DAVID Y. IGE
GOVERNOR

CRAIG K. HIRAI
EXECUTIVE DIRECTOR

FILE COPY

JUN 08 2015

STATE OF HAWAII

DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT AND TOURISM
HAWAII HOUSING FINANCE AND DEVELOPMENT CORPORATION
677 QUEEN STREET, SUITE 300
Honolulu, Hawaii 96813
FAX: (808) 587-0600

IN REPLY REFER TO:

15:PEO/41

May 27, 2015

RECEIVED
'15 MAY 27 P4:13
OFC. OF ENVIRONMENTAL QUALITY CONTROL

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

Dear Ms. Wooley:

With this letter, the Hawaii Housing Finance and Development Corporation hereby transmits the Draft Environmental Assessment and Anticipated Finding of No Significant Impact (DEA-AFONSI) for the Kapiolani Residence condominium situated at Tax Map Keys 2-3-041: 006 and 009, in the Honolulu District on the island of Oahu for publication in the next available edition of the Environmental Notice.

Enclosed is a completed OEQC Publication Form, two copies of the DEA-AFONSI, an Adobe Acrobat PDF file of the same, and an electronic copy of the publication form in MS Word. Simultaneous with this letter, we have submitted the summary of the action in a text file by electronic mail to your office.

If there are any questions, please contact Janice Takahashi, Chief Planner, at 587-0639.

Sincerely,

Craig K. Hirai
Executive Director

Enclosures

c: SamKoo Pacific, LLC

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

Project Name: Kapiolani Residence
Island: Oahu
District: Honolulu
TMK: (1)2-3-041: 006 & 009
Permits: 201H, building, electrical, plumbing, sidewalk/driveway and demolition work (variance for building permit when work done in setbacks), Grubbing, grading/trenching, Street Usage, and Stockpiling Permit, sewer connection, water connection, water quality.
Approving Agency: Hawaii Housing Finance & Development Corporation (HHFDC)
677 Queen Street, 3rd Floor, Honolulu, HI 96813 / Ken Takahashi/ 808-587-0547
Applicant: SamKoo Pacific, LLC
1631 Kapiolani Boulevard, Suite 200, Honolulu, HI 96814/ Timothy Yi
Consultant: Pacific Catalyst, LLC
1296 Kapiolani Blvd., S. 1907
Honolulu, Hawaii 96814
Lowell Chun
Telephone: 808.386.9596

Status (check one only):

X_DEA-AFNSI	Submit the approving agency notice of determination/transmittal on agency letterhead, a hard copy of DEA, a completed OEQC publication form, along with an electronic word processing summary and a PDF copy (you may send both summary and PDF to oeqchawaii@doh.hawaii.gov; a 30-day comment period ensues upon publication in the periodic bulletin.
__FEA-FONSI	Submit the approving agency notice of determination/transmittal on agency letterhead, a hard copy of the FEA, an OEQC publication form, along with an electronic word processing summary and a PDF copy (send both summary and PDF to oeqchawaii@doh.hawaii.gov; no comment period ensues upon publication in the periodic bulletin.
__FEA-EISPN	Submit the approving agency notice of determination/transmittal on agency letterhead, a hard copy of the FEA, an OEQC publication form, along with an electronic word processing summary and PDF copy (you may send both summary and PDF to oeqchawaii@doh.hawaii.gov; a 30-day consultation period ensues upon publication in the periodic bulletin.
__Act 172-12 EISPN	Submit the approving agency notice of determination on agency letterhead, an OEQC publication form, and an electronic word processing summary (you may send the summary to oeqchawaii@doh.hawaii.gov. NO environmental assessment is required and a 30-day consultation period upon publication in the periodic bulletin.
__DEIS	The applicant simultaneously transmits to both the OEQC and the approving agency, a hard copy of the DEIS, a completed OEQC publication form, a distribution list, along with an electronic word processing summary and PDF copy of the DEIS (you may send both the summary and PDF to oeqc@doh.hawaii.gov); a 45-day comment period ensues upon publication in the periodic bulletin.
__FEIS	The applicant simultaneously transmits to both the OEQC and the approving agency, a hard copy of the FEIS, a completed OEQC publication form, a distribution list, along with an electronic word processing summary and PDF copy of the FEIS (you may send both the summary and PDF to oeqc@doh.hawaii.gov); no comment period ensues upon publication in the periodic bulletin.
__ Section 11-200-23 Determination	The approving agency simultaneous transmits its determination of acceptance or nonacceptance (pursuant to Section 11-200-23, HAR) of the FEIS to both OEQC and the applicant. No comment period ensues upon publication in the periodic bulletin.
__Statutory hammer Acceptance	The approving agency simultaneously transmits its notice to both the applicant and the OEQC that it failed to timely make a determination on the acceptance or nonacceptance of the applicant's FEIS under Section 343-5(c), HRS, and that the applicant's FEIS is deemed accepted as a matter of law.
__Section 11-200-27 Determination	The approving agency simultaneously transmits its notice to both the applicant and the OEQC that it has reviewed (pursuant to Section 11-200-27, HAR) the previously accepted FEIS and

determines that a supplemental EIS is not required. No EA is required and no comment period ensues upon publication in the periodic bulletin.

__Withdrawal (explain)

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

SamKoo Pacific, LLC proposes to design and construct a 485-unit residential condominium tower, to be named “Kapiolani Residence”, on a 1.291 acre (56,250 square feet) site consisting of two parcels (TMK’s: (1) 2-3-041:009 and (1) 2-3-041:006) adjacent to Ala Moana Center a little over ¼ mile from the City and County of Honolulu’s future Ala Moana HART (Rail) Station.

SamKoo Pacific’s vision for “Kapiolani Residence” focuses on providing a mix of quality market and affordable homes centrally located in the heart of Honolulu’s vital Ala Moana neighborhood, in convenient proximity to shopping, family services, business and employment opportunities, and multiple transportation choices. The residences will include mauka and makai-facing units that will be housed in a tower fronting Kapiolani Boulevard. Sixty percent of these residences are intended as affordable units targeting households earning eighty (80) to one hundred twenty (120) percent of the Area Median Income (“AMI”). In addition to the intended residences, the building’s ground floor fronting Kapiolani Boulevard will feature spaces for commercial enterprises that can be occupied by businesses and services oriented toward serving the local community.

KAPIOLANI RESIDENCE

1631 Kapiolani Boulevard
Honolulu, Hawaii

TMKs: 2-3-041:009 & 2-3-041:006

Draft Environmental Assessment

SamKoo Pacific, LLC
1631 Kapiolani Boulevard
Suite 200
Honolulu, Hawaii 96814

April 2015

KAPIOLANI RESIDENCE

1631 Kapiolani Boulevard
Honolulu, Hawaii

TMKs: 2-3-041:009 & 2-3-041:006

Draft Environmental Assessment

SamKoo Pacific, LLC
1631 Kapiolani Boulevard
Suite 200
Honolulu, Hawaii 96814

Prepared by Pacific Catalyst, LLC & Hawaii Planning, LLC
April 2015

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ACRONYMS AND ABBREVIATIONS

ADA Americans with Disabiities Act

ACM Asbestos Containing Materials

AMI Area Median Income (as defined by U.S. Department of Housing and Urban Development (HUD)

BWS Board of Water Supply, City and County of Honolulu

DLNR Department of Land and Natural Resources, State of Hawaii

DOE Department of Education, State of Hawaii

DOH Department of Health, State of Hawaii

DPP Department of Planning and Permitting, City and County of Honolulu

DURF Dwelling Unit Revolving Fund, Hawaii Housing Finance and Development Corporation (HHFDC), State of Hawaii

EA Environmental Assessment

FAR Floor Area Ratio

FIRM Flood Insurance Rate Map

FONSI Finding of No Significant Impact

HAR Hawaii Administrative Rules

HART Honolulu Authority for Rapid Transit, City and County of Honolulu

HECO Hawaiian Electric Company

HHFDC Hawaii Housing Finance and Development Corporation, State of Hawaii

HPD Honolulu Police Department, City and County of Honolulu

HRS Hawaii Revised Statutes, State of Hawaii

HUD U.S. Department of Housing and Urban Development

LUO Land Use Ordinance, Department of Planning and Permitting ("DPP"), City and County of Honolulu

NRCS Natural Resource Conservation Service

PMA Primary Market Area

PUC Primary Urban Center

RCRA Resource Conservation and Recovery Act

REC Recognized Environmental Condition

SHPD State Historic Preservation Division, DLNR, State of Hawaii

SMA Special Management Area

TMK Tax Map Key

Figure 1: Kapiolani Residence – The Residence Plaza

OVERVIEW

SamKoo Pacific, LLC proposes to design and construct a 485-unit residential condominium tower, to be named “Kapiolani Residence”, on a 1.291 acre (56,250 square feet) site consisting of two parcels (TMK’s: (1) 2-3-041:009 and (1) 2-3-041:006) adjacent to Ala Moana Center a little over ¼ mile from the City and County of Honolulu’s future Ala Moana HART (Rail) Station.

SamKoo Pacific’s vision for “Kapiolani Residence” focuses on providing a mix of quality market and affordable homes centrally located in the heart of Honolulu’s vital Ala Moana neighborhood, in convenient proximity to shopping, family services, business and employment opportunities, and multiple transportation choices. The residences will include mauka and makai-facing units that will be housed in a tower fronting Kapiolani Boulevard. Sixty percent of these residences are intended as affordable units targeting households earning eighty (80) to one hundred twenty (120) percent of the Area Median Income (“AMI”). In addition to the intended residences, the building’s ground floor fronting Kapiolani Boulevard will feature spaces for commercial enterprises that can be occupied by businesses and services oriented toward serving the local community. Parking for building occupants will be located “behind” the residential tower on its Kona Street side. Figure 1 presents an architect’s concept of the project’s finished appearance along Kapiolani Boulevard.

With much of the recent high-rise residential project activity in the Ala Moana and Kakaako area focusing on market housing with emphasis on the upper or “luxury” end of the market, SamKoo Pacific intends this project to make affordable and modestly priced market rate residential units available in a uniquely central Honolulu location in a neighborhood targeted by public policy for increased vitality as a lively urban community offering the spectrum of lifestyle support opportunities characteristic of some of the country’s most preferred neighborhoods of choice.

SamKoo Pacific intends to process approvals and entitlements for Kapiolani Residence under Chapter 201H, Hawaii Revised Statutes (HRS), which offers flexibility in design and permitting requirements to projects created for lower and moderate income households. Therefore, in addition to presenting known environmental factors pertinent to the site and proposed project, this draft Environmental Assessment (EA) also serves as the Chapter 201H, HRSs application agency/public comment document.

1. INTRODUCTION

This draft Environmental Assessment ("EA") is prepared in accordance with Chapter 343, Hawaii Revised Statutes ("HRS") for "Kapiolani Residence", a proposed residential tower housing affordable and moderately-priced market units adjacent to Ala Moana Center in the Ala Moana neighborhood of Central Honolulu. This chapter presents basic project information and a citation of pertinent environmental statutory requirements.

1.1 Project Profile

Project Name:	Kapiolani Residence
Location:	1631 Kapiolani Boulevard Honolulu, Hawaii 96814
Judicial District	Honolulu
Tax Map Keys:	(1) 2-3-041:009 and (1) 2-3-041:006
Project Area:	1.291 acre (56,250 square feet)
Existing Uses	Commercial
Recorded Fee Owner	SamKoo Pacific, LLC 1631 Kapiolani Boulevard Suite 300 Honolulu, HI 96814
Developer/Applicant	SamKoo Pacific, LLC 1631 Kapiolani Boulevard Suite 300 Honolulu, HI 96814
Approving Agency	Hawaii Housing Finance and Development Corporation 677 Queen Street Ste. 300 Honolulu, Hawaii 96813
Agent/Preparer	Pacific Catalyst, LLC 1296 Kapiolani Boulevard Ste. 1907 Honolulu, Hawaii 96814 Hawaii Planning, LLC

Land Use Policies and Controls	
State Land Use	Urban
Development Plan	District Commercial
County Zoning	BMX-3: Community Business Mixed Use
Special District	Not currently in Special District *However, the draft Ala Moana Transit-Oriented Development Neighborhood Plan, when adopted, may create a Special District in which the site is located*
Special Management Area	Not in Special Management Area
Consulted Agencies, Organizations, and Persons	
Federal Agencies	U.S. Fish and Wildlife Service
State of Hawaii	Department of Education
	Department of Land and Natural Resources
	Hawaii Housing Finance and Development Corporation
	Office of Environmental Quality Control
	Department of Health, Environmental Health Division
	Disability and Communication Access Board
	Department of Transportation
	Department of Business, Economic Development, Tourism, and Energy
	Department of Defense
	Office of Planning
	University of Hawaii Environmental Center
City and County of Honolulu	Board of Water Supply
	Department of Community Services

City and County of Honolulu (cont'd.)	Department of Design and Construction
	Department of Environmental Services
	Department of Facility Maintenance
	Department of Parks and Recreation
	Department of Transportation Services
	Department of Planning and Permitting - Land Use Approvals Branch - Traffic Review Branch - Zoning Plan Review Branch - Civil Engineering Branch - Subdivision Branch - Wastewater Branch
	Fire Department
	Police Department
	Honolulu Authority for Rapid Transit
Other Individuals and Organizations: *The following were contacted informally at the start of the SamKoo project effort while the definition of a Kapiolani Boulevard project was still in process. Further consultations are planned as part of the continuing project consultation process*	
	Hawaiian Electric Company
	Councilmember and Chair Ernie Martin
	Councilmember Ann Kobayashi
	Councilmember Carol Fukunaga
	Councilmember Stanley Chang (Trevor Ozawa)

1.2 Compliance with State of Hawaii Environmental Laws

Section 343-5, HRS establishes nine indicators or "triggers" that require the preparation of an environmental assessment or environmental impact statement. Use of State lands or funds is one of those indicators requiring an environmental assessment. Kapiolani Residence proposes to use State funds through the HHFDC's Dwelling Unit Revolving Fund (DURF) program. As such, this environmental assessment is prepared in compliance with the provisions of Hawaii

Administrative Rules (HAR), Title 11, Department of Health, Chapter 200, Environmental Impact Statement Rules.

Design and construction of Kapiolani Residence may involve or impact State and/or City and County lands or funds relating to infrastructure improvements for public facilities. While the specific nature of each improvement is not known at this time, this environmental assessment is intended to address all current and future instances involving the use of State and/or City and County lands and funds relating to Kapiolani Residence.

2. PROJECT DESCRIPTION

2.1 CONTEXT

2.1.1 PROJECT LOCATION

Kapiolani Residence is located in the Ala Moana neighborhood of Central Honolulu, an area of generally very high property values as a result of its central location, relatively intense development patterns, current and pending development potential, and location near regionally significant commercial destinations. At its proposed location within a pending Transit-Oriented Development Neighborhood, Kapiolani Residence is unique as a predominantly affordable housing project given the immediate area's already high and currently appreciating property values.

The 1.291 acre (56,250 square feet) project site consists of two tax map parcels (TMK's: (1) 2-3-041:009 and (1) 2-3-041:006) located along the makai side of Kapiolani Boulevard, just beyond the eastern end of Ala Moana Center and immediately mauka of the Ala Moana Hotel. Kapiolani Boulevard forms the site's mauka edge. Kona Street, a service road owned by Ala Moana Center and which provides customer and service access to the Center and businesses fronting Kapiolani Boulevard, forms the site's makai edge, separating the site from the eastern portion of the Ala Moana Center parking structure. Immediately east or Diamond Head of the site are small, low-rise commercial buildings while the west or Ewa side of the site is defined by the Ala Moana Tower with the Nordstrom Department Store and parking structure just beyond.

The site is located just over ¼ mile from the City and County of Honolulu's proposed future HART Transit Station, and lies within an area intended by the City and County of Honolulu to become the "Ala Moana Transit-Oriented Neighborhood", an urban mixed-use community for which the station's high-speed rail system and other coordinated modes of transportation would offer convenient transportation opportunities to other Oahu locations. Figure 2 displays the site's location. Figure 3 is a tax map display of the project site.

2.1.2 ONSITE AND VICINITAL CONDITIONS

The project site is predominantly level. It is currently occupied by several commercial uses served by surface parking. A single story Korean restaurant occupies the site's eastern edge. A

linear two-story commercial building housing a restaurant, a club, businesses, and the SamKoo offices occupies the center of the site. The eastern portion of the site is an open parking lot occupied by a car wash business and food trucks. Two vehicular accessways exist along Kapiolani Boulevard while two accessways are located along the site's Kona Street side.

Figure 2: Location Map

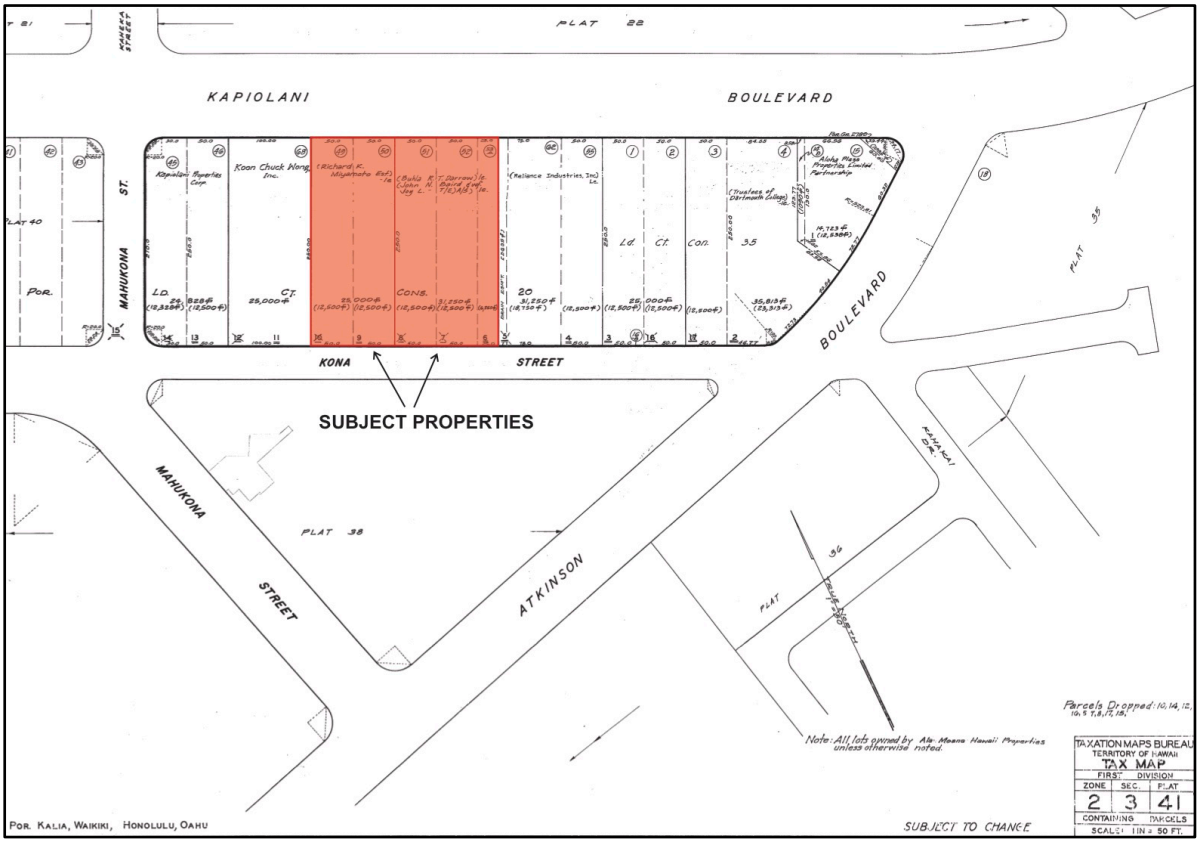


Figure 3: Tax Map of the Project Site

Low-rise buildings, shops, restaurants, and clubs served by open parking lots extend eastward from the project site to Atkinson Boulevard, across which stands the Hawaii Convention Center. Immediately makai of the site, Kona Street is a heavily used service road along which run overhead utility lines and beyond which stands the towers of the Ala Moana Hotel. To the west stand three towers: the Ala Moana Tower, 1600 Kapiolani Boulevard, and the Ala Moana Pacific Building. Kaheka Street, which provides secondary access from Kapiolani Boulevard to Ala Moana Center, the Ala Moana Hotel, service and customer vehicular access to Kapiolani Boulevard businesses, and Atkinson Drive via Mahukona Street runs between the 1600 Kapiolani Boulevard and Ala Moana Pacific towers. The Nordstrom Department Store, the One Ala Moana residential tower, and a parking garage serving both structures span the distance between the Ala Moana Pacific Building and Ala Moana Center's Keeaumoku Street entrance. The nearby Center itself offers a varied concentration of shopping, dining, and entertainment opportunities within easy access from the proposed project.

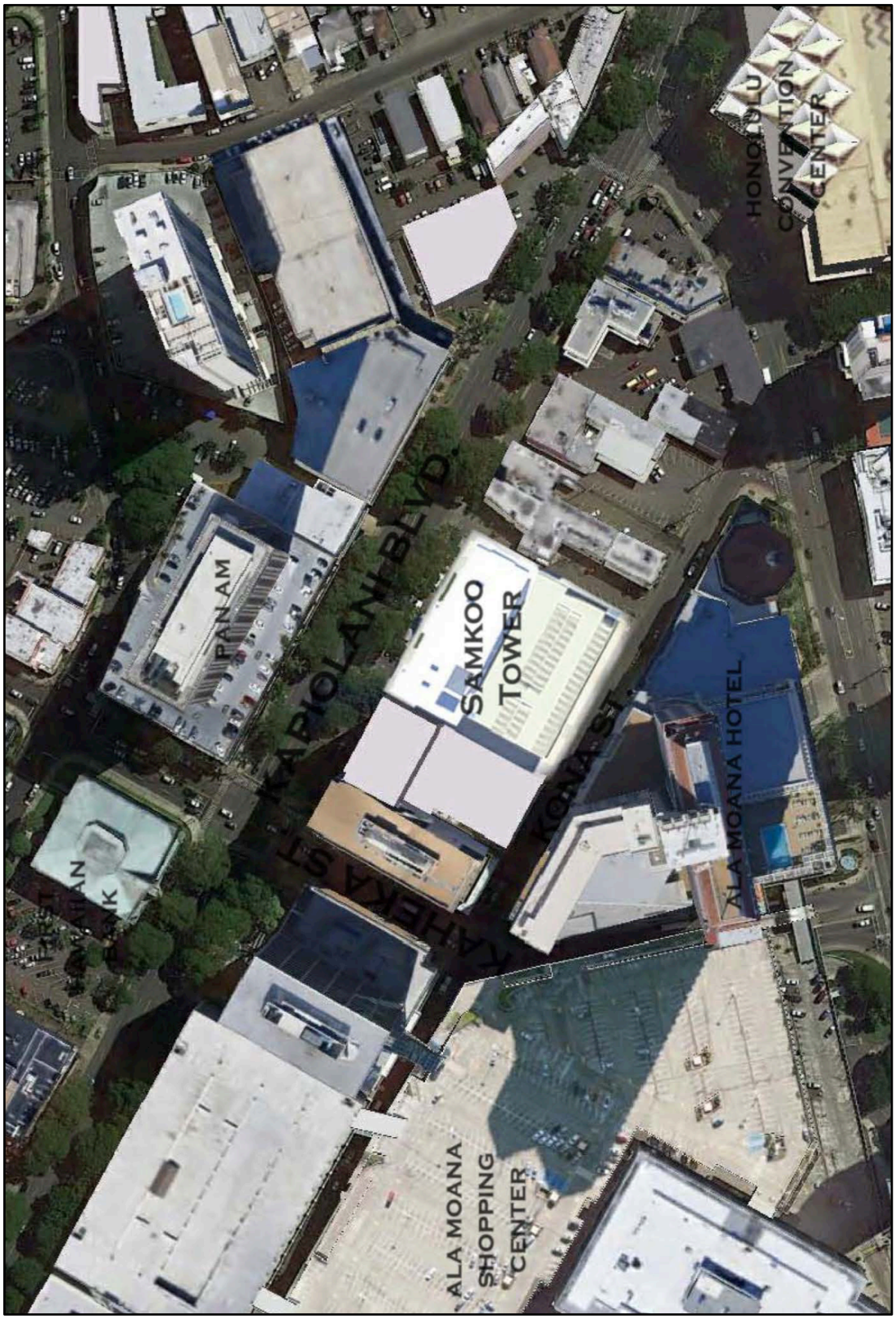


Figure 4: Project Site and Vicinity

Low-rise commercial buildings housing a variety of commercial establishments, the “Pan Am” tower, and the First Hawaiian Bank Ala Moana Branch stand across Kapiolani Boulevard and mauka of the project site. Grocery shopping opportunities are located further mauka along Beretania Street where the Safeway, Times, and Foodland markets are located.

Kapiolani Boulevard, which will provide the principal access and public view of the proposed project, is a major intown arterial running from Honolulu’s Capital District across most of Central Honolulu to Kapahulu Avenue at the edge of Kaimuki. In addition to providing an important connection between Central Honolulu’s various districts, neighborhoods, and destinations, it is visually distinctive along a significant portion of its length by the canopies of mature monkeypod trees planted on both sides of the street. Monkeypod trees are capable of producing canopies eighty feet in diameter. These canopies provide welcome shade for pedestrians and vehicles and a distinctive and differentiating identity for the street.

Because of their maturity, the monkeypods are both an asset and a potential liability. Their presence and appearance give Kapiolani Boulevard its distinctive character while their maturity presents potential hazard. Heavy branches falling from a mature tree could cause severe

Figure 5: Monkeypod Tree Canopies Along Kapiolani Boulevard

damage to property or severe injury to persons beneath them. For this reason, while the distinctive visual qualities of Kapiolani's monkeypods should be respected and utilized wherever possible, these trees may best be treated as design elements in the development of properties along the street: maintained and preserved where they provide amenity, and edited to signify important entry conditions or to eliminate unavoidable hazard. While it would be unwise to construct a building under or in conflict with existing monkeypod tree canopies, it would be equally unwise to maintain a tree where it interfered unavoidably with public safety.

