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869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

IN REPLY REFER TO:
DIR 0157
STP 8.1475

February 7, 2014

Acting Director
State of Hawaii
Office of Environmental Quality Control
235 South Beretania Street, Suite 702
Honolulu, Hawaii 96813

FILE COPY
FEB 23 2014

RECEIVED
'14 FEB -7 P3:04
OFFICE OF ENVIRONMENTAL QUALITY CONTROL

Dear Sir/Madame:

Subject: Draft Environmental Assessment
Hawaii Pacific University – Aloha Tower Marketplace Project
Honolulu, Oahu, Hawaii
TMK: (1) 2-1-001:001 (por.) and 063

The State of Hawaii Department of Transportation has reviewed the Draft Environmental Assessment (DEA) for the subject project and anticipates a Finding of No Significant Impact. The DEA has been prepared pursuant to Chapter 343, Hawaii Revised Statutes and Chapter 11 - 200, Hawaii Administrative Rules. Please publish notice of this DEA in the February 8, 2014 issue of the OEQC's *The Environmental Notice.*

Enclosed is a completed OEQC Publication Form, two copies of the DEA-AFONSI, an Adobe Acrobat file of the same, and an electronic copy of the publication form in MS Word.

Please contact Mr. Dean Nakagawa of our Statewide Transportation Planning Office at 831-7968 or dean.nakagawa@hawaii.gov if you have any questions.

Very truly yours,

GLENN M. OKIMOTO, Ph.D.
Director of Transportation

Enclosures

c: Scott Hayashi, Hawaii Pacific University
Earl Matsukawa, Wilson Okamoto Corporation

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

Project Name: Hawai'i Pacific University – Aloha Tower Marketplace Project

Island: O'ahu

District: Honolulu

TMK: (1) 2-1-001: 001 (por.) and 063

RECEIVED
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OFFICE OF ENVIRONMENTAL QUALITY CONTROL

Permits:

State of Hawai'i

Aloha Tower Development Corporation
- Eligibility Review
- Development Permit
- Modification Application

Department of Land and Natural Resources
- Chapter 6E, HRS, State Historic Preservation Law

City and County of Honolulu

Department of Planning and Permitting
- Building Permit

Approving Agency: State of Hawai'i, Department of Transporation
Dr. Glenn Okimoto, Director
(808) 587-2150

Applicant: Hawai'i Pacific University
Mr. Scott Hayashi, Asset Manager – Real Estate
(808) 544-0219

Consultant: Wilson Okamoto Corporation
Mr. Earl Matsukawa, Project Manager
(808) 946-2277

Status (check one only):

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

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

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

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

__DEIS — The applicant simultaneously transmits to both the OEQC and the approving agency, a hard copy of the DEIS, a completed OEQC publication form, a distribution list, along with an electronic word

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

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

Hawai'i Pacific University (HPU) is proposing to make interior tenant improvements to portions of the existing Aloha Tower Marketplace (ATM) and Pier 10 building to convert them for use by HPU. A portion of the first floor retail and restaurant space of the ATM will be converted into HPU academic and support spaces. Improvements to the second floor will convert the existing retail space into 83 student and faculty residences. Interior improvements to Pier 10 will convert a portion of the building into HPU multi-purpose spaces. Hawai'i Lifestyle Retail Properties (HLRP), a subsidiary of HPU and holder of the master lease for the ATM, is also proposing improvements to stairs, elevators, and escalators in the common areas of the ATM. There is a need for additional housing for HPU students, and feedback from the students indicates a strong demand for housing in the downtown area as well as for a central gathering place for the downtown campus. The existing development at the ATM and Pier 10 offers an opportunity to address some of the student housing need as well as to create a central gathering place offering other HPU student-related support services.

DRAFT ENVIRONMENTAL ASSESSMENT

HAWAI‘I PACIFIC UNIVERSITY -
ALOHA TOWER MARKETPLACE PROJECT

Prepared For:

HAWAI'I PACIFIC UNIVERSITY

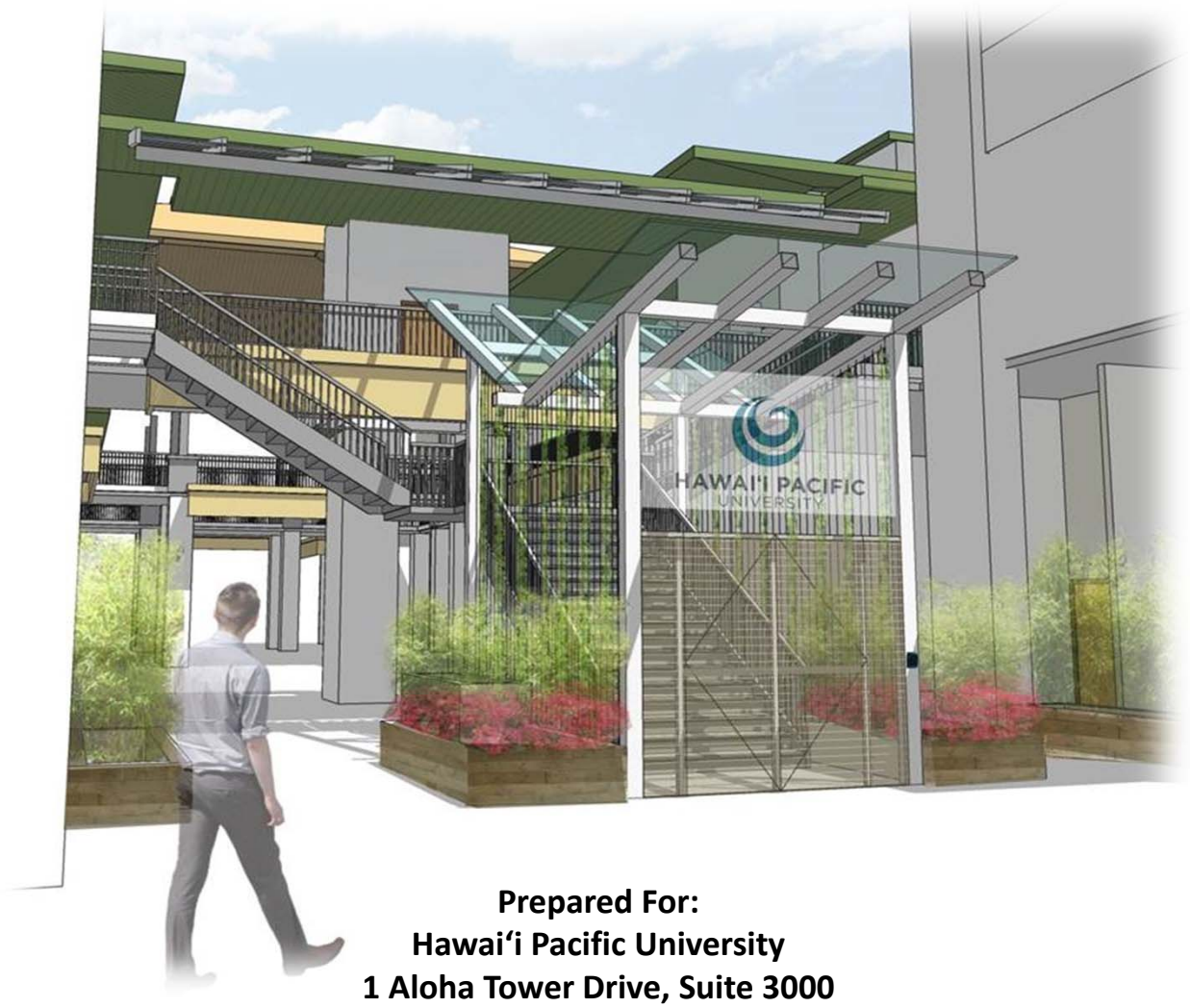
Prepared By:

WILSON OKAMOTO CORPORATION

FEBRUARY 2014

DRAFT ENVIRONMENTAL ASSESSMENT

HAWAIʻI PACIFIC UNIVERSITY -
ALOHA TOWER MARKETPLACE PROJECT
Honolulu, Oʻahu, Hawaiʻi



Prepared For:
Hawaiʻi Pacific University
1 Aloha Tower Drive, Suite 3000
Honolulu, Hawaiʻi 96813

Prepared By:
Wilson Okamoto Corporation
Engineers and Planners
1907 South Beretania Street, Suite 400
Honolulu, Hawaiʻi 96826
WOC Job No. 8428-01

FEBRUARY 2014

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PREFACE

This Draft Environmental Assessment (EA) / Anticipated Finding of No Significant Impact (FONSI) has been prepared pursuant to Chapter 343, Hawai‘i Revised Statutes (HRS), and Title 11, Chapter 200, Hawai‘i Administrative Rules (HAR), Department of Health, State of Hawai‘i. Hawai‘i Pacific University (HPU), as a tenant of Hawai‘i Lifestyle Retail Properties (HLRP), is proposing to make interior tenant improvements to the existing Aloha Tower Marketplace (ATM) and Pier 10 building located in Downtown Honolulu on the Island of O‘ahu. HLRP, which is a subsidiary of HPU and holds the master lease for the ATM, is also proposing improvements to stairs, elevators, and escalators in the common areas of the ATM. The proposed project involves the use of State lands and, therefore, is subject to the State environmental review process.

The proposed action assessed herein is for interior tenant improvements to portions of the existing Aloha Tower Marketplace (ATM) and Pier 10 building to convert them for use by HPU. A portion of the first floor retail and restaurant space of the ATM will be converted into HPU academic and support spaces. Improvements to the second floor will convert the existing retail space into 83 student and faculty residences. Interior improvements to Pier 10 will convert a portion of the building into HPU multipurpose spaces.

It is anticipated that a Finding of No Significant Impact (FONSI) will be issued and filed with the State Office of Environmental Quality Control (OEQC) by the approving agency following public review of the Draft EA.

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SUMMARY

Applicant:	Hawai‘i Pacific University (HPU)
Approving Agency:	Department of Transportation, State of Hawai‘i
Location:	Honolulu, O‘ahu, Hawai‘i
Tax Map Keys (TMKs):	(1) 2-1-001: 001 (por.) and 063
Recorded Fee Owner:	State of Hawai‘i, Department of Transportation
Existing Use:	
State Land Use Classification:	Urban
Community Plan Designation:	District Commercial
County Zoning Designation:	N/A
Proposed Action:	The proposed action assessed herein is for interior tenant improvements to portions of the existing Aloha Tower Marketplace (ATM) and Pier 10 building to convert them for use by HPU. A portion of the first floor retail and restaurant space of the ATM will be converted into HPU academic and support spaces. Improvements to the second floor will convert the existing retail space into 83 student and faculty residences. Interior improvements to Pier 10 will convert a portion of the building into HPU multi-purpose spaces. Hawai‘i Lifestyle Retail Properties (HLRP), a subsidiary of HPU and holder of the master lease for the ATM, is also proposing improvements to stairs, elevators, and escalators in the common areas of the ATM.
Impacts:	No significant impacts are anticipated from the construction and operation of the proposed project. Construction activities are anticipated to have short-term noise quality impacts in the surrounding area. Construction noise impacts will be minimized by compliance with applicable State Department of Health Rules. No significant long-term environmental or community impacts in the vicinity of the project site are anticipated.
Anticipated Determination:	Finding of No Significant Impact (FONSI)

Parties Consulted During Pre-Assessment:

Federal Agencies
National Oceanic and Atmospheric Administration (NOAA)
NOAA, National Marine Fisheries Service
U.S. Army Corps of Engineers
U.S. Coast Guard

State Agencies
Aloha Tower Development Corporation
Department of Business, Economic Development and Tourism (DBEDT)
DBEDT, Office of Planning
DBEDT, Hawai'i State Energy Office
Department of Health (DOH)
DOH, Clean Water Branch
DOH, Environmental Planning Office
DOH, Office of Environmental Quality Control
Department of Land and Natural Resources (DLNR)
DLNR, Division of Forestry and Wildlife
DLNR, Engineering Division
DLNR, Land Division
DLNR, State Historic Preservation Division
Department of Transportation (DOT)
DOT, Harbors Division
DOT, Highways Division
DOT, Aloha Tower Development Corporation

City and County of Honolulu Agencies
Board of Water Supply
Department of Environmental Services
Department of Planning and Permitting
Department of Transportation Services
Fire Department
Police Department

Other Interested Parties and Individuals
Downtown Neighborhood Board No. 13
Hawai'i Gas
Hawaiian Electric Company
Hawaiian Telcom
Oceanic Time Warner Cable
The Bernice Pauahi Bishop Museum

1. INTRODUCTION

1.1 Project Location

HPU proposes to make interior tenant improvements to the existing Aloha Tower Marketplace (ATM) and Pier 10 building, located at 1 Aloha Tower Drive in Honolulu, O‘ahu, Hawai‘i (see Figures 1-1 and 1-2). HLRP, a subsidiary of HPU and holder of the master lease for the ATM, is also proposing improvements to stairs, elevators, and escalators in the common areas of the ATM. The project area is further identified as Tax Map Keys (TMKs) (1) 2-1-001: 001 (por.) and 063 (see Figure 1-3).

1.1.1 Existing Uses

The existing ATM consists of four separate buildings, three stories tall, that are connected by breezeways. The first and second floors house various retail and restaurants spaces, while the third floor houses office and support spaces. Currently, many of the spaces available for retail and restaurant use are vacant.

Current tenants at the ATM include the following:

Retail	Services	Dining
Aloha Tower Jewelry	ATM Pacific	Aloha Sushi
Aloha Tower Sundries	Bank of Hawai‘i	Gordon Biersch Brewery Restaurant
Ann's Fashion	Cingular Wireless	Hooters
Bill Wyland Art Gallery	First Hawaiian Bank	Try My Dogs
Ceci	Innovative Foto	
Daniella	Navatek Cruises	
Hawai‘i Collection	Platinum Limousine Service	
Hawaiian Wear	Star of Honolulu	
Hibiscus Collection	The Cab	
Island Casual		
Lani Johnson		
Les Montres		
Mag-Neat-O		
Melrose		
Rainbow Hawai‘i Souvenirs		
Star Apparel		

Out of the 34 existing tenants, the Gordon Biersch Brewery Restaurant and Hooters establishments are planned to remain in their existing spaces. The majority of the current tenants’ leases have either expired or are set to expire in 2014, when construction is anticipated to begin for the proposed first floor ATM improvements. There are a few leases set to expire in 2016. These tenants may be accommodated within the approximately 35,000 square feet of for-lease spaces proposed to be retained.

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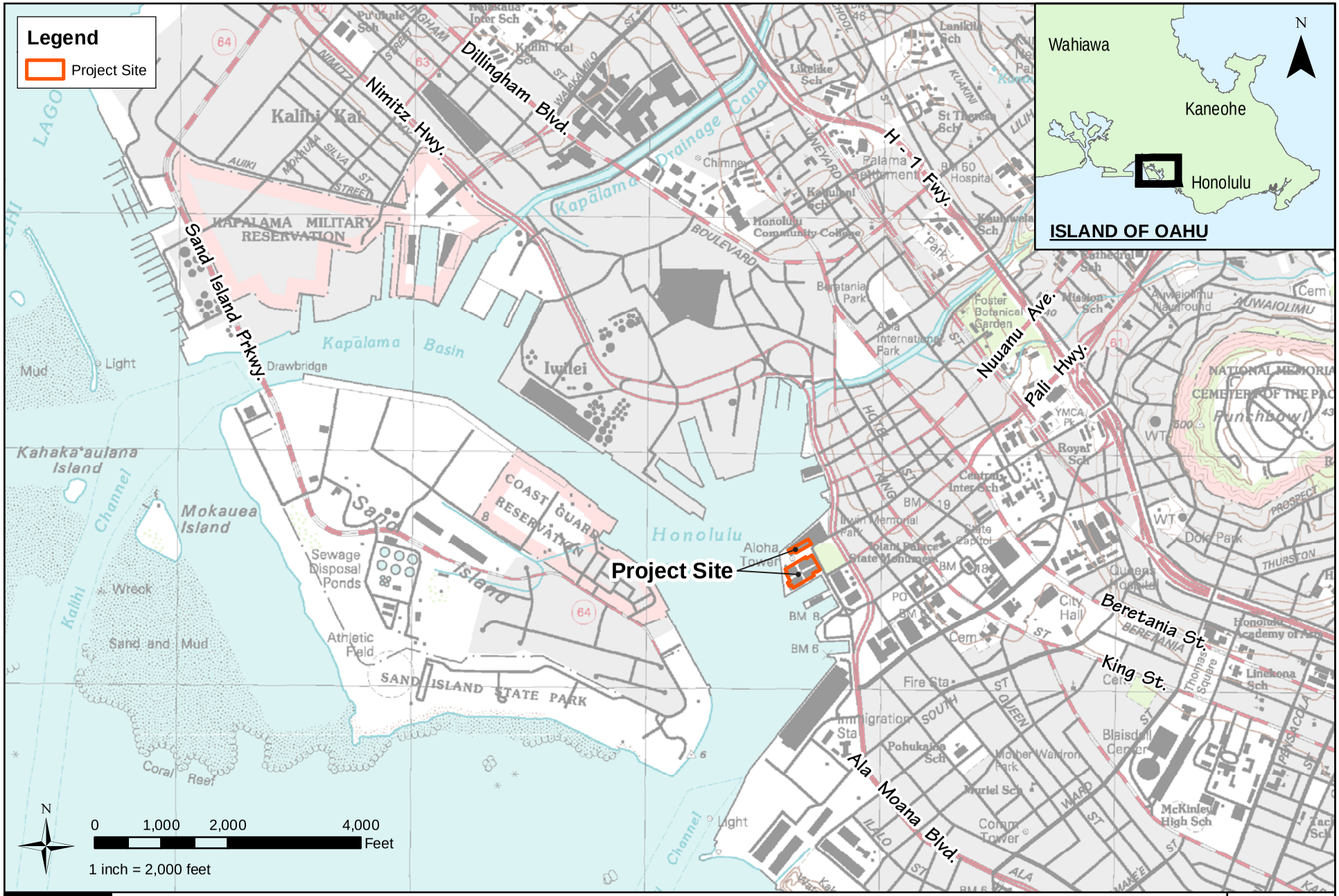

HAWAI'I PACIFIC UNIVERSITY - ALOHA TOWER MARKETPLACE PROJECT

LOCATION MAP

FIGURE

1-1

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HAWAI'I PACIFIC UNIVERSITY - ALOHA TOWER MARKETPLACE PROJECT

EXISTING SITE

FIGURE 1-2

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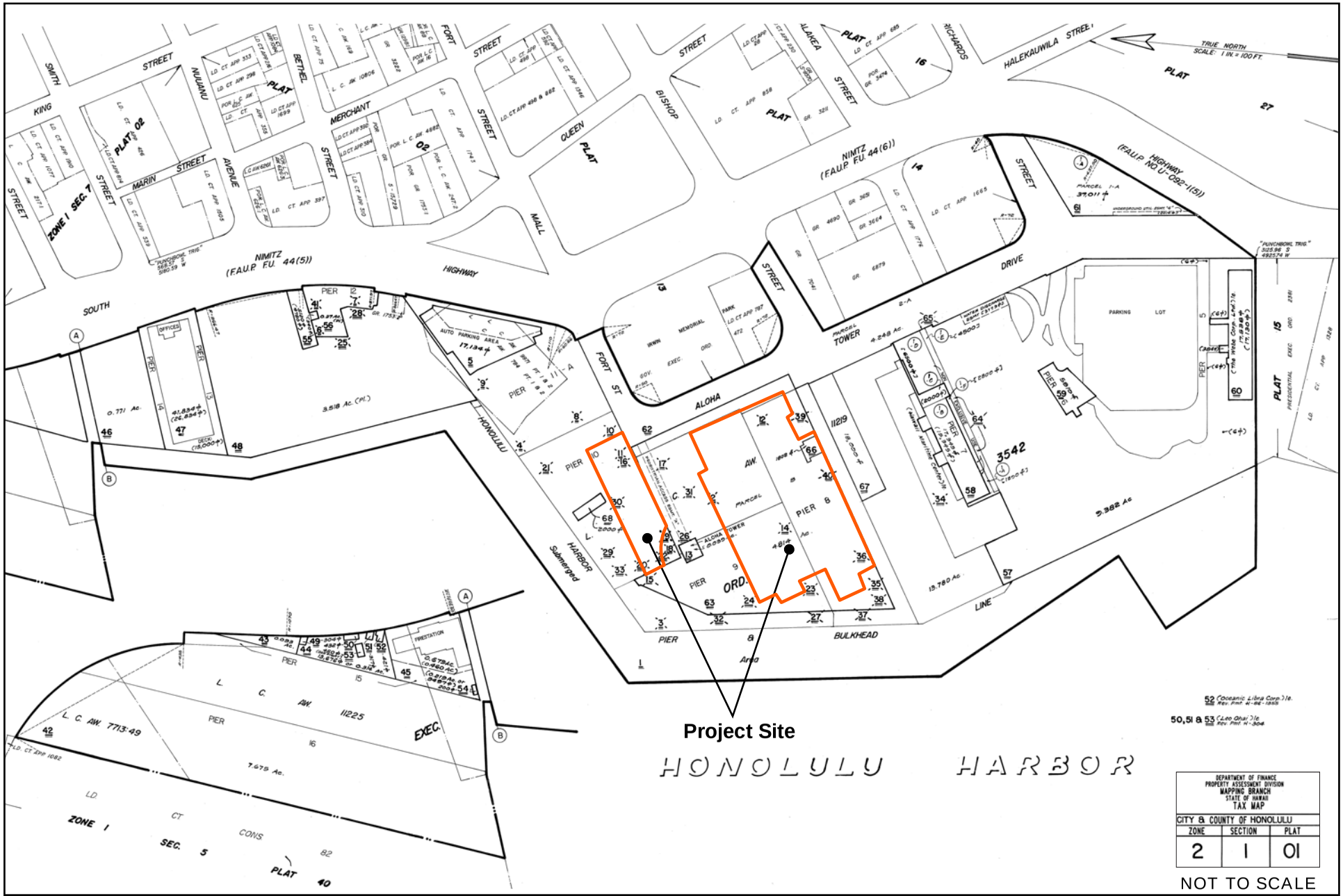

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HAWAI'I PACIFIC UNIVERSITY - ALOHA TOWER MARKETPLACE PROJECT

TAX MAP KEY: (1) 2-1-001: 001 (POR.) AND 063

FIGURE

1-3

The Pier 10 building is a two-story structure occasionally used as an overflow valet parking for patrons of the ATM. It is also used by the State of Hawai‘i Department of Transportation Harbors Division as a cruise passenger terminal facility.

1.1.2 Surrounding Uses

The project site is bounded by Honolulu Harbor to the north, south, and west and Aloha Tower Drive and Nimitz Highway to the east (see Figure 1-4). Located directly between the ATM and Pier 10 is the Aloha Tower. To the east of the project site is Irwin Memorial Park which is currently used as a parking lot for the ATM. Located to the south are the former Hawai‘i Maritime Museum and the Falls of Clyde. The Hawaiian Electric Company (HECO) Downtown power plant is located to the south east.

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HAWAI'I PACIFIC UNIVERSITY - ALOHA TOWER MARKETPLACE PROJECT

SURROUNDING USES MAP

FIGURE

1-4

2. PROJECT DESCRIPTION

2.1 Project Purpose and Need

Hawai‘i Pacific University (HPU) is a private, non-profit university with a student population of approximately 6,300 undergraduate and 1,200 graduate students. HPU is comprised of two campuses. The main campus is located in downtown Honolulu and the second campus, also known the Hawaii Loa Campus, is located in Kāne‘ohe on the windward side of O‘ahu. Students are able to travel between campuses via the University’s intercampus shuttle service.

Housing for students is only provided at the Hawaii Loa Campus. There are six co-ed resident halls that house approximately 200 students. However, the current need for housing is estimated at 2,500 beds. Feedback from the HPU students indicates a strong demand for housing in the downtown area as well as for a central gathering place for the downtown campus. The existing development at the ATM and Pier 10 offers an opportunity to address at least some of the student housing need as well as to create a central gathering place offering other HPU student-related support services. This could be accomplished by converting existing interior spaces and renovating and rehabilitating existing structures, as opposed to developing or re-developing with new facilities.

The ATM, along with Pier 10, was originally envisioned as a part of a larger development that included a retail center, offices, hotel, and residential high rise towers. After several attempts to develop the project, the ATM opened in 1994. However, since its opening, the ATM has twice filed for bankruptcy.

Expanding the HPU main downtown campus to include portions of ATM will revitalize the waterfront area with activity generated by the students and faculty housed at the facility along with HPU students from its other campuses, HPU faculty and staff, parents, friends, and visitors. This activity will, in turn, attract new commercial business to the ATM and nearby areas that will also benefit from the patronage of downtown workers and residents.

2.2 Project Description

The proposed project involves making interior tenant improvements to portions of the existing ATM and Pier 10 buildings. First floor improvements to the ATM buildings include replacing a portion of the first floor retail and restaurant space with HPU academic and support spaces (see Figure 2-1).

Proposed spaces include small classrooms and lecture spaces, an admissions office, a housing office, student center/learning commons, student organization spaces, a library/computer lab, book store, and fitness center. All proposed renovated facilities will serve the entire HPU system. There would also be approximately 35,000 square feet of retail space available for lease to commercial uses. Currently, the existing Gordon Biersch Brewery Restaurant and Hooters establishments are expected to remain.

HAWAI'I PACIFIC UNIVERSITY

First Floor Plan

Source: BROWNING DAY MULLINS DIERDORF ARCHITECTS

HAWAI'I PACIFIC UNIVERSITY - ALOHA TOWER MARKETPLACE PROJECT

ALOHA TOWER MARKET PLACE FIRST FLOOR PLAN

FIGURE 2-1

Other anticipated improvements to the first floor include renovating or removing the central stair case, removing one or more escalators, making improvements to existing stairs and elevators, and installing a new elevator as well as replacing exterior windows.

Second floor improvements to the ATM include converting the second floor retail space to 83 student and faculty residences (see Figure 2-2). Planned housing includes 18 five-bed units, 38 four-bed units, three two-bed units, 14 two-bed units, six units for resident assistants (RAs), and four faculty apartments.

While there are various configurations for the units that will house the approximately 300 HPU residents, student residences are planned to include one or two bedrooms with two beds in each room, a living room, a kitchenette, and a bathroom. Residences with two floors are planned to be connected by an interior staircase. RA units are planned to have a bedroom with one bed, a kitchenette, and a bathroom. Faculty units are designed with a bedroom, a living room, a kitchen, a half bath, a full bath, an office space, and storage space.

Improvements to the Pier 10 building include converting a portion of the interior spaces into HPU multi-purpose spaces (see Figure 2-3). Uses currently programmed for this space include a theater/lecture hall space with seating for up to 250 people and a box office. HPU keeps the vast majority of its classes below 25 students. This larger space would be used primarily for public lectures and occasional musical presentations. There is little to no additional business hour traffic or parking expected.

Other uses may include facilities such as a flat-floor space for multi-purpose use. In concert with the agreement to maintain priority for maritime operations, HPU's current plan calls for simple renovation for the existing space within its current walls to be used for student recreational athletics and intramural games, and development would be consistent with the needs of maritime uses.

Previously, a portion of the enclosed space at Pier 10 was envisaged as a NCAA-sized athletic facility, but such a notion was later abandoned after discussions between HPU and state agencies noted the movement of an interior wall, which would be needed to accommodate such programmed use, could potentially disrupt maritime operations.

2.3 Project Schedule

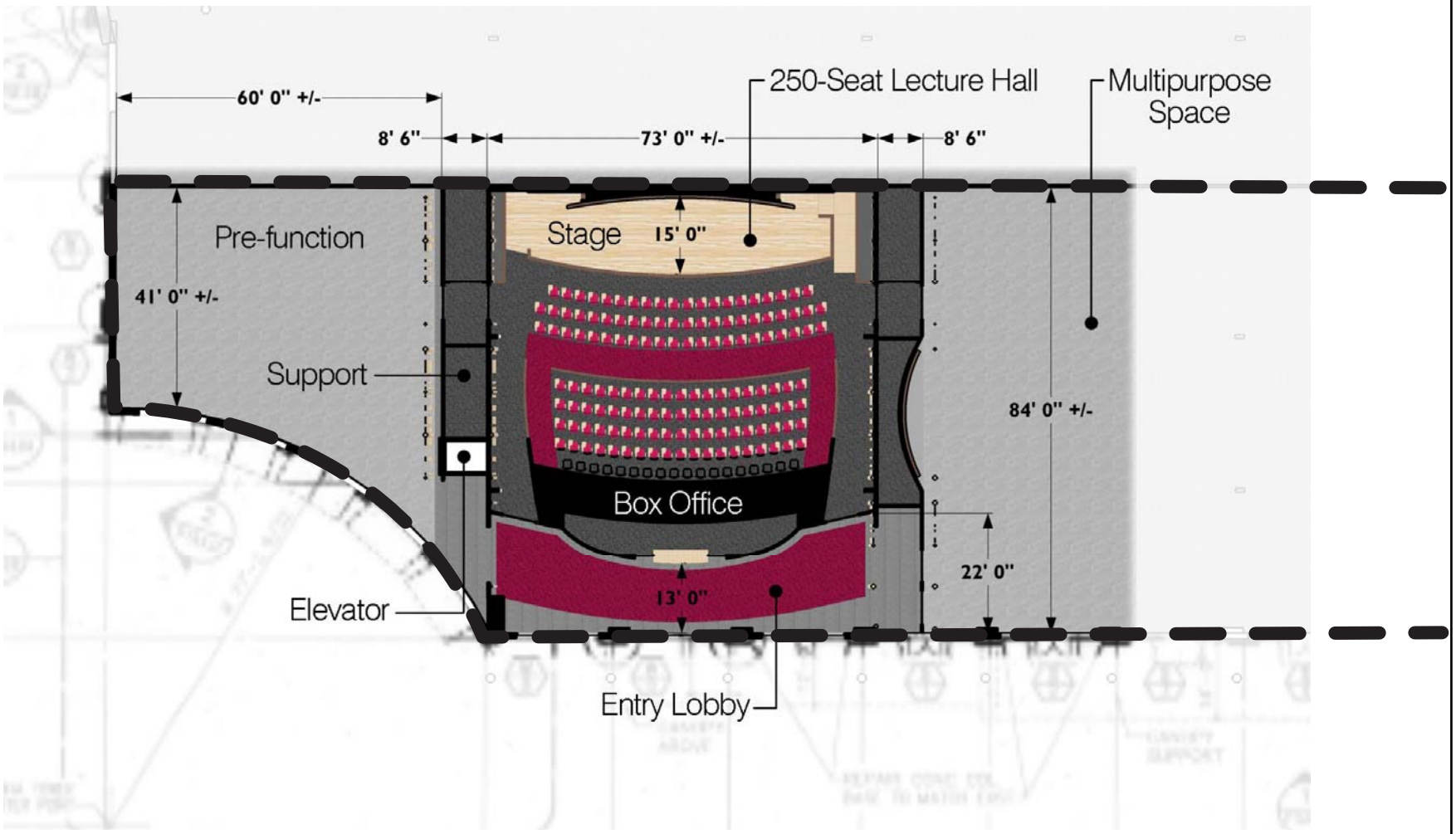
Construction of the project is anticipated to commence in the first quarter of 2014, with completion in 2015.

Source: Group 70 International

HAWAI'I PACIFIC UNIVERSITY - ALOHA TOWER MARKETPLACE PROJECT

ALOHA TOWER MARKET PLACE SECOND FLOOR PLAN

FIGURE 2-2



HAWAI'I PACIFIC UNIVERSITY

Source: BROWNING DAY MULLINS DIERDORF ARCHITECTS

HAWAI'I PACIFIC UNIVERSITY - ALOHA TOWER MARKETPLACE PROJECT

PIER 10 LECTURE HALL CONCEPTUAL LAYOUT

FIGURE 2-3

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

3.1 Climate

The climate of the Honolulu area is typical of the leeward coastal lowlands of O'ahu. The area is characterized by abundant sunshine, persistent tradewinds, relatively constant temperatures, moderate humidity, and the infrequency of severe storms. Northeasterly tradewinds prevail throughout the year although its frequency varies.

The mean temperature measured at Honolulu International Airport ranges from 70 degrees Fahrenheit in the winter to 80 degrees Fahrenheit in the summer.

Average rainfall in the area is approximately 21 inches annually, with most of the rainfall occurring between October and March.

Impacts and Mitigation Measures

No significant impacts on climate in the project area are anticipated. Construction and operation of the proposed project are not anticipated to affect temperatures, wind, or rainfall levels in the project area.

3.2 Physiography

3.2.1 Geology and Topography

The Island of O'ahu is a volcanic doublet formed by the Wai'anae Range to the west and the younger Ko'olau Range to the east. Both are the remnants of shield volcanoes, but the term "range" indicates that they have lost most of the original shield outlines and are now long, narrow ridges shaped largely by erosion.

O'ahu's southern central coast, geographically referred to as the Honolulu plain, is underlain by a broad, elevated coral reef which has been partly covered by alluvium carried down from the mountains. Core samples reveal that lava flows of the Honolulu Series are interbedded with these reef deposits which were formed when sea level was higher than it is now. Prior to the dredging and filling of Honolulu Harbor, the shoreline area consisted of submerged coral reefs, mudflats, and islands of varying sizes, shapes, and elevations.

Honolulu Harbor was created by the continual flow of fresh water from Nu'uanu Valley into the ocean. The freshwater restricted the growth of coral, which resulted in the formation of a basin and the beginnings of a natural harbor. The freshwater flows also cut channels through the existing coral reef in which sand eventually began to accumulate. These sand accumulations grew over time, forming what would later become Sand Island.

Dredging of Honolulu Harbor over the years gradually increased the size and depth of the harbor basin and entrance channel. Dredged fill was used to create fast land, particularly on the seaward reef at Sand Island (formerly Ānuenue Island). The Kapālama Basin, also once a natural break in the reef, was eventually joined to the Main Harbor Basin by dredging a channel (Kapālama Channel) between the two basins. In 1960, the western entrance

channel (Kalihi Channel) was opened to Kapālama Basin, substantially improving circulation within the latter basin and Honolulu Harbor as a whole.

Generally, all of the land around the harbor is flat. The coastal plain, within which the harbor complex is located, ranges in elevation from 0 to 10 feet above sea level.

Impacts and Mitigation Measures

In the short- and long-term, no significant impacts on geology or topography are anticipated during construction or operation of the proposed project. Construction of the proposed project will not involve any land disturbing activities as the proposed project involves interior tenant improvements to portions of existing buildings including stairs, elevators, and escalators and some exterior modifications to building windows.

3.2.2 Soils

According to the U.S. Department of Agriculture, Natural Resource Conservation Service, soils within the project site are classified as Fill land, mixed (FL).

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

Historical data indicates that the main part of the existing pier complex around the project site was produced by filling a shallow offshore area in 1857 with material from the walls of Honolulu Fort which was dismantled in that year for this purpose. It is surmised that over time, due to heavy traffic in the area, the underlying materials have been consolidated.

Impacts and Mitigation Measures

In the short- and long-term, no significant impacts on soils are anticipated during construction or operation of the proposed project. Construction of the proposed project will not involve any land disturbing activities as the proposed project involves interior tenant improvements to portions of existing buildings including stairs, elevators, and escalators and some exterior modifications to building windows.

3.3 Hydrology

3.3.1 Surface Water

The nearest surface water in the vicinity of the project area is Nu'uanu Stream, which is located approximately 0.35 miles from the project site at its closest point. Nu'uanu Stream is perennial stream that discharges into Honolulu Harbor near Pier 15.

According to the State Department of Health's (DOH) *2004 Final List of Impaired Waters of Hawai'i,* Nu'uanu Stream is considered to be an impaired stream. Pollutants found at the stream include total chlordane, dieldrin, nitrite/nitrate (Total N), trash, and turbidity.

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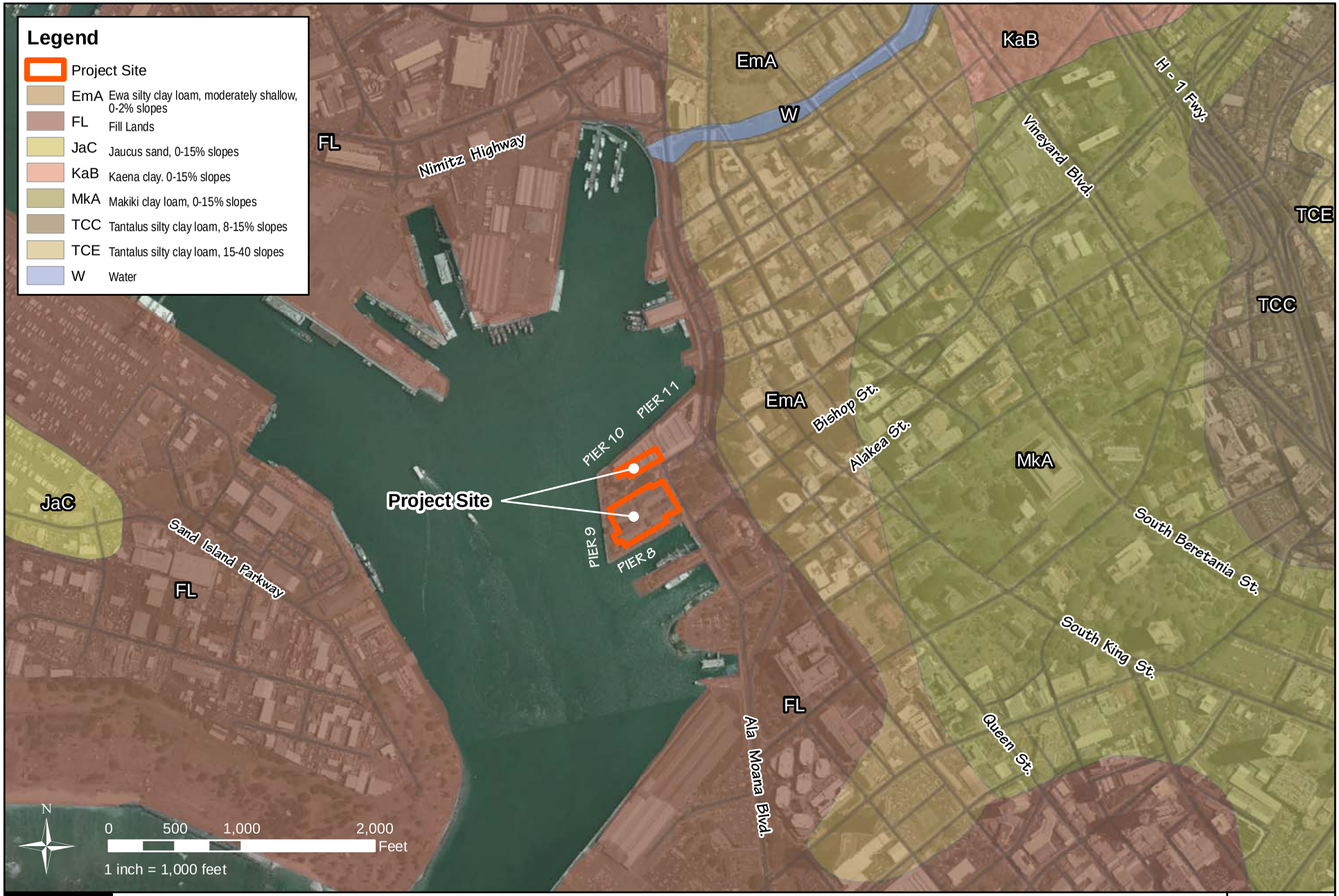

HAWAI'I PACIFIC UNIVERSITY - ALOHA TOWER MARKETPLACE PROJECT

SOIL SURVEY OF THE ISLAND OF O'AHU

FIGURE

3-1

Impacts and Mitigation Measures

In the short- and long-term, no significant impacts on surface waters in the project vicinity are anticipated during construction or operation of the proposed project. Construction of the proposed project will not involve any land disturbing activities as the proposed project involves interior tenant improvements to portions of existing buildings including stairs, elevators, and escalators and some exterior modifications to building windows.

3.3.2 Groundwater

Honolulu Harbor is located over two groundwater aquifers. The overlying caprock aquifer is non-potable and is described as a basal, unconfined, sedimentary (non-volcanic lithology) type aquifer. The underlying basal aquifer is currently used for drinking water as is described as a basal, confined, flank (horizontally extensive lavas) type of aquifer. This aquifer is protected from surface contamination by the overlaying caprock layer. The general direction of groundwater flow is assumed to be seaward towards the harbor. The water table is approximately at sea level and fluctuates with the tide.

Impacts and Mitigation Measures

In the short- or long-term, no significant impacts to groundwater resources associated with the project site are anticipated during construction or operation of the proposed project. Construction of the proposed project will not involve any land disturbing activities as the proposed project involves interior tenant improvements to portions of existing buildings including stairs, elevators, and escalators and some exterior modifications to building windows. Construction material wastes will be appropriately disposed of to prevent any leachate from contaminating groundwater resources.

3.3.3 Coastal Waters

The nearest coastal water offshore of the project site is Honolulu Harbor which borders the project site on its north, south, and west side. Pursuant to Hawai'i Administrative Rules (HAR) Title 11, Chapter 54, Water Quality Standards, the coastal waters in the vicinity of the project site are classified as Class A marine waters. Class A marine waters are recognized as waters to be used for "recreational purposes and aesthetic enjoyment to be protected. These waters shall not act as receiving waters for any discharge which has not received the best degree of treatment or control compatible with the criteria established for this class".

The DOH has identified Water Quality Limited Segments (WQLS) around the State, in accordance with Section 303(d) of the Clean Water Act. WQLS are defined as water bodies within the State, which without additional action to control non-point sources of pollution, cannot reasonably be expected to attain or maintain State Water Quality Standards. "Honolulu Harbor and Shore Areas" are listed on the Final 2004 List of Impaired Waters in Hawai'i. Cause of impairment in this vicinity of the project area includes trash and turbidity.

Impacts and Mitigation Measures

No short- or long-term significant impacts on coastal waters in the project vicinity are anticipated during construction or operation of the proposed project. Construction of the proposed project will not involve any land disturbing activities as the proposed project involves interior tenant improvements to portions of existing buildings

including stairs, elevators, and escalators and some exterior modifications to building windows.

3.4 Natural Hazards

3.4.1 Flood and Tsunami Hazard

According to the Flood Insurance Rate Map (FIRM) (Community Panel Numbers 15003C0353G, 15003C0354G, 15003C0361G, and 15003C0362G, Effective Date: January 19, 2011) prepared by the Federal Emergency Management Agency (FEMA), the project site is designated Zone X (see Figure 3-2).

Zone X indicates areas of minimal flood hazard and is characterized as "areas determined to be outside the 0.2 percent annual chance floodplain."

According to the Tsunami Evacuation Zone maps for O'ahu, the project site lies entirely within the tsunami evacuation zone (see Figure 3-3).

Impacts and Mitigation Measures

In the short- and long-term, no significant impacts on flood hazards in the project area are anticipated during construction or operation of the proposed project. Construction of the proposed project will not involve any land disturbing activities as the proposed project involves interior tenant improvements to portions of existing buildings including stairs, elevators, and escalators and some exterior modifications to building windows.

3.5 Flora and Fauna

The project site and its surrounding areas is a highly altered urban environment that provides little habitat for flora and fauna. With the exception landscaped trees and ornamental plantings, almost the entire surface area at the project site has been paved over.

Coconut trees (*Cocos nucifera*) are planted as landscaping along the walkways around and through the ATM. Monkey pod trees (*Samanea saman*) are growing on the north side of the ATM. There are also royal palm trees (*Roystones regia)* lining the walkway in front of Pier 10, leading to the Aloha Tower.

The only major vegetated area in the immediate vicinity of the project site is Irwin Memorial Park. The park has been landscaped with monkeypod trees, coconut trees, and banyan trees (*Ficus var.*). Much of the park has been paved as a parking lot.

Feral cats and mice, common to inner city environments are likely present at the project site. Avifauna species that are known to inhabit the area include mynahs, finches, doves, sparrows, cardinals, and pigeons.

No threatened or endangered flora or fauna species exist at the project site or nearby areas.

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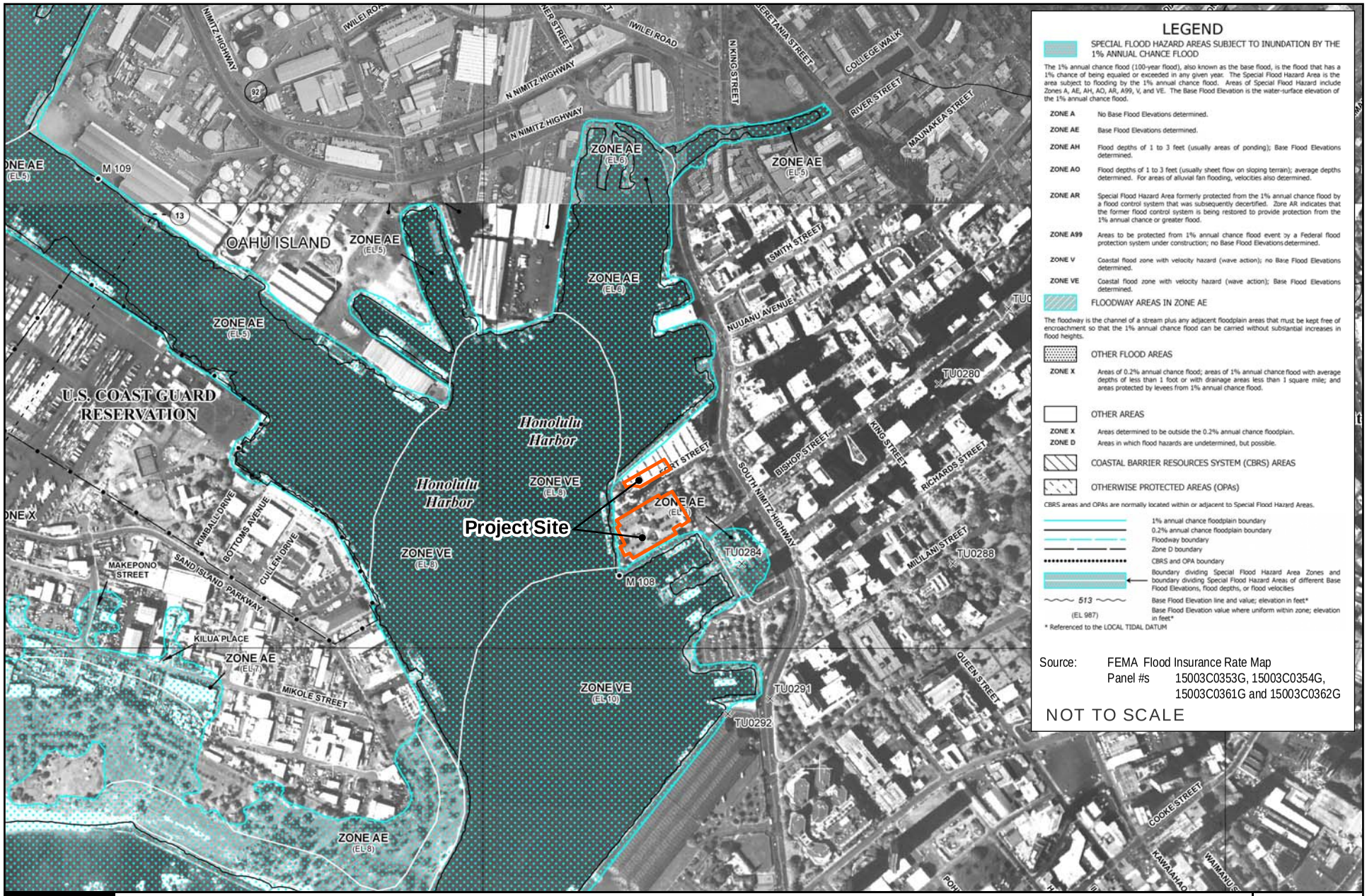

HAWAI'I PACIFIC UNIVERSITY - ALOHA TOWER MARKETPLACE PROJECT

FLOOD INSURANCE RATE MAP

FIGURE 3-2

HAWAI'I PACIFIC UNIVERSITY - ALOHA TOWER MARKETPLACE PROJECT

TSUNAMI EVACUATION ZONES MAP

FIGURE

3-3

The Wedge-tailed Shearwater (`Ua`u kani – *Puffinus pacificus*) is an indigenous seabird species that may occasionally overflies the area. Their breeding season begins in February and by November both adults and fledglings have migrated to the ocean. During this migration, fledglings may become disoriented by artificial lighting and can crash or fall. If they are not killed as a result of the collision, the injured fledglings become easy targets for predatory animals such as cats, dogs, and mongoose. On some neighbor islands, such disorientation by artificial lighting is of particular concern when it involves endangered seabird species, specifically the Newell's Shearwater (`A`o - *Puffinus auricularis newelii*) and the Hawaiian Petrel (`Ua`u -*Pterodroma sandwichensis*). The Wedge-tailed Shearwater, however, is neither an endangered or threatened species, nor is it a rare species. Nevertheless, it is protected under Chapter 13, Section 124, HAR, which prohibits injuring or killing indigenous wildlife.

Impacts and Mitigation Measures

In the short- and long-term, no significant impacts on flora and fauna are anticipated as a result of the construction and operation of the proposed project. Construction of the proposed project will not involve any land disturbing activities as the proposed project involves interior tenant improvements to portions of existing buildings including stairs, elevators, and escalators and some exterior modifications to building windows.

While the Wedge-tailed Shearwater is an indigenous seabird species that occasionally overflies the area, it is neither an endangered or threatened species, nor is it a rare species. Nevertheless, they are protected under Chapter 13, Section 124, HAR, which prohibits injuring or killing indigenous wildlife.

No new exterior lighting is planned as a part of the proposed improvements. Therefore, no additional impacts to Wedge-tailed Shearwaters are anticipated as a result of the construction and operation of the proposed project.

3.6 Historic Resources

Historic resources within the immediate vicinity of the project site include the following (see Figure 3-4):

Aloha Tower:

Construction of Aloha Tower was completed in 1926 to replace a 25-foot lighthouse that was constructed in 1869. The Tower was built on an axis formed by the harbor entrance and Fort Street, one of the City's oldest streets. At eleven stories high (185 feet), Aloha Tower remained the tallest building in Hawai'i for nearly 40 years and became one of Hawai'i's most recognizable landmarks.

During World War II, the tower was controlled by the military. After the war, it was returned to civilian use to monitor commercial shipping and seaplane traffic. In 1947, the tower was refurbished, which included restoring its original Spanish white color, visible 16 miles out to sea.

