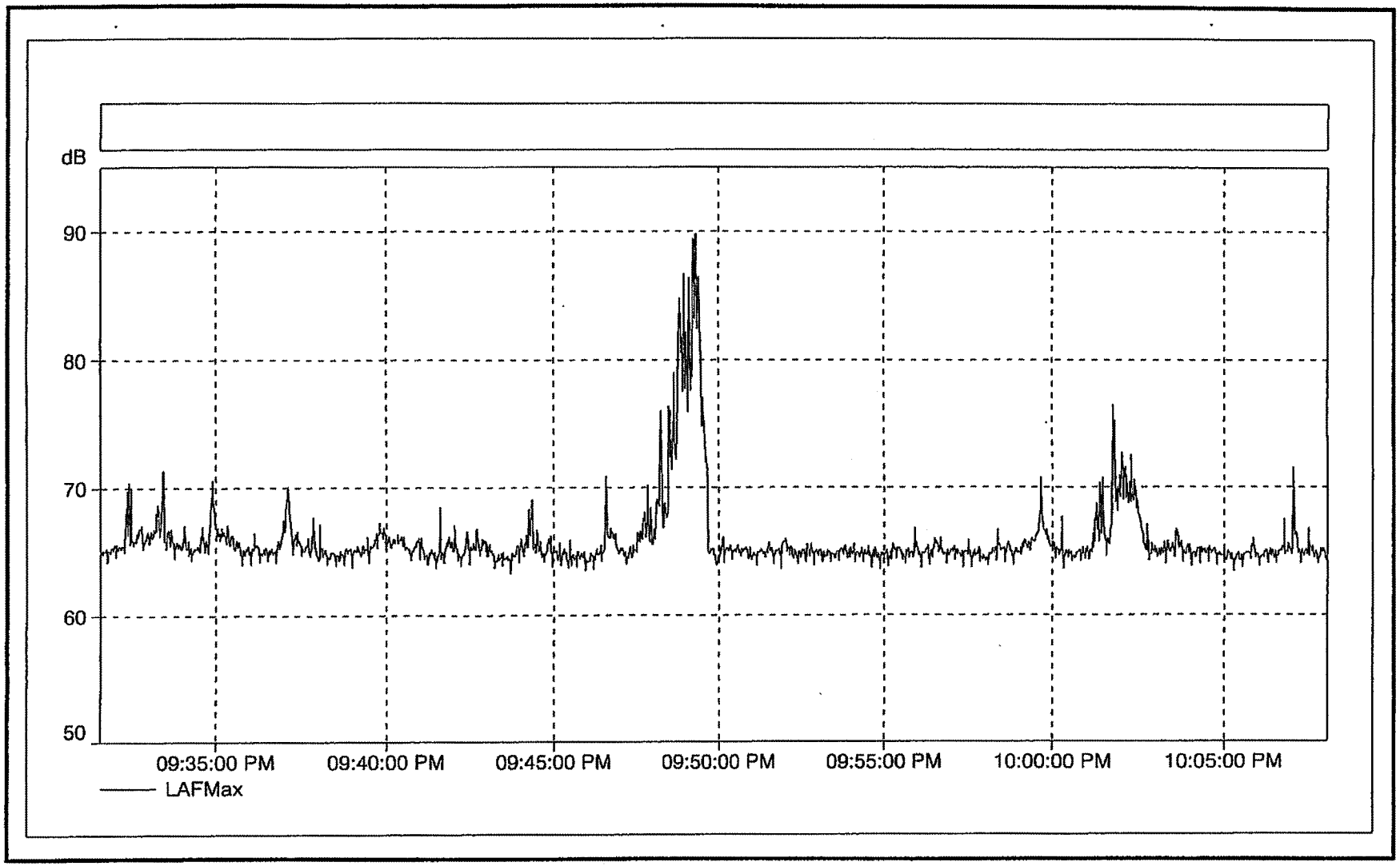
REFUSE TRUCK OPERATING AT APPROXIMATELY 200 FT DISTANCE

FIGURE 5



FIREWORKS MEASURED ON LANAI OF SUITE 2113;
WAIKIKI PARC HOTEL; 9/27/13

FIGURE
6



EMERGENCY SIREN MEASURED ON LANAI OF SUITE 2113;
WAIKIKI PARC HOTEL; 9/27/13

FIGURE
7

CHAPTER VI. FUTURE NOISE ENVIRONMENT

Predictions of future traffic noise levels were made using the traffic volume assignments of Reference 6 for CY 2017 with and without the proposed project. The future projections of non-project and project traffic volumes for the No Build and Build Alternatives are shown in Appendix C. Future traffic volumes were provided for a weekday AM and PM peak traffic hours, and future traffic noise level predictions were performed for the highest (AM or PM) peak traffic hour.

Table 5 contains the CY 2017 traffic volumes and noise levels at 50, 75, and 100 feet from the roadways' centerlines for the Build Alternative during a weekday peak hour. Table 4 contains the setback distances to the 65, 70, and 75 DNL contours for CY 2017 on a weekday. Future average vehicle speeds and traffic mixes along all roadways were assumed to be identical to those used for CY 2013 (see Table 3).

In CY 2017, the dominant traffic noise sources in the project area will continue to be traffic along Kalakaua Avenue, Lewers Street south of Kalakaua Avenue, Kalia Road west of Lewers Street, and Saratoga Road north of Kalia Road. Future traffic noise levels are expected to increase by less than 0.5 dB (or DNL) due to non-project traffic along Kalakaua Avenue by CY 2017, and decrease on Lewers Street, Kalia Road, and Saratoga Road (see Table 6). Total traffic noise levels on Lewers Street, Kalia Road, and Saratoga Road are predicted to decline by 0.1 dB to 1.8 dB as a result of the project. For this reason, the project should not cause existing traffic noise levels to increase, and is expected to reduce existing traffic noise levels along all roadways in the project environs except for Kalakaua Avenue.

The other loud noise sources in the project area are not expected to change between CY 2013 and CY 2017, and will continue to be emergency and police sirens, motorcycles and mopeds, and refuse and delivery trucks, and tour buses.

Essentially all locations which front Kalakaua Avenue, Lewers Street, Kalia Road, and Saratoga Road will continue to experience relatively high noise levels above 65 DNL. Lower elevation receptors which benefit from the noise shielding from existing and new buildings may experience traffic noise levels less than 65 DNL. In addition, those receptor locations which are also removed from the major roadways as well as those shielded by existing and new buildings should experience traffic noise levels less than 65 DNL. The relatively high traffic noise levels within the project area are characteristic of Waikiki, and will remain high through CY 2017, with or without the project.

The future noise levels at adjacent hotel properties (Halekulani, Sheraton Waikiki, The Royal Hawaiian, Wyndham At Waikiki Beach Walk, and The Imperial Waikiki) should not increase following completion of the proposed project. Planned renovations to the Diamond Head Pool Deck on the 8th floor of the Waikiki Parc Hotel involve relocation of the pool to the makai side and the addition of a covered lounge

TABLE 5

FUTURE (CY 2017) TRAFFIC VOLUMES AND NOISE LEVELS ALONG ROADWAYS IN PROJECT AREA (AM OR PM PEAK HOUR, BUILD)

LOCATION	SPEED (MPH)	TOTAL VPH	****** VOLUMES (VPH) ******** AUTOS	M TRUCKS	H TRUCKS	50' Leq	75' Leq	100' Leq
Kalakaua Ave. W. of Lewers St., PM	36	1,962	1,805	39	118	70.4	68.5	67.2
Kalakaua Ave. E. of Lewers St., PM	36	1,632	1,501	33	98	69.6	67.7	66.4
Lewers St. S. of Kalakaua Ave., PM	35	400	386	14	0	67.8	66.2	64.9
Lewers St. N. of Kalia Rd., AM	35	183	176	7	0	64.5	62.8	61.6
Kalia Rd. W. of Lewers St., PM	35	275	228	25	22	66.7	65.0	63.8
Kalia Rd. E. of Lewers St., AM	35	120	99	11	10	63.2	61.5	60.2
Kalia Rd. W. of Saratoga Rd., PM	25	704	507	42	155	65.2	63.4	62.2
Kalia Rd. E. of Saratoga Rd., PM	35	570	473	51	46	66.0	64.3	63.0
Saratoga Rd. N. of Kalia Rd., PM	25	776	629	27	120	66.3	64.4	63.2

TABLE 6

CALCULATIONS OF PROJECT AND NON-PROJECT TRAFFIC NOISE CONTRIBUTIONS (CY 2017) (PEAK HOUR LEQ OR DNL)

	NOISE LEVEL INCREASE DUE TO:	
STREET SECTION	NON-PROJECT TRAFFIC	PROJECT TRAFFIC
Kalakaua Ave. W. of Lewers St.	0.3	-0.1
Kalakaua Ave. E. of Lewers St.	0.3	0.0
Lewers St. S. of Kalakaua Ave.	0.0	-0.1
Lewers St. N. of Kalia Rd.	0.0	-0.3
Kalia Rd. W. of Lewers St.	0.0	-0.8
Kalia Rd. E. of Lewers St.	0.0	-1.8
Kalia Rd. W. of Saratoga Rd.	0.1	-0.2
Kalia Rd. E. of Saratoga Rd.	3.9	-4.2
Saratoga Rd. N. of Kalia Rd.	0.1	-0.2

area. A new dining and bar function area is planned for the roof of the Waikiki Parc Hotel. The other renovations include the addition of a porte cochere and turnaround on Kalia Road.

CHAPTER VII. DISCUSSION OF PROJECT-RELATED NOISE IMPACTS AND POSSIBLE MITIGATION MEASURES

Traffic Noise. Noise impacts from project related traffic along the roadways which are expected to service the project traffic (Kalakaua Avenue, Lewers Street, Kalia Road, and Saratoga Road) are not expected due to the reduced levels of project related traffic noise when compared to the noise levels of non-project related traffic and other noise sources. In addition, the existing resort units which are located in the immediate vicinity of the project are currently provided with air conditioning.

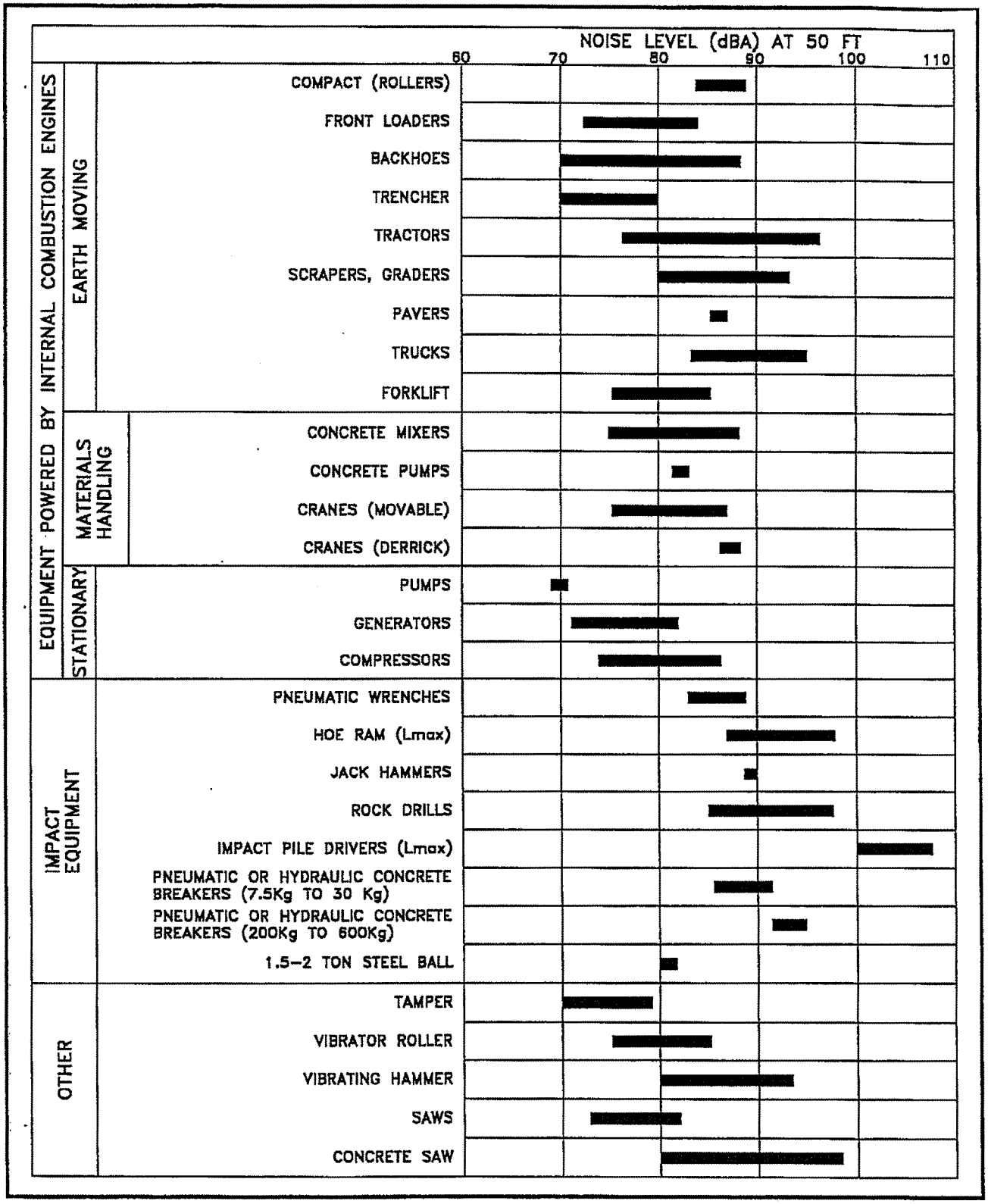
For those renovated guest spaces in the Waikiki Parc Hotel, noise mitigation measures are recommended. Closure and air conditioning of the affected spaces can be an effective noise mitigation measure for this project.

General Construction Noise. Audible construction noise will probably be unavoidable during the project construction period. It is anticipated that actual construction work will be moving from one location on the project site to another during that period. Actual length of exposure to construction noise at any receptor location will probably be less than the total construction period for the entire project. Figure 8 depicts the range of noise levels of various types of construction equipment when measured at 50 FT distance from the equipment.

Demolition of the existing entrance to the Waikik Parc Hotel on Kalia Road will occur during the initial phase of work. The demolition work will probably involve the use of hoptos, front end loaders, saws, and/or jack hammers. Noise during the actual demolition work, and during site cleanup and removal of the debris can be expected.

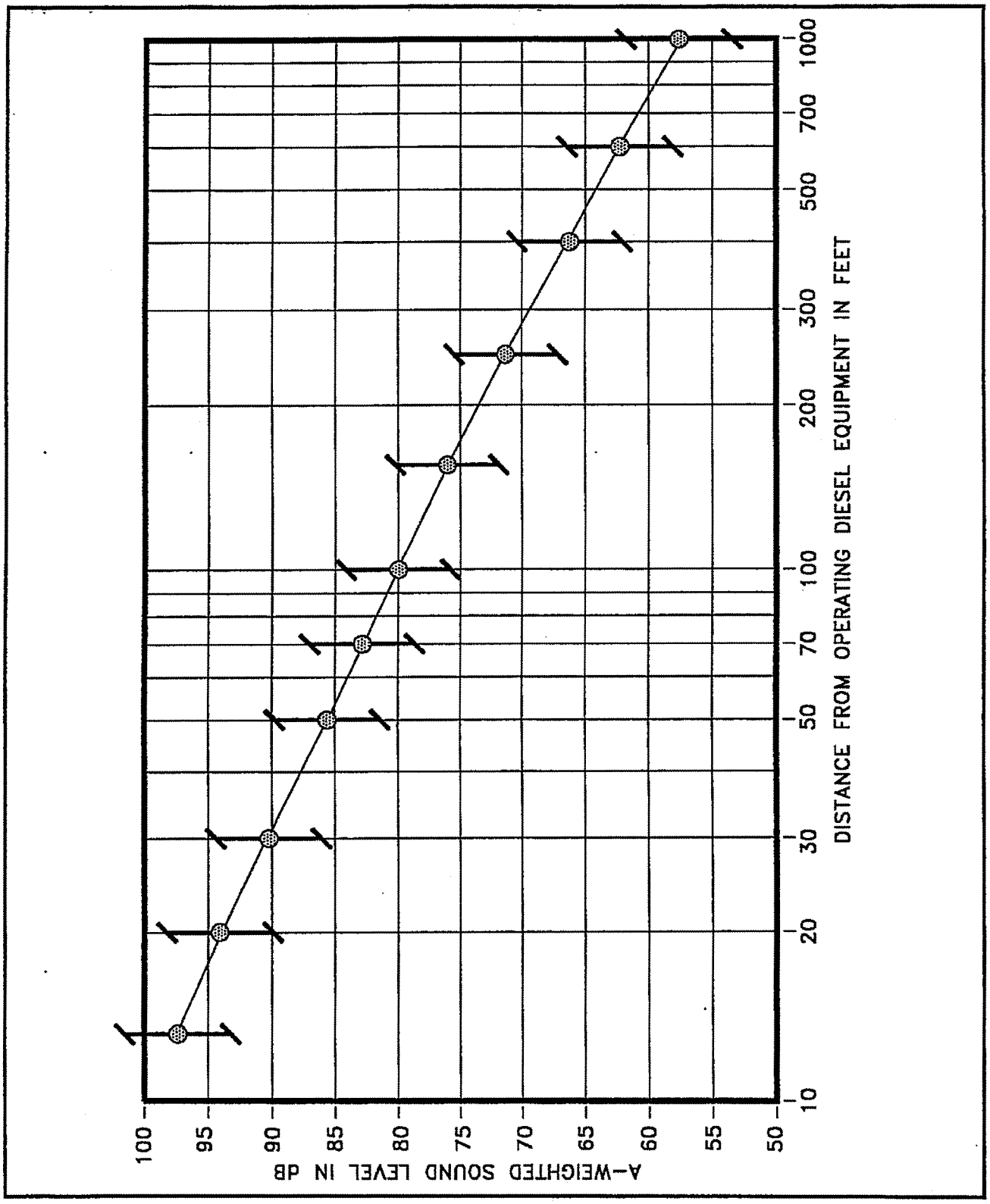
Following demolition and cleanup, the noise during construction of the new turnaround and porte cochere will be present. Typical levels of exterior noise from construction activity at various distances from the work area are shown in Figure 9. Figure 9 is useful for predicting exterior noise levels at short distances (within 100 FT) from the work when visual line of sight exists between the construction equipment and the receptor. Direct line-of-sight distances from the construction equipment to existing resort units will range from 100 FT to 280+ FT, with corresponding average noise levels of 80 to 70 dBA (plus or minus 5 dBA). For receptors along a cross-street, the construction noise level vs. distance curve of Figure 9 should be reduced by approximately 8 dBA when the work is occurring at the intersection with the cross street, and should be reduced by 15 dBA when work is occurring at least 100 FT from the intersection (and the visual line-of-sight is blocked by intervening buildings). Typical levels of construction noise inside naturally ventilated and air conditioned structures are approximately 10 and 20 dB less, respectively, than the levels shown in Figure 9.