Figure 6: Tree Canopy at the Kapiolani Boulevard Edge of the Project Site

Figure 7: The Treeless Kona Street Edge of the Project Site

Figure 8: Kapiolani Monkeypods in Front of the Project Site

Figure 9: Project Site Interior Looking Makai with Ala Moana Hotel Beyond

Figure 10: Project Site Interior Looking Toward Mauka View Opportunities

Figure 4: Aerial Photograph of Project Vicinity displays the project's immediate environs. Figures 5 through 10 display onsite conditions. The monkeypod trees fronting the project site have canopies ranging from 40 to 50 feet in diameter.

2.1.3 A Summary of the Institutional Context

This subject, which is offered here as a quick summary for the reviewer's reference, will be covered in more detail later in this document.

State Land Use

The project site is located in the State Urban District. This district allows for the development of facilities to establish and sustain communities and the built environment needed to support them. Uses allowed within this district correspond to uses allowed by County zoning and other County land use regulations and standards.

City and County of Honolulu

Development Plan Land Use Designation

The project is located within the Primary Urban Center in an area designated "District Commercial". This designation refers to commercial uses with a large service radius: district, regional, or islandwide. It also allows for and encourages integrated mixtures of uses that enhance the lifestyle quality of urban communities. In this vein, it allows for "medium or higher-density residential facilities" and specifically encourages higher densities in these areas.

Land Use Ordinance: Zoning

Zoning on the project site and adjacent parcels is BMX-3: Community Business Mixed Use. The intent of this designation is to provide areas for both commercial and residential uses outside the central business district, and at a lower intensity than permitted in that district.

Current Building Envelope restrictions at the site under this zoning designation limits building height to 350 feet, a maximum building floor area of 2.5 – 3.5 times the area of the site ("Floor Area Ratio"). Building Height Setbacks from the centerline of bordering streets are also in effect, further limiting the volume of any tall structures built at the site.

It should be noted, however, that as an area intended for future intensification as a Transit-Oriented neighborhood, future City and County policy and concomitant regulations are likely

to change to allow for higher densities and larger building envelopes than currently permitted.

Ala Moana Transit-Oriented Development ("TOD") Neighborhood Plan

The City and County of Honolulu is developing a transit-oriented development plan for the neighborhood in which the project will be located. A draft plan has been released and is currently undergoing public review and possible refinements. It outlines the kinds of improvements in the public domain that are considered desirable to increase neighborhood livability and to support transit ridership and proposes increases in development capacity that may be possible in exchange for a project applicant's contribution of public benefits.

In the area in which the project site is located, the Draft Ala Moana TOD proposes a maximum building height of four hundred (400) feet and a maximum floor area density of 7.0 (seven times the parcel area) in exchange for developer contributions of approved public benefits, to be determined and negotiated on a project-by-project basis. However, actual TOD plan provisions are pending City responses to public and agency reviews.

After a final TOD plan has been developed and adopted, regulations to implement it will be developed, publically reviewed, refined, and adopted. At present, neither a TOD Plan nor concomitant regulations or standards are in effect.

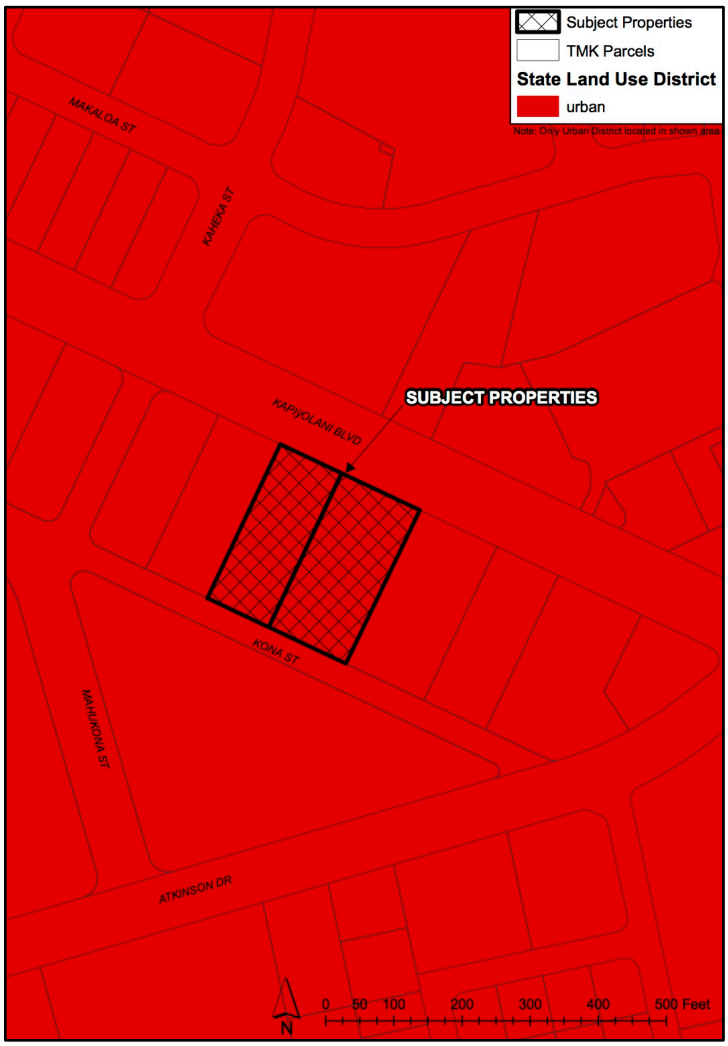


Figure 11: State Land Use District Map

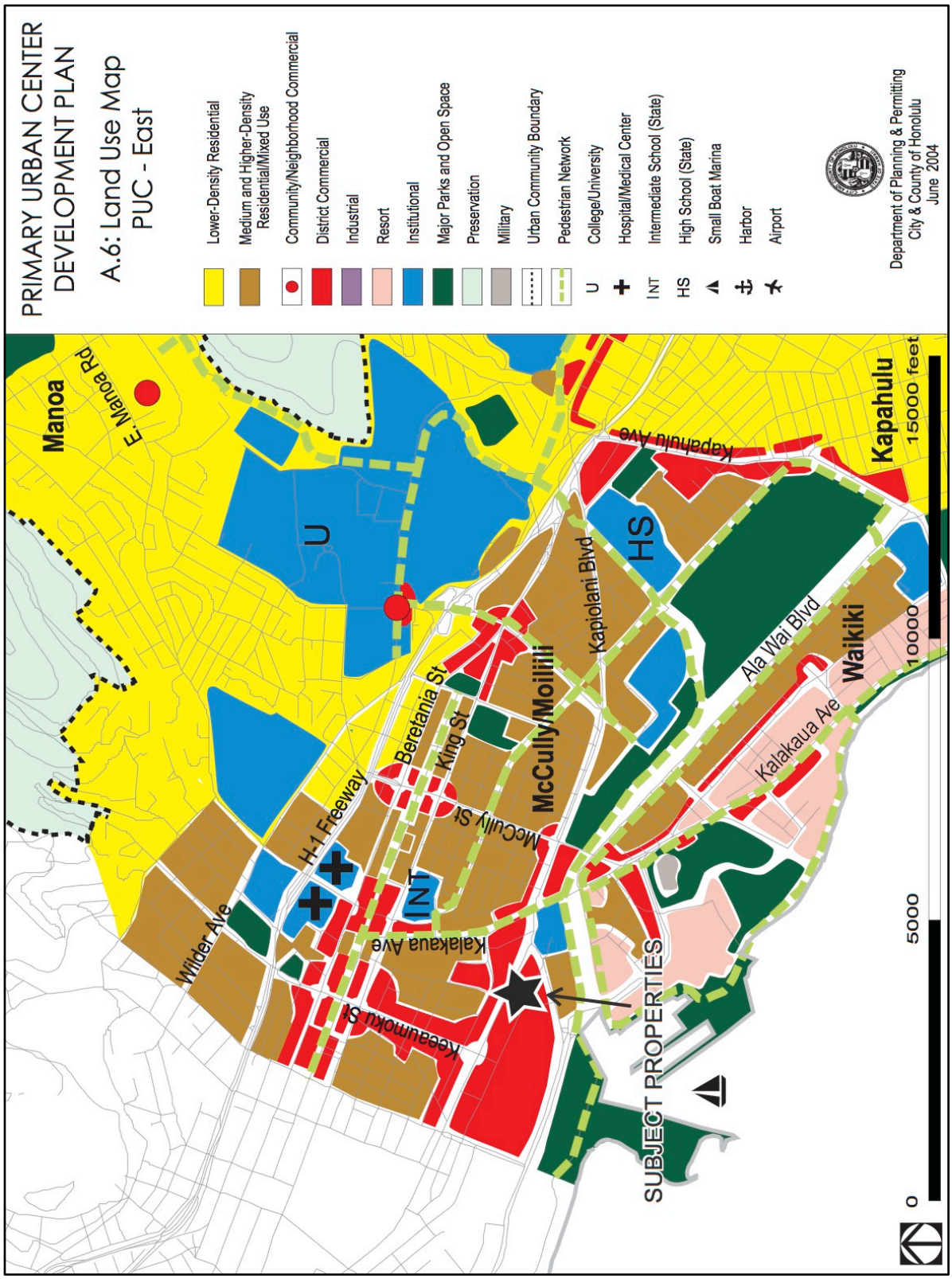


Figure 12: Primary Urban Center

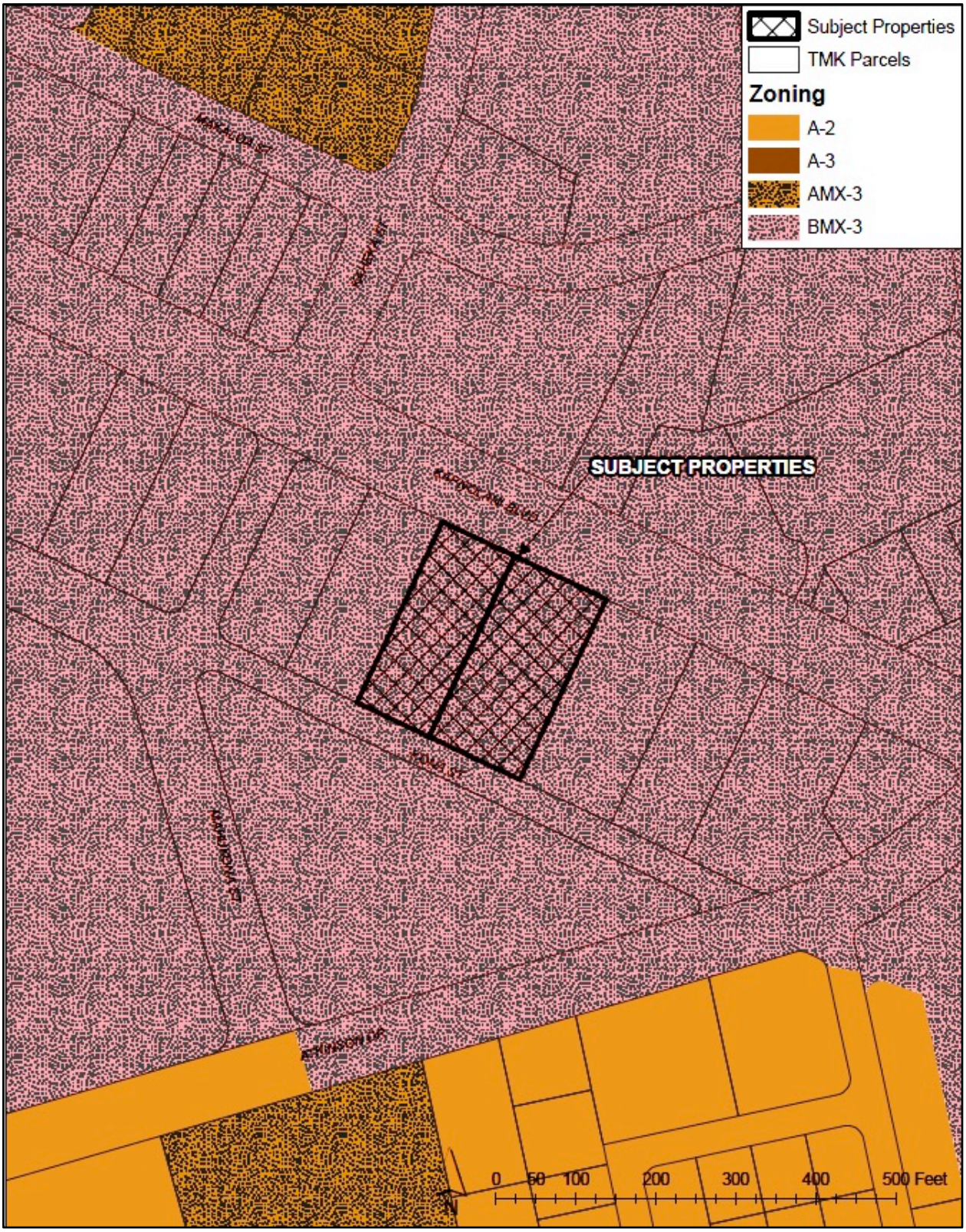


Figure 13: Zoning Map

2.2 THE PROJECT

2.2.1 STATEMENT OF PURPOSE AND NEED

The Kapiolani Residence project is intended to provide quality affordable and moderately priced market for-sale housing in Central Honolulu, at a strategically located, high-value site offering uniquely convenient access to shopping, employment, business and family services, dining, entertainment, multiple transportation choices, and other vital lifestyle support facilities and functions. As such, this project addresses public policy, market preferences, and the severe shortage of housing in the project's target markets.

Public Policy: For decades, the City and County of Honolulu's directed growth policies have emphasized the concentration of population growth in Oahu's two urban centers: Honolulu, Oahu's Primary Urban Center, and Ewa, the island's Secondary Urban Center. Its development plan system reflects this. Since 1998, only two of the island's development plans, which are the primary land use policy plans for each of Oahu's eight regions, have been called "Development Plans". The other six land use policy plans have been named "Sustainable Communities Plans". The land use policy plans for Ewa and the Primary Urban Center (Honolulu from Pearl City to Kahala) are Development Plans, reflecting their purpose: to guide the continuing development of urban communities and the facilities needed to support them. The other eight regions are called "Sustainable Communities Plans". They focus on land use, exterior design, infrastructure, and resource management that will maintain the distinctive quality of those regions and the communities located there.

Within the Primary Urban Center as in other locations along the City's future rail ("HART") line, plans for the areas in the vicinity of HART transit stations are currently in process. These plans will be followed by the development and adoption of implementing regulations. In general, increases in development intensities, public amenities, access to multiple forms of transportation to promote resident mobility, and housing for a mix of income groups are envisioned in these neighborhoods. The Ala Moana neighborhood in which Kapiolani Residence will be located is one of these future "transit-oriented development" ("TOD") neighborhoods.

Market Preferences: While many active families with growing children prefer suburban environments in which to raise families, there has been a growing preference for intown living

among younger members of the workforce and “empty nesters” and other older individuals who value the convenience of needed services and the range of lifestyle enriching establishments and facilities. This is reinforced by the value often placed by working age persons on the quality of the environment in which they find livelihood. Many prefer excellent work or business opportunities coupled with “cool places to live”, often associating this pair of assets with the stimulating intensities of urban environments. At the other end of the spectrum are older members of the population who value the benefits of well-managed multi-family housing, conveniently located services, diversions, and proximity to health care facilities.

The Scarcity of Affordable and Moderately-Priced Urban Housing: Public policy promotes affordable and moderately-priced housing. However, there is difficulty in providing such housing in central urban areas, where most of the land is already developed. Existing development intensity and land values are characteristically high in these areas. As a result, most new projects in central Honolulu must occur as infill redevelopment efforts. Such efforts are typically more expensive to undertake than development on vacant land.

Because of the high cost of land and heavily burdened infrastructure systems, it has been difficult to provide housing to low and moderate market sectors in most central Honolulu locations. The Ala Moana and adjacent Kakaako area are cases in point. Each has been targeted for growth and intensification of development. Recent development activity in both areas have emphasized high-end markets. While projects offering units in the affordable category are also in progress, development activity for the higher end of the housing market has predominated.

The project *Market Study* cites a clear and present shortage on Oahu of both open market and affordable-restricted units. For those households preferring an intown location, the situation is one of very high demand and very tight supply. Its conclusion states:

> *Simply put, it has been shown that there is sufficient potential demand in place to absorb all (and then some more) of the supply of new housing priced under the HHFDC affordable guidelines, as is being considered here. Additionally, the comparable market for the market rate units were examined and found to be sufficient to assume that these units have the potential to be sold out in a 2-3 year time frame. Finally, if current conditions continue into 2015 and beyond to 2017, the proposed project should be able to complete both pre-sales and final closings in that time frame.*

The purpose and intent of Kapiolani Residence is to meet that demand, and to supply much-needed affordable and moderately-priced market housing in an area of Honolulu where this is both much needed and very difficult to do. As such, this project is unique, and in an environment of scarcity that can be difficult overcome, a vital one for both the Ala Moana neighborhood and the neighboring Kakaako district.

2.2.2 PROJECT AFFORDABILITY

Sixty percent (60%) or 292 of Kapiolani Residence's 485 residential units will be priced within the "affordable housing" range, targeting households earning between 80% - 120% of Area Median Income (AMI). The remainder of the units will be offered for sale as moderately-priced "market units". The distribution of affordable units by unit type is displayed in the next section: "Facility Description".

As an affordable housing project, Kapiolani Residence will be processed for approvals under the affordable housing provisions of Chapter 201H, HRS, which allows for greater design flexibility, exemptions from certain statutes, ordinances, rules, and fees relating to planning, zoning, and construction. This flexibility is sought to achieve the cost effectiveness needed for project economic feasibility.

Hawaii Housing Finance and Development Corporation (HHFDC) will be processing the 201H application for this project. Communications with DPP at project inception determined this project's ineligibility for DPP processing. A copy of the DPP letter to this effect is presented in Appendix B of this document. HHFDC will process this environmental assessment and the 201H application. The City and County of Honolulu City Council will review and may approve the project's request for exemptions pursuant to HRS Section 201H-38. The City Council may also disapprove the project, or approve the project with modifications.

As specified in Section 201H-47, HRS and required by HHFDC, there will be a 10-year buyback clause for the affordable units. If the purchaser of an affordable unit sells the unit prior to the end of the 10-year period, HHFDC has the option to purchase the unit. Resale of affordable units is also subject to shared appreciation clauses as provided in Section 201H-47, HRS.
This Draft Environmental Assessment serves as the project's disclosure and public comment document, meeting the content and submittal requirements under Chapter 343,HRS, and

Chapter 11-200, Hawaii Administrative Rules (HAR). Relevant 201H application information and requested project-related exemptions are also included in this document. A complete 201H application will be submitted to HHFDC.

SamKoo Pacific is also working with HHFDC to apply for and secure funding through HHFDC's Dwelling Unit Revolving Fund (DURF) program.

2.2.3 FACILITY DESCRIPTION

Facility Overview

Kapiolani Residence consists of a 45-story residential tower with ground-level streetfront commercial spaces facing Kapiolani Boulevard, a 9-floor free-standing parking structure fronting Kona Street, and intervening recreational and leisure open spaces between the two structures. Kapiolani Boulevard will provide principal vehicular access, using an exclusively right turn in/right turn out pattern. Secondary vehicular egress allowing both right and left turns will take place on Kona Street, using an existing vehicular point of access.

The tower will house four hundred eighty-five (485) studio, one-bedroom, two-bedroom, and three-bedroom residential units and rise to a height of approximately 399.5 feet. Rooftop mechanical equipment will rise an additional 18 feet for a cumulative height of approximately 417.5 feet. The proposed project floor area ratio (FAR) is 9.32.

Major project elements include:

- Residential Units
- Residential Support Spaces and Amenities
- Staff Support Spaces
- Commercial Space
- Recreational and Leisure Spaces
- Building Technical Support Spaces
- Parking and Loading Spaces

Figure 14: Kapiolani Residence Site Plan

The tower presents the project's "front" or public face while the parking structure's primary purpose is to house the project's necessary parking, loading, and utility facilities. Kapiolani Boulevard provides primary access and egress for the project while secondary egress and service access will be from Kona Street. Both the tower and parking garage run parallel to their respectively fronting streets. Figure 1 is a conceptual view of the project as it will be seen from its Kapiolani face. Figure 14 displays the project conceptual site plan, which illustrates the organization of facilities on the project site. Project drawings with appropriate notations illustrating other aspects of the proposed facility may be found in Appendix D.

Kapiolani Residence Program Summary

During its development, the proposal for Kapiolani Residence has been studied rigorously from market, physical, contextual, and financial perspectives in an effort to create the kind of balance required for a successful project that meets market needs, enhances its surroundings, creates in itself an asset to the emerging identity of the District, and meets the demanding requirements of financial feasibility on a very high value site. While further detailed development of critical project elements still lie ahead, the table below gives a useful programmatic overview of Kapiolani Residence as it has been defined to date, as an overview perspective of the proposed project and an introduction to its major component parts. Areas below are in gross square feet.

USAGE TYPE	APPROXIMATE AREA ALLOCATIONS		
	FAR-Subject Area (sf)	Non-FAR Area (sf)	Total Area (sf)
Residential Units	388,280		
Residential Balconies	22,622	7,172	
Residential Floor Circulation	94,543		
Residential Common Area & Circulation	6,348		
Resident Manager's Unit	972		
Staff Spaces	861		
Total Residential	**513,626**	**7,172**	**520,798**
Commercial Spaces	3,348		
Total Commercial	**3,348**		**3,348**
Recreation and Leisure			
Resident Accommodations			
Lawn and Adjacent Gathering Plaza		2,942	
Covered Entry	317		
Party Room	1,557		
Fitness Center	1,128		
Public Plaza & Leisure Space		3,928	
Total Recreation and Leisure	**3,002**	**6,870**	**9,872**
Building Support (Utility) Spaces			
Tower Utility Spaces	774		
Parking Garage Utility Spaces	3,739		
Total Building Support	**4,513**		
Parking Facilities: 695 Stalls		243,031	
Space Totals	**524,489 (FAR = 9.32)**	**257,073**	**781,562**

Table 1: Preliminary Space Program Summary

With this programmatic overview, a summary description of major project elements follows.

The Tower

The 45-story tower houses the project's 485 residential units, resident support spaces, commercial spaces, a portion of needed building systems support spaces, and a resident manager's unit. 60% or 292 of the project's total 485 units will be affordable to households earning 80% - 120% of the Area Median Income (AMI). The remaining 193 units will be moderately priced and offered to the open market. General unit distribution will be as follows:

Unit Type	Affordable 80-120% AMI	Open Market	Totals
Studio/1 Bath	53	35	88
1 – Bedroom/1 Bath	107	69	176
2 – Bedroom/2 Bath	105	72	177
3 – Bedroom/2 Bath	27	17	44
Totals	**292**	**193**	**485**

Table 2: Unit Distribution by Bedroom and Market Type

The tower presents the project's "front" or public face toward Kapiolani Boulevard, with a generous street setback to:

- Provide an adequate visual foreground to establish a setting for the project's public or primary "face", its streetlevel commercial enterprises, and its generously proportioned, landscaped and furnished leisure and passive recreational plaza;
- Achieve maximum acoustical buffering from vehicular street traffic;
- Enable the creation, differentiation of, and generous provisions for circulation space (the "sidewalk") along the street, the frontyard leisure spaces for passive recreation, outdoor dining, relaxation, and social interaction, and access to the building's streetlevel facilities along the building's frontage.

The tower's streetlevel floor houses the main pedestrian entrance to streetfront commercial facilities, the residential lobby, resident services, a resident manager's living unit, staff support spaces, and building technical equipment spaces. The resident lobby and commercial spaces face Kapiolani Boulevard. This provides an easily identifiable resident entrance to the building along the building's public face while simultaneously giving commercial spaces immediate visibility and access to passing pedestrians, bicyclers, and persons occupying the adjacent recreational plaza. The rear of the tower's streetlevel floor houses staff and building support

spaces. They include the resident mail room, a resident manager's apartment, building administrative spaces, and spaces housing some of the building's technical support systems. The Tower's upper floors house the residential units. Each floor holds 11 units per floor, as follows:

Unit Type	No.	Approximate Net Interior Living Area w/out Balcony
Studio/1 Bath	2	408 - 421
1-Bedroom/1 Bath	4	624 - 680
2-Bedroom/2 Bath	4	841 - 916
3-Bedroom/2 Bath	1	1,227
Total	**11**	

Table 3: Unit Distribution, Typical Residential Floor

The Parking Structure

The project's parking structure holds resident indoor recreational spaces, the remainder of the project's utility spaces, four loading spaces, secured bicycle storage, and project parking stalls. Recreational, leisure, utility spaces, loading spaces, and parking stalls are located on the ground floor. The upper parking structure floors are dedicated exclusively to the remainder of the project's 695 parking stalls. All units will be assigned at least one parking stall. While 2-Bedrrom units will be assigned 1 stall per unit, Table 4 shows 1.5 stalls per unit allocated to the 2-Bedroom units to enable 2-Bedroom unit purchasers to acquire a second stall on a "first come, first served" basis. Each 3-Bedroom unit will be assigned 2 stalls. Another 38 stalls will be available for other uses, including possible additional resident acquisition.

PROPOSED DISTRIBUTION OF PARKING STALLS BY USAGE TYPE		
USAGE TYPE	**Stalls by Unit Type**	**Stalls by Usage Type**
RESIDENTIAL TOTAL		**617**
STUDIO (1 Stall/Unit x 88 Units)	88	
1- BEDROOM (1 Stall/Unit x 176 Units)	176	
2 – BEDROOM (1.5 Stalls/Unit x 177 Units)	265	
3 – BEDROOM (2 Stalls/Unit x 44 Units)	88	
COMMERCIAL		**8**
GUEST PARKING		**24**
ELECTRIC CAR PARKING		**8**
ADDITIONAL STALLS FOR RESIDENT OR OTHER PROJECT USES		**38**
TOTALS	**N/A**	**695**

Table 4: Distribution of Parking Stalls by Usage Type

Recreation and Leisure Spaces

Kapiolani Residence will offer a variety of recreation and leisure spaces for its residents and the public. Between the Tower and the Parking Garage, expanses of lawn and hardscape will offer opportunities for recreation, social interaction, and leisure pastimes for residents and their guests. A large public plaza offering landscaped seating for enjoying coffee, smoothies, and social interaction in front of the streetfront commercial spaces will provide welcome opportunities for respite for residents and passersby, designed to be clearly distinct from the pedestrian thoroughfares served by the adjacent public sidewalk. This outdoor area will also feature bicycle racks for public use. On the ground floor of the parking structure, a party room and fitness center, located directly adjacent to the outdoor leisure spaces will provide opportunities for indoor fitness and social activities. For large indoor functions, the lawn and plaza will act as natural extensions of the indoor spaces to enhance the quality of the recreational and leisure experiences.