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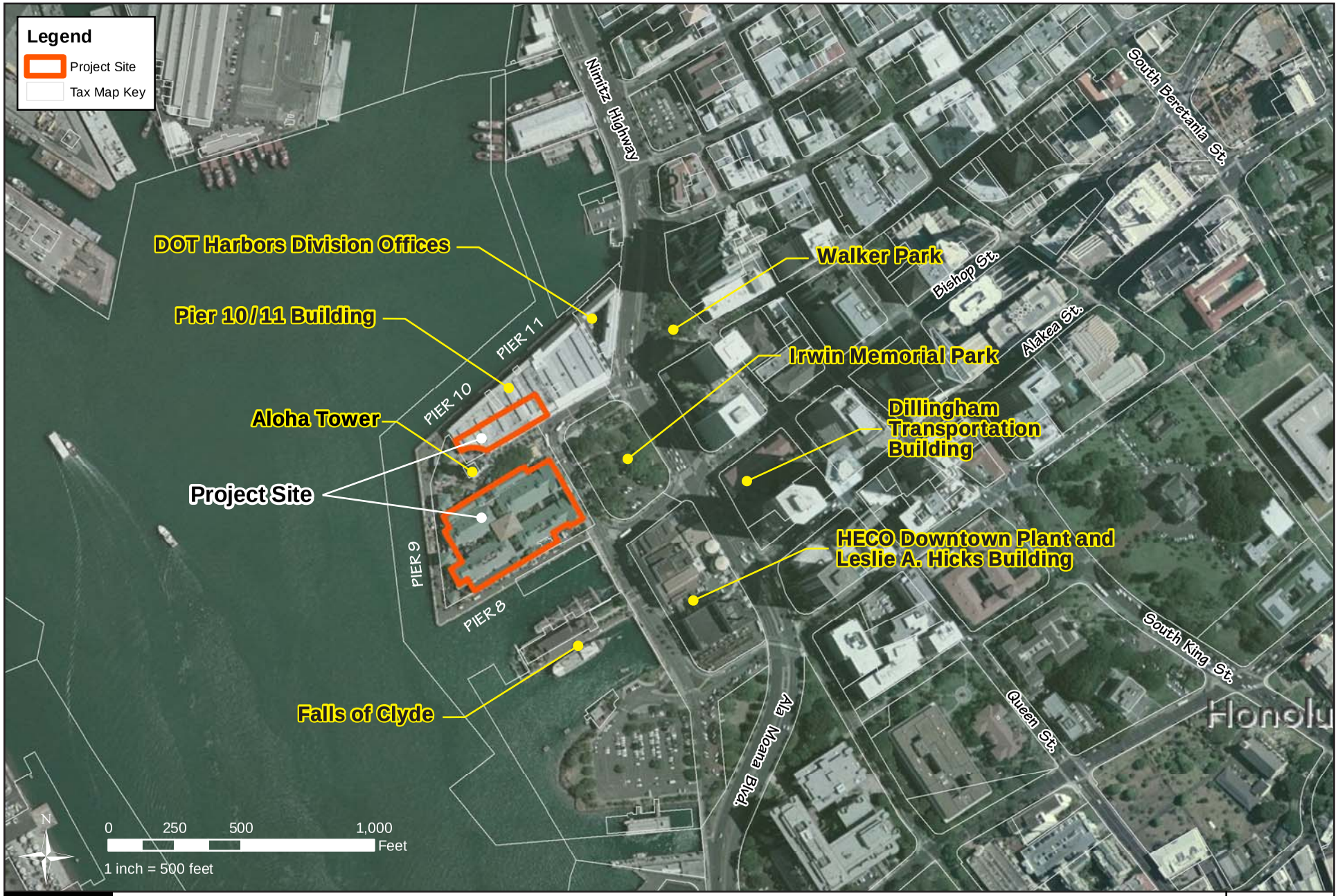

HAWAI'I PACIFIC UNIVERSITY - ALOHA TOWER MARKETPLACE PROJECT

HISTORIC RESOURCES MAP

FIGURE

3-4

Aloha Tower was placed on the National Register of Historic Places in 1976 and on the State Register of Historic Places in 1981 and is identified as State Inventory of Historic Places (SIHP) No. 80-14-9929.

Piers 10 and 11
Piers 10 and 11 were constructed in 1926 and are comprised of a single-story passenger terminal building, approximately 550 feet long. As the piers are over 50 years old, they are eligible for listing on the State Inventory of Historic Properties. They may also be eligible for nomination and listing on the National Register of Historic Places for their association with the maritime passenger industry and as an example of neo-classical architecture of the 1920s in Honolulu.

In particular, Pier 11 has both architectural and cultural significance due to its character of design and association with history. Visual elements inherent in the pier's design are important facets of the waterfront, particularly due to its tile roof and segmented arched gallery.

Department of Transportation Harbors Division Building
The State of Hawai'i Department of Transportation (DOT) Harbors Division building is a three-story building that was constructed in 1952. As the property is over 50 years old, it is eligible to for listing on the State Inventory of Historic Properties.

It may also be eligible for nomination and listing on the National Register of Historic Places due to its association with the Harbor Commission of the Territory of Hawai'i in the period after World War II and before the 1959 advent of jetliners.

Irwin Memorial Park
Irwin Memorial Park was built on what was originally Māhele Reef lands, which were later filled and subdivided as Esplanade lots. In 1926, the U.S. Government deeded Esplanade lots to the Damon Estate in exchange for other real estate. Helene Irwin Fagan deeded the Diamond Head portion of the park site to the Territory's Board of Harbor Commissioner in 1930 to be combined with adjacent State property as a public park to be called "Irwin Memorial Park" in honor of her father, William G. Irwin.

Irwin Memorial Park was placed on the State Register of Historic Places in 1999 and is identified as SIHP No. 80-14-9829.

The Falls of Clyde
Currently docked a Pier 7, the Falls of Clyde is the first four-masted, full-rigged ship to call at the Port of Honolulu. She was built in 1878 and was originally designed to be used in the wool trade with Australia. Captain Matson bought the ship in 1898, and used her primarily for hauling sugar cane and goods to and from Hilo Harbor. In 1907, she was converted to a tanker used for transporting oil to the plantations and molasses to California. The Falls of Clyde was retired in 1922. In 1959 she was taken to Alaska, but returned home to Honolulu in 1963. In 1971, the ship was moved to Pier 5 where she was opened to the public. In 1982, Hurricane 'Iwa caused a surge that broke the ship's mooring lines and damaged her mooring facility. Once repaired, she was moved to Pier 7 where she remains on display until this day.

The Falls of Clyde was placed on the National Register of Historic Places in 1973 and is identified as State Inventory of Historic Places (SIHP) No. 80-14-9700.

HECO Downtown Plant and Leslie A. Hicks Building
The Hawaiian Electric Company (HECO) Downtown Plant and Leslie A. Hicks Building is a power generation plant consisting primarily of two (2) buildings constructed in 1929 and 1955, respectively. The 1955 building was named for Leslie A. Hicks, HECO president as the time the building was opened.

As the buildings are over 50 years old, they are eligible for listing on the State Inventory of Historic Properties. They may also be eligible for nomination and listing on the National Register of Historic Places for their association with the history of electric power and the development of Honolulu.

Impacts and Mitigation Measures
In the short- and long-term, no significant impacts on historic properties are anticipated as a result of the construction and operation of the proposed project. Construction of the proposed project will not involve any land disturbing activities as the proposed project involves interior tenant improvements to portions of existing buildings including stairs, elevators, and escalators and some exterior modifications to building windows.

3.7 Air Quality

The State of Hawai'i Department of Health (DOH), Clean Air Branch, monitors the ambient air quality in the State for various gaseous and particulate air pollutants. The U.S. Environmental Protection Agency (EPA) has set national ambient air quality standards (NAAQS) for six criteria pollutants: carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), lead (Pb), ozone (O_3), and particulate matter (PM_{10} and PM_2). Hawai'i has also established a state ambient air standard for hydrogen sulfide (H_2S). The primary purpose of the statewide monitoring network is to measure ambient air concentrations of these pollutants and ensure that these air quality standards are met.

Air pollution in Hawai'i is caused by many different man-made and natural sources. There are industrial sources of pollution, such as power plants and petroleum refineries; mobile sources, such as cars, trucks and buses; agricultural sources, such as sugar cane burning, and natural sources, such as windblown dust and volcanic activity. The DOH Clean Air Branch is responsible for regulating and monitoring pollution sources to ensure that the levels of criteria pollutants remain well below the State and federal ambient air quality standards.

The State maintains five air monitoring stations on the island of O'ahu. The closest air monitoring station to the project site is located in Honolulu near the State Capitol. This station monitors particulate matter less than 10 micrometers ($PM_{2.5}$), particulate matter less than 2.5 micrometers ($PM_{2.5}$), CO, and SO_2. The second closest station is located at Sand Island, Honolulu. This monitoring station monitors O_3 and $PM_{2.5}$. The air quality data from both monitoring stations are in compliance with state and federal standards and are well below the State and Federal air quality standards.

Air Quality in the vicinity of the project site is mostly affected by emissions from vehicular, industrial, and/or natural sources. Nimitz Highway, adjacent to the project site, is a major arterial roadway that carries heavy volumes of traffic. Emissions from motor vehicles tend to be carried over the project site by the prevailing winds. Also adjacent to the project site is the Hawaiian Electric Company (HECO) downtown power plant. Emissions from the two chimneys of this facility may presently affect that air quality of the area. HECO, however, plans to close the plant sometime in 2014. Natural sources of air pollution affecting the air quality of the site include ocean spray, plant pollens, wind-blown dust and emissions from distant volcanos.

Impacts and Mitigation Measures

In the short- and long-term, no significant impacts on air quality are anticipated as a result of the construction and operation of the proposed project. Construction of the proposed project will not involve any land disturbing activities as the proposed project involves interior tenant improvements to portions of existing buildings including stairs, elevators, and escalators and some exterior modifications to building windows. Exhaust emissions from construction vehicles are anticipated to have negligible impact on air quality in the project vicinity as the emissions would be relatively small and readily dissipated.

3.8 Noise

The existing noise environment at the project site is characteristic of an urban setting. Ambient noise in the project area is predominantly attributed to vehicular traffic traveling along Nimitz Highway and adjacent roadways, harbor operations, the HECO power plant, and aircraft using Honolulu International Airport and Hickam Air Force Base. Also contributing to the acoustic environment is noise from low pitch sounds of waves along the coast, wind and birds.

Impacts and Mitigation Measures

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

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

In the long-term, no significant noise impacts are anticipated once the construction of the proposed project has been completed. Since the project is not expected to increase roadway capacity or travel demand, ambient noise levels in the vicinity should not change significantly.

3.9 Traffic

Near the northwest corner of the project site, Nimitz Highway intersects Aloha Tower Drive. At this location, Nimitz Highway is a predominantly six-lane, two-way State of Hawai‘i roadway, generally oriented in the east-west direction. It serves as one of the major access roadways through Downtown Honolulu (see Figure 3-5). At the signalized T-intersection with Aloha Tower Drive, the eastbound approach of Nimitz Highway has three through lanes and a shared through and right-turn lane while the westbound approach has three through lanes. Extending south of Nimitz Highway, Aloha Tower Drive has exclusive left-turn and right-turn lanes. Aloha Tower Drive primarily serves as the access roadway for the ATM and fronting Piers 8 through 11. When cruise ships are docked at Pier 11 (located on the southwest corner of the intersection with Nimitz Highway), vehicular traffic along Aloha Tower Drive is restricted with right-turns from Nimitz Highway prohibited.

East of its intersection with Aloha Tower Drive, Nimitz Highway intersects Bishop Street. At this signalized intersection, the eastbound approach has four through lanes and an exclusive right-turn lane, while the westbound approach has three through lanes.

North of Nimitz Highway, Bishop Street is a one-way southbound roadway that has street parking on the eastern (left) side. Between Nimitz Highway and Aloha Tower Drive, Bishop Street is a two-way roadway. At its intersection with Nimitz Highway, the northbound approach of Bishop Street has exclusive left-turn and right-turn lanes, while the southbound approach has two left-turn lanes, one through lane, and an exclusive right-turn lane.

Further east, Nimitz Highway intersects Alake‘a Street at a signalized T-intersection. At this intersection, the eastbound approach of Nimitz Highway has three through-lanes and two exclusive left-turn lanes, while the westbound approach has three lanes that serve through and right-turn traffic. From the intersection, Alake‘a Street is a one-way street with five northbound lanes.

On the east end of the study area, Nimitz Highway intersects Halekauwila Street and an access roadway for the Aloha Tower Marketplace. At this signalized intersection, the eastbound approach of Nimitz Highway has an exclusive left-turn lane, two through lanes, and a shared through and right-turn lane, while the westbound approach three through lanes and an exclusive left-turn lane. Halekauwila Street originates at Nimitz Highway as a one-lane, one-way (eastbound) roadway that transitions to a two-way roadway at Punchbowl Street. At its intersection with Nimitz Highway, Halekauwila Street has one eastbound departure lane. The southern leg of the intersection is comprised of an access road for the ATM that has one southbound departure lane.

A Traffic Assessment Report (TAR) was prepared for the proposed project by Wilson Okamoto Corporation in October 2013. The purpose of the TAR is to assess the traffic conditions in vicinity of the proposed project and to identify recommendations, if appropriate, that would mitigate the traffic impacts. The TAR is included in Appendix A and summarized below.

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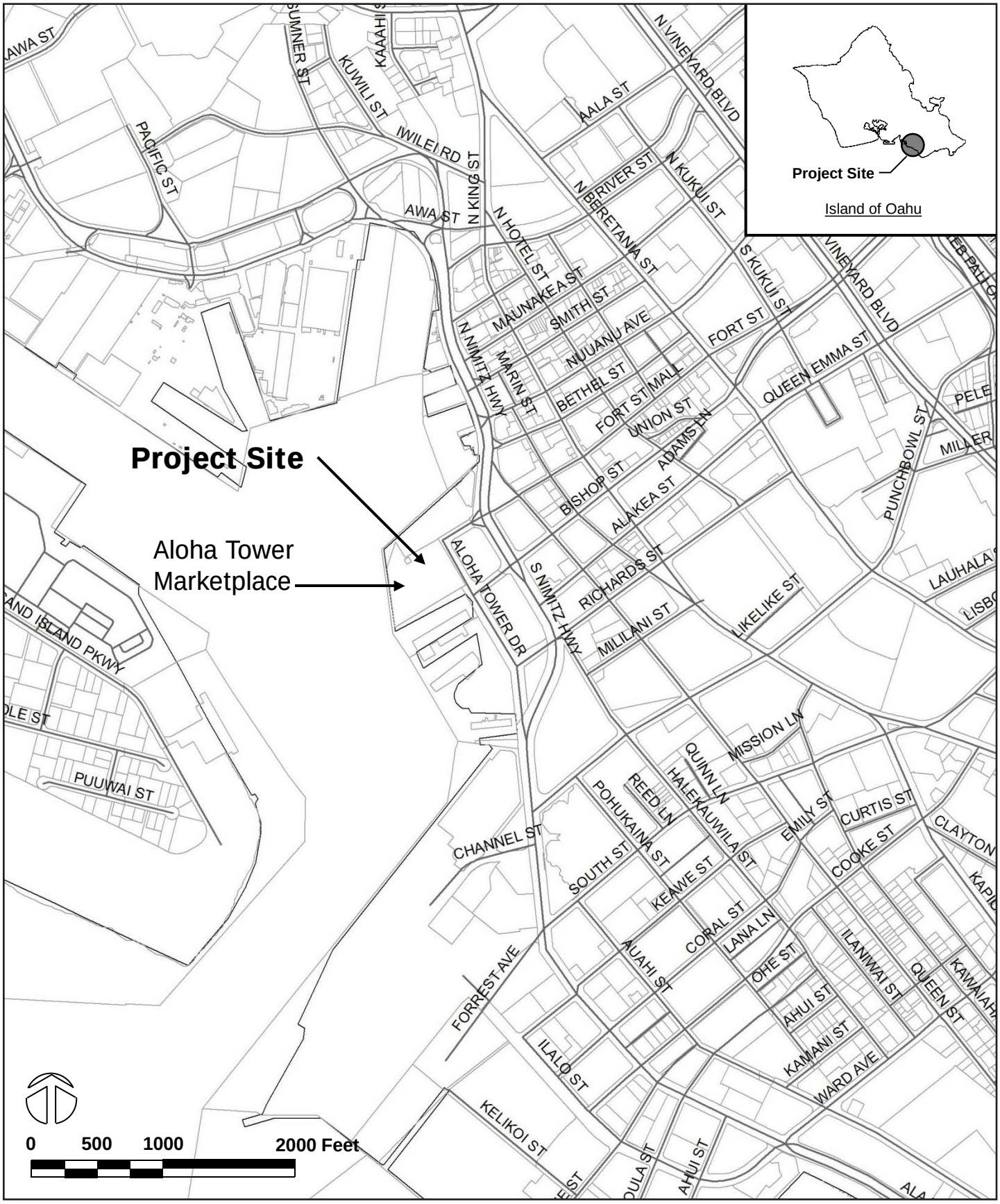

HAWAI'I PACIFIC UNIVERSITY - ALOHA TOWER MARKETPLACE PROJECT

AREA ROADWAY MAP

FIGURE

3-5

Field investigations were conducted in February 2013 and supplemented with additional investigations in August 2013. These investigations consisted manual turning movement count surveys during the morning peak hours between 6:00 AM and 9:00 AM, and the afternoon peak hours between 3:00 PM and 6:00 PM at the following intersections:

- Nimitz Highway and Aloha Tower Drive
- Nimitz Highway and Bishop Street
- Nimitz Highway and Alakea Street
- Nimitz Highway and Halekauwila Street

During the survey conducted in February 2013 there were no cruise ships docked at Pier 11. Therefore, additional surveys were conducted during August on days with and without a cruise ship docked at Pier 11 to verify that the counts collected during February were an appropriate baseline for this study. After comparison of the collected traffic data, it was determined that the data collected during February was an adequate representation of traffic conditions in the project vicinity and, as such, was utilized as the baseline conditions for this report.

The highway capacity analysis performed in this TAR is based upon procedures presented in the "Highway Capacity Manual", Transportation Research Board, 2000, and the "Synchro", developed by Trafficware. The analysis is based on the concept of Level of Service (LOS). 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" representing unacceptable or potentially congested traffic operating conditions.

"Volume-to-Capacity" (v/c) ratio is another measure indicating the relative traffic demand to the roadway 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 generally indicates that the traffic demand exceeds the road's carrying capacity.

In the vicinity of the project site, the morning peak hour of traffic generally occurs between 7:15 AM and 8:15 AM, while the afternoon peak hour of traffic generally occurs between the hours of 4:15 PM and 5:15 PM.

<u>Nimitz Highway and Aloha Tower Drive</u>
At its intersection with Aloha Tower Drive, Nimitz Highway carries 3,453 vehicles eastbound and 2,280 vehicles westbound during the AM peak period. During the PM peak period, the overall traffic volume is less with Nimitz Highway carrying 2,986 vehicles eastbound and 2,763 vehicles westbound. Both approaches of Nimitz Highway operate at LOS "A" during both peak periods.

The Aloha Tower Drive approach of the intersection carries 25 vehicles northbound during the AM peak period and 103 vehicles during the PM peak period. The northbound approach of Aloha Tower Drive operates at LOS "E" during both peak periods.

Nimitz Highway and Bishop Street
At the intersection of Nimitz Highway and Bishop Street, Nimitz Highway carries 3,380 vehicles eastbound and 2,056 vehicles westbound during the AM peak period. During the PM peak period, the overall traffic volume is less with Nimitz Highway carrying 2,973 vehicles eastbound and 2,400 vehicles westbound. Both approaches of Nimitz Highway operate at LOS "B" and LOS "A" during the AM and PM peak periods, respectively.

Bishop Street carries 50 vehicles northbound and 634 vehicles southbound during the AM peak period. During the PM peak period, the overall traffic volume is less with Bishop Street carrying 89 vehicles northbound and 354 vehicles traveling southbound. The northbound approach of Bishop Street operates at LOS "C" and LOS "D" during the AM and PM peak periods, respectively, while the southbound approach operates at LOS "D" and LOS "E" during the AM and PM peak periods, respectively.

Nimitz Highway and Alake'a Street
At its intersection with Alake'a Street, Nimitz Highway carries 3,114 vehicles eastbound and 2,284 vehicles westbound during the AM peak period. During the PM peak period, the overall traffic volume is less with Nimitz Highway carrying 2,504 vehicles eastbound and 2,512 vehicles westbound. The eastbound approach of Nimitz Highway operates at LOS "A" during both peak periods while the westbound approach operates at LOS "B" and LOS "A" during the AM and PM peak periods, respectively.

Nimitz Highway and Halekauwila Street
At its intersection with Halekauwila Street, Nimitz Highway carries 2,569 vehicles eastbound and 2,354 vehicles westbound during the AM peak period. During the PM peak period, the overall traffic volume is less with Nimitz Highway carrying 2,152 vehicles eastbound and 2,577 vehicles westbound. The eastbound approach of Nimitz Highway operates at LOS "B" during both peak periods while the westbound approach operates at LOS "C" and LOS "B" during the AM and PM peak periods, respectively.

Impacts and Mitigation Measures

Traffic conditions were forecast to the Year 2015 (the anticipated completion date of the project) using the trip generation methodology based upon generally accepted techniques developed by the Institute of Transportation Engineers (ITE) and published in "Trip Generation, 9th Edition," 2012. The ITE trip generation rates are developed empirically by correlating vehicle trip generation data with various land use characteristics such as the number of vehicle trips generated per student or 1,000 square feet of development. However, since the new housing is expected to serve primarily non-resident undergraduate and graduate students under restrictions not allowing them to have cars on site, the majority of student-related trips to and from the site are expected to be made via the existing public transit service or other alternative modes of travel such as bicycle and walking.

It is also anticipated that current HPU students who travel to the renovated facilities at ATM would walk to and from the main campus located along Fort Street Mall. Pedestrian traffic to and from ATM is expected to increase over current patterns as ATM's occupancy rate is intentionally high presently due to the planned renovation. Since HPU's Downtown Campus houses the majority of the academic facilities in

Honolulu, pedestrian traffic is expected to increase but not likely above the rates that were originally planned for the commercial use of the facility. The major intersections along the adjacent roadways are currently signalized, thereby providing protected pedestrian crossings at those intersections.

HPU keeps the vast majority of classes below 25 students and are scheduled throughout the day with most starting around 9:40 a.m. and continuing past the evening rush hour. There is no reason to anticipate that there will be periods of heavy student pedestrian traffic between the ATM and the downtown campus or that such movement would be significant during peak roadway traffic periods. Students already commute into campus using existing transportation mediums.

In addition to the proposed university uses, some commercial (retail and restaurant) uses within the ATM are expected to be modified and/or replaced. An assessment of the current commercial uses indicates that only approximately 35,000 square feet of the existing commercial space is occupied. This is equivalent to the retail space HPU is planning to retain as a part of the proposed project. As such, the proposed university uses and commercial use modification/replacement are not expected to generate additional trips to and from the project site. Since parking for retail customers, such as at Irwin Park, is available for public use, students or faculty could, conceivably, park there for HPU-related business and obtain parking validation from an ATM retailer. If this becomes a problem, HLRP will curb such activity to address their tenants' concerns.

An important consideration regarding the TAR is that it compares current conditions with future (with project) conditions. Due to the steady decline in retail occupancy experienced by the ATM since it was developed, the traffic associated with the development had also declined. Therefore, since the amount of retail space that HPU will retain will be comparable to current retail occupancy, the nominal amount of traffic generated by HPU's uses would be far less than if the space were to be re-occupied by retail uses as the ATM was originally conceived.

Under Year 2015 conditions, traffic operations are expected remain similar to existing conditions despite the anticipated ambient growth in traffic along Nimitz Highway (see Table 3-1). The approaches of the intersections of Nimitz Highway with Aloha Tower Drive is expected to continue operating at LOS "E" or better during both peak periods while those at the intersection with Bishop Street are expected to operate at LOS "D" or better during the AM peak period and LOS "E" or better during the PM peak period. At the intersection of Nimitz Highway and Alake'a Street, the approaches of the intersection are expected to continue operating at LOS B"' or better during the AM peak period and LOS "A" during the PM peak period while those at the intersection of Nimitz Highway and Halekauwila Street are expected to continue operating at LOS "C" or better during the AM peak period and LOS "B" or better at the PM peak period.

Table3 1: Existing and Projected (Without Project) LOS Traffic Operating Conditions

Intersection	Approach	AM		PM	
		Exist	Year 2015	Exist	Year 2015
Nimitz Hwy/ Aloha Tower Dr	Eastbound	A	A	A	A
	Westbound	A	A	A	A
	Northbound	E	E	E	E
Nimitz Hwy Bishop St	Eastbound	B	B	A	A
	Westbound	B	B	A	A
	Northbound	C	C	D	D
	Southbound	D	D	E	E
Nimitz Hwy Alake'a St	Eastbound	A	A	A	A
	Westbound	B	B	A	A
Nimitz Hwy Halekauwila St	Eastbound	B	B	B	B
	Westbound	C	C	B	B

Based on the analysis of the traffic data, the following are the recommendations of this study associated with the development of the site:

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

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

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

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

5. Monitor traffic conditions in the project vicinity after the completion of the proposed project to verify the vehicular and pedestrian trips generated by the project.
6. Update the Traffic Study when details regarding the future development plans for the surrounding piers and parking lots are known.

3.10 Socio-Economic Characteristics

The project site is located within the Urban Honolulu Census Designated Place (see Figure 3-6). Demographic and other information were reviewed from the U.S. Census 2010 for the Urban Honolulu CDP and the City and County of Honolulu and is shown on Table 3-3.

Based upon the data shown on the table, the Urban Honolulu CDP has a slightly older population than the City and County of Honolulu as a whole. The median age of the population for the Urban Honolulu CDP was 41.3 versus 37.8 for the County.

By racial mix, the Urban Honolulu CDP has a higher percentage of Asians (54.8%) than the County (43.9%). The Urban Honolulu CDP has a lower percentage of Whites (17.9%) and those of two or more races (16.3%) than the County (20.8% and 22.3%, respectively). These three races (Asian, Whites, and those with two or more races) make up the majority of the population. Native Hawaiian and other Pacific Islanders comprise a slightly lower proportion in the Urban Honolulu CDP than the County as a whole, with 8.4% and 9.5%, respectively.

According to the 2010 Census, the Urban Honolulu CDP has a slightly lower occupancy rate, 90.4%, than the County, 92.3%. Housing units in this region are largely occupied by renters at 56.2%. The County data is slightly different than that of the Urban Honolulu CDP in that a larger proportion of housing units are occupied with owners.

Impacts and Mitigation Measures

In the short-term, construction expenditures will provide positive benefits to the local economy. This would include creation of some construction and construction support jobs, and the purchase of materials from local suppliers, as well as indirect benefits to local retail businesses resulting from construction activities.

In the long-term, the revitalization of the area will provide positive benefits to the local economy through the development of an HPU student and faculty residential market along with HPU faculty and staff who work at the ATM, and parents, friends, and visitors who visit the ATM. This will, in turn, attract new commercial business to the area that will also benefit from the patronage of Downtown workers and residents.

3.11 Public Services and Facilities

3.11.1 State of Hawai'i, Department of Transportation Harbor (DOT-HAR) Operations

Piers 9, 10 and 11, which front the ATM, are primarily used for cruise ship docking. Foreign cruise ships call at Honolulu Harbor where passengers normally disembark for short stays. In addition, there are interisland cruise ships that travel around the Hawaiian Islands and make weekly calls at Honolulu Harbor. The ATM serves as both a cruise passenger terminal facility as well as public parking for ATM patrons. Cruise ship operations take place on the ground level while passengers disembark onto the second level. Passengers then proceed to the ground level where tour buses are waiting to take the passengers to their desired locations.

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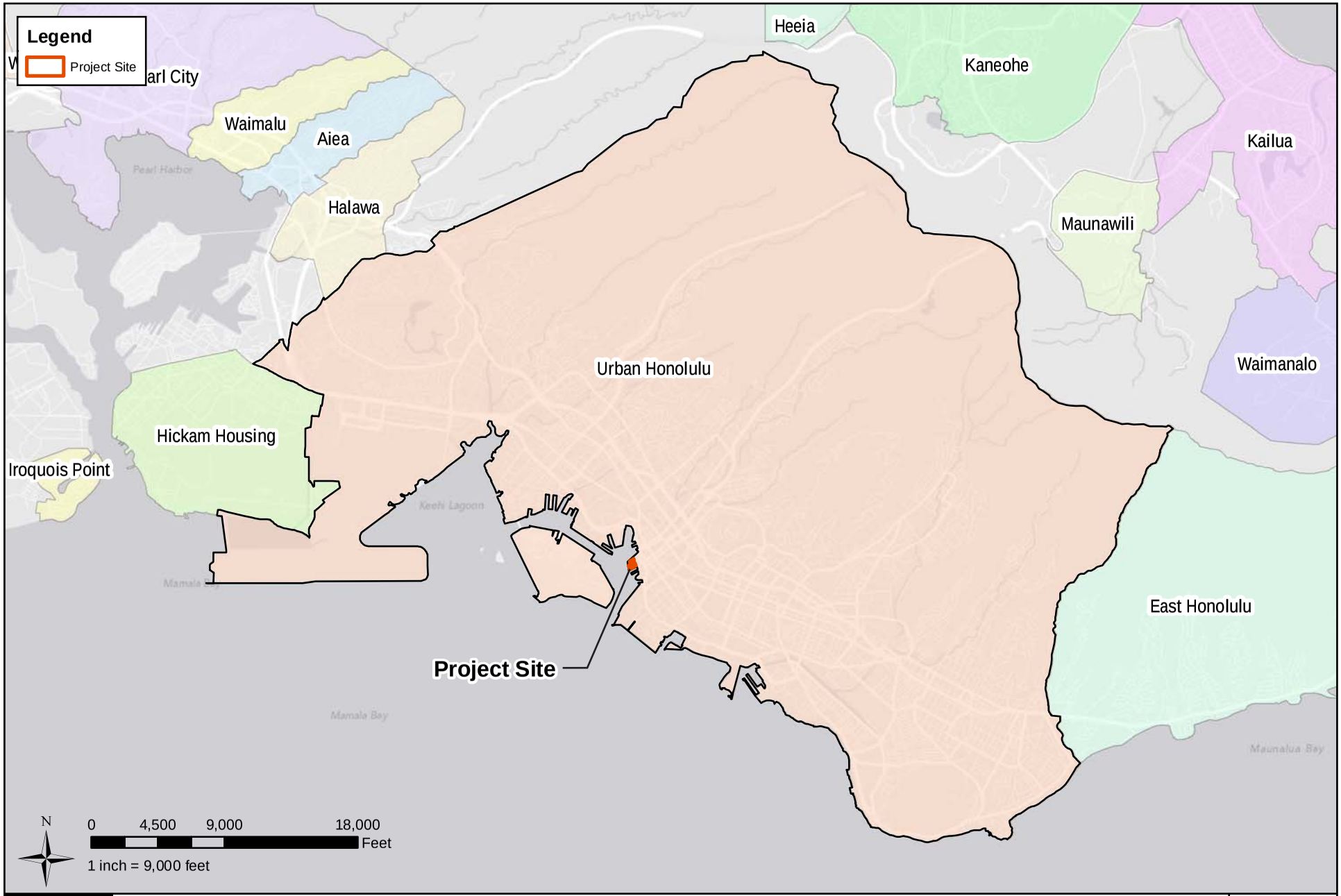


HAWAI'I PACIFIC UNIVERSITY - ALOHA TOWER MARKETPLACE PROJECT

URBAN HONOLULU CDP MAP

FIGURE

3-6

Table 3-2
Demographic Characteristics

Subject	Urban Honolulu CDP		City and County of Honolulu	
	Number	Percent	Number	Percent
Total Population	**337,256**	**100**	**953,207**	**100**
AGE				
Under 5 years	16,677	4.9	61,261	6.4
5-19 years	50,395	15	174,309	18.3
20-64 years	210,022	62.3	579,147	60.8
65 years and over	60,162	17.8	138,490	14.5
Median age (years)	41.3	--	37.8	--
RACE				
White	60,409	17.9	198,732	20.8
Black or African American	4,974	1.5	19,256	2.0
American Indian and Alaskan Native	743	0.2	2,438	0.3
Asian	184,950	54.8	418,410	43.9
Native Hawaiian and other Pacific Islander	28,260	8.4	90,878	9.5
Two or more races	55,080	16.3	213,036	22.3
Other	2,840	0.8	10,457	1.1
HOUSEHOLD (BY TYPE)				
Total households	**129,408**	**100**	**311,047**	**100**
Family households (families)	74,688	57.7	328,953	70.0
Married-couple family	52,431	40.5	161,172	51.8
With own children under 18 years	2,062	1.6	65,995	21.2
Female householder, no husband present	15,689	12.1	39,435	12.7
With own children under 18 years	5,321	4.1	15,027	4.8
Nonfamily household	54,720	42.3	93,205	30.0
Average household size	2.51	--	2.95	--
HOUSING OCCUPANCY AND TENURE				
Total housing Units	**143,173**	**100**	**336,889**	**100**
Occupied Units	129,408	90.4	311,047	92.3
By owner	56,742	43.8	174,387	56.1
By renter	72,666	56.2	136,660	43.9
Vacant Units	13,765	9.6	25,852	7.7

Pier 8 is used by the Star of Honolulu, which operates sunset dinner cruises, and is classified as an excursion vessel. Excursion vessels are smaller in size than the foreign and interisland cruise vessels and are generally used for cruises that last only a few hours and often include meals and entertainment.

Impacts and Mitigation Measures

In the short- and long-term, no significant impacts on DOT-HAR operations are anticipated. Coordination between HPU and DOT-HAR operations will be achieved through lease agreements, Capital Improvements, Maintenance, Operations and Security Agreements (CIMOSAs), or other agreed to operating standards. HLRP purchased the existing ATM and assumed an existing lease to use the underlying State land under the administration of the Aloha Tower Development Corporation (ATDC). HLRP assumed a separate lease to portions of the interior space within the building fronting Pier 10. Terms of these leases govern HPU's use of DOT-HAR's land to minimize operational conflicts maintaining priority for maritime operations. HLRP will also abide by the security requirements of and cooperate with local, state and federal agencies including the U.S. Department of Homeland Security, U.S Coast Guard, Honolulu Police Department, and State Civil Defense.

3.11.2 Public Transportation System

The City and County of Honolulu, Department of Transportation Services (DTS), provides a county-wide public transportation system (TheBus and TheHandi-Van) through a contractor, O'ahu Transit Services, Inc. (OTS). Several routes service the project vicinity:

Route 2: Provides access between the Kalihi Transit Center and Kaimuki/Kahala.

Route 13: Provides access between Nu'uanu, Downtown, Ala Moana, Waikiki, and the University of Hawai'i at Mānoa.

Route 19: Provides access between Hickam Air Force Base and Waikiki.

Route 19: Provides access between Pearlridge and Waikiki.

Route 42: Provides access between Ewa Beach and Waikiki.

Route 55: Provides access between Haleiwa, Kāne'ohe, Downtown, and Ala Moana.

Route 56: Provides access between Windward Community College (Kāne'ohe), Kailua, Downtown, and Ala Moana.

Route 57: Provides access between Sea Life Park (Hawai'i Kai/Waimanalo), Kailua, Downtown, and Ala Moana.

Route 65: Provides access between Ahuimanu and Downtown.

There is only one bus stop located in the immediate vicinity of the project site. It is in front of the former Maritime Museum, directly adjacent to the project site. Routes 55, 56, 57, and 65 utilize this bus stop to pick up passengers on their way into Waikiki.

Impacts and Mitigation Measures

In the short-term, no significant impacts on the public transportation system are anticipated. Construction of the proposed project will not involve any land disturbing

activities as the proposed project involves interior tenant improvements to portions of existing buildings including stairs, elevators, and escalators and some exterior modifications to building windows. However, HPU will coordinate planned construction activities with DTS to ensure there are no disruptions to public transportation.

In the long-term, expansion of HPU's Downtown campus to include portions of ATM may shift its student and faculty ridership patterns on public transportation. But, it is not anticipated that such shift would significantly affect the provision of transportation services. To the extent that student housing, classrooms and other student and faculty facilities at the ATM will become available within walking distance of the existing Downtown campus, reliance on public transportation could decline. HPU also plans to extend its shuttle service between the Hawai‘i Loa campus and Downtown campus to the ATM, which will give students and faculty another transportation option that may reduce reliance on public transportation.

3.11.3 Police, Fire and Medical Services

Police protection is provided by the City's Honolulu Police Department. The project area is a part of District 1 – Central Honolulu, Sector 3, which covers the downtown Honolulu area from the State Capitol area to Ala Moana Beach Park and is served by the Downtown Substation located at 79 North Hotel Street, approximately 0.3 miles northeast of the project site.

Fire protection is provided by the City's Honolulu Fire Department. The project area is served by the Kaka‘ako Fire Station located at 555 Queen Street, approximately 0.5 miles southeast of the project site.

The closest hospital to the project site is The Queen's Medical Center located approximately 0.75 miles northeast of the project site. The Queen's Medical Center is the largest private hospital in Hawai‘i, with more than 3,000 employees and over 1,200 physicians on staff. Queen's offers a comprehensive range of primary and specialized care services.

Emergency medical service is provided by the City's Emergency Services Department, Emergency Medical Services Division. The Department has 22 ambulance units under two districts. All ambulance units are designated as advanced life support units, meaning they are staffed by at least two people. The project area is served by District 2, which includes the southeast region of O‘ahu.

Impacts and Mitigation Measures

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

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

The proposed building improvements will comply with the applicable County fire code requirements.

3.11.4 Education

The project site is located within the State Department of Education's (DOE) Kaimuki-McKinley-Roosevelt complex area which includes Lincoln, Ma‘ema‘e, Mānoa, Noelani, Nu‘uanu, and Pauoa Elementary Schools; Kawananakoa and Stevenson Middle School which feed into either Roosevelt High School or McKinley High School. The native Hawaiian emersion school Ānuenue, the Education Laboratory Public Charter School, and Hālau Kū Māna Public Charter School are also a part of this complex.

The closest educational facility is McKinley High School, located approximately 1.2 miles from the proposed project site.

Impacts and Mitigation Measures

In the short- and long-term, no significant impacts or increase demand on schools are anticipated. The proposed project will benefit HPU students and faculty as it will provide additional housing, classroom, and support spaces. The proposed project is not anticipated to induce population growth and is, therefore, not expected to affect student enrollment at public school facilities in the area.

3.11.5 Recreational Facilities

The nearest recreational park to the project site is the City and County of Honolulu owned ‘A‘ala Park, located 0.5 miles north. Amenities at ‘A‘ala Park include a skate park, a basketball court, playground equipment, a comfort station, and water fountains.

Impacts and Mitigation Measures

In the short- and long-term, no significant impacts or increased demand on recreational facilities in the project vicinity are anticipated. The proposed project is intended to support the existing and projected student and faculty population of HPU. Therefore, the project is not anticipated to induce population growth and associated demands on recreational facilities and parks.

3.11.6 Solid Waste Collection and Disposal

Solid waste collection and disposal service is provided by a private hauler. Solid waste collected in the Honolulu area is hauled to the Campbell Industrial Park H-POWER Plant for eventual disposal at the Waimānalo Gulch Sanitary Landfill. Construction and demolition material is disposed of at the privately-owned PVT landfill.

Impacts and Mitigation Measures

No short- or long-term significant impacts to municipal solid waste collection and disposal facilities are anticipated as a result of the construction and operation of the proposed project.

Construction of the proposed project will generate solid waste typical of building construction related activities over the short-term. The contractor will be required to

remove all debris from the site, and properly dispose of it at the PVT landfill in conformance with County regulations.

Solid waste collection for the proposed use will be provided by a private hauler under contract with HLRP. The project is not anticipated to significantly affect the City's solid waste collection and disposal service.

3.12 Infrastructure and Utilities

3.12.1 Water System

Water service in the project area is provided by the City and County of Honolulu Board of Water Supply (BWS). There is an existing 12-inch waterline that runs under Aloha Tower Drive which serves both the ATM and Pier 10.

Impacts and Mitigation Measures
In the short- and long- term, the project is not anticipated to result in increased demand on the water system in the area as the current water allocation for the ATM is sufficient to serve the proposed project. In addition, as the proposed project is intended to support the existing and projected student and faculty population of HPU, the project is not anticipated to induce population growth and associated demand on water.

3.12.2 Wastewater System

Wastewater service in the downtown Honolulu area is provided by the City and County of Honolulu Department of Environmental Services. Wastewater is conveyed from the project site via an existing 8-inch sewer line to the main sewer line under Nimitz Highway. From there the wastewater is conveyed to the Sand Island Wastewater Treatment Plant for treatment and disposal.

Impacts and Mitigation Measures
No significant impacts are anticipated on the existing wastewater system as a result of the construction and operation of the proposed improvements as the collection and disposal system is adequate to serve the proposed project.

3.12.3 Drainage System

The majority of the drainage system for the ATM is comprised of a series of pipelines that conveys flows to a main 24-inch pipeline that runs beneath Bishop Street. Drainage on the eastern side of the property is disposed of via existing drain outlets into Honolulu Harbor.

Drainage for Pier 10 is provided by an 18-inch pipeline that runs beneath Aloha Tower Drive where it eventually connects to the aforementioned main 24-inch pipeline.

Impacts and Mitigation Measures
In the short- and long-term, no significant impacts are anticipated on the existing storm drainage system as a result of the construction and operation as the proposed project itself will not generate any additional runoff. Construction of the proposed project will not involve any land disturbing activities as the proposed project involves

interior tenant improvements to portions of existing buildings including stairs, elevators, and escalators and some exterior modifications to building windows.

3.12.4 Electrical and Communications Systems

Electrical power on the island of O'ahu is provided by Hawaiian Electric Company, Inc. The electrical source for the project area is the Honolulu Power Plant.
Telephone service in the Honolulu area, like the rest of the State, is provided by Hawaiian Telcom.

Oceanic Time Warner Cable of Hawai'i is the local CATV provider in the region.

The main connection for electrical, telephone, and cable lines for the buildings are located in the southwestern building (Building 2) of the ATM which houses the main transformer and main telephone room.

Impacts and Mitigation Measures

In the short- and long-term, the proposed project is not anticipated to significantly impact or increase demand on electrical and communication systems in the area. The current services provided to the buildings are sufficient to serve the proposed project, therefore, as the proposed project only involves interior tenant improvements to existing buildings and exterior repair and rehabilitation of existing structures, services are anticipated to remain the same.

4. RELATIONSHIP TO PLANS, POLICIES, AND CONTROLS

This section discusses the State of Hawai‘i and City and County of Honolulu land use plans, policies and controls relating to the proposed project.

4.1 State Land Use Plans and Policies

4.1.1 Hawai‘i State Plan

The Hawai‘i State Plan, Chapter 226, HRS, provides goals, objectives, policies, and priorities for the State. The Hawai‘i State Plan also provides a basis for determining priorities, allocating limited resources, and improving coordination of State and County Plans, policies, programs, projects, and regulatory activities. It establishes a set of themes, goals, objectives, and policies that are meant to guide the State's long-range growth and development activities. The proposed project is consistent with the following applicable objectives and policies:

Sec. 226-6 Objectives and policies for the economy – in general.

(a) Planning for the State's economy in general shall be directed toward achievement of the following objectives:

(2) A steady growing and diversified economic base that is not overly dependent on a few industries, and includes the development and expansion of industries on the neighbor islands.

(3) To achieve the general economic objectives, it shall be the policy of this State to:

(2) Promote Hawai‘i as an attractive market for environmentally and socially sound investment activities that benefit Hawai‘i's people.

(9) Foster greater cooperation and coordination between the government and private sectors in developing Hawai‘i's employment and economic growth opportunities.

(13) Encourage businesses that have favorable financial multiplier effects within Hawai‘i's economy.

(15) Increase effective communication between the educational community and the private sector to develop relevant curricula and training programs to meet future employment needs in general, and requirements of new, potential growth industries in particular.

(16) Foster a business climate in Hawai‘i – including attitudes, tax and regulatory policies, and financial and technical assistance programs – that is conductive to the expansion of existing enterprises and the creation and attraction of new business and industry.

Discussion: In the short-term, construction expenditures will provide positive benefits to the local economy. This would include creation of some construction and construction support jobs, and the purchase of materials from local suppliers, as well as indirect benefits to local retail businesses resulting from construction activities.

In the long-term, the revitalization of the area will provide positive benefits to the local economy through the development of an HPU student and faculty residential market along with HPU faculty and staff who work at the ATM, and parents, friends, and visitors who visit the ATM. This will, in turn, attract new commercial business to the area that will also benefit from the patronage of Downtown workers and residents. In addition, HPU is in a position to capitalize on Hawai'i's attraction as a place to get a college education. This attraction includes Hawai'i's location in the middle of the Pacific Rim, reputation as a desirable place to visit, and its cosmopolitan population and culture.

Sec. 226-21 Objective and policies for socio-cultural advancement – education.

(a) Planning for the State's socio-cultural advancement with regard to education shall be directed towards achievement to the objective of the provision of a variety of educational opportunities to enable individuals to fulfill their needs, responsibilities, and aspirations.

(b) To achieve the educational objective, it shall be the policy of this State to:

(2) Ensure the provision of adequate and accessible educational services and facilities that are designed to meet individual and community needs;

(5) Provide higher educational opportunities that enable Hawai'i's people to adapt to changing employment demands;

(6) Emphasize equality in educational programs in Hawai'i's institutions to promote academic excellence; and

(9) Support research programs and activities that enhance the education programs of the State.

Discussion: The proposed project will allow HPU to provide much needed housing and other facilities for their students. This will improve access to educational opportunities that can meet the State's objectives.

4.1.2 State Land Use District

The State Land Use Law, Chapter 205, HRS, is intended to preserve, protect and encourage the development of lands in the State for uses that are best suited to the public health and welfare of Hawai'i's people. Under Chapter 205, HRS all lands in the State of Hawai'i are classified by the State Land Use Commission (LUC) into four major categories referred to as State Land Use Districts. These districts are identified as the Urban District, Agricultural District, Conservation District, and Rural District. Permitted uses within the districts are

prescribed under Title 12, Chapter 205, HRS, and the State Land Use Commission's Administrative Rules prescribed under Title 15, Subtitle 3, Chapter 15 HAR.

The LUC's Land Use District Boundary map for the Island of O'ahu depicts the lands within the project area as being designated within the State Urban District. Land uses in the Urban district throughout the State are, in most cases, administered by the respective Counties through their respective zoning ordinances. The project site, however, is located within the jurisdiction of the Aloha Tower Development Corporation (ATDC).

4.1.3 The Aloha Tower Complex Project Area Rules

The Aloha Tower Development Corporation (ATDC) was established in 1981 to redevelop land surrounding the historic Aloha Tower. The Aloha Tower Complex is a part of a master plan created as a stimulus for economic activities by balancing community and tourism development; enhancing the beauty of the waterfront; better serving the maritime users; and by providing public access to the ocean to transform the area into a "people place".

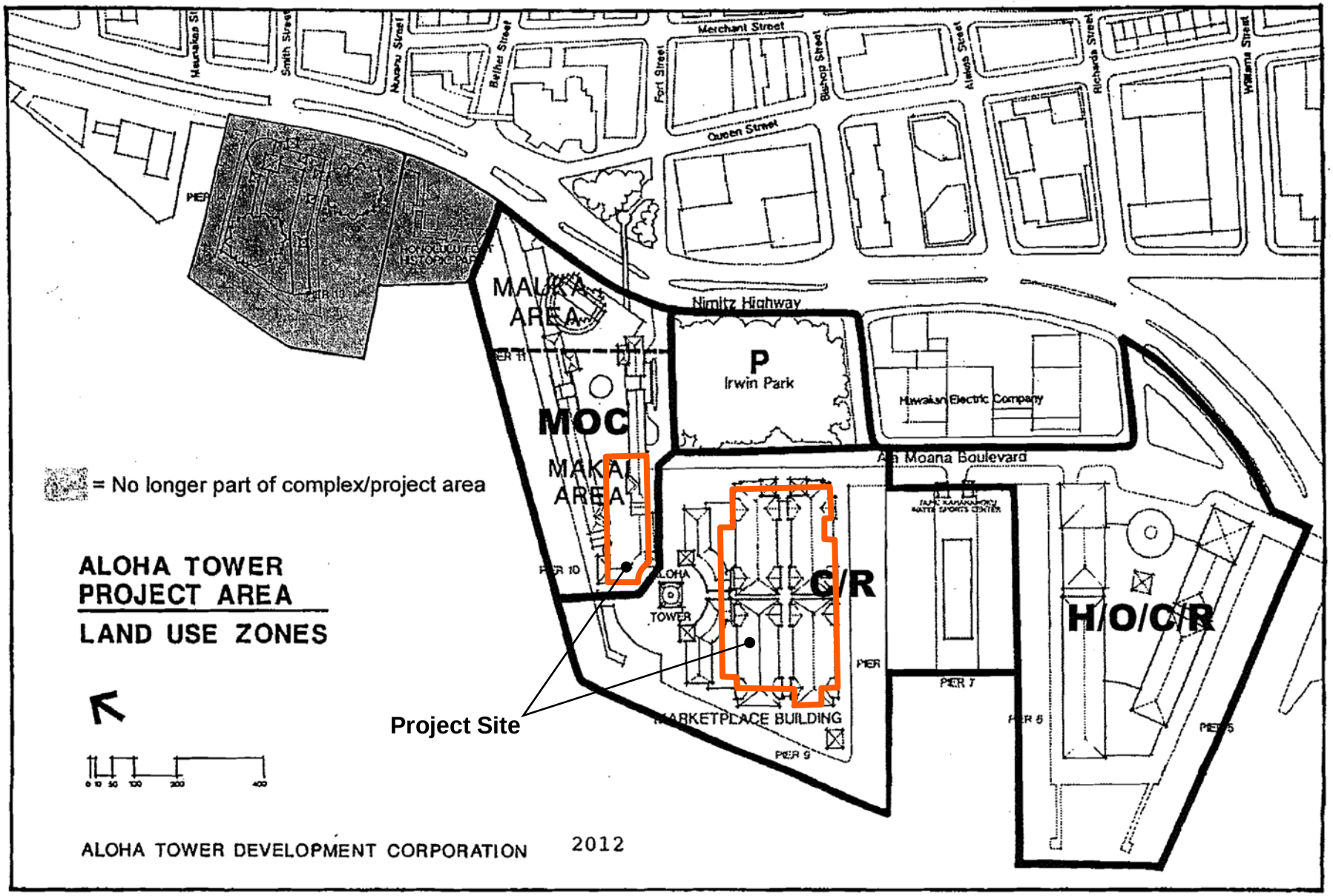
Also established in 1981 was the Aloha Tower Complex Area. Originally, the complex included primarily the area makai of Nimitz Highway between Piers 8 and 11, however, subsequent legislation amended the boundaries to include Piers 5 through 23 and portion of Iwilei, makai of Iwilei Road as shown on Figure 4-1.

Within the Aloha Tower Complex Area, ATDC has established five (5) land use zones. These land use zones are identified as the Maritime Zone, Commercial Zone, Hotel/Office/Residential Zone, Park Zone, and Residential Office Zone. According to Aloha Tower Project Area Land Use Zones Map, the ATM is zoned Commercial (C) and Pier 10 is zoned Hotel/Office/Residential (H/O/R).

Discussion: The proposed project is not an allowable use in either of the land uses zones, however, pursuant to HAR 15-26-127, *Modification of specific provisions*, ATDC can modify plan and rule requirements, including uses, through an application for modification. HPU has already prepared and submitted an application for modification to ATDC for the proposed project.

4.1.4 Hawai'i Coastal Zone Management Program

The National Coastal Zone Management (CZM) Program was created through passage of the Coastal Zone Management Act of 1972. Hawai'i's CZM Program, adopted as Chapter 205A, HRS, provides a basis for protecting, restoring and responsibly developing coastal communities and resources. The Hawai'i CZM area includes all lands within the State and the areas seaward to the extent of the State's management jurisdiction. Hence, the proposed project site is located in the CZM area. A discussion of the project's consistency with the objectives and policies of the CZM Program is provided below.



HAWAI'I PACIFIC UNIVERSITY - ALOHA TOWER MARKETPLACE PROJECT

ALOHA TOWER PROJECT AREA LAND USE ZONES

FIGURE

4-1

(1) Recreational Resources

Objective:
Provide coastal recreational opportunities accessible to the public.

Policies:
(A) Improve coordination and funding of coastal recreational planning and management; and
(i) Provide adequate, accessible, and diverse recreational opportunities in the coastal zone management area by: Protecting coastal resources uniquely suited for recreational activities that cannot be provided in other areas;
(ii) Requiring replacement of coastal resources having significant recreational value, including but not limited to surfing sites, fishponds, and sand beaches, when such resources will be unavoidably damaged by development; or requiring reasonable monetary compensation to the state for recreation when replacement is not feasible or desirable;
(iii) Providing and managing adequate public access, consistent with conservation of natural resources, to and along shorelines with recreational value;
(iv) Providing an adequate supply of shoreline parks and other recreational facilities suitable for public recreation;
(v) Ensuring public recreational use of county, state, and federally owned or controlled shoreline lands and waters having recreational value consistent with public safety standards and conservation of natural resources;
(vi) Adopting water quality standards and regulating point and nonpoint sources of pollution to protect, and where feasible, restore the recreational value of coastal waters.
(vii) Developing new shoreline recreational opportunities, where appropriate, such as artificial lagoons, artificial beaches, and artificial reefs for surfing and fishing; and
(viii) Encouraging reasonable dedication of shoreline areas with recreational value for public use as part of discretionary approvals or permits by the land use commission, board of land and natural resources, and county authorities; and crediting such dedication against the requirements of section 46-6.

Discussion: Honolulu Harbor borders the project site on its north, south, and west sides.

In the short- and long-term, no significant impacts on recreational resources are anticipated during construction or operation of the proposed project. Construction of the proposed project will not involve any land disturbing activities as the proposed project involves interior tenant improvements to portions of existing buildings including stairs, elevators, and escalators and some exterior modifications to building windows.

(2) Historic Resources

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

Policies:
(A) Identify and analyze significant archaeological resources;
(B) Maximize information retention through preservation of remains and artifacts or salvage operations; and
(C) Support state goals for protection, restoration, interpretation, and display of historic resources.