The resort and commercial establishments which are adjacent to the project site are predicted to experience the highest noise levels during construction activities due to their close proximity to the construction sites. Adverse impacts from construction noise



RANGES OF CONSTRUCTION EQUIPMENT NOISE LEVELS

FIGURE 8



ANTICIPATED RANGE OF CONSTRUCTION NOISE LEVELS VS. DISTANCE

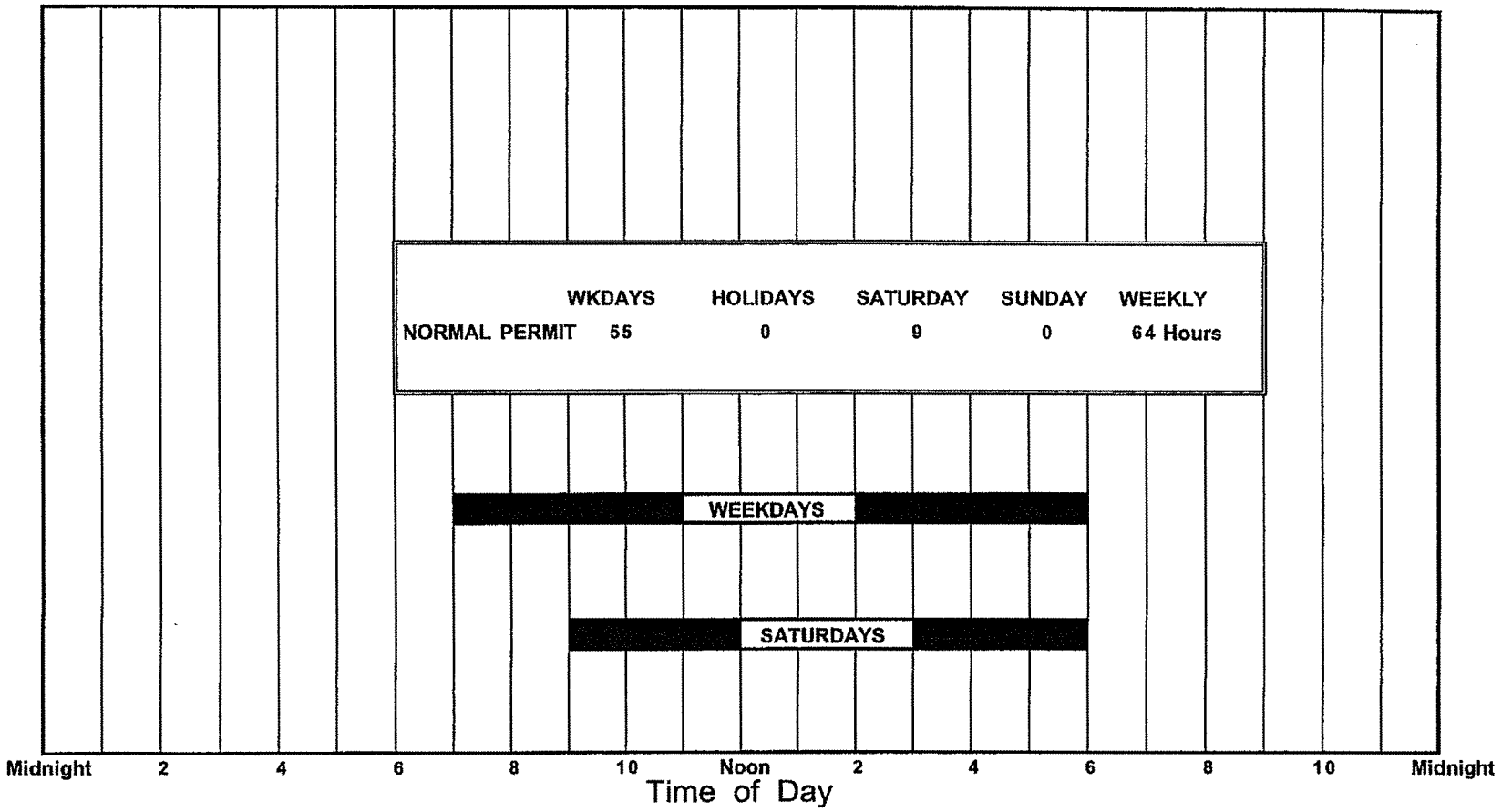
FIGURE 9

are not expected to be in the "public health and welfare" category due to the temporary nature of the work, the availability of closure and air conditioning for noise mitigation at the majority of the resort and commercial units in the project area, and due to the administrative controls available for regulation of construction noise. Instead, these impacts will probably be limited to the temporary degradation of the quality of the acoustic environment in the immediate vicinity of the project site.

Mitigation of construction noise to inaudible levels will not be practical in all cases due to the intensity of construction noise sources (80 to 90+ dB at 50 FT distance), and due to the exterior nature of the work (demolition, excavation, grading, trenching, concrete pouring, hammering, etc.). The use of properly muffled construction equipment should be required on the job site.

Severe noise impacts are not expected to occur inside air conditioned structures which are beyond 70 to 450 FT of the project construction sites. Inside naturally ventilated structures, interior noise levels (with windows or doors opened) are estimated to range between 73 to 55 dBA at 70 FT to 450 FT distances from the construction site. Closure of all doors and windows facing the construction site would generally reduce interior noise levels by an additional 5 to 10 dBA.

The incorporation of State Department of Health construction noise limits and curfew times, which are applicable throughout the State of Hawaii (Reference 4), is another noise mitigation measure which is normally applied to construction activities. Figure 10 depicts the normally permitted hours of construction. Noisy construction activities are not allowed on Sundays and holidays, during the early morning, and during the late evening and nighttime periods under the DOH permit procedures.



AVAILABLE WORK HOURS UNDER DOH PERMIT PROCEDURES FOR CONSTRUCTION NOISE

FIGURE 10

APPENDIX A. REFERENCES

(1) "Guidelines for Considering Noise in Land Use Planning and Control;" Federal Interagency Committee on Urban Noise; June 1980.

(2) "Environmental Criteria and Standards, Noise Abatement and Control, 24 CFR, Part 51, Subpart B;" U.S. Department of Housing and Urban Development; July 12, l979.

(3) "Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety;" Environmental Protection Agency (EPA 550/9-74-004); March 1974.

(4) "Title 11, Administrative Rules, Chapter 46, Community Noise Control;" Hawaii State Department of Health; September 23, 1996.

(5) "FHWA Traffic Noise Model User's Guide;" FHWA-PD-96-009, DOT-VNTSC-FHWA-98-1, Federal Highway Administration; Washington, D.C.; January 1998 and Version 2.5 Upgrade (April 14, 2004).

(6) "Traffic Impact Report for Waikiki Parc Hotel Renovation;" Wilson Okamoto Corporation/W-Trans; November 2013.

(7) Hourly traffic counts at Station #B72761200109, Kalakaua Avenue Between Lewers and Beachwalk; Hawaii State Department of Transportation; February 4, 2013.

APPENDIX B

EXCERPTS FROM EPA'S ACOUSTIC TERMINOLOGY GUIDE

Descriptor Symbol Usage

The recommended symbols for the commonly used acoustic descriptors based on A-weighting are contained in Table I. As most acoustic criteria and standards used by EPA are derived from the A-weighted sound level, almost all descriptor symbol usage guidance is contained in Table I.

Since acoustic nomenclature includes weighting networks other than "A" and measurements other than pressure, an expansion of Table I was developed (Table II). The group adopted the ANSI descriptor-symbol scheme which is structured into three stages. The first stage indicates that the descriptor is a level (i.e., based upon the logarithm of a ratio), the second stage indicates the type of quantity (power, pressure, or sound exposure), and the third stage indicates the weighting network (A, B, C, D, E.....). If no weighting network is specified, "A" weighting is understood. Exceptions are the A-weighted sound level and the A-weighted peak sound level which require that the "A" be specified. For convenience in those situations in which an A-weighted descriptor is being compared to that of another weighting, the alternative column in Table II permits the inclusion of the "A". For example, a report on blast noise might wish to contrast the LCdn with the LAdn.

Although not included in the tables, it is also recommended that "Lpn" and "LepN" be used as symbols for perceived noise levels and effective perceived noise levels, respectively.

It is recommended that in their initial use within a report, such terms be written in full, rather than abbreviated. An example of preferred usage is as follows:

The A-weighted sound level (LA) was measured before and after the installation of acoustical treatment. The measured LA values were 85 and 75 dB respectively.

Descriptor Nomenclature

With regard to energy averaging over time, the term "average" should be discouraged in favor of the term "equivalent". Hence, Leq, is designated the "equivalent sound level". For Ld, Ln, and Ldn, "equivalent" need not be stated since the concept of day, night, or day-night averaging is by definition understood. Therefore, the designations are "day sound level", "night sound level", and "day-night sound level", respectively.

The peak sound level is the logarithmic ratio of peak sound pressure to a reference pressure and not the maximum root mean square pressure. While the latter is the maximum sound pressure level, it is often incorrectly labelled peak. In that sound level meters have "peak" settings, this distinction is most important.

"Background ambient" should be used in lieu of "background", "ambient", "residual", or "indigenous" to describe the level characteristics of the general background noise due to the contribution of many unidentifiable noise sources near and far.

With regard to units, it is recommended that the unit decibel (abbreviated dB) be used without modification. Hence, DBA, PNdB, and EPNdB are not to be used. Examples of this preferred usage are: the Perceived Noise Level (Lpn was found to be 75 dB. Lpn = 75 dB). This decision was based upon the recommendation of the National Bureau of Standards, and the policies of ANSI and the Acoustical Society of America, all of which disallow any modification of bel except for prefixes indicating its multiples or submultiples (e.g., deci).

Noise Impact

In discussing noise impact, it is recommended that "Level Weighted Population" (LWP) replace "Equivalent Noise Impact" (ENI). The term "Relative Change of Impact" (RCI) shall be used for comparing the relative differences in LWP between two alternatives.

Further, when appropriate, "Noise Impact Index" (NII) and "Population Weighed Loss of Hearing" (PHL) shall be used consistent with CHABA Working Group 69 Report Guidelines for Preparing Environmental Impact Statements (1977).

APPENDIX B (CONTINUED)

TABLE I

A-WEIGHTED RECOMMENDED DESCRIPTOR LIST

	TERM	SYMBOL
1.	A-Weighted Sound Level	L_A
2.	A-Weighted Sound Power Level	L_{WA}
3.	Maximum A-Weighted Sound Level	L_{max}
4.	Peak A-Weighted Sound Level	L_{Apk}
5.	Level Exceeded x% of the Time	L_x
6.	Equivalent Sound Level	L_{eq}
7.	Equivalent Sound Level over Time (T) (1)	$L_{eq(T)}$
8.	Day Sound Level	L_d
9.	Night Sound Level	L_n
10.	Day-Night Sound Level	L_{dn}
11.	Yearly Day-Night Sound Level	$L_{dn(Y)}$
12.	Sound Exposure Level	L_{SE}

(1) Unless otherwise specified, time is in hours (e.g. the hourly equivalent level is $L_{eq(1)}$). Time may be specified in non-quantitative terms (e.g., could be specified a $L_{eq(WASH)}$ to mean the washing cycle noise for a washing machine).

SOURCE: EPA ACOUSTIC TERMINOLOGY GUIDE, BNA 8-14-78,

TABLE II

RECOMMENDED DESCRIPTOR LIST

	TERM	A-WEIGHTING	ALTERNATIVE[1] A-WEIGHTING	OTHER[2] WEIGHTING	UNWEIGHTED
1.	Sound (Pressure)[3] Level	L_A	L_{pA}	L_B, L_{pB}	L_p
2.	Sound Power Level	L_{WA}		L_{WB}	L_W
3.	Max. Sound Level	L_{max}	L_{Amax}	L_{Bmax}	L_{pmax}
4.	Peak Sound (Pressure) Level	L_{Apk}		L_{Bpk}	L_{pk}
5.	Level Exceeded x% of the Time	L_x	L_{Ax}	L_{Bx}	L_{px}
6.	Equivalent Sound Level	L_{eq}	L_{Aeq}	L_{Beq}	L_{peq}
7.	Equivalent Sound Level[4] Over Time(T)	$L_{eq(T)}$	$L_{Aeq(T)}$	$L_{Beq(T)}$	$L_{peq(T)}$
8.	Day Sound Level	L_d	L_{Ad}	L_{Bd}	L_{pd}
9.	Night Sound Level	L_n	L_{An}	L_{Bn}	L_{pn}
10.	Day-Night Sound Level	L_{dn}	L_{Adn}	L_{Bdn}	L_{pdn}
11.	Yearly Day-Night Sound Level	$L_{dn(Y)}$	$L_{Adn(Y)}$	$L_{Bdn(Y)}$	$L_{pdn(Y)}$
12.	Sound Exposure Level	L_S	L_{SA}	L_{SB}	L_{Sp}
13.	Energy Average Value Over (Non-Time Domain) Set of Observations	$L_{eq(e)}$	$L_{Aeq(e)}$	$L_{Beq(e)}$	$L_{peq(e)}$
14.	Level Exceeded x% of the Total Set of (Non-Time Domain) Observations	$L_{x(e)}$	$L_{Ax(e)}$	$L_{Bx(e)}$	$L_{px(e)}$
15.	Average L_x Value	L_x	L_{Ax}	L_{Bx}	L_{px}

(1) "Alternative" symbols may be used to assure clarity or consistency.

(2) Only B-weighting shown. Applies also to C,D,E,.....weighting.

(3) The term "pressure" is used only for the unweighted level.

(4) Unless otherwise specified, time is in hours (e.g., the hourly equivalent level is Leq(1). Time may be specified in non-quantitative terms (e.g., could be specified as Leq(WASH) to mean the washing cycle noise for a washing machine.

APPENDIX C

SUMMARY OF BASE YEAR AND YEAR 2017 TRAFFIC VOLUMES DURING AM AND PM PEAK HOURS

ROADWAY LANES	******** CY 2013 ******		CY 2017 (NO BUILD)		*** CY 2017 (BUILD) ****	
	AM	PM	AM	PM	AM	PM
Kalakaua Ave. W. of Lewers (EB)	1,689	1,860	1,791	1,979	1,775	1,962
Kalakaua Ave. E. of Lewers (EB)	1,284	1,520	1,386	1,639	1,383	1,632
Lewers St. S. of Kalakaua (NB)	61	194	61	194	61	194
Lewers St. S. of Kalakaua (SB)	269	216	269	216	256	206
Two-Way	330	410	330	410	317	400
Lewers St. N. of Kalia (SB)	196	187	196	187	183	177
Kalia Rd. W. of Lewers (WB)	199	278	199	278	184	239
Kalia Rd. W. of Lewers (EB)	97	57	97	57	73	36
Two-Way	296	335	296	335	257	275
Kalia Rd. E. of Lewers (WB)	39	111	39	111	24	72
Kalia Rd. E. of Lewers (EB)	133	77	133	77	96	46
Two-Way	172	188	172	188	120	118
Kalia Rd. W. of Saratoga (WB)	247	366	249	369	243	353
Kalia Rd. W. of Saratoga (EB)	251	350	255	356	249	351
Two-Way	498	716	504	725	492	704
Kalia Rd. E. of Saratoga (WB)	338	519	338	519	323	480
Kalia Rd. E. of Saratoga (EB)	100	103	100	103	85	90
Two-Way	438	622	438	622	408	570
Saratoga Rd. N. of Kalia (NB)	393	599	397	605	388	582
Saratoga Rd. N. of Kalia (SB)	151	199	153	202	144	194
Two-Way	544	798	550	807	532	776

APPENDIX 3

APPENDIX 3

TRAFFIC IMPACT REPORT

WAIKIKI PARC HOTEL RENOVATION

Traffic Impact Report

Waikiki Parc Hotel Renovation

Prepared for:
Anbe, Aruga & Ishizu Architects, Inc.

Prepared by:
Wilson Okamoto Corporation

February 2014

TRAFFIC IMPACT REPORT

FOR

WAIKIKI PARC HOTEL RENOVATION

Prepared for:

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February 2014

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I. INTRODUCTION

A. Purpose of Study

The purpose of this study is to identify and assess the traffic impacts resulting from a proposed Waikiki Parc Hotel renovation in Waikiki on the island of Oahu. The proposed project entails the conversion of the existing standard hotel rooms into suites.

B. Scope of Study

This report presents the findings and conclusions of the traffic study, the scope of which includes:

1. Description of the proposed project.
2. Evaluation of existing roadway and traffic operations in the vicinity.
3. Analysis of future roadway and traffic conditions without the proposed project.
4. Analysis and development of trip generation characteristics for the proposed project.
5. Superimposing site-generated traffic over future traffic conditions.
6. The identification and analysis of traffic impacts resulting from the proposed project.
7. Recommendations of improvements, if appropriate, that would mitigate the traffic impacts resulting from the proposed project.

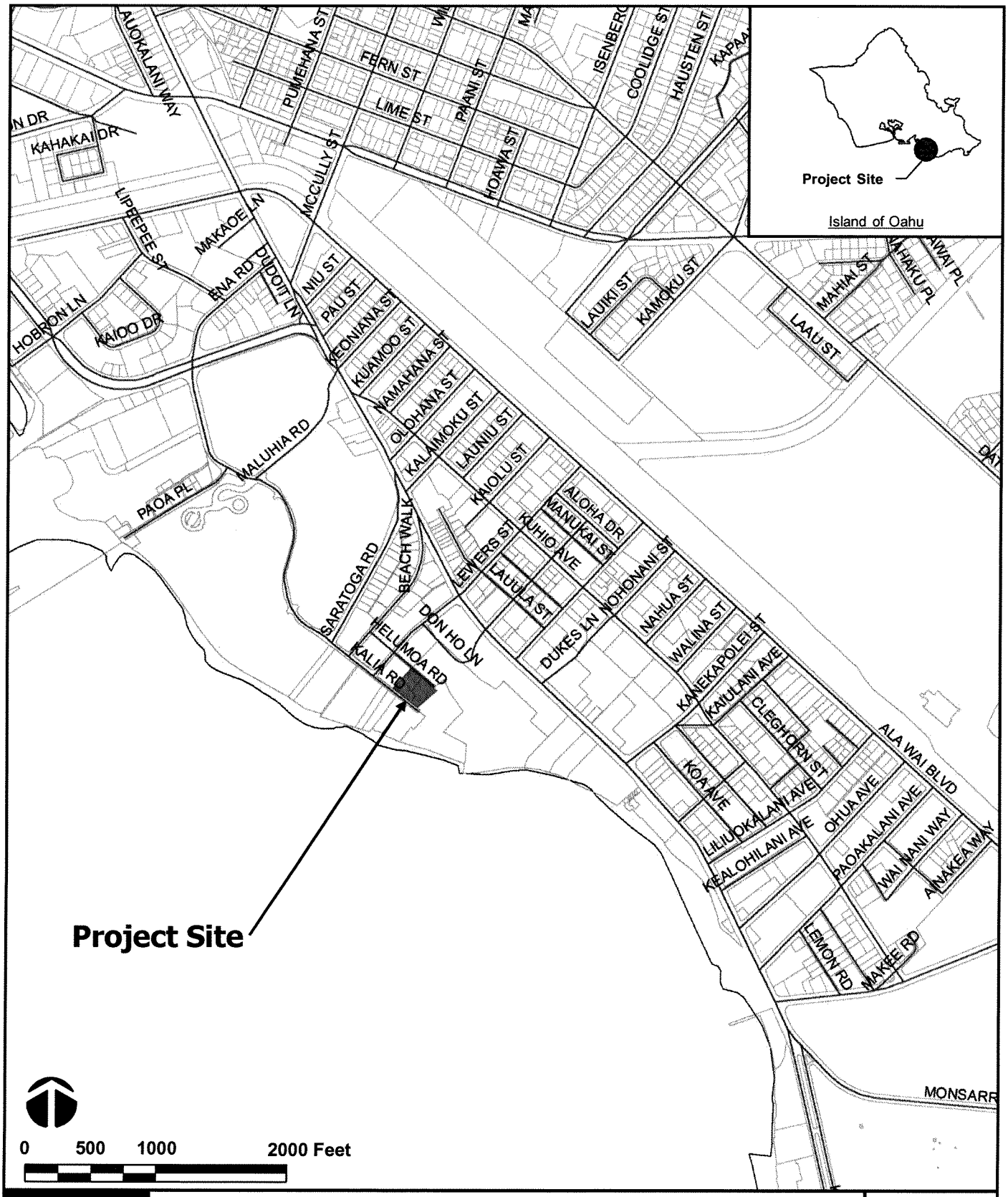
II. PROJECT DESCRIPTION

A. Location

The existing Waikiki Parc Hotel is located near the east end of Kalia Road in Waikiki on the island of Oahu (see Figure 1). The site is bounded by Kalia Road to the south, Helumoa Road to the north, and other hotel/resort uses to the east and west. Primary access to the project will continue to be provided via a driveway off Kalia Road with valet services continued to be provided off Helumoa Road.