2.3 PRELIMINARY MARKET DISTRIBUTION OF RESIDENTIAL UNITS

As previously cited, Kapiolani Residence is a project emphasizing residential offerings to affordable markets. As such, 60% of its units will be affordable, priced to be accessible to households earning 80 – 120% of the Area Median Income (AMI) while the remaining 40% of its units will moderately priced market units.

While the determination of affordable unit AMI and possible pricing is still in progress and difficult to define precisely with the start of the sales program a half-year away, the following table displays preliminary unit target market distribution as developed to date, using 2014 HUD income and sales price guidelines:

UNIT TYPE	AFFORDABLE UNITS				# MARKET UNITS
	AMI CATEGORY & HHFDC PRICE RANGE			UNIT TOTALS	
	80% AMI & BELOW	80% - 100% AMI	100 - 120% AMI		
STUDIO	11	42		53	35
PriceRange	$295,150~$314,800	$318,740~$393,600			
1-BEDRM	7	100		107	69
PriceRange	$345,280~$354,100	$358,550~$442,900			
2-BEDRM	15	79	11	105	72
PriceRange	$408,970~424,900	$430,210~531,100	$536,420~$637,400		
3-BEDRM		4	23	27	17
PriceRange		$597,500~$609,700	$615,790~$731,600		
TOTALS	**33**	**225**	**34**	**292**	**193**

Table 5: Preliminary Market Distribution of Residential Units

2.4 NEARBY RESIDENT SERVICES AND AMENITIES

Kapiolani Residence offers a uniquely central location for affordable and moderately priced urban homes. It enjoys the proximity of conveniently located shopping, dining, entertainment, family and business services, financial institutions, private and public educational facilities, and convenient access to public transportation.

Some of Honolulu's most unique and stylish as well as some of its most popular shopping, dining and entertainment establishments are located within walking distance. They include the myriad establishments housed in adjacent Ala Moana Center and nearby Ward Village Centers, and the wide variety of restaurants, clubs, shops, and services located along Keeaumoku Street and Kapiolani Boulevard.

Banking institutions located nearby include Territorial Savings Bank, Bank of Hawaii, and American Savings Bank in Ala Moana Center. First Hawaiian Bank stands nearly directly across Kapiolani Boulevard from the project, while another branch of American Savings Bank is located near the proposed Transit Station location along Kapiolani Boulevard.

Medical services are located throughout the project's environs. A large concentration of services is located just over ¼ mile away in the Ala Moana Building at the Ala Moana Center Keeaumoku Street entrance while smaller concentrations of medical offices are located along King Street from Keeaumoku Street to Kalakaua Avenue.

Sam's Club, Walmart, and Keeaumoku Market on Keeaumoku Street, Don Quixote and Palama Market on Kaheka Street, and Safeway, Time's and Foodland Supermarkets on Beretania Street offer a wide variety of food shopping opportunities within comfortable reach of the project.

Educational facilities are also located nearby. McKinley High School provides educational programs at the high school level and for adults through its continuing education program. Kaahumanu School serves elementary education needs, and Washington Middle School serves students in that transitional period between elementary and high school education.

2.5 DEVELOPMENT TIMETABLE

The table below displays the project's targeted development schedule:

PROCESS	PROJECTED DATES	DURATION
Entitlement	September 2014 – July 2015	7.9 months
Design	November 2014 – October 2015	8.3 months
Construction Permits	July 2015 – February 2016	5.2 months
Sales Program	October 2015 – April 2016	
Construction	October 2015 – April 2017 (est.)	20+ months

Table 6: Preliminary Development Time Table

3. THE AFFECTED ENVIRONMENT, POTENTIAL IMPACTS AND MITIGATIVE MEASURES

This section documents existing environmental conditions at and adjacent to the project site, any project-related impacts that may occur, and any mitigative measures that may be necessary.

3.1 CLIMATE

The project site is located on the coastal plain of metropolitan Honolulu. Its surrounding relatively warm ocean water temperatures and wind patterns influence its general climate. Cooling tradewinds from the northeast have been the historically prevalent wind pattern for Honolulu and the island of Oahu on which it is located. Southerly or "Kona" winds occur periodically in response to weather conditions, during which time humidity and surface temperatures rise. With minor variations, climatic conditions remain relatively constant throughout the year, with somewhat cooler periods during fall and winter months and warmer periods occurring during late spring and summer. Temperatures generally range between 70 to 90 degrees Fahrenheit, with an average annual temperature of 77.6 degrees Fahrenheit. Average annual rainfall is 17.13 inches per year.

With its location near the coast, the site experiences less rain and more sunlight and warmth than occur in higher and more inland valleys and ridges overlooking the city.

(*Source: National Oceanic and Atmospheric Administration, usclimatedata.com, rss weather.com, redorbit.com)*

Potential Impacts and Mitigative Measures

The project will be located in an already highly developed area characterized by low rise buildings and numerous high rise structures, where the high presence of reflective surfaces accentuate Honolulu's typically warmer coastal conditions. It is not anticipated that the project will significantly alter current climatic conditions. A project shadow study to observe the potential shadowing effects project structures may have on the neighboring environment has been scheduled as part of advanced project design studies. A wind study to examine estimated wind patterns around the project at street level and at higher elevations has been commissioned as part of the project design and documentation process.

To mitigate discomfort from periods of higher temperatures, balconies, which offer the opportunity to increase ventilation within the individual unit and to allow resident access to

outside air, operable windows, and air conditioning capabilities within each unit will be part of the project provisions.

3.2 TOPOGRAPHY

As cited in the project *Preliminary Engineering Report* conducted by SSFM International and presented as Appendix H, the project site is predominantly flat, ranging from 5.1 to 7.1 feet above mean sea level (MSL).

Potential Impacts and Mitigative Measures:

As the project's finished grading will result in a relatively flat site, it is not expected that any major alterations to the topography or export/import of soil will be necessary.

3.3 SOILS

The soil type at the project site has been identified by in the U.S. Department of Agriculture Soil Conservation Service as Fill Land, mixed (FL). This type of soil occurs most frequently near Pearl Harbor and Honolulu areas near the ocean. It consists of areas filled with material dredged from the ocean or hauled from nearby areas and material transported from offsite locations. As this type of soil is present in the coastal plain where much urbanization is and will continue to progress, it is present in many urban development settings as surface layers and is used for those purposes.

The surface fill layer extends to about 4 to 6 feet below the site surface. This fill is underlain by lagoonal deposits extending to 24 – 26 feet below existing grade. Coralline deposits lie beneath the lagoonal deposits. They generally consist of loose to medium-dense sandy and gravelly coralline detritus interbedded with medium hard to hard sandstone/coral formations and stiff to very stiff layers of alluvial clay.

Onsite geotechnical borings encountered groundwater at 4.9 – 6.0 feet below existing grade. With its proximity to the ocean, groundwater level fluctuations probably occur in response to tidal fluctuations or introduction of water onto the site as a result of varying surface conditions. Figure 15, on the following page, presents a soils map of the area in which the site is located.

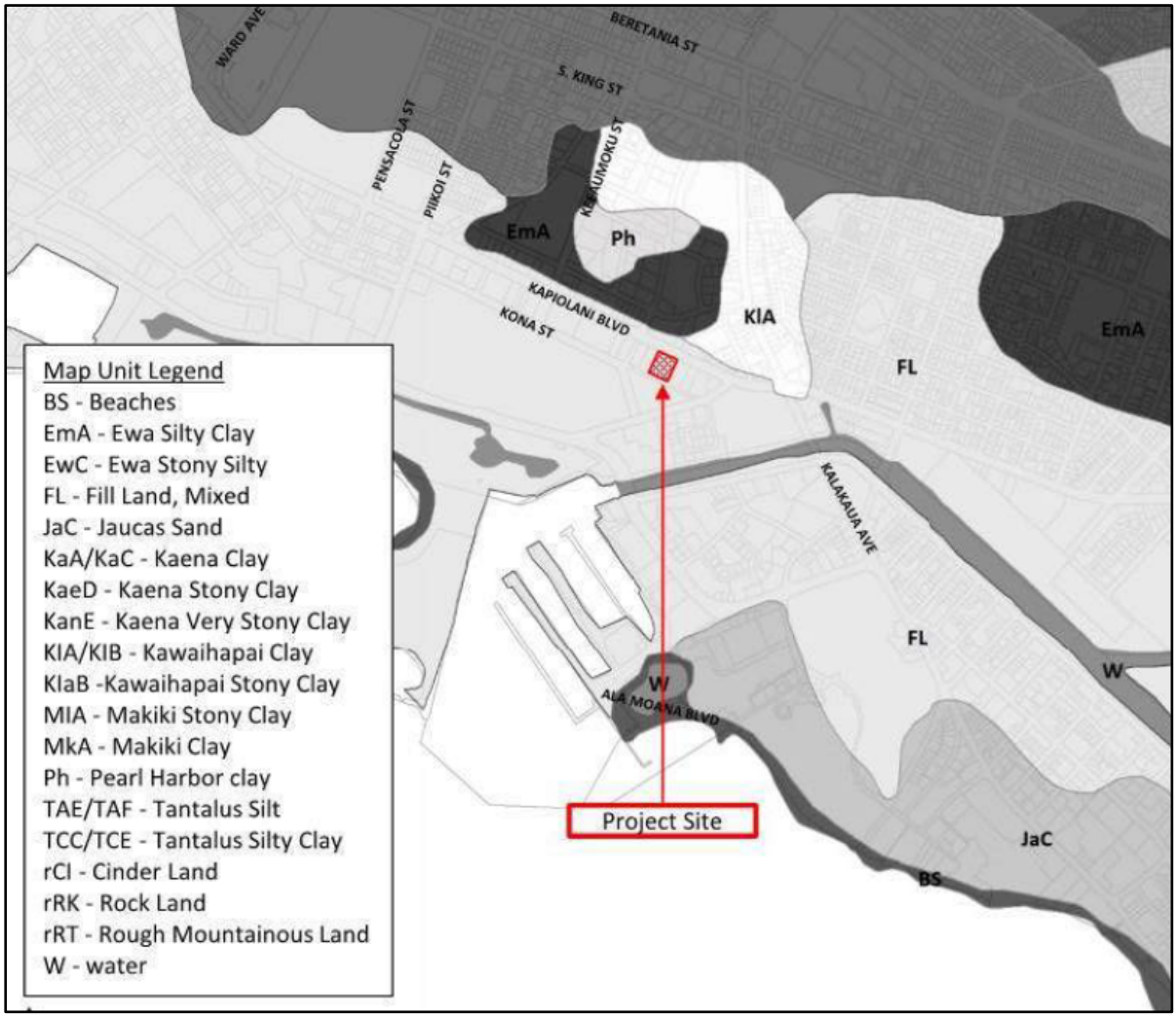


Figure 15: Soils Map of General Project Area

Potential Impacts and Mitigative Measures

The proposed project will involve grading and site preparation for new paved areas and building footings, but as cited in the Topography discussion above, no major topographical changes are anticipated. Short term impacts may involve minor soil loss or erosion during construction, but these potential effects will be controlled as cited below. After construction and the establishment of onsite planting, the site will be stabilized, and soil loss, if any, would be minimal.

All grading operations will be conducted in full compliance with dust, erosion control, and other requirements of the City and County Grading Ordinance and the State of Hawaii Administrative Rules, Section 11-60, 1-33 applicable to fugitive dust. In addition, Best Management Practices will be included in construction plans to mitigate dust and/or silt emissions.

3.4 FLORA AND FAUNA

The project site has been highly modified for decades for urban uses, eradicating pre-European natural features and resources. The U.S. Fish and Wildlife Service (USFWS) files and mapped date pertinent to federally "listed species" and designated critical habitat has found no federally listed species or critical habitat "within the immediate vicinity" of the project area. However, its records do indicate a probability that migratory white terns "may nest or transit through the area". These birds are protected by the Migratory Bird Treaty Act (MBTA) (16 U.S.C. pp703-712). USFWS states that these birds often nest in urban parks and residential areas from Hawaii Kai to Hickam Air Force Base. They do not build nests, but lay eggs directly on a ledge, branch, or other suitable location. The young hatchlings take 45 days to be able to leave their hatching location. USFWS recommends examining existing trees or structures slated for disturbance for the presence of white tern prior to commencing activity, and notifying USFWS if such presence is detected.

All existing onsite vegetation is introduced. Monkeypod trees are the most prominent vegetative features at the project site.

<u>Potential Impacts and Mitigative Measures</u>

Visual inspections to date have not detected the presence of white terns at onsite buildings or trees. However, site inspections will be conducted to determine the presence of white terns prior to tree removal and other construction activity.

Project planning in consultation with the City and County of Honolulu Department of Planning and Permitting, Traffic Review and Urban Design Branches and with the Department of Parks and Recreation have identified the need to remove and replace two existing monkeypod trees in order to maintain adequate vehicular "sight lines" and safe site access and egress along Kapiolani Boulevard.

Consultations with the Department of Parks and Recreation Division of Urban Forestry have tentatively determined that one replacement monkeypod tree will be planted at the project site while the other will be planted in a suitable offsite location. This strategy has been presented to and has received the support of the Outdoor Circle.

3.5 ARCHAEOLOGICAL AND HISTORIC RESOURCES

An archaeological inventory survey of the site, which included background research on the site's historic and cultural context, was conducted via document research and 15 evenly spaced trenches dug at the site. Its findings and conclusions are summarized below.

Context

The archaeological survey places the project site in a region called *Kewalo*, located between the two traditional population centers of Honolulu (traditionally known as *Kou*) and Waikiki. While there are no specific references to Kewalo among the writings of early (European) travellers, early historic documentation described Honolulu and Waikiki as having extensively irrigated taro fields (*loi*), fishponds, and permanent habitation sites, with Waikiki in particular having served in pre-European times having served for centuries as an important population center and center for the royalty from as early as the late 14th Century.

In sharp contrast with Honolulu and Waikiki, the Kewalo region seemed to have been less attractive as a place to live and farm because it consisted predominantly of marshes and was prone to flooding and tidal surges. However, while this area was apparently not considered a practical location for actual settlement until its modern transformation into an urban district, it was apparently an important location for fishponds and as a waterbird habitat. An old 19th Century Land Commission Awards record (LCA 387) just makai of Kewalo described the presence of fishing grounds, coral flats, and salt beds.

Other archaeological studies near the project area suggest that the general Kewalo area was an extensive wetland in traditional times. However, systematic filling of the area began in the 1920's and '30's and was completed by the late 1940's. As cited in the project geotechnical engineering report, soils in the general area currently consist of mixed fill imported and deposited to facilitate urbanization, typically forming a top soil layer four to six (4'-6') deep, under which are generally found lagoonal deposits over a coralline ledge formation.

Findings and Recommendations

The subsurface survey work identified, documented, and registered one "archaeological" site: a historic era refuse deposit which it designated *State Site number 50-80-14-7756.* This site consisted primarily of broken and intact glass bottles and two subsurface features that consisted of fills associated with abandoned utility infrastructure. The test trenches also revealed

sediments indicative of previous land surface characteristics, which consisted of wet sandy clay characteristic of marsh sediments.

The archaeology team assessed the site as significant for its potential to contribute information to the record of "Historic Era" land tenure in the project area and this general portion of the Kalia Ahupuaa, of which it is a part. However, no further work was recommended for the site.

Potential Impacts and Mitigative Measures

The significance of the newly discovered and registered site was defined as informational: that it provided information of living/lifestyle conditions at the time of the deposit. The archaeology consultant determined that this recently registered site should not require project design modifications for the purposes of preservation. However, the archaeology consultant recommended monitoring of all excavation exceeding a depth of one meter due the potential for additional archaeological deposits that might exist in subsurface layers of historic period fill. As a result, such excavation work will be monitored for possible encounters of such deposits during construction.

3.6 CULTURAL RESOURCES

A *Cultural Impact Assessment for the Kakaako Community Development District Mauka Area Plan, Waikiki Ahupuaa, Honolulu (Kona) District, Oahu Island* was prepared as part of the Environmental Impact Statement for the Hawaii Community Development Authority in support of the Kakaako Community District Mauka Area Plan. The "Area of Potential Effect" (APE) for a Cultural Impact Assessment (CIA) is substantially larger than for archaeological studies. This CIA "extends [from the currently designated Kakaako Mauka Area] to wider associations throughout Waikiki Ahupuaa, Kona District, and beyond". The Kapiolani Residence site lies within this area of coverage.

The study found that the general area between the Honolulu and Waikiki was characterized by fishponds, salt ponds, occasional taro loi, and trails connecting Honolulu and Waikiki. The study also noted that Kewalo and the adjacent Kaakaukui and Kukuluaeo districts were traditionally noted for fishponds, salt pans, and marshlands where pili grass grew. Religious rites and resource gathering were also practiced in this general area. Since the APE covers a very wide area, the specific location of these activities and sites may often be elusive.

Potential Impacts and Mitigative Measures:

Given the systematic Twentieth Century filling of the lands in and around the area in which the project site is located and the fact that the one "significant" site identified by the archaeological inventory is a historic (post-European arrival), it is possible that pre-European remains may lie buried beneath the layers of fill material deposited during those filling operations.

Activities at and adjacent to the project site have consisted predominantly of increasingly intense urban uses, purposes, facilities and environmental character since the early 20th Century. However, because construction activity will involve some excavation, recommendations of the archaeological inventory, which include the monitoring of all excavation exceeding a depth of one meter due the potential for additional archaeological deposits that might exist in subsurface layers of historic period fill should be followed. In addition, in keeping with the recommendations of the Mauka Area CIA, efforts to avoid impacts on view corridors and existing green spaces should be made, any infrastructure concerns, if they arise, should be addressed with the community prior to development, and community members should be consulted to address and integrate any community concerns that may arise in the design of site improvements.

The project has identified and addressed the project's relationship to the significant public view corridor identified by the City's Primary Urban Center Development Plan which covers the region in which the project is located. An examination of this relationship found that the project has no impact on this view corridor. A summary of this can be found in Section 3.7, *Visual Resources*, immediately following. At present, there are no infrastructure concerns. To address previous wastewater transmission issues, the project owner, SamKoo, was part of a group of property owners which funded improvements to sewer line capacity in and adjacent to the project area to enable adequate sewer line capacity for those properties. SamKoo and its consultants have also formally consulted on multiple occasions with the community through the Ala Moana/Kakaako Neighborhood Board to present and discuss the project during its development.

Further community access to the project review process will be possible as the project continues through its requisite entitlement processes, through the formal public review and comment period for this Environmental Assessment and the subsequent Honolulu City Council review process.

3.7 VISUAL RESOURCES

The Kapiolani Residence project is located in the Ala Moana District of Central Honolulu, within the region covered by the City and County of Honolulu Primary Urban Center (PUC) Development Plan. The protection of visual resources is included in the first of the Plan's "Key Elements". It states: "*Honolulu's natural, cultural, and scenic resources are protected and enhanced".* Pertinent to this project are the Plan's discussion of panoramic views and the city skyline. Pertinent PUC Development Plan sections addressing this are as follows:

Section 3.1.1.2 Scenic Views

PANORAMIC VIEWS OF NATURAL FEATURES AND LANDMARKS

"Panoramic views are broad vistas from distant vantage points. "

Significant views noted by the Plan are:

- *The Koolau and Waianae Mountain Ranges and their foothills (notably Red Hill and Pu-u Ualakaa, or Round Top);*
- *The Pacific Ocean, Pearl Harbor's East Loch, Ford Island, Honolulu Harbor, Ke-ehi Lagoon and Kewalo Basin, and their respective shorelines; and*
- *The craters of Leahi (Diamond Head), Puowaina (Puchbowl) and Aliamanu.*

Section 3.1.2 Policies

"Establish and maintain an integrated open space network throughout the Primary Urban Center comprised of the following elements:

- **Preserve panoramic views of natural landmarks and the urban skyline.** Preserve views of the Ko-olau and Waianae Mountain Ranges, Punchbowl, Diamond Head, Pearl Harbor and other natural landmarks. Maintain important view corridors within and across urban Honolulu and keep Downtown as the most prominent feature of the urban skyline.

Section 3.1.3.3 Urban Skyline and Mauka-Makai Views

- Preserve the following panoramic views…
  - From Ala Wai Canal Promenade toward the Koolau Range
  - From Ala Moana Beach Park toward the Koolau Range
  - From Kewalo Basin toward the Koolau Range and Punchbowl
  - From Kakaako Waterfront Park toward Punchbowl and the Koolau Range
  - From Punchbowl Lookout toward Diamond Head

Potential Impacts and Mitigating Measures

The diagram below, taken from the Primary Urban Center Development Plan, illustrates important Central Honolulu view corridors. The applicable view corridor is the mauka view of the Koolaus from Magic Island at Ala Moana Park. The Ala Moana Hotel, located immediately makai of the proposed Kapiolani Residence project and which possesses a broader profile than the Kapiolani Residence tower, prevents any part of the project from being seen from this vantage point. Because it is not visible from this vantage point, the project does not impact mauka views of the Koolau from the shoreline.

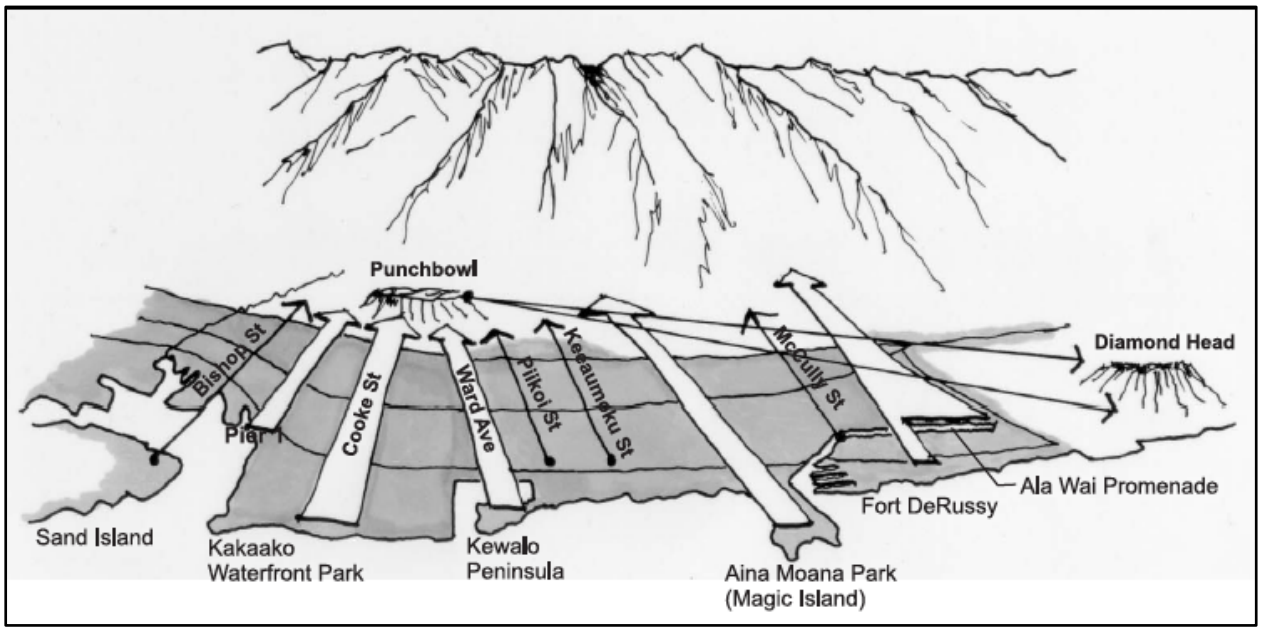


Figure 16: Primary Urban Center Development Plan View Corridor Diagram

3.8 ROADS AND TRAFFIC

The proposed project is located in an area of high vehicular and pedestrian activity. The immediate area has been proposed for increased densities under the City's draft Ala Moana Neighborhood Transit-Oriented Development Plan. To assess future traffic in the immediate project area and the potential effect the project may have on it, a *multi-modal* Traffic Impact Analysis Study was commissioned. Its findings and recommendations are included in this document as Appendix G: *Traffic Impact Analysis Report* (TIAR). The following narratives addressing existing and future conditions are based on this report.

The Transportation Network

Vehicular Facilities: The surrounding transportation network consists of a gridded network of streets. The Ala Moana Neighborhood Transit-Oriented Development Plan, Existing Conditions Report (RTKL, August 2012) states that the transportation network is disrupted by the existence of "superblocks" (large blocks that interrupt the street grid). These superblocks concentrate vehicular volumes at major intersections resulting in long signal timing cycle lengths of 120 seconds and strained capacity. They also make it difficult to maintain connectivity and mobility for other transportation modes.

Buses and Heavy Vehicles: Ala Moana Center is the primary transfer point for TheBus system with a transit center located along Kona Street, adjacent to the Ala Moana Center. Buses that service this area include Routes: C, 6, 8, 23, 40, 52, 53, 55, 56, 57, 57A, 62, 65, and 88A. Additional buses that stop along Kapiolani Boulevard in the project area include Routes: A, 3, 9, 13, 17, and 18. Private buses and trolley services also have stops within the Ala Moana Center parking complex of garages and multi-storied lots. For a graphic representation of this transportation network and other relevant figures, refer to Appendix G, *Traffic Impact Analysis Report* enclosed in this Draft EA.