Discussion: As discussed in Section 3.6 of this document, there are a number of historic resources within the vicinity of the project site including the Aloha Tower, Piers 10 and 11, the DOT Harbors Division Building, Irwin Memorial Park, the Falls of Clyde, and the HECO Downtown Plant and Leslie A. Hicks Building.

In the short- and long-term, no significant impacts on historic properties are anticipated as a result of the construction and operation of the proposed project. Construction of the proposed project will not involve any land disturbing activities as the proposed project involves interior tenant improvements to portions of existing buildings including stairs, elevators, and escalators and some exterior modifications to building windows.

(3) Scenic and Open Space Resources

Objective:
(A) Protect, preserve, and where desirable, restore or improve the quality of coastal scenic and open space resources.

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

Discussion: In the short- and long-term, no significant impacts on scenic and open space resources are anticipated as a result of the construction and operation of the proposed project. The proposed project involves interior tenant improvements to portions of existing buildings including stairs, elevators, and escalators and some exterior modifications to

building windows. The proposed project will not include the construction of any new buildings.

(4) Coastal Ecosystems

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

Policies:
(A) Exercise an overall conservation ethic, and practice stewardship in the protection, use, and development of marine and coastal resources;
(B) Improve the technical basis for natural resource management;
(C) Preserve valuable coastal ecosystems, including reefs, of significant biological or economic importance;
(D) Minimize disruption or degradation of coastal water ecosystems by effective regulation of stream diversions, channelization, and similar land and water uses, recognizing competing water needs; and
(E) Promote water quantity and quality planning and management practices that reflect the tolerance of fresh water and marine ecosystems and maintain and enhance water quality through the development and implementation of point and nonpoint source water pollution control measures.

Discussion: Honolulu Harbor borders the project site on its north, south, and west sides.

In the short- and long-term, no significant impacts on coastal ecosystems are anticipated during construction or operation of the proposed project. Construction of the proposed project will not involve any land disturbing activities as the proposed project involves interior tenant improvements to portions of existing buildings including stairs, elevators, and escalators and some exterior modifications to building windows.

(5) Economic Uses

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

Policies:
(A) Concentrate coastal dependent development in appropriate areas;
(B) Ensure that coastal dependent developments such as harbors and ports, and coastal related development such as visitor facilities and energy generating facilities, are located, designed, and constructed to minimize adverse social, visual, and environmental impacts in the coastal zone management area; and
(C) Direct the location and expansion of coastal dependent developments to areas presently designated and used for such developments and permit reasonable long-term growth at such areas, and permit coastal dependent development outside of presently designated areas when:

(i) Use of presently designated locations is not feasible;
(ii) Adverse environmental effects are minimized; and
(iii) The development is important to the State's economy.

Discussion: In the short-term, construction expenditures will provide positive benefits to the local economy. This would include creation of some construction and construction support jobs, and the purchase of materials from local suppliers, as well as indirect benefits to local retail businesses resulting from construction activities.

In the long-term, the revitalization of the area will provide positive benefits to the local economy through the development of an HPU student and faculty residential market along with HPU faculty and staff who work at the ATM, and parents, friends, and visitors who visit the ATM. This will, in turn, attract new commercial business to the area that will also benefit from the patronage of Downtown workers and residents.

While the HPU is not a coastal dependent use, it will be occupying a portion of ATM which itself is also not coastal dependent. Nevertheless, the ATM is part of the larger ATDC area, which, collectively, is a costal dependent use as a passenger ship terminal with supporting services and activities. HLRP will ensure that commercial activity in the ATM will remain economically viable.

(6) Coastal Hazards

Objectives:
(A) Reduce hazard to life and property from tsunami, storm waves, stream flooding, erosion, subsidence, and pollution.

Policies:
(A) Develop and communicate adequate information about storm wave, tsunami, flood, erosion, subsidence, and point and nonpoint source pollution hazards;
(B) Control development in areas subject to storm wave, tsunami, flood, erosion, hurricane, wind, subsidence, and point and nonpoint pollution hazards;
(B) Ensure that developments comply with requirements of the Federal Flood Insurance Program;
(C) Prevent coastal flooding from inland projects.

Discussion: According to the Flood Insurance Rate Map (FIRM) (Community Panel Numbers 15003C0353G, 15003C0354G, 150030361G, and 15003C0362G, Effective Date: January 19, 2011) prepared by the Federal Emergency Management Agency (FEMA), the project site is designated Zone X.

Zone X is characterized as areas determined to be outside the 0.2 percent annual chance floodplain.

According to the Tsunami Evacuation Zone maps for O'ahu, the project site lies entirely within the tsunami evacuation zone

(7) Managing Development

Objective:
(A) Improve the development review process, communication, and public participation in the management of coastal resource and hazards.

Policies:
(A) Use, implement, and enforce existing law effectively to the maximum extent possible in managing present and future coastal zone development;
(B) Facilitate timely processing of applications for development permits and resolve overlapping or conflicting permit requirements; and
(C) Communicate the potential short- and long-term impacts of proposed significant coastal developments early in their life cycle and in terms understandable to the public to facilitate public participation in the planning and review process.

Discussion: The Hawai'i State environmental review process, HRS 343, requires project review by government agencies and affords the public the opportunity to provide comments on the proposed project. Applicable State and County requirements will be adhered to in the design and construction phases of the proposed improvements to assure compliance with applicable laws, ordinances and policies related to land use and environmental impacts.

(8) Public Participation

Objective:
(A) Stimulate public awareness, education, and participation in coastal management.

Policies:
(A) Promote public involvement in coastal zone management processes;
(B) Disseminate information on coastal management issues by means of educational materials, published reports, staff contact, and public workshops for persons and organizations concerned with coastal issues, developments, and government activities; and
(C) Organize workshops, policy dialogues, and site-specific mediations to respond to coastal issues and conflicts.

Discussion: The Hawai'i State environmental review process, Chapter 343, HRS, requires project review by government agencies and affords organizations and the general public the opportunity to provide comments on the proposed project.

(9) Beach Protection

Objective:
(A) Protect beaches for public use and recreation.

Policies:

(A) Locate new structures inland from the shoreline setback to conserve open space, minimize interference with natural shoreline processes, and minimize loss of improvements due to erosion;

(B) Prohibit construction of private erosion-protection structures seaward of the shoreline, except when they result in improved aesthetic and engineering solutions to erosion at the sites and do not interfere with existing recreational and waterline activities; and

(C) Minimize the construction of public erosion-protection structures seaward of the shoreline.

Discussion: The proposed does not involve the construction of improvements in the shoreline setback nor require any shoreline erosion-protection structures.

(10) Marine Resources

Objective:

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

Policies:

(D) Ensure that the use and development of marine and coastal resources are ecologically and environmentally sound and economically beneficial;

(E) Coordinate the management of marine and coastal resources and activities to improve effectiveness and efficiency;

(F) Assert and articulate the interests of the State as a partner with federal agencies in the sound management of ocean resources within the United States exclusive economic zone;

(G) Promote research, study, and understanding of ocean processes, marine life, and other ocean resources in order to acquire and inventory information necessary to understand how ocean development activities relate to and impact upon ocean and coastal resources; and

(H) Encourage research and development of new, innovative technologies for exploring, using, or protecting marine and coastal resources.

Discussion: In the short- and long-term, no significant impacts on marine resources are anticipated during construction or operation of the proposed project. Construction of the proposed project will not involve any land disturbing activities as the proposed project involves interior tenant improvements to portions of existing buildings and some exterior modifications to building windows as well as stairs, elevators, and escalators.

4.2 City and County of Honolulu Land Use Plans and Policies

Pursuant to Chapter 26, Title 15, Subtitle 58, HAR, the ATDC has the authority of supersede certain local controls, such as Development Plans and Land Use Ordinances. The project, however, will continue to foster the land use development goals of the City and County of Honolulu, as expressed in the General Plan and Primary Urban Center Development Plan.

4.2.1 City and County of Honolulu General Plan

The City and County of Honolulu last updated its General Plan in October of 2002. The General Plan for the City and County of Honolulu is a written commitment by the City and County government to a future for the Island of O'ahu that it considers desirable and attainable. The Plan is a two-fold document: First, it is a statement of the long-range social, economic, environmental, and design objectives for the general welfare and prosperity of the people of O'ahu. These objectives contain both statements of desirable conditions to be sought over the long run and statements of desirable conditions which can be achieved within an approximately 20-year time horizon. Second, the General Plan is a statement of broad policies that facilitate the attainment of the objectives of the Plan.

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

(1) Population;
(2) Economic activity;
(3) The natural environment;
(4) Housing,
(5) Transportation and utilities;
(6) Energy;
(7) Physical development and urban design;
(8) Public safety;
(9) Health and education;
(10) Culture and recreation; and
(11) Government operations and fiscal management.

The proposed project is relevant and consistent with the following applicable goals, objectives, policies, and actions of the *City and County of Honolulu General Plan*:

II. Economic Activity

Objective A
To promote employment opportunities that will enable all the people of O'ahu to attain a decent standard of living

Policy 1
Encourage the growth and diversification of O'ahu's economic base

Policy 3
Encourage the development in appropriate locations on O'ahu of trade, communications, and other industries of a nonpolluting nature.

Discussion: In the short-term, construction expenditures will provide positive benefits to the local economy. This would include creation of some construction and construction support jobs, and the purchase of materials from local suppliers, as well as indirect benefits to local retail businesses resulting from construction activities.

In the long-term, the revitalization of the area will provide positive benefits to the local economy through the development of an HPU student and faculty residential market along with HPU faculty and staff who work at the ATM, and parents, friends, and visitors who visit the ATM. This will, in turn, attract new commercial business to the area that will also benefit from the patronage of Downtown workers and residents.

VII. Physical Development and Urban Design

Objective B
To develop Honolulu (Wai'alae-Kāhala to Hālawa), 'Aiea, and Pearl City as the Island's primary urban center.

Policy 3
Encourage the establishment of mixed-use districts with appropriate design and development controls to insure and attractive living environment with surrounding land uses.

Policy 4
Provide downtown Honolulu and other major business centers with a well-balanced mixture of uses.

Policy 5
Encourage the development of attractive residential communities in downtown and other business centers.

Policy 6
Maintain and improve downtown as the financial and office center of the Island, and as a major retail center.

Policy 8
Foster the development of Honolulu's waterfront as the State's major port and maritime center, as a people-oriented mixed-use area, and as a major recreation area.

Discussion: The proposed project implements mixed use development to revitalize the ATM area. The revitalization of the area will provide positive benefits to the local economy through the development of an HPU student and faculty residential market along with HPU faculty and staff who work at the ATM, and parents, friends, and visitors who visit the ATM. This will, in turn, attract new commercial business to the area that will also benefit from the patronage of Downtown workers and residents.

VII. Health and Education

Objective B
To provide a wide range of educational opportunities for the people of O'ahu

Policy 4
Encourage the construction of school facilities that are designed for flexibility and high levels of use.

Policy 5
Facilitate the appropriate location of learning institutions from the preschool through the university levels.

Discussion: The proposed project is well situated in the urban core of Honolulu, in close proximity to Honolulu's Central Business District and HPU's existing downtown campus on Fort Street Mall.

4.2.2 Primary Urban Center Development Plan

The island of O'ahu is divided into eight Development/Sustainable Communities. These eight regional plans reflect each area's vision, and are intended to guide City land use approvals, infrastructure improvements and private sector investment decisions. The project site is located within the region encompassed by the Primary Urban Center Development Plan (PUCDP). The Plan is designed as a general framework intended to support more detailed planning at the neighborhood level. It provides clear, conceptual, long-range policies for topics of concern to all of the region's communities.

The proposed project is consistent with the following applicable policies and guidelines of the PUCDP:

3.4 The Pacific's Leading City

3.4.1.1 The Urban Waterfront
As demonstrated in leading cities throughout the world, recapturing visual and physical access to the urban waterfront can stimulate economic renewal and be a source of civic pride. Waterfront redevelopment can bring vitality and business to commercial centers. There are opportunities for waterfront renewal around both Honolulu Harbor and Pearl Harbor.

The development of Aloha Tower Marketplace opened an avenue to the Honolulu waterfront and demonstrated the potential of the harbor to attract commercial and recreational activity. Lands fronting the harbor are a prime site for new commercial, hotel, and residential development. Increased entertainment and recreational opportunities along the waterfront will benefit from the patronage of Downtown workers and residents. Revitalization of the waterfront will in turn lend impetus to redevelopment in Iwilei.

3.4.2 Policies
To be the Pacific's leading city and to attract high-technology businesses as well as conventions and visitors, the PUC needs to enhance those qualities that make it an attractive place to do business. Following are policies for enhancing the PUC's

commercial centers while providing for moderate growth and maintaining essential military, industrial and transportation functions.

3.4.2.1 Honolulu and Pearl Harbor Waterfronts

Redevelop the Downtown/Iwilei waterfront. Reroute through traffic to a new Sand Island parkway and harbor tunnel thoroughfare, and replace the makai portion of Nimitz Highway with a new shoreline pedestrian promenade and mixed-use commercial/recreational/residential complexes. Adopt appropriate measures to enhance the attractiveness of the Nimitz corridor and public and private responsibilities to implement and maintain such improvements. By creating a new parkway across Sand Island and a tunnel beneath the Harbor entrance, Airport-to-Waikīkī traffic (and all other through traffic not destined for the Iwilei/Downtown area) will bypass this unsightly industrial section and significantly reduce the traffic demand on Nimitz Highway through town. This will enable the 'Ewa-bound mauka section of the highway to be converted to a two-way local access street. It will also allow the Waikīkī-bound makai section to be converted to a major shoreline promenade and waterfront activity area, providing space for restaurants, shops, indoor and outdoor entertainment, and recreation areas. This area would also hold potential for development of low- to mid-rise housing.

4.7 Schools

4.7.2 Policies

- *Support the development of a high quality educational system of schools and post-secondary institutions that increase the attractiveness of the Primary Urban Center as a place to live and work.*

Discussion: The proposed project would revitalize the downtown waterfront area by attracting new commercial and recreational activity. The revitalization of the area will provide positive benefits to the local economy through the development of an HPU student and faculty residential market along with HPU faculty and staff who work at the ATM, and parents, friends, and visitors who visit the ATM. This will, in turn, attract new commercial business to the area that will also benefit from the patronage of Downtown workers and residents.

According to the PUCDP Land Use Map, the project site is designated as District Commercial (see Figure 4-2). This designation refers to a wide variety of commercial uses and related activities intended to serve district-, regional-, and/or island wide populations. Uses typically include major office buildings, shopping centers, professional and business services municipal services, and commercial activities along major streets. Mixed uses, including appropriately integrated medium or higher-density residential facilities, are encouraged in these areas. The proposed project is consistent with the intent of the designation as the project intends to create a mixed use area consisting of residential student and faculty housing, services and facilities for student from all HPU campuses, and a variety of commercial businesses that will be patronized by HPU students as well as ship terminal passengers and the general public.

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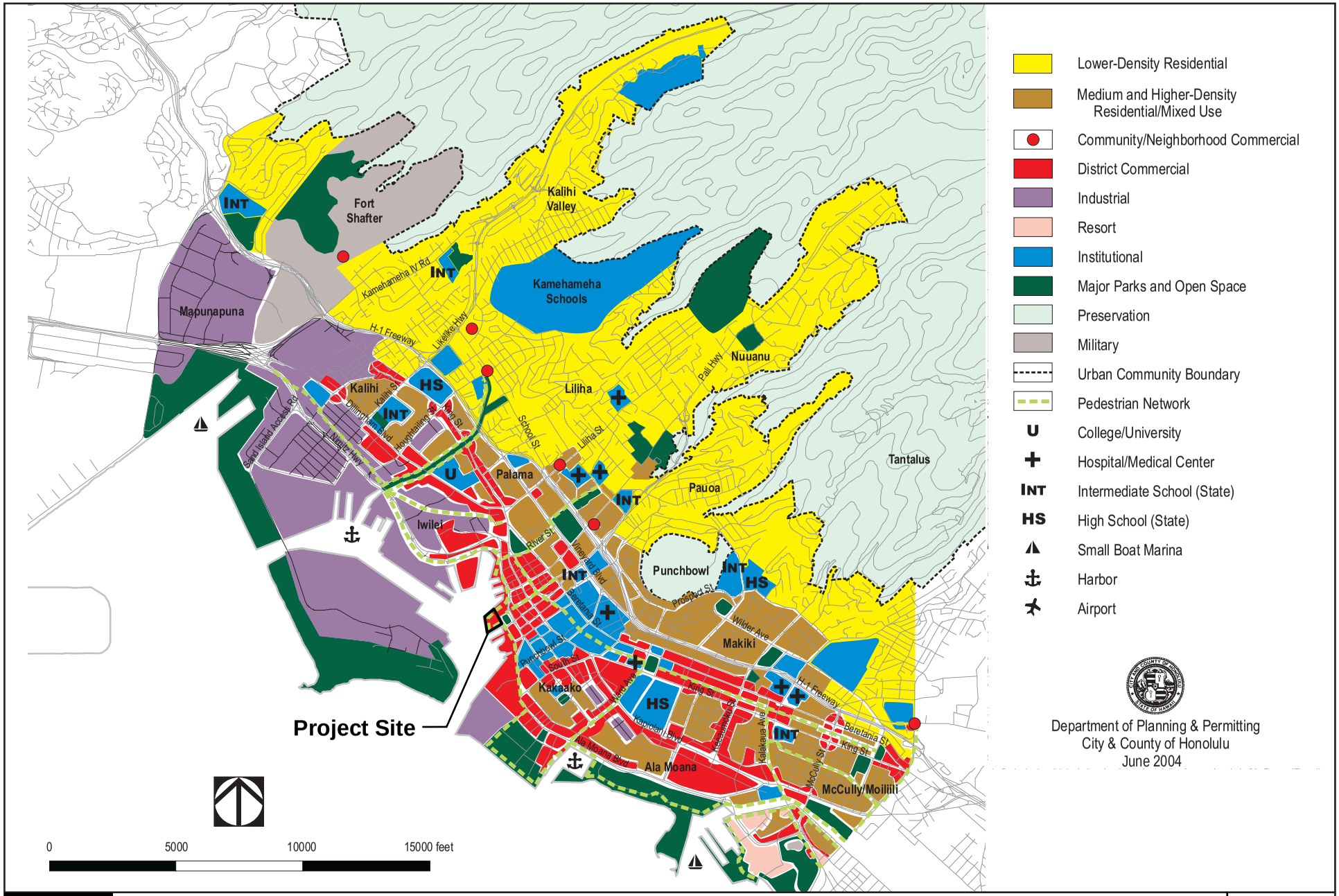

HAWAI'I PACIFIC UNIVERSITY - ALOHA TOWER MARKETPLACE PROJECT

PRIMARY URBAN CENTER DEVELOPMENT PLAN

FIGURE

4-2

4.2.3 Draft Downtown Neighborhood Transit-Oriented Development Plan

The City and County of Honolulu is in the process of preparing Neighborhood Transit-Oriented Development (TOD) Plans that integrate land use and transportation planning around the upcoming Honolulu Rail Transit Project stations. The plans are intended to address opportunities for new development and holistically plan for orderly growth and improved accessibility around the planned rail stations. The proposed project is located within the region encompassed by the Downtown Neighborhood TOD Plan. The TOD plan provides a land use and circulation framework to guide future development; identifies policies and regulatory standards for urban design, parks, and community benefit and services; and recommends implementation measures to advance the community's vision into reality.

The Downtown TOD addresses land use, local transportation, public facilities and services, economics, infrastructure planning, and options for implementation around three planned Downtown rail stations: Downtown, Chinatown, and Iwilei. The proposed project is located in the vicinity of the Downtown station.

Guiding principles of the plan include the following:

1. Develop a vibrant mixed-use Downtown.
2. Enhance Downtown's waterfront orientation.
3. Expand housing opportunities and provide a range of housing types.
4. Balance density with green space.
5. Create an integrated and convenient transportation network.
6. Provide quality public improvements.

The overall concept for the Downtown station area is that Bishop Street and a revitalized Fort Street Mall will provide mauka-makai connections between the station, Downtown offices, and a redeveloped Aloha Tower complex. The waterfront will feature a promenade that links uses and the stations, provides opportunities for new active uses, creates segregated walking and bike paths, and allows views of the waterfront.

The proposed project is consistent with the following applicable goals and policies of the Downtown TOD:

Land Use

GOALS

LU-G1 *Develop vibrant mixed-use districts with a range of residential, shopping, employment, and cultural uses that provide activities during the day and evening and support rail transit ridership.*

LU-G2 *Enhance the waterfront orientation of the Downtown stations areas, with new uses at AlohaTower, redevelopment of Irwin Park, and new destinations along the waterfront linked by a pedestrian and bicycle promenade.*

POLICIES

LU-P3 *Coordinate with the State and Aloha tower lease holder to encourage redevelopment of the Aloha Tower complex to support rail transit and provide a vibrant waterfront destination.*

Discussion: The proposed project will revitalize the downtown waterfront by attracting new commercial and passive recreational activity. This will have positive benefit on the local economy by creating an HPU student and faculty residential market. This market will also include HPU faculty and staff who work at the ATM, as well as parents, friends, and visitors who visit the ATM. Creation of this market will, in turn, attract new commercial business to the area that will also benefit from the patronage of Downtown workers and residents. In addition, HPU students and faculty, along with the ATM patrons, are potential rail transit commuters.

4.3 Permits and Approvals

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

State of Hawai'i

Aloha Tower Development Corporation

- Eligibility Review
- Development Permit
- Modification Application

Department of Land and Natural Resources

- Chapter 6E, HRS, State Historic Preservation Law

City and County of Honolulu

Department of Planning and Permitting

- Building Permit

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5. ALTERNATIVES

5.1 No Action Alternative

Under the no action alternative, the tenant improvements to the existing ATM and Pier 10 would not be pursued. Environmental impacts would be avoided, construction costs spared, and the need for permits precluded. HPU would continue to operate the facilities they currently have and the need for additional student housing and academic and support spaces will remain unaddressed.

5.2 Expansion of the Hawaii Loa Campus

This alternative would expand the Hawaii Loa Campus. Prior to the availability of the ATM and Pier 10, HPU considered expanding their Hawaii Loa campus as a part of their strategic planning effort to accommodate their anticipated growing student population. The expansion at the Hawaii Loa campus would have included new resident buildings to accommodate an additional 400 students, an academic center, a student center, indoor recreational facilities, and increased food service facilities. Additional broad development, including the needed infrastructure to support such expansion, at the existing HLC campus posed difficulties. The campus has a very harsh terrain with steep slopes, which makes development more difficult and costly. In combination with heavy rainfall in the area, the slopes create drainage problems. Increased vehicular access and egress to the campus are also problematic, given slopes and short sight-lines that complicate traffic queuing. Due to these issues, HPU determined that pursuing broad expansion of the Hawaii Loa campus is not feasible.

5.3 Expansion of the Downtown Campus

Expansion of the downtown campus depends on the availability of affordable space near HPU's existing facilities. HPU currently operates from eight buildings located along Fort Street Mall. The buildings include Blaisdell Hotel; The Frear Center; 1060 and 1132 Bishop Street; 1166 Fort Street; Kukui Plaza; Model Progress Building; and Finance Factors Center. While affordable spaces may become available over time, they would not provide the opportunity that the ATM offers to meet student housing needs and other services and facilities in a setting that would create a focal point and gathering space for student and community interaction.

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6. ANTICIPATED DETERMINATION OF FONSI

The proposed project involves the following improvements:

Potential impacts of the proposed improvements have been evaluated in accordance with the significance criteria of Section 11-200-12 of the Department of Health's Administrative Rules. Discussion of the project's conformance to the criteria is presented as follows:

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

As the project involves interior tenant improvements to portions of existing buildings including stairs, elevators, and escalators and some exterior modifications to building windows, no significant impacts on any natural or cultural resources are anticipated as a result of the construction and operation of the proposed project.

There will be no destruction or loss of any significant, endangered, or threatened botanical, faunal, geological, or other natural resources. There are no federally delineated Critical Habitat within or close to the project corridor, thus construction and operation of the proposed project will not result in any impacts to federally designated Critical Habitats.

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

The proposed project will not curtail the beneficial uses of the environment as the project site is currently developed and involves interior tenant improvements to existing buildings and exterior repair and rehabilitation of existing structures.

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

The proposed project does not conflict with long-term environmental policies, goals, and guidelines of the State of Hawai'i. As presented in this EA, the project's potential temporary adverse impacts are associated primarily with short-term construction-related activities and can be mitigated through adherence to standard construction impact mitigation practices.

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

In the short-term, construction expenditures will provide positive benefits to the local economy. This would include creation of some construction and construction support jobs, and the purchase of materials from local suppliers, as well as indirect benefits to local retail businesses resulting from construction activities.

In the long-term, the revitalization of the area will provide positive benefits to the local economy through the development of an HPU student and faculty residential market along with HPU faculty and staff who work at the ATM, and parents, friends, and visitors who visit the ATM. This will, in turn, attract new commercial business to the area that will also benefit from the patronage of Downtown workers and residents.

(5) Substantially affects public health;

No significant adverse short- or long-term impacts are anticipated as a result of the proposed project as the proposed project involves interior tenant improvements to portions of existing buildings and some exterior repair and rehabilitation of existing structures.

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

No secondary effects are anticipated with the construction or operation of the proposed project. The improvements, in and of themselves, are not anticipated to affect the population of the greater urban Honolulu area. Rather, the proposed project will benefit HPU students and faculty as it will provide additional housing, classroom, and support spaces. The proposed project is not anticipated to induce population growth and is, therefore, not expected to have an effect on public facilities.

(7) Involves a substantial degradation of environmental quality;

The proposed project is not anticipated to involve a substantial degradation of environmental quality. Construction of the proposed project will not involve any land disturbing activities as the proposed project involves interior tenant improvements to portions of existing buildings including stairs, elevators, and escalators and some exterior modifications to building windows.

Construction activities associated with the proposed improvements will create some adverse short-term impacts such as unavoidable noise impacts. Unavoidable construction noise impacts on nearby land uses in the immediate vicinity of the proposed project will be mitigated to some degree by complying with the provisions of the State DOH Administrative Rules, Title 11, Chapter 46, Community Noise Control.

In the long-term, no significant air quality, noise, or water quality impacts are anticipated from the operation of the proposed project.

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

The proposed project will replace the 2nd floor and portions of the 1st floor retail-commercial spaces at the ATM with university facilities. The cumulative impacts of HPU's use of these spaces, such as traffic, will be negligible relative to the amount of traffic that would be generated if the ATM were fully occupied by those commercial uses.

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

There will be no destruction or loss of any significant, endangered, or threatened botanical, faunal, geological, or other natural resources. There are no federally delineated Critical Habitat within or close to the project corridor, thus construction and operation of the proposed project will not result in any impacts to federally designated Critical Habitats.

While the Wedge-tailed Shearwater is an indigenous seabird species that occasionally overflies the area, it is neither an endangered or threatened species, nor is it a rare species. Nevertheless, they are protected under Chapter 13, Section 124, HAR, which prohibits injuring or killing indigenous wildlife.

No new exterior lighting is planned as a part of the proposed improvements. Therefore, no additional impacts to Wedge-tailed Shearwaters are anticipated as a result of the construction and operation of the proposed project.

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

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

Construction of the proposed project will not involve any land disturbing activities as the proposed project involves interior tenant improvements to portions of existing buildings including stairs, elevators, and escalators and some exterior modifications to building windows.

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

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

In the long-term, no significant noise impacts are anticipated once the construction of the proposed project has been completed. Since the project is not expected to increase roadway capacity or travel demand, ambient noise levels in the vicinity should not change significantly.

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

No short- or long-term significant impacts are anticipated as the project site is not located within an environmentally sensitive area.

According to the Flood Insurance Rate Map (FIRM) (Community Panel Numbers 15003C0353G, 15003C0354G, 15003C0361G, and 15003C0362G, Effective Date: January 19, 2011) prepared by the Federal Emergency Management Agency (FEMA), the project site is designated Zone X.

Zone X indicates areas of minimal flood hazard and is characterized as “areas determined to be outside the 0.2 percent annual chance floodplain.”

According to the Tsunami Evacuation Zone maps for O‘ahu, the project site lies entirely within the tsunami evacuation zone.

(12) Substantially affects scenic vistas and viewplanes identified in county or state plans or studies; or,

In the short- and long-term, no significant impacts on scenic and open space resources are anticipated as a result of the construction and operation of the proposed project. The proposed project involves interior tenant improvements to existing buildings including stairs, elevators, and escalators and exterior modifications to building windows and will not include the construction of any new buildings.

(13) Requires substantial energy consumption.

Operation of the proposed project will not result in a significant increase in energy consumption.

7. CONSULTATION

7.1 Pre-Assessment Consultation

The following agencies and organization were consulted during the preparation of the Draft EA. Of the 14 parties that formally replied during the pre-assessment period, some had no comments while others provided substantive comments as indicated by the ✓ and ✓✓, respectively. All written comments are reproduced in Appendix B.

Federal Agencies

National Oceanic and Atmospheric Administration (NOAA)
NOAA, National Marine Fisheries Service
U.S. Army Corps of Engineers
U.S. Coast Guard

State Agencies

Aloha Tower Development Corporation
Department of Business, Economic Development and Tourism (DBEDT)
✓✓ DBEDT, Office of Planning
DBEDT, Hawai'i State Energy Office
Department of Health (DOH)
✓✓ DOH, Clean Water Branch
✓✓ DOH, Environmental Planning Office
DOH, Office of Environmental Quality Control
Department of Land and Natural Resources (DLNR)
✓ DLNR, Division of Forestry and Wildlife
✓✓ DLNR, Engineering Division
✓ DLNR, Land Division
DLNR, State Historic Preservation Division
Department of Transportation (DOT)
✓✓ DOT, Harbors Division
✓✓ DOT, Highways Division
DOT, Aloha Tower Development Corporation

City and County of Honolulu Agencies

✓✓ Board of Water Supply
Department of Environmental Services
Department of Planning and Permitting
✓✓ Department of Transportation Services
✓✓ Fire Department
✓✓ Police Department

Other Interested Parties and Individuals

Downtown Neighborhood Board No. 13
✓✓ Hawai'i Gas
Hawaiian Electric Company
Hawaiian Telcom

Other Interested Parties and Individuals (Continued)

✓✓ Oceanic Time Warner Cable
The Bernice Pauahi Bishop Museum

7.2 Draft Environmental Assessment Consultation

The following agencies and organizations will be consulted during the public review period of the Draft EA:

Federal Agencies

National Oceanic and Atmospheric Administration
NOAA, National Marine Fisheries Service
U.S. Army Corps of Engineers
U.S. Coast Guard

State Agencies

Aloha Tower Development Corporation
Department of Business, Economic Development and Tourism (DBEDT)
- DBEDT, Office of Planning
- DBEDT, Hawai'i State Energy Office

Department of Health (DOH)
- DOH, Clean Water Branch
- DOH, Environmental Planning Office
- DOH, Office of Environmental Quality Control

Department of Land and Natural Resources (DLNR)
- DLNR, Division of Forestry and Wildlife
- DLNR, Engineering Division
- DLNR, Land Division
- DLNR, State Historic Preservation Division

Department of Transportation (DOT)
- DOT, Harbors Division
- DOT, Highways Division
- DOT, Aloha Tower Development Corporation

City and County of Honolulu Agencies

Board of Water Supply
Department of Environmental Services
Department of Planning and Permitting
Department of Transportation Services
Fire Department
Police Department

Other Interested Parties and Individuals

Downtown Neighborhood Board No. 13
Hawai'i Gas
Hawaiian Electric Company
Hawaiian Telcom

Other Interested Parties and Individuals (Continued)

Oceanic Time Warner Cable
The Bernice Pauahi Bishop Museum

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APPENDIX A

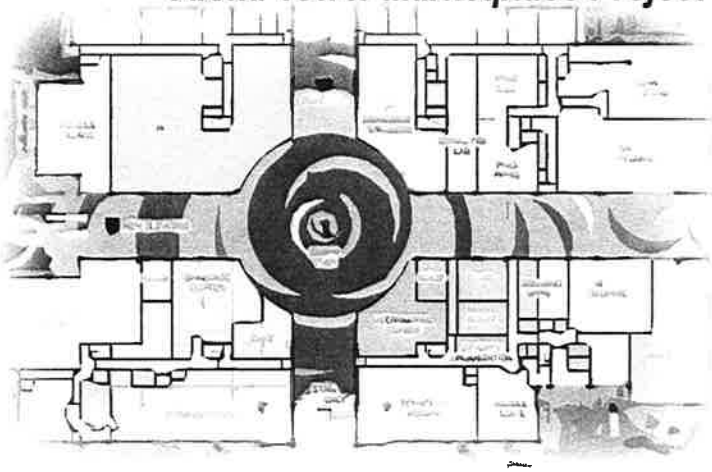
Traffic Assessment Report

Wilson Okamoto Corporation

October 2013

Traffic Assessment Report

Hawaii Pacific University
Aloha Tower Marketplace Project



Prepared for:
Hawaii Pacific University

Prepared by:
Wilson Okamoto Corporation

October 2013

TRAFFIC ASSESSMENT REPORT

FOR THE

HAWAII PACIFIC UNIVERSITY

ALOHA TOWER MARKETPLACE PROJECT

Prepared for:

Hawaii Pacific University

Prepared by:

Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826
WOC Ref: 8428-02

October 2013

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I. INTRODUCTION

A. Purpose of Study

The purpose of this study is to assess the traffic conditions in the vicinity of the proposed Hawaii Pacific University – Aloha Tower Marketplace Project located in downtown Honolulu on the island of Oahu. The proposed project entails the conversion of the existing Aloha Tower Marketplace into student and faculty residences, as well as a central gathering place, for the school.

B. Scope of Study

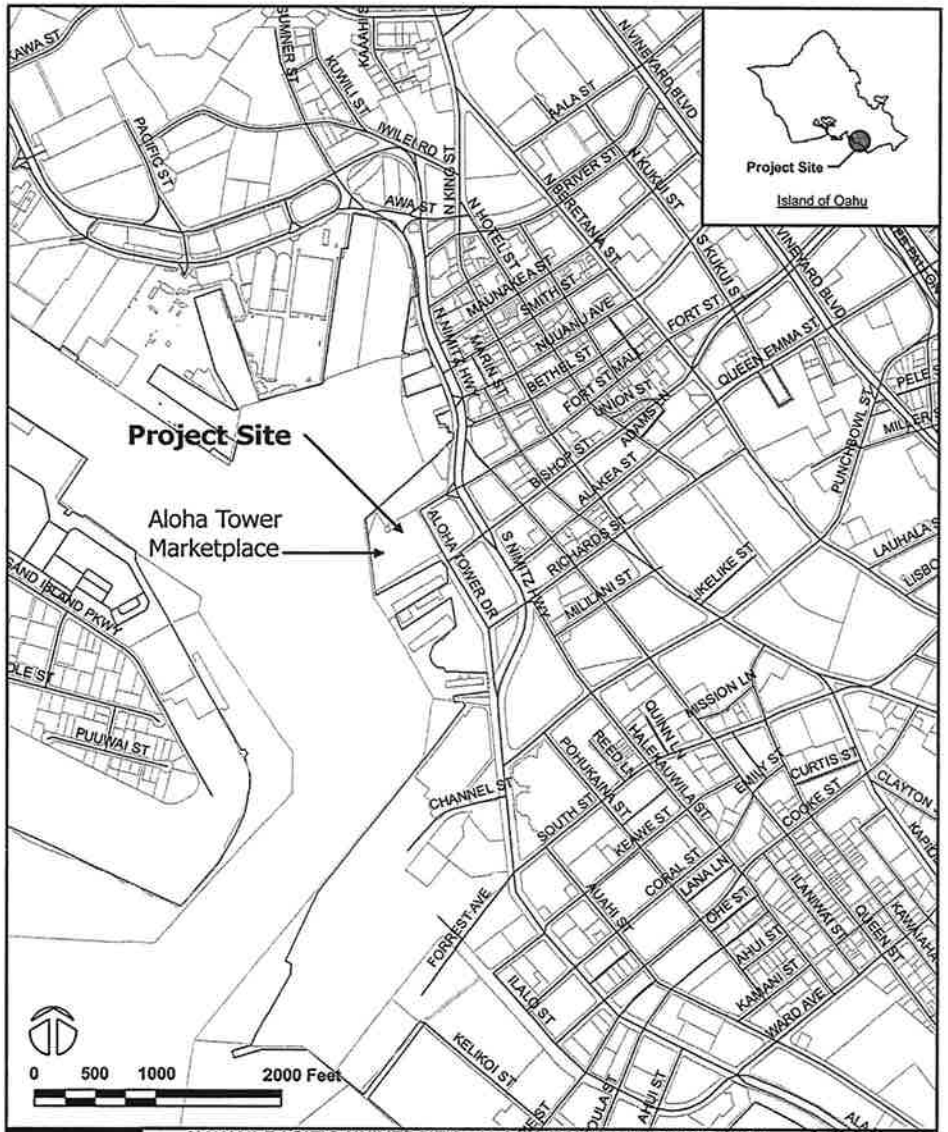
This report presents the findings and conclusions of the traffic study, the scope of which includes:

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 proposed project site is located at the existing Aloha Tower Marketplace adjacent to Nimitz Highway in downtown Honolulu on the island of Oahu (see Figure 1). The project site is further identified as Tax Map Keys (TMKs): 2-1-001: por. 063. Primary access to the proposed project will be provided via the existing Aloha Tower Drive off Nimitz Highway.



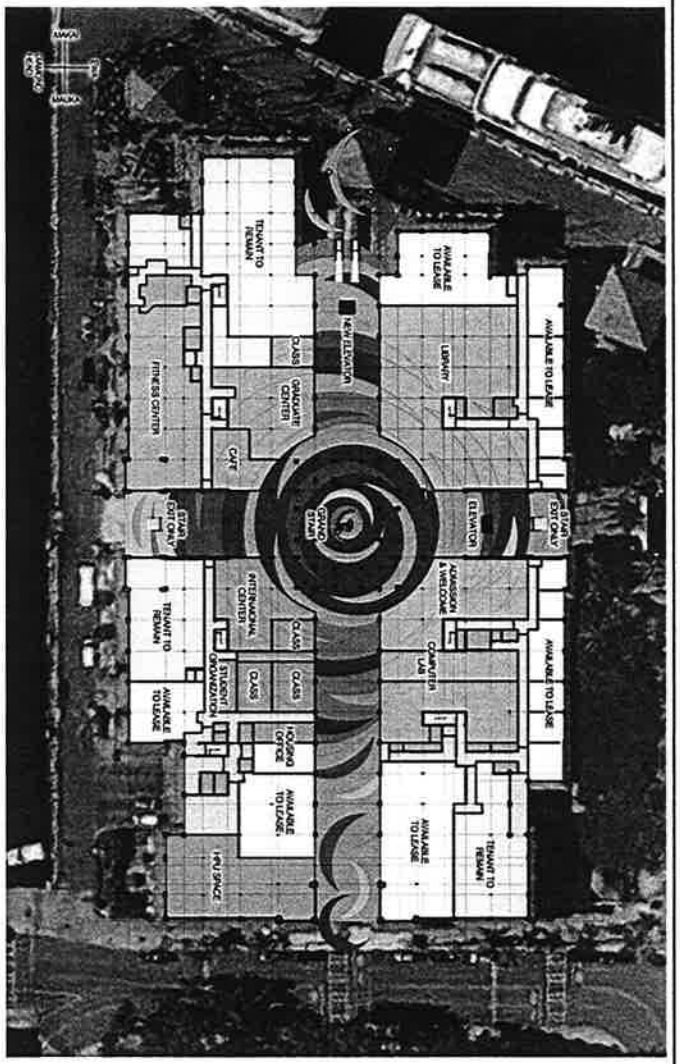
B. Project Characteristics

The proposed project entails the conversion of the existing Aloha Tower Marketplace (ATM) and the adjacent Pier 10 building into student and faculty housing, as well as providing a central gathering place for use by Hawaii Pacific University (HPU). The majority of the existing retail and restaurant uses currently housed within the ATM would be replaced with academic and support spaces including classrooms, administrative offices, a library, book store, and other amenities on the first floor with student and faculty housing located on the second floor. The student housing is expected to primarily serve graduate and/or international students. At the time of this report, Hawaii Pacific University is not expected to provide dedicated parking for students with all operations at the surrounding at-grade parking lots expected to remain similar to existing conditions. In addition, the adjacent Pier 10 building is expected to be renovated to convert a portion of the existing building into recreational and lecture spaces. A portion of the existing commercial space on the ground floor including Gordon Biersch and Hooters restaurants are expected to remain. The other surrounding existing uses within the adjacent piers are expected to remain. It should be noted that there are plans for additional improvements and/or modifications in the project vicinity, but the details or implementation schedule of these future projects is not known at this time. Access to the project site will continue to be provided via Aloha Tower Drive off Nimitz Highway. Figures 2 and 3 include the proposed project site plans.

III. EXISTING TRAFFIC CONDITIONS

A. Area Roadway System

Near the northwest corner of the project site, Nimitz Highway intersects Aloha Tower Drive. In the vicinity of the project site, Nimitz Highway is a predominantly six-lane, two-way State of Hawaii roadway generally oriented in the east-west direction that serves as one of the major access roadways through downtown Honolulu. At the signalized T-intersection with Aloha Tower Drive, the eastbound approach of Nimitz Highway has three through lanes and a shared through and right



First Floor Plan

Source: BROWNING ARCHITECTS

HAWAII PACIFIC UNIVERSITY

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PROJECT SITE PLAN – FIRST FLOOR

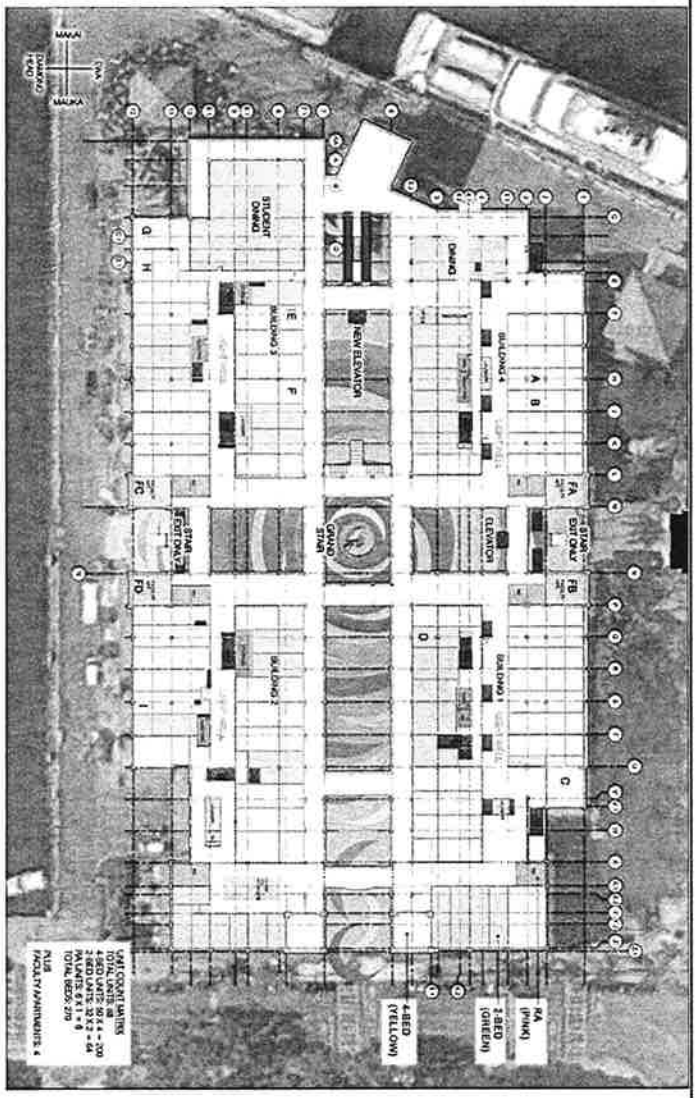
FIGURE 2

turn lane while the westbound approach has three through lanes. Aloha Tower Drive primarily serves as the access roadway for the Aloha Tower Marketplace and the surrounding piers. It should be noted that when cruise ships are docked at Pier 11 (located on the southwest corner of the intersection with Nimitz Highway), vehicular traffic along Aloha Tower Drive is restricted with right-turns from Nimitz Highway prohibited. At the intersection with Nimitz Highway, the Aloha Tower Drive approach has exclusive left-turn and right-turn lanes.

East of the intersection with Aloha Tower Drive, Nimitz Highway intersects Bishop Street. At this signalized intersection, the eastbound approach has four through lanes and an exclusive right-turn lane, while westbound approach has three through lanes. Bishop Street is a one-way roadway and has street parking on the eastern side of the street. Bishop Street originates as a two-way roadway at Aloha Tower Drive that transitions to a one-way (southbound) roadway at Nimitz Highway. At the intersection with Nimitz Highway, the northbound approach has exclusive left-turn and right-turn lanes, while the southbound approach has two left-turn lanes, one through lane, and an exclusive right-turn lane.

Further east, Nimitz Highway intersects Alakea Street. At this signalized T-intersection, the eastbound approach of the highway has three through-lanes and two exclusive left-turn lane, while the westbound approach has three lanes that serve through and right-turn traffic movements. Alakea Street is a one-way (northbound) roadway generally oriented in the north-south direction. At the intersection with Nimitz Highway, Alakea Street has five northbound departure lanes.

On the east end of the study area, Nimitz Highway intersects Halekauwila Street and an access roadway for the Aloha Tower Marketplace. At this signalized intersection, the eastbound approach of Nimitz Highway has an exclusive left-turn lane, two through lanes, and a shared through and right-turn lane, while the westbound approach three through lanes and an exclusive left-turn lane. Halekauwila Street originates at Nimitz Highway as a one-lane, one-way (eastbound) roadway that transitions to a two-way roadway at Punchbowl Street. At the intersection with



Second Floor unit key and metrics

Source: BROWNING DAY MULLINS DIERKOOP ARCHITECTS

HAWAII PACIFIC UNIVERSITY

HAWAII PACIFIC UNIVERSITY - ALOHA TOWER MARKETPLACE PROJECT

WILSON OKAMOTO CORPORATION

PROJECT SITE PLAN – SECOND FLOOR

FIGURE 3

Nimitz Highway, Halekauwila Street had one eastbound departure lane. The south leg of the intersection is comprised of an access road for the Aloha Tower Marketplace that has one southbound departure lane.

B. Traffic Volumes and Conditions

1. General

a. Field Investigation

Field investigations were conducted during February 2013 and supplemented with additional investigations in August 2013. These investigations consisted of manual turning movement count surveys during the morning peak hours between 6:00 AM and 9:00 AM, and the afternoon peak hours between 3:00 PM and 6:00 PM at the following intersections:

- Nimitz Highway and Aloha Tower Drive
- Nimitz Highway and Bishop Street
- Nimitz Highway and Alakea Street
- Nimitz Highway and Halekauwila Street

It should be noted that there were no cruise ships docked at Pier 11 during the surveys in February 2013 so additional surveys were conducted during August on days with and without a cruise ship docked at Pier 11 to verify that the counts collected during February were an appropriate baseline for this study. After comparison of the collected traffic data, it was determined that the data collected during February was an adequate representation of traffic conditions in the project vicinity and, as such, was utilized as the baseline conditions for the report. 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", developed

by Trafficware. The analysis is based on the concept of Level of Service (LOS).

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" representing unacceptable or potentially congested traffic operating conditions.

"Volume-to-Capacity" (v/c) ratio is another measure indicating the relative traffic demand to the roadway 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 generally indicates that the traffic demand exceeds the road's carrying capacity. The LOS definitions are included in Appendix B.

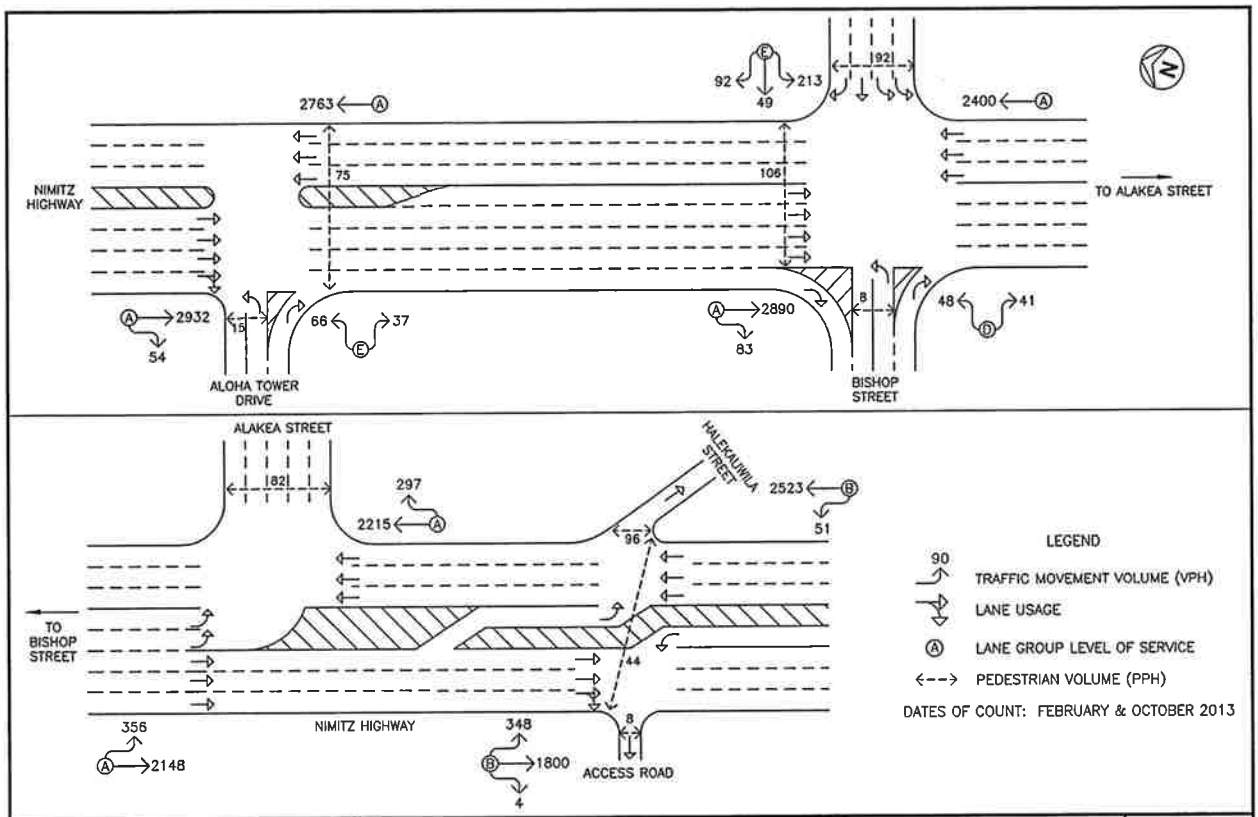
2. Existing Peak Hour Traffic

a. General

Figures 4 and 5 show the existing AM and PM peak period traffic volumes and operating conditions. The AM peak hour of traffic generally occurs between 7:15 AM and 8:15 AM. The PM peak hour of traffic generally occurs between the hours of 4:15 PM and 5:15 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. Nimitz Highway and Aloha Tower Drive

At the intersection with Aloha Tower Drive, Nimitz Highway carries 3,453 vehicles eastbound and 2,280 vehicles westbound during the AM peak period. During the PM peak period, the overall traffic volume is less with Nimitz Highway carrying 2,986 vehicles eastbound and 2,763 vehicles westbound. Both approaches of Nimitz Highway operate at LOS "A" during both peak periods.