B. Project Characteristics

The existing Waikiki Parc Hotel includes approximately 297 hotel rooms, a restaurant, and other amenities. The proposed project entails the conversion of the existing hotel rooms into approximately 130 suites. The other hotel uses, parking areas, and valet service are expected to remain similar to existing conditions. The



WILSON OKAMOTO CORPORATION

WAIKIKI PARC HOTEL

LOCATION MAP AND VICINITY MAP

FIGURE 1

proposed renovation is expected to be completed by the Year 2017. Figure 2 shows the project site plan.

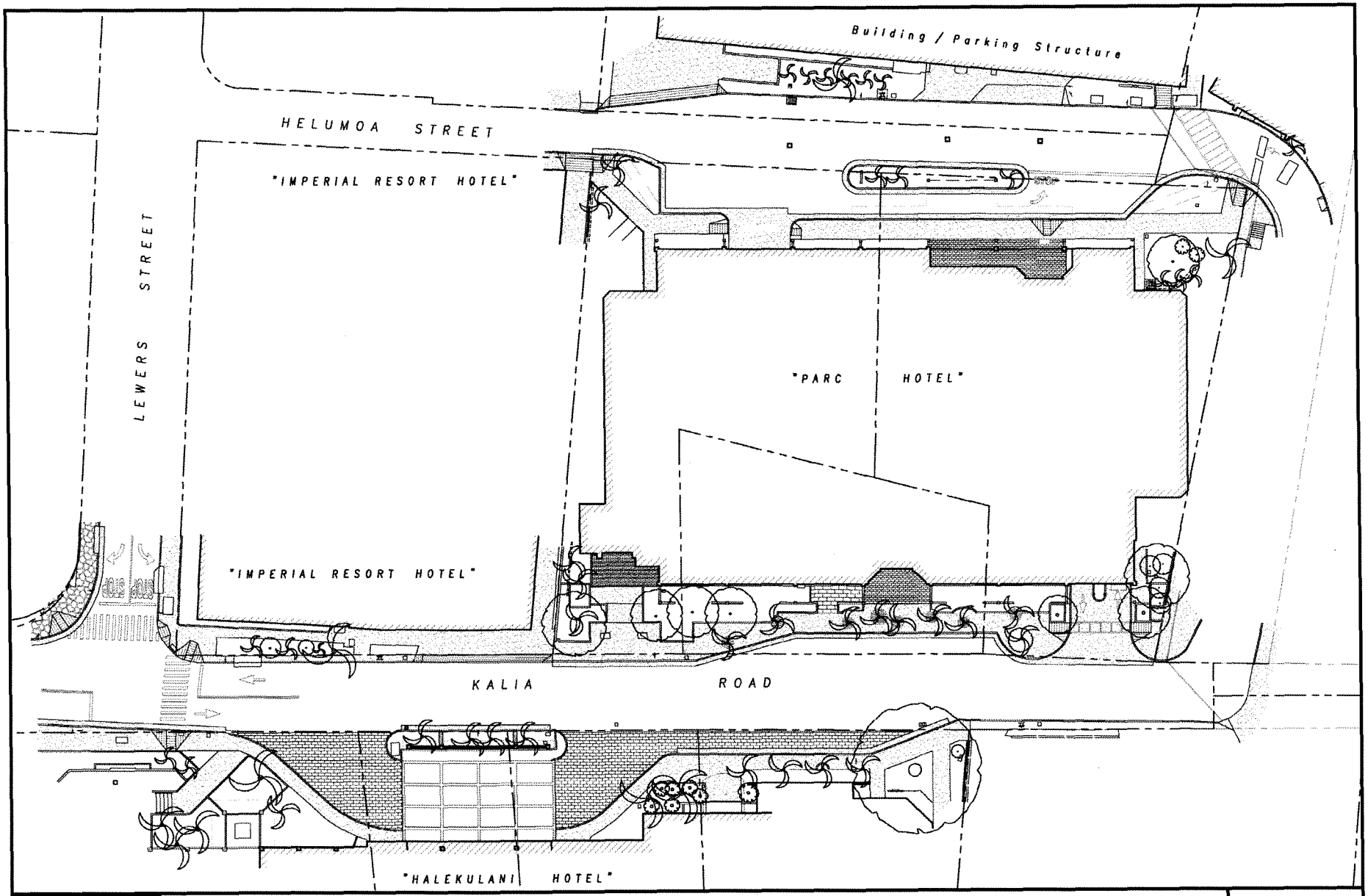
III. EXISTING TRAFFIC CONDITIONS

A. Area Roadway System

The Waikiki Parc Hotel is located adjacent to Kalia Road, a predominantly two-lane, two-way roadway generally oriented in the east-west direction in the vicinity of the project site. West of the hotel, Kalia Road intersects Saratoga Road. At this signalized T-intersection, the eastbound approach of Kalia Road has a shared left-turn and through lane while the westbound approach had one through lane and an exclusive right-turn lane (see Figure 3). Saratoga Road is a predominantly four-lane, two-way roadway that serves as a connector roadway between Kalia Road and Kalakaua Avenue. At the intersection with Kalia Road, the Saratoga Road approach has exclusive left-turn and right-turn lanes.

East of the intersection with Saratoga Road, Kalia Road intersects Lewers Street. At this all-way stop controlled intersection, both approaches of Kalia Road have one lane that serve through movements. Lewers Street originates at Kalia Road as a two-lane, one-way (southbound) roadway that transitions to a two-way roadway between Don Ho Lane and Kalakaua Avenue. North of Kalakaua Avenue, Lewers continues on as a predominantly one-lane, one-way (northbound) roadway. At the intersection with Kalia Road, the Lewers Street approach has exclusive turning lanes.

North of the intersection with Kalia Road, Lewers Street intersects Kalakaua Avenue. At this signalized intersection, the northbound approach of Lewers Street had one through lane and an exclusive right-turn lane. Kalakaua Avenue is a predominantly four-lane, one-way (eastbound) roadway generally oriented in the east-west direction that with Ala Wai Boulevard forms a couplet system that provides access through Waikiki. At the intersection with Lewers Street, the Kalakaua Avenue approach has a shared left-turn and through lane, two through lanes, and a shared through and right-turn lane.



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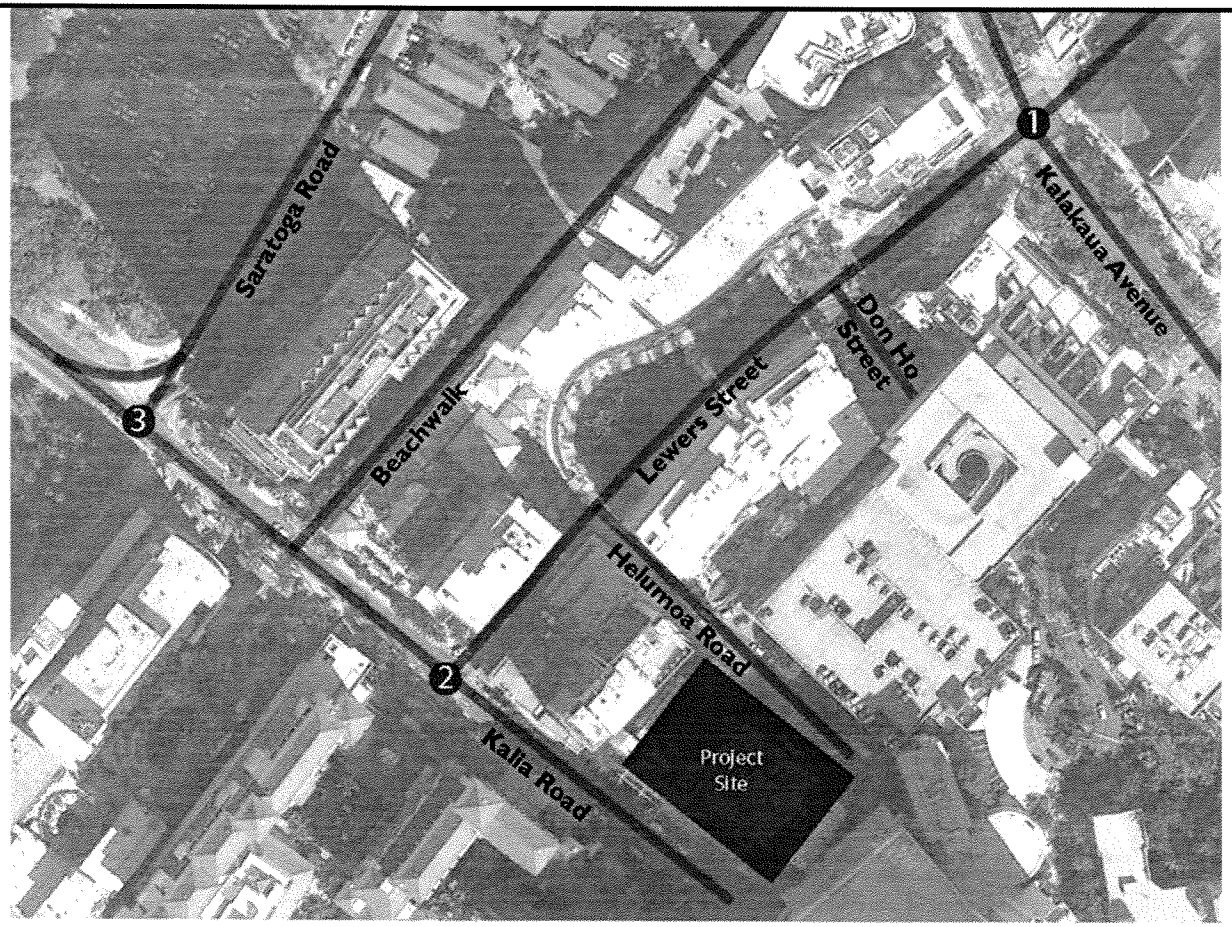
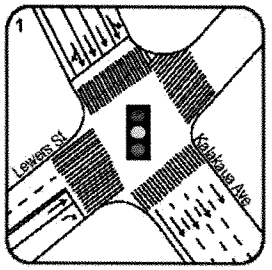
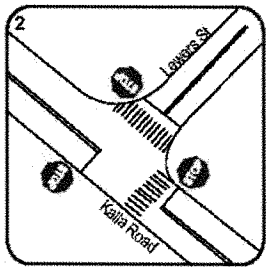
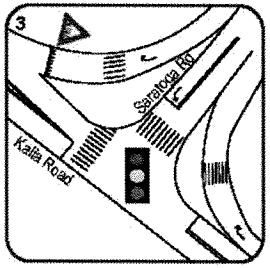
PROJECT SITE PLAN

FIGURE 2









North

Not to Scale

LEGEND

● Study Intersection

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WAIKIKI PARC HOTEL

EXISTING LANE CONFIGURATIONS

FIGURE 3

B. Traffic Volumes and Conditions

1. General

a. Field Investigation

A field investigation was conducted in September 2013 and consisted of manual turning movement count surveys and traffic flow assessment during the morning peak hours between 7:00 AM and 9:00 AM, and the afternoon peak hours between 3:00 PM and 6:00 PM at the following locations:

- Kalia Road and Saratoga Road
- Kalia Road and Lewers Street
- Lewers Street and Kalakaua Avenue
- Kalia Road and the Halekulani Hotel porte cochere
- Helumoa Road and the Waikiki Parc Hotel porte cochere

Appendix A includes the existing traffic count data.

b. Capacity Analysis Methodology

The highway capacity analysis performed in this study is based upon procedures presented in the "Highway Capacity Manual", Transportation Research Board, 2000, and the "Synchro" software, developed by Trafficware. The analysis is based on the concept of Level of Service (LOS) to identify the traffic impacts associated with traffic demands during the peak periods of traffic.

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

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

2. Existing Peak Hour Traffic

a. General

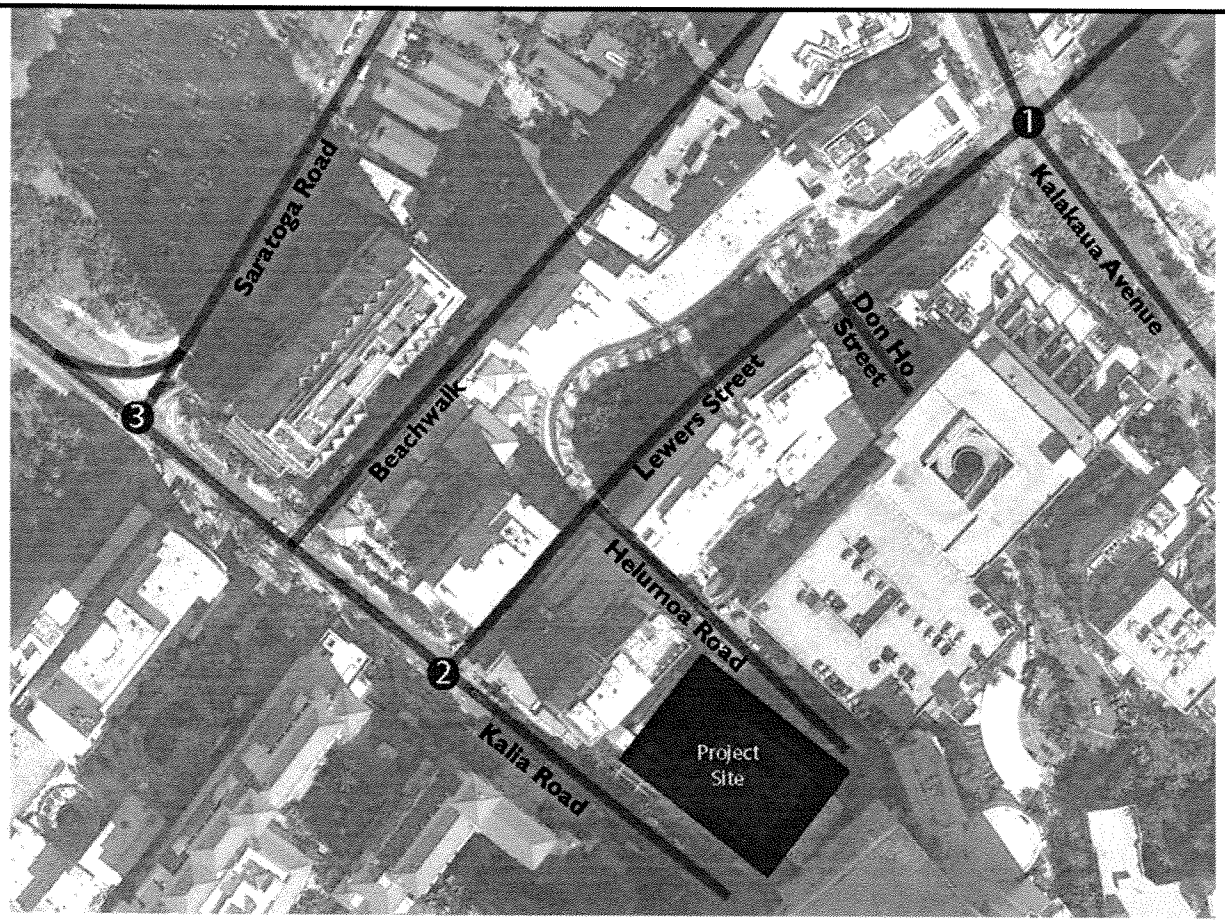
Figure 4 shows the existing AM and PM peak period traffic volumes and operating conditions. The AM peak hour of traffic generally occurs between 8:00 AM and 9:00 AM. In the afternoon, the PM peak hour of traffic generally occurs between the hours of 3:15 PM and 4:15 PM. The analysis is based on these peak hour time periods for each intersection to identify the traffic impacts resulting from the proposed project. LOS calculations are included in Appendix C.

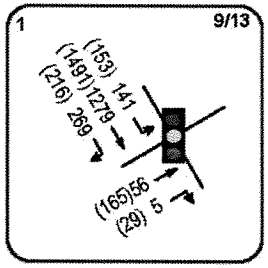
b. Kalia Road and Saratoga Road

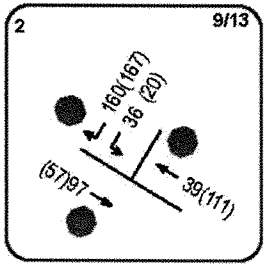
At the intersection with Saratoga Road, Kalia Road carries 251 vehicles eastbound and 338 vehicles westbound during the AM peak period. During the PM peak period, traffic volumes are higher with 350 vehicles traveling eastbound and 519 vehicles traveling westbound. The eastbound approach of Kalia Road operates at LOS "A" and LOS "B" during the AM and PM peak periods, respectively, while the westbound approach operates at LOS "A" during both peak periods.

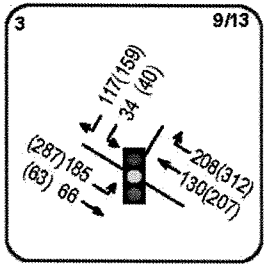
The Saratoga Road approach of the intersection carries 151 vehicles southbound during the AM peak period and 199 vehicles southbound during the PM peak period. The southbound approach of Saratoga Road operates at LOS "A" and LOS "B" during the AM and PM peak periods, respectively.

Pedestrian crossings are provided across the north and west legs of the intersection. During the AM peak period, 112 pedestrians were observed crossing Saratoga Road on the north side of the intersection and 168 pedestrians were observed crossing Kalia Road on the east side of the intersection. During the PM peak period, 118 pedestrians were observed crossing Saratoga Road on the north side of









LEGEND
- ● Study Intersection
- xx A.M. Peak Hour Volume
- (xx) P.M. Peak Hour Volume

WILSON OKAMOTO CORPORATION

WAIKIKI PARC HOTEL

EXISTING PEAK HOURS OF TRAFFIC

FIGURE 4

the intersection and 226 pedestrians were observed crossing Kalia Road on the east side of the intersection.

c. Kalia Road and Lewers Street

At the intersection with Lewers Street, Kalia Road carries 97 vehicles eastbound and 39 vehicles westbound during the AM peak period. During the PM peak period, the overall traffic volume is slightly higher with 57 vehicles traveling eastbound and 111 vehicles traveling westbound. Both approaches of Kalia Road operate at LOS "A" during both peak periods.

The Lewers Street approach of the intersection carries 196 vehicles southbound and 187 vehicles southbound during the AM and PM peak periods, respectively. The southbound approach of Lewers Street operates at LOS "A" during both peak periods.