Pedestrian Facilities: Sidewalks line both sides of Kapiolani Boulevard with landscaped planter strips separating vehicular travel ways from pedestrians in most locations. Along Kona Street, sidewalks exist only along the makai side of the street. Fronting the project site along Kona Street, there is no sidewalk. Sidewalks widths in the surrounding project area range from 5-feet on Kona Street to 6 to 8-feet on Kapiolani Boulevard. Other sidewalks on Kaheka Street and Mahukona Street range from 5 to 8-feet. The City and County of Honolulu's Traffic Standards Manual (C&C, 1979) states that in most cases, concrete sidewalks shall be at least four feet wide in residential districts. The Hawaii Statewide Design Manual (HDOT, 1980) states that clear sidewalk width should be four feet minimum although widths of eight feet or greater may be needed in commercial areas. Along Kona Street, adjacent to the project area, there are frequent driveway locations that interrupt the sidewalks along both sides of the street.

The Kapiolani Residence project features 8-foot wide sidewalks along most of its Kapiolani Boulevard frontage, widening in places to open onto a public seating plaza fronting its commercial spaces or to signal the pedestrian entrance to the tower lobby. Project physical requirements have precluded sidewalks along its Kona Street edge, but in recognition of the

benefit of pedestrian provisions along this heavily used service street, maintaining the existing sidewalk on the makai side of Kona Street is strongly advocated.

Bicycle Facilities: Oahu Bike Plan, a Bicycle Master Plan (HHF, August 2012) has no designated bike paths, lanes or routes on Kapiolani Boulevard. However, the Hawaii Revised Statutes, Section 291C-145 states that bicyclists traveling along the roadway slower than the normal speed of traffic should ride as close as practicable to the right-hand curb or edge of the road where bike lanes are not available. In areas other than business or prohibited districts, bicycles may be ridden on sidewalks provided the speed is 10 mph or less. On sidewalks, the bicycle operator must yield to the right-of-way to pedestrians. Ease of biking in the surrounding project area is not optimal because of the lack of designated bikeways, the presence of heavy vehicular traffic, and narrow sidewalk widths. For Diamond Head-Ewa (east-west) travel, a cycle track exists along South King Street, between Alapai Street and Isenberg Street, a bike route exists along Young Street and a bike path is adjacent to Ala Moana Boulevard. All of these are less than ¼ -mile from the project site. There are no existing designated mauka-makai bike ways. Future mauka-makai bikeways on Piikoi Street and Keeaumoku Street are shown in the Oahu Bike Plan, A Bicycle Master Plan (HHF, August 2012).

While neither Kapiolani Boulevard or Kona Street have formally designated bicycling provisions, Kapiolani Residence plans nevertheless to provide publically accessible bicycle storage racks for public use as well as separate provisions for resident bicycle racks.

Geometric Configuration

Intersection Configuration: Considering existing traffic movements in the project area and the anticipated impact of the proposed development, the following intersections were selected for study:

1. Kapiʻolani Boulevard and Kaheka Street/Mahukona Street
2. Kona Street and Mahukona Street
3. Kapiʻolani Boulevard and Atkinson Drive
4. Atkinson Drive and Kahakai Drive
5. Atkinson Drive and Kona Street

Roadway Configuration: Kapiolani Boulevard is a principal urban arterial owned by the County that runs in the Diamond Head-Ewa direction. In the project area, Kapiolani Boulevard is a six-

lane, undivided, signalized arterial with a 35 mph posted speed limit. During the AM peak period the corridor is coned for contraflow operations, providing an additional lane for approximately 2.3 miles in the Ewa-bound direction between the H-1 Freeway near South King Street to west of Ward Avenue. Left turns are prohibited for the Diamond Head direction during the AM contraflow. During the PM peak period, an additional contraflow lane is provided in the Diamond Head-bound direction between Penscola Street to McCully Street. Left turns are prohibited for the Ewa-bound direction during the PM contraflow.

Driveway accesses to existing properties in the project area, including the subject project site, are prevalent along Kapiolani Boulevard and have no mid-block dedicated turn lanes. Kapiolani Boulevard serves as a major bus route with no bus pullouts. Fronting the property, sidewalks exist along both sides of the street, with various widths and an 11-foot landscaped area providing a buffer from vehicular travel lanes. Mahukona Street is a two-lane roadway that runs mauka-makai between Kapiolani Boulevard and Atkinson Drive with a 15 mph posted speed limit.

Mahukona Street is privately owned by General Growth Properties, the owners of Ala Moana Center. At the intersection with Kapiolani Boulevard, the northbound approach is striped as a one-lane for all turning movements. However, it was observed that motorists utilize the approach as a two-lane roadway in order to separate conflicting movements, thereby resulting in a left-through and right-through lane. This aligns with the two receiving lanes on the other side of Kapiolani Boulevard. Mahukona Street provides access to the Ala Moana Center parking garage. There is also a bus stop located on Mahukona Street in the mauka-bound direction, before its intersection with Kapiolani Boulevard. Parking is permitted in designated meter parking stalls adjacent to the Ala Moana Shopping Center parking garage. Sidewalks line both sides of the street.

Kaheka Street is a major urban collector owned by the County that runs in the mauka-makai direction. No posted speed limit sign exists in this section and therefore is regulated to be 25 mph.

Kaheka Street is the mauka leg at the intersection of Kapiolani Boulevard and Mahukona Street. Between Kapiolani Boulevard and Makaloa Street, Kaheka Street has two lanes in the mauka direction and three lanes in the makai direction with on-street parking on the Diamond Head side of the street. Mauka of Makaloa Street, Kaheka Street turns into a two-way, two-lane

corridor with a posted speed of 25 mph and on-street parking on either sides of the roadway. Sidewalks exist on both sides of the street. Kona Street, between Mahukona Street and Atkinson Drive, is a two-lane roadway that runs in the Diamond Head-Ewa direction with a 15 mph posted speed limit. Like Mahukona Street, Kona Street is privately owned by General Growth Properties.

Kona Street in this area serves as access for residential and delivery loading areas for apartments, condominiums, hotel and commercial areas. There is a sidewalk on the makai side of Kona Street with permitted on-street parking. At the T-intersection with Atkinson Drive, there is a right-turn out only for the eastbound approach. A raised island separates the right-in movements from the right-out movements.

Atkinson Drive is a minor urban arterial owned by the County that runs in the mauka-makai direction. It primarily has four lanes with dedicated left-turn lanes. At the T-intersection with Kapiolani Boulevard, starting mauka of Kahakai Drive, Atkinson is seven lanes with four right turn lanes in the mauka direction and three receiving lanes in the makai direction. There is on-street parking on Atkinson Drive makai of Kona Street on the Diamond Head side of the road. Atkinson Drive provides access to Ala Moana Shopping Center, Ala Moana Beach Park, hotels, apartments/condominiums and other commercial and office spaces.

Kahakai Drive is a two-lane road owned by the County. The road provides access to residential units and for those leaving the Hawaii Convention Center parking garage.
Parking is allowed along the makai side of the roadway. Sidewalks exist along both sides of the street.

Projected Future Conditions, Potential Impacts and Mitigative Measures

The TIAR, presented in Appendix G projected and assessed future traffic conditions in the area surrounding the project site. It projected 2017 conditions, when the project would be completed, and 2030 conditions, when the City HART line was complete and in operation. For 2017, it projected conditions for two scenarios: 1) Without the proposed project, and 2) With the project completed.

2017 Conditions: Future (2017) conditions without the project resulted in appropriate signalized intersection operations with worsened operations at the unsignalized intersection approaches in

the PM peak hour. The intersection of Mahukona Street Kona Street warranted a traffic signal using the PM peak hour volumes. The intersection operated appropriately as a signalized intersection for Future (2017) Without Project and Future (2017) With Project conditions.

Future (2017) conditions with the project built found that appropriate LOS conditions for all signalized intersections were maintained but that the LOS the two existing unsignalized intersections likewise worsened. Table 7 compares existing intersection levels of service (LOS) at signalized intersections with both 2017 scenarios. More detailed tables can be seen in the TIAR presented as Appendix G of this report.

Levels of Service in roads surrounding the project site are shown in Table 8. Each level of service as defined in the *Highway Capacity Manual* is shown in Table 7 below.

LEVEL OF SERVICE	DEFINITION
A	Free Flow; Traffic flows at or above the posted speed limit and motorists have complete mobility between lanes; high level of physical and psychological comfort.
B	Reasonably Free Flow; Reasonably free flow; LOS A speeds are maintained, maneuverability within the traffic stream is slightly restricted.
C	Stable Flow, at or near free flow; Ability to maneuver through lanes is noticeably restricted and lane changes require more driver awareness.
D	Approaching Unstable Flow; Speeds slightly decrease as traffic volume slightly increases. Freedom to maneuver within the traffic stream is much more noticeably limited and driver comfort levels decrease.

Table 7: LOS Definitions

INTERSECTION		Existing Conditions		2017 Conditions			
				Without Project		With Project	
Approach	**Movement**	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**
Kapiolani Blvd & Kaheka/Mahukona Sts.		**B**	**C**	**C**	**C**	**C**	**C**
Kapiolani Blvd. & Atkinson Dr.		**A**	**B**	**A**	**B**	**A**	**B**
Atkinson Dr. & Kahakai Dr.		**C**	**A**	**C**	**D**	**B**	**D**

Table 8: Current and Future Levels of Service at Signalized Intersections

To optimize traffic conditions and mitigate project effects on traffic, the TIAR recommended that the project should include the following mitigation measures to address projected impact:

- Include wide, tree-lined sidewalks along Kapiolani Boulevard with convenient access to the project entrance. Serving a different purpose, the makai side of Kona Street should include adequate sidewalks as well.
- Bicycle access and storage should be considered within the development.

Kapiolani Residence incorporates the Kapiolani Boulevard and bicycle recommendations. Because of project space requirement constraints, the combined frequency of driveways from the proposed Kapiolani Residence and other properties along the mauka side of Kona Street, and the existence of a pedestrian sidewalk on the makai side of Kona Street where driveway interruptions are less frequent in the immediate area than on the mauka side of the street, no sidewalk will be provided along the Kona edge of the project. Continued use of the makai sidewalk, with its fewer driveway interruptions in the area opposite the project and adjacent buildings was considered the safer pedestrian accommodation for this stretch of Kona Street than a sidewalk on the mauka side of Kona Street in the immediate project vicinity of the project.

2030 Conditions: The assessment of 2030 conditions considered the effect of the build-out and operation of the Honolulu Rail Transit and a future Ala Moana Rail Station. As a result of the increased activity around the project area from the rail system, the intersections of Kona Street and Keeaumoku Street, Kona Street at Piikoi Street, and Kapiolani Boulevard at Keeaumoku Street would experience added delay. It was assumed that the Kapiolani Residence study intersections would also experience additional delay as a result.

The HART rail alignment extension from the future Ala Moana HART Station to the University of Hawaii and Waikiki as documented in HART's Final Environmental Impact Statement runs through the project site. However, HART has noted that it "has not yet conducted planning or environmental assessments of the proposed rail extensions, so the exact location of the future guideway is subject to change." The HART extension had originally been planned to run at an elevation of approximately 80 feet as it followed the Kona Street alignment in order to "clear" the top of the Nordstrom parking garage. However, the presence of the new One Ala Moana tower atop this parking garage may make this alignment difficult to pursue since the rail structures and vehicles would obstruct views and rail operations would create unwelcome levels of noise, negatively impacting One Ala Moana residents.

Conclusions

In conclusion, the TIAR found that the proposed Kapiolani Residence project complies with TOD guidelines by providing a mix of high density residential and commercial accommodations 0.4 miles from the Ala Moana Rail Station, within the ½-mile TOD radius. It also found that the project is further beneficial in its provision of much-needed affordable housing in the area. It

stated that existing conditions could be improved with the addition of pedestrian facilities in the form of sidewalks fronting the building along Kapiolani Boulevard and Kona Street.

Finally, it concluded that the addition of project-related traffic would have a negligible impact on the surrounding area.

3.9 NOISE

Daily noise levels in the project vicinity are relatively high as a result of heavy daily vehicular traffic during the day and evening hours. Vehicular traffic is a mixture of private automobiles, buses, heavy trucks and semi-trailers, and emergency vehicles. Local and federal agencies have established standards and guidelines for assessing environmental noise impacts and have set noise limits related to land uses.

Noise from HART operations at the planned Ala Moana Station a little more than ¼ mile to the west is not expected to impact Kapiolani Residence occupants. The original HART extension documented in HART's Final Environmental Impact Statement, which would have run past the top of the Nordstrom parking garage before entering and passing through the site, has not yet been confirmed by the necessary planning and environmental assessments. With the presence of the One Ala Moana Tower which now stands atop the Nordstrom parking garage, the route of an actual HART extension appears uncertain. Until the final alignment of a HART extension has been confirmed or updated, noise impacts of this extension cannot be determined.

Potential Impacts and Mitigative Measures

Project construction activities will create short-term noise impacts. Most of this noise will be generated by construction equipment. Most of these impacts will be experienced by occupants of adjacent buildings.

Proper mitigation measures will be implemented to minimize noise impacts. All work will comply with the State of Hawaii Department of Health noise limits. Construction activity will be limited to daylight hours. Impacts of a HART extension cannot be determined until the current extension alignment has been confirmed or revised and updated.

3.10 NATURAL HAZARDS

Flood and tsunami potential are hazards to which the general area around the site is subject to varying degrees. The site is located in FEMA Flood Zone "X". Flood Zone X has been defined by FEMA as an area of "minimal flood". Flood Zone X indicates areas outside the "Special Flood Hazard Area (SFHA) and outside the area of the 500-year flood. Figure 17: Flood Insurance Rate Map displays flood zones in and adjacent to the project site.

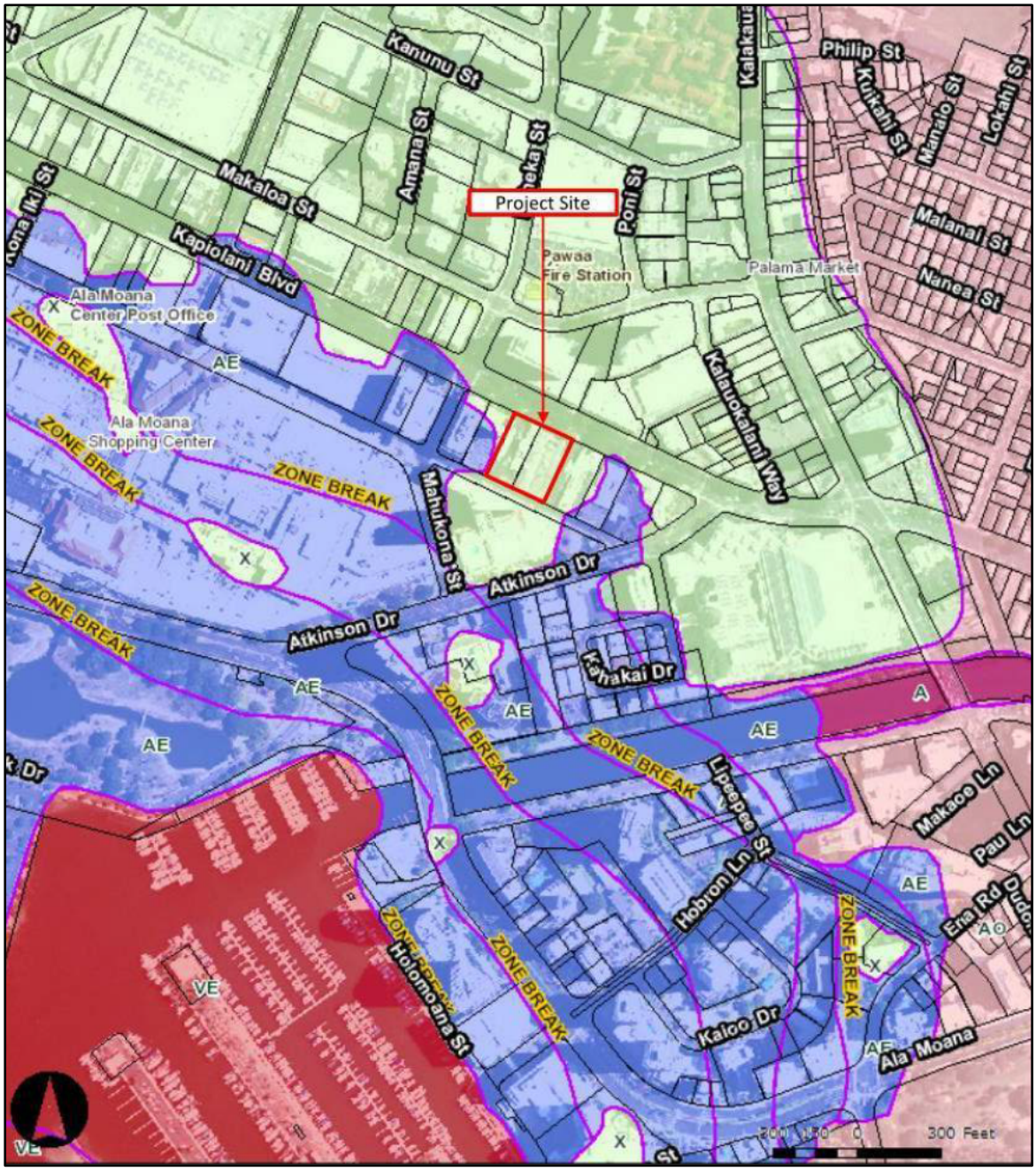


Figure 17: Flood Insurance Rate Map

While the project site has been shown by City and County of Honolulu to be within a tsunami evacuation zone, it does not lie within the FEMA "VE" flood hazard area (see Figure 17: Flood Insurance Rate Map), where structures may be subject to wave (storm wave or tsunami) damage. An extensive zone of inundation hazard lying between the project site and the zone of potential wave damage hazard, and the presence of major structures between the proposed Kapiolani Residence and the ocean, notably the Ala Moana Hotel, the Ala Moana Center parking structure, and the major residential buildings along Atkinson Drive further shield Kapiolani Residence effectively from wave or tsunami hazard.

3.11 MAN-MADE HAZARDS

A Phase I Environmental Site Assessment (ESA) was prepared on September 2014 by Central Planet Repair, LLC for the Kapiolani Residence site. The findings of this Phase 1 study are that the following recognized environmental conditions (RECs) were likely present on the subject property:

- The 1949 Sanborn Map shows the structure located at the west side of the Parcel 009 as "clo. Clean'g" that probably means "clothes cleaning". It is noted that the Sanborn Maps typically indicate "dry cleaning" as separate from "clothes cleaning". The 1949 Sanborn Map does not show the presence of a fuel storage tank on site. The source of hot water for the laundry is not known. The presence of a laundry without indications of dry cleaning or fuel storage does not constitute a recognized environmental condition.

- The R.M. Towill Corporation noted that the general area around the property has received fill material from a number of sources over the years, including construction debris and sugar processing by products, dredged materials, and fill dirt. A subsurface investigation performed on an adjacent property did not reveal any hazardous materials. If excavation work is planned for the subject property, additional subsurface investigations may be recommended or the excavation may be monitored by a qualified professional to allow for the identification of suspect hazardous materials (*Kapiolani Commercial Property Parcel (1)2-3-41:009, Honolulu, Hawaii.* R.M. Towill Corporation, February 2002).

The following environmental conditions, which are not considered to be recognized environmental conditions, as defined by ASTM, were revealed during this assessment:

- Because the buildings on the subject property were built prior to 1980, suspect asbestos-containing materials (ACM) may be an issue at the subject property. An asbestos inspection was performed on February 7, 2001 by the R.M. Towill Corporation to identify any friable asbestos containing building materials. A total of seven building materials were sampled and no asbestos was in any of the samples. However, no samples of floor tiles, mastics, roofing materials or other not friable materials were collected as part of this inspection.

- Because the buildings on the subject property were built prior to 1978, lead-based paint (LBP) could be an issue on the subject property.

The findings of this Phase 1 study are that the following RECs are present on the adjoining properties:

- *Ala Moana Hotel.* 410 Atkinson Drive. SSW 0.080 miles – Small quantity generator (SQG). SQG generates between 100 kg and 1,000 kg of hazardous waste per month. Violation Status: No violations found.

- *Pan Am Bldg.* 1600 Kapiolani Boulevard. NW 0.036 miles – Conditionally Exempt Small Quantity generator (CESQG). CESQG generates less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month. Violation Status: No violations found.

The SQG and CESQG sites will not affect the environmental condition of the subject property if they are operated and maintained in accordance with the Federal and State of Hawaii rules and regulations.

- The 1955 Sanborn Map shows an auto repairing facility including a gas station marked as “gas & oil” on the south adjoining property located across Kona street. This property is now occupied by the Ala Moana Hotel. Substantial excavation was conducted during the construction of this building. No adverse effect on the subject property is expected from the former “gas & oil” sites due to the site distance to the subject property and downgradient location.

Potential Impacts and Mitigative Measures

The findings of the Phase I study are that the Recognized Environmental Conditions (RECs) are present on the surrounding properties, but that no adverse effects on the subject property are expected from these nearby properties due to their distance from the project site.

It suggested that monitoring of excavation and demolition work for the potential presence of as-yet undiscovered hazardous material might be considered given the age of existing onsite structures and the presence of fill material which had been deposited at the site at various times during the development of the area.

3.12 SOCIO-ECONOMIC CHARACTERISTICS

As a City-designated TOD neighborhood, the Ala Moana area is slated for change. It is a mixture of business and residential uses, and currently hosts a major concentration of retail, dining, entertainment, and residential facilities as well as a rich mixture of ethnic groups and age cohorts. It has a resident population of about 21,000 persons or 11,000 households. Average annual household income is about $52,600. About 45% of its population is college-educated and about 40% are married. Its resident population is ethnically diverse.

The area immediately mauka of the project is characterized by businesses and a mixture of rental or purchased residential apartments in mid- and high-rise buildings occupied by modest- to middle-income households. The immediate project area along Kapiolani Boulevard is a mixture of office buildings and residential towers. Occupants of the newer residential towers are typically higher-income households and a mixture of local and offshore residents. Ala Moana Center, other dining and retail establishments, and the numerous office buildings in the immediate project area draw visitors, workers and business owners into the area daily.

With its daily concentrations of resident, working, and visitor populations, Ala Moana is a center of activity in Central Honolulu that, if TOD moves forward, will see further increases in resident and business concentrations.

Potential Impacts and Mitigative Measures

Kapiolani Residence, with its mix of affordable and moderately-priced market residential units, will provide a much needed accessible housing opportunity for persons working in the area and those wanting access to urban housing conveniently located near places of employment, support services, and facilities.

In contrast to much of the recently completed or in-progress luxury residential offerings in the Ala Moana and Kakaako neighborhoods, Kapiolani Residence will offer housing to those with more modest levels of income who desire the benefits of rich urban settings and proximity to their sources of income. It will offer a uniquely central location for professionals and entrepreneurs desiring efficient and time-saving access to work and supporting resources as well as for more mature households requiring proximity to vital health and other lifestyle support services.

Kapiolani Residence proposes to provide a substantial portion of the residential component to the Ala Moana TOD mixed-use neighborhood. It will house households and individuals whose employment, business endeavors, lifestyle needs, and consumption of merchandise and services will help drive the economic component of this emerging TOD neighborhood.

While the proposed project does not propose to act as one of the economic engines of this intended TOD neighborhood, its implementation will bring economic benefits to Oahu households, communities, and the State in general.

Excepting the cost of the land, the economic benefits created by the project, based on currently estimated development costs, are expected to include approximately 675 directly created construction jobs, 1,958 indirectly created jobs, $128.9 million in earnings, and about $2.6 million in State tax revenues.

Given these anticipated results, the economic contributions potentially attributable to the development of Kapiolani Residence are expected to be substantial.

3.13 INFRASTRUCTURE

The following sections address infrastructure elements pertinent to the proposed Kapiolani Residence project.

3.13.1 WATER

The Board of Water Supply (BWS) system provides water service to the project site. As-built BWS plans for water service is provided by 1-inch and a 1.5-inch lateral lines connected to a 12-inch water main running along Kapiolani Boulevard.

Potential Impacts and Mitigative Measures

The proposed project when completed will create additional water demands on the BWS system. Potable water demands will include service to the project's residential and commercial facilities, fire protection, and landscape irrigation.

A preliminary review of the existing BWS system's ability to accommodate estimated project water demands was coordinated with BWS based on the agency's Water System Standards 2002 guidelines. It concluded that the existing system had the capacity to provide adequate water for the project. This conclusion was based on the following assumptions:

Potable Water:

Commercial & Residential Spaces: 728,884 sf x GDP/sf: 120/1000(0.12) = 87.466.08 GDP; Assumption: Demand is 0.1 MGD

Fire Protection: A fire protection system will be provided for building fire sprinklers. The projected fire flow, duration, and hydrant spacing for the project based on BWS Fire Flow Requirements are: 2,000 gallons/minute for 2 hours. Hydrant spacing is 250 feet. Provisions will be designed to meet National Fire Protection Association (NFPA) standards.

Landscape Irrigation: Approximate landscape area for the project was estimated at 11,000sf. A permanent landscape irrigation system was assumed.

A final decision on water availability will be confirmed by BWS at the time of Building Permit submission.

3.13.2 WASTEWATER

An existing 6-inch gravity lateral connected to a 36-inch gravity main (trunk) line running along Kapiolani Boulevard currently services the project site. Wastewater carried by these lines is discharged into the Sand Island Wastewater Treatment Facility where it is processed and discharged.

Potential Impacts and Mitigative Measures:

Project facilities will create wastewater flows, estimated in accordance with City and County Sewer Standards as follows:

Usage Category	Average Wastewater Flow Rate
Residential (485 units)	108,640 gal.
Commercial	489 gal.
Total	**109,129 gal.**
Assume	**0.11 MGD**

Table 9: Estimated Wastewater Flows

For planning purposes, based on the foregoing information and City and County of Honolulu wastewater standards, the following project-generated wastewater flows were calculated:

- Design Average Flow: 0.116 MGD
- Design Maximum Flow: 0.633 MGD
- Design Peak Flow: 0.633 MGD

These calculations were used to determine existing system capability to accommodate the flows to be generated by the project.