HAWAII PACIFIC UNIVERSITY - ALOHA TOWER MARKETPLACE PROJECT

EXISTING PM PEAK HOUR OF TRAFFIC

FIGURE 5

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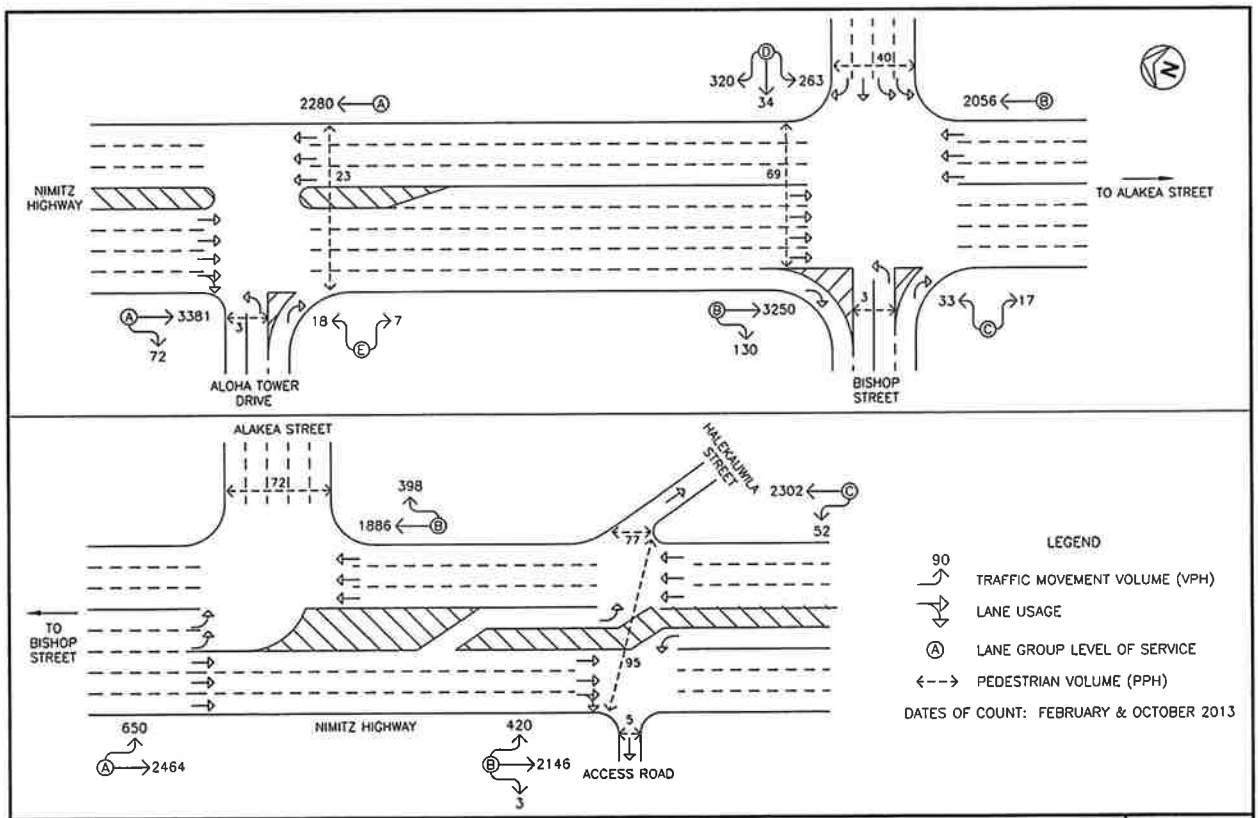


HAWAII PACIFIC UNIVERSITY - ALOHA TOWER MARKETPLACE PROJECT

EXISTING AM PEAK HOUR OF TRAFFIC

FIGURE 4

WILSON OKAMOTO CORPORATION

The Aloha Tower Drive approach of the intersection carries 25 vehicles northbound during the AM peak period and 103 vehicles during the PM peak period. The northbound approach of Aloha Tower Drive operates at LOS "E" during both peak periods.

c. Nimitz Highway and Bishop Street

At the intersection with Nimitz Highway, Nimitz Highway carries 3,380 vehicles eastbound and 2,056 vehicles westbound during the AM peak period. During the PM peak period, the overall traffic volume is less with Nimitz Highway carrying 2,973 vehicles eastbound and 2,400 vehicles westbound. Both approaches of Nimitz Highway operate at LOS "B" and LOS "A" during the AM and PM peak periods, respectively.

Bishop Street carries 50 vehicles northbound and 634 vehicles southbound during the AM peak period. During the PM peak period, the overall traffic volume is less with Bishop Street carrying 89 vehicles northbound and 354 vehicles traveling southbound. The northbound approach of Bishop Street operates at LOS "C" and LOS "D" during the AM and PM peak periods, respectively, while the southbound approach operates at LOS "D" and LOS "E" during the AM and PM peak periods, respectively.

d. Nimitz Highway and Alakea Street

At the intersection with Alakea Street, Nimitz Highway carries 3,114 vehicles eastbound and 2,284 vehicles westbound during the AM peak period. During the PM peak period, the overall traffic volume is less with Nimitz Highway carrying 2,504 vehicles eastbound and 2,512 vehicles westbound. The eastbound approach of Nimitz Highway operates at LOS "A" during both peak periods while the westbound approach operates at LOS "B" and LOS "A" during the AM and PM peak periods, respectively.

e. Nimitz Highway and Halekauwila Street

At the intersection with Halekauwila Street, Nimitz Highway carries 2,569 vehicles eastbound and 2,354 vehicles westbound during the AM peak period. During the PM peak period, the overall traffic volume is less with Nimitz Highway carrying 2,152 vehicles eastbound and 2,577 vehicles westbound. The eastbound approach of Nimitz Highway operates at LOS "B" during both peak periods while the westbound approach operates at LOS "C" and LOS "B" during the AM and PM peak periods, respectively.

IV. PROJECTED TRAFFIC CONDITIONS

A. Trip Generation

The trip generation methodology is based upon generally accepted techniques developed by the Institute of Transportation Engineers (ITE) and published in "Trip Generation, 9th Edition," 2012. The ITE trip generation rates are developed empirically by correlating the vehicle trip generation data with various land use characteristics such as the number of vehicle trips generated per student or 1,000 square feet of development. However, since the new housing is expected to serve graduate and/or foreign students without provisions for dedicated student parking, the majority of university-related trips to and from the ATM are expected to be made via the existing transit service or other alternative modes of travel such as bicycle and walking. It should be noted that pedestrian traffic to and from the Aloha Tower Marketplace Project is expected to increase since Hawaii Pacific University's Downtown Campus houses the majority of the academic facilities in Honolulu. Although pedestrian traffic is expected to increase, the major intersections along the adjacent roadways are currently signalized thereby providing protected pedestrian crossings at those intersections. In addition to the proposed HPU uses, commercial (retail and restaurant) uses within the ATM are expected to be modified and/or replaced. An assessment of the currently commercial uses indicates that only approximately 35,000 square feet of the existing commercial space is occupied. The

proposed project is expected to include approximately 35,000 square feet of commercial space. As such, the proposed HPU uses and commercial use modification/replacement are not expected to generate additional trips to and from the project site.

B. Through Traffic Forecasting Methodology

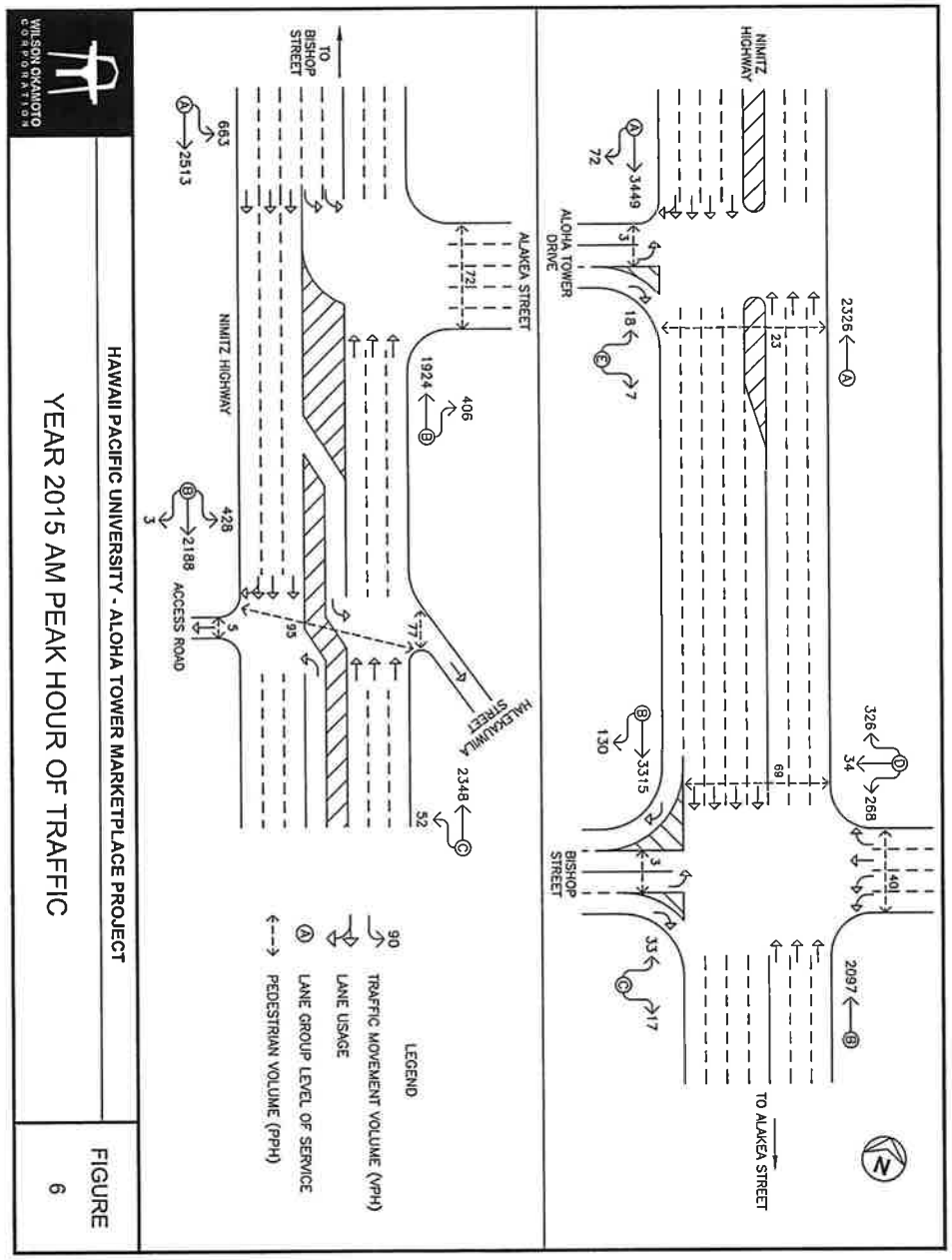
The travel forecast utilizes a conservative average annual traffic growth rate of 1.0% per year in the project vicinity. As such, using 2013 as the Base Year, growth rate factor of 1.02 was applied to the existing through traffic demands along Nimitz Highway, Bishop Street, Alakea Street, and Halekauwila Street to simulate projected Year 2015 traffic demands.

C. Total Traffic Volumes

The projected year 2015 AM and PM peak period traffic volumes and operating conditions are shown in Figures 6 and 7, and summarized in Table 1. As previously discussed, the cumulative volumes primarily incorporated ambient growth in traffic along the highway. The existing levels of service are included for comparison purposes. LOS calculations are included in Appendix D.

Table 1: Existing and Projected (Without Project) LOS Traffic Operating Conditions

Intersection	Approach	AM		PM	
		Exist	Year 2015	Exist	Year 2015
Nimitz Hwy/ Aloha Tower Dr	Eastbound	A	A	A	A
	Westbound	A	A	A	A
	Northbound	E	E	E	E
Nimitz Hwy Bishop St	Eastbound	B	B	A	A
	Westbound	B	B	A	A
	Northbound	C	C	D	D
	Southbound	D	D	E	E
Nimitz Hwy Alakea St	Eastbound	A	A	A	A
	Westbound	B	B	A	A
Nimitz Hwy Halekauwila St	Eastbound	B	B	B	B
	Westbound	C	C	B	B

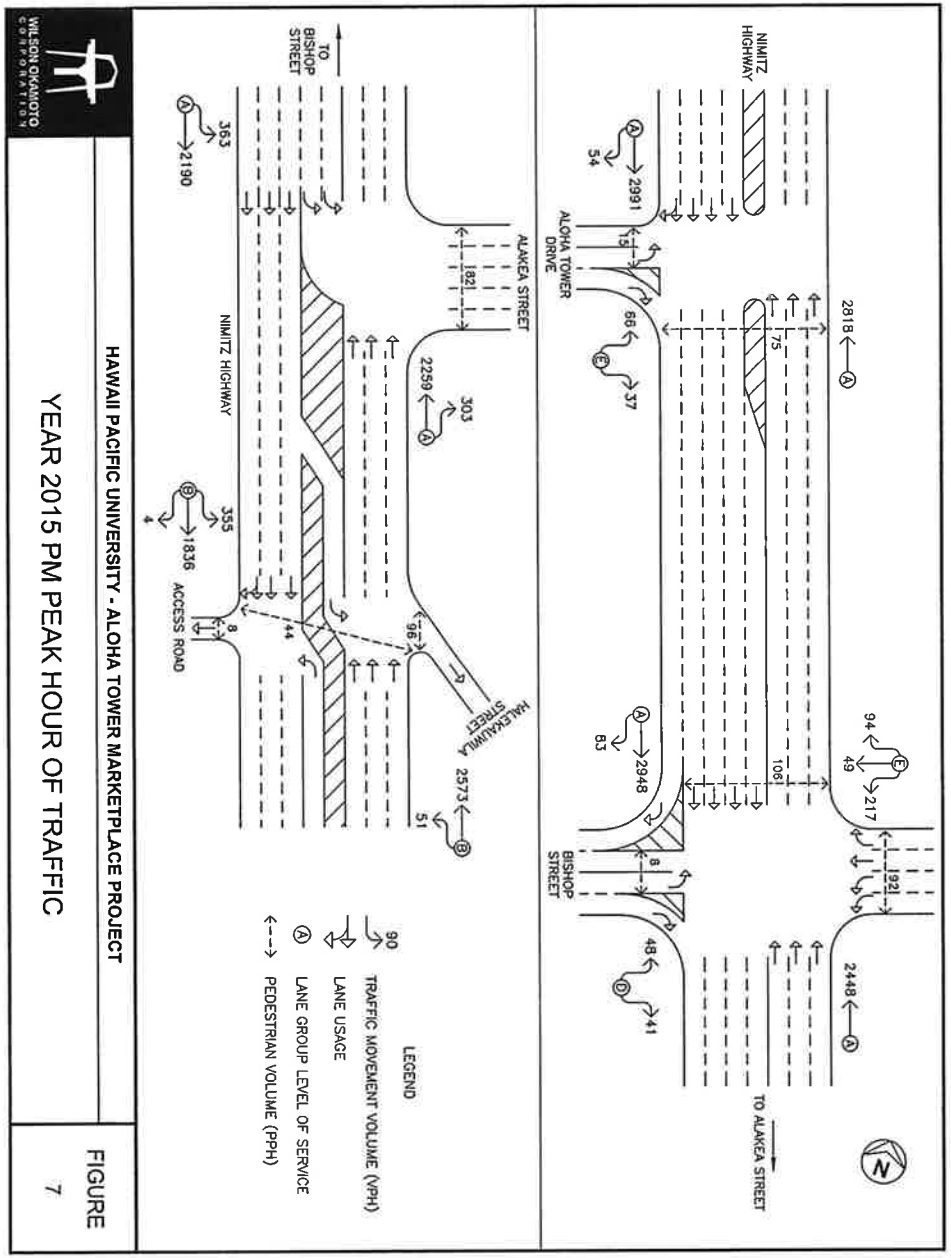


Under Year 2015 conditions, traffic operations are expected remain similar to existing conditions despite the anticipated ambient growth in traffic along Nimitz Highway. The approaches of the intersections of Nimitz Highway with Aloha Tower Drive is expected to continue operating at LOS "E" or better during both peak periods while those at the intersection with Bishop Street are expected to operate at LOS "D" or better during the AM peak period and LOS "E" or better during the PM peak period. At the intersection with Alakea Street, the approaches of the intersection are expected to continue operating at LOS B"' or better during the AM peak period and LOS "A" during the PM peak period while those at the intersection with Halekauwila Street are expected to continue operating at LOS "C" or better during the AM peak period and LOS "B" or better at the PM peak period.

V. RECOMMENDATIONS

Based on the analysis of the traffic data, the following are the recommendations of this study associated with the development of the Hawaii Pacific University – Aloha Tower Marketplace Project:

1. Maintain sufficient sight distance for motorists to safely enter and exit all driveways and roadways.
2. Maintain adequate on-site loading and off-loading service areas and prohibit off-site loading operations.
3. Maintain adequate turn-around area for service, delivery, and refuse collection vehicles to maneuver on the project site to avoid vehicle-reversing maneuvers onto public roadways.
4. Maintain sufficient turning radii at all driveways and roadways to avoid or minimize vehicle encroachments to oncoming traffic lanes.
5. Monitor traffic conditions in the project vicinity after the completion of the proposed project to verify the vehicular and pedestrian trips generated by the project.
6. Update the Traffic Study when details regarding the future development plans for the surrounding piers and parking lots are known.



HAWAII PACIFIC UNIVERSITY - ALOHA TOWER MARKETPLACE PROJECT

YEAR 2015 PM PEAK HOUR OF TRAFFIC

FIGURE 7

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VI. CONCLUSION

The proposed Hawaii Pacific University – Aloha Tower Marketplace Project will be located at the existing Aloha Tower Marketplace. The proposed project entails the replacement of the majority of the existing uses with primarily academic and support spaces, and student housing. Since the proposed project is expected to serve graduate and/or foreign students, and will not include provisions for dedicated student parking, the increase in traffic due to the proposed project is not expected to be significant. In addition, the total amount of future commercial space is expected to be similar to the current amount of occupied commercial space. As such, traffic operations in the vicinity with the development of the proposed project are expected to remain similar to existing conditions.

APPENDIX A

EXISTING TRAFFIC COUNT DATA

Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400
Honolulu, Hawaii

Counted By:MM, TO
Counter:D4-5675, D4-3888
Weather:Clear

File Name : NimFtMall PM
Site Code : 00000002
Start Date : 2/20/2013
Page No : 1

Groups Printed- Unshifted

	Southbound	Nimitz Highway Westbound					Fort Street Mall Northbound					Nimitz Highway Eastbound					
Start Time	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	0	0	657	0	12	669	15	0	3	2	20	0	638	13	0	651	1340
03:15 PM	0	0	624	0	7	631	18	0	2	0	20	0	637	11	0	648	1299
03:30 PM	0	0	740	0	11	751	14	0	4	1	19	0	727	19	0	746	1516
03:45 PM	0	0	635	0	18	653	16	0	6	1	23	0	634	10	0	644	1320
Total	0	0	2656	0	48	2704	63	0	15	4	82	0	2636	53	0	2689	5475
04:00 PM	0	0	608	0	20	628	16	0	4	5	25	0	722	15	0	737	1390
04:15 PM	0	0	642	0	14	656	16	0	4	10	30	0	777	14	0	791	1477
04:30 PM	0	0	664	0	26	690	16	0	10	4	30	0	656	13	0	669	1389
04:45 PM	0	0	757	0	12	769	14	0	11	0	25	0	795	16	0	811	1605
Total	0	0	2671	0	72	2743	62	0	29	19	110	0	2950	58	0	3008	5861
05:00 PM	0	0	700	0	23	723	20	0	12	1	33	0	704	11	0	715	1471
05:15 PM	0	0	702	0	15	717	17	0	7	0	24	0	708	10	0	718	1459
05:30 PM	0	0	672	0	23	695	13	0	7	0	20	0	626	7	0	633	1348
05:45 PM	0	0	549	0	7	556	6	0	6	2	14	0	560	13	0	573	1143
Total	0	0	2623	0	68	2691	56	0	32	3	91	0	2598	41	0	2639	5421
Grand Total	0	0	7950	0	188	8138	181	0	76	26	283	0	8184	152	0	8336	16757
Apprch %		0	97.7	0	2.3		64	0	26.9	9.2		0	98.2	1.8	0		
Total %	0	0	47.4	0	1.1	48.6	1.1	0	0.5	0.2	1.7	0	48.8	0.9	0	49.7	

	Southbound	Nimitz Highway Westbound				Fort Street Mall Northbound				Nimitz Highway Eastbound				
Start Time	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1														
Peak Hour for Entire Intersection Begins at 04:15 PM														
04:15 PM	0	0	642	0	642	16	0	4	20	0	777	14	791	1453
04:30 PM	0	0	664	0	664	16	0	10	26	0	656	13	669	1359
04:45 PM	0	0	757	0	757	14	0	11	25	0	795	16	811	1593
05:00 PM	0	0	700	0	700	20	0	12	32	0	704	11	715	1447
Total Volume	0	0	2763	0	2763	66	0	37	103	0	2932	54	2986	5852
% App. Total		0	100	0		64.1	0	35.9		0	98.2	1.8		
PHF	.000	.000	.912	.000	.912	.825	.000	.771	.805	.000	.922	.844	.920	.918

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:MM, LS
Counter:D4-3888, D4-5675
Weather:Clear

File Name : NimFtMall AM
Site Code : 00000002
Start Date : 2/20/2013
Page No : 1

Groups Printed- Unshifted

	Southbound	Nimitz Highway Westbound					Fort Street Mall Northbound					Nimitz Highway Eastbound					
Start Time	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	0	0	217	0	0	217	3	9	0	0	12	0	438	2	0	440	669
06:15 AM	0	0	230	0	4	234	3	0	2	0	5	0	494	0	0	494	733
06:30 AM	0	0	340	0	5	345	4	0	0	1	5	0	698	10	0	708	1058
06:45 AM	0	0	432	0	6	438	5	0	0	0	5	0	804	12	0	816	1259
Total	0	0	1219	0	15	1234	15	9	2	1	27	0	2434	24	0	2458	3719
07:00 AM	0	0	435	0	2	437	4	0	1	0	5	0	840	6	0	846	1288
07:15 AM	0	0	589	0	6	595	3	0	1	2	6	0	846	9	0	855	1456
07:30 AM	0	0	547	0	11	558	5	0	0	1	6	0	816	11	0	827	1391
07:45 AM	0	0	593	0	4	597	3	0	1	0	4	0	884	20	0	904	1505
Total	0	0	2164	0	23	2187	15	0	3	3	21	0	3386	46	0	3432	5640
08:00 AM	0	0	551	0	2	553	7	0	5	0	12	0	835	32	0	867	1432
08:15 AM	0	0	459	0	7	466	4	0	6	0	10	0	838	15	0	853	1329
08:30 AM	0	0	461	0	7	468	4	0	4	0	8	0	864	21	0	885	1361
08:45 AM	0	0	427	0	5	432	8	0	1	2	11	0	782	7	0	789	1232
Total	0	0	1898	0	21	1919	23	0	16	2	41	0	3319	75	0	3394	5354
Grand Total	0	0	5281	0	59	5340	53	9	21	6	89	0	9139	145	0	9284	14713
Apprch %		0	98.9	0	1.1		59.6	10.1	23.6	6.7		0	98.4	1.6	0		
Total %	0	0	35.9	0	0.4	36.3	0.4	0.1	0.1	0	0.6	0	62.1	1	0	63.1	

	Southbound	Nimitz Highway Westbound				Fort Street Mall Northbound				Nimitz Highway Eastbound				
Start Time	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1														
Peak Hour for Entire Intersection Begins at 07:15 AM														
07:15 AM	0	0	589	0	589	3	0	1	4	0	846	9	855	1448
07:30 AM	0	0	547	0	547	5	0	0	5	0	816	11	827	1379
07:45 AM	0	0	593	0	593	3	0	1	4	0	884	20	904	1501
08:00 AM	0	0	551	0	551	7	0	5	12	0	835	32	867	1430
Total Volume	0	0	2280	0	2280	18	0	7	25	0	3381	72	3453	5758
% App. Total		0	100	0		72	0	28		0	97.9	2.1		
PHF	.000	.000	.961	.000	.961	.643	.000	.350	.521	.000	.956	.563	.955	.959

Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400
Honolulu, Hawaii

Counted By:GC, EV
Counter:D4-5674, D4-5677
Weather:Clear

File Name : NimBis PM
Site Code : 00000003
Start Date : 2/20/2013
Page No : 1

Groups Printed- Unshifted

	Bishop Street Southbound					Nimitz Highway Westbound					Bishop Street Northbound					Nimitz Highway 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	34	10	59	13	116	0	567	0	0	567	16	0	6	0	22	0	634	8	26	668	1373
03:15 PM	38	10	60	11	119	0	549	0	0	549	8	0	3	1	12	0	645	7	21	673	1353
03:30 PM	41	12	58	11	122	0	676	0	0	676	7	0	6	3	16	0	711	13	16	740	1554
03:45 PM	48	14	50	18	130	0	582	0	0	582	5	0	4	1	10	0	641	15	28	684	1406
Total	161	46	227	53	487	0	2374	0	0	2374	36	0	19	5	60	0	2631	43	91	2765	5686
04:00 PM	41	9	76	26	152	0	548	0	0	548	6	0	4	0	10	0	712	25	31	768	1478
04:15 PM	33	12	69	18	132	0	578	0	0	578	11	0	6	1	18	0	754	15	30	799	1527
04:30 PM	50	10	72	37	169	2	587	0	0	589	12	0	7	1	20	0	669	23	21	713	1491
04:45 PM	50	9	67	16	142	0	644	0	0	644	15	0	15	3	33	0	752	22	30	804	1623
Total	174	40	284	97	595	2	2357	0	0	2359	44	0	32	5	81	0	2887	85	112	3084	6119
05:00 PM	80	18	110	21	229	0	591	0	0	591	10	0	13	3	26	0	715	23	25	763	1609
05:15 PM	54	14	80	7	155	0	593	0	0	593	16	0	17	3	36	0	686	18	27	733	1517
05:30 PM	43	14	79	8	144	0	572	0	0	572	13	0	7	1	21	0	619	15	21	655	1392
05:45 PM	45	10	71	14	140	0	465	0	0	465	8	0	9	2	19	0	585	12	25	602	1226
Total	222	56	340	50	668	0	2221	0	0	2221	47	0	46	9	102	0	2587	68	98	2753	5744
Grand Total	557	142	851	200	1750	2	6952	0	0	6954	127	0	97	19	243	0	8105	196	301	8602	17549
Apprch %	31.8	8.1	48.6	11.4		0	100	0	0		52.3	0	39.9	7.8		0	94.2	2.3	3.5		
Total %	3.2	0.8	4.8	1.1	10	0	39.6	0	0	39.6	0.7	0	0.6	0.1	1.4	0	46.2	1.1	1.7	49	

	Bishop Street Southbound				Nimitz Highway Westbound				Bishop Street Northbound				Nimitz Highway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	50	10	72	132	2	587	0	589	12	0	7	19	0	669	23	692	1432
04:45 PM	50	9	67	126	0	644	0	644	15	0	15	30	0	752	22	774	1574
05:00 PM	80	18	110	208	0	591	0	591	10	0	13	23	0	715	23	738	1560
05:15 PM	54	14	80	148	0	593	0	593	16	0	17	33	0	688	18	706	1480
Total Volume	234	51	329	614	2	2415	0	2417	53	0	52	105	0	2824	86	2910	6046
% App. Total	38.1	8.3	53.6		0.1	99.9	0		50.5	0	49.5		0	97	3		
PHF	.731	.708	.748	.738	.250	.938	.000	.938	.828	.000	.765	.795	.000	.939	.935	.940	.950

Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400
Honolulu, Hawaii

Counted By:GC, EV
Counter:D4-5677, D4-5674
Weather:Clear

File Name : NimBis AM
Site Code : 00000003
Start Date : 2/20/2013
Page No : 1

Groups Printed- Unshifted

	Bishop Street Southbound					Nimitz Highway Westbound					Bishop Street Northbound					Nimitz Highway Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	30	10	20	2	62	0	190	0	0	190	1	0	1	0	2	0	446	13	0	459	713
06:15 AM	45	16	33	0	94	0	195	0	0	195	4	0	0	1	5	1	506	8	2	517	811
06:30 AM	46	10	53	1	110	0	281	0	0	281	6	0	0	1	7	0	662	13	8	683	1081
06:45 AM	53	9	57	2	121	0	388	0	0	388	6	0	1	2	9	0	820	14	8	842	1360
Total	174	45	163	5	387	0	1054	0	0	1054	17	0	2	4	23	1	2434	48	18	2501	3965
07:00 AM	59	8	61	6	134	0	390	0	0	390	2	0	5	2	9	0	807	22	6	835	1368
07:15 AM	46	4	71	10	131	0	554	0	0	554	9	0	6	0	15	0	842	27	10	879	1579
07:30 AM	70	15	84	8	177	0	483	0	0	483	3	0	2	2	7	0	785	37	9	831	1498
07:45 AM	53	6	67	10	136	0	551	0	0	551	6	0	4	0	10	0	837	28	13	878	1575
Total	228	33	283	34	578	0	1978	0	0	1978	20	0	17	4	41	0	3271	114	38	3423	6020
08:00 AM	94	9	98	12	213	0	468	0	0	468	15	0	5	1	21	0	786	38	37	861	1563
08:15 AM	85	17	93	11	206	0	427	0	0	427	6	0	3	3	12	0	768	37	19	824	1489
08:30 AM	68	10	62	7	147	0	424	0	0	424	12	0	6	1	19	0	820	32	9	861	1451
08:45 AM	85	12	78	12	187	0	338	0	0	338	12	0	5	0	17	0	708	23	17	748	1290
Total	332	48	331	42	753	0	1657	0	0	1657	45	0	19	5	69	0	3082	130	82	3294	5793
Grand Total	734	126	777	81	1718	0	4689	0	0	4689	82	0	38	13	133	1	8787	292	138	9218	15758
Apprch %	42.7	7.3	45.2	4.7		0	100	0	0		61.7	0	28.6	9.8		0	95.3	3.2	1.5		
Total %	4.7	0.8	4.9	0.5	10.9	0	29.8	0	0	29.8	0.5	0	0.2	0.1	0.8	0	55.8	1.9	0.9	58.5	

	Bishop Street Southbound				Nimitz Highway Westbound				Bishop Street Northbound				Nimitz Highway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	46	4	71	121	0	554	0	554	9	0	6	15	0	842	27	869	1559
07:30 AM	70	15	84	169	0	483	0	483	3	0	2	5	0	785	37	822	1479
07:45 AM	53	6	67	126	0	551	0	551	6	0	4	10	0	837	28	865	1552
08:00 AM	94	9	98	201	0	468	0	468	15	0	5	20	0	786	38	824	1513
Total Volume	263	34	320	617	0	2056	0	2056	33	0	17	50	0	3250	130	3380	6103
% App. Total	42.6	5.5	51.9		0	100	0		66	0	34		0	96.2	3.8		
PHF	.699	.567	.816	.767	.000	.928	.000	.928	.550	.000	.708	.625	.000	.965	.855	.972	.979

Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400
Honolulu, Hawaii

Counted By:GC, RF
Counter:D4-3889, D4-3890
Weather:Clear

File Name : NimAla PM
Site Code : 00000000
Start Date : 2/21/2013
Page No : 1

Groups Printed- Unshifted

	Alakea Street Southbound					Nimitz Highway Westbound					Northbound	Nimitz Highway Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	0	0	0	7	7	0	554	78	0	632	0	97	379	0	0	476	1115
03:15 PM	0	0	0	13	13	0	556	92	0	648	0	129	545	0	0	674	1335
03:30 PM	0	0	0	18	18	0	615	82	0	697	0	83	466	0	0	549	1264
03:45 PM	0	0	0	11	11	0	570	77	0	647	0	107	503	0	0	610	1268
Total	0	0	0	49	49	0	2295	329	0	2624	0	416	1893	0	0	2309	4982
04:00 PM	0	0	0	15	15	0	578	101	0	679	0	95	517	0	0	612	1306
04:15 PM	0	0	0	25	25	0	583	75	0	658	0	109	509	0	0	618	1301
04:30 PM	0	0	0	13	13	0	551	86	0	637	0	91	557	0	0	648	1298
04:45 PM	0	0	0	24	24	0	576	82	0	658	0	97	548	0	0	645	1327
Total	0	0	0	77	77	0	2288	344	0	2632	0	392	2131	0	0	2523	5232
05:00 PM	0	0	0	20	20	0	505	54	0	559	0	59	534	0	0	593	1172
05:15 PM	0	0	0	24	24	0	518	50	0	568	0	69	592	0	0	661	1253
05:30 PM	0	0	0	10	10	0	545	55	0	600	0	122	543	0	0	665	1275
05:45 PM	0	0	0	8	8	0	576	74	0	650	0	109	629	0	0	738	1396
Total	0	0	0	62	62	0	2144	233	0	2377	0	359	2298	0	0	2657	5096
Grand Total	0	0	0	189	188	0	6727	906	0	7633	0	1167	6322	0	0	7489	15310
Apprch %	0	0	0	100		0	88.1	11.9	0			15.6	84.4	0	0		
Total %	0	0	0	1.2	1.2	0	43.9	5.9	0	49.9	0	7.6	41.3	0	0	48.9	

	Alakea Street Southbound				Nimitz Highway Westbound				Northbound	Nimitz Highway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1														
Peak Hour for Entire Intersection Begins at 04:00 PM														
04:00 PM	0	0	0	0	0	578	101	679	0	95	517	0	612	1291
04:15 PM	0	0	0	0	0	583	75	658	0	109	509	0	618	1276
04:30 PM	0	0	0	0	0	551	86	637	0	91	557	0	648	1285
04:45 PM	0	0	0	0	0	576	82	658	0	97	548	0	645	1303
Total Volume	0	0	0	0	0	2288	344	2632	0	392	2131	0	2523	5155
% App. Total	0	0	0		0	86.9	13.1			15.5	84.5	0		
PHF	.000	.000	.000	.000	.000	.981	.851	.969	.000	.899	.956	.000	.973	.989

Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400
Honolulu, Hawaii

Counted By:GC, RF
Counter:D4-3889, D4-3890
Weather:Clear

File Name : NimAla AM
Site Code : 00000000
Start Date : 2/21/2013
Page No : 1

Groups Printed- Unshifted

	Alakea Street Southbound					Nimitz Highway Westbound					Northbound	Nimitz Highway Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	0	0	0	8	8	0	193	19	0	212	0	67	313	0	0	380	600
06:15 AM	0	0	0	11	11	0	216	22	0	238	0	110	429	0	0	539	788
06:30 AM	0	0	0	5	5	0	276	35	0	311	0	126	547	0	0	673	989
06:45 AM	0	0	0	6	6	0	357	59	0	416	0	155	587	0	0	742	1184
Total	0	0	0	30	30	0	1042	135	0	1177	0	458	1876	0	0	2334	3541
07:00 AM	0	0	0	16	16	0	382	68	0	450	0	146	648	0	0	794	1260
07:15 AM	0	0	0	17	17	0	543	93	0	636	0	149	639	0	0	788	1441
07:30 AM	0	0	0	7	7	0	395	98	0	493	0	152	641	0	0	793	1293
07:45 AM	0	0	0	20	20	0	518	110	0	628	0	154	602	0	0	756	1404
Total	0	0	0	60	60	0	1838	369	0	2207	0	601	2530	0	0	3131	5398
08:00 AM	0	0	0	28	28	0	430	97	0	527	0	195	582	0	0	777	1332
08:15 AM	0	0	0	13	13	0	414	104	0	518	0	101	410	0	0	511	1042
08:30 AM	0	0	0	24	24	0	396	122	0	518	0	129	683	0	0	812	1354
08:45 AM	0	0	0	16	16	0	345	77	0	422	0	172	578	0	0	750	1188
Total	0	0	0	81	81	0	1585	400	0	1985	0	597	2253	0	0	2850	4916
Grand Total	0	0	0	171	171	0	4465	904	0	5369	0	1656	6659	0	0	8315	13855
Apprch %	0	0	0	100		0	83.2	16.8	0			19.9	80.1	0	0		
Total %	0	0	0	1.2	1.2	0	32.2	6.5	0	38.8	0	12	48.1	0	0	60	

	Alakea Street Southbound				Nimitz Highway Westbound				Northbound	Nimitz Highway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1														
Peak Hour for Entire Intersection Begins at 07:15 AM														
07:15 AM	0	0	0	0	0	543	93	636	0	149	639	0	788	1424
07:30 AM	0	0	0	0	0	395	98	493	0	152	641	0	793	1286
07:45 AM	0	0	0	0	0	518	110	628	0	154	602	0	756	1384
08:00 AM	0	0	0	0	0	430	97	527	0	195	582	0	777	1304
Total Volume	0	0	0	0	0	1886	398	2284	0	650	2464	0	3114	5398
% App. Total	0	0	0		0	82.6	17.4			20.9	79.1	0		
PHF	.000	.000	.000	.000	.000	.868	.905	.898	.000	.833	.961	.000	.882	.948

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:MM, SF
Counter:TU-0653, TU-0649
Weather:Clear

File Name : NimHalRic PM
Site Code : 00000003
Start Date : 2/21/2013
Page No : 1

Groups Printed- Unshifted

	Parking Lot Driveway Southbound					Nimitz Highway Westbound					Parking Lot Driveway Northbound					Nimitz Highway Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	0	0	0	14	14	12	639	0	0	651	0	0	0	0	0	41	333	0	1	375	1040
03:15 PM	0	0	0	15	15	11	647	0	0	658	0	0	0	0	0	77	472	2	3	554	1227
03:30 PM	0	0	0	17	17	6	708	0	0	714	0	0	0	0	0	68	400	1	3	472	1203
03:45 PM	0	0	0	11	11	4	652	0	0	656	0	0	0	0	0	80	430	1	7	518	1185
Total	0	0	0	57	57	33	2646	0	0	2679	0	0	0	0	0	266	1635	4	14	1919	4655
04:00 PM	0	0	0	24	24	7	685	0	0	692	0	0	0	2	2	93	429	4	9	535	1253
04:15 PM	0	0	0	18	18	5	657	0	0	662	0	0	0	6	6	64	449	0	4	517	1203
04:30 PM	0	0	0	24	24	11	645	0	0	656	0	0	0	0	0	98	465	1	19	583	1263
04:45 PM	0	0	0	30	30	8	658	0	0	666	0	0	0	0	0	85	450	0	10	545	1241
Total	0	0	0	96	96	31	2645	0	0	2676	0	0	0	8	8	340	1793	5	42	2180	4960
05:00 PM	0	0	0	24	24	27	563	0	0	590	0	0	0	0	0	101	436	3	11	551	1165
05:15 PM	0	0	0	28	28	5	575	0	0	580	0	0	0	0	0	89	507	0	20	616	1224
05:30 PM	0	0	0	15	15	6	601	0	0	607	0	0	0	0	0	89	460	1	4	554	1176
05:45 PM	0	0	0	15	15	12	650	0	0	662	0	0	0	0	0	90	538	2	2	632	1309
Total	0	0	0	82	82	50	2389	0	0	2439	0	0	0	0	0	369	1941	6	37	2353	4874
Grand Total	0	0	0	235	235	114	7680	0	0	7794	0	0	0	8	8	975	5369	15	93	6452	14489
Apprch %	0	0	0	100		1.5	98.5	0	0		0	0	0	100		15.1	83.2	0.2	1.4		
Total %	0	0	0	1.6	1.6	0.8	53	0	0	53.8	0	0	0	0.1	0.1	6.7	37.1	0.1	0.6	44.5	

	Parking Lot Driveway Southbound				Nimitz Highway Westbound				Parking Lot Driveway Northbound				Nimitz Highway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	7	685	0	692	0	0	0	0	93	429	4	526	1218
04:15 PM	0	0	0	0	5	657	0	662	0	0	0	0	64	449	0	513	1175
04:30 PM	0	0	0	0	11	645	0	656	0	0	0	0	98	465	1	564	1220
04:45 PM	0	0	0	0	8	658	0	666	0	0	0	0	85	450	0	535	1201
Total Volume	0	0	0	0	31	2645	0	2676	0	0	0	0	340	1793	5	2138	4814
% App. Total	0	0	0		1.2	98.8	0		0	0	0		15.9	83.9	0.2		
PHF	.000	.000	.000	.000	.705	.965	.000	.967	.000	.000	.000	.000	.867	.964	.313	.948	.986

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:MA, LS
Counter:TU-0649, TU-0653
Weather:Clear

File Name : NimHalRic AM
Site Code : 00000003
Start Date : 2/21/2013
Page No : 1

Groups Printed- Unshifted

	Parking Lot Driveway Southbound					Nimitz Highway Westbound					Parking Lot Northbound					Nimitz Highway Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	0	0	0	11	11	1	211	0	2	214	0	0	0	0	0	36	274	1	0	311	536
06:15 AM	0	0	0	14	14	1	237	0	12	250	0	0	0	3	3	74	359	1	0	434	701
06:30 AM	0	0	0	19	19	7	316	0	3	326	0	0	0	7	7	87	460	2	0	549	901
06:45 AM	0	0	0	12	12	12	420	0	12	444	0	0	0	7	7	94	501	1	0	596	1059
Total	0	0	0	56	56	21	1184	0	29	1234	0	0	0	17	17	291	1594	5	0	1890	3197
07:00 AM	0	0	0	19	19	5	450	0	14	469	0	0	0	6	6	117	536	1	0	654	1148
07:15 AM	0	0	0	22	22	3	639	0	19	661	0	0	0	7	7	102	539	1	0	642	1332
07:30 AM	0	0	0	18	18	13	503	0	18	534	0	0	0	22	22	127	521	0	0	648	1222
07:45 AM	0	0	0	23	23	20	629	0	31	680	0	0	0	14	14	99	600	1	0	700	1417
Total	0	0	0	82	82	41	2221	0	82	2344	0	0	0	49	49	445	2196	3	0	2644	5119
08:00 AM	0	0	0	14	14	16	531	0	27	574	0	0	0	15	15	92	486	1	0	579	1182
08:15 AM	0	0	0	14	14	12	516	0	22	550	0	0	0	11	11	64	342	2	0	408	983
08:30 AM	0	0	0	16	16	11	524	0	25	560	0	0	0	13	13	84	591	2	0	677	1266
08:45 AM	0	0	0	18	18	9	422	0	17	448	0	0	0	10	10	85	493	0	0	578	1054
Total	0	0	0	62	62	48	1993	0	91	2132	0	0	0	49	49	325	1912	5	0	2242	4485
Grand Total	0	0	0	200	200	110	5398	0	202	5710	0	0	0	115	115	1061	5702	13	0	6776	12801
Apprch %	0	0	0	100		1.9	94.5	0	3.5		0	0	0	100		15.7	84.1	0.2	0		
Total %	0	0	0	1.6	1.6	0.9	42.2	0	1.6	44.6	0	0	0	0.9	0.9	8.3	44.5	0.1	0	52.9	

	Parking Lot Driveway Southbound				Nimitz Highway Westbound				Parking Lot Northbound				Nimitz Highway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	3	639	0	642	0	0	0	0	102	539	1	642	1284
07:30 AM	0	0	0	0	13	503	0	516	0	0	0	0	127	521	0	648	1164
07:45 AM	0	0	0	0	20	629	0	649	0	0	0	0	99	600	1	700	1349
08:00 AM	0	0	0	0	16	531	0	547	0	0	0	0	92	486	1	579	1126
Total Volume	0	0	0	0	52	2302	0	2354	0	0	0	0	420	2146	3	2569	4923
% App. Total	0	0	0		2.2	97.8	0		0	0	0		16.3	83.5	0.1		
PHF	.000	.000	.000	.000	.650	.901	.000	.907	.000	.000	.000	.000	.827	.894	.750	.918	.912

Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400
Honolulu, Hi 96826

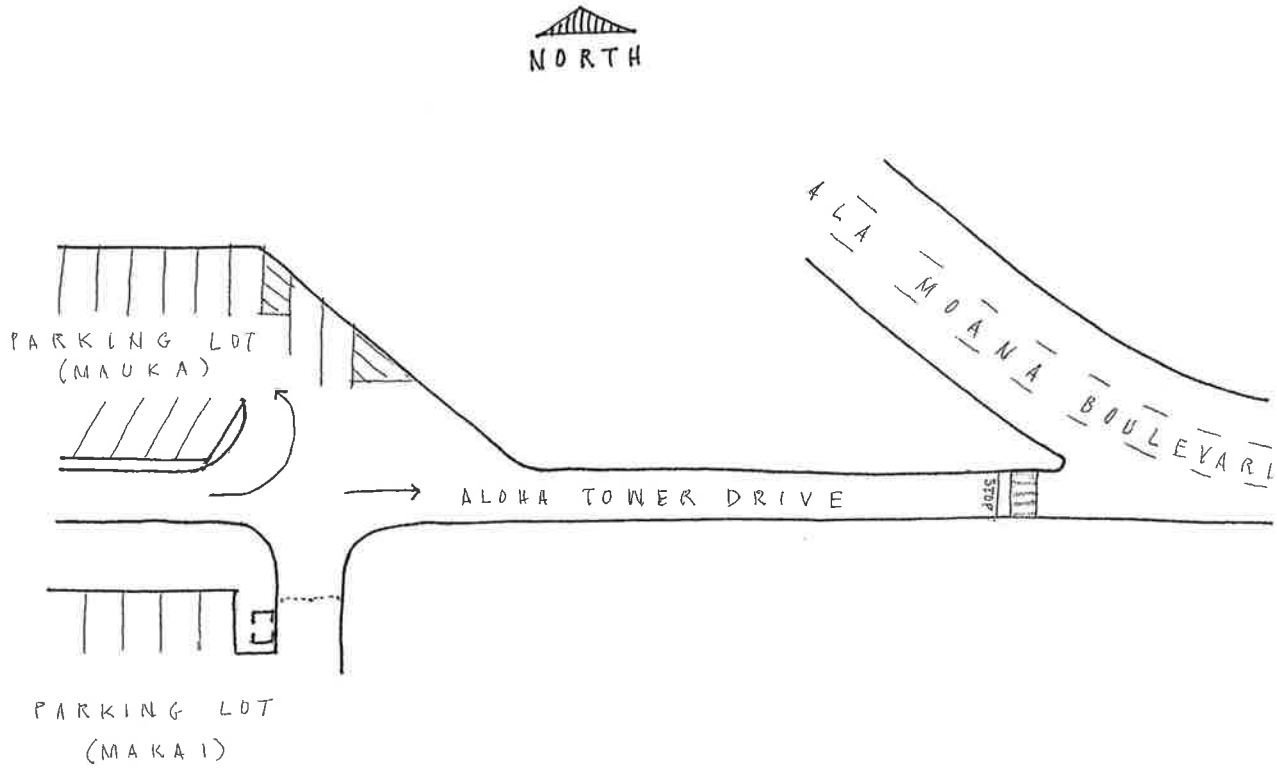
Counted By:NL
Counter:D4-3888
Weather:Clear

File Name : 8-16-2013 Intersection 1 AM
Site Code : 00000001
Start Date : 8/16/2013
Page No : 1

Groups Printed- Unshifted

	Southbound	Westbound	Makai Parking Lot Driveway Northbound					Aloha Tower Drive Eastbound					
Start Time	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	0	0	0	0	0	3	3	1	5	0	0	6	9
06:15 AM	0	0	0	0	0	2	2	1	6	0	0	7	9
06:30 AM	0	0	0	0	0	1	1	3	15	0	0	18	19
06:45 AM	0	0	0	0	0	10	10	1	10	0	0	11	21
Total	0	0	0	0	0	16	16	6	36	0	0	42	58
07:00 AM	0	0	0	0	0	9	9	4	13	0	0	17	26
07:15 AM	0	0	0	0	0	2	2	2	8	0	0	10	12
07:30 AM	0	0	0	0	0	5	5	4	9	0	0	13	18
07:45 AM	0	0	0	0	0	3	3	1	5	0	0	6	9
Total	0	0	0	0	0	19	19	11	35	0	0	46	65
08:00 AM	0	0	0	0	0	4	4	3	13	0	0	16	20
08:15 AM	0	0	0	0	0	8	8	0	11	0	0	11	19
08:30 AM	0	0	0	0	0	8	8	5	9	0	0	14	22
08:45 AM	0	0	0	0	0	8	8	5	11	0	0	16	24
Total	0	0	0	0	0	28	28	13	44	0	0	57	85
Grand Total	0	0	0	0	0	63	63	30	115	0	0	145	208
Apprch %			0	0	0	100		20.7	79.3	0	0		
Total %	0	0	0	0	0	30.3	30.3	14.4	55.3	0	0	69.7	

	Southbound	Westbound	Makai Parking Lot Driveway Northbound				Aloha Tower Drive Eastbound				
Start Time	App. Total	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 08:00 AM											
08:00 AM	0	0	0	0	0	0	3	13	0	16	16
08:15 AM	0	0	0	0	0	0	0	11	0	11	11
08:30 AM	0	0	0	0	0	0	5	9	0	14	14
08:45 AM	0	0	0	0	0	0	5	11	0	16	16
Total Volume	0	0	0	0	0	0	13	44	0	57	57
% App. Total			0	0	0		22.8	77.2	0		
PHF	.000	.000	.000	.000	.000	.000	.650	.846	.000	.891	.891



INTERSECTION 1

Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400
Honolulu, Hi 96826

Counted By:NL
Counter:D4-3888
Weather:Clear

File Name : 8-20-2013 Intersection 1 AM
Site Code : 00000001
Start Date : 8/20/2013
Page No : 1

Groups Printed- Unshifted

	Southbound	Westbound	Parking Lot Driveway Northbound					Aloha Tower Drive Eastbound					
Start Time	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	0	0	0	0	0	4	4	0	7	0	0	7	11
06:15 AM	0	0	0	0	0	7	7	1	9	0	0	10	17
06:30 AM	0	0	0	0	0	3	3	2	16	0	0	18	21
06:45 AM	0	0	0	0	0	1	1	1	18	0	0	19	20
Total	0	0	0	0	0	15	15	4	50	0	0	54	69
07:00 AM	0	0	0	0	0	2	2	2	22	0	0	24	26
07:15 AM	0	0	0	0	0	2	2	1	35	0	0	36	38
07:30 AM	0	0	0	0	0	0	0	1	35	0	0	36	36
07:45 AM	0	0	0	0	0	2	2	0	23	0	0	23	25
Total	0	0	0	0	0	6	6	4	115	0	0	119	125
08:00 AM	0	0	0	0	0	0	0	3	29	0	0	32	32
08:15 AM	0	0	0	0	0	0	0	1	15	0	0	16	16
08:30 AM	0	0	0	0	0	0	0	4	20	0	0	24	24
08:45 AM	0	0	0	0	0	1	1	2	11	0	0	13	14
Total	0	0	0	0	0	1	1	10	75	0	0	85	86
Grand Total	0	0	0	0	0	22	22	18	240	0	0	258	280
Apprch %			0	0	0	100		7	93	0	0		
Total %	0	0	0	0	0	7.9	7.9	6.4	85.7	0	0	92.1	

	Southbound	Westbound	Parking Lot Driveway Northbound				Aloha Tower Drive Eastbound				
Start Time	App. Total	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 07:15 AM											
07:15 AM	0	0	0	0	0	0	1	35	0	36	36
07:30 AM	0	0	0	0	0	0	1	35	0	36	36
07:45 AM	0	0	0	0	0	0	0	23	0	23	23
08:00 AM	0	0	0	0	0	0	3	29	0	32	32
Total Volume	0	0	0	0	0	0	5	122	0	127	127
% App. Total			0	0	0		3.9	96.1	0		
PHF	.000	.000	.000	.000	.000	.000	.417	.871	.000	.882	.882

Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400
Honolulu, Hi 96826

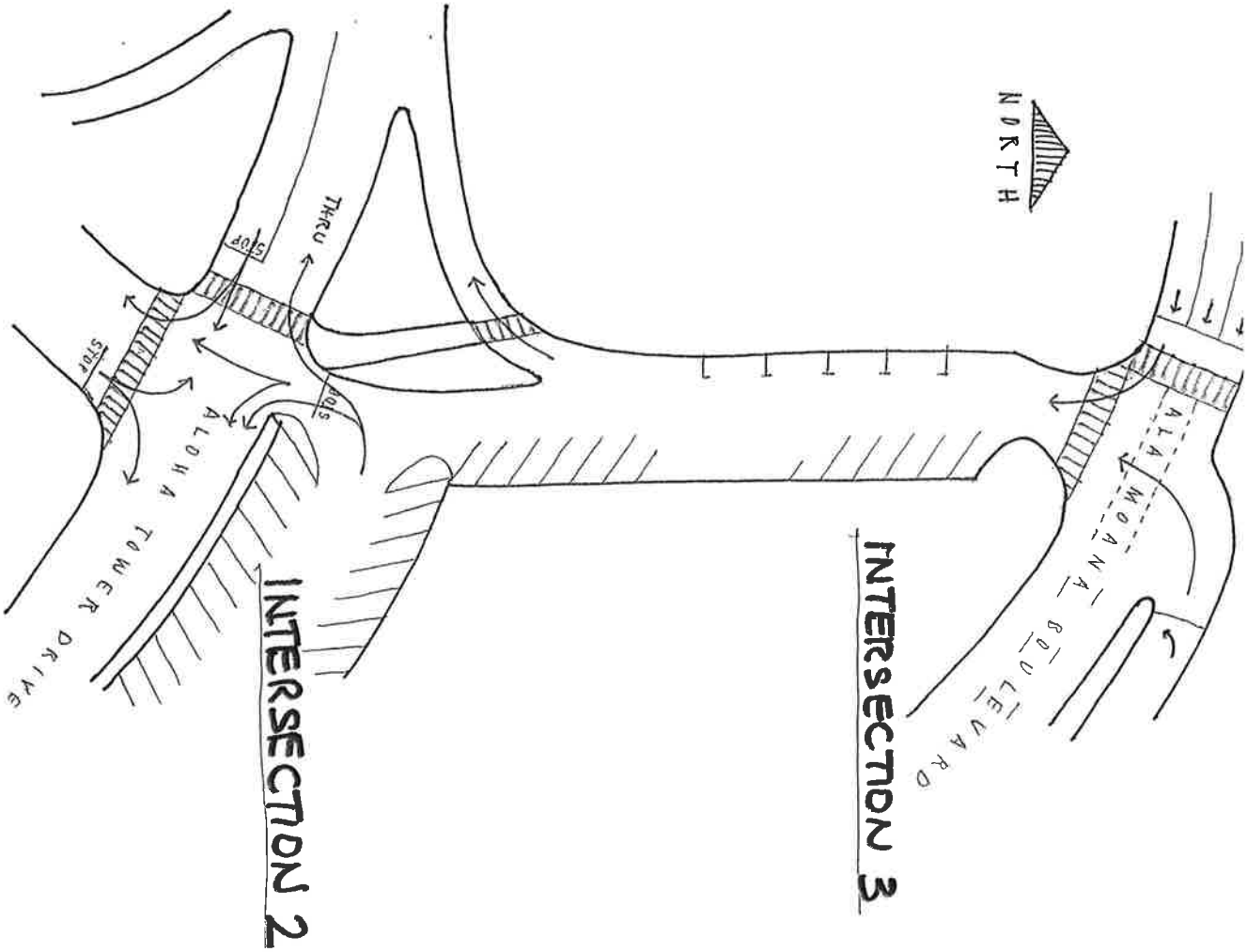
Counted By:JT
Counter:D4-3888
Weather:Clear

File Name : 8-16-2013 Intersection 1 PM
Site Code : 00000001
Start Date : 8/16/2013
Page No : 1

Groups Printed- Unshifted

	Southbound	Westbound	Makai Parking Lot Driveway Northbound					Aloha Tower Drive 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	0	0	11	11	5	17	0	0	22	33
03:15 PM	0	0	0	0	0	10	10	3	25	0	0	28	38
03:30 PM	0	0	0	0	0	1	1	4	16	0	0	20	21
03:45 PM	0	0	0	0	0	1	1	5	19	0	0	24	25
Total	0	0	0	0	0	23	23	17	77	0	0	94	117
04:00 PM	0	0	0	0	0	5	5	5	13	0	0	18	23
04:15 PM	0	0	0	0	0	0	0	4	16	0	0	20	20
04:30 PM	0	0	0	0	0	3	3	4	25	0	0	29	32
04:45 PM	0	0	0	0	0	3	3	1	44	0	0	45	48
Total	0	0	0	0	0	11	11	14	98	0	0	112	123
05:00 PM	0	0	0	0	0	0	0	3	57	0	0	60	60
05:15 PM	0	0	0	0	0	11	11	6	63	0	0	69	80
05:30 PM	0	0	0	0	0	7	7	2	50	0	0	52	59
05:45 PM	0	0	0	0	0	5	5	4	32	0	0	36	41
Total	0	0	0	0	0	23	23	15	202	0	0	217	240
Grand Total	0	0	0	0	0	57	57	46	377	0	0	423	480
Apprch %			0	0	0	100		10.9	89.1	0	0		
Total %	0	0	0	0	0	11.9	11.9	9.6	78.5	0	0	88.1	

	Southbound	Westbound	Makai Parking Lot Driveway Northbound				Aloha Tower Drive 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 04:45 PM											
04:45 PM	0	0	0	0	0	0	1	44	0	45	45
05:00 PM	0	0	0	0	0	0	3	57	0	60	60
05:15 PM	0	0	0	0	0	0	6	63	0	69	69
05:30 PM	0	0	0	0	0	0	2	50	0	52	52
Total Volume	0	0	0	0	0	0	12	214	0	226	226
% App. Total			0	0	0		5.3	94.7	0		
PHF	.000	.000	.000	.000	.000	.000	.500	.849	.000	.819	.819



Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400
Honolulu, Hi 96826

Counted By:NL
Counter:D4-3888
Weather:Clear

File Name : 8-20-2013 Intersection 1 PM
Site Code : 00000001
Start Date : 8/20/2013
Page No : 1

Groups Printed- Unshifted

	Southbound	Westbound	Parking Lot Driveway Northbound					Aloha Tower Drive 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	0	0	2	2	3	11	0	0	14	16
03:15 PM	0	0	0	0	0	9	9	3	20	0	0	23	32
03:30 PM	0	0	0	0	0	3	3	0	10	0	0	10	13
03:45 PM	0	0	0	0	0	3	3	2	19	0	0	21	24
Total	0	0	0	0	0	17	17	8	60	0	0	68	85
04:00 PM	0	0	0	0	0	2	2	3	23	0	0	26	28
04:15 PM	0	0	0	0	0	10	10	6	15	0	0	21	31
04:30 PM	0	0	0	0	0	5	5	3	38	0	0	41	46
04:45 PM	0	0	0	0	0	3	3	1	52	0	0	53	56
Total	0	0	0	0	0	20	20	13	128	0	0	141	161
05:00 PM	0	0	0	0	0	2	2	1	61	0	0	62	64
05:15 PM	0	0	0	0	0	10	10	2	55	0	0	57	67
05:30 PM	0	0	0	0	0	2	2	3	35	0	0	38	40
05:45 PM	0	0	0	0	0	3	3	1	22	0	0	23	26
Total	0	0	0	0	0	17	17	7	173	0	0	180	197
Grand Total	0	0	0	0	0	54	54	28	361	0	0	389	443
Apprch %			0	0	0	100		7.2	92.8	0	0		
Total %	0	0	0	0	0	12.2	12.2	6.3	81.5	0	0	87.8	

	Southbound	Westbound	Parking Lot Driveway Northbound				Aloha Tower Drive 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 04:30 PM											
04:30 PM	0	0	0	0	0	0	3	38	0	41	41
04:45 PM	0	0	0	0	0	0	1	52	0	53	53
05:00 PM	0	0	0	0	0	0	1	61	0	62	62
05:15 PM	0	0	0	0	0	0	2	55	0	57	57
Total Volume	0	0	0	0	0	0	7	206	0	213	213
% App. Total			0	0	0		3.3	96.7	0		
PHF	.000	.000	.000	.000	.000	.000	.583	.844	.000	.859	.859

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:MM, JD
Counter:D4-5676, D4-5675
Weather:Clear

File Name : 8-16-2013 Intersection 2 PM
Site Code : 00000002
Start Date : 8/16/2013
Page No : 1

Groups Printed- Unshifted

	Parking Lot Driveway (Along Ala Moana Blvd.) Southbound					Waikiki End Parking Lot (Numbers In Left Column Indicates U-Turns) Westbound					Parking Lot Driveway (Makai Lot) Northbound					Aloha Tower Drive 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	1	2	23	0	26	6	0	0	0	6	2	0	3	18	23	0	20	2	2	24	79
03:15 PM	2	0	19	0	21	1	0	0	0	1	4	0	3	10	17	0	23	2	2	27	66
03:30 PM	1	2	19	0	22	2	0	0	0	2	7	0	3	13	23	0	17	5	5	27	74
03:45 PM	2	5	12	0	19	3	0	0	0	3	6	0	4	6	16	0	19	6	6	31	69
Total	6	9	73	0	88	12	0	0	0	12	19	0	13	47	79	0	79	15	15	109	288
04:00 PM	3	2	17	0	22	6	0	0	0	6	8	0	1	11	20	0	16	6	6	28	76
04:15 PM	0	6	18	0	24	3	0	0	0	3	7	0	1	2	10	0	18	6	5	29	66
04:30 PM	2	2	18	0	22	5	0	0	0	5	9	0	4	11	24	0	25	6	9	40	91
04:45 PM	1	8	21	0	30	1	0	0	0	1	7	0	3	10	20	0	41	4	3	48	99
Total	6	18	74	0	98	15	0	0	0	15	31	0	9	34	74	0	100	22	23	145	332
05:00 PM	1	4	28	0	33	2	0	0	0	2	11	0	5	5	21	0	56	2	8	66	122
05:15 PM	0	9	27	0	36	4	0	0	0	4	19	0	4	13	36	0	66	3	12	81	157
05:30 PM	1	4	19	0	24	2	0	0	0	2	6	0	4	4	14	0	45	10	5	60	100
05:45 PM	3	0	23	0	26	5	0	0	0	5	7	0	5	12	24	0	35	9	3	47	102
Total	5	17	97	0	119	13	0	0	0	13	43	0	18	34	95	0	202	24	28	254	481
Grand Total	17	44	244	0	305	40	0	0	0	40	93	0	40	115	248	0	381	61	66	508	1101
Apprch %	5.6	14.4	80	0		100	0	0	0		37.5	0	16.1	46.4		0	75	12	13		
Total %	1.5	4	22.2	0	27.7	3.6	0	0	0	3.6	8.4	0	3.6	10.4	22.5	0	34.6	5.5	6	46.1	

	Parking Lot Driveway (Along Ala Moana Blvd.) Southbound				Waikiki End Parking Lot (Numbers In Left Column Indicates U-Turns) Westbound				Parking Lot Driveway (Makai Lot) Northbound				Aloha Tower Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	1	4	28	33	2	0	0	2	11	0	5	16	0	56	2	58	109
05:15 PM	0	9	27	36	4	0	0	4	19	0	4	23	0	66	3	69	132
05:30 PM	1	4	19	24	2	0	0	2	6	0	4	10	0	45	10	55	91
05:45 PM	3	0	23	26	5	0	0	5	7	0	5	12	0	35	9	44	87
Total Volume	5	17	97	119	13	0	0	13	43	0	18	61	0	202	24	226	419
% App. Total	4.2	14.3	81.5		100	0	0		70.5	0	29.5		0	89.4	10.6		
PHF	.417	.472	.866	.826	.650	.000	.000	.650	.566	.000	.900	.663	.000	.765	.600	.819	.794

Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400
Honolulu, Hi 96826

Counted By:MM, ES
Counter:D4-5675, D4-5676
Weather:Clear

File Name : 8-16-2013 Intersection 2 AM
Site Code : 00000002
Start Date : 8/16/2013
Page No : 1

Groups Printed- Unshifted

	Parking Lot Driveway (Along Ala Moana Blvd.) Southbound					Waikiki End Parking Lot (Numbers In Left Column Indicates U-Turns) Westbound					Parking Lot Driveway (Makai Lot) Northbound					Aloha Tower Drive Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	0	1	3	0	4	0	0	0	0	0	0	0	0	3	3	0	1	1	0	2	9
06:15 AM	3	2	1	0	6	1	0	0	0	1	0	0	0	2	2	0	4	4	0	8	17
06:30 AM	5	4	2	0	11	1	0	0	0	1	0	0	0	1	1	0	14	3	1	18	31
06:45 AM	2	1	2	0	5	1	0	0	0	1	0	0	0	9	9	0	9	6	4	19	34
Total	10	8	8	0	26	3	0	0	0	3	0	0	0	15	15	0	28	14	5	47	91
07:00 AM	0	8	5	0	13	3	0	0	0	3	2	0	0	9	11	0	14	9	3	26	53
07:15 AM	2	7	4	0	13	0	0	0	0	0	1	0	0	14	15	0	10	19	12	41	69
07:30 AM	2	5	7	0	14	2	0	0	0	2	0	0	0	20	20	0	9	13	13	35	71
07:45 AM	2	10	13	0	25	0	0	0	0	0	1	0	1	14	16	0	3	10	10	23	64
Total	6	30	29	0	65	5	0	0	0	5	4	0	1	57	62	0	36	51	38	125	257
08:00 AM	0	4	13	0	17	1	0	0	0	1	1	0	0	9	10	0	12	8	7	27	55
08:15 AM	0	5	15	0	20	0	0	0	0	0	0	0	2	14	16	0	11	5	1	17	53
08:30 AM	1	1	7	0	9	2	0	0	0	2	0	0	1	13	14	0	12	6	3	21	46
08:45 AM	2	6	6	0	14	5	0	0	0	5	2	0	0	7	9	0	13	3	7	23	51
Total	3	16	41	0	60	8	0	0	0	8	3	0	3	43	49	0	48	22	18	88	205
Grand Total	19	54	78	0	151	16	0	0	0	16	7	0	4	115	126	0	112	87	61	260	553
Apprch %	12.6	35.8	51.7	0		100	0	0	0		5.6	0	3.2	91.3		0	43.1	33.5	23.5		
Total %	3.4	9.8	14.1	0	27.3	2.9	0	0	0	2.9	1.3	0	0.7	20.8	22.8	0	20.3	15.7	11	47	

	Parking Lot Driveway (Along Ala Moana Blvd.) Southbound				Waikiki End Parking Lot (Numbers In Left Column Indicates U-Turns) Westbound				Parking Lot Driveway (Makai Lot) Northbound				Aloha Tower Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	8	5	13	3	0	0	3	2	0	0	2	0	14	9	23	41
07:15 AM	2	7	4	13	0	0	0	0	1	0	0	1	0	10	19	29	43
07:30 AM	2	5	7	14	2	0	0	2	0	0	0	0	0	9	13	22	38
07:45 AM	2	10	13	25	0	0	0	0	1	0	1	2	0	3	10	13	40
Total Volume	6	30	29	65	5	0	0	5	4	0	1	5	0	36	51	87	162
% App. Total	9.2	46.2	44.6		100	0	0		80	0	20		0	41.4	58.6		
PHF	.750	.750	.558	.650	.417	.000	.000	.417	.500	.000	.250	.625	.000	.643	.671	.750	.942

Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400
Honolulu, Hi 96826

Counted By:MM, JD
Counter:D4-5675, D4-5676
Weather:Clear

File Name : 8-20-2013 Intersection 2 PM
Site Code : 00000002
Start Date : 8/20/2013
Page No : 1

Groups Printed- Unshifted

	Parking Lot Driveway (Along Ala Moana Boulevard) Southbound					Waikiki End Parking Lot (Numbers In Left Column Indicates U-Turns) Westbound					Parking Lot Driveway (Makai Lot) Northbound					Aloha Tower Drive 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	1	1	0	2	1	1	0	0	2	16	0	1	11	28	0	12	2	5	19	51
03:15 PM	2	1	4	0	7	2	2	0	0	4	6	0	2	9	17	0	18	4	4	26	54
03:30 PM	0	3	5	0	8	0	0	0	0	0	6	0	0	3	9	0	9	2	3	14	31
03:45 PM	1	1	2	0	4	1	1	0	0	2	1	0	3	5	9	0	15	2	5	22	37
Total	3	6	12	0	21	4	4	0	0	8	29	0	6	28	63	0	54	10	17	81	173
04:00 PM	1	3	12	0	16	0	2	0	0	2	6	0	2	8	16	0	14	6	9	29	63
04:15 PM	1	3	4	0	8	2	1	0	0	3	7	0	0	13	20	0	12	13	5	30	61
04:30 PM	3	6	9	0	18	1	3	0	0	4	16	0	5	12	33	0	29	4	18	51	106
04:45 PM	1	11	22	0	34	0	1	0	0	1	21	0	7	8	36	0	36	2	8	46	117
Total	6	23	47	0	76	3	7	0	0	10	50	0	14	41	105	0	91	25	40	156	347
05:00 PM	0	11	12	0	23	0	1	0	0	1	21	0	9	19	49	0	50	3	22	75	148
05:15 PM	1	4	6	0	11	1	2	0	0	3	31	0	4	18	53	0	46	2	11	59	126
05:30 PM	2	2	2	0	6	2	1	0	0	3	17	0	5	7	29	0	27	2	13	42	80
05:45 PM	0	1	2	0	3	0	3	0	0	3	9	0	3	7	19	0	17	2	5	24	49
Total	3	18	22	0	43	3	7	0	0	10	78	0	21	51	150	0	140	9	51	200	403
Grand Total	12	47	81	0	140	10	18	0	0	28	157	0	41	120	318	0	285	44	108	437	923
Apprch %	8.6	33.6	57.9	0		35.7	64.3	0	0		49.4	0	12.9	37.7		0	65.2	10.1	24.7		
Total %	1.3	5.1	8.8	0	15.2	1.1	2	0	0	3	17	0	4.4	13	34.5	0	30.9	4.8	11.7	47.3	

	Parking Lot Driveway (Along Ala Moana Boulevard) Southbound				Waikiki End Parking Lot (Numbers In Left Column Indicates U-Turns) Westbound				Parking Lot Driveway (Makai Lot) Northbound				Aloha Tower Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	3	6	9	18	1	3	0	4	16	0	5	21	0	29	4	33	76
04:45 PM	1	11	22	34	0	1	0	1	21	0	7	28	0	36	2	38	101
05:00 PM	0	11	12	23	0	1	0	1	21	0	9	30	0	50	3	53	107
05:15 PM	1	4	6	11	1	2	0	3	31	0	4	35	0	46	2	48	97
Total Volume	5	32	49	86	2	7	0	9	89	0	25	114	0	161	11	172	381
% App. Total	5.8	37.2	57		22.2	77.8	0		78.1	0	21.9		0	93.6	6.4		
PHF	.417	.727	.557	.632	.500	.583	.000	.563	.718	.000	.694	.814	.000	.805	.688	.811	.890

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:MM, KG
Counter:D4-5675, D4-5676
Weather:Clear

File Name : 8-20-2013 Intersection 2 AM-1
Site Code : 00000002
Start Date : 8/20/2013
Page No : 1

Groups Printed- Unshifted

	Parking Lot Driveway (Along Ala Moana Blvd.) Southbound					Waikiki End Parking Lot (Numbers In Left Column Indicates U-Turns) Westbound					Parking Lot (Makai Lot) Northbound					Aloha Tower Drive Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	2	2	1	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
06:15 AM	1	1	2	0	4	0	1	0	0	1	0	0	0	6	6	0	4	5	2	11	22
06:30 AM	2	5	1	0	8	0	4	0	0	4	0	0	1	7	8	0	13	8	10	31	51
06:45 AM	3	4	1	0	8	0	0	0	0	0	0	0	0	8	8	0	17	9	10	36	52
Total	8	12	5	0	25	0	5	0	0	5	0	0	1	21	22	0	34	22	22	78	130
07:00 AM	1	6	1	0	8	0	1	0	0	1	0	0	0	6	6	0	19	13	5	37	52
07:15 AM	1	6	1	0	8	1	0	0	0	1	0	0	0	14	14	0	30	15	9	54	77
07:30 AM	2	13	1	0	16	0	0	0	0	0	2	0	0	15	17	0	27	16	11	54	87
07:45 AM	0	14	4	0	18	0	0	0	0	0	0	0	0	10	10	0	18	15	9	42	70
Total	4	39	7	0	50	1	1	0	0	2	2	0	0	45	47	0	94	59	34	187	286
08:00 AM	3	3	4	0	10	0	1	0	0	1	1	0	0	11	12	0	30	13	16	59	82
08:15 AM	0	4	7	0	11	0	1	0	0	1	0	0	0	3	3	0	15	6	1	22	37
08:30 AM	3	3	2	0	8	0	0	0	0	0	1	0	2	4	7	0	17	7	3	27	42
08:45 AM	1	1	3	0	5	0	0	0	0	0	1	0	1	5	7	0	11	7	4	22	34
Total	7	11	16	0	34	0	2	0	0	2	3	0	3	23	29	0	73	33	24	130	195
Grand Total	19	62	28	0	109	1	8	0	0	9	5	0	4	89	98	0	201	114	80	395	611
Apprch %	17.4	56.9	25.7	0		11.1	88.9	0	0		5.1	0	4.1	90.8		0	50.9	28.9	20.3		
Total %	3.1	10.1	4.6	0	17.8	0.2	1.3	0	0	1.5	0.8	0	0.7	14.6	16	0	32.9	18.7	13.1	64.6	

	Parking Lot Driveway (Along Ala Moana Blvd.) Southbound				Waikiki End Parking Lot (Numbers In Left Column Indicates U-Turns) Westbound				Parking Lot (Makai Lot) Northbound				Aloha Tower Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	1	6	1	8	1	0	0	1	0	0	0	0	0	30	15	45	54
07:30 AM	2	13	1	16	0	0	0	0	2	0	0	2	0	27	16	43	61
07:45 AM	0	14	4	18	0	0	0	0	0	0	0	0	0	18	15	33	51
08:00 AM	3	3	4	10	0	1	0	1	1	0	0	1	0	30	13	43	55
Total Volume	6	36	10	52	1	1	0	2	3	0	0	3	0	105	59	164	221
% App. Total	11.5	69.2	19.2		50	50	0		100	0	0		0	64	36		
PHF	.500	.643	.625	.722	.250	.250	.000	.500	.375	.000	.000	.375	.000	.875	.922	.911	.906

Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400
Honolulu, Hi 96826

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

File Name : 8-16-2013 Intersection 3 PM
Site Code : 00000003
Start Date : 8/16/2013
Page No : 1

Groups Printed- Unshifted

	Southbound	Ala Moana Boulevard Westbound					Parking Lot Driveway Northbound					Ala Moana Boulevard Eastbound					
Start Time	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	0	26	0	0	0	26	0	0	0	6	6	0	0	2	9	11	43
03:15 PM	0	23	0	0	0	23	0	0	0	0	0	0	0	0	11	11	34
03:30 PM	0	18	0	0	0	18	0	0	0	0	0	0	0	3	8	11	29
03:45 PM	0	20	0	0	0	20	0	0	0	0	0	0	0	1	24	25	45
Total	0	87	0	0	0	87	0	0	0	6	6	0	0	6	52	58	151
04:00 PM	0	22	0	0	0	22	0	0	0	1	1	0	0	2	7	9	32
04:15 PM	0	20	0	0	0	20	0	0	0	2	2	0	0	5	13	18	40
04:30 PM	0	25	0	0	0	25	0	0	0	2	2	0	0	3	11	14	41
04:45 PM	0	33	0	0	0	33	0	0	0	1	1	0	0	2	13	15	49
Total	0	100	0	0	0	100	0	0	0	6	6	0	0	12	44	56	162
05:00 PM	0	35	0	0	0	35	0	0	0	3	3	0	0	1	10	11	49
05:15 PM	0	32	0	0	0	32	0	0	0	0	0	0	0	1	14	15	47
05:30 PM	0	20	0	0	0	20	0	0	0	1	1	0	0	1	3	4	25
05:45 PM	0	21	0	0	0	21	0	0	0	0	0	0	0	6	10	16	37
Total	0	108	0	0	0	108	0	0	0	4	4	0	0	9	37	46	158
Grand Total	0	295	0	0	0	295	0	0	0	16	16	0	0	27	133	160	471
Apprch %		100	0	0	0		0	0	0	100		0	0	16.9	83.1		
Total %	0	62.6	0	0	0	62.6	0	0	0	3.4	3.4	0	0	5.7	28.2	34	

	Southbound	Ala Moana Boulevard Westbound				Parking Lot Driveway Northbound				Ala Moana Boulevard Eastbound				
Start Time	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1														
Peak Hour for Entire Intersection Begins at 04:30 PM														
04:30 PM	0	25	0	0	25	0	0	0	0	0	0	3	3	28
04:45 PM	0	33	0	0	33	0	0	0	0	0	0	2	2	35
05:00 PM	0	35	0	0	35	0	0	0	0	0	0	1	1	38
05:15 PM	0	32	0	0	32	0	0	0	0	0	0	1	1	33
Total Volume	0	125	0	0	125	0	0	0	0	0	0	7	7	132
% App. Total		100	0	0		0	0	0		0	0	100		
PHF	.000	.893	.000	.000	.893	.000	.000	.000	.000	.000	.000	.583	.583	.917

Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400
Honolulu, Hi 96826

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

File Name : 8-16-2013 Intersection 3 AM
Site Code : 00000003
Start Date : 8/16/2013
Page No : 1

Groups Printed- Unshifted

	Southbound	Ala Moana Boulevard Westbound					Parking Lot Driveway Northbound					Ala Moana Boulevard Eastbound					
Start Time	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3
06:15 AM	0	6	0	0	0	6	0	0	0	0	0	0	0	1	2	3	9
06:30 AM	0	8	0	0	0	8	0	0	0	0	0	0	0	4	5	9	17
06:45 AM	0	4	0	0	0	4	0	0	0	0	0	0	0	0	10	10	14
Total	0	21	0	0	0	21	0	0	0	0	0	0	0	5	17	22	43
07:00 AM	0	6	0	0	0	6	0	0	0	0	0	0	0	6	4	10	16
07:15 AM	0	7	0	0	0	7	0	0	0	0	0	0	0	3	13	16	23
07:30 AM	0	16	0	0	0	16	0	0	0	2	2	0	0	3	9	12	30
07:45 AM	0	8	0	0	0	8	0	0	0	3	3	0	0	8	8	16	27
Total	0	37	0	0	0	37	0	0	0	5	5	0	0	20	34	54	96
08:00 AM	0	21	0	0	0	21	0	0	0	0	0	0	0	1	4	5	26
08:15 AM	0	18	0	0	0	18	0	0	0	3	3	0	0	2	7	9	30
08:30 AM	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	4
08:45 AM	0	5	0	0	0	5	0	0	0	0	0	0	0	5	5	10	15
Total	0	48	0	0	0	48	0	0	0	3	3	0	0	8	16	24	75
Grand Total	0	106	0	0	0	106	0	0	0	8	8	0	0	33	67	100	214
Apprch %		100	0	0	0		0	0	0	100		0	0	33	67		
Total %	0	49.5	0	0	0	49.5	0	0	0	3.7	3.7	0	0	15.4	31.3	46.7	

	Southbound	Ala Moana Boulevard Westbound				Parking Lot Driveway Northbound				Ala Moana Boulevard Eastbound				
Start Time	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1														
Peak Hour for Entire Intersection Begins at 07:30 AM														
07:30 AM	0	16	0	0	16	0	0	0	0	0	0	3	3	19
07:45 AM	0	8	0	0	8	0	0	0	0	0	0	8	8	16
08:00 AM	0	21	0	0	21	0	0	0	0	0	0	1	1	22
08:15 AM	0	18	0	0	18	0	0	0	0	0	0	2	2	20
Total Volume	0	63	0	0	63	0	0	0	0	0	0	14	14	77
% App. Total		100	0	0		0	0	0		0	0	100		
PHF	.000	.750	.000	.000	.750	.000	.000	.000	.000	.000	.000	.438	.438	.875

Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400
Honolulu, Hi 96826

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

File Name : 8-20-2013 Intersection 3 PM
Site Code : 00000003
Start Date : 8/20/2013
Page No : 1

Groups Printed- Unshifted

	Southbound	Ala Moana Boulevard Westbound					Parking Lot Driveway Northbound					Ala Moana Boulevard Eastbound					
Start Time	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	0	7	0	0	0	7	0	0	0	5	5	0	0	1	9	10	22
03:15 PM	0	5	0	0	0	5	0	0	0	2	2	0	0	3	3	6	13
03:30 PM	0	8	0	0	0	8	0	0	0	3	3	0	0	1	9	10	21
03:45 PM	0	8	0	0	0	8	0	0	0	6	6	0	0	0	9	9	23
Total	0	28	0	0	0	28	0	0	0	16	16	0	0	5	30	35	79
04:00 PM	0	12	0	0	0	12	0	0	0	3	3	0	0	2	13	15	30
04:15 PM	0	12	0	0	0	12	0	0	0	1	1	0	0	1	8	9	22
04:30 PM	0	13	0	0	0	13	0	0	0	1	1	0	0	4	23	27	41
04:45 PM	0	29	0	0	0	29	0	0	0	2	2	0	0	1	13	14	45
Total	0	66	0	0	0	66	0	0	0	7	7	0	0	8	57	65	138
05:00 PM	0	24	0	0	0	24	0	0	0	3	3	0	0	1	27	28	55
05:15 PM	0	9	0	0	0	9	0	0	0	5	5	0	0	2	21	23	37
05:30 PM	0	6	0	0	0	6	0	0	0	3	3	0	0	2	20	22	31
05:45 PM	0	2	0	0	0	2	0	0	0	2	2	0	0	0	8	8	12
Total	0	41	0	0	0	41	0	0	0	13	13	0	0	5	76	81	135
Grand Total	0	135	0	0	0	135	0	0	0	36	36	0	0	18	163	181	352
Apprch %		100	0	0	0		0	0	0	100		0	0	9.9	90.1		
Total %	0	38.4	0	0	0	38.4	0	0	0	10.2	10.2	0	0	5.1	46.3	51.4	

	Southbound	Ala Moana Boulevard Westbound				Parking Lot Driveway Northbound				Ala Moana Boulevard Eastbound				
Start Time	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1														
Peak Hour for Entire Intersection Begins at 04:15 PM														
04:15 PM	0	12	0	0	12	0	0	0	0	0	0	1	1	13
04:30 PM	0	13	0	0	13	0	0	0	0	0	0	4	4	17
04:45 PM	0	29	0	0	29	0	0	0	0	0	0	1	1	30
05:00 PM	0	24	0	0	24	0	0	0	0	0	0	1	1	25
Total Volume	0	78	0	0	78	0	0	0	0	0	0	7	7	85
% App. Total		100	0	0		0	0	0		0	0	100		
PHF	.000	.672	.000	.000	.672	.000	.000	.000	.000	.000	.000	.438	.438	.708

Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400
Honolulu, Hi 96826

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

File Name : 8-20-2013 Intersection 3 AM
Site Code : 00000003
Start Date : 8/20/2013
Page No : 1

Groups Printed- Unshifted

	Southbound	Ala Moana Boulevard Westbound					Parking Lot Driveway Northbound					Ala Moana Boulevard Eastbound					
Start Time	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	0	48	0	0	0	48	0	0	0	2	2	0	0	2	8	10	60
06:15 AM	0	38	6	0	0	44	0	0	0	0	0	0	0	0	2	2	46
06:30 AM	0	0	6	0	0	6	0	0	0	2	2	0	0	2	10	12	20
06:45 AM	0	0	8	0	0	8	0	0	0	1	1	0	0	3	13	16	25
Total	0	86	20	0	0	106	0	0	0	5	5	0	0	7	33	40	151
07:00 AM	0	0	8	0	0	8	0	0	0	1	1	0	0	1	5	6	15
07:15 AM	0	0	7	0	0	7	0	0	0	0	0	0	0	0	17	17	24
07:30 AM	0	0	21	0	0	21	0	0	0	2	2	0	0	1	16	17	40
07:45 AM	0	0	19	0	0	19	0	0	0	1	1	0	0	1	24	25	45
Total	0	0	55	0	0	55	0	0	0	4	4	0	0	3	62	65	124
08:00 AM	0	0	12	0	0	12	0	0	0	0	0	0	0	1	20	21	33
08:15 AM	0	0	11	0	0	11	0	0	0	0	0	0	0	2	6	8	19
08:30 AM	0	0	10	0	0	10	0	0	0	1	1	0	0	2	8	10	21
08:45 AM	0	0	7	0	0	7	0	0	0	2	2	0	0	1	12	13	22
Total	0	0	40	0	0	40	0	0	0	3	3	0	0	6	46	52	95
Grand Total	0	86	115	0	0	201	0	0	0	12	12	0	0	16	141	157	370
Apprch %		42.8	57.2	0	0		0	0	0	100		0	0	10.2	89.8		
Total %	0	23.2	31.1	0	0	54.3	0	0	0	3.2	3.2	0	0	4.3	38.1	42.4	

	Southbound	Ala Moana Boulevard Westbound				Parking Lot Driveway Northbound				Ala Moana Boulevard Eastbound				
Start Time	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1														
Peak Hour for Entire Intersection Begins at 06:00 AM														
06:00 AM	0	48	0	0	48	0	0	0	0	0	0	2	2	50
06:15 AM	0	38	6	0	44	0	0	0	0	0	0	0	0	44
06:30 AM	0	0	6	0	6	0	0	0	0	0	0	2	2	8
06:45 AM	0	0	8	0	8	0	0	0	0	0	0	3	3	11
Total Volume	0	86	20	0	106	0	0	0	0	0	0	7	7	113
% App. Total		81.1	18.9	0		0	0	0		0	0	100		
PHF	.000	.448	.625	.000	.552	.000	.000	.000	.000	.000	.000	.583	.583	.585

Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400
Honolulu, Hi 96826

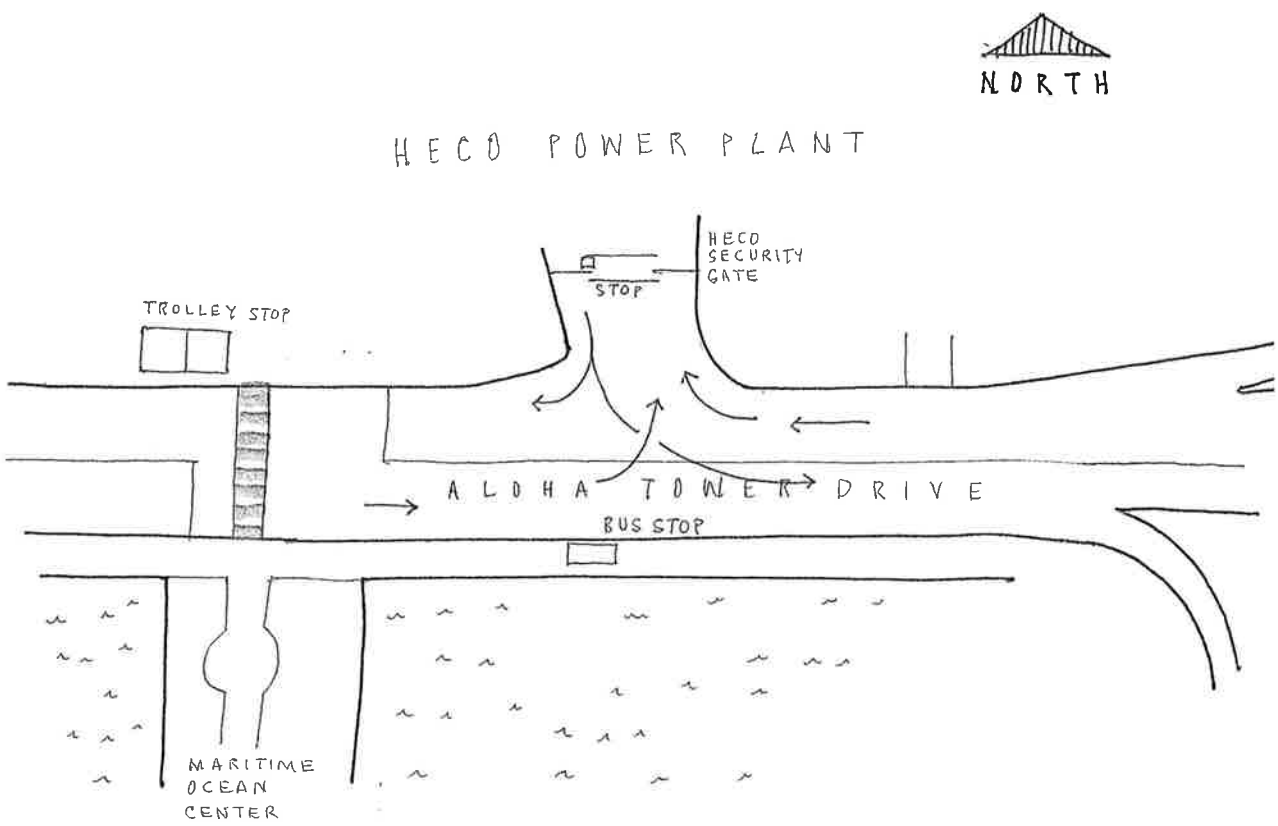
Counted By:PA
Counter:T-1841
Weather:Clear

File Name : 8-16-2013 Intersection 4 AM
Site Code : 00000004
Start Date : 8/16/2013
Page No : 1

Groups Printed- Unshifted

	HECO Plant Southbound					Aloha Tower Drive Westbound					Northbound	Aloha Tower Drive Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	0	0	1	0	1	0	2	0	0	2	0	0	6	0	0	6	9
06:15 AM	0	0	0	0	0	0	4	0	0	4	0	0	10	0	2	12	16
06:30 AM	0	0	0	0	0	0	3	0	0	3	0	0	19	0	3	22	25
06:45 AM	0	0	0	0	0	0	5	2	0	7	0	0	17	0	2	19	26
Total	0	0	1	0	1	0	14	2	0	16	0	0	52	0	7	59	76
07:00 AM	0	0	0	0	0	0	9	0	0	9	0	0	26	0	3	29	38
07:15 AM	1	0	0	0	1	0	4	0	0	4	0	0	33	0	4	37	42
07:30 AM	1	0	0	0	1	0	12	1	0	13	0	0	22	0	0	22	36
07:45 AM	0	0	1	0	1	0	9	0	0	9	0	0	13	0	2	15	25
Total	2	0	1	0	3	0	34	1	0	35	0	0	94	0	9	103	141
08:00 AM	0	0	0	0	0	0	17	0	0	17	0	0	23	0	0	23	40
08:15 AM	0	0	0	0	0	0	13	0	0	13	0	0	9	0	1	10	23
08:30 AM	0	0	0	0	0	0	11	1	0	12	0	0	16	0	1	17	29
08:45 AM	0	0	0	0	0	0	14	0	0	14	0	0	15	0	4	19	33
Total	0	0	0	0	0	0	55	1	0	56	0	0	63	0	6	69	125
Grand Total	2	0	2	0	4	0	103	4	0	107	0	0	209	0	22	231	342
Apprch %	50	0	50	0		0	96.3	3.7	0			0	90.5	0	9.5		
Total %	0.6	0	0.6	0	1.2	0	30.1	1.2	0	31.3	0	0	61.1	0	6.4	67.5	

	HECO Plant Southbound				Aloha Tower Drive Westbound				Northbound	Aloha Tower Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1														
Peak Hour for Entire Intersection Begins at 07:15 AM														
07:15 AM	1	0	0	1	0	4	0	4	0	0	33	0	33	38
07:30 AM	1	0	0	1	0	12	1	13	0	0	22	0	22	36
07:45 AM	0	0	1	1	0	9	0	9	0	0	13	0	13	23
08:00 AM	0	0	0	0	0	17	0	17	0	0	23	0	23	40
Total Volume	2	0	1	3	0	42	1	43	0	0	91	0	91	137
% App. Total	66.7	0	33.3		0	97.7	2.3			0	100	0		
PHF	.500	.000	.250	.750	.000	.618	.250	.632	.000	.000	.689	.000	.689	.856



INTERSECTION 4

Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400
Honolulu, Hi 96826

Counted By:PA
Counter:T-1841
Weather:Clear

File Name : 8-20-2013 Intersection 4 AM
Site Code : 00000004
Start Date : 8/20/2013
Page No : 1

Groups Printed- Unshifted

	HECO Plant Southbound					Aloha Tower Drive Westbound					Northbound	AlohaTower Drive Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	0	0	1	0	1	0	2	1	0	3	0	0	8	0	2	10	14
06:15 AM	0	0	1	0	1	0	1	1	0	2	0	0	18	0	4	22	25
06:30 AM	0	0	0	0	0	0	4	0	0	4	0	0	21	0	1	22	26
06:45 AM	0	0	0	0	0	0	3	0	0	3	0	0	23	0	4	27	30
Total	0	0	2	0	2	0	10	2	0	12	0	0	70	0	11	81	95
07:00 AM	0	0	0	0	0	0	2	1	0	3	0	0	34	0	1	35	38
07:15 AM	1	0	0	0	1	0	2	0	0	2	0	0	47	0	0	47	50
07:30 AM	0	0	0	0	0	0	8	1	0	9	0	0	54	0	1	55	64
07:45 AM	0	0	1	0	1	0	5	0	0	5	0	0	47	0	5	52	58
Total	1	0	1	0	2	0	17	2	0	19	0	0	182	0	7	189	210
08:00 AM	0	0	0	0	0	0	7	0	0	7	0	0	47	0	4	51	58
08:15 AM	0	0	0	0	0	0	12	0	0	12	0	0	23	0	2	25	37
08:30 AM	0	0	2	0	2	0	4	3	0	7	0	0	28	0	4	32	41
08:45 AM	2	0	0	0	2	0	7	2	0	9	0	0	14	0	1	15	26
Total	2	0	2	0	4	0	30	5	0	35	0	0	112	0	11	123	162
Grand Total	3	0	5	0	8	0	57	9	0	66	0	0	364	0	29	393	467
Apprch %	37.5	0	62.5	0		0	86.4	13.6	0			0	92.6	0	7.4		
Total %	0.6	0	1.1	0	1.7	0	12.2	1.9	0	14.1	0	0	77.9	0	6.2	84.2	

	HECO Plant Southbound				Aloha Tower Drive Westbound				Northbound	AlohaTower Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1														
Peak Hour for Entire Intersection Begins at 07:15 AM														
07:15 AM	1	0	0	1	0	2	0	2	0	0	47	0	47	50
07:30 AM	0	0	0	0	0	8	1	9	0	0	54	0	54	63
07:45 AM	0	0	1	1	0	5	0	5	0	0	47	0	47	53
08:00 AM	0	0	0	0	0	7	0	7	0	0	47	0	47	54
Total Volume	1	0	1	2	0	22	1	23	0	0	195	0	195	220
% App. Total	50	0	50		0	95.7	4.3			0	100	0		
PHF	.250	.000	.250	.500	.000	.688	.250	.639	.000	.000	.903	.000	.903	.873

Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400
Honolulu, Hi 96826

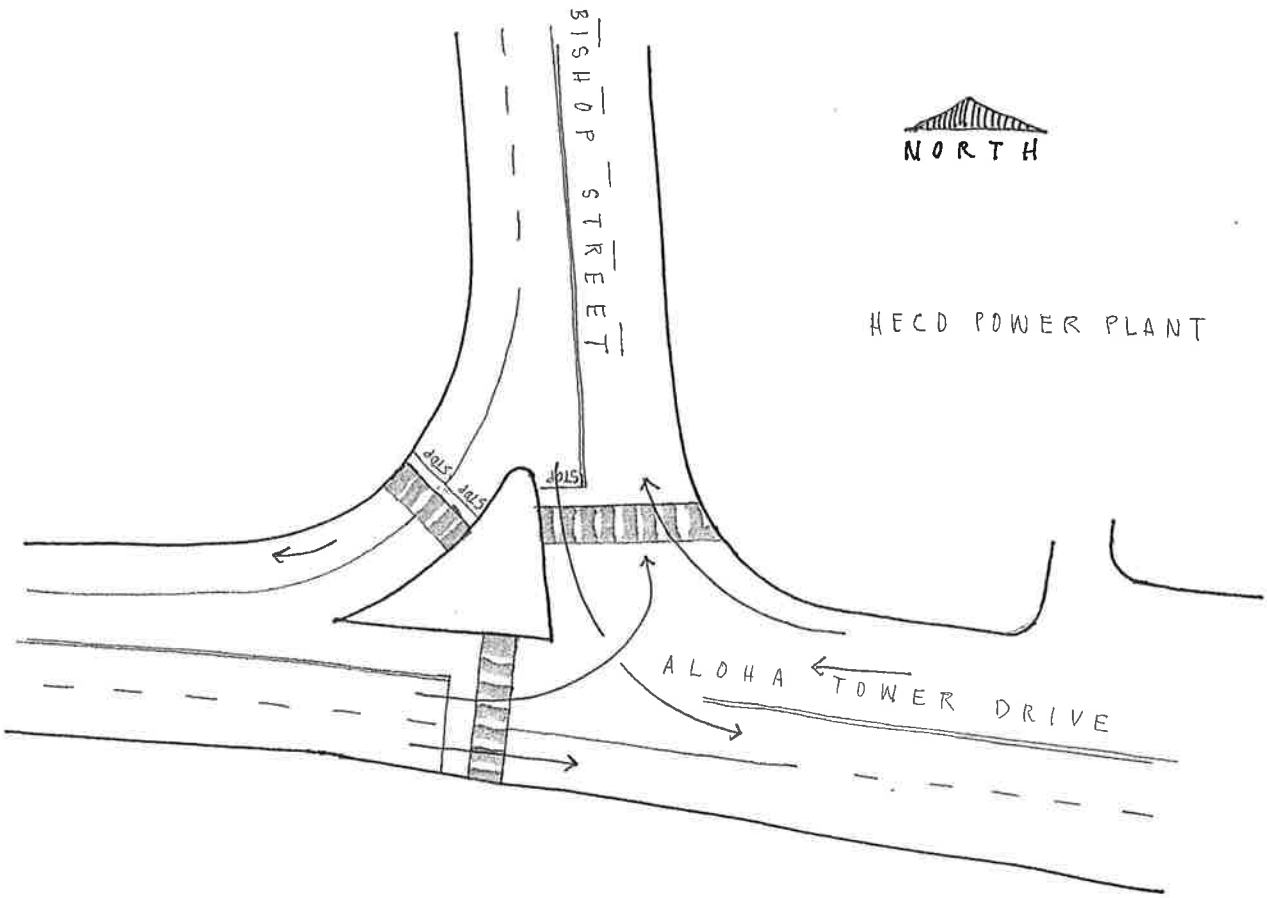
Counted By:PA
Counter:T-1841
Weather:Clear

File Name : 8-16-2013 Intersection 4 PM
Site Code : 00000004
Start Date : 8/16/2013
Page No : 1

Groups Printed- Unshifted

	HECO Plant Southbound					Aloha Tower Drive Westbound					Northbound	Aloha Tower Drive Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	0	0	0	0	0	0	29	0	0	29	0	0	21	0	4	25	54
03:15 PM	0	0	0	0	0	0	26	0	0	26	0	0	24	0	8	32	58
03:30 PM	0	0	0	0	0	0	27	0	0	27	0	0	22	0	7	29	56
03:45 PM	0	0	0	0	0	0	22	0	0	22	0	0	21	0	2	23	45
Total	0	0	0	0	0	0	104	0	0	104	0	0	88	0	21	109	213
04:00 PM	0	0	0	0	0	0	33	0	0	33	0	0	23	0	7	30	63
04:15 PM	0	0	0	0	0	0	26	0	0	26	0	0	26	0	1	27	53
04:30 PM	0	0	0	0	0	0	29	0	0	29	0	0	29	0	36	65	94
04:45 PM	0	0	3	0	3	0	31	0	0	31	0	0	44	0	20	64	98
Total	0	0	3	0	3	0	119	0	0	119	0	0	122	0	64	186	308
05:00 PM	0	0	0	0	0	0	46	0	0	46	0	0	50	0	1	51	97
05:15 PM	0	0	4	0	4	0	50	0	0	50	0	0	66	0	2	68	122
05:30 PM	0	0	1	0	1	0	30	0	0	30	0	0	47	0	1	48	79
05:45 PM	0	0	0	0	0	0	29	0	0	29	0	0	40	0	6	46	75
Total	0	0	5	0	5	0	155	0	0	155	0	0	203	0	10	213	373
Grand Total	0	0	8	0	8	0	378	0	0	378	0	0	413	0	95	508	894
Apprch %	0	0	100	0		0	100	0	0			0	81.3	0	18.7		
Total %	0	0	0.9	0	0.9	0	42.3	0	0	42.3	0	0	46.2	0	10.6	56.8	

	HECO Plant Southbound				Aloha Tower Drive Westbound				Northbound	Aloha Tower Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1														
Peak Hour for Entire Intersection Begins at 04:45 PM														
04:45 PM	0	0	3	3	0	31	0	31	0	0	44	0	44	78
05:00 PM	0	0	0	0	0	46	0	46	0	0	50	0	50	96
05:15 PM	0	0	4	4	0	50	0	50	0	0	66	0	66	120
05:30 PM	0	0	1	1	0	30	0	30	0	0	47	0	47	78
Total Volume	0	0	8	8	0	157	0	157	0	0	207	0	207	372
% App. Total	0	0	100		0	100	0			0	100	0		
PHF	.000	.000	.500	.500	.000	.785	.000	.785	.000	.000	.784	.000	.784	.775



INTERSECTION 5

Wilson Okamoto Corporation
1907 S. Beretania Street, Suite 400
Honolulu, Hi 96826

Counted By:PA
Counter:T-1841
Weather:Clear

File Name : 8-20-2013 Intersection 4 PM
Site Code : 00000004
Start Date : 8/20/2013
Page No : 1

Groups Printed- Unshifted

	HECO Plant Southbound					Aloha Tower Drive Westbound					Northbound	Aloha Tower Drive Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	0	0	0	0	0	0	27	0	0	27	0	0	15	0	17	32	59
03:15 PM	0	0	0	0	0	0	12	0	0	12	0	0	19	0	2	21	33
03:30 PM	0	0	0	0	0	0	13	0	0	13	0	0	11	0	3	14	27
03:45 PM	0	0	0	0	0	0	8	0	0	8	0	0	18	0	5	23	31
Total	0	0	0	0	0	0	60	0	0	60	0	0	63	0	27	90	150
04:00 PM	0	0	0	0	0	0	28	0	0	28	0	0	30	0	0	30	58
04:15 PM	0	0	0	0	0	0	19	0	0	19	0	0	29	0	11	40	59
04:30 PM	0	0	1	0	1	0	34	0	0	34	0	0	36	0	22	58	93
04:45 PM	0	0	0	0	0	0	41	0	0	41	0	0	37	0	8	45	86
Total	0	0	1	0	1	0	122	0	0	122	0	0	132	0	41	173	296
05:00 PM	0	0	1	0	1	0	22	0	0	22	0	0	39	0	3	42	65
05:15 PM	0	0	0	0	0	0	39	0	0	39	0	0	48	0	6	54	93
05:30 PM	0	0	0	0	0	0	21	0	0	21	0	0	26	0	4	30	51
05:45 PM	0	0	0	0	0	0	15	0	0	15	0	0	18	0	0	18	33
Total	0	0	1	0	1	0	97	0	0	97	0	0	131	0	13	144	242
Grand Total	0	0	2	0	2	0	279	0	0	279	0	0	326	0	81	407	688
Apprch %	0	0	100	0		0	100	0	0			0	80.1	0	19.9		
Total %	0	0	0.3	0	0.3	0	40.6	0	0	40.6	0	0	47.4	0	11.8	59.2	

	HECO Plant Southbound				Aloha Tower Drive Westbound				Northbound	Aloha Tower Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1														
Peak Hour for Entire Intersection Begins at 04:30 PM														
04:30 PM	0	0	1	1	0	34	0	34	0	0	36	0	36	71
04:45 PM	0	0	0	0	0	41	0	41	0	0	37	0	37	78
05:00 PM	0	0	1	1	0	22	0	22	0	0	39	0	39	62
05:15 PM	0	0	0	0	0	39	0	39	0	0	48	0	48	87
Total Volume	0	0	2	2	0	136	0	136	0	0	160	0	160	298
% App. Total	0	0	100		0	100	0			0	100	0		
PHF	.000	.000	.500	.500	.000	.829	.000	.829	.000	.000	.833	.000	.833	.856

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:GH
Counter:D4-5673
Weather:Clear

File Name : 8-16-2013 Intersection 5 PM
Site Code : 00000005
Start Date : 8/16/2013
Page No : 1

Groups Printed- Unshifted

	Bishop Street Southbound					Aloha Tower Drive Westbound					Northbound	Aloha Tower Drive 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	9	1	22	5	37	0	23	6	1	30	0	6	12	0	10	28	95
03:15 PM	13	0	28	1	42	0	22	5	0	27	0	5	11	0	14	30	99
03:30 PM	13	0	22	9	44	0	19	7	0	26	0	5	9	0	11	25	95
03:45 PM	13	0	26	4	43	0	14	7	0	21	0	3	10	0	6	19	83
Total	48	1	98	19	166	0	78	25	1	104	0	19	42	0	41	102	372
04:00 PM	16	0	34	14	64	0	19	10	0	29	0	5	9	0	10	24	117
04:15 PM	24	0	20	2	46	1	21	9	0	31	0	6	10	0	6	22	99
04:30 PM	25	0	25	7	57	0	17	15	0	32	0	4	11	0	7	22	111
04:45 PM	47	0	27	3	77	0	21	10	0	31	0	2	8	0	20	30	138
Total	112	0	106	26	244	1	78	44	0	123	0	17	38	0	43	98	465
05:00 PM	54	0	38	12	104	0	29	23	0	52	0	6	11	0	29	46	202
05:15 PM	67	0	29	13	109	0	24	15	0	39	0	3	10	0	2	15	163
05:30 PM	37	0	26	7	70	0	21	8	0	29	0	2	13	0	4	19	118
05:45 PM	24	0	31	2	57	0	18	13	0	31	0	3	12	0	9	24	112
Total	182	0	124	34	340	0	92	59	0	151	0	14	46	0	44	104	595
Grand Total	342	1	328	79	750	1	248	128	1	378	0	50	126	0	128	304	1432
Apprch %	45.6	0.1	43.7	10.5		0.3	65.6	33.9	0.3			16.4	41.4	0	42.1		
Total %	23.9	0.1	22.9	5.5	52.4	0.1	17.3	8.9	0.1	26.4	0	3.5	8.8	0	8.9	21.2	