Pedestrian crossings are provided across the north and east legs of the intersection. During the AM peak period, 46 pedestrians were observed crossing Lewers Street on the north side of the intersection and 306 pedestrians were observed crossing Kalia Road on the east side of the intersection. 27 pedestrians were observed illegally crossing the west side of the intersection during the morning peak period. During the PM peak period, 132 pedestrians were observed crossing Lewers Street on the north side of the intersection and 686 pedestrians were observed crossing Kalia Road on the east side of the intersection.

d. Lewers Street and Kalakaua Avenue

At the intersection with Kalakaua Avenue, the Lewers Street approach carries 61 vehicles northbound and 194 vehicles northbound during the AM and PM peak periods, respectively. The Lewers Street approach operates at LOS "C" during the AM peak period and LOS "D" during the PM peak period.

The Kalakaua Avenue eastbound approach carries 1,689 vehicles and 1,860 vehicles during the AM and PM peak periods,

respectively. The eastbound approach of Kalakaua Avenue operates at LOS "C" during both peak periods.

An all-way pedestrian crossing is provided at this intersection. 929 pedestrians were observed crossing at this intersection during the AM peak period and 1,999 pedestrians were observed during the PM peak period.

IV. PROJECTED TRAFFIC CONDITIONS

A. Site-Generated Traffic

1. Trip Generation Methodology

The trip generation methodology used in this study is based upon generally accepted techniques developed by the Institute of Transportation Engineers (ITE) and published in "Trip Generation, 9th Edition," 2012. The ITE trip generation rates are developed empirica

lly by correlating vehicle trip generation data with various land use characteristics such as the number of vehicle trips generated per hotel room. Although the type standard hotel rooms are expected to be replaced by suites, the characteristics of the hotel are expected to remain the same. As such, the same land use was utilized to determine the existing and future trip generation characteristics of the hotel. Table 1 summarizes the existing site trip generation characteristics and Table 2 summarizes the projected site trip generation characteristics.

Table 1: Existing Peak Hour Trip Generation

RESORT HOTEL INDEPENDENT VARIABLE: # of rooms = 297		
		PROJECTED TRIP ENDS
AM PEAK	ENTER	66
	EXIT	26
	TOTAL	92
PM PEAK	ENTER	54
	EXIT	71
	TOTAL	125

Table 2: Projected Peak Hour Trip Generation

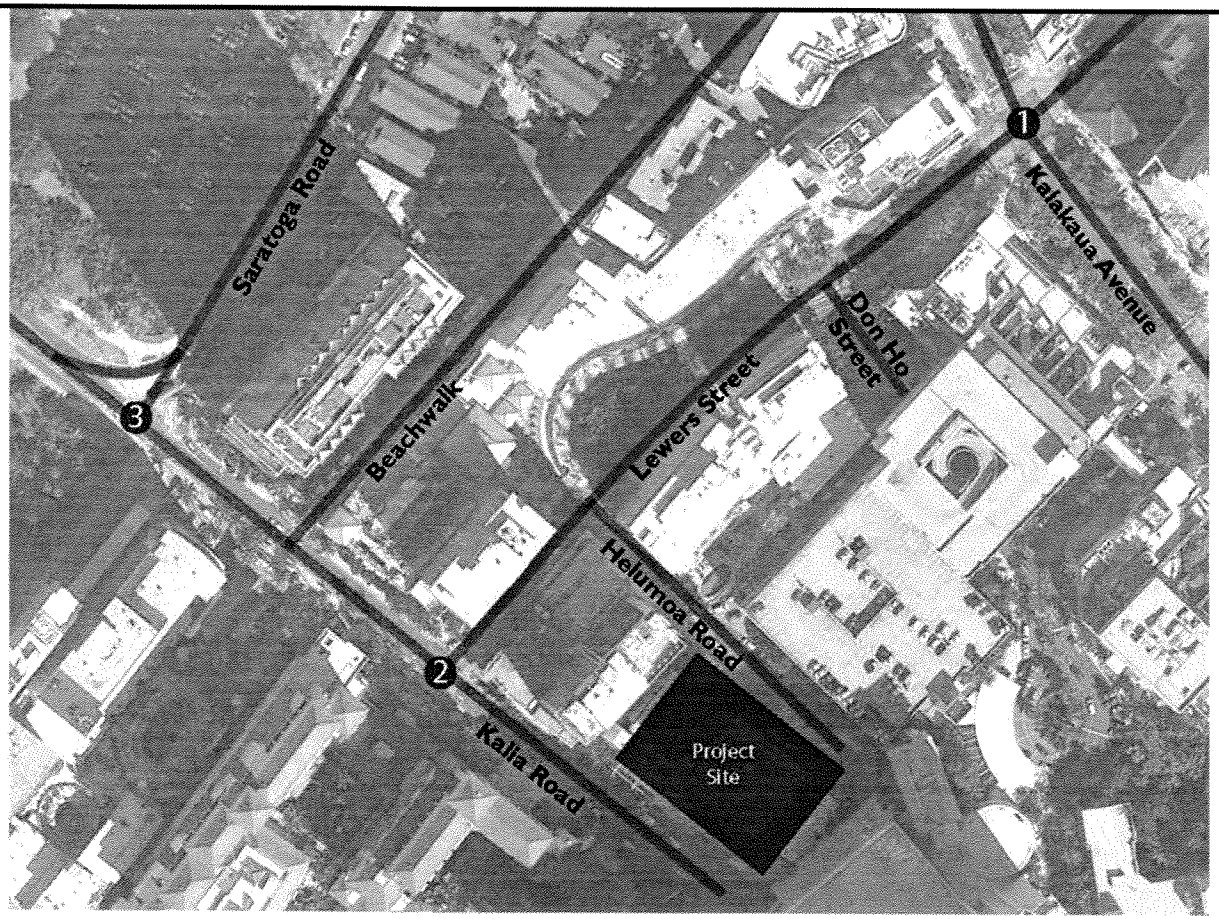
RESORT HOTEL INDEPENDENT VARIABLE: # of rooms = 130		
		PROJECTED TRIP ENDS
AM PEAK	ENTER	29
	EXIT	11
	TOTAL	40
PM PEAK	ENTER	23
	EXIT	32
	TOTAL	55
NET DIFFERENCE FROM EXISTING		
		PROJECTED TRIP ENDS
AM PEAK	ENTER	-37
	EXIT	-15
	TOTAL	-52
PM PEAK	ENTER	-31
	EXIT	-39
	TOTAL	-70

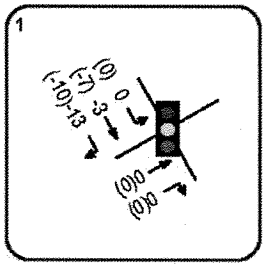
2. Trip Distribution

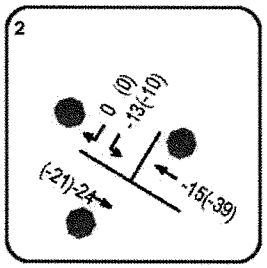
Figure 5 shows the distribution of site-generated traffic during the AM and PM peak periods. Primary access for the Parc Hotel will continue to be provided via a driveway off Kalia Road. The directional distribution vehicles at the study intersections were assumed to remain similar to existing conditions.

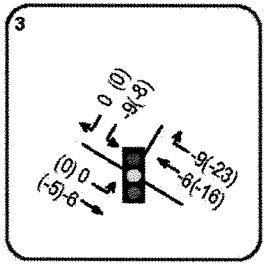
B. Through Traffic Forecasting Methodology

There are no State of Hawaii or City and County of Honolulu traffic count stations in the immediate vicinity of the project site with sufficient available historical data to obtain a historical trend for the growth of traffic in the project vicinity. However, for the purpose of this report, an average annual growth rate of 2.0% per year was conservative assumed along Kalakaua Avenue and an average annual growth rate of 0.5% per year was conservatively assumed along Saratoga Road and Kalia Road west of Saratoga Road to account for ambient growth in traffic. As such, using 2013 as the Base Year, growth rates of 1.08 and 1.02 were applied to the existing through traffic demands along those roadways to achieve the projected Year 2017 traffic demands.









North

Not to Scale

LEGEND

- Study Intersection
- xx A.M. Peak Hour Volume
- (xx) P.M. Peak Hour Volume

WILSON OKAMOTO CORPORATION

WAIKIKI PARC HOTEL

DISTRIBUTION OF SITE-GENERATED VEHICLES

FIGURE 5

C. Total Traffic Volumes Without Project

The projected Year 2017 AM and PM peak period traffic volumes and operating conditions without the proposed Waikiki Parc Hotel renovation are shown in Figure 6, and summarized in Table 3. The existing levels of service are provided for comparison purposes. LOS calculations are included in Appendix D.

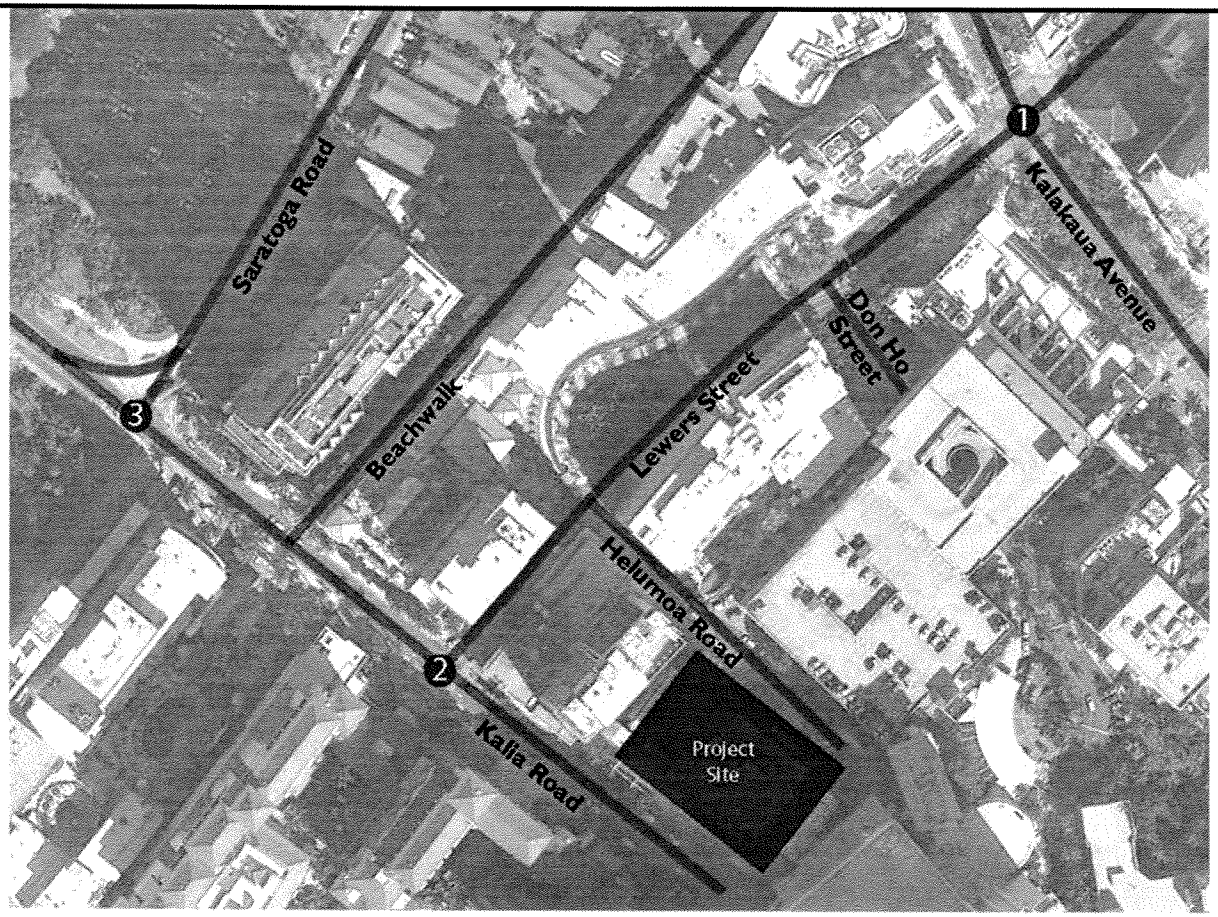
Table 3: Existing and Projected Year 2017 (Without Project) LOS Traffic Operating Conditions

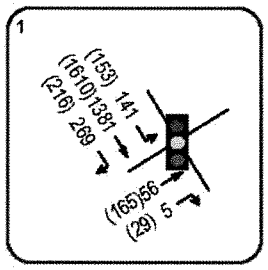
Intersection	Approach	AM		PM	
		Exist	Year 2017 w/out Proj	Exist	Year 2017 w/out Proj
Kalia Rd/ Saratoga Rd	Eastbound	A	A	B	B
	Westbound	A	A	A	A
	Southbound	A	A	B	B
Kalia Rd/ Lewers St	Eastbound	A	A	A	A
	Westbound	A	A	A	A
	Southbound	A	A	A	A
Lewers St/ Kalakaua Ave	Eastbound	C	C	C	C
	Northbound	C	C	D	D

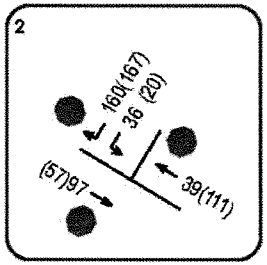
Traffic operations under Year 2017 without project conditions are expected to remain similar to existing conditions despite the anticipated ambient growth in traffic. The approaches of the study intersections along Kalia Road are expected to continue operating at LOS "B" or better during both peak periods while those at the intersection of Lewers Street and Kalakaua Avenue are expected to continue operating at LOS "C" during the AM peak period and LOS "D" or better during the PM peak period.

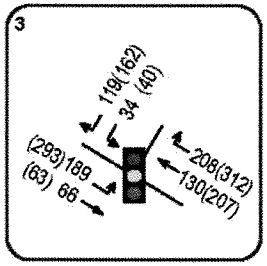
D. Total Traffic Volumes With Project

Figure 7 shows the Year 2017 cumulative AM and PM peak hour traffic conditions resulting from the projected external traffic and the proposed Waikiki Parc Hotel renovation. The cumulative volumes consist of site- generated traffic superimposed over Year 2017 projected traffic demands. The traffic impacts resulting from the proposed project are addressed in the following section.









North

Not to Scale

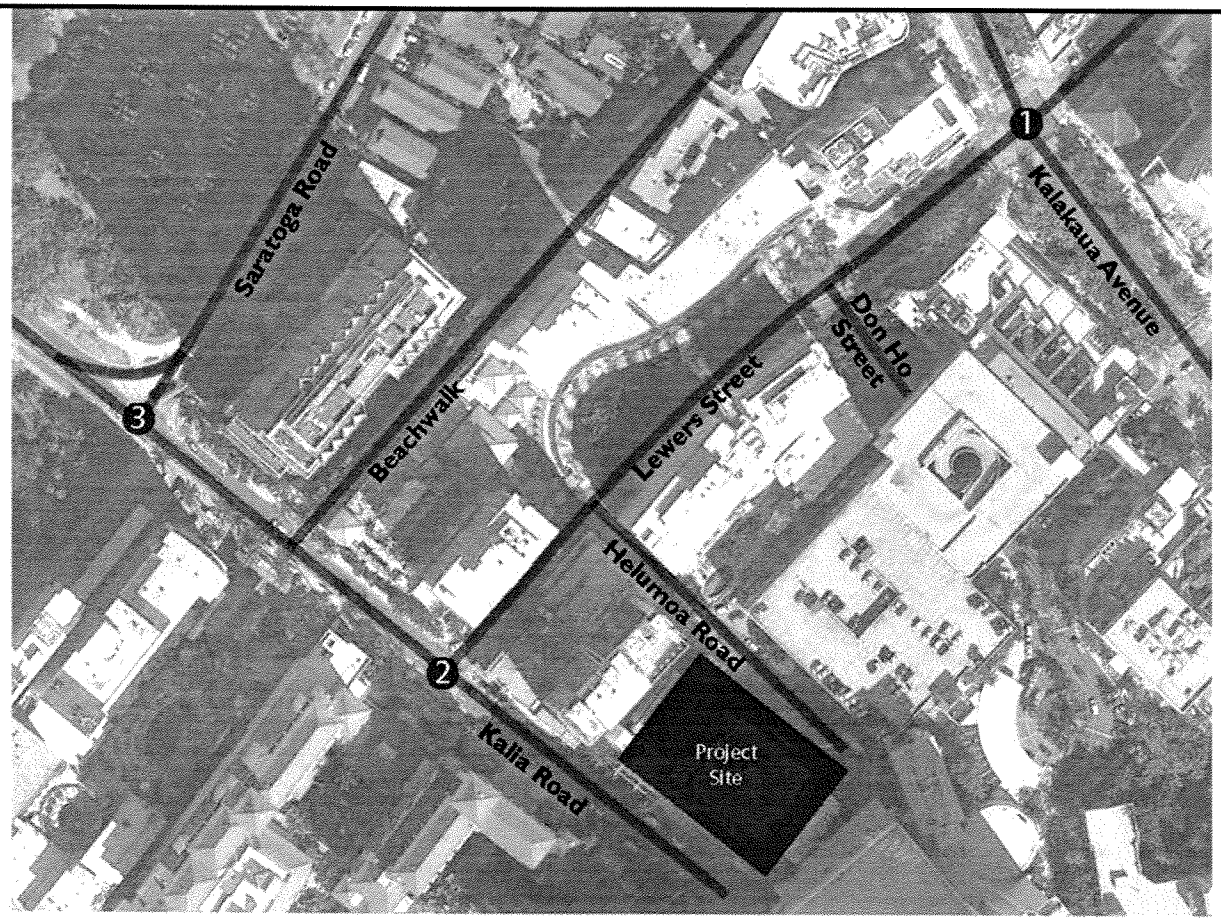
LEGEND
- ● Study Intersection
- xx A.M. Peak Hour Volume
- (xx) P.M. Peak Hour Volume

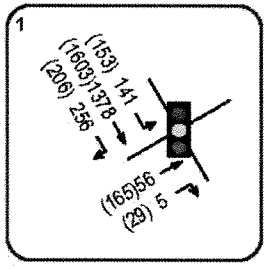
WILSON OKAMOTO CORPORATION

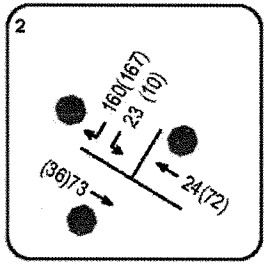
WAIKIKI PARC HOTEL

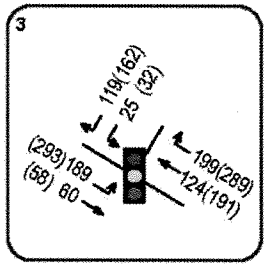
YEAR 2017 PEAK HOURS OF TRAFFIC WITHOUT PROJECT

FIGURE 6









North

Not to Scale

LEGEND
- ● Study Intersection
- xx A.M. Peak Hour Volume
- (xx) P.M. Peak Hour Volume

WILSON OKAMOTO CORPORATION

WAIKIKI PARC HOTEL

YEAR 2017 PEAK HOURS OF TRAFFIC WITH PROJECT

FIGURE 7

V. TRAFFIC IMPACT ANALYSIS

The Year 2017 cumulative AM and PM peak hour traffic conditions with the Waikiki Parc Hotel Renovation are summarized in Table 4. The existing and projected Year 2017 (Without Project) operating conditions are provided for comparison purposes. LOS calculations are included in Appendix E.