SamKoo Pacific, LLC and SamKoo Hawaii, LLC (formerly Sam House Development) were part of a group of developers known as “Kalakaua Relief Line, LLC” that partnered to build a 2,000-foot sewer line along Kalakaua Avenue to relieve the strain on the City’s Kapiolani Boulevard sewer main that was threatening to delay contemplated projects in the Ala Moana and Waikiki area. A Memorandum of Understanding and Agreement (MOUA) dated December 19, 2007 and amended September 22, 2011 was signed by Kalakaua Relief Line

members and the City and County of Honolulu Departments of Environmental Services (ENV) and Planning and Permitting, Wastewater Branch (DPP). Under this agreement, Kalakaua Relief Line members were to design and construct the sewer line based on plans and specifications approved by the City in return for sewer credits corresponding to the actual amounts committed by each member to the effort. In October 2011, the City issued letters to each member under the MOUA. This reduces SamKoo's cost of connection to the City's sewer system.

An application for sewer connection (No.2012/SCA-0658) has been submitted to DPP, Wastewater Branch, and was preliminarily approved. The final decision and approval on the availability of sewer capacity will be confirmed when the building permit application is submitted for approval.

3.13.3 DRAINAGE

Existing:

Under current drainage patterns, storm water runoff sheet flows across the asphalt pavement towards Kapiolani Boulevard and Kona Street and is intercepted by an existing catch basin east of the property, entering the existing storm drainage system. Storm water runoff from the property also flows towards Kona Street where it flows into a catch basin across Kona Street and enters the storm drainage system. There are no drainage structures, such as drain inlets or manholes, on the subject properties.

Preliminary as-built research indicates all runoff from the site is conveyed via a network of existing concrete box drains along Kapiolani Avenue and Kona Street, to an existing 36-in drain line along Atkinson Drive, going to an underground line at Kahakai Drive to the final discharge point at Ala Wai Canal.

Ultimately, the storm water drains into the Ala Wai Canal which is a 2-mile-long man-made waterway constructed in the 1920's to drain extensive wetlands in order to allow development of the Waikiki area on the island of Oahu.

Potential Impacts and Mitigative Measures

There will be drainage improvements within the project site to accommodate the proposed development. However, storm water runoff is not expected to increase due to construction of the Kapiolani Residence condominium. The project's planned landscaped areas are anticipated to reduce the amount of impervious surface at the project site. Where possible, mitigation measures using natural runoff control such as bio-infiltration areas in addition to the planned landscaping treatment will be considered. Storm water quality features will be finalized as necessary during the design phase to comply with agency requirements.

It is anticipated that wherever possible, the project will continue to sheet flow into the Kapiolani Boulevard and Kona Street existing catch basins. There is an existing 10' wide storm drain easement adjacent to property TMK: 3-2-41:06 on the east side, where a 60" storm drain line is located. Drainage structures, such as drain inlets will be placed in areas within the property where runoff flows will not be able to sheet flow following existing patterns. These inlets will be a network that will connect and discharge to the existing storm drainage system, with proper provisions to satisfy storm water quality requirements. Storm water from roofs will be conveyed to the inlet network.

There will not be any drainage improvements outside of the project site as the proposed improvements should not alter or impact the downstream system flows. A drainage analysis based on City and County of Honolulu standards will be developed during the design phase of the project. During construction, appropriate erosion control Best Management Practices will be used to minimize the amount of soil transported in stormwater runoff during construction activities. All construction activities will comply with applicable Federal, State, and County regulations and rules for erosion control.

3.13.4 SOLID WASTE

A private refuse company currently serves existing uses at the project site to remove wastes generated by onsite tenants. The proposed project will generate different kinds of solid wastes during and after construction.

Construction wastes will consist primarily of vegetation, pavement, rocks, and debris from onsite clearing and demolition of existing structures, and construction packing, construction-related material wastes and refuse generated by onsite workers generated during construction activity.

Post-construction wastes will consist primarily of refuse generated daily by residents, tenants, staff, and contractors as a result of occupancy and management of the completed project. It is anticipated that this refuse will be collected by City and County of Honolulu public refuse services.

Potential Impacts and Mitigative Measures

Generation of construction wastes through clearing, demolition, and construction activities will be a short-term impact managed by the project's building contractor, and should not cause major impact to existing landfills.

Post-construction refuse generated by use and management of completed project facilities will be collected by the City and County of Honolulu and deposited at the Waimanalo Gulch landfill or the H-Power waste-to-energy plant in Kapolei. It is understood that the City is currently exploring alternative means of handling solid waste as an ongoing city-wide concern.

3.13.5 ELECTRICAL AND TELECOMMUNICATIONS

Electrical

National Electrical Code (NEC) load calculations for this project yields approximately 2500kVA, at 480Y/277 volts, 3-phase, 4-wire. The first floor will contain a Hawaiian Electric Company (HECO) vault sized for a new HECO primary padmount switchgear and a padmount transformer. Service location for connection to HECO's existing 25kV system will be determined by HECo. Empty primary concrete encased ductlines will be provided from the HECO service location to the HECO vault by the contractor. The 25kV primary cables will be provided by HECO. The ducts will terminate in a corner of the vault with cables pulled and laid on the floor terminating in the padmount switchgear. HECO will provide the 25kV primary padmount switchgear and pad mounted transformer. Primary conductors will be laid on the vault floor from the switchgear to the transformer. Secondary service conductors will be laid on the floor and will run from the transformer to the main switchboard. The HECO Vault will require a roll up door directly fronting the primary electrical equipment. The vault will also be provided with a personnel door. The main electrical room will be located adjacent to the HECO Vault and will contain the building's main service switchboard.

Telecom

The project will include telecommunication services for Telephone and CATV for both Residential and Common Areas. Service location for connection to Telecommunication service providers' (Hawaiian Tel Com and Time Warner Oceanic) existing systems will be determined by the service provider. Empty primary concrete encased duct lines will be provided from the service provider location to the Telcom room main distribution frame (MDF) by the contractor. Infrastructure such as conduit, raceways and pathways will be provided by the contractor to enable the support of the following services to both the residents and the operation of the building:

- Residential Services
    - Telephone service (traditionally from Hawaiian Telcom)
    - Cable TV access (CATV) (traditionally from Oceanic Time Warner, Dish or DirectTV).
    - Internet Access

- AOAO Services
    - Internal Telephone network and access to telephone service
    - Internal Data network
    - Internet Access
    - CATV Service
    - Security
        - CCTV
        - Access Control
    - Entry Phone
    - Parking Garage Access

Existing overhead power and telecommunication lines run currently run along Kona Street. It is anticipated that electrical and telecommunications service will come from this location as underground lines. Handholds for HECO, HT, and OTWC cables may be required on the site to enable pulling service cables into the garage and tower. A HECO vault room has been provided on the project plans.

Further consultation with the respective service providers will be conducted to verify requirements for the project.

3.2 PUBLIC SERVICES

The following narratives address necessary public services available to serve the proposed project.

3.2.1 SCHOOLS

Kapiolani Residence is located in the State of Hawaii Department of Education (DOE) Kaimuki-McKinley-Roosevelt Complex Area, and is served by Kaahumanu Elementary School, Washington Middle School, and McKinley High School. Kaahumanu School, located on Kinau Street between Piikoi and Pensacola Streets, is 1.5 miles from the project site. Washington Middle School is located on King Street just east of Kalakaua Avenue and is 0.7 miles from the project site. McKinley High School, located down the street from the proposed project adjacent to the Blaisdell Center and bounded by Kapiolani Boulevard, King, Piikoi, and Pensacola Streets, is 0.9 miles away. All schools are relatively near the project.

Potential Impacts and Mitigative Measures

A large percentage of the active families that may live in the proposed project will probably use these schools for their children's education. Although a formal preconsultation response from DOE was not received for this project, informal written communications with the Department has generated a preliminary assessment of project impact on existing school facilities.

Based on a very broad student generation rate that DOE is using for multi-family projects in the area from Kalihi to Ala Moana along the HART route, DOE estimates that Kapiolani Residence will generate a total of 59 DOE students. That number includes an estimated 29 elementary school students, 15 middle school students, and 15 high school students.

Through a series of informal conversations, DOE stated that it does not expect the Kapiolani Residence project to impact existing school classroom capacity. However, it anticipates that the enormous cumulative growth that is expected to result from public growth policies in the previously mentioned Kalihi to Ala Moana area that may create needs for more classroom capacity at the elementary and high school levels by the end of the current decade.

3.2.2 POLICE

Police protection and services are provided by the Honolulu Police Department. Police Headquarters are located at 801 South Beretania Street near the City's Civic Complex.

Potential Impacts and Mitigative Measures

Police Department concerns during construction will center on modifications to traffic as a result of construction activity and the transport of materials to and from the site. The Police Department has noted the need for maintaining a safe flow of vehicular traffic, parking in the project area, and security. They have recommended effective traffic control devices to enable a safe means of ingress/egress for large construction vehicles, motorists, and pedestrians, and adequate site security measures during and after construction. Such measures will be developed and implemented to address both the construction and post-construction periods. In addition, HPD will be notified when construction begins so that they may prepare for increased traffic-related calls for service created by possible construction-related traffic pattern alterations.

As a result of Police Department comments, further studies of potential traffic impacts and the use of mitigating measures and security provisions were carried out. The following are the results of these studies:

Kona Street:

Based on previous projects in the project vicinity, it is anticipated that the approximately 32-foot wide Kona Street will accommodate the turning radius of large construction vehicles. To facilitate continued operation of adjacent businesses, the project will coordinate with adjacent business and property owners and the City to minimize disruptions. Street parking may need to be prohibited during construction hours along Kona Street near the project site. In addition, proper traffic control devices such as cones and signage, along with flaggers and police officers will be used to facilitate safe driving conditions in the vicinity of the site.

Kapiolani Boulevard:

Because Kapiolani Boulevard is heavily used as a major thoroughfare during both day and night hours, traffic will be impacted if lane closures are implemented. The contractor will manage the work to minimize lane closures and will use Kona Street instead of Kapiolani Boulevard for site access and egress whenever possible. In the event that either Kapiolani Boulevard or Kona Street is needed for site access, proper flag personnel and police officers

will be placed in both directions of traffic to inform drivers of the upcoming work. Lane closures will avoid peak hour traffic. They will be scheduled between the hours of 8am and 3pm and/or on less busy night time hours. Traffic control devices will address pedestrian and vehicular access and circulation in the vicinity of the site.

The existing sidewalk fronting the project site will remain open but will be closed as needed during construction. Proper construction walkways and alternative detours will be provided for the safe passage of pedestrians in front of and around the site. There is no sidewalk fronting the project site along Kona Street. Proper signage and access control fencing will be in place along Kona Street for security purposes. The existing sidewalk on the makai side of Kona Street will remain accessible to pedestrians during the construction period.

It is anticipated that one lane of Kapiolani Boulevard will be closed during the conducting of improvements to the existing driveway and sidewalk. During this time, traffic control devices, advance warning signs, and pedestrian detours away from the project frontage will be put in place. Detour signage will be placed at the Kapiolani Boulevard/Makaloa/Kaheka Street intersection and the Kapiolani/Atkinson Drive intersection to allow pedestrians to cross those points safely to the opposite (mauka) side of Kapiolani Boulevard.

After construction has been completed, onsite parking will be provided for building tenants and residents, with access to the parking facility provided from Kapiolani Boulevard and Kona Street. A City-approved fire department access area with a minimum height clearance of 13'-6" will be provided within the parking facility, connecting Kapiolani Boulevard with Kona Street. This area will also be available for use by large delivery and service trucks.

All vehicular access to the project site will be controlled. Power-assisted gate arm systems will be installed at all parking garage entrances. An electronic surveillance system will be installed in all project public areas, with surveillance monitors located in the project security office.

3.2.3 FIRE

Engine Company 2 on Makaloa Street is the Ladder Company closest to the proposed project. The Fire Department's comments on the proposed project, dated December 11, 2014, and the project response to it are presented in Appendix I.

Potential Impacts and Mitigative Measures

There may be occasional demand for firefighting services. To mitigate fire hazard, Kapiolani Residence will incorporate modern fire control devices and alarms, adequate access for fire apparatus, fire protection water supply, and building construction in conformance with existing building, life safety, fire, and other pertinent codes and standards.

3.2.4 MEDICAL FACILITIES

Several healthcare facilities and private medical offices are located in or near the project area. Nearby facilities with hospital services include Straub Clinic and Hospital on South King Street, the Kaiser Hospital Downtown Clinic on South King and Pensacola Streets, Kapiolani Medical Center for Women and Children on Punahou Street near Central Union Church, and The Queen's Medical Center on Punchbowl Street near the Hawaii State Capitol. The Ala Moana Building just down the street at the Keeaumoku Street entrance to Ala Moana Center houses a concentration of medical and dental offices, as do the Blackfield Building further down Kapiolani Boulevard between Piikoi and Pensacola Streets and the Medical Arts Building on the corner of King and Victoria Streets. Numerous smaller buildings along King Street from Piikoi Street to Kalakaua Avenue also house medical offices and laboratories.

Potential Impacts and Mitigative Measures

Although there may be occasional needs for emergency health care services and regular needs for customary levels of routine medical care generated by occupants of Kapiolani Residence, the proposed project is not expected to substantially increase demands for medical services or have long-term adverse impacts on emergency medical providers or their ability to adequately serve the general community.

3.2.5 RECREATIONAL FACILITIES

There are numerous recreational assets in the Central Honolulu area easily accessible to the proposed Kapiolani Residence project. Major resource-oriented recreation facilities include the beach parks at Waikiki, Kapiolani Park, Ala Moana Beach Park (which includes the Aina Moana Park peninsula) Kewalo Basin, Kakaako Waterfront Park, Ala Wai Boat Harbor, Round Top (Puu Ualakaa) State Recreation Area, Diamond Head State Park, and Lyon Arboretum.

Ala Moana Beach Park, although a resource-oriented park, also acts as an activity-based recreation facility capable of accommodating informal sports and picnics. Other nearby parks and recreation areas include the well-used passive family recreation area on the Diamond Head edge of Kakaako adjacent to the Hokua and Koolani residential condominium towers, Sheridan Community Park, Cartwright Neighborhood Park, Makiki District Park, McCully District Park. and Pawaa Park on King Street near Kalakaua Avenue.

Other recreationally oriented facilities in the area include health and fitness clubs. They include Kakaako Fitness, UFC Gym, Hardass Fitness, and Island Club and Spa in nearby Kakaako, 24 Hour Fitness on Kapiolani Boulevard, the Honolulu Club near Thomas Square, and various cross training and yoga facilities throughout the Ala Moana and Kakaako districts.

<u>Potential Impacts and Mitigation Measures</u>

The proposed project will create some level of demand for recreation, although the actual levels of demand are not known and will depend on the composition of the project's future occupants. Active families will desire play areas for children at ages toddler to teen. Adult populations may have needs ranging from organized and informal sports to social gatherings and more passive, contemplative settings in sheltered surroundings. Others may feel the need for fitness programs. Facilities meeting these needs can be found among the facilities just cited.

Kapiolani Residence will also feature recreational and leisure facilities of its own. It will offer open-air social gathering and informal recreation spaces between the tower and parking garage providing landscaped lawn areas and furnished hardscape spaces for social gatherings or intimate encounters. The first floor of the parking garage will feature a fitness center and party room. The plaza in front of the Tower on the Kapiolani Boulevard side of the project will be landscaped and furnished as a leisure space to accommodate passers-by, commercial customers, and project residents. It will offer seating areas, tables, and public bicycle racks.

4. THE INSTITUTIONAL CONTEXT: LAND USE POLICIES AND CONTROLS

Kapiolani Residence is in compliance within pertinent statutory requirements of the State of Hawaii and the City and County of Honolulu. The narratives below summarize this compliance.

4.1 STATE OF HAWAII

4.1.1 HAWAII STATE PLAN (Chapter 226, Hawaii Revised Statutes [HRS])

The Hawaii State Planning Act (Chapter 226, HRS) establishes a statewide planning system with goals, objectives, policies, and priorities to guide future long-range development of the State. Kapiolani Residence is consistent with the State Plan objectives and policies related to housing and facility systems as cited below:

> ***Ch. 226-19 Objectives and policies for socio-cultural advancement – housing.*** *(a) Planning for the State's socio-cultural advancement with regard to housing shall be directed toward the achievement of the following objectives:*
>
> *(1) Greater opportunities for Hawaii's people to secure reasonably priced, safe, sanitary, and livable homes, located in suitable environments that satisfactorily accommodate the needs and desires of families and individual, through collaboration and cooperation between government and nonprofit and for-profit developers to ensure that more affordable housing is made available to vey low-, low-, and moderate-income segments of Hawaii's population.*
>
> *(2) The orderly development of residential areas sensitive to community needs and other land uses*
>
> *(3) The development and provision of affordable rental housing by the State to meet the housing needs of Hawaii's people.*
>
> *(b) To achieve the housing objectives, it shall be the policy of this State to:*
>
> *(1) Effectively accommodate the housing needs of Hawaii's people*

(2) Stimulate and promote feasible approaches that increase housing choices for los-income, moderate-income, and gap-group households.

(3) Increase homeownership and rental opportunites and choices in terms of quality, location, cost, densities, style, and size of housing.

(4) Promote appropriate improvement, rehabilitation, and maintenance of existing housing units and residential areas.

(5) Promote design and location of housing developments taking into account the physical setting, accessibility to public facilities and services, and other concerns of existing communities and surrounding areas.

(6) Facilitate the use of available vacant, developable, and underutilized urban lands for housing.

(7) Foster a variety of lifestyles traditional to Hawaii through the design and maintenance of neighborhoods that reflect the culture and values of the community.

(8) Promote research and development of methods to reduce the cost of housing construction in Hawaii.

Kapiolani Residence proposes to provide affordable and moderately-priced housing in a uniquely central location in the Ala Moana neighborhood of urban Honolulu in proximity to jobs, business opportunities, shopping, dining, recreation, entertainment, family and business services, public transportation, and other vital lifestyle support facilities. Of its proposed 485 units, 60% or 292 of them will be made available to households earning 80 – 120% of the Area Median Income. The remainder will be moderately priced market residential units.

A large percentage of recent residential projects in the Ala Moana and the neighboring Kakaako district have targeted luxury markets. Kapiolani Residence, then, is unique among recent project starts by providing quality affordable and moderately priced homes strategically located to support the lifestyle needs of urban dwellers. In addition, by developing these housing opportunities under the State of Hawaii HHFDC 201H program, the developer has in effect chosen to proceed in partnership with the State of Hawaii.

4.1.2 STATE LAND USE LAW – State Land Use Classifications (Chapter 205, HRS)

State Land Use Districts are established by the State Land Use Commission in accordance with Chapter 205, HRS. The purpose of the districts is to regulate the use of lands within the state to accommodate population growth and development as needed, and to protect important agricultural and natural resources areas. There are four classifications of land under this districting system: Urban, Rural, Agricultural, or Conservation. According to Chapter 205,

> *Urban Districts shall include activities or uses as provided by ordinances or regulations of the county within which the urban district is situated.*

The land on which Kapiolani Residence is located is within the Urban District, and is consistent with the intent of the State Land Use Law.

4.2 CITY AND COUNTY OF HONOLULU

4.2.1 GENERAL PLAN

The General Plan for the City and County of Honolulu is a collection of broad objectives and policies supported by the City and County of Honolulu government to guide the future of Oahu toward a desirable and attainable future. Kapiolani Residence is consistent with General Plan objectives and policies, as cited below:

I. POPULATION

Objective C: To establish a pattern of population distribution that will allow the people of Oahu to live and work in harmony.

Policy 1: Facilitate full development of the Primary Urban Center

Kapiolani Residence is located in the Primary Urban Center ("PUC). It will facilitate opportunities for low and moderate income households to live in the Primary Urban Center near business and lifestyle support opportunities and near public as well as private forms of transportation. By doing so, it facilitates full development of the PUC by providing opportunities for an important and often underserved portion of the residential market to live in

the PUC and in locating near both commercial and family-oriented facilities and services, providing the customer base that will support lively and vital economic and social activity essential to neighborhoods and districts everywhere.

IV. HOUSING

Objective A: To provide decent housing for all the people of Oahu at prices they can afford.

Policy 3: Encourage innovative residential development which will result in lower costs, added convenience and privacy, and the more efficient use of streets and utilities.

Policy 5: Make full use of State and Federal programs that provide financial assistance for low- and moderate-income homebuyers.

Objective C: To provide the people of Oahu with a choice of living environments which are reasonably close to employment, recreation, and commercial centers and which are adequately served by public utilities.

Policy 1: Encourage residential developments that offer a variety of homes to people of different income levels and to families of various sizes.

Policy 3: Encourage residential development near employment centers.

Policy 4: Encourage residential development in areas where existing roads, utilities, and other community facilities are not being used to capacity.

Kapiolani Residence will provide housing to affordable and moderately-priced markets. 60% of its 485 units will be available to persons with incomes ranging from 80 – 120% Area Median Income (AMI). In addition, the proposed project is close to employment, business, commercial, and recreation facilities. As a project that is located at the primary Bus transfer point on Oahu and the future City HART rail transportation system, both of which offer alternatives to private modes of transportation, and which is in an area where pedestrian travel amenities are intended for emphasis, it will support a more efficient use of the area street system. Finally, as project being done under the auspices of the Hawaii Housing and Finance Corporation, it

engages a State program which facilitates the availability of housing to low and moderate income groups.

VII. PHYSICAL DEVELOPMENT AND URBAN DESIGN

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

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

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

Policy 6: Encourage the clustering of developments to reduce the cost of providing utilities and other public services.

As a proposed residential tower in a dense urban neighborhood with developed utilities, available public services, and already existing office and residential towers that has been slated by City policy for intensification of uses as one of Honolulu's Transit-Oriented Development (TOD) neighborhoods, the Kapiolani Residence tower is an appropriate building type appropriately located, and one that sets a level of quality that further intensification of the area can use as a baseline with which to reference future actions.

It represents the kind of land-conserving, compact development that supports the concentration of facilities and services which make livable urban neighborhoods possible. It will be an added asset that will serve the Ala Moana neighborhood's already urban population. Finally, in addition to locating in an area with existing infrastructure availability, the project owner had also previously joined with other developers to increase sewer capacity in the project and adjacent areas to provide the sewer capacities needed by existing and contemplated developments.

Objective B: *To develop Honolulu (Waialae-Kahala to Halawa), Aiea, and Pearl City as the Island's Primary Urban Center.*

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

Objective E: *To create and maintain attractive, meaningful, and stimulating environments throughout Oahu.*

Policy 4: *Require the consideration of urban design principles in all development projects.*

Kapiolani Residence, as one of the first major new structures to be developed in an intensifying node of activity at Ala Moana, will contribute, along with other buildings in this area and the neighboring Kakaako District, to the ongoing development of Oahu's Primary Urban Center. It is being designed to be attractive as well as practical, and to take advantage of existing environmental elements as well as developing its own attractive and memorable sense of place. In its plaza, its selective combining of Kapiolani's unique monkeypod frontage with its own exterior design measures and amenities will help establish a fabric and vocabulary of urban design for Kapiolani in keeping with developing City TOD concepts and probable future preferences of an emerging pedestrian public.

4.2.2 THE PRIMARY URBAN CENTER DEVELOPMENT PLAN

The City and County of Honolulu's Development and Sustainable Communities Plans apply General Plan provisions to each of Oahu's eight "development plan" regions. These plans respond to the specific characteristics and community values of each region and are the first physical application of the more programmatic General Plan. They are the primary land use policy plan for each region. Each also offer some degree of general physical design prescription in response to its region's unique qualities, character, and community values.

Kapiolani Residence is located within Oahu's Primary Urban Center (PUC), a region covered by the Primary Urban Center Development Plan (PUCDP). It is consistent with the intent of land use policies objectives, and policies of the PUCDP, as follows:

LAND USE DESIGNATION

Kapiolani Residence is located in an area designated "District Commercial". The PUCDP describes "District Commercial" as follows:

> *District commercial areas, which are shaded in red on the maps, refer to a wide variety of commercial uses and related activities intended to serve district-, regional- and/or islandwide populations. Uses typically include major office buildings, shopping centers, professional and business services, municipal services, and commercial activities located along major streets. Mixed uses, including appropriately integrated medium or higher-density residential facilities, and higher densities are encouraged in these areas.*

Given this definition, Kapiolani Residence is clearly consistent with PUCDP land use policies.

3.3 In-Town Housing Choices

"The PUC of the future offers in-town housing choices for people of all ages and incomes." This third element of the Vision addresses the need for affordable housing, both rental and for-sale, in the PUC to serve families with young children as well as young adults, elderly residents, and mult-generational households.

3.3.1.1 Housing Stock and Occupancy

In the 1980's and early '90's, the city and the State carried out aggressive low-moderate income housing development not only in Ewa but also in Downtown and Kakaako. As of 2000, however, most of the government-owned in-town sites had been developed and funding for new housing had been drastically reduced, making preservation and retention of existing affordable units an integral and essential component of fulfilling the housing needs of PUC residents.

3.3.1.2 Development of New Housing

The PUC is essentially "built out" – i.e., there is no reservoir of vacant land designated for future urban use. New housing is developed on lands which are underutilized or where it is not economical to maintain the existing uses or structures. This occurs primarily in older in-

town districts where land values are relatively high, and there is a strong market demand for higher use.

Higher Prices. *Prices for all types of housing – both sale and rental prices – are extremely high in the PUC, with single-family houses clearly beyond the affordable range. Prices for apartments are generally high because of higher costs for land and for construction of high rise structures.*

Higher Risks. *Development of a multifamily, high-rise structure carries more developer risk than lower-density housing because the structure must be completed (and the investors fully extended) before any sales are closed. Honolulu's Uniform Building Code requires "Type 1" construction for large apartment buildings. Type 1 standards essentially demand a reinforced concrete structure, which is very expensive. With the high carrying costs of a completed building, slow absorption can cut into or eliminate profits. The higher risk makes it more difficult and costly to obtain development financing.*

Zoning Regulations. *Zoning regulations strictly limit the floor area and the lot coverage of apartment buildings. High minimum parking requirements, combined with limitations on lot coverage, force the development of costly structured parking. In addition to substantially increasing project design and construction costs, existing regulations force apartment buildings into a tower configuration with a parking pedestal.*

Despite the PUCDP's Vision for more in-town housing, PUC housing prices have been high and beyond the reach of a very large number of consumers. Because of existing prices, the need for affordable homes appears severe. Kapiolani Residence is a project oriented toward meeting that need.