	Bishop Street Southbound				Aloha Tower Drive Westbound				Northbound	Aloha Tower Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1														
Peak Hour for Entire Intersection Begins at 04:45 PM														
04:45 PM	47	0	27	74	0	21	10	31	0	2	8	0	10	115
05:00 PM	54	0	38	92	0	29	23	52	0	6	11	0	17	161
05:15 PM	67	0	29	96	0	24	15	39	0	3	10	0	13	148
05:30 PM	37	0	26	63	0	21	8	29	0	2	13	0	15	107
Total Volume	205	0	120	325	0	95	56	151	0	13	42	0	55	531
% App. Total	63.1	0	36.9		0	62.9	37.1			23.6	76.4	0		
PHF	.765	.000	.789	.846	.000	.819	.609	.726	.000	.542	.808	.000	.809	.825

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:GH
Counter:D4-5673
Weather:Clear

File Name : 8-16-2013 Intersection 5 AM
Site Code : 00000005
Start Date : 8/16/2013
Page No : 1

Groups Printed- Unshifted

	Bishop Street Southbound					Aloha Tower Drive Westbound					Northbound	Aloha Tower Drive Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	5	0	4	0	9	0	2	0	1	3	0	0	3	0	1	4	16
06:15 AM	9	0	4	4	17	0	4	0	0	4	0	0	5	0	4	9	30
06:30 AM	17	0	14	6	37	0	3	1	0	4	0	0	1	0	5	6	47
06:45 AM	19	0	5	10	34	0	3	3	0	6	0	0	4	0	9	13	53
Total	50	0	27	20	97	0	12	4	1	17	0	0	13	0	19	32	146
07:00 AM	20	0	11	1	32	0	4	5	0	9	0	1	2	0	5	8	49
07:15 AM	30	0	17	0	47	0	2	3	0	5	0	2	0	0	7	9	61
07:30 AM	20	0	15	0	35	0	5	4	0	9	0	3	3	0	7	13	57
07:45 AM	13	0	14	2	29	0	7	4	0	11	0	1	1	0	2	4	44
Total	83	0	57	3	143	0	18	16	0	34	0	7	6	0	21	34	211
08:00 AM	23	0	13	0	36	0	9	2	0	11	0	3	4	0	4	11	58
08:15 AM	9	0	18	0	27	0	8	3	0	11	0	3	3	0	1	7	45
08:30 AM	15	0	15	0	30	0	7	3	0	10	0	2	6	0	5	13	53
08:45 AM	9	0	13	1	23	0	7	2	0	9	0	1	6	0	3	10	42
Total	56	0	59	1	116	0	31	10	0	41	0	9	19	0	13	41	198
Grand Total	189	0	143	24	356	0	61	30	1	92	0	16	38	0	53	107	555
Apprch %	53.1	0	40.2	6.7		0	66.3	32.6	1.1			15	35.5	0	49.5		
Total %	34.1	0	25.8	4.3	64.1	0	11	5.4	0.2	16.6	0	2.9	6.8	0	9.5	19.3	

	Bishop Street Southbound				Aloha Tower Drive Westbound				Northbound	Aloha Tower Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1														
Peak Hour for Entire Intersection Begins at 07:15 AM														
07:15 AM	30	0	17	47	0	2	3	5	0	2	0	0	2	54
07:30 AM	20	0	15	35	0	5	4	9	0	3	3	0	6	50
07:45 AM	13	0	14	27	0	7	4	11	0	1	1	0	2	40
08:00 AM	23	0	13	36	0	9	2	11	0	3	4	0	7	54
Total Volume	86	0	59	145	0	23	13	36	0	9	8	0	17	198
% App. Total	59.3	0	40.7		0	63.9	36.1			52.9	47.1	0		
PHF	.717	.000	.868	.771	.000	.639	.813	.818	.000	.750	.500	.000	.607	.917

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:GH
Counter:D4-5673
Weather:Clear

File Name : 8-20-2013 Intersection 5 PM
Site Code : 00000005
Start Date : 8/20/2013
Page No : 1

Groups Printed- Unshifted

	Bishop Street Southbound					Aloha Tower Drive Westbound					Northbound	Aloha Tower Drive 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	10	0	7	14	31	0	20	9	1	30	0	2	8	0	0	10	71
03:15 PM	11	0	7	7	25	0	7	8	0	15	0	13	8	0	11	32	72
03:30 PM	7	0	9	5	21	0	9	6	0	15	0	4	4	0	2	10	46
03:45 PM	12	0	14	16	42	0	5	3	0	8	0	6	7	0	6	19	69
Total	40	0	37	42	119	0	41	26	1	68	0	25	27	0	19	71	258
04:00 PM	19	0	11	19	49	0	12	9	0	21	0	7	5	0	6	18	88
04:15 PM	23	0	13	8	44	0	6	12	0	18	0	5	4	0	3	12	74
04:30 PM	24	0	16	13	53	0	12	20	0	32	0	4	7	0	1	12	97
04:45 PM	26	0	14	10	50	0	18	16	0	34	0	6	5	0	5	16	100
Total	92	0	54	50	196	0	48	57	0	105	0	22	21	0	15	58	359
05:00 PM	32	0	7	16	55	0	21	16	0	37	0	10	11	0	17	38	130
05:15 PM	37	0	5	20	62	0	17	21	0	38	0	2	6	0	2	10	110
05:30 PM	24	0	12	21	57	0	9	15	0	24	0	9	4	0	4	17	98
05:45 PM	5	0	8	9	22	0	6	10	0	16	0	4	15	0	1	20	58
Total	98	0	32	66	196	0	53	62	0	115	0	25	36	0	24	85	396
Grand Total	230	0	123	158	511	0	142	145	1	288	0	72	84	0	58	214	1013
Apprch %	45	0	24.1	30.9		0	49.3	50.3	0.3			33.6	39.3	0	27.1		
Total %	22.7	0	12.1	15.6	50.4	0	14	14.3	0.1	28.4	0	7.1	8.3	0	5.7	21.1	

	Bishop Street Southbound				Aloha Tower Drive Westbound				Northbound	Aloha Tower Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1														
Peak Hour for Entire Intersection Begins at 04:30 PM														
04:30 PM	24	0	16	40	0	12	20	32	0	4	7	0	11	83
04:45 PM	26	0	14	40	0	18	16	34	0	6	5	0	11	85
05:00 PM	32	0	7	39	0	21	16	37	0	10	11	0	21	97
05:15 PM	37	0	5	42	0	17	21	38	0	2	6	0	8	88
Total Volume	119	0	42	161	0	68	73	141	0	22	29	0	51	353
% App. Total	73.9	0	26.1		0	48.2	51.8			43.1	56.9	0		
PHF	.804	.000	.656	.958	.000	.810	.869	.928	.000	.550	.659	.000	.607	.910

Wilson Okamoto Corporation

1907 S. Beretania Street Suite 400
Honolulu, HI 96826

Counted By:GL
Counter:D4-5673
Weather:Clear

File Name : 8-20-2013 Intersection 5 AM
Site Code : 00000005
Start Date : 8/20/2013
Page No : 1

Groups Printed- Unshifted

	Bishop Street Southbound					Aloha Tower Drive Westbound					Northbound	Aloha Tower Drive Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	8	0	6	2	16	0	2	1	0	3	0	0	2	0	5	7	26
06:15 AM	15	0	4	4	23	0	0	3	0	3	0	1	5	0	4	10	36
06:30 AM	18	0	7	2	27	0	3	0	0	3	0	1	5	0	6	12	42
06:45 AM	22	0	9	3	34	0	2	1	0	3	0	4	3	0	2	9	46
Total	63	0	26	11	100	0	7	5	0	12	0	6	15	0	17	38	150
07:00 AM	29	3	5	0	37	0	1	2	0	3	0	8	6	0	3	17	57
07:15 AM	39	1	3	0	43	0	3	0	0	3	0	2	12	0	14	28	74
07:30 AM	45	2	5	2	54	0	6	3	0	9	0	9	9	0	17	35	98
07:45 AM	41	0	3	4	48	0	4	3	0	7	0	8	3	0	21	32	87
Total	154	6	16	6	182	0	14	8	0	22	0	27	30	0	55	112	316
08:00 AM	49	0	5	5	59	0	8	1	0	9	0	9	5	0	10	24	92
08:15 AM	24	0	3	5	32	0	8	4	0	12	0	6	4	0	4	14	58
08:30 AM	27	0	3	3	33	0	6	2	0	8	0	2	4	0	4	10	51
08:45 AM	13	2	9	5	29	0	4	4	0	8	0	0	2	0	7	9	46
Total	113	2	20	18	153	0	26	11	0	37	0	17	15	0	25	57	247
Grand Total	330	8	62	35	435	0	47	24	0	71	0	50	60	0	97	207	713
Apprch %	75.9	1.8	14.3	8		0	66.2	33.8	0			24.2	29	0	46.9		
Total %	46.3	1.1	8.7	4.9	61	0	6.6	3.4	0	10	0	7	8.4	0	13.6	29	

	Bishop Street Southbound				Aloha Tower Drive Westbound				Northbound	Aloha Tower Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1														
Peak Hour for Entire Intersection Begins at 07:15 AM														
07:15 AM	39	1	3	43	0	3	0	3	0	2	12	0	14	60
07:30 AM	45	2	5	52	0	6	3	9	0	9	9	0	18	79
07:45 AM	41	0	3	44	0	4	3	7	0	8	3	0	11	62
08:00 AM	49	0	5	54	0	8	1	9	0	9	5	0	14	77
Total Volume	174	3	16	193	0	21	7	28	0	28	29	0	57	278
% App. Total	90.2	1.6	8.3		0	75	25			49.1	50.9	0		
PHF	.888	.375	.800	.894	.000	.656	.583	.778	.000	.778	.604	.000	.792	.880

Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400
Honolulu, Hi 96826

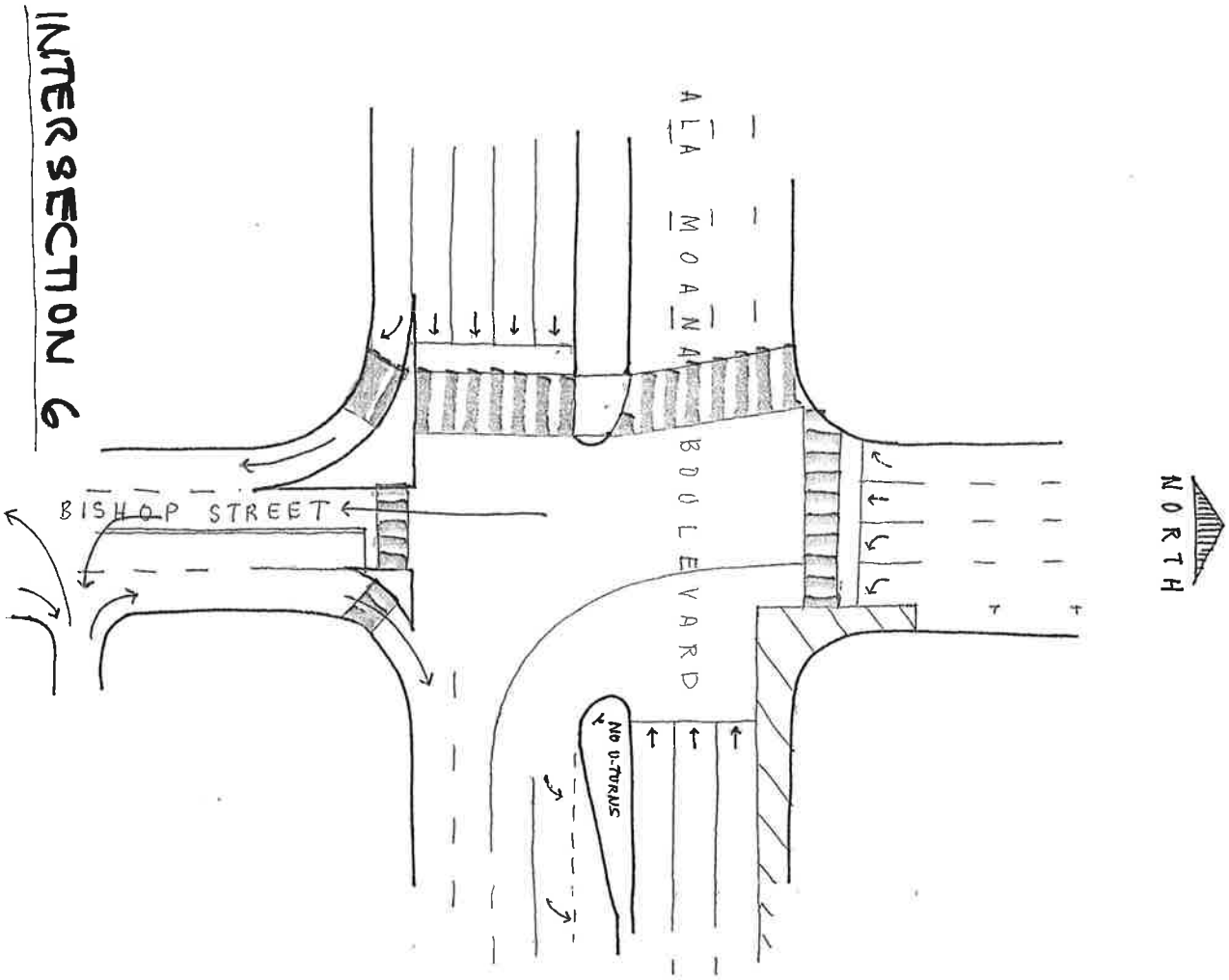
Counted By:MA
Counter:D4-5677
Weather:Clear

File Name : 8-16-2013 Intersection 6 AM
Site Code : 00000006
Start Date : 8/16/2013
Page No : 1

Groups Printed- Unshifted

	Bishop Street Southbound					Westbound	Bishop Street Northbound					Ala Moana Boulevard Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	0	5	0	0	5	0	0	0	0	1	1	0	0	5	5	10	16
06:15 AM	0	6	0	0	6	0	0	0	1	0	1	0	0	11	5	16	23
06:30 AM	0	15	0	0	15	0	0	0	1	1	2	0	0	17	10	27	44
06:45 AM	0	14	0	0	14	0	0	0	3	1	4	0	0	15	11	26	44
Total	0	40	0	0	40	0	0	0	5	3	8	0	0	48	31	79	127
07:00 AM	0	12	0	0	12	0	0	0	3	2	5	0	0	19	15	34	51
07:15 AM	0	11	0	0	11	0	0	0	3	11	14	0	0	40	19	59	84
07:30 AM	0	6	0	0	6	0	0	0	3	3	6	0	0	27	14	41	53
07:45 AM	0	14	0	0	14	0	0	0	1	10	11	0	0	21	10	31	56
Total	0	43	0	0	43	0	0	0	10	26	36	0	0	107	58	165	244
08:00 AM	0	9	0	0	9	0	0	0	2	5	7	0	0	35	14	49	65
08:15 AM	0	7	0	0	7	0	0	0	3	10	13	0	0	34	20	54	74
08:30 AM	0	15	0	0	15	0	0	0	1	9	10	0	0	19	15	34	59
08:45 AM	0	5	0	0	5	0	0	0	4	3	7	0	0	28	10	38	50
Total	0	36	0	0	36	0	0	0	10	27	37	0	0	116	59	175	248
Grand Total	0	119	0	0	119	0	0	0	25	56	81	0	0	271	148	419	619
Apprch %	0	100	0	0			0	0	30.9	69.1		0	0	64.7	35.3		
Total %	0	19.2	0	0	19.2	0	0	0	4	9	13.1	0	0	43.8	23.9	67.7	

	Bishop Street Southbound				Westbound	Bishop Street Northbound				Ala Moana Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1														
Peak Hour for Entire Intersection Begins at 07:15 AM														
07:15 AM	0	11	0	11	0	0	0	3	3	0	0	40	40	54
07:30 AM	0	6	0	6	0	0	0	3	3	0	0	27	27	36
07:45 AM	0	14	0	14	0	0	0	1	1	0	0	21	21	36
08:00 AM	0	9	0	9	0	0	0	2	2	0	0	35	35	46
Total Volume	0	40	0	40	0	0	0	9	9	0	0	123	123	172
% App. Total	0	100	0			0	0	100		0	0	100		
PHF	.000	.714	.000	.714	.000	.000	.000	.750	.750	.000	.000	.769	.769	.796



Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400
Honolulu, Hi 96826

Counted By:MA
Counter:D4-5674
Weather:Clear

File Name : 8-16-2013 Intersection 6 PM
Site Code : 00000006
Start Date : 8/16/2013
Page No : 1

Groups Printed- Unshifted

	Bishop Street Southbound					Westbound	Bishop Street Northbound					Ala Moana Boulevard Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	0	9	0	0	9	0	0	0	8	8	16	0	0	23	31	54	79
03:15 PM	0	17	0	0	17	0	0	0	3	8	11	0	0	27	20	47	75
03:30 PM	0	16	0	0	16	0	0	0	8	7	15	0	0	23	29	52	83
03:45 PM	0	14	0	0	14	0	0	0	5	11	16	0	0	24	14	38	68
Total	0	56	0	0	56	0	0	0	24	34	58	0	0	97	94	191	305
04:00 PM	0	12	0	0	12	0	0	0	5	0	5	0	0	42	35	77	94
04:15 PM	0	12	0	0	12	0	0	0	11	7	18	0	0	31	36	67	97
04:30 PM	0	16	0	0	16	0	0	0	10	6	16	0	0	36	38	74	106
04:45 PM	0	15	0	0	15	0	0	0	3	3	6	0	0	53	20	73	94
Total	0	55	0	0	55	0	0	0	29	16	45	0	0	162	129	291	391
05:00 PM	0	14	0	0	14	0	0	0	18	6	24	0	0	79	35	114	152
05:15 PM	0	14	0	0	14	0	0	0	21	1	22	0	0	91	28	119	155
05:30 PM	0	13	0	0	13	0	0	0	10	4	14	0	0	51	14	65	92
05:45 PM	0	11	0	0	11	0	0	0	5	4	9	0	0	48	66	114	134
Total	0	52	0	0	52	0	0	0	54	15	69	0	0	269	143	412	533
Grand Total	0	163	0	0	163	0	0	0	107	65	172	0	0	528	366	894	1229
Apprch %	0	100	0	0			0	0	62.2	37.8		0	0	59.1	40.9		
Total %	0	13.3	0	0	13.3	0	0	0	8.7	5.3	14	0	0	43	29.8	72.7	

	Bishop Street Southbound				Westbound	Bishop Street Northbound				Ala Moana Boulevard Eastbound				
Start Time	Left	Thru	Right	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 04:45 PM														
04:45 PM	0	15	0	15	0	0	0	3	3	0	0	53	53	71
05:00 PM	0	14	0	14	0	0	0	18	18	0	0	79	79	111
05:15 PM	0	14	0	14	0	0	0	21	21	0	0	91	91	126
05:30 PM	0	13	0	13	0	0	0	10	10	0	0	51	51	74
Total Volume	0	56	0	56	0	0	0	52	52	0	0	274	274	382
% App. Total	0	100	0			0	0	100		0	0	100		
PHF	.000	.933	.000	.933	.000	.000	.000	.619	.619	.000	.000	.753	.753	.758

Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400
Honolulu, Hi 96826

Counted By:MA
Counter:D4-5677
Weather:Clear

File Name : 8-16-2013 Intersection 6 AM HECO Gate
Site Code : 00000006
Start Date : 8/16/2013
Page No : 1

Groups Printed- Unshifted

	Bishop Street Southbound					Westbound	Bishop Street Northbound					Ala Moana Boulevard Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
06:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
07:00 AM	0	0	0	0	0	0	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	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	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	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	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	0	0	0	0
Grand Total	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Apprch %	100	0	0	0			0	0	0	0		0	0	0	0		
Total %	100	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	

	Bishop Street Southbound				Westbound	Bishop Street Northbound				Ala Moana Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1														
Peak Hour for Entire Intersection Begins at 06:00 AM														
06:00 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	1
06:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	1	0	0	1	0	0	0	0	0	0	0	0	0	1
% App. Total	100	0	0			0	0	0		0	0	0		
PHF	.250	.000	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250

Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400
Honolulu, Hi 96826

Counted By:MA
Counter:D4-5674
Weather:Clear

File Name : 8-20-2013 Intersection 6 AM
Site Code : 00000006
Start Date : 8/20/2013
Page No : 1

Groups Printed- Unshifted

	Bishop Street Southbound					Westbound	Bishop Street Northbound					Ala Moana Boulevard Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	0	6	0	0	6	0	0	0	1	2	3	0	0	5	8	13	22
06:15 AM	0	14	0	0	14	0	0	0	1	1	2	0	0	7	8	15	31
06:30 AM	0	14	0	0	14	0	0	0	1	1	2	0	0	11	6	17	33
06:45 AM	0	21	0	0	21	0	0	0	3	2	5	0	0	13	11	24	50
Total	0	55	0	0	55	0	0	0	6	6	12	0	0	36	33	69	136
07:00 AM	0	8	0	0	8	0	0	0	6	2	8	0	0	27	11	38	54
07:15 AM	0	11	0	0	11	0	0	0	3	2	5	0	0	33	18	51	67
07:30 AM	0	17	0	0	17	0	0	0	6	2	8	0	0	43	8	51	76
07:45 AM	0	10	0	0	10	0	0	0	3	2	5	0	0	42	23	65	80
Total	0	46	0	0	46	0	0	0	18	8	26	0	0	145	60	205	277
08:00 AM	0	13	0	0	13	0	0	0	8	2	10	0	0	40	18	58	81
08:15 AM	0	7	0	0	7	0	0	0	4	0	4	0	0	21	15	36	47
08:30 AM	0	12	0	0	12	0	0	0	3	2	5	0	0	21	11	32	49
08:45 AM	0	13	0	0	13	0	0	0	0	1	1	0	0	12	16	28	42
Total	0	45	0	0	45	0	0	0	15	5	20	0	0	94	60	154	219
Grand Total	0	146	0	0	146	0	0	0	39	19	58	0	0	275	153	428	632
Apprch %	0	100	0	0			0	0	67.2	32.8		0	0	64.3	35.7		
Total %	0	23.1	0	0	23.1	0	0	0	6.2	3	9.2	0	0	43.5	24.2	67.7	

	Bishop Street Southbound				Westbound	Bishop Street Northbound				Ala Moana Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1														
Peak Hour for Entire Intersection Begins at 07:15 AM														
07:15 AM	0	11	0	11	0	0	0	3	3	0	0	33	33	47
07:30 AM	0	17	0	17	0	0	0	6	6	0	0	43	43	66
07:45 AM	0	10	0	10	0	0	0	3	3	0	0	42	42	55
08:00 AM	0	13	0	13	0	0	0	8	8	0	0	40	40	61
Total Volume	0	51	0	51	0	0	0	20	20	0	0	158	158	229
% App. Total	0	100	0			0	0	100		0	0	100		
PHF	.000	.750	.000	.750	.000	.000	.000	.625	.625	.000	.000	.919	.919	.867

Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400
Honolulu, Hi 96826

Counted By:MA
Counter:D4-5677
Weather:Clear

File Name : 8-16-2013 Intersection 6 PM HECO Gate
Site Code : 00000006
Start Date : 8/16/2013
Page No : 1

Groups Printed- Unshifted

	Bishop Street Southbound					HECO PLant Westbound					Bishop Street Northbound					Eastbound	
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	App. Total	Int. Total
03:00 PM	0	0	0	0	0	0	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	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	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	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	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	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	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	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0	0		0	0	0	0		0	0	0	0			
Total %																	

	Bishop Street Southbound				HECO PLant Westbound				Bishop Street Northbound				Eastbound	
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	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	0	0	0
03:15 PM	0	0	0	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	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0			
PHF	.000	.000	.000	.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:MA
Counter:D4-5674
Weather:Clear

File Name : 8-20-2013 Intersection 6 PM
Site Code : 00000006
Start Date : 8/20/2013
Page No : 1

Groups Printed- Unshifted

	Bishop Street Southbound					Westbound	Bishop Street Northbound					Ala Moana Boulevard Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	0	11	0	0	11	0	0	0	3	3	6	1	0	4	28	33	50
03:15 PM	0	8	0	0	8	0	0	0	9	2	11	0	0	8	30	38	57
03:30 PM	0	7	0	0	7	0	0	0	5	4	9	0	0	12	15	27	43
03:45 PM	0	9	0	0	9	0	0	0	6	4	10	0	0	16	42	58	77
Total	0	35	0	0	35	0	0	0	23	13	36	1	0	40	115	156	227
04:00 PM	0	12	0	0	12	0	0	0	8	4	12	0	0	19	32	51	75
04:15 PM	0	16	0	0	16	0	0	0	10	1	11	0	0	20	30	50	77
04:30 PM	0	8	0	0	8	0	0	0	10	6	16	0	0	30	25	55	79
04:45 PM	0	7	0	0	7	0	0	0	16	10	26	0	0	36	33	69	102
Total	0	43	0	0	43	0	0	0	44	21	65	0	0	105	120	225	333
05:00 PM	0	10	0	0	10	0	0	0	18	2	20	0	0	41	24	65	95
05:15 PM	0	3	0	0	3	0	0	0	12	4	16	0	0	37	33	70	89
05:30 PM	0	7	0	0	7	0	0	0	21	5	26	0	0	28	30	58	91
05:45 PM	0	8	0	0	8	0	0	0	5	2	7	0	0	5	18	23	38
Total	0	28	0	0	28	0	0	0	56	13	69	0	0	111	105	216	313
Grand Total	0	106	0	0	106	0	0	0	123	47	170	1	0	256	340	597	873
Apprch %	0	100	0	0			0	0	72.4	27.6		0.2	0	42.9	57		
Total %	0	12.1	0	0	12.1	0	0	0	14.1	5.4	19.5	0.1	0	29.3	38.9	68.4	

	Bishop Street Southbound				Westbound	Bishop Street Northbound				Ala Moana Boulevard Eastbound				
Start Time	Left	Thru	Right	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 04:45 PM														
04:45 PM	0	7	0	7	0	0	0	16	16	0	0	36	36	59
05:00 PM	0	10	0	10	0	0	0	18	18	0	0	41	41	69
05:15 PM	0	3	0	3	0	0	0	12	12	0	0	37	37	52
05:30 PM	0	7	0	7	0	0	0	21	21	0	0	28	28	56
Total Volume	0	27	0	27	0	0	0	67	67	0	0	142	142	236
% App. Total	0	100	0			0	0	100		0	0	100		
PHF	.000	.675	.000	.675	.000	.000	.000	.798	.798	.000	.000	.866	.866	.855

Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400
Honolulu, Hi 96826

Counted By:MA
Counter:D4-5677
Weather:Clear

File Name : 8-20-2013 AM HECO Gate
Site Code : 00000006
Start Date : 8/20/2013
Page No : 1

Groups Printed- Unshifted

	Bishop Street Southbound					Westbound	Bishop Street Northbound					HECO Gate Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
06:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM	0	0	0	0	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	0	1	1	1
07:00 AM	0	0	0	0	0	0	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	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	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	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
Grand Total	0	0	0	0	0	0	0	0	1	0	1	0	0	0	1	1	2
Apprch %	0	0	0	0			0	0	100	0		0	0	0	100		
Total %	0	0	0	0	0	0	0	0	50	0	50	0	0	0	50	50	

	Bishop Street Southbound				Westbound	Bishop Street Northbound				HECO Gate Eastbound				
Start Time	Left	Thru	Right	App. Total	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1														
Peak Hour for Entire Intersection Begins at 07:15 AM														
07:15 AM	0	0	0	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	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	1	1	0	0	0	0	1
Total Volume	0	0	0	0	0	0	0	1	1	0	0	0	0	1
% App. Total	0	0	0			0	0	100		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.250	.250	.000	.000	.000	.000	.250

Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400
Honolulu, Hi 96826

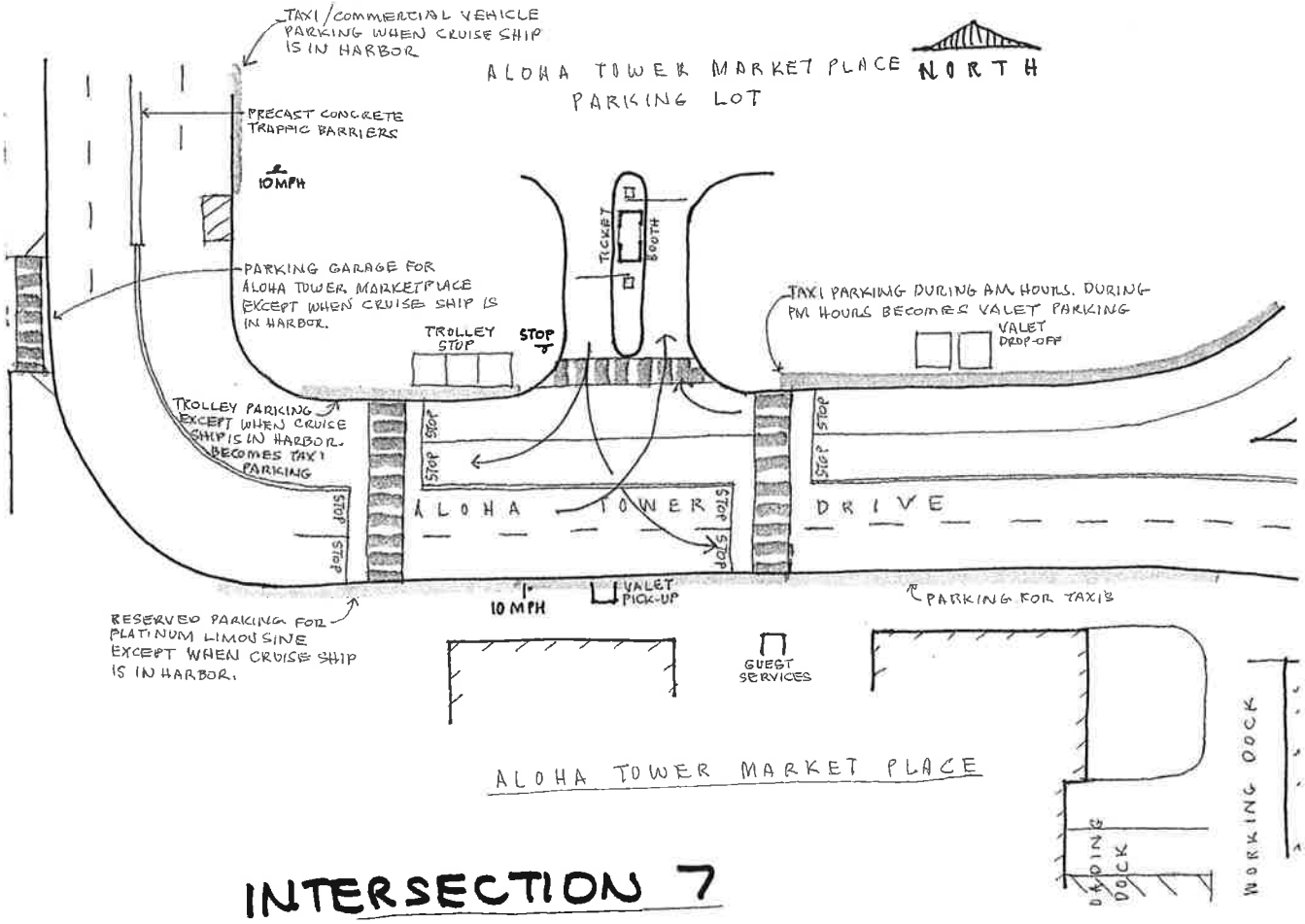
Counted By:BE
Counter:D4-3889
Weather:Clear

File Name : 8-16-2013 Intersection 7 AM
Site Code : 00000007
Start Date : 8/16/2013
Page No : 1

Groups Printed- Unshifted

	Aloha Tower Market PLace Parking Lot Driveway Southbound					Aloha Tower Drive Westbound					Northbound	Aloha Tower Drive Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	0	0	0	1	1	0	4	0	1	5	0	0	5	0	0	5	11
06:15 AM	0	0	0	0	0	0	4	1	1	6	0	0	1	0	0	1	7
06:30 AM	0	0	0	1	1	0	13	3	0	16	0	0	2	0	0	2	19
06:45 AM	0	0	0	0	0	0	6	1	1	8	0	0	1	0	0	1	9
Total	0	0	0	2	2	0	27	5	3	35	0	0	9	0	0	9	46
07:00 AM	0	0	0	3	3	0	10	4	2	16	0	0	3	0	0	3	22
07:15 AM	0	0	0	4	4	0	9	1	5	15	0	0	0	0	0	0	19
07:30 AM	0	0	1	2	3	0	10	6	1	17	0	0	3	0	0	3	23
07:45 AM	0	0	1	4	5	0	18	3	9	30	0	0	4	0	0	4	39
Total	0	0	2	13	15	0	47	14	17	78	0	0	10	0	0	10	103
08:00 AM	0	0	0	0	0	0	18	2	7	27	0	0	4	0	0	4	31
08:15 AM	0	0	1	4	5	0	24	6	18	48	0	0	3	0	0	3	56
08:30 AM	0	0	1	9	10	0	21	5	6	32	0	0	5	0	0	5	47
08:45 AM	1	0	2	0	3	0	21	3	1	25	0	0	2	0	0	2	30
Total	1	0	4	13	18	0	84	16	32	132	0	0	14	0	0	14	164
Grand Total	1	0	6	28	35	0	158	35	52	245	0	0	33	0	0	33	313
Apprch %	2.9	0	17.1	80		0	64.5	14.3	21.2			0	100	0	0		
Total %	0.3	0	1.9	8.9	11.2	0	50.5	11.2	16.6	78.3	0	0	10.5	0	0	10.5	

	Aloha Tower Market PLace Parking Lot Driveway Southbound				Aloha Tower Drive Westbound				Northbound	Aloha Tower Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1														
Peak Hour for Entire Intersection Begins at 08:00 AM														
08:00 AM	0	0	0	0	0	18	2	20	0	0	4	0	4	24
08:15 AM	0	0	1	1	0	24	6	30	0	0	3	0	3	34
08:30 AM	0	0	1	1	0	21	5	26	0	0	5	0	5	32
08:45 AM	1	0	2	3	0	21	3	24	0	0	2	0	2	29
Total Volume	1	0	4	5	0	84	16	100	0	0	14	0	14	119
% App. Total	20	0	80		0	84	16			0	100	0		
PHF	.250	.000	.500	.417	.000	.875	.667	.833	.000	.000	.700	.000	.700	.875



INTERSECTION 7

Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400
Honolulu, Hi 96826

Counted By:BE
Counter:D4-3889
Weather:Clear

File Name : 8-20-2013 Intersection 7 AM
Site Code : 00000007
Start Date : 8/20/2013
Page No : 1

Groups Printed- Unshifted

	Aloha Tower Marketplace Parking Lot driveway Southbound					Aloha Tower Drive Westbound					Northbound	Aloha Tower Drive Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	0	0	0	0	0	0	2	0	1	3	0	0	1	0	0	1	4
06:15 AM	0	0	0	0	0	0	0	2	1	3	0	0	5	0	0	5	8
06:30 AM	0	0	0	2	2	0	8	0	2	10	0	0	5	0	0	5	17
06:45 AM	0	0	0	1	1	0	8	1	1	10	0	1	4	0	0	5	16
Total	0	0	0	3	3	0	18	3	5	26	0	1	15	0	0	16	45
07:00 AM	0	0	0	2	2	0	4	0	2	6	0	0	16	0	0	16	24
07:15 AM	0	0	0	0	0	0	3	0	0	3	0	0	13	0	0	13	16
07:30 AM	0	0	0	0	0	0	7	4	0	11	0	1	13	0	0	14	25
07:45 AM	0	0	0	1	1	0	6	0	2	8	0	0	12	0	0	12	21
Total	0	0	0	3	3	0	20	4	4	28	0	1	54	0	0	55	86
08:00 AM	0	0	0	1	1	0	10	2	1	13	0	0	17	0	0	17	31
08:15 AM	0	0	0	0	0	0	9	3	2	14	0	1	11	0	0	12	26
08:30 AM	0	0	0	0	0	0	5	4	6	15	0	2	6	0	0	8	23
08:45 AM	1	0	0	0	1	0	5	5	3	13	0	1	2	0	0	3	17
Total	1	0	0	1	2	0	29	14	12	55	0	4	36	0	0	40	97
Grand Total	1	0	0	7	8	0	67	21	21	109	0	6	105	0	0	111	228
Apprch %	12.5	0	0	87.5		0	61.5	19.3	19.3			5.4	94.6	0	0		
Total %	0.4	0	0	3.1	3.5	0	29.4	9.2	9.2	47.8	0	2.6	46.1	0	0	48.7	

	Aloha Tower Marketplace Parking Lot driveway Southbound				Aloha Tower Drive Westbound				Northbound	Aloha Tower Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1														
Peak Hour for Entire Intersection Begins at 07:30 AM														
07:30 AM	0	0	0	0	0	7	4	11	0	1	13	0	14	25
07:45 AM	0	0	0	0	0	6	0	6	0	0	12	0	12	18
08:00 AM	0	0	0	0	0	10	2	12	0	0	17	0	17	29
08:15 AM	0	0	0	0	0	9	3	12	0	1	11	0	12	24
Total Volume	0	0	0	0	0	32	9	41	0	2	53	0	55	96
% App. Total	0	0	0		0	78	22			3.6	96.4	0		
PHF	.000	.000	.000	.000	.000	.800	.563	.854	.000	.500	.779	.000	.809	.828

Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400
Honolulu, Hi 96826

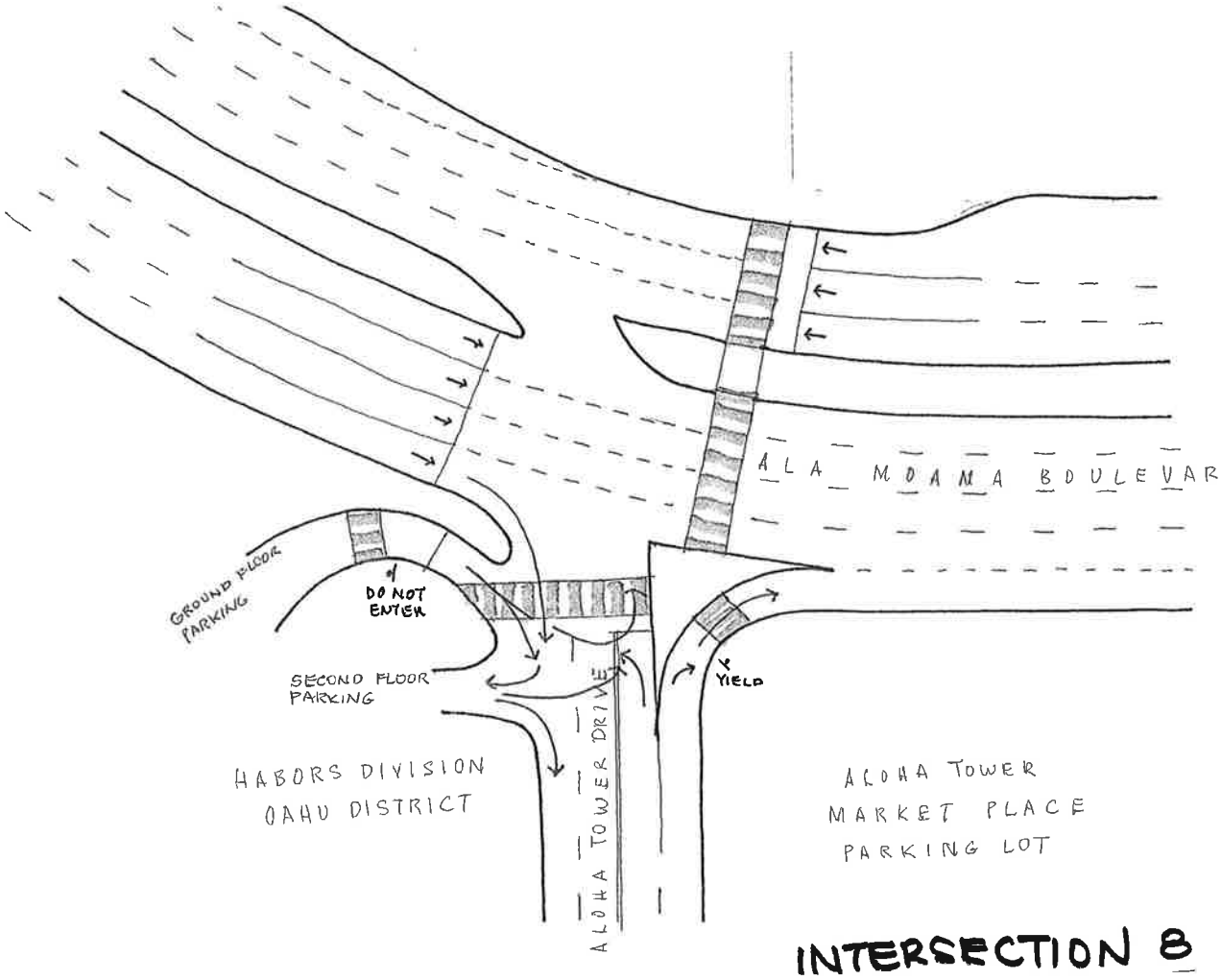
Counted By:BE
Counter:D4-3889
Weather:Clear

File Name : 8-16-2013 Intersection 7 PM
Site Code : 00000007
Start Date : 8/16/2013
Page No : 1

Groups Printed- Unshifted

	Aloha Tower Market Place Parking Lot Driveway Southbound					Aloha Tower Drive Westbound					Northbound	Aloha Tower Drive 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	5	0	5	6	16	0	17	11	42	70	0	0	4	0	0	4	90
03:15 PM	7	0	6	0	13	0	32	10	29	71	0	1	7	0	0	8	92
03:30 PM	7	0	4	1	12	0	14	12	28	54	0	0	3	0	0	3	69
03:45 PM	8	0	3	5	16	0	23	10	31	64	0	0	4	0	0	4	84
Total	27	0	18	12	57	0	86	43	130	259	0	1	18	0	0	19	335
04:00 PM	2	0	2	0	4	0	13	22	19	54	0	0	4	0	0	4	62
04:15 PM	1	0	2	3	6	0	19	16	37	72	0	0	8	0	0	8	86
04:30 PM	2	0	2	0	4	0	24	13	50	87	0	0	6	0	0	6	97
04:45 PM	5	0	2	1	8	0	25	16	50	91	0	1	4	0	0	5	104
Total	10	0	8	4	22	0	81	67	156	304	0	1	22	0	0	23	349
05:00 PM	4	0	6	6	16	0	41	20	52	113	0	0	15	0	0	15	144
05:15 PM	1	0	3	5	9	0	45	10	41	96	0	0	6	0	0	6	111
05:30 PM	1	0	2	2	5	0	34	3	23	60	0	0	3	0	0	3	68
05:45 PM	2	0	2	3	7	0	36	4	34	74	0	1	4	0	0	5	86
Total	8	0	13	16	37	0	156	37	150	343	0	1	28	0	0	29	409
Grand Total	45	0	39	32	116	0	323	147	436	906	0	3	68	0	0	71	1093
Apprch %	38.8	0	33.6	27.6		0	35.7	16.2	48.1			4.2	95.8	0	0		
Total %	4.1	0	3.6	2.9	10.6	0	29.6	13.4	39.9	82.9	0	0.3	6.2	0	0	6.5	

	Aloha Tower Market Place Parking Lot Driveway Southbound				Aloha Tower Drive Westbound				Northbound	Aloha Tower Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1														
Peak Hour for Entire Intersection Begins at 04:30 PM														
04:30 PM	2	0	2	4	0	24	13	37	0	0	6	0	6	47
04:45 PM	5	0	2	7	0	25	16	41	0	1	4	0	5	53
05:00 PM	4	0	6	10	0	41	20	61	0	0	15	0	15	86
05:15 PM	1	0	3	4	0	45	10	55	0	0	6	0	6	65
Total Volume	12	0	13	25	0	135	59	194	0	1	31	0	32	251
% App. Total	48	0	52		0	69.6	30.4			3.1	96.9	0		
PHF	.600	.000	.542	.625	.000	.750	.738	.795	.000	.250	.517	.000	.533	.730



Wilson Okamoto Corporation
1907 S. Beretania Street, Suite 400
Honolulu, Hi 96826

Counted By:BE
Counter:D4-3889
Weather:Clear

File Name : 8-20-2013 Intersection 7 PM
Site Code : 00000007
Start Date : 8/20/2013
Page No : 1

Groups Printed- Unshifted

	Aloha Tower Marketplace parking Lot Driveway Southbound					Aloha Tower Drive Westbound					Northbound	Aloha Tower Drive 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	2	0	8	0	10	0	17	9	20	46	0	0	10	0	0	10	66
03:15 PM	9	0	5	0	14	0	8	4	23	35	0	2	8	0	0	10	59
03:30 PM	1	0	5	0	6	0	6	7	18	31	0	6	2	0	0	8	45
03:45 PM	4	0	2	0	6	0	5	8	20	33	0	3	11	0	0	14	53
Total	16	0	20	0	36	0	36	28	81	145	0	11	31	0	0	42	223
04:00 PM	3	0	3	1	7	0	8	15	19	42	0	1	6	0	0	7	56
04:15 PM	4	0	3	0	7	0	3	9	37	49	0	5	2	0	0	7	63
04:30 PM	7	0	1	2	10	0	11	19	33	63	0	0	9	0	0	9	82
04:45 PM	2	0	4	0	6	0	11	17	34	62	0	4	9	0	0	13	81
Total	16	0	11	3	30	0	33	60	123	216	0	10	26	0	0	36	282
05:00 PM	5	0	6	0	11	0	18	16	33	67	0	5	17	0	0	22	100
05:15 PM	3	0	4	6	13	0	10	7	37	54	0	6	8	0	0	14	81
05:30 PM	5	0	1	3	9	0	10	3	16	29	0	2	5	0	0	7	45
05:45 PM	7	0	3	0	10	0	6	6	15	27	0	1	5	0	0	6	43
Total	20	0	14	9	43	0	44	32	101	177	0	14	35	0	0	49	269
Grand Total	52	0	45	12	109	0	113	120	305	538	0	35	92	0	0	127	774
Apprch %	47.7	0	41.3	11		0	21	22.3	56.7			27.6	72.4	0	0		
Total %	6.7	0	5.8	1.6	14.1	0	14.6	15.5	39.4	69.5	0	4.5	11.9	0	0	16.4	

	Aloha Tower Marketplace parking Lot Driveway Southbound				Aloha Tower Drive Westbound				Northbound	Aloha Tower Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1														
Peak Hour for Entire Intersection Begins at 04:30 PM														
04:30 PM	7	0	1	8	0	11	19	30	0	0	9	0	9	47
04:45 PM	2	0	4	6	0	11	17	28	0	4	9	0	13	47
05:00 PM	5	0	6	11	0	18	16	34	0	5	17	0	22	67
05:15 PM	3	0	4	7	0	10	7	17	0	6	8	0	14	38
Total Volume	17	0	15	32	0	50	59	109	0	15	43	0	58	199
% App. Total	53.1	0	46.9		0	45.9	54.1			25.9	74.1	0		
PHF	.607	.000	.625	.727	.000	.694	.776	.801	.000	.625	.632	.000	.659	.743

Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400
Honolulu, Hi 96826

Counted By:DY
Counter:TU-0651
Weather:Clear

File Name : 8-16-2013 Intersection 8 PM
Site Code : 00000008
Start Date : 8/16/2013
Page No : 1

Groups Printed- Unshifted

	Southbound	Ala Moana Boulevard Westbound					Aloha Tower Drive Northbound					Eastbound	
Start Time	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	App. Total	Int. Total
03:00 PM	0	0	0	0	26	26	15	0	19	51	85	0	111
03:15 PM	0	0	0	0	35	35	14	0	19	33	66	0	101
03:30 PM	0	0	0	0	39	39	12	0	9	38	59	0	98
03:45 PM	0	0	0	0	22	22	5	0	11	26	42	0	64
Total	0	0	0	0	122	122	46	0	58	148	252	0	374
04:00 PM	0	0	0	0	46	46	10	0	12	47	69	0	115
04:15 PM	0	0	0	0	17	17	17	0	12	18	47	0	64
04:30 PM	0	0	0	0	30	30	16	0	8	39	63	0	93
04:45 PM	0	0	0	0	48	48	9	0	16	23	48	0	96
Total	0	0	0	0	141	141	52	0	48	127	227	0	368
05:00 PM	0	0	0	0	30	30	9	0	17	39	65	0	95
05:15 PM	0	0	0	0	29	29	23	0	18	31	72	0	101
05:30 PM	0	0	0	0	18	18	13	0	23	14	50	0	68
05:45 PM	0	0	0	0	19	19	14	0	17	32	63	0	82
Total	0	0	0	0	96	96	59	0	75	116	250	0	346
Grand Total	0	0	0	0	359	359	157	0	181	391	729	0	1088
Apprch %		0	0	0	100		21.5	0	24.8	53.6			
Total %	0	0	0	0	33	33	14.4	0	16.6	35.9	67	0	

	Southbound	Ala Moana Boulevard Westbound				Aloha Tower Drive Northbound				Eastbound	
Start Time	App. Total	Left	Thru	Right	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 05:00 PM											
05:00 PM	0	0	0	0	0	9	0	17	26	0	26
05:15 PM	0	0	0	0	0	23	0	18	41	0	41
05:30 PM	0	0	0	0	0	13	0	23	36	0	36
05:45 PM	0	0	0	0	0	14	0	17	31	0	31
Total Volume	0	0	0	0	0	59	0	75	134	0	134
% App. Total		0	0	0		44	0	56			
PHF	.000	.000	.000	.000	.000	.641	.000	.815	.617	.000	.817

Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400
Honolulu, Hi 96826

Counted By:DY
Counter:TU-0651
Weather:Clear

File Name : 8-16-2013 Intersection 8 AM
Site Code : 00000008
Start Date : 8/16/2013
Page No : 1

Groups Printed- Unshifted

	Southbound	Ala Moana Boulevard Westbound					Aloha Tower Drive Northbound					Ala Moana Boulevard Eastbound					
Start Time	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	0	0	0	0	4	4	3	0	2	4	9	0	0	0	0	0	13
06:15 AM	0	0	0	0	4	4	0	0	2	3	5	0	0	0	0	0	9
06:30 AM	0	0	0	0	6	6	6	0	2	0	8	0	0	0	0	0	14
06:45 AM	0	0	0	0	4	4	6	0	5	1	12	0	0	1	0	1	17
Total	0	0	0	0	18	18	15	0	11	8	34	0	0	1	0	1	53
07:00 AM	0	0	0	0	9	9	3	0	3	4	10	0	0	2	0	2	21
07:15 AM	0	0	0	0	6	6	6	0	4	14	24	0	0	1	0	1	31
07:30 AM	0	0	0	0	5	5	7	0	1	18	26	0	0	1	0	1	32
07:45 AM	0	0	0	0	24	24	7	0	7	35	49	0	0	0	0	0	73
Total	0	0	0	0	44	44	23	0	15	71	109	0	0	4	0	4	157
08:00 AM	0	0	0	0	10	10	4	0	14	27	45	0	0	4	0	4	59
08:15 AM	0	0	0	0	8	8	9	0	19	44	72	0	0	0	0	0	80
08:30 AM	0	0	0	0	14	14	6	0	9	80	95	0	0	0	0	0	109
08:45 AM	0	0	0	0	21	21	8	0	10	105	123	0	0	1	0	1	145
Total	0	0	0	0	53	53	27	0	52	256	335	0	0	5	0	5	393
Grand Total	0	0	0	0	115	115	65	0	78	335	478	0	0	10	0	10	603
Apprch %		0	0	0	100		13.6	0	16.3	70.1		0	0	100	0		
Total %	0	0	0	0	19.1	19.1	10.8	0	12.9	55.6	79.3	0	0	1.7	0	1.7	