Table 4: Existing and Projected Year 2017 (Without and With Project) LOS Traffic Operating Conditions

Intersection	Approach	AM			PM		
		Exist	Year 2017		Exist	Year 2017	
			w/out Proj	w/ Proj		w/out Proj	w/ Proj
Kalia Rd/ Saratoga Rd	Eastbound	A	A	A	B	B	B
	Westbound	A	A	A	A	A	A
	Southbound	A	A	A	B	B	B
Kalia Rd/ Lewers St	Eastbound	A	A	A	A	A	A
	Westbound	A	A	A	A	A	A
	Southbound	A	A	A	A	A	A
Lewers St/ Kalakaua Ave	Eastbound	C	C	C	C	C	C
	Northbound	C	C	C	D	D	D

With the proposed renovation, traffic operations in the vicinity of the Waikiki Parc Hotel are expected to remain similar to existing and Year 2017 without project conditions primarily due to the anticipated reduction in the number of rooms at the hotel. The approaches of the intersection of Kalia Road with Saratoga Road are expected to continue operating at LOS "A" during the AM peak period and LOS "B' or better during the PM peak period while those at the intersection with Lewers Street are expected to continue operating at LOS "A" during both peak periods. At the intersection of Lewers Street and Kalakaua Avenue, the approaches are expected to continue operating at LOS "C" during the AM peak period and LOS "D" or better during the PM peak period.

VI. RECOMMENDATIONS

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

1. Maintain sufficient sight distance for motorists to safely enter and exit all project driveways.

2. Maintain adequate on-site loading and off-loading service areas and limit off-site loading operations.

3. Maintain adequate turn-around area for service, delivery, and refuse collection vehicles to maneuver on the project site to minimize vehicle-reversing maneuvers onto public roadways.

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

5. Consider providing signage along Kalia Road east of Lewers Street, east of Beach Walk, and east of Saratoga Road to provide motorists with advanced notice that the roadway is a dead end facility. During the field investigation, vehicles were observed making U-turns at the end of Kalia Road or utilizing the Halekulani Hotel porte cochere to turn around.

6. Consider restricting parked vehicles within the porte cochere for the Waikiki Parc Hotel and transferring vehicles to the hotel's garage. The elimination of these vehicles would provide better visibility of and for vehicles within the hotel's porte cochere.

7. Maintain the existing drop-off area on Kalia Road and consider extending the length of the drop-off area to continue to provide and improve the alternate arrival point utilizing Ala Moana Boulevard and Kalia Road, thereby reducing traffic demands along Kalakaua Avenue and Lewers Street.

8. Consider preparing a Traffic Management Plan (TMP) for the hotel to improve circulation in the vicinity. The hotel is bounded by two "dead end" roadways that limit the circulation in the vicinity of the hotel. In addition, the hotel's porte cochere is located across from the exit for the Sheraton Waikiki Hotel's bus depot along a fairly narrow roadway (Helumoa Street). The preparation of a TMP for the Waikiki Parc Hotel could help to minimize conflicts between the hotel and adjacent uses.

VII. CONCLUSION

The Waikiki Parc Hotel currently includes standard hotel rooms, a restaurant, and other amenities. The proposed renovation is expected to convert the existing hotel rooms into suites thereby reducing the hotel's overall room count. With the proposed project, traffic operations in the vicinity of the proposed renovation are expected to remain similar to existing and without project conditions. As such, with the implementation of the aforementioned recommendations, the proposed Waikiki Parc Hotel renovation is not expected to have a significant impact on traffic operations in the vicinity.

APPENDIX A

EXISTING TRAFFIC COUNT DATA

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:DY, CY
Counter:D4-5676, D4-5675
Weather:Clear

File Name : KalSar AM
Site Code : 00000007
Start Date : 9/12/2013
Page No : 1

Groups Printed- Unshifted

	Saratoga Road Southbound					Kalia Road Westbound					Northbound	Kalia Road Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	7	0	28	18	53	0	34	43	0	77	0	35	8	0	43	86	216
07:15 AM	8	0	25	25	58	0	40	38	0	78	0	38	11	0	33	82	218
07:30 AM	11	0	37	17	65	0	25	47	0	72	0	35	11	0	70	116	253
07:45 AM	4	0	26	20	50	0	31	43	0	74	0	41	11	0	36	88	212
Total	30	0	116	80	226	0	130	171	0	301	0	149	41	0	182	372	899
08:00 AM	13	0	28	32	73	0	24	44	0	68	0	53	20	0	37	110	251
08:15 AM	11	0	31	27	69	0	37	58	0	95	0	47	17	0	42	106	270
08:30 AM	3	0	27	25	55	0	43	49	0	92	0	46	9	0	41	96	243
08:45 AM	7	0	31	28	66	0	26	57	0	83	0	39	20	0	48	107	256
Total	34	0	117	112	263	0	130	208	0	338	0	185	66	0	168	419	1020
Grand Total	64	0	233	192	489	0	260	379	0	639	0	334	107	0	350	791	1919
Apprch %	13.1	0	47.6	39.3		0	40.7	59.3	0			42.2	13.5	0	44.2		
Total %	3.3	0	12.1	10	25.5	0	13.5	19.7	0	33.3	0	17.4	5.6	0	18.2	41.2	

	Saratoga Road Southbound				Kalia Road Westbound				Northbound	Kalia Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1														
Peak Hour for Entire Intersection Begins at 08:00 AM														
08:00 AM	**13**	0	28	41	0	24	44	68	0	**53**	**20**	0	**73**	182
08:15 AM	11	0	**31**	**42**	0	37	**58**	**95**	0	47	17	0	64	**201**
08:30 AM	3	0	27	30	0	**43**	49	92	0	46	9	0	55	177
08:45 AM	7	0	31	38	0	26	57	83	0	39	20	0	59	180
Total Volume	34	0	117	151	0	130	208	338	0	185	66	0	251	740
% App. Total	22.5	0	77.5		0	38.5	61.5			73.7	26.3	0		
PHF	.654	.000	.944	.899	.000	.756	.897	.889	.000	.873	.825	.000	.860	.920

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:DY, CY
Counter:D4-5675., D4-5676
Weather:Clear

File Name : KalSar PM
Site Code : 00000007
Start Date : 9/12/2013
Page No : 1

Groups Printed- Unshifted

	Sartoga Road Southbound					Kalia Road Westbound					Northbound	Kalia Road Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	11	0	37	42	90	0	67	60	0	127	0	59	6	0	51	116	333
03:15 PM	10	0	35	33	78	0	62	81	0	143	0	82	16	0	55	153	374
03:30 PM	12	0	42	20	74	0	54	88	0	142	0	69	25	0	32	126	342
03:45 PM	12	0	42	16	70	0	37	60	0	97	0	67	7	0	40	114	281
Total	45	0	156	111	312	0	220	289	0	509	0	277	54	0	178	509	1330
04:00 PM	6	0	40	49	95	0	54	83	0	137	0	69	15	0	99	183	415
04:15 PM	3	0	42	40	85	0	53	74	0	127	0	91	9	0	43	143	355
04:30 PM	11	0	40	41	92	0	47	60	0	107	0	83	6	0	52	141	340
04:45 PM	8	0	43	42	93	0	49	63	0	112	0	65	7	0	45	117	322
Total	28	0	165	172	365	0	203	280	0	483	0	308	37	0	239	584	1432
05:00 PM	9	0	32	42	83	0	51	79	0	130	0	70	10	0	53	133	346
05:15 PM	6	0	47	38	91	0	42	68	0	110	0	57	12	0	42	111	312
05:30 PM	8	0	39	42	89	0	42	61	0	103	0	84	10	0	49	143	335
05:45 PM	5	0	27	47	79	0	45	52	0	97	0	69	12	0	64	145	321
Total	28	0	145	169	342	0	180	260	0	440	0	280	44	0	208	532	1314
Grand Total	101	0	466	452	1019	0	603	829	0	1432	0	865	135	0	625	1625	4076
Apprch %	9.9	0	45.7	44.4		0	42.1	57.9	0			53.2	8.3	0	38.5		
Total %	2.5	0	11.4	11.1	25	0	14.8	20.3	0	35.1	0	21.2	3.3	0	15.3	39.9	

	Sartoga Road Southbound				Kalia Road Westbound				Northbound	Kalia Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1														
Peak Hour for Entire Intersection Begins at 03:15 PM														
03:15 PM	10	0	35	45	0	**62**	81	**143**	0	**82**	16	0	**98**	286
03:30 PM	**12**	0	**42**	**54**	0	54	**88**	142	0	69	**25**	0	94	**290**
03:45 PM	12	0	42	54	0	37	60	97	0	67	7	0	74	225
04:00 PM	6	0	40	46	0	54	83	137	0	69	15	0	84	267
Total Volume	40	0	159	199	0	207	312	519	0	287	63	0	350	1068
% App. Total	20.1	0	79.9		0	39.9	60.1			82	18	0		
PHF	.833	.000	.946	.921	.000	.835	.886	.907	.000	.875	.630	.000	.893	.921

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:MM, MA
Counter:D4-5674, D4-5677
Weather:Clear

File Name : KalLew AM
Site Code : 00000001
Start Date : 9/12/2013
Page No : 1

Groups Printed- Unshifted

	Lewers Street Southbound					Kalakaua Avenue Westbound					Lewers Street Northbound					Kalakaua Avenue Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	0	0	24	24	0	0	0	26	26	0	8	3	68	79	13	214	55	17	299	428
07:15 AM	0	0	0	15	15	0	0	0	31	31	0	8	3	87	98	25	286	57	17	385	529
07:30 AM	0	0	0	35	35	0	0	0	39	39	0	15	3	63	81	28	349	64	57	498	653
07:45 AM	0	0	0	48	48	0	0	0	30	30	0	11	4	120	135	32	303	74	22	431	644
Total	0	0	0	122	122	0	0	0	126	126	0	42	13	338	393	98	1152	250	113	1613	2254
08:00 AM	0	0	0	29	29	0	0	0	42	42	0	14	1	87	102	28	302	58	5	393	566
08:15 AM	0	0	0	64	64	0	0	0	33	33	0	10	0	79	89	39	291	76	35	441	627
08:30 AM	0	0	0	68	68	0	0	0	51	51	0	15	2	115	132	29	362	69	55	515	766
08:45 AM	0	0	0	114	114	0	0	0	83	83	0	17	2	119	138	45	324	66	60	495	830
Total	0	0	0	275	275	0	0	0	209	209	0	56	5	400	461	141	1279	269	155	1844	2789
Grand Total	0	0	0	397	397	0	0	0	335	335	0	98	18	738	854	239	2431	519	268	3457	5043
Apprch %	0	0	0	100		0	0	0	100		0	11.5	2.1	86.4		6.9	70.3	15	7.8		
Total %	0	0	0	7.9	7.9	0	0	0	6.6	6.6	0	1.9	0.4	14.6	16.9	4.7	48.2	10.3	5.3	68.6	

	Lewers Street Southbound				Kalakaua Avenue Westbound				Lewers Street Northbound				Kalakaua Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 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	14	1	15	28	302	58	388	403
08:15 AM	0	0	0	0	0	0	0	0	0	10	0	10	39	291	76	406	416
08:30 AM	0	0	0	0	0	0	0	0	0	15	2	17	29	362	69	460	477
08:45 AM	0	0	0	0	0	0	0	0	0	17	2	19	45	324	66	435	454
Total Volume	0	0	0	0	0	0	0	0	0	56	5	61	141	1279	269	1689	1750
% App. Total	0	0	0		0	0	0		0	91.8	8.2		8.3	75.7	15.9		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.824	.625	.803	.783	.883	.885	.918	.917

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:MM, MA
Counter:D4-5674, D4-5677
Weather:Clear

File Name : KalLew - Diagonal-X-Walk AM
Site Code : 00000001
Start Date : 9/12/2013
Page No : 1

Groups Printed- Unshifted

	Lewers Street - Diagonal Crossing Between Northwest & Southeast Curbs Southbound					Westbound	Lewers Street - Diagonal Crossing Between Northeast & Southwest Curbs Northbound					Eastbound	
Start Time	Left	Thru	Right	Peds	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	App. Total	Int. Total
06:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 AM	0	0	0	9	9	0	0	0	0	13	13	0	22
07:15 AM	0	0	0	17	17	0	0	0	0	8	8	0	25
07:30 AM	0	0	0	19	19	0	0	0	0	16	16	0	35
07:45 AM	0	0	0	13	13	0	0	0	0	6	6	0	19
Total	0	0	0	58	58	0	0	0	0	43	43	0	101
08:00 AM	0	0	0	10	10	0	0	0	0	14	14	0	24
08:15 AM	0	0	0	17	17	0	0	0	0	13	13	0	30
08:30 AM	0	0	0	43	43	0	0	0	0	5	5	0	48
08:45 AM	0	0	0	35	35	0	0	0	0	28	28	0	63
Total	0	0	0	105	105	0	0	0	0	60	60	0	165
Grand Total	0	0	0	163	163	0	0	0	0	103	103	0	266
Apprch %	0	0	0	100			0	0	0	100			
Total %	0	0	0	61.3	61.3	0	0	0	0	38.7	38.7	0	

	Lewers Street - Diagonal Crossing Between Northwest & Southeast Curbs Southbound				Westbound	Lewers Street - Diagonal Crossing Between Northeast & Southwest Curbs Northbound				Eastbound	
Start Time	Left	Thru	Right	App. Total	App. Total	Left	Thru	Right	App. Total	App. Total	Int. Total
Peak Hour Analysis From 06:45 AM to 08:30 AM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 06:45 AM											
06:45 AM	0	0	0	0	0	0	0	0	0	0	0
07:00 AM	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0			0	0	0			
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:MM, JT
Counter:D4-5677, D4-5674
Weather:Clear

File Name : KalLew PM
Site Code : 00000001
Start Date : 9/12/2013
Page No : 1

Groups Printed- Unshifted

	Southbound	Westbound	Lewers Street Northbound					Kalakaua Avenue Eastbound					
Start Time	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	0	0	0	31	15	254	300	37	343	64	203	647	947
03:15 PM	0	0	0	36	6	237	279	37	350	56	173	616	895
03:30 PM	0	0	0	28	7	209	244	50	371	78	167	666	910
03:45 PM	0	0	0	32	5	210	247	34	388	47	172	641	888
Total	0	0	0	127	33	910	1070	158	1452	245	715	2570	3640
04:00 PM	0	0	0	60	10	216	286	40	355	46	130	571	857
04:15 PM	0	0	0	45	7	208	260	29	377	45	129	580	840
04:30 PM	0	0	0	38	9	239	286	39	350	48	122	559	845
04:45 PM	0	0	0	30	9	262	301	33	403	38	126	600	901
Total	0	0	0	173	35	925	1133	141	1485	177	507	2310	3443
05:00 PM	0	0	0	31	12	257	300	23	410	43	150	626	926
05:15 PM	0	0	0	43	15	215	273	32	394	45	112	583	856
05:30 PM	0	0	0	32	10	242	284	30	382	37	114	563	847
05:45 PM	0	0	0	47	6	315	368	26	355	38	119	538	906
Total	0	0	0	153	43	1029	1225	111	1541	163	495	2310	3535
Grand Total	0	0	0	453	111	2864	3428	410	4478	585	1717	7190	10618
Apprch %			0	13.2	3.2	83.5		5.7	62.3	8.1	23.9		
Total %	0	0	0	4.3	1	27	32.3	3.9	42.2	5.5	16.2	67.7	

	Southbound	Westbound	Lewers Street Northbound				Kalakaua Avenue Eastbound				
Start Time	App. Total	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 03:30 PM											
03:30 PM	0	0	0	28	7	35	**50**	371	**78**	**499**	**534**
03:45 PM	0	0	0	32	5	37	34	**388**	47	469	506
04:00 PM	0	0	0	**60**	**10**	**70**	40	355	46	441	511
04:15 PM	0	0	0	45	7	52	29	377	45	451	503
Total Volume	0	0	0	165	29	194	153	1491	216	1860	2054
% App. Total			0	85.1	14.9		8.2	80.2	11.6		
PHF	.000	.000	.000	.688	.725	.693	.765	.961	.692	.932	.962

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:MM, JT
Counter:D4-5677, D4-5674
Weather:Clear

File Name : KalLew - Diagonal-X-Walk PM
Site Code : 00000001
Start Date : 9/12/2013
Page No : 1

Groups Printed- Unshifted

	Lewers Street - Diagonal Crossing Between Northwest & Southeast Curbs Southbound					Westbound	Lewers Street - Diagonal Crossing Between Northeast & Southwest Curbs Northbound					Eastbound	
Start Time	Left	Thru	Right	Peds	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	App. Total	Int. Total
03:00 PM	0	0	0	183	183	0	0	0	0	53	53	0	236
03:15 PM	0	0	0	143	143	0	0	0	0	58	58	0	201
03:30 PM	0	0	0	148	148	0	0	0	0	84	84	0	232
03:45 PM	0	0	0	147	147	0	0	0	0	68	68	0	215
Total	0	0	0	621	621	0	0	0	0	263	263	0	884
04:00 PM	0	0	0	180	180	0	0	0	0	71	71	0	251
04:15 PM	0	0	0	141	141	0	0	0	0	101	101	0	242
04:30 PM	0	0	0	159	159	0	0	0	0	81	81	0	240
04:45 PM	0	0	0	156	156	0	0	0	0	80	80	0	236
Total	0	0	0	636	636	0	0	0	0	333	333	0	969
05:00 PM	0	0	0	107	107	0	0	0	0	74	74	0	181
05:15 PM	0	0	0	126	126	0	0	0	0	86	86	0	212
05:30 PM	0	0	0	177	177	0	0	0	0	93	93	0	270
05:45 PM	0	0	0	189	189	0	0	0	0	111	111	0	300
Total	0	0	0	599	599	0	0	0	0	364	364	0	963
Grand Total	0	0	0	1856	1856	0	0	0	0	960	960	0	2816
Apprch %	0	0	0	100			0	0	0	100			
Total %	0	0	0	65.9	65.9	0	0	0	0	34.1	34.1	0	

	Lewers Street - Diagonal Crossing Between Northwest & Southeast Curbs Southbound				Westbound	Lewers Street - Diagonal Crossing Between Northeast & Southwest Curbs Northbound				Eastbound	
Start Time	Left	Thru	Right	App. Total	App. Total	Left	Thru	Right	App. Total	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 03:00 PM											
03:00 PM	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0			0	0	0			
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:GC
Counter:D4-3890
Weather:Clear

File Name : Kalia @ Halekulani Hotel AM 9-12-2013
Site Code : 00000005
Start Date : 9/12/2013
Page No : 1

Groups Printed- Unshifted

	Lewers Street Southbound					Kalia Road Westbound					Halekulani Hotel Valet Northbound					Kalia Road Right = Right Turn Into Halekulani Hotel Valet Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	7	0	34	14	55	0	11	0	0	11	4	0	1	0	5	1	8	4	79	92	163
07:15 AM	8	0	40	11	59	0	6	0	0	6	2	0	0	0	2	0	11	7	92	110	177
07:30 AM	9	0	29	13	51	1	8	0	0	9	7	0	3	0	10	0	15	9	78	102	172
07:45 AM	12	0	36	27	75	0	4	1	1	6	4	0	6	0	10	1	11	11	103	126	217
Total	36	0	139	65	240	1	29	1	1	32	17	0	10	0	27	2	45	31	352	430	729
08:00 AM	11	0	30	16	57	5	8	0	5	18	3	0	8	0	11	0	10	15	80	105	191
08:15 AM	9	0	33	10	52	1	8	0	4	13	2	0	12	0	14	0	17	16	49	82	161
08:30 AM	8	0	48	10	66	2	7	0	8	17	1	0	4	0	5	1	12	3	89	105	193
08:45 AM	8	0	49	10	67	4	16	0	10	30	5	0	10	0	15	0	17	6	88	111	223
Total	36	0	160	46	242	12	39	0	27	78	11	0	34	0	45	1	56	40	306	403	768
Grand Total	72	0	299	111	482	13	68	1	28	110	28	0	44	0	72	3	101	71	658	833	1497
Apprch %	14.9	0	62	23		11.8	61.8	0.9	25.5		38.9	0	61.1	0		0.4	12.1	8.5	79		
Total %	4.8	0	20	7.4	32.2	0.9	4.5	0.1	1.9	7.3	1.9	0	2.9	0	4.8	0.2	6.7	4.7	44	55.6	