3.3.2 Policies

- *Provide incentives and cost savings for affordable housing. Provide exemptions from zoning and building codes for housing projects that meet established standards of affordability, on a case-by-case basis.*

Kapiolani Residence intends to make 60% of its units affordable to households earning 80 – 120% of Area Median Income. In view of the foregoing descriptions of existing conditions

influencing the cost of housing, incentives and exemptions are clearly needed to facilitate and to simply enable the achieving of the proposed project's intent. The HHFDC-administered 201H program has the elements to do so, and at this time is the program which holds the incentives, allows the exemptions, and which is intended, equipped, and implemented to enable this kind of housing and these kinds of buildings to be possible.

- *Provide for high-density housing options in mixed-use developments around transit stations. This type of transit-oriented development" facilitates transit use and allows for increased densities without generating increased vehicular congestion.*

Kapiolani Residence is a high-density affordable housing project with street level commercial offerings located at Honolulu's primary bus transfer hub and within ½ mile of the City's future Ala Moana Transit Station. Its large setbacks along Kapiolani Boulevard provides unobstructed circulation for pedestrian traffic while also offering a landscaped, furnished plaza for pedestrians who wish to rest, gather for social interaction, or pause for a beverage from one of the proposed project's commercial establishments without impeding the flow of the pedestrian traffic. The proposed project will also offer bicycle storage facilities for bicyclers. Finally, in addition to these circulation-promoting improvements which avoid or minimize conflict with vehicular traffic, the project's own vehicular traffic provisions will observe one-way access and egress along Kapiolani to minimize traffic conflicts, and its Kona street vehicular access will be used for only secondary and service access to the building.

With these provisions, Kapiolani Residence, by locating near transit nodes, facilitating transit use, providing facilities for non-vehicular travel, and implementing vehicular flow practices which minimize conflicts between project-generated and passing vehicular traffic, will not only facilitate the use of public transit facilities, but will do so in a way that minimizes contributions to vehicular congestion.

4.2.3 CITY AND COUNTY OF HONOLULU LAND USE ORDINANCE

The purpose of the Land Use Ordinance (LUO) of the City and County of Honolulu is "to regulate land use in a manner that will encourage orderly development in accordance with adopted land use policies, including the [General Plan] and development plans…" Its intent is to provide "reasonable development and design standards for the location, height, bulk and size of

structures, yard areas, off-street parking facilities, and open spaces, and the use of structures and land for agriculture, industry, business, residences or other purposes."

The LUO designates and defines categories or zoning districts of land use as well as allowable developments and design criteria within each category or zoning district. The proposed Kapiolani Residence is located in the BMX-3 (Community Business Mixed Use) District. The purpose of the BMX-3 district is to provide areas for both commercial and residential uses outside the Central Business District (historically, Downtown Honolulu) at a lower intensity than that of the Central Business District. It requires a minimum lot size of 35,000 square feet, a minimum lot width and depth of 50 feet and building height setbacks along street frontages. In this location, the allowable building height is 350 feet, and the allowable maximum density (FAR) is 3.5 (Total building floor area can be 3.5 times the area of the lot).

As an affordable housing project, the building envelope (maximum height allowance and building height setbacks from the street) and density allowances of the BMX-3 zoning district provide insufficient building envelope and floor area for the project to achieve economic feasibility. In addition, in an area slated for increased development intensity (as proposed by the draft Ala Moana TOD Neighborhood Development Plan), these constraints will become inconsistent with City policy once the intended new provisions are in place.

To achieve the floor area and building volume required for project feasibility, the proposed Kapiolani Residence requires exemptions from existing City regulations and would additionally benefit from financial incentives to assist with this feasibility. The 201H process offers well-defined opportunities for acquiring Kapiolani Residence's needed exemptions and incentives. It is therefore clear that the HRS 201H provisions are the preferred avenues currently in force for achieving this. For this reason, Kapiolani Residence will pursue the 201H program and through it, request exemptions from City zoning and other requirements.

4.2.4 THE ALA MOANA NEIGHBORHOOD TRANSIT-ORIENTED DEVELOPMENT PLAN and ORDINANCE 14-010, THE INTERIM TOD ORDINANCE

The Ala Moana Neighborhood Transit-Oriented Development (TOD) Plan is one of nine TOD plans being done to create neighborhood development plans in response to the opportunities and requirements associated with the stations of the City's Honolulu Authority for Rapid Transit

(HART) system now under construction. The City's TOD website shows the nine TOD Plans completed or now in progress.

A draft of the Ala Moana TOD Plan has been completed and is undergoing a review and refinement process. Principal proposals of the plan addressing project building envelope and density include the possible elimination of building height setback requirements. It also proposes height and density allowances in excess of currently existing zoning provisions, including possible building heights of up to 400 feet with possible densities of 7.0 FAR in exchange for "public contributions", to be evaluated and negotiated on a project-by-project basis. In areas along the Kapiolani Boulevard frontage, it proposes a "build-to" (or "setback") line (the line to which the front of abuilding must align) of 12 feet from the edge of a parcel.

However, this plan has yet to be finalized and adopted. Following its adoption, the City would need to draft, review, and adopt enabling ordinances to implement it. Therefore, the plan is not yet in place and the ordinance specifically designed to implement it has not yet been written. As an interim measure, the City drafted and adopted Ordinance 14-010, which creates a temporary process for pending TOD areas, based on its "Planned Development" review procedure. This process could be selected by a project applicant proposing development in a pending TOD area for processing a TOD-oriented project until a permanent TOD Plan and enabling ordinance are in effect. Like the Ala Moana TOD Plan, building envelope and density allowances would be negotiated in exchange for "public contributions" on a project-by-project basis.

Although the planning and design of Kapiolani Residence voluntarily supports elements of the TOD program in multiple ways, the discretionary nature of its process, the attendant uncertainty in time and outcome that could result, and the extreme importance of certainty and timely execution demanded by the financial and time-sensitive nature of an affordable housing project, the 201H Affordable Housing program has been judged a preferred process for processing and executing the Kapiolani Residence affordable housing project.

4.3 APPROVALS AND PERMITS

Table 9 below displays permits required for the review and implementation of the proposed Kapiolani Residence project.

Permit or Approval	Responsible Agency
Chapter 201H, HRS	State HHFDC & City and County of Honolulu City Council
DURF Loan Application	State HHFDC
Chapter 343, HRS	State HHFDC & State of Hawaii Office of Environmental Quality Control (OEQC)
Americans with Disabilities Act (ADA) Accessibility Requirements	Disability and Communications Access Board
Building Permit for building, electrical, plumbing, sidewalk/driveway and demolition work (variance for building permit when work done in setbacks)	City and County of Honolulu, Department of Planning and Permitting
Grubbing, grading/trenching, Street Usage, and Stockpiling Permit	City and County of Honolulu, Department of Planning and Permitting
Sewer Connection Permits	City and County of Honolulu, Department of Planning and Permitting
Water Connection	Honolulu Board of Water Supply
Water Quallity	State of Hawaii Department of Health

Table 10: Approvals and Permits Summary

5. CHAPTER 201H APPLICATION AND EXEMPTIONS

5.1 INTRODUCTION

Hawaii Revised Statutes (HRS) Section 201H-38, "Housing development; exemption from statutes, ordinances, charter provision, and rules" allows for eligible 201H projects to seek exemptions from all statutes, ordinances, and rules of any governmental agency relating to planning, zoning, and construction standards that do not negatively affect the health and safety of the general public in exchange for providing affordable housing.

Kapiolani Residence will be a 485-unit for-sale, predominantly affordable housing project that will offer 60% or 292 of its units to households earning 80% - 120% of the Area Median Income (AMI). It is centrally located in the Ala Moana district of Central Honolulu, where already high property values are expected to rise further in anticipation of the City's pending Ala Moana Transit-Oriented Neighborhood and the increased development potential that this will bring.

Current market activity has already indicated a value for the Kapiolani Residence site in excess of $25 million, or over $400 per square foot. In response to this context: high construction and land costs combined with efforts to provide the above quantum of affordable units, exemptions and deferrals from customary fees and permits are being sought.

The exemption and deferral requests which follow are necessary to achieve and maintain the financial feasibility of the project. The primary objective is to reduce the per-unit cost of development sufficiently to achieve this financial feasibility. If this is achieved, both SamKoo and the State of Hawaii will be able to maximize the number of quality affordable units that will be delivered to the public in a soundly built, aesthetically pleasing, and efficiently configured building at this very central location, in convenient proximity to virtually all the facilities and services needed to support the urban lifestyle needs of its occupants. From the Kapiolani Residence location, future project residents will have convenient access to employment, shopping, dining, and family services, and access to multiple forms of transportation with which to reach other Oahu destinations.

The following is a description of the exemptions being requested for Kapiolani Residence. A summary of these exemptions, presented in tabular form in Section 5.3, follows these narratives.

5.2 REQUESTED EXEMPTIONS AND DEFERRALS

Exemption from Revised Ordinances of Honolulu, Land Use Ordinance Section 21-3.120-2(b) (Table 21-3.4), Business Mixed Use Districts and Development Standards

- Exemption from Land Use Ordinance Sec. 21-3.120-2(b)(Table 21-3.4) is sought to allow Kapiolani Residence to exceed the current allowable maximum height of 350 feet. The Kapiolani Residence tower component is projected to be 399.5 feet in height.

  This additional height has no visual impact on distant views from the coast toward the Koolau Mountains or toward Diamond Head from Punchbowl, two important view corridors cited by the Primary Urban Center Development Plan (PUCDP). The 396-foot tall Ala Moana Hotel stands directly makai of the project site, blocking views of the Kapiolani Residence tower from the coastline. Figure 15: Primary Urban Center Development Plan View Corridor Diagram indicates the view from Magic Island as an important public view point. From this station point, the Ala Moana Hotel, completed in 1970, effectively blocks any view of Kapiolani Residence. Therefore, if there is any obstruction of a Koolau view from this location, the obstruction would be the Ala Moana Hotel.

  The proposed project does not lie in the view path between Punchbowl and Diamond Head. In addition, the Kapiolani Tower height conforms to and is therefore consistent with the draft Ala Moana Neighborhood TOD Plan, which proposes a maximum tower height of 400 feet in this area.

  Finally, by setting back considerably from Kapiolani Boulevard and orienting parallel to the street, the tower, additionally shielded by the large monkeypod trees along its frontage, has effectively minimized its visual presence to passersby along Kapiolani Boulevard.

  In summary, the proposed height of Kapiolani Tower is already consistent with the scale set in 1970 by the adjacent Ala Moana Hotel. It is consistent as well with the draft Ala Moana Neighborhood TOD Development Plan heights and is therefore consistent with the future development scale the draft Plan proposes for this part of the Ala Moana "Neighborhood".

- Exemption from Land Use Ordinance Sec. 21-3.120-2(b)(Table 21-3.4) is sought to allow Kapiolani Residence to exceed the maximum (bonus-generated) density of FAR 3.5 (the maximum allowed in exchange for public open space and arcade contributions) allowed by the BMX-3 zoning district. In order to achieve financial feasibility while making 60% of its units affordable to households earning 80%-120% of Area Median Income, the proposed project must have the magnitude of floor area required to do so. Kapiolani Residence's proposed FAR of 9.32, enabling a floor area of 524,489 square feet, makes this possible.

- Exemption from Land Use Ordinance Sec. 21-3.120-2(b)(Table 21-3.4) is sought to allow the Kapiolani Residence parking garage structure and the parking garage entry ramp to encroach into the 10-foot side and rear yard setbacks in order to enable the inclusion of the necessary facilities the garage has been programmed and designed to house.

- Exemption from Land Use Ordinance Sec. 21-3.120-2(c)(5) is sought to exempt Kapiolani Residence from height setback requirements from the street. Height setbacks as outlined in this ordinance would significantly restrict both the tower and parking garage building envelope and prevent them from achieving the volume needed to house the number of units and supporting parking stalls needed to make the proposed project physically and financially feasible.

<u>Exemption from Revised Ordinances of Honolulu, Land Use Ordinance (LUO) Section 21-6.20 (Table 21-6.1), Off-street Parking Requirements</u>

- Exemption from Land Use Ordinance Sec. 21.6.20 (Table 21-6.1) is sought to allow for less than the minimum required off-street parking spaces. The LUO would require that the proposed project provide a total of 851 parking stalls: 794 resident stalls, 8 commercial stalls, and 49 guest stalls. Kapiolani Residence proposes to provide a total of 695 parking stalls: 617 resident stalls, 8 commercial stalls, 24 guest stalls, 8 electric car stalls, and 38 stalls for other project uses, possibly as additional residential stalls, to be determined at a later date. Kapiolani Residence's proximity to multiple City bus lines, the future City Ala Moana HART station, and places of employment and lifestyle services are anticipated to reduce the need for personal automobiles. The reduced parking count also supports PUCDP recommendations for promotion of alternative forms of

transportation and the draft Ala Moana TOD Plan's even lower parking requirements for similar reasons. In reducing its parking count in the way proposed, Kapiolani Residence supports prevailing City urban transportation policies while maintaining a sufficiently attractive number of resident-oriented stalls to facilitate the marketability of project units while current individual transportation preferences for private automobile use transition to coincide eventually with emerging public policy.

Exemption from Revised Ordinances of Honolulu, Chapter 22, Article 7, Park Dedication Ordinance

- Exemption from Park Dedication requirements as set forth in Chapter 22, Article 7, Revised Ordinances of Honolulu is sought. The Park Dedication Ordinance would require the provision of land equal to 110 square feet for each residential unit or an in-lieu fee payment for the required amount of land based on the market value of the project site.

  Meeting this requirement would result in the provision of 53,350 square feet of park land or in-lieu fees equivalent to the value of the same quantity of land based on the per square foot market value of the project site. The amount of land that would be required is nearly as large as the 56, 250 square foot project site, which, as a premium central Honolulu property, commanded a very high price when it was purchased. In the intervening years, its value has risen. Given the size of the project site and its very high value, both versions of this requirement are impossible to achieve onsite and cost-prohibitive for an affordable housing project. In order to achieve financial feasibility, the buildings of Kapiolani Residence have had to occupy nearly the entire site except for the 6,870 square feet of open recreational and leisure spaces and facilities created for residents and the public. Provision of the required land onsite is not possible and payment of an in-lieu fee based on the market value of the project site or any other urban parcel would be prohibitive given the project's affordable housing orientation.

  The numerous nearby shoreline, neighborhood, community, district parks, and fitness centers cited previously in this document under *Recreation Resources* are available to offer a wide spectrum of recreational experiences for project residents, and can be used to fulfill the various recreation requirement of future project residents.

In addition, Kapiolani Residence proposes to provide recreational and leisure space amenities in the space available at the site. It proposes to provide 2,942 square feet of open lawn and furnished hardscape for its residents adjacent to a resident health club and party room totaling an additional 3,002 square feet of indoor recreation facilities. Its 3,928 square foot public plaza fronting Kapiolani Boulevard provides leisure and social gathering space for residents, project customers, and passersby alike. These facilities total 9,872 square feet of recreational and leisure spaces and facilities, and represent a a genuine effort to help meet the recreational and leisure needs of its future occupants in immediate proximity to their place of residence.

Given the cost-prohibitive nature of this requirement applied to an affordable housing project on a high-value parcel of central Honolulu land, the existence of nearby public recreational facilities, and the recreational contributions of the project, the applicant believes this request is justified and reasonable. Therefore, Kapiolani Residence requests exemptions from both the park dedication and in-lieu fee requirement for all project affordable and market units.

Building Permit and Plan Review Fees

Exemption from Sections 18-6.1 and 18-6.2, Revised Ordinances of Honolulu is requested to allow exemption from building permit and plan review fees to help achieve the economic feasibility of Kapiolani Residence as a 201H affordable housing project.

Public Works/Infrastructure Fees

- Exemption from Revised Ordinances of Honolulu (ROH), Sec. 14-14.4 is requested to exempt payment of grading and grubbing fees to facilitate the achievement of project economic feasitbility.

- Exemption from Revised Ordinances of Honolulu (ROH), Sec. 14-12.12 is requested to exempt payment of storm drain connection fee to facilitate the achievement of project economic feasitbility.

- Exemption from Revised Ordinances of Honolulu (ROH), Sec. 14-10.3 is requested to exempt payment of wastewater system facility charge to facilitate the achievement of project economic feasibility.

- Deferral from Revised Ordinances of Honolulu (ROH), Sec. 14-6.1 and 14-6.4 is requested to defer payment of Board of Water Supply connection and wastewater connection fees until issuance of Certificate of Occupancy to facilitate the applicant's financial capability to proceed with the project through the construction period.

5.3 SUMMARY TABLE OF REQUESTED EXEMPTIONS AND DEFERRALS

SUMMARY OF REQUESTED EXEMPTIONS AND DEFERRALS				
Requested Exemptions				
Development Standard or Requirement	**Relevant Section/ Requirement**	**Proposed Project Development Standard**	**Applicable Agency**	**Rationale or Request/ Est. Value where appropriate**
Building Height	LUO Sec. 21-3.120(b) Table 21-3.4/ 350 feet	399.5 feet (+ 18 feet for customary mechanical rooftop equipment)	Department of Planning and Permitting (DPP)	Proposed height is needed to provide 485 affordable and market residential units at a cost enabling project feasibility. This height is consistent with the height of the adjacent Ala Moana Hotel, built in 1970, and with proposed City Ala Moana TOD Plan which proposes a maximum height of 400 feet in the area in which the project is located.
Floor Area Ratio/Density	Sec. 21-3.120-2(b) (Table 21-3.4)/ 3.5 maximum FAR	9.32 FAR	DPP	Requested FAR is needed to provide the floor area quantum to create the 485 residential for-sale units needed to achieve affordability targets and project economic feasibility
Height Setback Requirements	Sec.21-3.120-2(c)(5) At street frontages, setback at 10:1 angle after first 40 feet of height	No height setbacks	DPP	This exemption is requested to enable the achievement of sufficient building volume to house project facilities and to achieve a sufficiently simple building geometry to facilitate project economic feasibility
Side and Rear Yard Setbacks	Sec.21-3.120-2(b) (Table 21-3.4) 10 feet	5-foot rear yard, No side yard	DPP	These exemptions are requested in order to provide necessary project parking, loading, and service elements, to achieve livable volumetric proportions in the open space between the tower and parking structure, and to provide sufficient front yard setback to buffer residential units from traffic noise and provide the proposed public open space amenities along Kapiolani Blvd.

SUMMARY OF REQUESTED EXEMPTIONS AND DEFERRALS (cont'd.)				
Requested Exemptions				
Development Standard or Requirement	**Development Standard or Requirement**	**Proposed Project Development Standard**	**Applicable Agency**	**Rationale or Request/ Est. Value where appropriate**
Off-street Parking Requirements	Sec. 21-6.20 (Table 21-6.1) • Residential : 794 stalls • Commercial: 8 stalls • Guest: 49 stalls • Total: 851 stalls	695 total stalls (see detailed request, pp. 85 & 86)	DPP	With public bus and future HART transportation terminals nearby and project-proposed provisions to facilitate pedestrian circulation as alternatives to private automobile transportation, this request is reasonable. In addition, the proposal to provide parking at lower than LUO requirements: • Facilitates project affordability and economic feasibility • Promotes the use of public modes of transportation • Is consistent with PUCDP intent • Is consistent with draft Ala Moana Neighborhood TOD Plan proposals for reduced parking requirements
Building Permit Fees	ROH, Sec. 18-6.2	Exemption from Payment of Building Permit Fees	DPP	To facilitate the economic feasibility of Kapiolani Residence as a 201H affordable housing project. *Est. Fees: $659,915*
Plan Review Fees	ROH Sec. 18-6.1	Exemption from Payment of Plan Review Fees	DPP	To facilitate the economic feasibility of Kapiolani Residence as a 201H affordable housing project. *Est. Fees: $25,000*
Grading and Grubbing Fees	ROH Sec. 14-14.4	Exemption from Payment of Grading and Grubbing Fees	DPP	To facilitate the economic feasibility of Kapiolani Residence as a 201H affordable housing project. *Est. Grading Permit Fee: $1,500* *Est. Bond Fee: $60,000*

Requested Exemptions (cont'd)				
Development Standard or Requirement	**Development Standard or Requirement**	**Development Standard or Requirement**	**Development Standard or Requirement**	**Rationale or Request/ Est. Value where appropriate**
Storm Drain Connection Fee	ROH Sec. 14-12.12	Exemption from Payment of Storm Drain Connection Fee	DPP (approved by Department of Environmental Services {DES})	To facilitate the economic feasibility of Kapiolani Residence as a 201H affordable housing project. *Est. Application Fee: $1,000*
Wastewater System Facility Charge	ROH Sec. 14-10.3	Exemption from payment of Wastewater System Facility Charge	Department of Environmental Services	To facilitate the economic feasibility of Kapiolani Residence as a 201H affordable housing project. *Est. Charge: $2.2 million*
Park Dedication Ordinance	ROH, Chapter 22, Article 7 110sf/unit = 53,350sf or in-lieu fees based on market value of project site	Exemption from this requirement; Use of area public park facilities and project-supplied recreational amenities	Department of Parks and Recreation (DPR)	The provision of 110sf/unit would require the provision of land equivalent to nearly the entire project site area. Use of the project site to satisfy this request is unfeasible and purchase of this amount of land elsewhere is economically prohibitive for an affordable housing project. However, there are numerous public parks and health clubs in the area available for use by project residents, and proposed onsite recreational and leisure facilities intended to meet resident recreation and leisure time needs *Est. Value: based on an est. current site market value of $25 million, or $444.5/sf x 53,350sf = $23.7 million*
Requested Deferral				
Development Standard or Requirement	**Development Standard or Requirement**	**Development Standard or Requirement**	**Development Standard or Requirement**	**Rationale or Request/ Est. Value where appropriate**
Water Supply Connection Fee	ROH Sec. 14-6.1 & 14-6.4	Deferral of payment of Water Supply and Wastewater Connection Fees until Issuance of Cert. of Occupancy	Board of Water Supply	To facilitate the applicant's financial capability in proceeding with the project through the construction period. *To be determined through discussions with the Board of Water Supply*

Table 10: Requested Exemptions and Deferrals

6. ALTERNATIVES TO THE PROPOSED ACTION

Three alternative scenarios for use of the project site were examined for their result and impact on the intended project. The findings of each scenario is summarized below:

6.1 NO ACTION

No action would result in the creation of no units at the project site and no additional units, affordable or otherwise, in the project area. The result would be:

- Continued underutilization of the site; This site would be considered underutilized by BMX-3 Community Business District development standards
- Conflict with the PUCDP, which prescribes full development of the Primary Urban Center, and high-density housing around transit stations
- No reduction in the scarcity of affordable and moderately priced residential units on Oahu

6.2 DEVELOPMENT IN ACCORDANCE WITH LUO AND PARK DEDICATION STANDARDS AND REQUIREMENTS

In exploring this scenario, it should be noted that while, under the LUO, the site is currently zoned BMX-3 ("Business Mixed Use") and is currently subject to BMX-3 development standards, it is current City intent for the site and its surrounding area to become a "Transit-Oriented Neighborhood" with development standards revised upwards to achieve greater urban density than now exists or is permitted.

Development pursuant to current LUO requirements would not yield an economically feasible affordable housing project. The project property measures 250 feet between the 100-foot wide Kapiolani Boulevard and 40-foot wide Kona Street rights-of-way. Under BMX-3 standards and requirements, maximum FAR is 3.5 and maximum height is 350 feet. Setback requirements are: 10-foot front yards and 10-foot side and rear yards. BMX-3 also requires height setbacks such that a building can be no higher than twice the distance from the centerline of an adjacent street.

Given these constraints, a building height of 350 feet could not be achieved. Measured from Kapiolani Boulevard, a point 350 feet above grade could be achieved 125 feet from the front property line (at the midpoint of the site), where in combination with the additional 50 feet to the centerline of Kapiolani Boulevard, it would be 175 feet from the centerline of that street, thence enabling a height of 350 feet (2 x 175 feet = 350 feet). However, that point would only be 145 feet from the centerline of Kona Street, allowing only a 290-foot building height if measured from the centerline of Kona Street. The maximum height of a point on the project site when measured from both Kapiolani Boulevard and Kona Street would 320 feet, achievable at a point 110 feet from the front property line (160 feet from the centerline of Kapiolani Boulevard) and 140 feet from the rear property line (160 feet from the centerline of Kona Street). However, it must be realized that this point is simply the apex of a triangle with sides having a 2:1 vertical to horizontal slope. Using the 70-foot width of the proposed Kapiolani Residence typical floor, the actual height of a residential tower would be 70 feet lower, or 250 feet. Assuming an approximate floor-to-floor height of 9 feet, that would yield about 28 building floors. Assuming that the ground floor were occupied by a resident lobby, resident management spaces, and building utility spaces as is typical in this kind of building, that would leave 27 floors available for residential use. If one used the current project design of 11 units per residential floor, that would yield a total of 297 residential units or 61% of Kapiolani Residence's current proposed total unit count. This resulting unit count would not yield a feasible affordable housing project. Furthermore, if the project were to be built under these standards with the same provision for 60% of total units being affordable, only 178 affordable units would be provided, in contrast to the current proposal's offering of 292 affordable housing units.

To compound this deficiency, it should be noted that residential and parking garage systems typically have different structural requirements, Kapiolani Residence as currently designed proposes a tower and parking garage as two independent structures to avoid the increased costs involved in constructing a building that would have to accommodate two different structural systems or requirements.

Under BMX-3, the tower would have to be placed toward the center of the project site in order to maximize tower height and unit count. In this position, the tower and parking garage could no longer be independent structures. Rather, the tower would have to be placed on top of the parking structure, increasing project costs, further reducing possible unit count, and further decreasing the economic feasibility of an affordable housing project at the site.