	Southbound	Ala Moana Boulevard Westbound				Aloha Tower Drive Northbound				Ala Moana Boulevard Eastbound				
Start Time	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1														
Peak Hour for Entire Intersection Begins at 08:00 AM														
08:00 AM	0	0	0	0	0	4	0	14	18	0	0	4	4	22
08:15 AM	0	0	0	0	0	9	0	19	28	0	0	0	0	28
08:30 AM	0	0	0	0	0	6	0	9	15	0	0	0	0	15
08:45 AM	0	0	0	0	0	8	0	10	18	0	0	1	1	19
Total Volume	0	0	0	0	0	27	0	52	79	0	0	5	5	84
% App. Total		0	0	0		34.2	0	65.8		0	0	100		
PHF	.000	.000	.000	.000	.000	.750	.000	.684	.705	.000	.000	.313	.313	.750

Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400
Honolulu, Hi 96826

Counted By:DY
Counter:TU-0651
Weather:Clear

File Name : 8-20-2013 Intersection 8 AM
Site Code : 00000008
Start Date : 8/20/2013
Page No : 1

Groups Printed- Unshifted

	Southbound	Ala Moana Boulevard Westbound					Aloha Tower Drive Northbound					Ala Moana Boulevard Eastbound					
Start Time	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	0	0	0	0	0	0	3	0	0	1	4	0	0	3	0	3	7
06:15 AM	0	0	0	0	3	3	2	0	0	3	5	0	0	3	0	3	11
06:30 AM	0	0	0	0	9	9	4	0	1	5	10	0	0	6	0	6	25
06:45 AM	0	0	0	0	7	7	5	0	3	6	14	0	0	6	0	6	27
Total	0	0	0	0	19	19	14	0	4	15	33	0	0	18	0	18	70
07:00 AM	0	0	0	0	7	7	0	0	0	4	4	0	0	17	0	17	28
07:15 AM	0	0	0	0	6	6	3	0	0	1	4	0	0	17	0	17	27
07:30 AM	0	0	0	0	7	7	2	0	1	5	8	0	0	17	0	17	32
07:45 AM	0	0	0	0	6	6	6	0	1	4	11	0	0	15	0	15	32
Total	0	0	0	0	26	26	11	0	2	14	27	0	0	66	0	66	119
08:00 AM	0	0	0	0	4	4	10	0	5	4	19	0	0	27	0	27	50
08:15 AM	0	0	0	0	2	2	8	0	3	2	13	0	0	14	0	14	29
08:30 AM	0	0	0	0	5	5	6	0	0	1	7	0	0	11	0	11	23
08:45 AM	0	0	0	0	7	7	5	0	2	1	8	0	0	7	0	7	22
Total	0	0	0	0	18	18	29	0	10	8	47	0	0	59	0	59	124
Grand Total	0	0	0	0	63	63	54	0	16	37	107	0	0	143	0	143	313
Apprch %		0	0	0	100		50.5	0	15	34.6		0	0	100	0		
Total %	0	0	0	0	20.1	20.1	17.3	0	5.1	11.8	34.2	0	0	45.7	0	45.7	

	Southbound	Ala Moana Boulevard Westbound				Aloha Tower Drive Northbound				Ala Moana Boulevard Eastbound				
Start Time	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1														
Peak Hour for Entire Intersection Begins at 07:30 AM														
07:30 AM	0	0	0	0	0	2	0	1	3	0	0	17	17	20
07:45 AM	0	0	0	0	0	6	0	1	7	0	0	15	15	22
08:00 AM	0	0	0	0	0	10	0	5	15	0	0	27	27	42
08:15 AM	0	0	0	0	0	8	0	3	11	0	0	14	14	25
Total Volume	0	0	0	0	0	26	0	10	36	0	0	73	73	109
% App. Total		0	0	0		72.2	0	27.8		0	0	100		
PHF	.000	.000	.000	.000	.000	.650	.000	.500	.600	.000	.000	.676	.676	.649

Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400
Honolulu, Hi 96826

Counted By:DY
Counter:TU-0651
Weather:Clear

File Name : 8-16-2013 Intersection 8 PM Harbors Division Parking
Site Code : 00000008
Start Date : 8/16/2013
Page No : 1

Groups Printed- Unshifted

	Southbound	Westbound	Northbound	Harbors Division Second Floor Parking 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	1	0	1	1
03:15 PM	0	0	0	0	0	1	0	1	1
03:30 PM	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	3	0	3	3
04:00 PM	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0
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	0	0	0	0	0
Grand Total	0	0	0	0	0	3	0	3	3
Apprch %				0	0	100	0		
Total %	0	0	0	0	0	100	0	100	

	Southbound	Westbound	Northbound	Harbors Division Second Floor Parking 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 03:00 PM								
03:00 PM	0	0	0	0	0	1	1	1
03:15 PM	0	0	0	0	0	1	1	1
03:30 PM	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	1	1	1
Total Volume	0	0	0	0	0	3	3	3
% App. Total				0	0	100		
PHF	.000	.000	.000	.000	.000	.750	.750	.750

Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400
Honolulu, Hi 96826

Counted By:DY
Counter:TU-0651
Weather:Clear

File Name : 8-20-2013 Intersection 8 AM Harbors Division Second Floor Parking
Site Code : 00000008
Start Date : 8/20/2013
Page No : 1

Groups Printed- Unshifted

	Aloha Tower Drive (Thru = Vehicles Making U-Turns At End Of Concrete Dividers At Aloha Tower Drive Then Travelling NB, Right = Right Turn Into Harbors Division Second Floor Parking)) Southbound					Westbound	Aloha Tower Drive (Left = Left Turn Into Harbors Division Second Floor Parking) Northbound					Harbors Division Second Floor Parking Garage Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	0	1	1	0	2	0	0	0	0	0	0	0	0	1	0	1	3
06:15 AM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2
06:30 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	1	2
06:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	4	1	0	5	0	0	0	0	0	0	0	0	2	0	2	7
07:00 AM	0	1	1	0	2	0	1	0	0	0	1	0	0	0	0	0	3
07:15 AM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2
07:30 AM	0	1	2	0	3	0	1	0	0	0	1	0	0	1	0	1	5
07:45 AM	0	3	0	0	3	0	1	0	0	0	1	0	0	1	0	1	5
Total	0	7	3	0	10	0	3	0	0	0	3	0	0	2	0	2	15
08:00 AM	0	2	0	0	2	0	0	0	0	0	0	1	0	0	0	1	3
08:15 AM	0	1	0	0	1	0	1	0	0	0	1	1	0	0	0	1	3
08:30 AM	0	2	0	0	2	0	1	0	0	0	1	1	0	3	0	4	7
08:45 AM	0	0	1	0	1	0	0	0	0	0	0	1	0	0	0	1	2
Total	0	5	1	0	6	0	2	0	0	0	2	4	0	3	0	7	15
Grand Total	0	16	5	0	21	0	5	0	0	0	5	4	0	7	0	11	37
Apprch %	0	76.2	23.8	0			100	0	0	0		36.4	0	63.6	0		
Total %	0	43.2	13.5	0	56.8	0	13.5	0	0	0	13.5	10.8	0	18.9	0	29.7	

	Aloha Tower Drive (Thru = Vehicles Making U-Turns At End Of Concrete Dividers At Aloha Tower Drive Then Travelling NB, Right = Right Turn Into Harbors Division Second Floor Parking)) Southbound				Westbound	Aloha Tower Drive (Left = Left Turn Into Harbors Division Second Floor Parking) Northbound				Harbors Division Second Floor Parking Garage Eastbound				
Start Time	Left	Thru	Right	App. Total	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1														
Peak Hour for Entire Intersection Begins at 07:45 AM														
07:45 AM	0	3	0	3	0	1	0	0	1	0	0	1	1	5
08:00 AM	0	2	0	2	0	0	0	0	0	1	0	0	1	3
08:15 AM	0	1	0	1	0	1	0	0	1	1	0	0	1	3
08:30 AM	0	2	0	2	0	1	0	0	1	1	0	3	4	7
Total Volume	0	8	0	8	0	3	0	0	3	3	0	4	7	18
% App. Total	0	100	0			100	0	0		42.9	0	57.1		
PHF	.000	.667	.000	.667	.000	.750	.000	.000	.750	.750	.000	.333	.438	.643

Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400
Honolulu, Hi 96826

Counted By:DY
Counter:TU-0651
Weather:Clear

File Name : 8-20-2013 Intersection 8 PM
Site Code : 00000008
Start Date : 8/20/2013
Page No : 1

Groups Printed- Unshifted

	Southbound	Aloha Tower Drive Westbound					Aloha Tower Drive Northbound					Ala Moana Boulevard Eastbound					
Start Time	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	0	0	0	0	5	5	24	0	5	5	34	0	0	7	0	7	46
03:15 PM	0	0	0	0	5	5	12	0	4	5	21	0	0	9	0	9	35
03:30 PM	0	0	0	0	12	12	20	0	7	3	30	0	0	12	0	12	54
03:45 PM	0	0	0	0	12	12	8	0	2	7	17	0	0	13	0	13	42
Total	0	0	0	0	34	34	64	0	18	20	102	0	0	41	0	41	177
04:00 PM	0	0	0	0	14	14	9	0	5	11	25	0	0	14	0	14	53
04:15 PM	0	0	0	0	12	12	10	0	5	6	21	0	0	9	0	9	42
04:30 PM	0	0	0	0	11	11	16	0	4	4	24	0	0	13	0	13	48
04:45 PM	0	0	0	0	17	17	13	0	14	10	37	0	0	14	0	14	68
Total	0	0	0	0	54	54	48	0	28	31	107	0	0	50	0	50	211
05:00 PM	0	0	0	0	11	11	22	0	12	1	35	0	0	26	0	26	72
05:15 PM	0	0	0	0	15	15	20	0	5	2	27	0	0	20	0	20	62
05:30 PM	0	0	0	0	14	14	9	0	7	5	21	0	0	9	0	9	44
05:45 PM	0	0	0	0	12	12	10	0	2	1	13	0	0	9	0	9	34
Total	0	0	0	0	52	52	61	0	26	9	96	0	0	64	0	64	212
Grand Total	0	0	0	0	140	140	173	0	72	60	305	0	0	155	0	155	600
Apprch %		0	0	0	100		56.7	0	23.6	19.7		0	0	100	0		
Total %	0	0	0	0	23.3	23.3	28.8	0	12	10	50.8	0	0	25.8	0	25.8	

	Southbound	Aloha Tower Drive Westbound				Aloha Tower Drive Northbound				Ala Moana Boulevard Eastbound				
Start Time	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1														
Peak Hour for Entire Intersection Begins at 04:30 PM														
04:30 PM	0	0	0	0	0	16	0	4	20	0	0	13	13	33
04:45 PM	0	0	0	0	0	13	0	14	27	0	0	14	14	41
05:00 PM	0	0	0	0	0	22	0	12	34	0	0	26	26	60
05:15 PM	0	0	0	0	0	20	0	5	25	0	0	20	20	45
Total Volume	0	0	0	0	0	71	0	35	106	0	0	73	73	179
% App. Total		0	0	0		67	0	33		0	0	100		
PHF	.000	.000	.000	.000	.000	.807	.000	.625	.779	.000	.000	.702	.702	.746

Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400
Honolulu, Hi 96826

Counted By:DY
Counter:TU-0651
Weather:Clear

File Name : 8-20-2013 Intersection 8 PM Harbors Division Second Floor Parking
Site Code : 00000008
Start Date : 8/20/2013
Page No : 1

Groups Printed- Unshifted

	Aloha Tower Drive (Thru = Vehicles Making U-Turns At End Of Concrete Dividers Then Travelling NB, Right = Right Turn Into Harbors Division Second Floor Parking) Southbound					Westbound	Aloha Tower Drive (Left = Left Turn Into Harbors Division Second Floor Parking) Northbound					Harbors Division Second Floor Parking Garage Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	0	0	0	0	0	0	2	0	0	0	2	0	0	2	0	2	4
03:15 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2
03:30 PM	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	0	5
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	7	0	0	7	0	2	0	0	0	2	0	0	2	0	2	11
04:00 PM	0	0	1	0	1	0	1	0	0	0	1	0	0	0	0	0	2
04:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
04:30 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	1	0	1	3
04:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	1	2
Total	0	4	1	0	5	0	1	0	0	0	1	0	0	2	0	2	8
05:00 PM	0	1	1	0	2	0	0	0	0	0	0	0	0	1	0	1	3
05:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
05:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	3	1	0	4	0	0	0	0	0	0	0	0	1	0	1	5
Grand Total	0	14	2	0	16	0	3	0	0	0	3	0	0	5	0	5	24
Apprch %	0	87.5	12.5	0			100	0	0	0		0	0	100	0		
Total %	0	58.3	8.3	0	66.7	0	12.5	0	0	0	12.5	0	0	20.8	0	20.8	

	Aloha Tower Drive (Thru = Vehicles Making U-Turns At End Of Concrete Dividers Then Travelling NB, Right = Right Turn Into Harbors Division Second Floor Parking) Southbound				Westbound	Aloha Tower Drive (Left = Left Turn Into Harbors Division Second Floor Parking) Northbound				Harbors Division Second Floor Parking Garage Eastbound				
Start Time	Left	Thru	Right	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 03:00 PM														
03:00 PM	0	0	0	0	0	2	0	0	2	0	0	2	2	4
03:15 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	2
03:30 PM	0	5	0	5	0	0	0	0	0	0	0	0	0	5
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	7	0	7	0	2	0	0	2	0	0	2	2	11
% App. Total	0	100	0			100	0	0		0	0	100		
PHF	.000	.350	.000	.350	.000	.250	.000	.000	.250	.000	.000	.250	.250	.550

Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400
Honolulu, Hi 96826

Counted By:DY
Counter:TU-0651
Weather:Clear

File Name : 8-20-2013 Intersection 8 AM Harbors Division Ground Floor Parking
Site Code : 00000008
Start Date : 8/20/2013
Page No : 1

Groups Printed- Unshifted

	Southbound	Westbound	Northbound	Harbors Division Ground Floor Parking Garage Eastbound					
Start Time	App. Total	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	0	0	0	0	0	0	0	0	0
06:15 AM	0	0	0	0	0	0	0	0	0
06:30 AM	0	0	0	0	0	1	0	1	1
06:45 AM	0	0	0	1	0	1	0	2	2
Total	0	0	0	1	0	2	0	3	3
07:00 AM	0	0	0	0	0	1	0	1	1
07:15 AM	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	1	0	1	1
07:45 AM	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	3	0	3	3
08:00 AM	0	0	0	0	0	2	0	2	2
08:15 AM	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	1	0	2	0	3	3
Total	0	0	0	1	0	4	0	5	5
Grand Total	0	0	0	2	0	9	0	11	11
Apprch %				18.2	0	81.8	0		
Total %	0	0	0	18.2	0	81.8	0	100	

	Southbound	Westbound	Northbound	Harbors Division Ground Floor Parking Garage Eastbound				
Start Time	App. Total	App. Total	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1								
Peak Hour for Entire Intersection Begins at 08:00 AM								
08:00 AM	0	0	0	0	0	2	2	2
08:15 AM	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	1	0	2	3	3
Total Volume	0	0	0	1	0	4	5	5
% App. Total				20	0	80		
PHF	.000	.000	.000	.250	.000	.500	.417	.417

APPENDIX B

LEVEL OF SERVICE DEFINITIONS

Wilson Okamoto Corporation
1907 S. Beretania Street, Suite 400
Honolulu, Hi 96826

Counted By:DY
Counter:TU-0651
Weather:Clear

File Name : 8-20-2013 Intersection 8 PM Harbors Division Ground Floor Parking
Site Code : 00000008
Start Date : 8/20/2013
Page No : 1

Groups Printed- Unshifted

	Southbound	Westbound	Northbound	Harbors Division Ground Floor Parking Garage 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	1	0	1	1
03:15 PM	0	0	0	0	0	2	0	2	2
03:30 PM	0	0	0	0	0	4	0	4	4
03:45 PM	0	0	0	1	0	0	0	1	1
Total	0	0	0	1	0	7	0	8	8
04:00 PM	0	0	0	1	0	1	0	2	2
04:15 PM	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	2	0	1	0	3	3
04:45 PM	0	0	0	0	0	3	0	3	3
Total	0	0	0	3	0	5	0	8	8
05:00 PM	0	0	0	1	0	1	0	2	2
05:15 PM	0	0	0	0	0	1	0	1	1
05:30 PM	0	0	0	0	0	1	0	1	1
05:45 PM	0	0	0	0	0	0	0	0	0
Total	0	0	0	1	0	3	0	4	4
Grand Total	0	0	0	5	0	15	0	20	20
Apprch %				25	0	75	0		
Total %	0	0	0	25	0	75	0	100	

	Southbound	Westbound	Northbound	Harbors Division Ground Floor Parking Garage 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	0	2	2	2
03:30 PM	0	0	0	0	0	4	4	4
03:45 PM	0	0	0	1	0	0	1	1
04:00 PM	0	0	0	1	0	1	2	2
Total Volume	0	0	0	2	0	7	9	9
% App. Total				22.2	0	77.8		
PHF	.000	.000	.000	.500	.000	.438	.563	.563

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.

APPENDIX C

CAPACITY ANALYSIS CALCULATIONS
EXISTING PEAK HOUR TRAFFIC ANALYSIS

HCM Signalized Intersection Capacity Analysis
3: Aloha Tower & Nimitz

10/22/2013

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	3381	72	0	2280	18	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0			5.0	5.0	5.0
Lane Util. Factor	0.86			0.91	1.00	1.00
Frt	1.00			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	6388			5085	1770	1583
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	6388			5085	1770	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	3522	75	0	2375	19	7
RTOR Reduction (vph)	1	0	0	0	0	3
Lane Group Flow (vph)	3596	0	0	2375	19	4
Turn Type	NA			NA	NA	Perm
Protected Phases	2			2	8	
Permitted Phases						8
Actuated Green, G (s)	114.3			114.3	4.5	4.5
Effective Green, g (s)	114.3			114.3	4.5	4.5
Actuated g/C Ratio	0.89			0.89	0.03	0.03
Clearance Time (s)	5.0			5.0	5.0	5.0
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	5668			4512	61	55
v/s Ratio Prot	c0.56			0.47	c0.01	
v/s Ratio Perm						0.00
v/c Ratio	0.63			0.53	0.31	0.07
Uniform Delay, d1	1.9			1.5	60.6	60.1
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	0.2			0.1	2.9	0.6
Delay (s)	2.1			1.6	63.5	60.7
Level of Service	A			A	E	E
Approach Delay (s)	2.1			1.6	62.8	
Approach LOS	A			A	E	

Intersection Summary			
HCM 2000 Control Delay	2.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	128.8	Sum of lost time (s)	10.0
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
3: Aloha Tower & Nimitz

10/22/2013

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	2932	54	0	2763	66	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0			5.0	5.0	5.0
Lane Util. Factor	0.86			0.91	1.00	1.00
Frpb, ped/bikes	1.00			1.00	1.00	1.00
Flpb, ped/bikes	1.00			1.00	1.00	1.00
Frt	1.00			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	6385			5085	1770	1583
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	6385			5085	1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	3187	59	0	3003	72	40
RTOR Reduction (vph)	1	0	0	0	0	4
Lane Group Flow (vph)	3245	0	0	3003	72	36
Confl. Peds. (#/hr)		15				
Turn Type	NA			NA	NA	Perm
Protected Phases	2			2	8	
Permitted Phases						8
Actuated Green, G (s)	112.9			112.9	9.2	9.2
Effective Green, g (s)	112.9			112.9	9.2	9.2
Actuated g/C Ratio	0.85			0.85	0.07	0.07
Clearance Time (s)	5.0			5.0	5.0	5.0
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	5456			4345	123	110
v/s Ratio Prot	0.51			c0.59	c0.04	
v/s Ratio Perm						0.02
v/c Ratio	0.59			0.69	0.59	0.33
Uniform Delay, d1	2.8			3.4	59.6	58.5
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	0.2			0.5	6.9	1.8
Delay (s)	3.0			3.9	66.5	60.3
Level of Service	A			A	E	E
Approach Delay (s)	3.0			3.9	64.3	
Approach LOS	A			A	E	

Intersection Summary			
HCM 2000 Control Delay	4.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	132.1	Sum of lost time (s)	10.0
Intersection Capacity Utilization	65.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
24: Nimitz & Bishop

10/25/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	3250	130	0	2056	0	33	0	17	263	34	320
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0		5.0		5.0		5.0	5.0	5.0	5.0
Lane Util. Factor		0.86	1.00		0.91		1.00		1.00	0.97	1.00	1.00
Frpb, ped/bikes		1.00	0.95		1.00		1.00		1.00	1.00	1.00	0.82
Flpb, ped/bikes		1.00	1.00		1.00		1.00		1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00		1.00		0.85	1.00	1.00	0.85
Flt Protected		1.00	1.00		1.00		0.95		1.00	0.95	1.00	1.00
Satd. Flow (prot)		6408	1500		5085		1770		1583	3261	1863	1304
Flt Permitted		1.00	1.00		1.00		0.73		1.00	0.95	1.00	1.00
Satd. Flow (perm)		6408	1500		5085		1368		1583	3261	1863	1304
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	3316	133	0	2098	0	34	0	17	268	35	327
RTOR Reduction (vph)	0	0	34	0	0	0	0	0	12	0	0	12
Lane Group Flow (vph)	0	3316	99	0	2098	0	34	0	5	268	35	315
Confl. Peds. (#/hr)			17									69
Parking (#/hr)										0		
Turn Type		NA	Perm		NA		custom		custom	Perm	NA	Perm
Protected Phases		2			6						4	
Permitted Phases			2				8		8	4		4
Actuated Green, G (s)		83.4	83.4		83.4		36.4		36.4	36.4	36.4	36.4
Effective Green, g (s)		83.4	83.4		83.4		36.4		36.4	36.4	36.4	36.4
Actuated g/C Ratio		0.64	0.64		0.64		0.28		0.28	0.28	0.28	0.28
Clearance Time (s)		5.0	5.0		5.0		5.0		5.0	5.0	5.0	5.0
Vehicle Extension (s)		3.0	3.0		3.0		3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		4117	963		3267		383		443	914	522	365
v/s Ratio Prot		c0.52			0.41						0.02	
v/s Ratio Perm			0.07				0.02		0.00	0.08		c0.24
v/c Ratio		0.81	0.10		0.64		0.09		0.01	0.29	0.07	0.86
Uniform Delay, d1		17.2	8.9		14.1		34.5		33.7	36.6	34.2	44.4
Progression Factor		1.00	1.00		1.00		1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2		1.2	0.0		0.4		0.1		0.0	0.2	0.1	18.7
Delay (s)		18.4	8.9		14.6		34.6		33.7	36.8	34.3	63.0
Level of Service		B	A		B		C		C	D	C	E
Approach Delay (s)		18.0			14.6			34.3			50.3	
Approach LOS		B			B			C			D	

Intersection Summary			
HCM 2000 Control Delay	20.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	129.8	Sum of lost time (s)	10.0
Intersection Capacity Utilization	79.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
24: Nimitz & Bishop

10/25/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	2890	83	0	2400	0	48	0	41	213	49	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0		5.0		5.0		5.0	5.0	5.0	5.0
Lane Util. Factor		0.86	1.00		0.91		1.00		1.00	0.97	1.00	1.00
Frpb, ped/bikes		1.00	0.97		1.00		1.00		1.00	1.00	1.00	0.74
Flpb, ped/bikes		1.00	1.00		1.00		1.00		1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00		1.00		0.85	1.00	1.00	0.85
Flt Protected		1.00	1.00		1.00		0.95		1.00	0.95	1.00	1.00
Satd. Flow (prot)		6408	1534		5085		1770		1583	3261	1863	1168
Flt Permitted		1.00	1.00		1.00		0.72		1.00	0.95	1.00	1.00
Satd. Flow (perm)		6408	1534		5085		1348		1583	3261	1863	1168
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)	0	3010	86	0	2500	0	50	0	43	222	51	96
RTOR Reduction (vph)	0	0	17	0	0	0	0	0	14	0	0	14
Lane Group Flow (vph)	0	3010	69	0	2500	0	50	0	29	222	51	82
Confl. Peds. (#/hr)			8									106
Parking (#/hr)										0		
Turn Type		NA	Perm		NA		custom		custom	Perm	NA	Perm
Protected Phases		2			6						4	
Permitted Phases			2				8		8	4		4
Actuated Green, G (s)		103.1	103.1		103.1		15.4		15.4	15.4	15.4	15.4
Effective Green, g (s)		103.1	103.1		103.1		15.4		15.4	15.4	15.4	15.4
Actuated g/C Ratio		0.80	0.80		0.80		0.12		0.12	0.12	0.12	0.12
Clearance Time (s)		5.0	5.0		5.0		5.0		5.0	5.0	5.0	5.0
Vehicle Extension (s)		3.0	3.0		3.0		3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		5141	1230		4079		161		189	390	223	139
v/s Ratio Prot		0.47			c0.49						0.03	
v/s Ratio Perm			0.04				0.04		0.02	0.07		c0.07
v/c Ratio		0.59	0.06		0.61		0.31		0.15	0.57	0.23	0.59
Uniform Delay, d1		4.7	2.6		4.9		51.7		50.7	53.4	51.2	53.6
Progression Factor		1.00	1.00		1.00		1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2		0.2	0.0		0.3		1.1		0.4	1.9	0.5	6.3
Delay (s)		4.9	2.6		5.2		52.8		51.1	55.3	51.7	59.8
Level of Service		A	A		A		D		D	E	D	E
Approach Delay (s)		4.8			5.2			52.0			56.0	
Approach LOS		A			A			D			E	

Intersection Summary			
HCM 2000 Control Delay	8.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	128.5	Sum of lost time (s)	10.0
Intersection Capacity Utilization	74.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
42: Nimitz & Alakea

10/22/2013

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	650	2464	1886	398	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	4.0	5.0	5.0		
Lane Util. Factor	0.97	0.91	0.91	1.00		
Frpb, ped/bikes	1.00	1.00	1.00	0.85		
Flpb, ped/bikes	1.00	1.00	1.00	1.00		
Frt	1.00	1.00	1.00	0.85		
Flt Protected	0.95	1.00	1.00	1.00		
Satd. Flow (prot)	3433	5085	5085	1344		
Flt Permitted	0.95	1.00	1.00	1.00		
Satd. Flow (perm)	3433	5085	5085	1344		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	684	2594	1985	419	0	0
RTOR Reduction (vph)	0	0	0	26	0	0
Lane Group Flow (vph)	684	2594	1985	393	0	0
Confl. Peds. (#/hr)				72		
Turn Type	Prot	NA	NA	Perm		
Protected Phases	5	Free	6			
Permitted Phases				6		
Actuated Green, G (s)	27.9	105.3	67.4	67.4		
Effective Green, g (s)	27.9	105.3	67.4	67.4		
Actuated g/C Ratio	0.26	1.00	0.64	0.64		
Clearance Time (s)	5.0		5.0	5.0		
Vehicle Extension (s)	3.0		3.0	3.0		
Lane Grp Cap (vph)	909	5085	3254	860		
v/s Ratio Prot	c0.20	0.51	c0.39			
v/s Ratio Perm				0.29		
v/c Ratio	0.75	0.51	0.61	0.46		
Uniform Delay, d1	35.5	0.0	11.2	9.6		
Progression Factor	1.00	1.00	1.00	1.00		
Incremental Delay, d2	3.6	0.4	0.3	0.4		
Delay (s)	39.1	0.4	11.5	10.0		
Level of Service	D	A	B	B		
Approach Delay (s)		8.4	11.3		0.0	
Approach LOS		A	B		A	

Intersection Summary			
HCM 2000 Control Delay	9.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	105.3	Sum of lost time (s)	10.0
Intersection Capacity Utilization	63.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
42: Nimitz & Alakea

10/22/2013

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	356	2148	2215	297	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	4.0	5.0	5.0		
Lane Util. Factor	0.97	0.91	0.91	1.00		
Frpb, ped/bikes	1.00	1.00	1.00	0.74		
Flpb, ped/bikes	1.00	1.00	1.00	1.00		
Frt	1.00	1.00	1.00	0.85		
Flt Protected	0.95	1.00	1.00	1.00		
Satd. Flow (prot)	3433	5085	5085	1169		
Flt Permitted	0.95	1.00	1.00	1.00		
Satd. Flow (perm)	3433	5085	5085	1169		
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	371	2238	2307	309	0	0
RTOR Reduction (vph)	0	0	0	28	0	0
Lane Group Flow (vph)	371	2238	2307	281	0	0
Confl. Peds. (#/hr)				126		
Turn Type	Prot	NA	NA	Perm		
Protected Phases	5	Free	6			
Permitted Phases				6		
Actuated Green, G (s)	17.8	107.9	80.1	80.1		
Effective Green, g (s)	17.8	107.9	80.1	80.1		
Actuated g/C Ratio	0.16	1.00	0.74	0.74		
Clearance Time (s)	5.0		5.0	5.0		
Vehicle Extension (s)	3.0		3.0	3.0		
Lane Grp Cap (vph)	566	5085	3774	867		
v/s Ratio Prot	c0.11	0.44	c0.45			
v/s Ratio Perm				0.24		
v/c Ratio	0.66	0.44	0.61	0.32		
Uniform Delay, d1	42.2	0.0	6.6	4.7		
Progression Factor	1.00	1.00	1.00	1.00		
Incremental Delay, d2	2.7	0.3	0.3	0.2		
Delay (s)	44.9	0.3	6.9	4.9		
Level of Service	D	A	A	A		
Approach Delay (s)		6.6	6.6		0.0	
Approach LOS		A	A		A	

Intersection Summary			
HCM 2000 Control Delay	6.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	107.9	Sum of lost time (s)	10.0
Intersection Capacity Utilization	61.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
7: Nimitz & Halekauwila

10/22/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	420	2146	3	52	2302	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0							
Lane Util. Factor	1.00	0.91		1.00	0.91							
Frpb, ped/bikes	1.00	1.00		1.00	1.00							
Flpb, ped/bikes	1.00	1.00		1.00	1.00							
Frt	1.00	1.00		1.00	1.00							
Flt Protected	0.95	1.00		0.95	1.00							
Satd. Flow (prot)	1770	5084		1770	5085							
Flt Permitted	0.95	1.00		0.95	1.00							
Satd. Flow (perm)	1770	5084		1770	5085							
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	462	2358	3	57	2530	0	0	0	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	462	2361	0	57	2530	0	0	0	0	0	0	0
Confl. Peds. (#/hr)			5									
Turn Type	Prot	NA		Prot	NA							
Protected Phases	5	2		1	6							
Permitted Phases												
Actuated Green, G (s)	37.8	111.5		7.2	80.9							
Effective Green, g (s)	37.8	111.5		7.2	80.9							
Actuated g/C Ratio	0.29	0.87		0.06	0.63							
Clearance Time (s)	5.0	5.0		5.0	5.0							
Vehicle Extension (s)	3.0	3.0		3.0	3.0							
Lane Grp Cap (vph)	519	4404		99	3196							
v/s Ratio Prot	c0.26	0.46		0.03	c0.50							
v/s Ratio Perm												
v/c Ratio	0.89	0.54		0.58	0.79							
Uniform Delay, d1	43.5	2.1		59.3	17.7							
Progression Factor	1.00	1.00		1.00	1.00							
Incremental Delay, d2	17.2	0.1		7.9	1.4							
Delay (s)	60.7	2.3		67.1	19.1							
Level of Service	E	A		E	B							
Approach Delay (s)		11.8			20.1			0.0			0.0	
Approach LOS		B			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	15.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	128.7	Sum of lost time (s)	10.0
Intersection Capacity Utilization	76.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
7: Nimitz & Halekauwila

10/22/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	348	1800	4	51	2523	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0							
Lane Util. Factor	1.00	0.91		1.00	0.91							
Frpb, ped/bikes	1.00	1.00		1.00	1.00							
Flpb, ped/bikes	1.00	1.00		1.00	1.00							
Frt	1.00	1.00		1.00	1.00							
Flt Protected	0.95	1.00		0.95	1.00							
Satd. Flow (prot)	1770	5083		1770	5085							
Flt Permitted	0.95	1.00		0.95	1.00							
Satd. Flow (perm)	1770	5083		1770	5085							
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	359	1856	4	53	2601	0	0	0	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	359	1860	0	53	2601	0	0	0	0	0	0	0
Confl. Peds. (#/hr)			8									
Turn Type	Prot	NA		Prot	NA							
Protected Phases	5	2		1	6							
Permitted Phases												
Actuated Green, G (s)	30.8	110.2		6.7	86.1							
Effective Green, g (s)	30.8	110.2		6.7	86.1							
Actuated g/C Ratio	0.24	0.87		0.05	0.68							
Clearance Time (s)	5.0	5.0		5.0	5.0							
Vehicle Extension (s)	3.0	3.0		3.0	3.0							
Lane Grp Cap (vph)	429	4414		93	3450							
v/s Ratio Prot	c0.20	0.37		0.03	c0.51							
v/s Ratio Perm												
v/c Ratio	0.84	0.42		0.57	0.75							
Uniform Delay, d1	45.7	1.7		58.7	13.4							
Progression Factor	1.00	1.00		1.00	1.00							
Incremental Delay, d2	13.3	0.1		7.8	1.0							
Delay (s)	58.9	1.8		66.5	14.4							
Level of Service	E	A		E	B							
Approach Delay (s)		11.0			15.4			0.0			0.0	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	13.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	126.9	Sum of lost time (s)	10.0
Intersection Capacity Utilization	76.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

APPENDIX D

CAPACITY ANALYSIS CALCULATIONS
PROJECTED YEAR 2015 PEAK HOUR
TRAFFIC ANALYSIS

HCM Signalized Intersection Capacity Analysis
3: Aloha Tower & Nimitz

10/22/2013

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	3449	72	0	2326	18	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0			5.0	5.0	5.0
Lane Util. Factor	0.86			0.91	1.00	1.00
Frt	1.00			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	6388			5085	1770	1583
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	6388			5085	1770	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	3593	75	0	2423	19	7
RTOR Reduction (vph)	1	0	0	0	0	2
Lane Group Flow (vph)	3667	0	0	2423	19	5
Turn Type	NA			NA	NA	Perm
Protected Phases	2			2	8	
Permitted Phases						8
Actuated Green, G (s)	114.3			114.3	4.5	4.5
Effective Green, g (s)	114.3			114.3	4.5	4.5
Actuated g/C Ratio	0.89			0.89	0.03	0.03
Clearance Time (s)	5.0			5.0	5.0	5.0
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	5668			4512	61	55
v/s Ratio Prot	c0.57			0.48	c0.01	
v/s Ratio Perm						0.00
v/c Ratio	0.65			0.54	0.31	0.09
Uniform Delay, d1	1.9			1.6	60.6	60.2
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	0.3			0.1	2.9	0.7
Delay (s)	2.2			1.7	63.5	60.9
Level of Service	A			A	E	E
Approach Delay (s)	2.2			1.7	62.8	
Approach LOS	A			A	E	

Intersection Summary			
HCM 2000 Control Delay	2.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	128.8	Sum of lost time (s)	10.0
Intersection Capacity Utilization	62.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
3: Aloha Tower & Nimitz

10/22/2013

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	2991	54	0	2818	66	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0			5.0	5.0	5.0
Lane Util. Factor	0.86			0.91	1.00	1.00
Frpb, ped/bikes	1.00			1.00	1.00	1.00
Flpb, ped/bikes	1.00			1.00	1.00	1.00
Frt	1.00			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	6385			5085	1770	1583
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	6385			5085	1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	3251	59	0	3063	72	40
RTOR Reduction (vph)	1	0	0	0	0	4
Lane Group Flow (vph)	3309	0	0	3063	72	36
Confl. Peds. (#/hr)		15				
Turn Type	NA			NA	NA	Perm
Protected Phases	2			2	8	
Permitted Phases						8
Actuated Green, G (s)	112.9			112.9	9.2	9.2
Effective Green, g (s)	112.9			112.9	9.2	9.2
Actuated g/C Ratio	0.85			0.85	0.07	0.07
Clearance Time (s)	5.0			5.0	5.0	5.0
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	5456			4345	123	110
v/s Ratio Prot	0.52			c0.60	c0.04	
v/s Ratio Perm						0.02
v/c Ratio	0.61			0.70	0.59	0.33
Uniform Delay, d1	2.9			3.5	59.6	58.5
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	0.2			0.5	6.9	1.8
Delay (s)	3.1			4.0	66.5	60.3
Level of Service	A			A	E	E
Approach Delay (s)	3.1			4.0	64.3	
Approach LOS	A			A	E	

Intersection Summary			
HCM 2000 Control Delay	4.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	132.1	Sum of lost time (s)	10.0
Intersection Capacity Utilization	66.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
24: Nimitz & Bishop

10/25/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	3315	130	0	2097	0	33	0	17	268	34	326
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0		5.0		5.0		5.0	5.0	5.0	5.0
Lane Util. Factor		0.86	1.00		0.91		1.00		1.00	0.97	1.00	1.00
Frpb, ped/bikes		1.00	0.95		1.00		1.00		1.00	1.00	1.00	0.82
Flpb, ped/bikes		1.00	1.00		1.00		1.00		1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00		1.00		0.85	1.00	1.00	0.85
Flt Protected		1.00	1.00		1.00		0.95		1.00	0.95	1.00	1.00
Satd. Flow (prot)		6408	1500		5085		1770		1583	3261	1863	1302
Flt Permitted		1.00	1.00		1.00		0.73		1.00	0.95	1.00	1.00
Satd. Flow (perm)		6408	1500		5085		1368		1583	3261	1863	1302
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	3383	133	0	2140	0	34	0	17	273	35	333
RTOR Reduction (vph)	0	0	34	0	0	0	0	0	11	0	0	11
Lane Group Flow (vph)	0	3383	99	0	2140	0	34	0	6	273	35	322
Confl. Peds. (#/hr)			17									69
Parking (#/hr)										0		
Turn Type		NA	Perm		NA		custom		custom	Perm	NA	Perm
Protected Phases		2			6						4	
Permitted Phases			2				8		8	4		4
Actuated Green, G (s)		83.4	83.4		83.4		37.4		37.4	37.4	37.4	37.4
Effective Green, g (s)		83.4	83.4		83.4		37.4		37.4	37.4	37.4	37.4
Actuated g/C Ratio		0.64	0.64		0.64		0.29		0.29	0.29	0.29	0.29
Clearance Time (s)		5.0	5.0		5.0		5.0		5.0	5.0	5.0	5.0
Vehicle Extension (s)		3.0	3.0		3.0		3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		4085	956		3242		391		452	932	532	372
v/s Ratio Prot		c0.53			0.42						0.02	
v/s Ratio Perm			0.07				0.02		0.00	0.08		c0.25
v/c Ratio		0.83	0.10		0.66		0.09		0.01	0.29	0.07	0.86
Uniform Delay, d1		18.2	9.2		14.8		34.2		33.5	36.4	34.0	44.3
Progression Factor		1.00	1.00		1.00		1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2		1.5	0.0		0.5		0.1		0.0	0.2	0.1	18.4
Delay (s)		19.7	9.2		15.3		34.3		33.5	36.6	34.0	62.7
Level of Service		B	A		B		C		C	D	C	E
Approach Delay (s)		19.3			15.3			34.0			50.0	
Approach LOS		B			B			C			D	

Intersection Summary

HCM 2000 Control Delay	21.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	130.8	Sum of lost time (s)	10.0
Intersection Capacity Utilization	80.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
24: Nimitz & Bishop

10/25/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	2948	83	0	2448	0	48	0	41	217	49	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0		5.0		5.0		5.0	5.0	5.0	5.0
Lane Util. Factor		0.86	1.00		0.91		1.00		1.00	0.97	1.00	1.00
Frpb, ped/bikes		1.00	0.97		1.00		1.00		1.00	1.00	1.00	0.74
Flpb, ped/bikes		1.00	1.00		1.00		1.00		1.00	1.00	1.00	1.00
Frt		1.00	0.85		1.00		1.00		0.85	1.00	1.00	0.85
Flt Protected		1.00	1.00		1.00		0.95		1.00	0.95	1.00	1.00
Satd. Flow (prot)		6408	1534		5085		1770		1583	3261	1863	1167
Flt Permitted		1.00	1.00		1.00		0.72		1.00	0.95	1.00	1.00
Satd. Flow (perm)		6408	1534		5085		1348		1583	3261	1863	1167
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)	0	3071	86	0	2550	0	50	0	43	226	51	98
RTOR Reduction (vph)	0	0	17	0	0	0	0	0	14	0	0	14
Lane Group Flow (vph)	0	3071	69	0	2550	0	50	0	29	226	51	84
Confl. Peds. (#/hr)			8									106
Parking (#/hr)										0		
Turn Type		NA	Perm		NA		custom		custom	Perm	NA	Perm
Protected Phases		2			6						4	
Permitted Phases			2				8		8	4		4
Actuated Green, G (s)		103.1	103.1		103.1		15.6		15.6	15.6	15.6	15.6
Effective Green, g (s)		103.1	103.1		103.1		15.6		15.6	15.6	15.6	15.6
Actuated g/C Ratio		0.80	0.80		0.80		0.12		0.12	0.12	0.12	0.12
Clearance Time (s)		5.0	5.0		5.0		5.0		5.0	5.0	5.0	5.0
Vehicle Extension (s)		3.0	3.0		3.0		3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		5133	1228		4073		163		191	395	225	141
v/s Ratio Prot		0.48			c0.50						0.03	
v/s Ratio Perm			0.04				0.04		0.02	0.07		c0.07
v/c Ratio		0.60	0.06		0.63		0.31		0.15	0.57	0.23	0.60
Uniform Delay, d1		4.9	2.7		5.1		51.6		50.6	53.4	51.1	53.6
Progression Factor		1.00	1.00		1.00		1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2		0.2	0.0		0.3		1.1		0.4	2.0	0.5	6.6
Delay (s)		5.1	2.7		5.4		52.7		51.0	55.4	51.6	60.2
Level of Service		A	A		A		D		D	E	D	E
Approach Delay (s)		5.0			5.4			51.9			56.1	
Approach LOS		A			A			D			E	

Intersection Summary

HCM 2000 Control Delay	9.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	128.7	Sum of lost time (s)	10.0
Intersection Capacity Utilization	75.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
42: Nimitz & Alakea

10/22/2013

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	663	2513	1924	406	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	4.0	5.0	5.0		
Lane Util. Factor	0.97	0.91	0.91	1.00		
Frpb, ped/bikes	1.00	1.00	1.00	0.85		
Flpb, ped/bikes	1.00	1.00	1.00	1.00		
Frt	1.00	1.00	1.00	0.85		
Flt Protected	0.95	1.00	1.00	1.00		
Satd. Flow (prot)	3433	5085	5085	1338		
Flt Permitted	0.95	1.00	1.00	1.00		
Satd. Flow (perm)	3433	5085	5085	1338		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	698	2645	2025	427	0	0
RTOR Reduction (vph)	0	0	0	24	0	0
Lane Group Flow (vph)	698	2645	2025	403	0	0
Confl. Peds. (#/hr)				72		
Turn Type	Prot	NA	NA	Perm		
Protected Phases	5	Free	6			
Permitted Phases				6		
Actuated Green, G (s)	28.8	108.0	69.2	69.2		
Effective Green, g (s)	28.8	108.0	69.2	69.2		
Actuated g/C Ratio	0.27	1.00	0.64	0.64		
Clearance Time (s)	5.0		5.0	5.0		
Vehicle Extension (s)	3.0		3.0	3.0		
Lane Grp Cap (vph)	915	5085	3258	857		
v/s Ratio Prot	c0.20	0.52	c0.40			
v/s Ratio Perm				0.30		
v/c Ratio	0.76	0.52	0.62	0.47		
Uniform Delay, d1	36.5	0.0	11.6	10.0		
Progression Factor	1.00	1.00	1.00	1.00		
Incremental Delay, d2	3.8	0.4	0.4	0.4		
Delay (s)	40.3	0.4	12.0	10.4		
Level of Service	D	A	B	B		
Approach Delay (s)		8.7	11.7		0.0	
Approach LOS		A	B		A	

Intersection Summary			
HCM 2000 Control Delay	10.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	108.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	64.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
42: Nimitz & Alakea

10/22/2013

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	363	2190	2259	303	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	4.0	5.0	5.0		
Lane Util. Factor	0.97	0.91	0.91	1.00		
Frpb, ped/bikes	1.00	1.00	1.00	0.73		
Flpb, ped/bikes	1.00	1.00	1.00	1.00		
Frt	1.00	1.00	1.00	0.85		
Flt Protected	0.95	1.00	1.00	1.00		
Satd. Flow (prot)	3433	5085	5085	1157		
Flt Permitted	0.95	1.00	1.00	1.00		
Satd. Flow (perm)	3433	5085	5085	1157		
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	378	2281	2353	316	0	0
RTOR Reduction (vph)	0	0	0	27	0	0
Lane Group Flow (vph)	378	2281	2353	289	0	0
Confl. Peds. (#/hr)				126		
Turn Type	Prot	NA	NA	Perm		
Protected Phases	5	Free	6			
Permitted Phases				6		
Actuated Green, G (s)	18.3	111.1	82.8	82.8		
Effective Green, g (s)	18.3	111.1	82.8	82.8		
Actuated g/C Ratio	0.16	1.00	0.75	0.75		
Clearance Time (s)	5.0		5.0	5.0		
Vehicle Extension (s)	3.0		3.0	3.0		
Lane Grp Cap (vph)	565	5085	3789	862		
v/s Ratio Prot	c0.11	0.45	c0.46			
v/s Ratio Perm				0.25		
v/c Ratio	0.67	0.45	0.62	0.34		
Uniform Delay, d1	43.6	0.0	6.7	4.8		
Progression Factor	1.00	1.00	1.00	1.00		
Incremental Delay, d2	3.0	0.3	0.3	0.2		
Delay (s)	46.6	0.3	7.0	5.0		
Level of Service	D	A	A	A		
Approach Delay (s)		6.9	6.8		0.0	
Approach LOS		A	A		A	

Intersection Summary			
HCM 2000 Control Delay	6.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	111.1	Sum of lost time (s)	10.0
Intersection Capacity Utilization	62.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
7: Nimitz & Halekauwila

10/22/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	428	2188	3	52	2348	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0							
Lane Util. Factor	1.00	0.91		1.00	0.91							
Frpb, ped/bikes	1.00	1.00		1.00	1.00							
Flpb, ped/bikes	1.00	1.00		1.00	1.00							
Frt	1.00	1.00		1.00	1.00							
Flt Protected	0.95	1.00		0.95	1.00							
Satd. Flow (prot)	1770	5084		1770	5085							
Flt Permitted	0.95	1.00		0.95	1.00							
Satd. Flow (perm)	1770	5084		1770	5085							
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	470	2404	3	57	2580	0	0	0	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	470	2407	0	57	2580	0	0	0	0	0	0	0
Confl. Peds. (#/hr)			5									
Turn Type	Prot	NA		Prot	NA							
Protected Phases	5	2		1	6							
Permitted Phases												
Actuated Green, G (s)	38.6	113.9		7.3	82.6							
Effective Green, g (s)	38.6	113.9		7.3	82.6							
Actuated g/C Ratio	0.29	0.87		0.06	0.63							
Clearance Time (s)	5.0	5.0		5.0	5.0							
Vehicle Extension (s)	3.0	3.0		3.0	3.0							
Lane Grp Cap (vph)	520	4413		98	3201							
v/s Ratio Prot	c0.27	0.47		0.03	c0.51							
v/s Ratio Perm												
v/c Ratio	0.90	0.55		0.58	0.81							
Uniform Delay, d1	44.5	2.2		60.5	18.3							
Progression Factor	1.00	1.00		1.00	1.00							
Incremental Delay, d2	19.0	0.1		8.5	1.6							
Delay (s)	63.5	2.3		69.0	19.8							
Level of Service	E	A		E	B							
Approach Delay (s)		12.3			20.9			0.0			0.0	
Approach LOS		B			C			A			A	

Intersection Summary

HCM 2000 Control Delay	16.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	131.2	Sum of lost time (s)	10.0
Intersection Capacity Utilization	77.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
7: Nimitz & Halekauwila

10/22/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	355	1836	4	51	2573	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0							
Lane Util. Factor	1.00	0.91		1.00	0.91							
Frpb, ped/bikes	1.00	1.00		1.00	1.00							
Flpb, ped/bikes	1.00	1.00		1.00	1.00							
Frt	1.00	1.00		1.00	1.00							
Flt Protected	0.95	1.00		0.95	1.00							
Satd. Flow (prot)	1770	5083		1770	5085							
Flt Permitted	0.95	1.00		0.95	1.00							
Satd. Flow (perm)	1770	5083		1770	5085							
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	366	1893	4	53	2653	0	0	0	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	366	1897	0	53	2653	0	0	0	0	0	0	0
Confl. Peds. (#/hr)			8									
Turn Type	Prot	NA		Prot	NA							
Protected Phases	5	2		1	6							
Permitted Phases												
Actuated Green, G (s)	31.4	112.2		6.7	87.5							
Effective Green, g (s)	31.4	112.2		6.7	87.5							
Actuated g/C Ratio	0.24	0.87		0.05	0.68							
Clearance Time (s)	5.0	5.0		5.0	5.0							
Vehicle Extension (s)	3.0	3.0		3.0	3.0							
Lane Grp Cap (vph)	431	4424		92	3451							
v/s Ratio Prot	c0.21	0.37		0.03	c0.52							
v/s Ratio Perm												
v/c Ratio	0.85	0.43		0.58	0.77							
Uniform Delay, d1	46.5	1.7		59.7	13.9							
Progression Factor	1.00	1.00		1.00	1.00							
Incremental Delay, d2	14.4	0.1		8.5	1.1							
Delay (s)	60.9	1.8		68.2	15.0							
Level of Service	E	A		E	B							
Approach Delay (s)		11.4			16.0			0.0			0.0	
Approach LOS		B			B			A			A	

Intersection Summary

HCM 2000 Control Delay	13.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	128.9	Sum of lost time (s)	10.0
Intersection Capacity Utilization	77.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

APPENDIX B

Pre-Assessment Consultation Comment and Response Letters

OFFICE OF PLANNING
STATE OF HAWAII

235 South Beretania Street, 6th Floor, Honolulu, Hawaii 96813
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

NEIL ABERCROMBIE
GOVERNOR

JESSE K. SOUKI
DIRECTOR
OFFICE OF PLANNING

Telephone: (808) 587-2846
Fax: (808) 587-2824
Web: http:/planning.hawaii.gov/

Ref. No. P-14086

August 20, 2013

Mr. Earl Matsukawa, AICP
Wilson Okamoto Corporation
1907 S. Beretania Street, Suite 400
Honolulu, Hawaii 96826

RECEIVED
AUG 22 2013
WILSON OKAMOTO CORPORATION

Dear Mr. Matsukawa:

Subject: Pre-Assessment Consultation for the Preparation of an Environmental Assessment of the Hawaii Pacific University Aloha Tower Marketplace Project, TMK: (1) 2-1-001:063, Honolulu, Hawaii

Thank you for the opportunity to provide comments on the Pre-Assessment Consultation Environmental Assessment for the Hawaii Pacific University Aloha Tower Marketplace Project.

We have reviewed the documents you submitted to us via letter dated August 8, 2013, and have the following comments to offer:

1. The entire state is defined to be within the Coastal Zone Management Area, pursuant to Hawaii Revised Statutes (HRS) §205A-1 (definition of "coastal zone management area"). The Draft Environmental Assessment (Draft EA) should include a discussion of the proposed project's ability to meet the objectives and policies set forth in HRS §205A-2.

2. CZM federal consistency review by the Hawaii CZM Program may be required if a Department of the Army Permit from the U.S. Army Corps of Engineers is required for any portion of the project. If other federal permits are required, then CZM federal consistency review may also be required for these permits.

3. The improvement project may have nonpoint pollution impacts on coastal waters. The applicant should review the Hawaii Watershed Guidance, which provides a summary and links to management measures that may be implemented to minimize coastal nonpoint pollution impact. This Guidance can be viewed or downloaded from the Office of Planning website at http://files.hawaii.gov/dbedt/op/czm/initiative/nonpoint/HI Watershed Guidance Final.pdf.

4. The Draft EA should include the Coastal Zone Management Act, HRS Chapter 205A, in a list that addresses the project's relationship to land use plans, policies, and controls.

If you have any questions regarding this comment letter, please contact Josh Hekekia of our Hawaii CZM Program at 587-2845.