	Lewers Street Southbound				Kalia Road Westbound				Halekulani Hotel Valet Northbound				Kalia Road Right = Right Turn Into Halekulani Hotel Valet Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	**11**	0	30	41	**5**	8	0	13	3	0	8	11	0	10	15	25	90
08:15 AM	9	0	33	42	1	8	0	9	2	0	**12**	14	0	**17**	**16**	**33**	98
08:30 AM	8	0	48	56	2	7	0	9	1	0	4	5	**1**	12	3	16	86
08:45 AM	8	0	**49**	**57**	4	**16**	0	**20**	**5**	0	10	**15**	0	17	6	23	**115**
Total Volume	36	0	160	196	12	39	0	51	11	0	34	45	1	56	40	97	389
% App. Total	18.4	0	81.6		23.5	76.5	0		24.4	0	75.6		1	57.7	41.2		
PHF	.818	.000	.816	.860	.600	.609	.000	.638	.550	.000	.708	.750	.250	.824	.625	.735	.846

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:GC
Counter:D4-3890
Weather:Clear

File Name : Kalia @ Halekulani Hotel U-Turns AM 9-12-2013
Site Code : 00000005
Start Date : 9/12/2013
Page No : 1

Groups Printed- Unshifted

	Southbound	Westbound	Northbound	Kalia Road Thru = U-Turn Within The Street, Right = U-Turn Within Valet Eastbound					
Start Time	App. Total	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	1	0	0	1	1
Total	0	0	0	0	1	0	0	1	1
08:00 AM	0	0	0	0	5	0	0	5	5
08:15 AM	0	0	0	0	4	0	0	4	4
08:30 AM	0	0	0	0	8	0	0	8	8
08:45 AM	0	0	0	0	10	0	0	10	10
Total	0	0	0	0	27	0	0	27	27
Grand Total	0	0	0	0	28	0	0	28	28
Apprch %				0	100	0	0		
Total %	0	0	0	0	100	0	0	100	

	Southbound	Westbound	Northbound	Kalia Road Thru = U-Turn Within The Street, Right = U-Turn Within Valet Eastbound				
Start Time	App. Total	App. Total	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 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	5	0	5	5
08:15 AM	0	0	0	0	4	0	4	4
08:30 AM	0	0	0	0	8	0	8	8
08:45 AM	0	0	0	0	10	0	10	10
Total Volume	0	0	0	0	27	0	27	27
% App. Total				0	100	0		
PHF	.000	.000	.000	.000	.675	.000	.675	.675

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:GC
Counter:D4-3890
Weather:Clear

File Name : Kalia @ Halekulani Hotel PM 9-12-2013
Site Code : 00000005
Start Date : 9/12/2013
Page No : 1

Groups Printed- Unshifted

	Lewers Street Southbound					Kalia Road Westbound					Halekulani Hotel Valet Northbound					Kalia Road Right = Right Turn Into Halekulani Hotel Valet Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	5	0	44	29	78	4	31	0	0	35	13	0	12	0	25	0	6	14	149	169	307
03:15 PM	6	0	52	28	86	6	37	0	0	43	17	0	8	0	25	0	1	18	129	148	302
03:30 PM	11	0	50	24	85	7	16	0	0	23	21	0	4	0	25	0	7	17	144	168	301
03:45 PM	8	0	39	34	81	1	23	0	0	24	11	0	4	0	15	0	3	13	159	175	295
Total	30	0	185	115	330	18	107	0	0	125	62	0	28	0	90	0	17	62	581	660	1205
04:00 PM	9	0	51	30	90	1	31	0	0	32	10	0	3	0	13	0	3	13	177	193	328
04:15 PM	7	0	49	28	84	2	27	0	0	29	8	0	2	0	10	0	1	12	154	167	290
04:30 PM	7	0	45	31	83	2	17	0	0	19	9	0	5	0	14	0	4	9	179	192	308
04:45 PM	3	0	49	54	106	1	28	0	0	29	5	0	4	0	9	0	2	8	144	154	298
Total	26	0	194	143	363	6	103	0	0	109	32	0	14	0	46	0	10	42	654	706	1224
05:00 PM	1	0	39	15	55	2	21	0	0	23	12	0	3	0	15	0	6	16	208	230	323
05:15 PM	4	0	42	18	64	2	32	0	0	34	8	0	4	0	12	0	2	7	149	158	268
05:30 PM	12	0	37	45	94	3	30	0	0	33	16	0	5	0	21	0	4	12	185	201	349
05:45 PM	2	0	36	24	62	4	16	0	0	20	16	0	2	0	18	0	2	17	163	182	282
Total	19	0	154	102	275	11	99	0	0	110	52	0	14	0	66	0	14	52	705	771	1222
Grand Total	75	0	533	360	968	35	309	0	0	344	146	0	56	0	202	0	41	156	1940	2137	3651
Apprch %	7.7	0	55.1	37.2		10.2	89.8	0	0		72.3	0	27.7	0		0	1.9	7.3	90.8		
Total %	2.1	0	14.6	9.9	26.5	1	8.5	0	0	9.4	4	0	1.5	0	5.5	0	1.1	4.3	53.1	58.5	

	Lewers Street Southbound					Kalia Road Westbound					Halekulani Hotel Valet Northbound					Kalia Road Right = Right Turn Into Halekulani Hotel Valet Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	3	0	**49**	**54**	**106**	1	28	0	0	29	5	0	4	0	9	0	2	8	144	154	298
05:00 PM	1	0	39	15	55	2	21	0	0	23	12	0	3	0	15	0	**6**	**16**	**208**	**230**	323
05:15 PM	4	0	42	18	64	2	**32**	0	0	**34**	8	0	4	0	12	0	2	7	149	158	268
05:30 PM	**12**	0	37	45	94	**3**	30	0	0	33	**16**	0	**5**	0	**21**	0	4	12	185	201	**349**
Total Volume	20	0	167	132	319	8	111	0	0	119	41	0	16	0	57	0	14	43	686	743	1238
% App. Total	6.3	0	52.4	41.4		6.7	93.3	0	0		71.9	0	28.1	0		0	1.9	5.8	92.3		
PHF	.417	.000	.852	.611	.752	.667	.867	.000	.000	.875	.641	.000	.800	.000	.679	.000	.583	.672	.825	.808	.887

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:GC
Counter:D4-3890
Weather:Clear

File Name : Kalia @ Halekulani Hotel U-Turns PM 9-12-2013
Site Code : 00000005
Start Date : 9/12/2013
Page No : 1

Groups Printed- Unshifted

	Southbound	Westbound	Northbound	Kalia Street Thru = U-Turn Within Street, Right = U-Turn Within Valet Eastbound					
Start Time	App. Total	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	0	0	0	0	13	0	0	13	13
03:15 PM	0	0	0	0	16	0	0	16	16
03:30 PM	0	0	0	0	15	0	0	15	15
03:45 PM	0	0	0	0	10	3	0	13	13
Total	0	0	0	0	54	3	0	57	57
04:00 PM	0	0	0	0	16	0	0	16	16
04:15 PM	0	0	0	0	14	0	0	14	14
04:30 PM	0	0	0	0	10	0	0	10	10
04:45 PM	0	0	0	0	8	0	0	8	8
Total	0	0	0	0	48	0	0	48	48
05:00 PM	0	0	0	0	4	0	0	4	4
05:15 PM	0	0	0	0	15	0	0	15	15
05:30 PM	0	0	0	0	17	0	0	17	17
05:45 PM	0	0	0	0	12	0	0	12	12
Total	0	0	0	0	48	0	0	48	48
Grand Total	0	0	0	0	150	3	0	153	153
Apprch %				0	98	2	0		
Total %	0	0	0	0	98	2	0	100	

	Southbound	Westbound	Northbound	Kalia Street Thru = U-Turn Within Street, Right = U-Turn Within Valet Eastbound				
Start Time	App. Total	App. Total	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1								
Peak Hour for Entire Intersection Begins at 03:15 PM								
03:15 PM	0	0	0	0	16	0	16	16
03:30 PM	0	0	0	0	15	0	15	15
03:45 PM	0	0	0	0	10	3	13	13
04:00 PM	0	0	0	0	16	0	16	16
Total Volume	0	0	0	0	57	3	60	60
% App. Total				0	95	5		
PHF	.000	.000	.000	.000	.891	.250	.938	.938

Wilson Okamoto Corporation

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Counted By:TO
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File Name : Kalia @ Halekulani Hotel AM 9-13-2013
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Start Date : 9/13/2013
Page No : 1

Groups Printed- Unshifted

	Lewers Street Southbound					Kalia road Left = Left Turn Into Halekulani Hotel Valet Westbound					Halekulani Hotel Valet Northbound					Kalia Road Left = Left Turn Into Imperial Resort Hotel, Right = Right Turn Into Halekulani Hotel Valet Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	6	0	21	21	48	0	9	0	0	9	3	0	0	0	3	1	15	2	41	59	119
07:15 AM	12	0	33	32	77	1	3	0	0	4	5	0	0	0	5	0	15	5	56	76	162
07:30 AM	6	0	17	48	71	0	6	0	0	6	2	0	0	0	2	0	11	2	43	56	135
07:45 AM	11	0	27	16	54	0	3	0	0	3	4	0	1	0	5	1	16	2	55	74	136
Total	35	0	98	117	250	1	21	0	0	22	14	0	1	0	15	2	57	11	195	265	552
08:00 AM	12	0	18	25	55	1	3	0	0	4	6	0	3	0	9	2	21	3	53	79	147
08:15 AM	12	0	33	33	78	2	8	0	0	10	9	0	1	0	10	1	13	9	58	81	179
08:30 AM	6	0	39	21	66	2	5	0	0	7	18	0	3	0	21	7	12	8	59	86	180
08:45 AM	3	0	35	27	65	3	7	0	0	10	8	0	2	0	10	3	16	5	48	72	157
Total	33	0	125	106	264	8	23	0	0	31	41	0	9	0	50	13	62	25	218	318	663
Grand Total	68	0	223	223	514	9	44	0	0	53	55	0	10	0	65	15	119	36	413	583	1215
Apprch %	13.2	0	43.4	43.4		17	83	0	0		84.6	0	15.4	0		2.6	20.4	6.2	70.8		
Total %	5.6	0	18.4	18.4	42.3	0.7	3.6	0	0	4.4	4.5	0	0.8	0	5.3	1.2	9.8	3	34	48	

	Lewers Street Southbound				Kalia road Left = Left Turn Into Halekulani Hotel Valet Westbound				Halekulani Hotel Valet Northbound				Kalia Road Left = Left Turn Into Imperial Resort Hotel, Right = Right Turn Into Halekulani Hotel Valet Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	**12**	0	18	30	1	3	0	4	6	0	**3**	9	2	**21**	3	26	69
08:15 AM	12	0	33	**45**	2	**8**	0	**10**	9	0	1	10	1	13	**9**	23	88
08:30 AM	6	0	**39**	45	2	5	0	7	**18**	0	3	**21**	**7**	12	8	**27**	**100**
08:45 AM	3	0	35	38	**3**	7	0	10	8	0	2	10	3	16	5	24	82
Total Volume	33	0	125	158	8	23	0	31	41	0	9	50	13	62	25	100	339
% App. Total	20.9	0	79.1		25.8	74.2	0		82	0	18		13	62	25		
PHF	.688	.000	.801	.878	.667	.719	.000	.775	.569	.000	.750	.595	.464	.738	.694	.926	.848

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Page No : 1

Groups Printed- Unshifted

	Southbound	Westbound	Northbound	Kalia Road Thru = U-Turn Within Street Eastbound				
Start Time	App. Total	App. Total	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	1	0	1	1
07:15 AM	0	0	0	0	8	0	8	8
07:30 AM	0	0	0	0	4	0	4	4
07:45 AM	0	0	0	0	3	0	3	3
Total	0	0	0	0	16	0	16	16
08:00 AM	0	0	0	0	4	0	4	4
08:15 AM	0	0	0	0	3	0	3	3
08:30 AM	0	0	0	0	1	0	1	1
08:45 AM	0	0	0	0	3	0	3	3
Total	0	0	0	0	11	0	11	11
Grand Total	0	0	0	0	27	0	27	27
Apprch %				0	100	0		
Total %	0	0	0	0	100	0	100	

	Southbound	Westbound	Northbound	Kalia Road Thru = U-Turn Within Street Eastbound				
Start Time	App. Total	App. Total	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1								
Peak Hour for Entire Intersection Begins at 07:15 AM								
07:15 AM	0	0	0	0	8	0	8	8
07:30 AM	0	0	0	0	4	0	4	4
07:45 AM	0	0	0	0	3	0	3	3
08:00 AM	0	0	0	0	4	0	4	4
Total Volume	0	0	0	0	19	0	19	19
% App. Total				0	100	0		
PHF	.000	.000	.000	.000	.594	.000	.594	.594

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
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Counted By:GL
Counter:T-1839
Weather:Clear

File Name : PARCHel AM
Site Code : 00000004
Start Date : 9/12/2013
Page No : 1

Groups Printed- Unshifted

	Sheraton Waikiki Bus Depot Southbound					Helumoa Street Westbound					Parc Shore Hotel Valet Northbound					Helumoa Street Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	0	10	0	10	1	2	0	0	3	3	0	0	0	3	0	4	2	0	6	22
07:15 AM	0	0	6	0	6	0	1	0	0	1	2	0	0	0	2	0	0	1	0	1	10
07:30 AM	0	0	11	0	11	1	0	0	0	1	2	0	0	0	2	0	2	4	0	6	20
07:45 AM	0	0	8	0	8	0	1	0	0	1	0	0	0	0	0	0	1	1	0	2	11
Total	0	0	35	0	35	2	4	0	0	6	7	0	0	0	7	0	7	8	0	15	63
08:00 AM	0	0	16	0	16	1	2	0	0	3	4	0	0	0	4	0	0	2	0	2	25
08:15 AM	0	0	19	0	19	1	0	0	0	1	0	0	0	0	0	0	0	1	0	1	21
08:30 AM	0	0	12	0	12	0	1	0	0	1	3	0	0	0	3	0	0	3	0	3	19
08:45 AM	0	0	17	0	17	0	2	0	0	2	2	0	0	0	2	0	1	7	0	8	29
Total	0	0	64	0	64	2	5	0	0	7	9	0	0	0	9	0	1	13	0	14	94
Grand Total	0	0	99	0	99	4	9	0	0	13	16	0	0	0	16	0	8	21	0	29	157
Apprch %	0	0	100	0		30.8	69.2	0	0		100	0	0	0		0	27.6	72.4	0		
Total %	0	0	63.1	0	63.1	2.5	5.7	0	0	8.3	10.2	0	0	0	10.2	0	5.1	13.4	0	18.5	

	Sheraton Waikiki Bus Depot Southbound					Helumoa Street Westbound					Parc Shore Hotel Valet Northbound					Helumoa Street Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	0	0	16	0	16	**1**	**2**	0	0	**3**	**4**	0	0	0	**4**	0	0	2	0	2	25
08:15 AM	0	0	**19**	0	**19**	1	0	0	0	1	0	0	0	0	0	0	0	1	0	1	21
08:30 AM	0	0	12	0	12	0	1	0	0	1	3	0	0	0	3	0	0	3	0	3	19
08:45 AM	0	0	17	0	17	0	2	0	0	2	2	0	0	0	2	0	**1**	**7**	0	**8**	**29**
Total Volume	0	0	64	0	64	2	5	0	0	7	9	0	0	0	9	0	1	13	0	14	94
% App. Total	0	0	100	0		28.6	71.4	0	0		100	0	0	0		0	7.1	92.9	0		
PHF	.000	.000	.842	.000	.842	.500	.625	.000	.000	.583	.563	.000	.000	.000	.563	.000	.250	.464	.000	.438	.810

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:GL
Counter:T-1839
Weather:Clear

File Name : PARCHel U-Turns AM
Site Code : 00000004
Start Date : 9/12/2013
Page No : 1

Groups Printed- Unshifted

	Southbound	Westbound	Northbound	Helumoa Street - Right = U-Turn Thru Valet Area, Thru = U-Turn Within The Street Eastbound					
Start Time	App. Total	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	3	6	0	9	9
07:15 AM	0	0	0	0	2	0	0	2	2
07:30 AM	0	0	0	0	2	1	0	3	3
07:45 AM	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	7	7	0	14	14
08:00 AM	0	0	0	0	1	0	0	1	1
08:15 AM	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	3	1	0	4	4
08:45 AM	0	0	0	0	2	3	0	5	5
Total	0	0	0	0	6	4	0	10	10
Grand Total	0	0	0	0	13	11	0	24	24
Apprch %				0	54.2	45.8	0		
Total %	0	0	0	0	54.2	45.8	0	100	

	Southbound	Westbound	Northbound	Helumoa Street - Right = U-Turn Thru Valet Area, Thru = U-Turn Within The Street Eastbound				
Start Time	App. Total	App. Total	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1								
Peak Hour for Entire Intersection Begins at 07:00 AM								
07:00 AM	0	0	0	0	**3**	**6**	**9**	**9**
07:15 AM	0	0	0	0	2	0	2	2
07:30 AM	0	0	0	0	2	1	3	3
07:45 AM	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	7	7	14	14
% App. Total				0	50	50		
PHF	.000	.000	.000	.000	.583	.292	.389	.389

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Groups Printed- Unshifted

	Sheraton Waikiki Bus Depot Southbound					Helumoa Street Westbound					Parc Shore Hotel Valet Northbound					Helumoa Street Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	0	0	8	0	8	0	1	0	0	1	1	0	0	0	1	0	2	1	0	3	13
03:15 PM	0	0	13	0	13	0	3	1	1	5	1	0	0	0	1	0	2	1	0	3	22
03:30 PM	0	0	14	0	14	0	1	0	0	1	1	0	0	0	1	0	0	2	0	2	18
03:45 PM	0	0	18	0	18	1	0	0	0	1	0	0	0	0	0	0	0	5	0	5	24
Total	0	0	53	0	53	1	5	1	1	8	3	0	0	0	3	0	4	9	0	13	77
04:00 PM	0	0	13	0	13	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	16
04:15 PM	0	0	10	0	10	0	0	0	1	1	0	0	0	0	0	0	0	1	0	1	12
04:30 PM	0	0	15	0	15	0	1	1	1	3	0	0	0	0	0	0	1	3	0	4	22
04:45 PM	0	0	5	0	5	0	0	1	1	2	0	0	0	0	0	0	3	2	0	5	12
Total	0	0	43	0	43	0	1	2	3	6	0	0	0	0	0	0	4	9	0	13	62
05:00 PM	0	0	14	0	14	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	15
05:15 PM	0	0	11	0	11	0	2	0	1	3	0	0	0	0	0	0	0	2	0	2	16
05:30 PM	0	0	12	0	12	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	13
05:45 PM	0	0	9	0	9	0	1	0	0	1	0	0	0	0	0	0	0	5	0	5	15
Total	0	0	46	0	46	0	3	0	2	5	0	0	0	0	0	0	0	8	0	8	59
Grand Total	0	0	142	0	142	1	9	3	6	19	3	0	0	0	3	0	8	26	0	34	198
Apprch %	0	0	100	0		5.3	47.4	15.8	31.6		100	0	0	0		0	23.5	76.5	0		
Total %	0	0	71.7	0	71.7	0.5	4.5	1.5	3	9.6	1.5	0	0	0	1.5	0	4	13.1	0	17.2	