In addition to the foregoing constraints, the imposition of existing Park Dedication requirements, which would require the provision of 110 square feet of land per unit or fees in lieu of such provision based on the current market value of the project site would further increase project costs and the economic infeasibility of the project conducted under BMX-3 development standards.

Given these factors, it is clear that this approach would not lead to an economically feasible affordable housing project.

6.3 DEVELOPMENT IN ACCORDANCE WITH ANTICIPATED ALA MOANA NEIGHBORHOOD TOD PLAN ("ALA MOANA TOD PLAN") INTENT USING ORDINANCE 14-010 AS A PROCESSING VEHICLE

The draft Ala Moana TOD Plan envisions building heights of 400 feet in the area of the project site, mauka-makai tower orientation, pedestrian-friendly streetscapes, and street-level commercial frontages. It would achieve this by allowing for departures from existing LUO requirements that would be negotiated for "community contributions" determined on a discretionary basis during the project review and permitting process. Ordinance 14-010 was enacted as a vehicle for processing TOD-oriented projects in TOD-designated locations in advance of an in-force TOD Plan and ordinance.

Provisions of Ordinance 14-010 would allow building height of up to 450 feet and an FAR of 7.0 at the project site. However, as this Ordinance also requires that proposed TOD projects be generally consistent with the current version of the Draft Ala Moana TOD Plan, the maximum permitted height of the proposed project would more likely be 400 feet instead of 450 feet.

The Kapiolani Residence project site context contains major existing and pending adjacent elements which require consideration in site planning at the Kapiolani Residence project site. Ala Moana Tower stands immediately adjacent of the project site on the Ewa side of the site boundary. Immediately Diamond Head of the project site, an active project proposal which will probably include a high-rise structure is in progress. Orienting the residential tower of the proposed Kapiolani Residence mauka-makai in conformance with Ala Moana TOD Plan while maintaining the tower and parking garage as two independent buildings separated sufficiently to allow an adequate sense of space between them would place the project tower against or very

close to either the Diamond Head or the Ewa project site property line. This would result in placing the residents on one side of the project tower very near and uncomfortably close to the wall of an adjacent tower, resulting in an unattractive project from urban design and consumer perspectives. This approach was dismissed.

If the Kapiolani Residence tower and parking garage maintained a mauka-makai orientation and were made to abut each other to create greater distance from the project site's Diamond Head and Ewa boundaries, residential units that would otherwise abut the parking garage in this arrangement would have to be eliminated, reducing project unit count and adversely affecting project economic feasibility. Residential units would still be directly facing adjacent towers. This configuration would also create an unattractive project from an aesthetic and consumer point of view.

If the Kapiolani Residence tower were to be placed near the middle of the project site to maximize separation from the afore-mentioned boundaries, it would have to stand above the parking garage. This would probable be the best site planning alternative for a mauka-makai tower orientation from a design and consumer perspective. However, while it would create more distance between the project and adjacent towers, this approach would still result in project residents having adjacent towers as primary near-view objects. In addition, the placement of the tower on a parking garage "podium" would increase project costs because of having to accommodate comingled structural and other technical systems from the residential tower through the parking garage. This arrangement would also result in a fewer units, since the first residential floor would have to be located at a considerable distance above the ground.

In summary, developing Kapiolani Residence in accordance with the Draft Ala Moana TOD Plan and Ordinance 14-010 is not likely to yield the appropriate unit count or to meet cost parameters needed for project economic feasibility. Because of the presence of Ala Moana Tower on one side of the site and the likelihood of another tower immediately adjacent on the other side, the mauka-makai tower orientation is also likely to produce a project with less than optimum attractiveness to a potential buyer, resulting in a potentially considerable competitive disadvantage in the marketplace.

Finally, despite the defined review times prescribed by Ordinance 14-010, the discretionary nature of the negotiations required to achieve needed relief from existing LUO requirements creates uncertainty in project cost and schedule. These are important factors which are

severely critical in the development of an affordable housing project on a high value urban site where construction activities, already complex in an urban high-rise project, are further complicated by the need to maintain onsite and adjacent area safety in a confined setting.

6.4 CONCLUSION

Given the examination of the above alternative scenarios, the selected alternative: development of the proposed 485 units in a 45-story residential tower in accordance with Section 201H-38 exemptions appears to be the most feasible alternative. The HRS Section 201H-38 approach carries with it the greatest amount of certainty of all available alternative processes, helping to achieve the cooperative relationship and timeliness important to facilitating project success.

7. DETERMINATION OF FINDINGS AND SUPPORTING REASONS FOR DETERMINATION

7.1 SIGNIFICANCE CRITERIA

A. Involves an irrevocable commitment to loss or destruction of any natural or cultural resource.

This draft document included evaluations of existing natural and cultural (archaeological/ historic) resources. Findings of these evaluations found that no known natural resources had been found, and that monitoring of the existing monkeypod trees and onsite buildings prior to actual construction would prevent disturbance or destruction of migratory white terns, their eggs, or young. Safety concerns and site functional requirements require the removal of two existing monkeypod trees, but these will be replaced with new monkeypod trees to be planted along Kapiolani Boulevard. Finally, although a historic site of significance has been registered with the State of Hawaii, it has been registered for its information value rather than for preservation. Monitoring for archaeological and historic remains during construction excavation activity over four feet in depth will be conducted for other such resources, and procedures to prevent or mitigate the loss of resources of value will be implemented should such resources are found.

B. Curtails the range of beneficial uses of the environment.

Kapiolani Residence is consistent with State and City plans and land use designations. Rather than curtailing the range of beneficial uses of the environment, its implementation would expand them by turning a currently under-used site with purely commercial uses housed in physically limited facilities into a site on which uses have been optimized and which will offer an enlivened commercial frontage reinforced by beneficial public spaces, improved provisions for pedestrians and bicyclists, and a significant increase in much-needed affordable and moderately-priced housing in a uniquely central in-town location in proximity to nearly all the facilities and services needed to support urban lifestyle requirements.

C. *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.*

One of the policies of Chapter 344 states: "Develop communities which provide a sense of identity and social satisfaction in harmony with the environment and provide internal opportunities for shopping, employment, education, and recreation." Kapiolani Residence is located in an area already rich in shopping, employment, education, and recreation opportunities and facilities, an area which is intended for further development along similar lines as a richly vibrant, urban mixed-use "neighborhood" in which opportunities for interaction with other areas and inhabitants of urban Honolulu and even rural Oahu will be increased. Kapiolani Residence, by adding a residential component to this mix will, in doing so, be in harmony with Chapter 344, its urban environment, and with both existing and emerging public policy.

D. *Substantially affects the economic welfare, social welfare, and cultural practices of the community or State.*

Kapiolani Residence, when complete, will beneficially affect the economic and social welfare of the immediate and larger community. Its positive aesthetic presence will enhance the visual character of its immediate area and set the tone for beneficial development of the future neighborhood. Its mixture of beneficial commercial and residential facilities and its public spaces will enhance neighborhood shopping, residential, and lifestyle options. The magnitude of its affordable and moderately-priced market units will meet a severe and widespread need for such housing on Oahu and provide future residents an opportunity to locate in a part of the city that has been often economically out of reach for those market segments.

In the short term, its construction will provide jobs and increasing sales and income volume in the construction industry and the businesses which service it. As previously cited under "Socio-Economic Characteristics" on page 59 of this document, the completed project will increase public tax revenues as a result of employment and sales-driven higher personal and business incomes and the increased property value that will result from the property improvements that the new facility will bring.

The project site has been part of the urban Honolulu business and social context for more than a century. No pre-European cultural practices exist at the site. The single archaeological site judged significant by the project archaeological study reflected western or historic activities. The Archaeological Inventory Survey Report for the project found that there were no early accounts of the lands in the specific location of the project site, only accounts of the much larger district of which the site was a part. In summarizing the recorded observations by early Western observers of the general area of which the project site was a part, it concludes that:

> *In sharp contrast with Waikiki and Kou (Honolulu), Kewalo (the pre-European name for the general area in which the site is located) seems to have been a less attractive place to live and farm, probably because it was dominated by marshes and prone to flooding, including tidal surges. In traditional times, Kewalo was apparently an important location for fishponds and for other marsh resources (e.g., birds). But, prior to its wholesale transformation into an urban area in historic times, this area would not have been a practical location for settlement.*

A *Cultural Impact Assessment for the Kakaako Community Development District Mauka Area Plan, Waikiki Ahupuaa, Honolulu (Kona) District, Oahu Island* was prepared as part of the Environmental Impact Statement for the Hawaii Community Development Authority in support of the Kakaako Community District Mauka Area Plan. The "Area of Potential Effect" (APE) for a Cultural Impact Assessment (CIA) is substantially larger than for archaeological studies. This CIA "extends [from the currently designated Kakaako Mauka Area] to wider associations throughout Waikiki Ahupuaa, Kona District, and beyond". The Kapiolani Residence site lies within this area of coverage.

The CIA found that the general area between the Honolulu and Waikiki was characterized by fishponds, salt ponds, occasional taro loi, and trails connecting Honolulu and Waikiki. The study also noted that Kewalo and the adjacent Kaakaukui and Kukuluaeo districts were traditionally noted for fishponds, salt pans, and marshlands where pili grass grew. Religious rites and resource gathering were also practiced in this general area. Since the APE covers a very wide area, the specific location of these activities and sites may often be elusive.

Given the systematic Twentieth Century filling of the lands in and around the area in which the project site is located and the fact that the one "significant" site identified by the archaeological

inventory is a historic (post-European arrival), it is possible that pre-European remains may lie deeper, buried beneath the layers of fill material deposited during those filling operations. As previously cited in Section 3.3: “Soils”, the surface fill layer appears to extend between 4 – 6 feet below the existing surface of the site.

Activities at and adjacent to the project site have consisted predominantly of increasingly intense urban uses, purposes, facilities and environmental character since the early 20th Century. However, because construction activity will involve some excavation, recommendations of the archaeological inventory, which include the monitoring of all excavation exceeding a depth of one meter due the potential for additional archaeological deposits that might exist in subsurface layers of historic period fill should be followed.

In addition, in keeping with the recommendations of the Mauka Area CIA, efforts to avoid impacts on view corridors and existing green spaces should be made, any infrastructure concerns, if they arise, should be addressed with the community prior to development, and community members should be consulted to address and integrate any community concerns that may arise in the design of site improvements.

The project has identified and addressed the project’s relationship to the significant public view corridor identified by the City’s Primary Urban Center Development Plan which covers the region in which the project is located. An examination of this relationship found that the project has no impact on this view corridor. At present, there are no infrastructure concerns. A summary of this can be found in Section 3.7, *Visual Resources*, immediately following. To address previous wastewater transmission issues, the project owner, SamKoo, was part of a group of property owners which funded improvements to sewer line capacity in and adjacent to the project area to enable adequate sewer line capacity for those properties. SamKoo and its consultants have also formally consulted on multiple occasions with the community through the Ala Moana/Kakaako Neighborhood Board to present and discuss the project during its development.

Further community access to the project review process will be possible as the project continues through its requisite entitlement processes, through the formal public review and comment period for this Environmental Assessment and the subsequent Honolulu City Council review process.

E. Substantially affects public health.

Construction of Kapiolani Residence may create temporary noise increases and impacts to air quality as a result of site development activities. However, these potential impacts will be short-term and will be monitored and conscientiously managed to avoid significant public health effects. All such activities will comply with applicable regulations and appropriate mitigation measures will be implemented as required.

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

The creation of 485 new residential units in the Ala Moana area will have secondary impacts. Its impact on population will be positive and consistent with public policy intent to fully develop the Primary Urban Center and to create Ala Moana as an activity node in Central Honolulu. As shown in the section on impacts to the affected environment, the proposed project is anticipated to have no or minimal impact on public facilities.

G. Involves a substantial degradation of environmental quality.

There are no anticipated substantial degradations of environmental quality. While construction activity is anticipated to have short-term impacts on noise, air quality, and traffic levels in the immediate vicinity of the project site, Best Management Practices and other mitigating measures as outlined previously in this document will be undertaken to minimize and mitigate such impacts. Kapiolani Residence's post-construction long term presence and use is not expected to result in long term degradation of environmental quality.

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

No major cumulative effects or commitments to larger actions are anticipated as a result of this project. Its location and purpose is consistent with public policies for the concentration of

populations in the Primary Urban Center and the intensification of the Ala Moana district. This intensification is likely to result in increased use of public services and facilities. However, intensification of the Ala Moana district will not by itself necessarily create public commitments for larger actions.

Urban intensification along the future HART rail transit route in the Central Honolulu *region* from Kalihi to Ala Moana in the first phase of the planned HART route is intended by public policy. Public agencies at both the State and City levels are preparing for the results of this policy when implemented, some of which would include increased demands for public services as a result of a regional intensification rather than any intensification of a single district. In view of this, any need for larger commitments of action would be the result of widespread increases in the total spectrum of urban uses over a large area rather than from the cumulative effects of a single type of use or district.

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

The project site exists in an intensely urban environment, has been repeatedly modified by human use for over two hundred years, and is currently intensely occupied by commercial enterprises. Threatened or endangered species neither frequent the site nor make it their home. This is confirmed by the U.S. Fish and Wildlife Service. Its response to this document's "preconsultation" letter states that a review of information provided by their files cited "no federally listed species or designated critical habitat within the immediate vicinity of the proposed project."

J. Detrimentally affects air or water quality or ambient noise levels.

Demolition and construction activities will have adverse impacts on air, and water quality and increase noise levels in the immediate vicinity of the site, but both demolition and construction activity will observe Best Management Practices, comply with applicable regulations and mitigation measures, and take all other practical steps to minimize impacts and noise level increases. Furthermore, these adverse effects will be temporary and will not result in long-term degradation of air or water quality or noise level increases.

K. 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.

Kapiolani Residence is located in a highly modified urban area away from the coastline and protected by extensive adjacent structures from virtually any coastal influence. The site is surrounded by relatively intense urban development and larger urban structures. There are no known environmentally sensitive areas in its immediate proximity. In this location, there is no adjacent estuary, beach, or body of fresh or coastal water. The site has been designated Flood Zone X, an area outside the "Special Flood Hazard Area (SFHA) and outside the area of the 500-year flood. While the project site is located within the City and County of Honolulu tsunami evacuation zone, the site is located far inland from the most inland extent of the FEMA "VE" zone, which indicates potential wave hazard. This distance from the FEMA "VE" zone, the site's inland location, and the presence of major intervening structures between the site and the "VE" zone and the coastline suggest that tsunami hazard is remote or non-existent.

Preliminary geotechnical analyses of the site have found no geologically hazardous conditions.

L. Substantially affects scenic vistas and view planes identified in county or state plans or studies.

Kapiolani Residence does not impact important views cited by the Primary Urban Center Development Plan (PUCDP). The plan cites the view from Magic Island toward the Koolau Mountains as an important view plane from an important public viewing point. The adjacent Ala Moana Hotel stands immediately makai of the project site, effectively blocking any possibility of seeing Kapiolani Residence from that location and consequently preventing its opportunity to obstruct any view from that station point. Kapiolani Residence does not block other vista opportunities.

M. Requires substantial energy consumption.

There will be an initially substantial use of energy during demolition of existing structures, site development, and initial construction of the project. However, most of the following construction

phase and attendant practices, which now use more energy-efficient construction techniques and procedures, will use normal or minimally increased levels of energy.

Post-construction energy usage will not require higher than historically normal energy consumption. Energy-efficient appliances, low-flow toilets, and low-flow sinks will be installed in the residential units and other project facilities.

7.2 DETERMINATION

Based on the examination of potential impacts, the intended application of pertinent mitigation measures, and the analysis of the project in terms of the foregoing criteria, Kapiolani Residence is not anticipated to have significant impacts on local, Countywide, or Statewide physical or human environments. Pursuant to Chapter 343, HRS, the Hawaii Housing Finance and Development Corporation, the Approving Agency for this project, is anticipated to issue a Finding of No Significant Impact (FONSI)

8. CONSULTATION

SamKoo Pacific, LLC solicited public and agency comments on the Kapiolani Residence project through letters and meetings requesting input prior to development of this EA. It received responses from a number of agencies and other parties consulted.

8.1 AGENCIES CONSULTED

The public agencies listed below were sent pre-consultation letters prior to the preparation of this Environmental Assessment. Agencies which responded are marked with an asterisk (*). Comments from those who responded as of this writing and the responses to the comment letters are provided in Appendix I of this Environmental Assessment.

United States of America

- U.S. Fish and Wildlife Service*

State of Hawaii

- Department of Education
- Department of Land and Natural Resources*
- Office of Environmental Quality Control
- Department of Health, Environmental Health Administration
- Disability and Communication Access Board
- Hawaii Housing Finance and Development Corporation

City and County of Honolulu

- Board of Water Supply*
- Department of Community Services*
- Department of Design and Construction*
- Department of Environmental Services
- Department of Facility Maintenance*
- Department of Parks and Recreation*
- Department of Transportation Services*
- Honolulu Authority for Rapid Transit (HART)*
- Department of Planning and Permitting (DPP)*

- DPP – Land Use Approval Branch
- DPP – Traffic Review Branch
- DPP – Zoning Plan Review Branch
- DPP – Civil Engineering Branch
- DPP – Subdivision Branch
- DPP – Wastewater Branch
- Fire Department*
- Police Department*

Private Organizations and Individuals

- Hawaiian Electric Company
- Councilmember and Chair Ernie Martin
- Councilmember Ann Kobayashi
- Councilmember Carol Fukunaga
- Councilmember Stanley Chang

Further Agency Consultations

The following additional agencies have been added to the agency consultation list and will also receive preconsultation letters:

State of Hawaii

- Department of Transportation
- Department of Business, Economic Development, and Tourism, Energy Office
- Department of Defense
- Office of Planning
- University of Hawaii Environmental Center

8.2 ADDITIONAL CONSULTATION

Parties consulted in addition to those on the above list included the following:

Ala Moana/Kakaako Neighborhood Board No. 11

The Kapiolani Residence project was presented to the Ala Moana/Kakaako Neighborhood Board on Tuesday, January 27, 2015. As this presentation was intended as an introduction to

the project, no responses were received. The developer presented a second time to the Ala Moana/Kakaako Neighborhood Board on March 24, 2015. The Board exhibited interest in the project but declined to take a position on it.

9. REFERENCES

Central Planet Repair, LLC (2014). Phase I Environmental Assessment, Prepared for SamKoo Pacific, LLC

City and County of Honolulu, *General Plan* (1992)

City and County of Honolulu. Honolulu Land Information System (HOLIS)

City and County of Honolulu, *Primary Urban Center Development Plan* (2004)

City and County of Honolulu, *Land Use Ordinance & Updates*

Geolabs, Inc., *Technical Memorandum: Geotechnical Recommendations for Planning and Preliminary Design of the SamKoo Condominium Project* (2014)

Hawaii Community Development Authority, Final Supplemental Environmental Impact Statement – Volume III, Appendix D: Cultural Impact Assessment, (Prepared by EDAW, Inc., 2009)

Richard Paul Cassiday, *Affordable Housing Market Study* (2014)

Scientific Consultant Services, Inc. *An Archaeological Inventory Survey Report for a Two-Parcel Property on Approximately 1.29 Acres in Waikiki and Kalia Ahupuaa, Ili of Kewalo, Kona (Honolulu) District, Island of Oahu,Hawaii* (2015)

SSFM, *Preliminary Engineering Report for SamKoo Pacific Condominium* (2015)

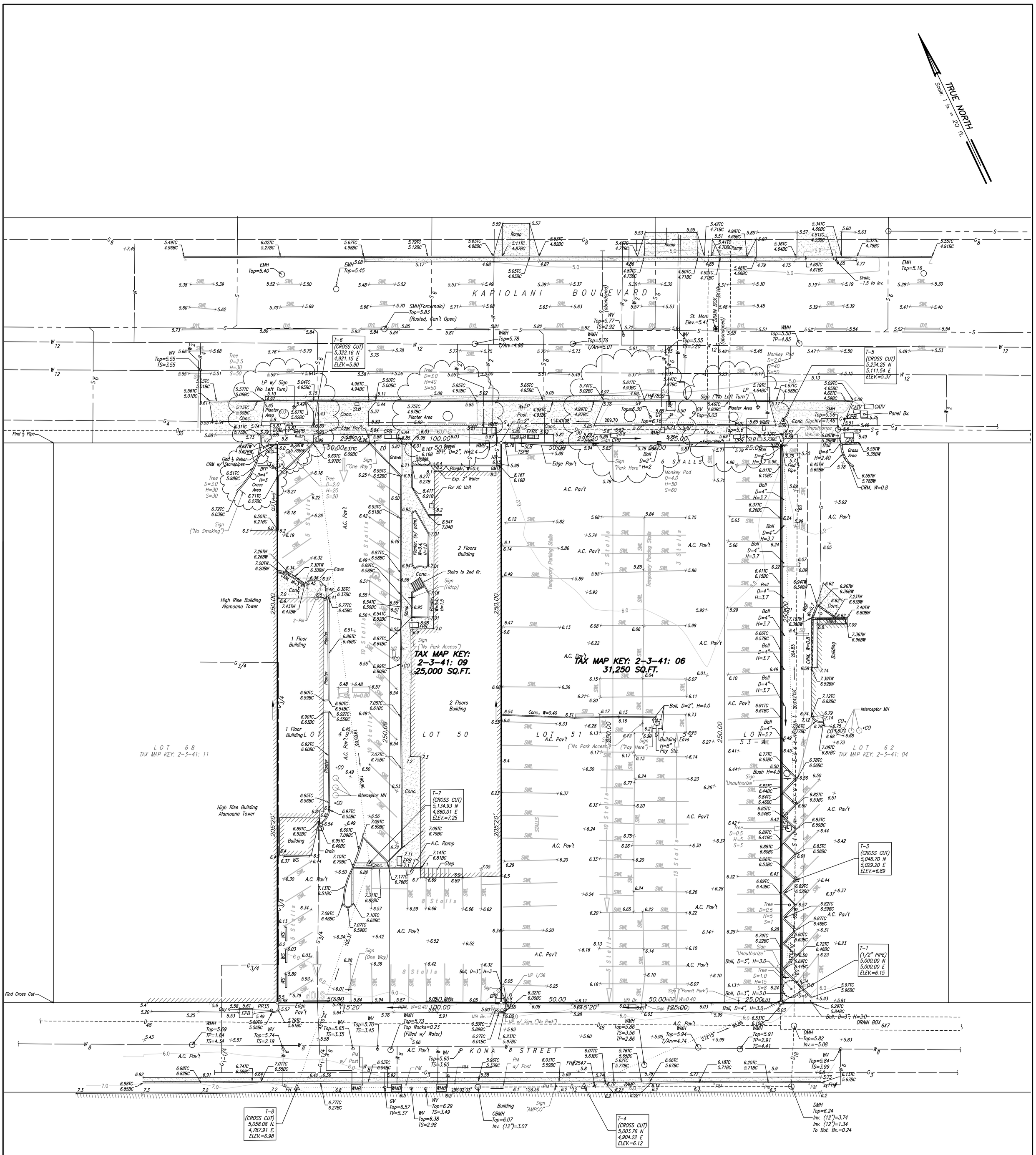
SSFM, *Kapiolani Residence Traffic Impact Analysis Report,* (2014)

State of Hawaii, *Hawaii State Plan*, Chapter 226, HRS

State of Hawaii, *State Land Use Law*, Chapter 205, HRS

APPENDICES

A. TOPOGRAPHIC SURVEY



Abbreviation

A.C. Pav't	Asphalt Concrete Pavement	Inv.	Invert
AC Unit	Air Conditioning Unit	LP	Lamp Post
BC	Bottom Concrete Curb	N	Northing
BFP	Backflow Preventer	Mon.	Monument
Boll	Bollard	PM	Parking Meter
Bot.	Bottom	PP	Power Pole
Bx.	Box	S=	Approximate Spread
BW	Bottom Wall	SB	Speed Bump
CATV	Cable TV Box	SLB	Street Light Box
CBMH	Catch Basin Manhole	SMH	Sewer Manhole
CLF	Chain Link Fence	St.	Street
CRM	Concrete Rock Masonry Wall	Sta.	Station
CO	Sewer Cleanout	SWL	Solid White Line Pavement Stripe
Conc.	Concrete	UP	Utility Pole
CPB	Communication Pullbox	TC	Top Concrete Curb
D=	Approximate Diameter	TP	Top Pipe
DMH	Drainage Manhole	TSPB	Traffic System Pullbox
DYL	Double Yellow Line Pavement Stripe	T/Arv	Top Air Relief Valve
E	Easting	TS	Top Stem
EMH	Electrical Manhole	TW	Top Wall
ELEV.	Elevation	Util.	Utility
EO	Electrical Outlet	w/	With
EPB	Electrical Pullbox	W=	Width
FABX	Fire Alarm Pullbox	WMB	Water Meter Box
FH	Fire Hydrant	WMH	Water Manhole
Flr.	Floor	WV	Water Valve
Guy	Guy Wire	2nd	Second
GV	Gas Valve		
H=	Approximate Height		
HB	Hose Bibb		
H.E.C.O.	Hawaiian Electric Cooperative		
Hdcp	Handicapped		

Notes:

1. Azimuths are referred to Land Court Consolidation 20 & Government Survey Triangulation Station "PUNCHBOWL".
2. Coordinates are ASSUMED. Traverse Point "T-1" held at 5000.00 N, 5000.00 E.
3. Owners of adjoining lands as shown on map are from available records filed at the Real Property Tax Mapping Branch.
4. Map is compiled from records found at the State Survey Office, Real Property Tax Mapping Branch and Bureau of Conveyances. Recorded data has not been verified by an actual survey on the ground.
5. The underground utilities shown have been located from field survey information and existing drawings. The surveyor make no guarantees that the underground utilities shown comprise all such utilities in the area, either in service or abandoned. The surveyor further does not warrant that the underground utilities shown are in the exact location indicated although he does certify that they are located as accurately as possible from information available. The surveyor has not physically located the underground utilities.
6. Elevations are referred to City & County Street Monument at the intersection of Kona Street & Kaheka Street, Elev. = 3.87 ft. M.S.L.
7. Date of Survey: July 25, 2014

Legend:

20	Major Contour
21	Minor Contour
S/6	Existing Sewer Line
	Existing Drainage Line
W/12	Existing Water Line
	Traverse Line
	Traverse Station
	Tree
	Fire Hydrant
	Lamp Post
	Sign

TOPOGRAPHIC SURVEY

LOTS 49 TO 52, INCLUSIVE, MAP 2 AND LOT 53-A, MAP 8 OF LAND COURT CONSOLIDATION 20

TMK: 2-3-41: 06 & 09

KALIA, WAIKIKI, HONOLULU, OAHU, HAWAII

20 10 0 20 40 60

GRAPHIC SCALE IN FEET

1001 Bishop Street
Suite 1600
Honolulu, Hawaii
October 2, 2014

GEORGE S. YOSHIMURA
LICENSED PROFESSIONAL LAND SURVEYOR
No. 2927
HAWAII, U.S.A.