Sincerely,

Jesse K. Souki
Director

WILSON OKAMOTO
CORPORATION
ENGINEERS | PLANNERS | CONSULTANTS

1907 South Beretania Street
Artesian Plaza, Suite 400
Honolulu, Hawaii, 96826 USA
Phone: 808-946-2277
FAX: 808-946-2253
www.wilsonokamoto.com

8428-01
February 23, 2014

Mr. Jesse K. Souki, Director
State of Hawai'i
Office of Planning
235 South Beretania Street, 6th Floor
Honolulu, Hawai'i 96813

Subject: Pre-Assessment Consultation
Draft Environmental Assessment (EA) for
Hawai'i Pacific University - Aloha Tower Marketplace Project
Honolulu, O'ahu, Hawai'i
TMK (1) 2-1-001:063

Dear Mr. Souki:

Thank you for your letter dated August 20, 2013 (Ref. No. P-14086) regarding the subject Draft EA pre-assessment consultation. We offer you the following response in the order of your comments:

1. The Draft EA shall include a discussion of the proposed project's ability to meet the objectives and policies set forth in HRS Chapter 205A-2.

2. The project will not require a Department of the Army Permit from the U.S. Army Corps of Engineers, nor any other federal permits. Therefore, we do not anticipate the need for a CZM federal consistency review pertaining to the proposed project.

3. The proposed project is not anticipated to increase impacts to coastal waters as it will not involve any land disturbing activities or any change in drainage from the project site. The proposed project involves mostly interior tenant improvements to existing buildings and some exterior repair and rehabilitation to existing structures.

4. The State Department of Health, Hawaii Administrative Rules (HAR) Title 11, Chapter 200, does not require an EA to address the project's relationship to land use plans, policies, and controls. However, it does require a list of all permits and approvals. Compliance with HRS Chapter 205A will be included on this list in the Draft EA.

Your letter, along with this response, will be reproduced and included in the forthcoming Draft EA. We appreciate your participation in the pre-assessment consultation review process.

Sincerely,

Earl Matsukawa, AICP
Project Manager

cc: Mr. Scott Hayashi, Hawai'i Pacific University

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

LORETTA J. FUDDY, A.C.S.W., M.P.H.
DIRECTOR OF HEALTH

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

In reply, please refer to:
EMD/CWB

08057PGH.13

August 26, 2013

RECEIVED
AUG 27 2013
WILSON OKAMOTO CORPORATION

Mr. Earl Mitsukawa, AICP
Project Manager
Wilson Okamoto Corporation
1907 South Beretania Street
Artesian Plaza, Suite 400
Honolulu, Hawaii 96826

Dear Mr. Matsukawa:

SUBJECT: Comments on the Pre-Assessment Consultation for the Preparation of an Environmental Assessment (EA) of the Hawaii Pacific University Aloha Tower Marketplace Project TMK: 2-1-001:063 Honolulu, Oahu, Hawaii

The Department of Health (DOH), Clean Water Branch (CWB), acknowledges receipt of your letter, dated August 8, 2013, requesting comments on your project. The DOH-CWB has reviewed the subject document and offers these comments. Please note that our review is based solely on the information provided in the subject document and its compliance with the Hawaii Administrative Rules (HAR), Chapters 11-54 and 11-55. You may be responsible for fulfilling additional requirements related to our program. We recommend that you also read our standard comments on our website at: http://health.hawaii.gov/epo/files/2013/05/CWB-standardcomment.pdf.

1. Any project and its potential impacts to State waters must meet the following criteria:

   a. Antidegradation policy (HAR, Section 11-54-1.1), which requires that the existing uses and the level of water quality necessary to protect the existing uses of the receiving State water be maintained and protected.

   b. Designated uses (HAR, Section 11-54-3), as determined by the classification of the receiving State waters.

   c. Water quality criteria (HAR, Sections 11-54-4 through 11-54-8).

2. You may be required to obtain a National Pollutant Discharge Elimination System (NPDES) permit for discharges of wastewater, including storm water runoff, into State surface waters (HAR, Chapter 11-55). An application for an NPDES individual permit must be submitted at least 180 calendar days before the commencement of the

discharge. To request NPDES permit coverage, you must submit the CWB Individual NPDES Form through the e-Permitting Portal and the hard copy certification statement with $1,000 filing fee. Please open the e-Permitting Portal website at: https://eha-cloud.doh.hawaii.gov/epermit/View/home.aspx. You will be asked to do a one-time registration to obtain your login and password. After you register, click on the Application Finder tool and locate the "CWB Individual NPDES Form." Follow the instructions to complete and submit this form.

3. If your project involves work in, over, or under waters of the United States, it is highly recommend that you contact the Army Corp of Engineers, Regulatory Branch (Tel: 438-9258) regarding their permitting requirements.

   Pursuant to Federal Water Pollution Control Act [commonly known as the "Clean Water Act" (CWA)], Paragraph 401(a)(1), a Section 401 Water Quality Certification (WQC) is required for "[a]ny applicant for Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may **result** in any discharge into the navigable waters..." (emphasis added). The term "discharge" is defined in CWA, Subsections 502(16), 502(12), and 502(6); Title 40 of the Code of Federal Regulations, Section 122.2; and HAR, Chapter 11-54.

4. Please note that all discharges related to the project construction or operation activities, whether or not NPDES permit coverage and/or Section 401 WQC are required, must comply with the State's Water Quality Standards. Noncompliance with water quality requirements contained in HAR, Chapter 11-54, and/or permitting requirements, specified in HAR, Chapter 11-55, may be subject to penalties of $25,000 per day per violation.

If you have any questions, please visit our website at: http://health.hawaii.gov/cwb/, or contact the Engineering Section, CWB, at (808) 586-4309.

Sincerely,

Alec Wong

ALEC WONG, P.E., CHIEF
Clean Water Branch

GH:np

c: DOH-EPO [via e-mail only]

WILSON OKAMOTO
CORPORATION
ENGINEERS | PLANNERS | CONSULTANTS

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Artesian Plaza, Suite 400
Honolulu, Hawaii, 96826 USA
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FAX: 808-946-2253
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8428-01
February 23, 2014

Mr. Alec Wong, P.E., Chief
State of Hawai'i
Department of Health
Clean Water Branch
P.O. Box 3378
Honolulu, Hawai'i 96801-3378

Subject: Pre-Assessment Consultation
Draft Environmental Assessment (EA) for
Hawai'i Pacific University - Aloha Tower Marketplace Project
Honolulu, O'ahu, Hawai'i
TMK (1) 2-1-001:063

Dear Mr. Wong:

Thank you for your letter dated August 26, 2013 (EMD/CWB 08057PGH.13) regarding the subject Draft EA pre-assessment consultation. We offer the following response in the respective order of your comments:

We will review your Department's Standard Comments on your website and any comments applicable shall be complied with during project implementation.

The proposed project is not anticipated to increase impacts to coastal waters as it will not involve land disturbing activities or any change in drainage from the project site. The proposed project involves mostly interior tenant improvements to existing buildings and some exterior repair and rehabilitation to existing structures. Therefore, no impacts to State waters are anticipated and an NPDES permit will not be required.

The project will also not require a Department of the Army Permit from the U.S. Army Corps of Engineers, nor any other federal permits. Nevertheless, any discharges related to the project construction or operation activities will comply with the State's Water Quality Standards.

Your letter, along with this response, will be reproduced and included in the forthcoming Draft EA. We appreciate your participation in the pre-assessment consultation review process.

Sincerely,

Earl Matsukawa, AICP
Project Manager

cc: Mr. Scott Hayashi, Hawai'i Pacific University

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

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

LORETTA J. FUDDY, A.C.S.W., M.P.H.
DIRECTOR OF HEALTH

In reply, please refer to:
File:
13-160
Aloha Tower Marketplace

August 15, 2013

RECEIVED
AUG 21 2013
WILSON OKAMOTO CORPORATION

Mr. Earl Matsukawa, AICP
Project Manager
Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

Dear Mr. Matsukawa:

SUBJECT: Pre-Assessment Consultation for the Preparation of an Environmental Assessment of the Hawaii Pacific University Aloha Tower Marketplace Project
TMK: (1) 2-1-001: 063, Honolulu, Oahu, Hawaii

The Department of Health (DOH), Environmental Planning Office (EPO), acknowledges receipt of your letter regarding the above subject. Thank you for allowing us to review and comment on the subject document. The document was routed to the Department of Health's Clean Water Branch. They will provide specific comments to you if necessary. EPO recommends that you review the Standard Comments found on our website: http://health.hawaii.gov/epo/home/landuse-planning-review-program/. You are required to adhere to all Standard Comments specifically applicable to this application.

EPO suggests that you examine the many sources available on strategies to support the sustainable design of communities, including the:

- U.S. Environmental Protection Agency's report, "Creating Equitable, Health and Sustainable Communities: Strategies for Advancing Smart Grants, Environmental Justice, and Equitable Development" (Feb. 2013), http://www.epa.gov/smartgrowth/pdf/equitable-dev/equitable-development-report-508-011713b.pdf;
- U.S. Environmental Protection Agency's sustainability programs: www.epa.gov/sustainability;
- U.S. Green Building Council's LEED program: www.new.usgbc.org/leed; and
- World Health Organization, www.who.int/hia.

The DOH encourages everyone to apply these sustainability strategies and principles early in the planning and review of projects. We also request that for future projects you consider conducting a Health Impact Assessment (HIA). More information is available at www.cdc.gov/healthyplaces/hia.htm. We request you share all of this information with others to increase community awareness on sustainable, innovative, inspirational, and healthy community design.

We wish to receive notice of the environmental assessment's availability when it is completed. We request a written response confirming receipt of this letter and any other letters you receive from DOH in regards to this submission. You may mail your response to: 919 Ala Moana Blvd., Ste. 312, Honolulu, Hawaii 96814. However, we would prefer an email submission to epo@doh.hawaii.gov. We anticipate that our letter(s) and your response(s) will be included in the final document. If you have any questions, please contact me at (808) 586-4337.

Mahalo,

Laura Leialoha Phillips McIntyre, AICP
Manager, Environmental Planning Office

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www.wilsonokamoto.com

8428-01
February 23, 2014

Ms. Laura Leialoha Phillips McIntyre, AICP
Environmental Planning Office Manager
State of Hawai'i
Department of Health
Environmental Health Administration
919 Ala Moana Blvd., Suite 312
Honolulu, Hawai'i 96814

Subject: Pre-Assessment Consultation
Draft Environmental Assessment (EA) for
Hawai'i Pacific University - Aloha Tower Marketplace Project
Honolulu, O'ahu, Hawai'i
TMK (1) 2-1-001:063

Dear Ms. McIntyre:

Thank you for your letter dated August 15, 2013 (13-160 Aloha Tower Marketplace) regarding the subject Draft EA pre-assessment consultation. We will review your Department's Standard Comments on your website and any comments applicable shall be adhered to during project implementation.

We will also review the sustainable design resources you have provided and will take them into consideration in project design. At this time, HPU is not pursuing LEED certification for the proposed project as improvements involve interior tenant improvements to existing buildings and exterior repair and rehabilitation of existing structures. As HPU is a privately owned and operated university, they are not required to meet the mandated requirements for energy efficiency and environmental standards for state facilities, as set forth in Chapter 196, Section 9 of the Hawaii Revised Statutes (HRS). Nevertheless, to the extent feasible, opportunities for energy efficiency and achievement of environmental standards will be pursued as part of the proposed renovation and rehabilitation work.

Your recommendation of conducting a Health Impact Assessment shall be taken into consideration for future HPU projects.

Your letter, along with this response, will be reproduced and included in the forthcoming Draft EA. Your office shall be notified when the Draft EA is available for public review. We appreciate your participation in the pre-assessment consultation review process.

Sincerely,

Earl Matsukawa, AICP
Project Manager

cc: Mr. Scott Hayashi, Hawai'i Pacific University

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

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

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

September 5, 2013

Wilson Okamoto Corporation
Attention: Mr. Earl Matsukawa, AICP
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

via email: ematsukawa@wilsonokamoto.com

Dear Mr. Matsukawa,

SUBJECT: Pre-Assessment Consultation for the Preparation of an Environmental Assessment (EA) of the Hawai`i Pacific University Aloha Tower Marketplace Project

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

At this time, enclosed are comments from (1) Land Division – Oahu District; (2) Division of Forestry and Wildlife; and (3) Engineering Division. No other comments were received as of our suspense date. Should you have any questions, please feel free to call Supervising Land Agent Steve Molmen at 587-0439. Thank you.

Sincerely,

Russell Y. Tsuji
Land Administrator

Enclosure(s)

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

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

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

August 15, 2013

MEMORANDUM

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

FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: Pre-Assessment Consultation for the Preparation of an Environmental Assessment (EA) of the Hawai`i Pacific University Aloha Tower Marketplace Project
LOCATION: Tax Map Key: 2-1-001:063, Honolulu, O`ahu, Hawai`i
APPLICANT: Hawai`i Pacific University by its consultant, Wilson Okamoto Corporation

Transmitted for your review and comment on the above-referenced document. We would appreciate your comments on this document.

Please submit any comments by September 4, 2013. If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Supervising Land Agent Steve Molmen at (808) 587-0439. Thank you.

Attachments

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

Signed: Tchee
Print Name: Tammy Chee
Date: 8/20/13

c: Central Files

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

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

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

RECEIVED
LAND DIVISION
2013 AUG 20 PM 2:44
DEPT. OF LAND & NATURAL RESOURCES
STATE OF HAWAII

August 15, 2013

MEMORANDUM

From ~~TO~~:

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

To ~~FROM~~: Russell Y. Tsuji, Land Administrator
SUBJECT: Pre-Assessment Consultation for the Preparation of an Environmental Assessment (EA) of the Hawai`i Pacific University Aloha Tower Marketplace Project
LOCATION: Tax Map Key: 2-1-001:063, Honolulu, O`ahu, Hawai`i
APPLICANT: Hawai`i Pacific University by its consultant, Wilson Okamoto Corporation

Transmitted for your review and comment on the above-referenced document. We would appreciate your comments on this document.

Please submit any comments by September 4, 2013. If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Supervising Land Agent Steve Molmen at (808) 587-0439. Thank you.

Attachments

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

Signed:
Print Name: Randy Kennedy
Date: 8/19/13

RECEIVED
2013 AUG 19 A11:18
FORESTRY & WILDLIFE
STATE OF HAWAII

c: Central Files

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

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

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

'13 AUG 19 PM 07:39 RECEIVED
LAND DIVISION
2013 AUG 26 PM 2:45
DEPT. OF LAND & NATURAL RESOURCES
STATE OF HAWAII

August 15, 2013

MEMORANDUM

~~TO~~: FR

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

TO:
FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: Pre-Assessment Consultation for the Preparation of an Environmental Assessment (EA) of the Hawai`i Pacific University Aloha Tower Marketplace Project
LOCATION: Tax Map Key: 2-1-001:063, Honolulu, O`ahu, Hawai`i
APPLICANT: Hawai`i Pacific University by its consultant, Wilson Okamoto Corporation

Transmitted for your review and comment on the above-referenced document. We would appreciate your comments on this document.

Please submit any comments by September 4, 2013. If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Supervising Land Agent Steve Molmen at (808) 587-0439. Thank you.

Attachments

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

Signed:
Print Name: Carty S. Chang, Chief Engineer
Date: 8/23/13

c: Central Files

DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION

LD/ Russell Y. Tsuji
REF: Pre-Assessment Consultation for Preparation of an EA for HPU Aloha Tower Marketplace Project
Oahu.015

COMMENTS

( ) We confirm that the project site, according to the Flood Insurance Rate Map (FIRM), is located in Flood Zone ___.

(X) **Please take note that the project site according to the Flood Insurance Rate Map (FIRM), is located in Zone X. The National Flood Insurance Program (NFIP) does not regulate developments within Zone X.**

( ) Please note that the correct Flood Zone Designation for the project site according to the Flood Insurance Rate Map (FIRM) is ___.

( ) Please note that the project must comply with the rules and regulations of the National Flood Insurance Program (NFIP) presented in Title 44 of the Code of Federal Regulations (44CFR), whenever development within a Special Flood Hazard Area is undertaken. If there are any questions, please contact the State NFIP Coordinator, Ms. Carol Tyau-Beam, of the Department of Land and Natural Resources, Engineering Division at (808) 587-0267.

Please be advised that 44CFR indicates the minimum standards set forth by the NFIP. Your Community's local flood ordinance may prove to be more restrictive and thus take precedence over the minimum NFIP standards. If there are questions regarding the local flood ordinances, please contact the applicable County NFIP Coordinators below:

( ) Mr. Mario Siu Li at (808) 768-8098 or Ms. Ardis Shaw-Kim at (808) 768-8296 of the City and County of Honolulu, Department of Planning and Permitting.
( ) Mr. Frank DeMarco at (808) 961-8042 of the County of Hawaii, Department of Public Works.
( ) Mr. Carolyn Cortez at (808) 270-7813 of the County of Maui, Department of Planning.
( ) Mr. Stanford Iwamoto at (808) 241-4884 of the County of Kauai, Department of Public Works.

( ) The applicant should include project water demands and infrastructure required to meet water demands. Please note that the implementation of any State-sponsored projects requiring water service from the Honolulu Board of Water Supply system must first obtain water allocation credits from the Engineering Division before it can receive a building permit and/or water meter.

( ) The applicant should provide the water demands and calculations to the Engineering Division so it can be included in the State Water Projects Plan Update.

( ) Additional Comments: _____

( ) Other: _____

Should you have any questions, please call Mr. Dennis Imada of the Planning Branch at 587-0257.

Signed: _____
CARTY S. CHANG, CHIEF ENGINEER

Date: 8/26/13

WILSON OKAMOTO CORPORATION
ENGINEERS | PLANNERS | CONSULTANTS
1907 South Beretania Street
Artesian Plaza, Suite 400
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FAX: 808-946-2253
www.wilsonokamoto.com

8428-01
February 23, 2014

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

Subject: Pre-Assessment Consultation
Draft Environmental Assessment (EA) for
Hawai'i Pacific University -Aloha Tower Marketplace Project
Honolulu, O'ahu, Hawai'i
TMK (1) 2-1-001:063

Dear Mr. Tsuji:

Thank you for your letter dated September 5, 2013 regarding the subject Draft EA pre-assessment consultation. We offer you the following response in the order of your comments:

Land Division – O'ahu District

We acknowledge that your Division has no comments.

Division of Forestry and Wildlife

We acknowledge that your Division has no comments.

Engineering Division:

We appreciate your confirmation that the project site, according to the Flood Insurance Rate Map (FIRM), is located in Zone X.

Your letter, along with this response, will be reproduced and included in the forthcoming Draft EA. We appreciate your participation in the pre-assessment consultation review process.

Sincerely,

Earl Matsukawa, AICP
Project Manager

cc: Mr. Scott Hayashi, Hawai'i Pacific University

NEIL ABERCROMBIE
GOVERNOR

GLENN M. OKIMOTO
DIRECTOR

Deputy Directors
JADE T. BUTAY
FORD N. FUCHIGAMI
RANDY GRUNE
JADINE URASAKI

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

IN REPLY REFER TO:
STP 8.1316

September 13, 2013

Mr. Earl Matsukawa, AICP
Project Manager
Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

RECEIVED
SEP 18 2013
WILSON OKAMOTO CORPORATION

Dear Mr. Matsukawa:

Subject: Hawaii Pacific University (HPU)
Aloha Tower Marketplace (ATM) Project
Pre-Assessment Consultation for Preparation of an Environmental Assessment
TMK: 2-1-001:063

Thank you for requesting the State Department of Transportation's (DOT) review of the subject project. DOT understands HPU proposes to renovate the ATM to provide additional facilities that will allow expansion of their existing downtown campus and provide student housing. Access to the project will be from Nimitz Highway and Ala Moana Boulevard.

Given the location of the subject project, DOT Highways Division (HWY) has highway access concerns and DOT Harbors Division (HAR) has concerns regarding operations and maintenance of pier facilities. DOT comments are as follows:

DOT Highways

1. DOT highway facilities that may be impacted include: Nimitz Highway and Ala Moana Boulevard.

2. A Traffic Impact Analysis Report (TIAR) shall be prepared and submitted to DOT for review and acceptance. The TIAR should address the movement of students between the ATM and the downtown campus, as well as present a comprehensive analysis of the availability of parking for student-owned vehicles, guests, employees, public transit and parking for theater patrons. It should assess impacts to existing traffic volumes vs. anticipated traffic volume, as well as any proposed changes to the existing traffic circulation patterns currently in place. DOT HAR shares this concern.

DOT Harbors

1. With respect to short-term (1-5 years) planning of HAR's commercial harbor capital improvement program (CIP) projects: CIP improvements including, but not limited to, pier fendering system replacements, bollard replacements, and/or infrastructure improvements may need to be implemented in and around the proposed project site. Therefore, HPU will need to be aware of the impacts these activities may have on its operations.

2. With respect to long-term (6 years and beyond) planning of HAR's commercial harbor CIP programming: Should the cruise industry demand more calls to Piers 10 and 11 and stricter safety regulations are proposed, HPU needs to understand the potential implications and associated impacts.

3. Security/Safety measures with respect to HPU operations vs. commercial harbor operations will need to be vetted through HAR Operations accordingly.

4. HPU must take over responsibility for all storm water drainage infrastructures within their lease areas. While this would not relieve them of compliance with all applicable clean water regulations, this should exempt them from all requirements of our Small Municipal Separate Storm Sewer Systems (MS4) program including, but not limited to, regular facility inspections, tenant training, construction project reviews for Small MS4 compliance including project site Best Management Practices (BMP) and permanent BMPs, and construction project site inspections. HAR will not take responsibility for the HPU storm drain system.

5. A map of the lease area is required so HAR can accurately delineate storm water infrastructure that HAR is responsible for and the HPU storm water infrastructure and see if there are any areas of uncertainty. There may be areas where the HAR drain system connects to HPU and vice versa. Geographic Information Systems (GIS) coordinates and descriptions will be required for input into the HAR GIS system.

6. Clear delineation must be made and areas for responsibility for common areas. Who will be responsible for maintenance and repair of the areas must be addressed. Typical items include the roof, exterior and interior surfaces, utilities, air conditioning, etc. HAR must retain the cruise ship passenger gallery second floor area where HAR Engineering offices are shown within the HPU limits.

7. Utilities will be required to be metered separately as this will impact daily utility charges proposed to be used within the Piers 10 and 11 terminals, parking, Aloha Tower, and pier areas. The HAR will require that stamped engineered drawings be submitted prior to reaching 100% design submission and upon construction completion that certifies design and construction requirements for the separation of utilities have been met.

8. The HAR utilizes the Piers 8, 9 and 10 aprons which include the pile supported pier up to the first Makai bulkhead. All landward area from this bulkhead to the second bulkhead is the responsibly of HPU. This includes the pile supported areas behind the current bulkhead that is under the Aloha Tower Marketplace.

9. Chapter 343 is triggered not only by the use of State lands but by the use of Special Purpose Revenue Bonds which are special, limited obligations of the State Department of Budget and Finance which have been issued to finance the improvements.

10. HPU shall be responsible for acquiring all the necessary construction permits, agency approvals and utility company approvals prior to construction.

11. HPU shall be responsible for any and all damages to harbor facilities and features caused by their contractor. Their contractor shall, at their own expense, make prompt restitution for damages to items caused by its operations or negligence. The contractor shall hold the State harmless for all claims from such loss or injury.

12. The harbor facility shall remain open, functional and operational at all times during construction. Harbor operations will have priority over construction operations.

13. Design and installation shall meet the standards of all applicable design codes and building permits are obtained.

14. HPU shall submit plans that show exact work and sufficient detail for HAR acceptance.

15. The DEA needs to discuss:

    A. Impacts to parking currently reserved for State agency use. DOT has been assured that HAR employee parking will not be impacted by the development.

    B. Impacts to cruise ship operations in Piers 10 and 11 Terminals. What happens when cruise ships are at Piers 10 and 11? What are the impacts?

    C. Impacts of the Pier 10 Improvements to the Pier 10 Terminal.

    D. What other proposed campus improvements are being planned to be funded with future bond proceeds.

    E. HPU needs to get off HAR electricity grid for Piers 10 and 11.

    F. Conditions when cruise ship passenger vessels are berth.

DOT appreciates the opportunity to provide comments. If there are any questions, please contact Mr. Norren Kato of the DOT Statewide Transportation Planning Office at telephone number (808) 831-7977.

Very truly yours,

GLENN M. OKIMOTO, Ph.D.
Director of Transportation

WILSON OKAMOTO
CORPORATION
ENGINEERS | PLANNERS | CONSULTANTS

1907 South Beretania Street
Artesian Plaza, Suite 400
Honolulu, Hawaii, 96826 USA
Phone: 808-946-2277
FAX: 808-946-2253
www.wilsonokamoto.com

8428-01
February 23, 2014

Mr. Glenn M. Okimoto, Ph.D.,
Director of Transportation
State of Hawai'i
Department of Transportation
869 Punchbowl Street
Honolulu, Hawai'i 96813-5097

Subject: Pre-Assessment Consultation
Draft Environmental Assessment (EA) for
Hawai'i Pacific University - Aloha Tower Marketplace Project
Honolulu, O'ahu, Hawai'i
TMK (1) 2-1-001:063

Dear Dr. Okimoto:

Thank you for your letter dated September 13, 2013 (STP8.1316) regarding the subject Draft EA pre-assessment consultation. We offer the following responses in the respective order of your comments:

DOT Highways

A traffic impact analysis report (TIAR) is being prepared and will be incorporated in the forthcoming Draft EA for your review and comment.

DOT Harbors

1. HPU acknowledges the DOT-HAR's short-term capital improvement program projects will be implemented in and around the proposed project site. As these projects are scheduled for implementation, HPU will work with the DOT-HAR to minimize potential impacts on both operations.

2 & 3. HPU acknowledges that there is a potential for cruise ship industry demand at Piers 10 and 11. Should stricter safety regulations be required, HPU is open to discussions with DOT-HAR with regard to how they may impact their operations.

4. HPU will be responsible for drainage facilities that convey stormwater from the lease area up to the point where they discharge into drainage facilities serving areas beyond the leased area. HPU proposes no changes to the existing stormwater drainage infrastructure within their leased area. Therefore, HPU's use of the ATM and Pier 10 will have no drainage impact on the quantity or quality of drainage discharges.

5. HPU will provide any available maps and drawings it has to the DOT-HAR.

6. The areas of responsibility for common areas are established in the Capital Improvements, Maintenance, Operations and Security Agreement (CIMOSA).

7. HPU does not object to separate metering of utility charges within Piers 10 and 11, parking, the ATM, and pier areas. The responsibility for the design and construction of separate meters will be determined through lease negotiations.

8. DOT-HAR's use of Piers 8, 9, and 10, as well as areas of HPU's responsibility are established in the CIMOSA.

9. It is our understanding that Chapter 343 is not triggered by the use of Special Purpose Revenue Bonds which are special, limited obligations of the State Department of Budget and Finance, which have been issued to finance improvements.

10. HPU will be responsible for acquiring all necessary construction permits, agency approvals and utility company approvals prior to construction as established by the CIMOSA.

11. HPU will be responsible for any and all damages to harbor facilities and features caused by their contractor as established by the CIMOSA.

12. The harbor facility will remain open, functional and operational at all times during construction. Harbor operations will have priority over construction operations.

13. Design and installation will meet the standards of all applicable design codes and building permits are obtained.

14. HPU will submit construction plan to DOT-HAR for review.

15. The Draft EA will include a discussion of impacts to existing DOT-HAR facilities including preservation of DOT-HAR employee parking in the leased area, improvements to Pier 10, and the accommodation of cruise ship passenger at Piers 10 and 11. Your comments regarding funding and separate utility metering were previously addressed in responses no. 7 and 9.

Your letter, along with this response, will be reproduced and included in the forthcoming Draft EA. We appreciate your participation in the pre-assessment consultation review process.

Sincerely,

Earl Matsukawa, AICP
Project Manager

cc: Mr. Scott Hayashi, Hawai'i Pacific University

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843

August 30, 2013

KIRK CALDWELL, MAYOR

DUANE R. MIYASHIRO, Chairman
MAHEALANI CYPHER, Vice Chair
THERESIA C. McMURDO
ADAM C. WONG
KAULANA H. R. PARK

ROSS S. SASAMURA, Ex-Officio
GLENN M. OKIMOTO, Ex-Officio

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

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

RECEIVED
SEP 06 2013
WILSON OKAMOTO CORPORATION

Mr. Earl Matsukawa, AICP
Project Manager
Wilson Okamoto Corporation
1907 South Beretania Street
Artesian Plaza, Suite 400
Honolulu, Hawaii 96826

Dear Mr. Matsukawa:

Subject: Your Letter Dated August 8, 2013, Regarding the Environmental Assessment Pre-Assessment Consultation for the Hawaii Pacific University Aloha Tower Marketplace Project – Tax Map Key: 2-1-001:063

Thank you for the opportunity to comment on the Hawaii Pacific University Aloha Tower Marketplace Project.

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

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

When water is made available, the applicant will be required to pay our Water System Facilities Charges for resource development, transmission and daily storage.

The on-site fire protection requirements should be coordinated with the Fire Prevention Bureau of the Honolulu Fire Department.

If you have any questions, please contact Robert Chun at 748-5443.

Very truly yours,

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

Water for Life . . . Ka Wai Ola

WILSON OKAMOTO CORPORATION
ENGINEERS | PLANNERS | CONSULTANTS

1907 South Beretania Street
Artesian Plaza, Suite 400
Honolulu, Hawaii, 96826 USA
Phone: 808-946-2277
FAX: 808-946-2253
www.wilsonokamoto.com

8428-01
February 23, 2014

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

Subject: Pre-Assessment Consultation
Draft Environmental Assessment (EA) for
Hawai'i Pacific University, Aloha Tower Marketplace Project
Honolulu, O'ahu, Hawai'i
TMK (1) 2-1-001:063

Dear Mr. Lau:

Thank you for your letter dated August 30, 2013 regarding the subject Draft EA pre-assessment consultation. We offer you the following response in the order of your comments:

We appreciate your confirmation that the existing water system should be adequate to accommodate the proposed developed. We also understand this situation is subject to change and the final decision will be confirmed when the building permit application is submitted for approval.

Water conservation measures such as the use of low flow plumbing fixtures, will be used where appropriate.

HPU understands that once water is made available, they will be subject to your Water System Facilities Charges for resource development, transmission, and daily storage.

The on-site fire protection requirements shall be coordinated with the Fire Prevention Bureau of the Honolulu Fire Department.

Your letter, along with this response, will be reproduced and included in the forthcoming Draft EA. We appreciate your participation in the pre-assessment consultation review process.

Sincerely,

Earl Matsukawa, AICP
Project Manager

cc: Mr. Scott Hayashi, Hawai'i Pacific University

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

KIRK CALDWELL
MAYOR

GEORGE I. ATTA, FAICP
DIRECTOR

ARTHUR D. CHALLACOMBE
DEPUTY DIRECTOR

2013/ELOG-1562(RY)

October 2, 2013

Mr. Earl Matsukawa, AICP
Project Manager
Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

RECEIVED
OCT 02 2013
WILSON OKAMOTO CORPORATION

Dear Mr. Matsukawa:

This is in response to your request received on August 9, 2013, for a pre-assessment consultation for the preparation of the draft environmental assessment (DEA) for the proposed Hawaii Pacific University (HPU) Aloha Tower Marketplace project. The DEA should include discussion of the following:

1. As the project is adjacent to the proposed Downtown rail transit station and within the downtown transit oriented development (TOD) area, the DEA should include a discussion of how the project supports the policies and objectives of our draft Downtown Neighborhood Transit Oriented Development Plan dated September 2012, which is available at:

   http://www.todhonolulu.org/neighborhood-tod-plans/downtown-neighborhood-tod-plans

   Please explain how the project will help invigorate the Aloha Tower Complex, attract a mix of patrons such as downtown residents, employees and visitors, in addition to HPU's students, staff, and faculty. Note that the draft TOD plan envisions Irwin Park as a significant component of the TOD area, serving as a gateway and local gathering place for events and the arts, with adjacent shops, eating establishments, and a connected harbor-front promenade.

2. As the project is anticipated to increase the pedestrian and bicycle crossings of Nimitz Highway to access classrooms at the Fort Street Mall campus, please clarify whether the project will propose programs and/or physical projects to address safe and convenient multi-modal connections to its campus.

3. Please provide additional information on the student apartments, including whether each will be equipped with kitchens and bathrooms. Also indicate who the intended users are (students, faculty, staff, public, etc.). The apartment units

located above eating and drinking establishments may be impacted by noise and odors generated by these establishments.

4. The DEA should also address the potential adverse impacts the project and harbor operations may have on each other.

Should you have any questions, please contact Raymond Young of our staff at 768-8049.

Very truly yours,

George I. Atta, FAICP
Director

GIA:js

1079769

WILSON OKAMOTO
CORPORATION
ENGINEERS | PLANNERS | CONSULTANTS

1907 South Beretania Street
Artesian Plaza, Suite 400
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FAX: 808-946-2253
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8428-01
February 23, 2014

Mr. George I. Atta, FAICP, Director
City and County of Honolulu
Department of Planning and Permitting
650 South King Street, 7th Floor
Honolulu, Hawai'i 96813

Subject: Pre-Assessment Consultation
Draft Environmental Assessment (EA) for
Hawai'i Pacific University - Aloha Tower Marketplace Project
Honolulu, O'ahu, Hawai'i
TMK (1) 2-1-001:063

Dear Mr. Atta:

Thank you for your letter dated October 2, 2013 (2013/ELOG-1562(RY)) regarding the subject Draft EA pre-assessment consultation. We offer you the following responses in the order of your comments:

1. The DEA will include a discussion on how the project supports the policies and objectives of the draft Downtown Neighborhood Transit Oriented Development Plan dated September 2012. The DEA will also discuss the intent of the proposed project to create greater day and evening pedestrian activity at the ATM as a draw for other patrons, downtown workers, and visitors. No changes are proposed to Irwin Park as a parking area.

2. HPU currently operates a shuttle to transport students between the Downtown campus and the Hawaii Loa campus. HPU intends to extend this shuttle service to the ATM. Otherwise, students will walk between the Downtown campus and the ATM. All of the pedestrian routes between the Downtown campus and the ATM have sidewalks and the major intersection crossings are signalized for pedestrians. We have no reason to believe that those pedestrian facilities would have insufficient capacity to accommodate any increase in pedestrian flow by HPU students and faculty.

3. The DEA will provide additional information on the student apartments as well as the intended occupants.

4. The DEA will include a discussion on the impacts the project and harbor operations may have on each other.

Your letter, along with this response, will be reproduced and included in the forthcoming Draft EA. We appreciate your participation in the pre-assessment consultation review process.

Sincerely,

Earl Matsukawa, AICP
Project Manager

cc: Mr. Scott Hayashi, Hawai'i Pacific University

DEPARTMENT OF TRANSPORTATION SERVICES
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 3RD FLOOR
HONOLULU, HAWAII 96813
Phone: (808) 768-8305 • Fax: (808) 768-4730 • Internet: www.honolulu.gov

KIRK CALDWELL
MAYOR

MICHAEL D. FORMBY
DIRECTOR

MARK N. GARRITY, AICP
DEPUTY DIRECTOR

TP8/13-526458R

September 4, 2013

RECEIVED
SEP 06 2013
WILSON OKAMOTO CORPORATION

Mr. Earl Matsukawa
Project Manager
Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

Dear Mr. Matsukawa:

SUBJECT: Pre-Consultation for Draft Environmental Assessment (DEA) Hawaii Pacific University Aloha Tower Marketplace Project; Tax Map Key (TMK): 2-1-001:063; Honolulu, Oahu, Hawaii

In response to your letter of August 8, 2013, we have the following comments:

- The DEA should include a traffic impact assessment report (TIAR). The TIAR should discuss the traffic and pedestrian impacts on the surrounding City roadways as a result of the project, including short-term impacts during construction, proposed mitigating measures, and complete streets concepts.

- The area Neighborhood Board, as well as the area residents, businesses, etc., should be kept apprised of the details of the proposed project and the impacts, particularly during construction, the project may have on the adjoining local street area network.

- A street usage permit from the City's Department of Transportation Services (DTS) should be obtained for work that may impact City streets.

- Your DEA should include a description of Public Transit and the impact of your project on Public Transit bus and paratransit operations during construction. Basic information is available on our websites: www.thebus.org and www.honolulu.gov/dts. For more details, you may contact our staff at 768-8370. Because your project will affect bus routes and services, you must contact them to coordinate your planned activities with them.

- Construction notes should include the following note regarding transit services:

  "This project may affect bus routes, bus stops, and paratransit operations, therefore, the Contractor shall notify the Department of Transportation Services, Public Transit Division at 768-8396 and Oahu Transit Services, Inc. (bus operations: 848-4578 or 852-6016 and paratransit operations: 454-5041 or 454-5020) of the scope of work, location, proposed closure of any street, traffic lane, sidewalk, or bus stop and duration of project at least two weeks prior to construction."

- The DEA should analyze whether the existing parking/bicycling facilities are adequate.

We reserve further comment pending submission of the DEA.

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

Very truly yours,

Michael D. Formby
Director

cc: Mr. Scott Hiyashi
Hawaii Pacific University

WILSON OKAMOTO
CORPORATION
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FAX: 808-946-2253
www.wilsonokamoto.com

8428-01
February 23, 2014

Mr. Michael D. Formby, Director
City and County of Honolulu
Department of Transportation Services
650 South King Street, 3rd Floor
Honolulu, Hawai'i 96813

Subject: Pre-Assessment Consultation
Draft Environmental Assessment (EA) for
Hawai'i Pacific University - Aloha Tower Marketplace Project
Honolulu, O'ahu, Hawai'i
TMK (1) 2-1-001:063

Dear Mr. Formby:

Thank you for your letter dated September 4, 2013 (TP8/13-526458R) regarding the subject Draft EA pre-assessment consultation. We offer you the following response in the order of your comments:

1. The DEA shall include a TIAR. The TIAR will discuss impacts of traffic generated by the proposed project on the surrounding city roadways, including short-term impacts during construction, and proposed mitigating measures. Should any mitigation require physical modification of streets, concepts of complete streets will be considered.

2. The HPU will periodically update the Downtown Neighborhood Board No. 13, as well as area residents, businesses, etc., regarding the progress of construction and subsequent operation of the Aloha Tower Marketplace (ATM) facility.

3. The DEA will describe public transit serving the project site and the impact of the proposed project on public transit buses and paratransit operations during construction. To the extent that bus routes and services will be impacted during construction, the DTS will be contacted to coordinate planned activities.

4. Construction notes shall include the following note regarding transit services:

   "This project may affect bus routes, bus stops, and paratransit operations, therefore, the contractor shall notify the Department of Transportation Services, Public Transit Division at 768-8396 and O'ahu Transit Services, Inc. (bus operations: 848-4578 or 852-6016 and paratransit operations: 454-5041 or 454-5020) of the scope of work, location, proposed closure of any

   street, traffic land, sidewalk, or bus stop and duration of project at least two weeks prior to construction."

5. Student parking demand will not be significant. Most students living in the proposed dorms on the second floor of the ATM buildings would either be graduate and/or international students who would either take the HPU shuttle to the Hawai'i Loa Campus or walk to and from classes at the existing downtown campus. They are likely to use public transit to travel off campus during their personal time. Bicycle storage would be accommodated in the dormitory facilities. As mentioned in response item 1, should any physical modification of street be required, complete streets concepts, including bicycle accommodations will be considered.

Your letter, along with this response, will be reproduced and included in the forthcoming Draft EA. We appreciate your participation in the pre-assessment consultation review process.

Sincerely,

Earl Matsukawa, AICP
Project Manager

cc: Mr. Scott Hayashi, Hawai'i Pacific University

HONOLULU FIRE DEPARTMENT

CITY AND COUNTY OF HONOLULU

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

KIRK CALDWELL
MAYOR

MANUEL P. NEVES
FIRE CHIEF

LIONEL CAMARA JR.
DEPUTY FIRE CHIEF

September 4, 2013

RECEIVED
SEP 05 2013
WILSON OKAMOTO CORPORATION

Mr. Earl Matsukawa, AICP
Project Manager
Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

Dear Mr. Matsukawa:

Subject: Preassessment Consultation for the Preparation of an Environmental Assessment of the Hawaii Pacific University Aloha Tower Marketplace Project
Honolulu, Oahu, Hawaii
Tax Map Key: 2-1-001: 063

In response to your letter of August 8, 2013, regarding the above-mentioned subject, the Honolulu Fire Department requires that all repairs, renovations, alterations, reconstruction, change of occupancy, and additions to buildings shall comform with National Fire Protection Association 101 and the building code.

Should you have any questions, please call Battalion Chief Socrates Bratakos of our Fire Prevention Bureau at 723-7151 or sbratakos@honolulu.gov.

Sincerely,

ROLLAND J. HARVEST
Assistant Chief

RJH/SY:bh

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8428-01
February 23, 2014

Mr. Rolland J. Harvest, Assistant Chief
City and County of Honolulu
Honolulu Fire Department
636 South Street
Honolulu, Hawai'i 96813-5007

Subject: Pre-Assessment Consultation
Draft Environmental Assessment (EA) for
Hawai'i Pacific University - Aloha Tower Marketplace Project
Honolulu, O'ahu, Hawai'i
TMK (1) 2-1-001:063

Dear Mr. Harvest:

Thank you for your letter dated September 4, 2013 regarding the subject Draft EA pre-assessment consultation. All repairs, renovations, alterations, reconstruction, change of occupancy, and additions to the existing Aloha Tower Marketplace and Pier 10 buildings shall conform with the National Fire Protection Association 101 and the building code.

Your letter, along with this response, will be reproduced and included in the forthcoming Draft EA. We appreciate your participation in the pre-assessment consultation review process.

Sincerely,

Earl Matsukawa, AICP
Project Manager

cc: Mr. Scott Hayashi, Hawai'i Pacific University

POLICE DEPARTMENT

CITY AND COUNTY OF HONOLULU

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

KIRK W. CALDWELL
MAYOR

LOUIS M. KEALOHA
CHIEF

DAVE M. KAJIHIRO
MARIE A. McCAULEY
DEPUTY CHIEFS

OUR REFERENCE WNK-WS

August 23, 2013

Mr. Earl Matsukawa, AICP
Project Manager
Wilson Okamoto Corporation
Artesian Plaza, Suite 400
1907 South Beretania Street
Honolulu, Hawaii 96826

RECEIVED
AUG 27 2013
WILSON OKAMOTO CORPORATION

Dear Mr. Matsukawa:

This is in response to your letter dated August 8, 2013, requesting comments on the Pre-Assessment Consultation for the Preparation of an Environmental Assessment for the Hawai'i Pacific University Aloha Tower Marketplace project.

The Honolulu Police Department has concerns regarding the increase in pedestrian and vehicular traffic in the area of the Aloha Tower Marketplace (ATM) and the adjoining streets and walkways. The expansion of the Hawai'i Pacific University for additional classrooms, housing, and other facility space at the ATM will create an increase in pedestrian and vehicular traffic between both campus locations. The pre-assessment documents did not include information regarding student parking. Assessments should be conducted on the current infrastructure for the efficiency of vehicular ingress and egress as well as the pedestrian crosswalks from the ATM to Fort Street Mall.

If there are any questions, please contact Major Roy Sugimoto of District 1 (Honolulu) at 723-3327 or via e-mail at rsugimoto@honolulu.gov.

Sincerely,

LOUIS M. KEALOHA
Chief of Police

By
CLAYTON G. KAU
Assistant Chief
Support Services Bureau

Serving and Protecting With Aloha

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8428-01
February 23, 2014

Mr. Louis M. Kealoha, Chief of Police
City and County of Honolulu
Honolulu Police Department
801 South Beretania Street
Honolulu, Hawai'i 96813

Subject: Pre-Assessment Consultation
Draft Environmental Assessment (EA) for
Hawai'i Pacific University - Aloha Tower Marketplace Project
Honolulu, O'ahu, Hawai'i
TMK (1) 2-1-001:063

Dear Chief Kealoha:

Thank you for your letter dated August 23, 2013 (WNK-WS) regarding the subject Draft EA pre-assessment consultation.

We acknowledge your concerns regarding an increase in pedestrian and vehicular traffic the vicinity of the Aloha Tower Marketplace (ATM) as a result of HPU's proposed use of the facility for its expanded downtown campus. A Traffic Impact Assessment Report (TIAR) will be prepared and incorporated in the forthcoming Draft EA for your review and comment.

Regarding pedestrian movement between the ATM and HPU's existing downtown campus, all of the pedestrian routes have sidewalks and the major intersection crossings are signalized for pedestrians. We have no reason to believe that these pedestrian facilities would have insufficient capacity to accommodate any increase in pedestrian flow by HPU students and faculty.

Student parking demand will not be significant. Most students living in the proposed dorms on the second floor of the ATM buildings would either be graduate and/or international students who would either take the HPU shuttle to the Hawai'i Loa Campus or walk to and from classes at the existing downtown campus. They are likely to use public transit to travel off campus during their personal time.

Your letter, along with this response, will be reproduced and included in the forthcoming Draft EA. We appreciate your participation in the pre-assessment consultation review process.

Sincerely,

Earl Matsukawa, AICP
Project Manager

cc: Mr. Scott Hayashi, Hawai'i Pacific University

HAWAI'I GAS
THE CLEAN ENERGY COMPANY

September 9, 2013

RECEIVED
SEP 10 2013
WILSON OKAMOTO CORPORATION

Mr. Earl Matsukawa, AICP
Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

Dear Mr. Matsukawa:

Subject: Pre-Assessment Consultation for the Preparation of an Environmental Assessment (EA) of the Hawai'I Pacific University Aloha Tower Marketplace Project
Tax Map Key: 2-1-001:063
Honolulu, O'ahu, Hawai'i

In response to your letter dated August 8, 2013, we do not anticipate any conflicts with the proposed project. Attached is a copy of a Gas Map indicating our current gas facilities.

All information provided by HAWAI'I**GAS**, including but not limited to maps, prints, and site indications are approximations only of its facilities and its pipelines. The party receiving such information shall have sole responsibility for field verification to determine the actual locations of such facilities and pipelines.

Thank you for the opportunity to review the Environmental Assessment. Should there be any questions, or if additional information is desired, please feel free to contact Jared Pasalo at 594-5008.

Sincerely,

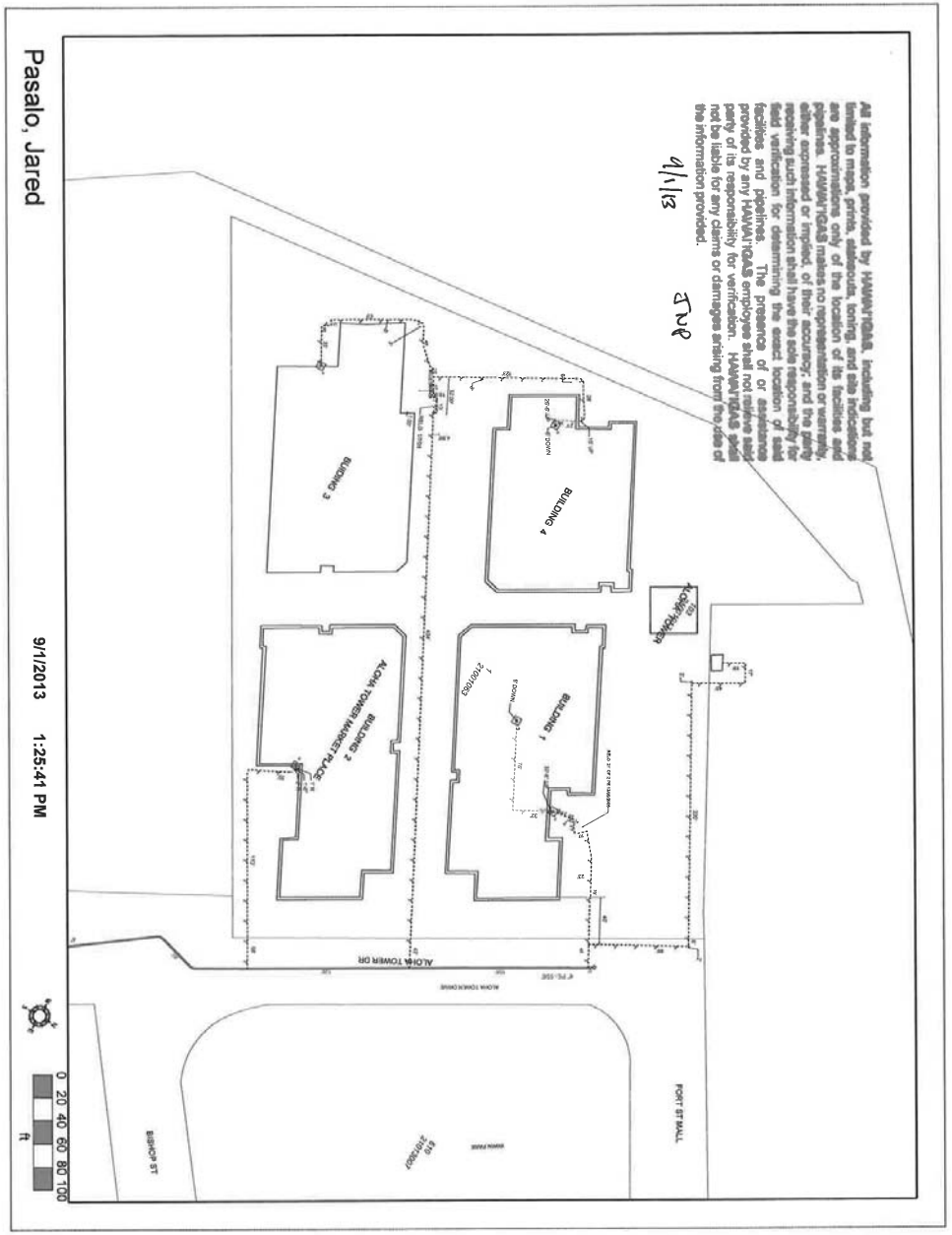
HAWAI'I**GAS**

Keith K. Yamamoto
Manager, Engineering

KKY:krs
13-175

Attachments: Gas Map

P.O. Box 3000 | Honolulu, Hawai'i 96802-3000 | www.HawaiiGas.com



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8428-01
February 23, 2014

Mr. Keith Yamamoto, Manager, Engineering
Hawai'i Gas
P.O. Box 3000
Honolulu, Hawai'i 96802-3000

Subject: Pre-Assessment Consultation
Draft Environmental Assessment (EA) for
Hawai'i Pacific University - Aloha Tower Marketplace Project
Honolulu, O'ahu, Hawai'i
TMK (1) 2-1-001:063

Dear Mr. Yamamoto:

Thank you for your letter dated September 9, 2013 regarding the subject Draft EA pre-assessment consultation. We appreciate your confirmation that you anticipate no conflicts with the proposed project. We also thank you for providing a copy of the Gas Map indicating the location of your facilities in the project area.

Your letter, along with this response, will be reproduced and included in the forthcoming Draft EA. We appreciate your participation in the pre-assessment consultation review process.

Sincerely,

Earl Matsukawa, AICP
Project Manager

cc: Mr. Scott Hayashi, Hawai'i Pacific University

Oceanic
Time Warner Cable

RECEIVED
AUG 14 2013
WILSON OKAMOTO CORPORATION

August 12, 2013

Wilson Okamoto Corp.
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

Attention: Earl Matsukawa

Project: EA of the Hawaii Pacific University Aloha Tower Marketplace

Subject: CATV Comments

Dear Mr. Matsukawa,

Oceanic Time Warner Cable does not have any comments regarding the EA for Aloha Tower at this time. However we would like a set of drawings for review and comment when available for the work that will be done so that we can provide service to the new facilities. If you have any questions, contact me at #625-8576.

Sincerely,

Lionel Aguiar
OSP Engineer
Oceanic Time Warner Cable

200 Akamainui Street
Mililani, Hawaii 96789-3999

Tel (808) 625-2100
Fax (808) 625-5368

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8428-01
February 23, 2014

Mr. Lionel Aguiar, OSP Engineer
Oceanic Time Warner Cable
200 Akamainui Street
Mililani, Hawai'i 96789-3999

Subject: Pre-Assessment Consultation
Draft Environmental Assessment (EA) for
Hawai'i Pacific University - Aloha Tower Marketplace Project
Honolulu, O'ahu, Hawai'i
TMK (1) 2-1-001:063

Dear Mr. Aguiar:

Thank you for your letter dated August 12, 2013 indicating you have no comments regarding the subject Draft EA pre-assessment consultation. A set of drawings will be submitted to your office for review and comment when available.

Your letter, along with this response, will be reproduced and included in the forthcoming Draft EA. We appreciate your participation in the pre-assessment consultation review process.

Sincerely,

Earl Matsukawa, AICP
Project Manager

cc: Mr. Scott Hayashi, Hawai'i Pacific University

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