	Sheraton Waikiki Bus Depot Southbound					Helumoa Street Westbound					Parc Shore Hotel Valet Northbound					Helumoa Street Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 03:15 PM																					
03:15 PM	0	0	13	0	13	0	**3**	**1**	**1**	**5**	**1**	0	0	0	**1**	0	**2**	1	0	3	22
03:30 PM	0	0	14	0	14	0	1	0	0	1	1	0	0	0	1	0	0	2	0	2	18
03:45 PM	0	0	**18**	0	**18**	**1**	0	0	0	1	0	0	0	0	0	0	0	**5**	0	**5**	**24**
04:00 PM	0	0	13	0	13	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	16
Total Volume	0	0	58	0	58	1	4	1	1	7	2	0	0	0	2	0	2	11	0	13	80
% App. Total	0	0	100	0		14.3	57.1	14.3	14.3		100	0	0	0		0	15.4	84.6	0		
PHF	.000	.000	.806	.000	.806	.250	.333	.250	.250	.350	.500	.000	.000	.000	.500	.000	.250	.550	.000	.650	.833

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	Southbound	Westbound	Northbound	Helumoa Street - Thru = U-Turn Made Thru Valet Area, Right = U-Turn Made Within The Street Eastbound					
Start Time	App. Total	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	1	1	0	2	2
03:30 PM	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	1	1	0	2	2
04:00 PM	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	1	0	0	1	1
04:30 PM	0	0	0	0	1	1	0	2	2
04:45 PM	0	0	0	0	1	1	0	2	2
Total	0	0	0	0	3	2	0	5	5
05:00 PM	0	0	0	0	1	0	0	1	1
05:15 PM	0	0	0	0	1	0	0	1	1
05:30 PM	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	2	0	0	2	2
Grand Total	0	0	0	0	6	3	0	9	9
Apprch %				0	66.7	33.3	0		
Total %	0	0	0	0	66.7	33.3	0	100	

	Southbound	Westbound	Northbound	Helumoa Street - Thru = U-Turn Made Thru Valet Area, Right = U-Turn Made Within The Street Eastbound				
Start Time	App. Total	App. Total	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1								
Peak Hour for Entire Intersection Begins at 04:15 PM								
04:15 PM	0	0	0	0	1	0	1	1
04:30 PM	0	0	0	0	1	1	2	2
04:45 PM	0	0	0	0	1	1	2	2
05:00 PM	0	0	0	0	1	0	1	1
Total Volume	0	0	0	0	4	2	6	6
% App. Total				0	66.7	33.3		
PHF	.000	.000	.000	.000	1.00	.500	.750	.750

APPENDIX B

LEVEL OF SERVICE DEFINITIONS

LEVEL OF SERVICE DEFINITIONS

LEVEL-OF-SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS

Level of Service (LOS) for signalized intersections is defined in terms of delay, which is a measure of driver discomfort, frustration, fuel consumption, and increased travel time. Specifically, level-of-service (LOS) criteria are stated in terms of the average control delay per vehicle, typically a 15-min analysis period. The criteria are given in the following table.

Table 1: Level-of-Service Criteria for Signalized Intersections

Level of Service	Control Delay per Vehicle (sec/veh)
A	≤10.0
B	>10.0 and ≤20.0
C	>20.0 and ≤35.0
D	>35.0 and ≤55.0
E	>55.0 and ≤80.0
F	>80.0

Delay is a complex measure and depends on a number of variables, including the quality of progression, the cycle length, the green ratio, and the v/c ratio for the lane group.

Level of Service A describes operations with low control delay, up to 10 sec per vehicle. This level of service occurs when progression is extremely favorable and most vehicles arrive during the green phase. Many vehicles do not stop at all. Short cycle lengths may tend to contribute to low delay values.

Level of Service B describes operations with control delay greater than 10 and up to 20 sec per vehicle. This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of delay.

Level of Service C describes operations with control delay greater than 20 and up to 35 sec per vehicle. These higher delays may result from only fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. Cycle failure occurs when a given green phase does not serve queued vehicles and overflows occur. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.

Level of Service D describes operations with control delay greater than 35 and up to 55 sec per vehicle. At level of service D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high v/c ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.

"Highway Capacity Manual," Transportation Research Board, 2000.

Level of Service E describes operation with control delay greater than 55 and up to 80 sec per vehicle. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent.

Level of Service F describes operations with control delay in excess of 80 sec per vehicle. This level, considered to be unacceptable to most drivers, often occurs with oversaturation, that is, when arrival flow rates exceed the capacity lane groups. It may also occur at high v/c ratios with many individual cycle failures. Poor progression and long cycle lengths may also contribute significantly to high delay levels.

"Highway Capacity Manual," Transportation Research Board, 2000.

LEVEL OF SERVICE DEFINITIONS

LEVEL-OF-SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS

Level of Service (LOS) criteria are given in Table 1. As used here, control delay is defined as the total elapsed time from the time a vehicle stops at the end of the queue to the time required for the vehicle to travel from the last-in-queue position to the first-in-queue position, including deceleration of vehicles from free-flow speed to the speed of vehicles in the queue.

The average total delay for any particular minor movement is a function of the service rate or capacity of the approach and the degree of saturation. If the degree of saturation is greater than about 0.9, average control delay is significantly affected by the length of the analysis period.

Table 1: Level-of-Service Criteria for Unsignalized Intersections

Level of Service	Average Control Delay (Sec/Veh)
A	≤10.0
B	>10.0 and ≤15.0
C	>15.0 and ≤25.0
D	>25.0 and ≤35.0
E	>35.0 and ≤50.0
F	>50.0

"Highway Capacity Manual," Transportation Research Board, 2000.

APPENDIX C

CAPACITY ANALYSIS CALCULATIONS
EXISTING PEAK PERIOD TRAFFIC ANALYSIS

HCM Signalized Intersection Capacity Analysis
6: Kalia Road & Saratoga Road

11/26/2013

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	185	66	130	208	34	117
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0	5.0	5.0	5.0
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes		1.00	1.00	0.94	1.00	0.86
Flpb, ped/bikes		0.97	1.00	1.00	1.00	1.00
Frt		1.00	1.00	0.85	1.00	0.85
Flt Protected		0.96	1.00	1.00	0.95	1.00
Satd. Flow (prot)		1743	1863	1488	1770	1360
Flt Permitted		0.69	1.00	1.00	0.95	1.00
Satd. Flow (perm)		1255	1863	1488	1770	1360
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	201	72	141	226	37	127
RTOR Reduction (vph)	0	0	0	130	0	108
Lane Group Flow (vph)	0	273	141	96	37	19
Confl. Peds. (#/hr)	112			112		168
Turn Type	Perm	NA	NA	Perm	NA	Perm
Protected Phases		6	2		8	
Permitted Phases	6			2		8
Actuated Green, G (s)		10.0	10.0	10.0	3.5	3.5
Effective Green, g (s)		10.0	10.0	10.0	3.5	3.5
Actuated g/C Ratio		0.43	0.43	0.43	0.15	0.15
Clearance Time (s)		5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		534	792	633	263	202
v/s Ratio Prot			0.08		c0.02	
v/s Ratio Perm		c0.22		0.06		0.01
v/c Ratio		0.51	0.18	0.15	0.14	0.09
Uniform Delay, d1		5.0	4.2	4.1	8.7	8.6
Progression Factor		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		0.8	0.1	0.1	0.2	0.2
Delay (s)		5.8	4.3	4.3	8.9	8.8
Level of Service		A	A	A	A	A
Approach Delay (s)		5.8	4.3		8.9	
Approach LOS		A	A		A	

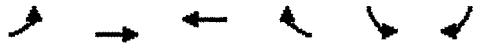
Intersection Summary			
HCM 2000 Control Delay	5.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	23.5	Sum of lost time (s)	10.0
Intersection Capacity Utilization	52.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	287	63	207	312	40	159
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0	5.0	5.0	5.0
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes		1.00	1.00	0.92	1.00	0.77
Flpb, ped/bikes		0.96	1.00	1.00	1.00	1.00
Frt		1.00	1.00	0.85	1.00	0.85
Flt Protected		0.96	1.00	1.00	0.95	1.00
Satd. Flow (prot)		1717	1863	1461	1770	1221
Flt Permitted		0.62	1.00	1.00	0.95	1.00
Satd. Flow (perm)		1111	1863	1461	1770	1221
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	312	68	225	339	43	173
RTOR Reduction (vph)	0	0	0	180	0	139
Lane Group Flow (vph)	0	380	225	159	43	34
Confl. Peds. (#/hr)	118			118		226
Turn Type	Perm	NA	NA	Perm	NA	Perm
Protected Phases		6	2		8	
Permitted Phases	6			2		8
Actuated Green, G (s)		14.2	14.2	14.2	6.0	6.0
Effective Green, g (s)		14.2	14.2	14.2	6.0	6.0
Actuated g/C Ratio		0.47	0.47	0.47	0.20	0.20
Clearance Time (s)		5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		522	875	686	351	242
v/s Ratio Prot			0.12		0.02	
v/s Ratio Perm		c0.34		0.11		c0.03
v/c Ratio		0.73	0.26	0.23	0.12	0.14
Uniform Delay, d1		6.4	4.8	4.8	9.9	10.0
Progression Factor		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		5.0	0.2	0.2	0.2	0.3
Delay (s)		11.5	5.0	4.9	10.1	10.2
Level of Service		B	A	A	B	B
Approach Delay (s)		11.5	5.0		10.2	
Approach LOS		B	A		B	

Intersection Summary			
HCM 2000 Control Delay	8.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	30.2	Sum of lost time (s)	10.0
Intersection Capacity Utilization	58.3%	ICU Level of Service	B
Analysis Period (min)	15		

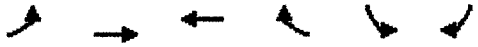
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Stop	Stop		Stop	
Volume (vph)	0	97	39	0	36	160
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	0	114	46	0	42	188

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total (vph)	114	46	42	188
Volume Left (vph)	0	0	42	0
Volume Right (vph)	0	0	0	188
Hadj (s)	0.03	0.03	0.53	-0.67
Departure Headway (s)	4.5	4.6	5.4	4.2
Degree Utilization, x	0.14	0.06	0.06	0.22
Capacity (veh/h)	754	736	643	824
Control Delay (s)	8.3	7.9	7.6	7.2
Approach Delay (s)	8.3	7.9	7.3	
Approach LOS	A	A	A	

Intersection Summary			
Delay	7.6		
Level of Service	A		
Intersection Capacity Utilization	36.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Stop	Stop		Stop	
Volume (vph)	0	57	111	0	20	167
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	64	125	0	22	188

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total (vph)	64	125	22	188
Volume Left (vph)	0	0	22	0
Volume Right (vph)	0	0	0	188
Hadj (s)	0.03	0.03	0.53	-0.67
Departure Headway (s)	4.6	4.5	5.5	4.3
Degree Utilization, x	0.08	0.16	0.03	0.22
Capacity (veh/h)	751	759	633	807
Control Delay (s)	8.0	8.3	7.5	7.3
Approach Delay (s)	8.0	8.3	7.3	
Approach LOS	A	A	A	

Intersection Summary			
Delay	7.7		
Level of Service	A		
Intersection Capacity Utilization	41.1%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1: Lewers Street & Kalakaua Avenue

11/26/2013

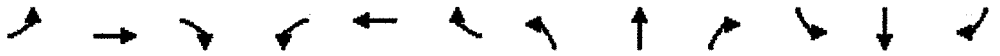
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	141	1279	269	0	0	0	0	56	5	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0						5.0	5.0			
Lane Util. Factor		0.86						1.00	1.00			
Frt		0.98						1.00	0.85			
Flt Protected		1.00						1.00	1.00			
Satd. Flow (prot)		6229						1863	1583			
Flt Permitted		1.00						1.00	1.00			
Satd. Flow (perm)		6229						1863	1583			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	153	1390	292	0	0	0	0	61	5	0	0	0
RTOR Reduction (vph)	0	44	0	0	0	0	0	0	4	0	0	0
Lane Group Flow (vph)	0	1791	0	0	0	0	0	61	1	0	0	0
Turn Type	Perm	NA						NA	Perm			
Protected Phases		4						2				
Permitted Phases	4								2			
Actuated Green, G (s)		45.0						25.0	25.0			
Effective Green, g (s)		45.0						25.0	25.0			
Actuated g/C Ratio		0.41						0.23	0.23			
Clearance Time (s)		5.0						5.0	5.0			
Lane Grp Cap (vph)		2548						423	359			
v/s Ratio Prot								c0.03				
v/s Ratio Perm		0.29							0.00			
v/c Ratio		0.70						0.14	0.00			
Uniform Delay, d1		27.0						34.0	32.9			
Progression Factor		1.00						1.00	1.00			
Incremental Delay, d2		1.7						0.7	0.0			
Delay (s)		28.6						34.7	32.9			
Level of Service		C						C	C			
Approach Delay (s)		28.6			0.0			34.5			0.0	
Approach LOS		C			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	28.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	36.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1: Lewers Street & Kalakaua Avenue

11/26/2013



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	153	1491	216	0	0	0	0	165	29	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0						5.0	5.0			
Lane Util. Factor		0.86						1.00	1.00			
Frt		0.98						1.00	0.85			
Flt Protected		1.00						1.00	1.00			
Satd. Flow (prot)		6270						1863	1583			
Flt Permitted		1.00						1.00	1.00			
Satd. Flow (perm)		6270						1863	1583			
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	159	1553	225	0	0	0	0	172	30	0	0	0
RTOR Reduction (vph)	0	34	0	0	0	0	0	0	23	0	0	0
Lane Group Flow (vph)	0	1903	0	0	0	0	0	172	7	0	0	0
Turn Type	Perm	NA						NA	Perm			
Protected Phases		4						2				
Permitted Phases	4								2			
Actuated Green, G (s)		45.0						25.0	25.0			
Effective Green, g (s)		45.0						25.0	25.0			
Actuated g/C Ratio		0.41						0.23	0.23			
Clearance Time (s)		5.0						5.0	5.0			
Lane Grp Cap (vph)		2565						423	359			
v/s Ratio Prot								c0.09				
v/s Ratio Perm		0.30							0.00			
v/c Ratio		0.74						0.41	0.02			
Uniform Delay, d1		27.6						36.2	33.0			
Progression Factor		1.00						1.00	1.00			
Incremental Delay, d2		2.0						2.9	0.1			
Delay (s)		29.6						39.1	33.1			
Level of Service		C						D	C			
Approach Delay (s)		29.6			0.0			38.2			0.0	
Approach LOS		C			A			D			A	

Intersection Summary			
HCM 2000 Control Delay	30.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	44.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

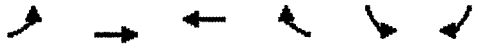
APPENDIX D

CAPACITY ANALYSIS CALCULATIONS
PROJECTED YEAR 2017 PEAK PERIOD TRAFFIC
ANALYSIS WITHOUT PROJECT

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	189	66	130	208	34	119
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0	5.0	5.0	5.0
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes		1.00	1.00	0.94	1.00	0.86
Flpb, ped/bikes		0.97	1.00	1.00	1.00	1.00
Frt		1.00	1.00	0.85	1.00	0.85
Flt Protected		0.96	1.00	1.00	0.95	1.00
Satd. Flow (prot)		1742	1863	1487	1770	1359
Flt Permitted		0.69	1.00	1.00	0.95	1.00
Satd. Flow (perm)		1253	1863	1487	1770	1359
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	205	72	141	226	37	129
RTOR Reduction (vph)	0	0	0	129	0	110
Lane Group Flow (vph)	0	277	141	97	37	19
Confl. Peds. (#/hr)	112			112		168
Turn Type	Perm	NA	NA	Perm	NA	Perm
Protected Phases		6	2		8	
Permitted Phases	6			2		8
Actuated Green, G (s)		10.1	10.1	10.1	3.5	3.5
Effective Green, g (s)		10.1	10.1	10.1	3.5	3.5
Actuated g/C Ratio		0.43	0.43	0.43	0.15	0.15
Clearance Time (s)		5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		536	797	636	262	201
v/s Ratio Prot			0.08		c0.02	
v/s Ratio Perm		c0.22		0.07		0.01
v/c Ratio		0.52	0.18	0.15	0.14	0.10
Uniform Delay, d1		5.0	4.2	4.1	8.7	8.7
Progression Factor		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		0.8	0.1	0.1	0.2	0.2
Delay (s)		5.8	4.3	4.2	9.0	8.9
Level of Service		A	A	A	A	A
Approach Delay (s)		5.8	4.3		8.9	
Approach LOS		A	A		A	

Intersection Summary			
HCM 2000 Control Delay	5.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	23.6	Sum of lost time (s)	10.0
Intersection Capacity Utilization	52.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	293	63	207	312	40	162
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0	5.0	5.0	5.0
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes		1.00	1.00	0.92	1.00	0.77
Flpb, ped/bikes		0.96	1.00	1.00	1.00	1.00
Frt		1.00	1.00	0.85	1.00	0.85
Flt Protected		0.96	1.00	1.00	0.95	1.00
Satd. Flow (prot)		1717	1863	1460	1770	1219
Flt Permitted		0.62	1.00	1.00	0.95	1.00
Satd. Flow (perm)		1109	1863	1460	1770	1219
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	318	68	225	339	43	176
RTOR Reduction (vph)	0	0	0	178	0	141
Lane Group Flow (vph)	0	386	225	161	43	35
Confl. Peds. (#/hr)	118			118		226
Turn Type	Perm	NA	NA	Perm	NA	Perm
Protected Phases		6	2		8	
Permitted Phases	6			2		8
Actuated Green, G (s)		14.4	14.4	14.4	6.0	6.0
Effective Green, g (s)		14.4	14.4	14.4	6.0	6.0
Actuated g/C Ratio		0.47	0.47	0.47	0.20	0.20
Clearance Time (s)		5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		525	882	691	349	240
v/s Ratio Prot			0.12		0.02	
v/s Ratio Perm		c0.35		0.11		c0.03
v/c Ratio		0.74	0.26	0.23	0.12	0.14
Uniform Delay, d1		6.5	4.8	4.7	10.0	10.1
Progression Factor		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		5.3	0.2	0.2	0.2	0.3
Delay (s)		11.8	4.9	4.9	10.2	10.4
Level of Service		B	A	A	B	B
Approach Delay (s)		11.8	4.9		10.3	
Approach LOS		B	A		B	

Intersection Summary			
HCM 2000 Control Delay	8.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	30.4	Sum of lost time (s)	10.0
Intersection Capacity Utilization	58.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↰	↱
Sign Control		Stop	Stop		Stop	
Volume (vph)	0	97	39	0	36	160
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	0	114	46	0	42	188

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total (vph)	114	46	42	188
Volume Left (vph)	0	0	42	0
Volume Right (vph)	0	0	0	188
Hadj (s)	0.03	0.03	0.53	-0.67
Departure Headway (s)	4.5	4.6	5.4	4.2
Degree Utilization, x	0.14	0.06	0.06	0.22
Capacity (veh/h)	754	736	643	824
Control Delay (s)	8.3	7.9	7.6	7.2
Approach Delay (s)	8.3	7.9	7.3	
Approach LOS	A	A	A	

Intersection Summary			
Delay	7.6		
Level of Service	A		
Intersection Capacity Utilization	36.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Stop	Stop		Stop	
Volume (vph)	0	57	111	0	20	167
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	64	125	0	22	188

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total (vph)	64	125	22	188
Volume Left (vph)	0	0	22	0
Volume Right (vph)	0	0	0	188
Hadj (s)	0.03	0.03	0.53	-0.67
Departure Headway (s)	4.6	4.5	5.5	4.3
Degree Utilization, x	0.08	0.16	0.03	0.22
Capacity (veh/h)	751	759	633	807
Control Delay (s)	8.0	8.3	7.5	7.3
Approach Delay (s)	8.0	8.3	7.3	
Approach LOS	A	A	A	

Intersection Summary			
Delay	7.7		
Level of Service	A		
Intersection Capacity Utilization	41.1%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1: Lewers Street & Kalakaua Avenue

11/26/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	141	1381	269	0	0	0	0	56	5	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0						5.0	5.0			
Lane Util. Factor		0.86						1.00	1.00			
Frt		0.98						1.00	0.85			
Flt Protected		1.00						1.00	1.00			
Satd. Flow (prot)		6239						1863	1583			
Flt Permitted		1.00						1.00	1.00			
Satd. Flow (perm)		6239						1863	1583			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	153	1501	292	0	0	0	0	61	5	0	0	0
RTOR Reduction (vph)	0	41	0	0	0	0	0	0	4	0	0	0
Lane Group Flow (vph)	0	1905	0	0	0	0	0	61	1	0	0	0
Turn Type	Perm	NA						NA	Perm			
Protected Phases		4						2				
Permitted Phases	4								2			
Actuated Green, G (s)		45.0						25.0	25.0			
Effective Green, g (s)		45.0						25.0	25.0			
Actuated g/C Ratio		0.41						0.23	0.23			
Clearance Time (s)		5.0						5.0	5.0			
Lane Grp Cap (vph)		2552						423	359			
v/s Ratio Prot								c0.03				
v/s Ratio Perm		0.31							0.00			
v/c Ratio		0.75						0.14	0.00			
Uniform Delay, d1		27.6						34.0	32.9			
Progression Factor		1.00						1.00	1.00			
Incremental Delay, d2		2.0						0.7	0.0			
Delay (s)		29.7						34.7	32.9			
Level of Service		C						C	C			
Approach Delay (s)		29.7			0.0			34.5			0.0	
Approach LOS		C			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	29.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	38.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1: Lewers Street & Kalakaua Avenue

11/26/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	153	1610	216	0	0	0	0	165	29	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0						5.0	5.0			
Lane Util. Factor		0.86						1.00	1.00			
Frt		0.98						1.00	0.85			
Flt Protected		1.00						1.00	1.00			
Satd. Flow (prot)		6279						1863	1583			
Flt Permitted		1.00						1.00	1.00			
Satd. Flow (perm)		6279						1863	1583			
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	159	1677	225	0	0	0	0	172	30	0	0	0
RTOR Reduction (vph)	0	31	0	0	0	0	0	0	23	0	0	0
Lane Group Flow (vph)	0	2030	0	0	0	0	0	172	7	0	0	0
Turn Type	Perm	NA						NA	Perm			
Protected Phases		4						2				
Permitted Phases	4								2			
Actuated Green, G (s)		45.0						25.0	25.0			
Effective Green, g (s)		45.0						25.0	25.0			
Actuated g/C Ratio		0.41						0.23	0.23			
Clearance Time (s)		5.0						5.0	5.0			
Lane Grp Cap (vph)		2568						423	359			
v/s Ratio Prot								c0.09				
v/s Ratio Perm		0.32							0.00			
v/c Ratio		0.79						0.41	0.02			
Uniform Delay, d1		28.4						36.2	33.0			
Progression Factor		1.00						1.00	1.00			
Incremental Delay, d2		2.6						2.9	0.1			
Delay (s)		31.0						39.1	33.1			
Level of Service		C						D	C			
Approach Delay (s)		31.0			0.0			38.2			0.0	
Approach LOS		C			A			D			A	

Intersection Summary			
HCM 2000 Control Delay	31.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	46.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

APPENDIX E

CAPACITY ANALYSIS CALCULATIONS
PROJECTED YEAR 2017 PEAK PERIOD TRAFFIC
ANALYSIS WITH PROJECT

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	189	60	124	199	25	119
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0	5.0	5.0	5.0
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes		1.00	1.00	0.94	1.00	0.86
Flpb, ped/bikes		0.97	1.00	1.00	1.00	1.00
Frt		1.00	1.00	0.85	1.00	0.85
Flt Protected		0.96	1.00	1.00	0.95	1.00
Satd. Flow (prot)		1739	1863	1488	1770	1362
Flt Permitted		0.69	1.00	1.00	0.95	1.00
Satd. Flow (perm)		1249	1863	1488	1770	1362
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	205	65	135	216	27	129
RTOR Reduction (vph)	0	0	0	125	0	110
Lane Group Flow (vph)	0	270	135	91	27	19
Confl. Peds. (#/hr)	112			112		168
Turn Type	Perm	NA	NA	Perm	NA	Perm
Protected Phases		6	2		8	
Permitted Phases	6			2		8
Actuated Green, G (s)		9.8	9.8	9.8	3.5	3.5
Effective Green, g (s)		9.8	9.8	9.8	3.5	3.5
Actuated g/C Ratio		0.42	0.42	0.42	0.15	0.15
Clearance Time (s)		5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		525	783	625	265	204
v/s Ratio Prot			0.07		c0.02	
v/s Ratio Perm		c0.22		0.06		0.01
v/c Ratio		0.51	0.17	0.15	0.10	0.09
Uniform Delay, d1		5.0	4.2	4.2	8.5	8.5
Progression Factor		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		0.9	0.1	0.1	0.2	0.2
Delay (s)		5.8	4.3	4.3	8.7	8.7
Level of Service		A	A	A	A	A
Approach Delay (s)		5.8	4.3		8.7	
Approach LOS		A	A		A	

Intersection Summary			
HCM 2000 Control Delay	5.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	23.3	Sum of lost time (s)	10.0
Intersection Capacity Utilization	52.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	293	58	191	289	32	162
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0	5.0	5.0	5.0
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00
Frpb, ped/bikes		1.00	1.00	0.92	1.00	0.77
Flpb, ped/bikes		0.96	1.00	1.00	1.00	1.00
Frt		1.00	1.00	0.85	1.00	0.85
Flt Protected		0.96	1.00	1.00	0.95	1.00
Satd. Flow (prot)		1714	1863	1461	1770	1223
Flt Permitted		0.63	1.00	1.00	0.95	1.00
Satd. Flow (perm)		1120	1863	1461	1770	1223
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	318	63	208	314	35	176
RTOR Reduction (vph)	0	0	0	166	0	141
Lane Group Flow (vph)	0	381	208	148	35	35
Confl. Peds. (#/hr)	118			118		226
Turn Type	Perm	NA	NA	Perm	NA	Perm
Protected Phases		6	2		8	
Permitted Phases	6			2		8
Actuated Green, G (s)		14.1	14.1	14.1	5.9	5.9
Effective Green, g (s)		14.1	14.1	14.1	5.9	5.9
Actuated g/C Ratio		0.47	0.47	0.47	0.20	0.20
Clearance Time (s)		5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		526	875	686	348	240
v/s Ratio Prot			0.11		0.02	
v/s Ratio Perm		c0.34		0.10		c0.03
v/c Ratio		0.72	0.24	0.22	0.10	0.14
Uniform Delay, d1		6.4	4.7	4.7	9.9	10.0
Progression Factor		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		4.9	0.1	0.2	0.1	0.3
Delay (s)		11.3	4.9	4.8	10.0	10.2
Level of Service		B	A	A	B	B
Approach Delay (s)		11.3	4.9		10.2	
Approach LOS		B	A		B	

Intersection Summary			
HCM 2000 Control Delay	8.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	30.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	58.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↰	↱
Sign Control		Stop	Stop		Stop	
Volume (vph)	0	73	24	0	23	160
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	0	86	28	0	27	188

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total (vph)	86	28	27	188
Volume Left (vph)	0	0	27	0
Volume Right (vph)	0	0	0	188
Hadj (s)	0.03	0.03	0.53	-0.67
Departure Headway (s)	4.4	4.5	5.3	4.1
Degree Utilization, x	0.11	0.04	0.04	0.21
Capacity (veh/h)	776	750	659	851
Control Delay (s)	8.0	7.7	7.3	7.0
Approach Delay (s)	8.0	7.7	7.1	
Approach LOS	A	A	A	

Intersection Summary			
Delay	7.3		
Level of Service	A		
Intersection Capacity Utilization	36.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↰	↱
Sign Control		Stop	Stop		Stop	
Volume (vph)	0	36	72	0	10	167
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	0	40	81	0	11	188

Direction, Lane #	EB 1	WB 1	SB 1	SB 2
Volume Total (vph)	40	81	11	188
Volume Left (vph)	0	0	11	0
Volume Right (vph)	0	0	0	188
Hadj (s)	0.03	0.03	0.53	-0.67
Departure Headway (s)	4.5	4.4	5.3	4.1
Degree Utilization, x	0.05	0.10	0.02	0.21
Capacity (veh/h)	768	771	656	847
Control Delay (s)	7.7	7.9	7.2	7.0
Approach Delay (s)	7.7	7.9	7.0	
Approach LOS	A	A	A	

Intersection Summary			
Delay	7.3		
Level of Service	A		
Intersection Capacity Utilization	41.1%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
1: Lewers Street & Kalakaua Avenue

11/26/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	141	1378	256	0	0	0	0	56	5	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0						5.0	5.0			
Lane Util. Factor		0.86						1.00	1.00			
Frt		0.98						1.00	0.85			
Flt Protected		1.00						1.00	1.00			
Satd. Flow (prot)		6245						1863	1583			
Flt Permitted		1.00						1.00	1.00			
Satd. Flow (perm)		6245						1863	1583			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	153	1498	278	0	0	0	0	61	5	0	0	0
RTOR Reduction (vph)	0	40	0	0	0	0	0	0	4	0	0	0
Lane Group Flow (vph)	0	1889	0	0	0	0	0	61	1	0	0	0
Turn Type	Perm	NA						NA	Perm			
Protected Phases		4						2				
Permitted Phases	4								2			
Actuated Green, G (s)		45.0						25.0	25.0			
Effective Green, g (s)		45.0						25.0	25.0			
Actuated g/C Ratio		0.41						0.23	0.23			
Clearance Time (s)		5.0						5.0	5.0			
Lane Grp Cap (vph)		2554						423	359			
v/s Ratio Prot								c0.03				
v/s Ratio Perm		0.30							0.00			
v/c Ratio		0.74						0.14	0.00			
Uniform Delay, d1		27.5						34.0	32.9			
Progression Factor		1.00						1.00	1.00			
Incremental Delay, d2		2.0						0.7	0.0			
Delay (s)		29.5						34.7	32.9			
Level of Service		C						C	C			
Approach Delay (s)		29.5			0.0			34.5			0.0	
Approach LOS		C			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	29.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	38.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
1: Lewers Street & Kalakaua Avenue

11/26/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	153	1603	206	0	0	0	0	165	29	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0						5.0	5.0			
Lane Util. Factor		0.86						1.00	1.00			
Frt		0.98						1.00	0.85			
Flt Protected		1.00						1.00	1.00			
Satd. Flow (prot)		6282						1863	1583			
Flt Permitted		1.00						1.00	1.00			
Satd. Flow (perm)		6282						1863	1583			
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	159	1670	215	0	0	0	0	172	30	0	0	0
RTOR Reduction (vph)	0	30	0	0	0	0	0	0	23	0	0	0
Lane Group Flow (vph)	0	2014	0	0	0	0	0	172	7	0	0	0
Turn Type	Perm	NA						NA	Perm			
Protected Phases		4						2				
Permitted Phases	4								2			
Actuated Green, G (s)		45.0						25.0	25.0			
Effective Green, g (s)		45.0						25.0	25.0			
Actuated g/C Ratio		0.41						0.23	0.23			
Clearance Time (s)		5.0						5.0	5.0			
Lane Grp Cap (vph)		2569						423	359			
v/s Ratio Prot								c0.09				
v/s Ratio Perm		0.32							0.00			
v/c Ratio		0.78						0.41	0.02			
Uniform Delay, d1		28.3						36.2	33.0			
Progression Factor		1.00						1.00	1.00			
Incremental Delay, d2		2.5						2.9	0.1			
Delay (s)		30.7						39.1	33.1			
Level of Service		C						D	C			
Approach Delay (s)		30.7			0.0			38.2			0.0	
Approach LOS		C			A			D			A	

Intersection Summary			
HCM 2000 Control Delay	31.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	46.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

APPENDIX 4

APPENDIX 4

PRELIMINARY ENGINEERING REPORT

WAIKIKI PARC HOTEL RENOVATION

PRELIMINARY ENGINEERING REPORT **March 3, 2014**
WAIKIKI PARC HOTEL
2233 Helumoa Road
Honolulu, HI 96815
TMK: 2-6-002: 11, 12, and 13

Prepared By:
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Site

The hotel building occupies most of the hotel's three TMK parcels between Helumoa Road and Kalia Road. There are no open outdoor spaces other than planting areas and walkways along Kalia Road. The main entry to the Hotel is a covered drop off area from Helumoa Road. Helumoa and Kalia are connected by the Waikiki Sheraton's private service driveway that traverses along the Diamond Head (east) side of the Parc Hotel property.

The topography is relatively flat. Ground elevations along the Helumoa Road frontage are between 4.85 and 4.25 feet mean sea level (MSL). Along Kalia Road, the ground elevations range between 4.20 and 3.70 feet MSL.

Storm Drain

Since the hotel site encumbers most of the property, storm runoff from the roof and upper parking deck downspout system drops to surface drains in the planting area between the Sheraton's service driveway and the Parc Hotel. The storm runoff from these downspouts flow into the planting area and percolates into the ground. Excess runoff flows onto Kalia Road.

There is no municipal storm drain on either Kalia or Helumoa Roads. The nearest municipal storm drain system is a 5.25'x 2' reinforced concrete box drain on Lewers Street. The nearest catch basins and storm water inlets are located at the Kalia Road and Helumoa Road corners with Lewers Street. The existing municipal storm drains are very shallow and there does not appear to be any opportunity to develop new storm drain systems along Kalia and Helumoa Roads to gravity flow to the municipal system.

The City's existing storm drainage system appears to be functioning adequately for the collection of rainfall runoff in the area and delivery of the flow to the ocean outfall seaward of Saratoga Avenue.

During the design phase of the project, a Storm Drain Report will be required to confirm the pre and post storm water flows generated by the site including a detailed breakdown of the distribution of flows to the City system. Since the existing site is an urbanized, fully developed

and built up district, we do not expect any increase in the storm water quantity or quality generated by the proposed project. The proposed storm drain flow pattern will follow the existing conditions to avoid redistribution of the project storm water flow to the City's drainage system.

A Drain Connection License will be obtained from the DPP in the event that any new drain connections are required for the project. Development of the project's storm drains will conform with the Low Impact Development (LID) measures which are required by the City's MS4 permit.

Sanitary Sewer System

Domestic wastes from the hotel's operation are disposed through a sewer lateral to the 8" municipal sewer system on Kalia Road. The Kalia Road 8" sewer is connected to the City's 10" vitrified clay pipe (vcp) sewer that traverses mauka along Lewers Street across Kalakaua Avenue where it turns into an 18" concrete sewer along Lewers Street to Kuhio Avenue. At the corner of Kuhio and Lewers is a municipal parking lot where the city's Beach Walk sewer pumping station is located. We understand that the sewer line on Lewers Street between Kalakaua and Kuhio Avenue is at capacity and no additional flows tributary to this section of sewer line will be accepted. The Halekulani and Waikiki Parc Hotel are within the tributary area.

Although portions of the City's collection system downstream of the project site is at or near capacity, we do not anticipate any off-site sewer improvements since the wastewater flow generated under the proposed project is less than is presently generated. A new Site Development Division Master Application for Sewer Connection will be submitted to confirm adequacy of the City's sewer collection system to support the revitalization project.

An average sanitary sewer flow of 94,320 gallons per day (gpd) is projected for the redevelopment project based on City and County guidelines for wastewater contribution. The projected sewer flow is approximately 20% lower than the existing flow of 117,280 gpd.

Domestic and Fire Water System

Potable water service is provided and operated by the City and County of Honolulu's Board of Water Supply (BWS). Potable service is currently adequate to support the proposed development. Since the renovated hotel will reduce the water usage by consolidating the number of guest rooms, there should be no increase in water demand.

Based on City and County Board of Water Supply demand factors, an average daily demand of 76,620 gpd was determined for the renovation project. This average daily demand represents a 23% decrease compared to the existing demand of 99,580 gpd.

Premises Identification Code: PID: 3335963392 1063034 (old)
Meter No.: M/N: 85159601 6" Detector Check Meter (Fire)

PID: 6277245894 1063031(old)
M/N: 03124157 4" Compound (Domestic)

Water for both domestic and fire flow use are provided from the 12" PVC BWS main on Kalia Road. There are several fire hydrants along the property frontage. FH 1031 and 7261 are near the Kalia Road intersection with Lewers Street. FH 1032 is on the Halekulani side of Kalia Road across from the Parc Hotel and FH 6106 is on Helumoa Street across from the Parc Hotel. All fire hydrants belong to the Board of Water Supply.

Gas

A 1" gas line enters the property near the southwest corner of the property from the Gas Company 4" gas line on Kalia Road.

FEMA Flood Designation

According to Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Panel 15003C0368G dated January 19, 2011, the Parc Hotel property is subject to FEMA Zone AE flooding with flood elevation of 7 feet. Across Kalia Road, the Halekulani Hotel is subject to AE flood elevation of 8 feet. The AE designation is the area subject to the 1% annual flood (100-year flood).

It appears that the flood elevation designation is due to run up of a tsunami wave along the shoreline. The FEMA Zone VE elevation 12 off shore degrades to an AE 8 in the Halekulani property, then AE 7 in the Waikiki Parc parcel and continues on to AE 6 and AE 5 further inland, whereas much of the remainder of Waikiki is subject to Flood Designation AO Depth 2 feet, due to the storm water overflow of the Ala Wai Canal.

Accessible Routes

The ADA consultant has completed a survey of the accessible routes outside and within the hotel and has recommended that a new curb ramp be provided at the Hotel entry on Kalia Road. The curb line and drop-off area is recessed from the Kalia Road right-of-way on Parc Hotel land and can be constructed without City approval. The existing curb ramp near the parking garage entrance is non-compliant because the grade of 11.6% exceeds the 8.33% maximum allowable. This curb ramp can be reconstructed also without seeking City approval because the ramp is wholly on Parc Hotel property.

Conclusion

With the hotel finish floor of 5.25 and the FEMA flood water surface elevation of 7, the hotel would be subject to flooding by approximately 2 feet of water during the 100 year event. Flood barriers or other mitigation measures can be employed to prevent flood waters from damaging the hotels interior and reducing the time needed after the flood event for the hotel to return to service.

Onsite utilities and drainage systems appear to be working as designed. With the reduction in room count, there will also be reduced water demand and sewer flow from the hotel compared to the existing usage. There is relatively little surface area on the property not encumbered by the hotel building. Correction of onsite ADA issues, particularly the accessible routes should be addressed since non-compliant elements could ultimately lead to civil lawsuits.