AECOM
Licensed Professional Land Surveyor
Certificate No. 2927/Expires 4/30/16

PATH/FILENAME: P:\USG\Survey\Oahu\60328002_SAM KOO PACIFIC_1630-1638 Kapiolani Blvd_TOPO_2014\dwg\FINAL.dwg LAST UPDATE: October 02, 2014 @ 11:07:40 am PLOT DATE: October 02, 2014 @ 11:09:37 am
24" x 36" = 6.0 Sq. Ft.

B. DPP CORRESPONDENCE

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

KIRK CALDWELL
MAYOR

GEORGE I. ATTA, FAICP
DIRECTOR

ARTHUR D. CHALLACOMBE
DEPUTY DIRECTOR

2014/ELOG-1519 (JP)

August 27, 2014

Mr. Lowell K.W. Chun, President
Pacific Catalyst, LLC
1296 Kapiolani Boulevard, Suite 1907
Honolulu, Hawaii 96814

Dear Mr. Chun:

SUBJECT: Sam Koo Affordable Housing Project
Eligibility for Affordable Housing Exemptions
Chapter 201H-38, Hawaii Revised Statutes (HRS)
1391 Kapiolani Boulevard - Kalia
Tax Map Key 2-3-39: 11

This responds to your request, received August 13, 2014, concerning whether a planned affordable housing project on the subject 1.431-acre property, which is in the BMX-3 Community Business Mixed Use District with a 250-foot zoning height limit, will be eligible for processing by the Department of Planning and Permitting (DPP). We understand that the project will involve the development of multi-family dwellings for households earning 100-140 percent of the median income for Honolulu. Under those particular circumstances, the project will not be eligible for processing by the DPP.

To be eligible for processing by the DPP, projects must include a minimum of 10 percent of the total units being affordable to households earning annual incomes which do not exceed 80 percent of the median income. And, a minimum of 20 percent of the total units must be affordable to households earning between 81 to 120 percent of the median income. The remaining affordable units to be provided may be affordable to gap group (i.e., 121 to 140 percent) households. A maximum of 50 percent of the total units can be sold at market rates. It is our understanding that the eligibility requirements for processing requests for exemptions pursuant to Chapter 201H-38, HRS by the Hawaii Housing Finance and Development Corporation are less restrictive than our own.

I hope this clarifies the matter. Please contact Jamie Peirson of our Land Use Permits Division at 768-8011 if you have any questions.

Very truly yours,

George I. Atta, FAICP
Director

C. MARKET STUDY

AFFORDABLE HOUSING MARKET STUDY

1631 Kapiolani Blvd, Honolulu Hawaii

For: Sam Koo Pacific LLC

By Ricky Cassiday

1029 Iiwi Street, Honolulu, Hawaii

(808) 291-4407

http://www.rcassiday.com

I. INTRODUCTION OF RESEARCHER

Ricky Cassiday, an independent market research analyst who specializes in analyzing residential real estate markets for developers, has been asked to analyze the market relative to a prospective housing development project in the area around Ala Moana Shopping Center that targets the affordable for-sale and the market for-sale housing market.

The study entailed collecting, comparing and analyzing information that has a bearing on housing market supply and demand relative to the proposed project, including but not limited to publicly available real property, economic and commercial data. Income and demographic information was obtained from the State of Hawaii, City and County of Honolulu, Bureau of the Census, and CLARITAS, a Nielsen Company.

The data and statements herein are based on independent research and are in no way contingent upon outside findings or recommendations.

II. OVERVIEW

STUDY SCOPE OF WORK:

- Describe and analyze the current economic conditions and socio-political realities that impact housing demand and supply, both island-wide and in Kakaako/Kapiolani market, as it pertains to these units.
- Describe and analyze the current housing stock (a.k.a., housing inventory), in terms of (a) past market capacity to absorb past housing production; (b) the effect on the current housing stock in the area of the projected future (potential) supply.
- Describe and analyze the current housing market, in terms of sales and prices, and put this into a historical context.
- Describe and analyze the specific target market of this development, relative (1) to the affordable housing considerations and obligations, and relative to (2) the normal market rate housing opportunities and risks, as seen through the eyes of developers.
- Describe and analyze the market and the project according to the affordable housing guidelines for market studies, as published by HUD and HCDCH.

PROJECT:

The developer is proposing to build an affordable and market for-sale project of 485 units – studios, one-bedroom, two-bedroom and three-bedroom units for families earning 80 to 120 percent of the area median income (AMI) or below. The following table describes the unit and bedroom counts for this project:

UNIT COUNT OF PROJECT BY BEDROOM TYPE & AMI

AMI Target	80%-120%	Market	Totals
Studio	56	32	88
1-Bedroom	104	72	176
2-Bedroom	108	69	177
3-Bedroom	24	20	44
Totals	291	194	485

The site is located three blocks west of the intersection of Kalakaua Avenue and Kapiolani Blvd, arguably the two best-known streets in Honolulu. It is located at the western edge of Waikiki and right in the middle of the Ala Moana district.

The project's strongest selling points:

- Affordability
- Newly built construction
- Next to the new rail station terminus
- Convenience of being close to the major employment centers of the state, plus the state's largest retail establishment and the largest public park.

III. MARKET DEFINITION AND DESCRIPTION

MARKET

The subject studied is the City and County of Honolulu, located on the Island of Oahu, in the state of Hawaii. Oahu is the third largest of the Hawaiian Islands and the most populous island in the state. Oahu has a total land area of 896.7 square miles. The City and County of Honolulu are consolidated and it is the only incorporated city in the state of Hawaii.

The property is located on the Island of Oahu, within the Honolulu, HI MSA. Oahu is the most populous island in the state, with a total land area of 896.7 square miles. The City and County of Honolulu are consolidated and it is the only incorporated city in the state of Hawaii. .

Specifically, the site is in the Ala Moana neighborhood, which sits between downtown Honolulu, the island's and the state's financial center, and Waikiki, the state's largest resort, which, draws millions of visitors each year. This resort is one of the premier visitor destinations worldwide, thanks to Hawaii's diverse culture, subtropical weather, American jurisprudence, a pristine landscape and the "aloha spirit" of the people. By the same token, the quality of visitor experience equates to the quality of life: so as Honolulu has long been considered at top vacation destination, it also has long been considered among the world's most desirable places to live.

In the narrowest sense, the competitive market area consists of the sales of condominium apartments in and around general area of Ala Moana. This would be included in TMK Zone 1-2-3.

In the broadest sense, we define the market area for these units geographically as being island-wide. The facts that support this definition of market area are:

- That the entire island's population is within a 20-mile radius (and over 90% is within a 10 mile one);
- There are few if any for-sale properties that are comparable to this one, given the affordable guidelines for prices.
- That there is a clear and present housing shortage on the island, for both open market and affordable-restricted units (as well as owner-occupied).

STATE & COUNTY HOUSING CHARACTURISTICS

The following are highlights from the 2013 American Community Survey 1-Year Estimates:

- Hawaii's **median housing value** increased from $496,600 in 2012 to $500,000 in 2013. This increase, however, was not statistically different. Hawaii remained #1 in the ranking with the highest median housing value in the U.S.

- **Median housing value** was the highest on Oahu at $573,800 in 2013, followed by Kauai County at $498,300. Median housing value on Maui was $471,800 while Hawaii County had the lowest median housing value at $291,900 in 2013.

- Oahu rents paid the highest **median rent** in 2013 at $1,535 per month, followed by Maui County renters at $1,292 per month, Kauai County rents at $1,281, and Hawaii County renters with the lowest rent at $1,017 per month.

Just looking at the county, as seen below, most of Oahu's condominium housing stock is quite old:

- 17% of the total condo housing stock was built before 1970,
- 46% of it was built between 1970-1979,
- 18% was built between 1980-1989, and,
- 15% was built between 1990-1999.

Furthermore, most of Oahu's condominium housing stock is quite small:

- 13% of all condominium units on Oahu are between 1,250 and 1,500 sq. ft.,
- 7% of all units are between 1,500 and 1,750 sq. ft.,
- 3% of all units are between 1,750 and 2,000 sq. ft., and
- 1% of all units are over 2,000 sq. ft.

The rest of the condo stock averages less than 1,250 sq. ft. in size. What this says is that this market is characterized by older units, units that are small in size, and units that are not very highly valued. In terms of the recent trend in housing stock creation, the following tables describe the types of housing and their growth since 1992.

HOUSING STOCK, OAHU, BY UNIT COUNT

	Totals	Single Family	Condo	Apartment	Military	Student	Cooperative
1992	285,557	137,299	81,293	40,535	19,324	4,392	2,714
1997	309,473	145,078	92,503	43,732	20,071	4,405	3,684
2003	311,466	150,957	91,913	39,602	21,843	4,270	2,881
2006	319,405	160,686	94,640	43,275	14,737	3,419	2,648
2010	329,724	165,440	100,438	43,424	14,737	3,408	2,277

Source: 2011 Rental Housing Study

HOUSING STOCK, PERCENT GROWTH OVER PRECEEDING PERIOD

	Totals	Single Family	Condo	Apartment	Military	Student	Cooperative
1997	8%	6%	14%	8%	4%	0%	36%
2003	1%	4%	-1%	-9%	9%	-3%	-22%
2006	3%	6%	3%	9%	-33%	-20%	-8%
2010	3%	3%	6%	0%	0%	0%	-14%

Per the 2010 Census, the total number of housing units in Honolulu was 329,724, with 92% of them occupied. This left some 26,000 units vacant, with about one-third of them 9,477 accessible to those seeking a residential housing unit. Most of these are in locations and in a condition conducive to high rental rates, such as Waikiki (high visitor demand) and Makiki (high demand for middle and upper income households, due to close proximity to employment centers and good schools). Thus, they remained unaffordable to households with low- to moderate-incomes.

Given high demand and low supply, the large numbers of low- to moderate-income households currently have very few options for housing. Further, this condition has existed for over 25 years, since the implementation of land zoning regulations at the county level (supply constraints) and the dramatic rise in the price of housing, fed by the Japanese visitor and housing demand explosion. These conditions, high prices and low supply, continue on today, with Honolulu being named as the least affordable housing market in the nation in a number of studies.

TARGET MARKET

The project is targeted on buyers who can qualify to purchase these units, under the guidelines of the affordable housing policy of the state of Hawaii. These guidelines consider the potential buyers in the market according to family size and family income guidelines (to be described further).

In general, the target market for this project will be making within 75% to 140% of the Area Median Income (per HUD, as defined by the state), and consist of households having 1 person to 7 persons. Given the needs and desires typical of these homebuyers, we will quantify the potential demand for these units as follows:

- All households within 30 miles of the proposed project that can qualify under the income guidelines of the state HHFDC and still be able to qualify for a market rate mortgage.

- All households within 30 miles of the proposed project that have the commensurate income and/or assets allowing them to qualify for a market rate mortgage.

In accessing the size and strength of the target market from local residents, we expect the most likely candidates would be families looking for a shorter commute, looking to secure quality housing in an area characterized by very tight supply and very high demand, looking to downsize, looking for a good public school district and looking to buy at a time when household finances are strong and incomes are rising

IV. THE ECONOMIC BACKGROUND:

Simply put, real estate sales and values move closely in synch with an area's economic growth, and the mechanism by which this growth occurs is via rising incomes and higher job counts. Both feed directly into demand for housing.

In the short run, economic growth is determined by trading activity, the most important of which is the level and balance of trade between the area and it's major trading partners. In the case of Oahu, the major trade is in recreational goods and services, the largest of which is the visitor industry. The health of this industry is tied to the health of the economies that send visitors to Oahu.

In the longer run, economic growth is also determined by population changes (both migration and demographic) and lifestyle preferences.

We start by looking at the economic outlook for Oahu, which will be closely followed by examining the residential market. Both the Oahu's economy and Oahu's residential real estate market are affected by the global and national economy, as well as the national real estate market.

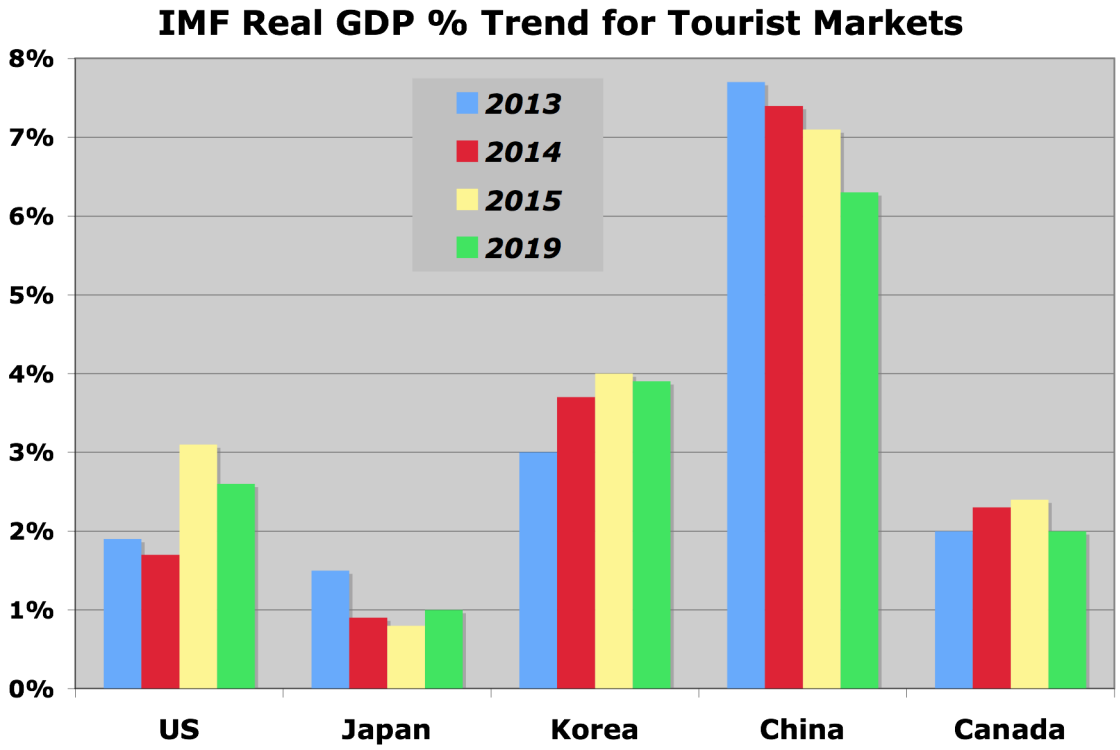
As Oahu's major industry is tourism, the major trading partners here would be the US, Canada and Asia on the international level: then California, and the west coast states, on the national level: and finally on the state level. As such, we examine the economic health of these trading partners in order to get an understanding of their ability to trade (send visitors, home owners and capital funding) with Oahu, currently and for the future.

GLOBAL ECONOMY:

The overall global economic forecast by the IMF earlier this year noted that the recovery had solidified, but the unemployment and underemployment has remained stubbornly high. In October, 2014, it said that in spite of setbacks, an uneven global recovery continues but they revised downwards their expectation for 2014's global economic activity to 3.3 percent for this year, 0.4 percentage point lower than in April, due to weaker-than-expected global activity. The global growth projection for 2015 was lowered to 3.8 percent.

The forecast envisages a rebound in growth for both advanced economies and emerging markets in the remainder of 2014 and in 2015, predicated on the assumption that key drivers supporting the recovery remain in place, a moderating of fiscal consolidation (Japan being one exception) and the continuation of highly accommodative monetary policy.

In most economies, raising actual and potential growth must remain a priority. Robust demand growth in advanced economies has not yet emerged despite continued very low interest rates and easing of brakes to the recovery. Avoiding premature monetary policy normalization remains a priority, as does fiscal adjustment supporting both the recovery and long-term growth. In particular, an increase in public infrastructure investment, particularly for advanced economies, could provide a boost to demand in the short term and help raise potential output in the medium term.



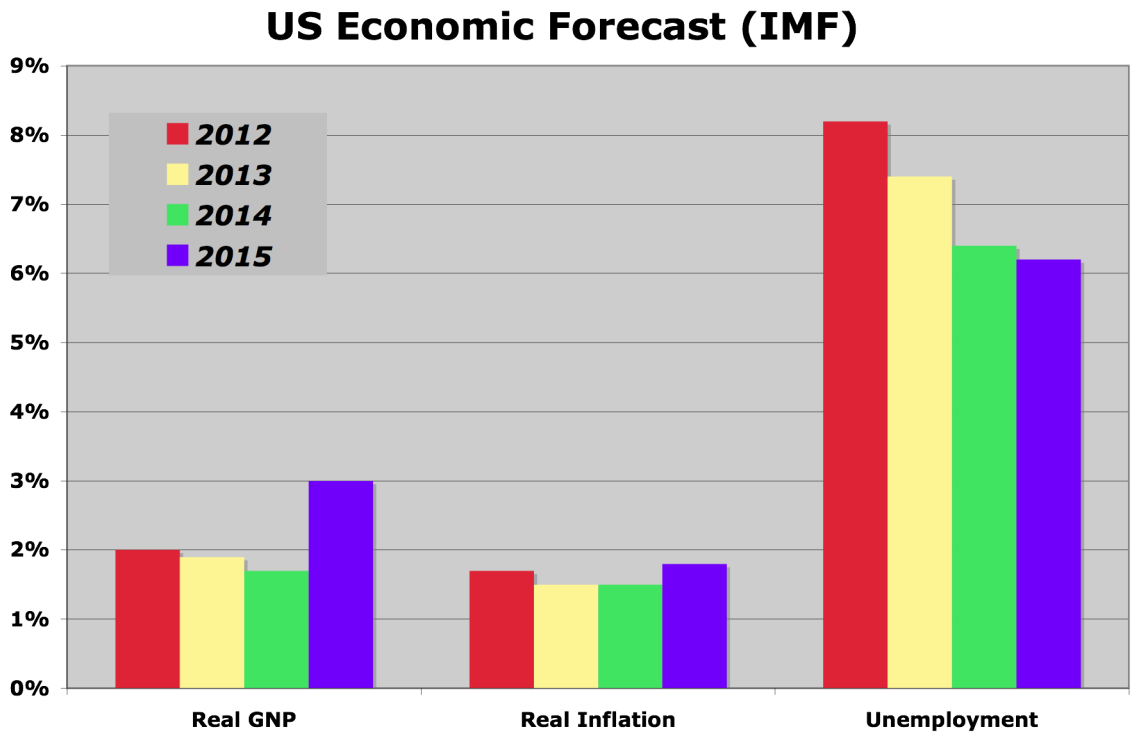
It predicted that if the advanced economies continue to repair their public and financial balance sheets, and stimulate employment, and if emerging markets do not overheat their economies, global financial markets and property markets will continue to grow. Indeed, this is what seems to be happening, as witnessed by the willingness of the US Fed to begin to talk to the markets about reducing their support of low interest rates.

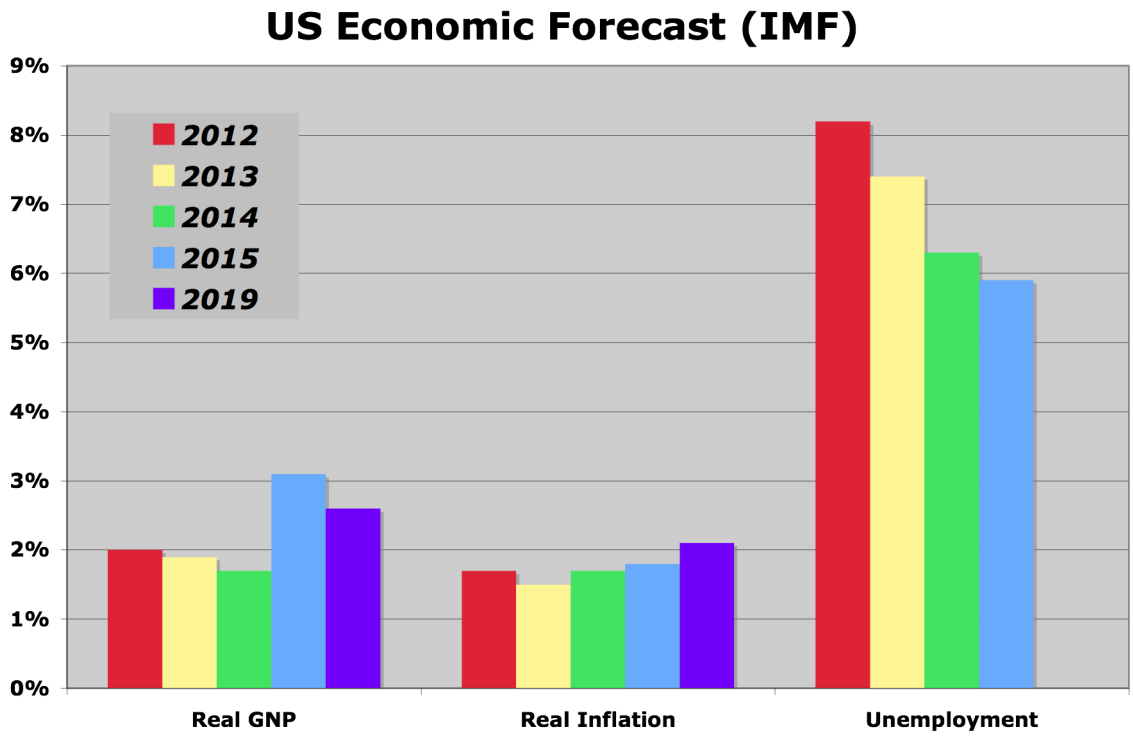
UNITES STATES:

US economic growth is projected to remain above forecast potential for the rest of the year and into 2015, underpinned by an improving labor market, better household balance sheets, favorable financial conditions, a healthier housing market as household formation gradually returns to levels that are more closely aligned with demographic factors, higher nonresidential investment and a smaller fiscal drag. However, medium-term prospects are generally subdued. Potential growth is estimated at only about 2 percent, weighed down by population aging and lower productivity growth compared with previous decades.

Improving housing activity, stronger nonresidential investment, and steady payroll gains suggest that the rebound is becoming more sustainable and, above all, price pressures remain contained,

That said, the key markets for Hawaii, the higher income households and the West Coast, are well positioned to spend more and more of their discretionary income on vacationing, particularly to the outer islands.


US Economic Forecast (IMF)
9%
8%
7%
6%
5%
4%
3%
2%
1%
0%
2012
2013
2014
2015
Real GNP
Real Inflation
Unemployment


US Economic Forecast (IMF)
9%
8%
7%
6%
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4%
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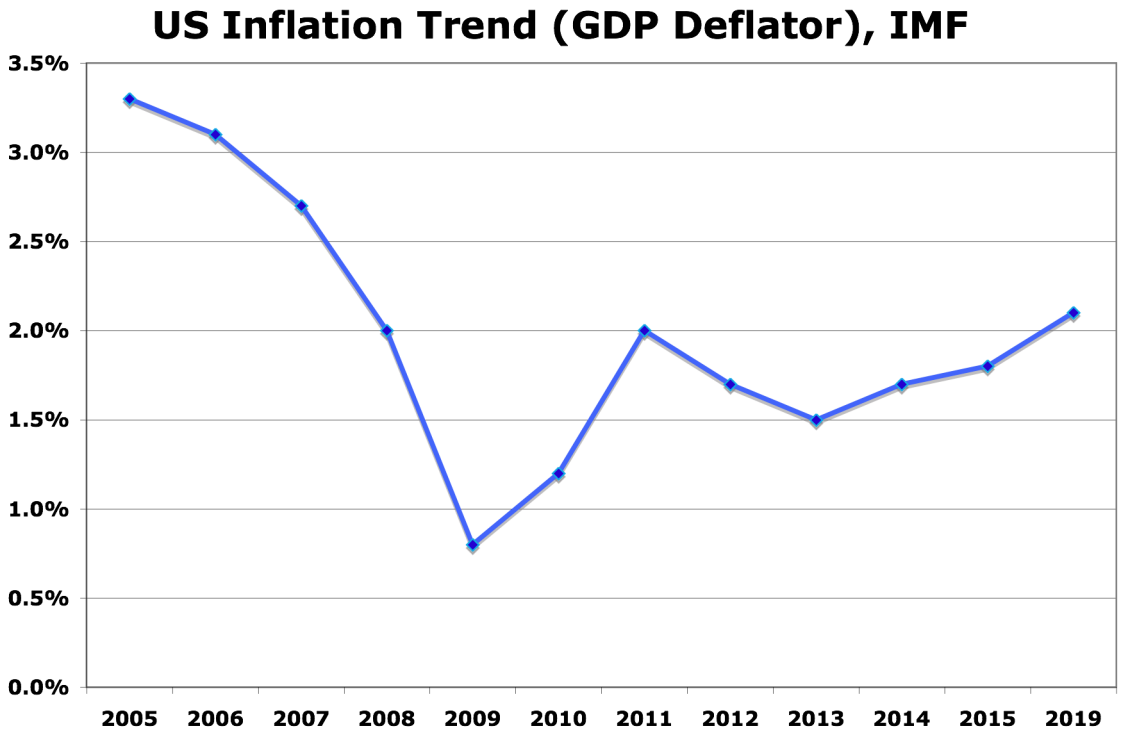
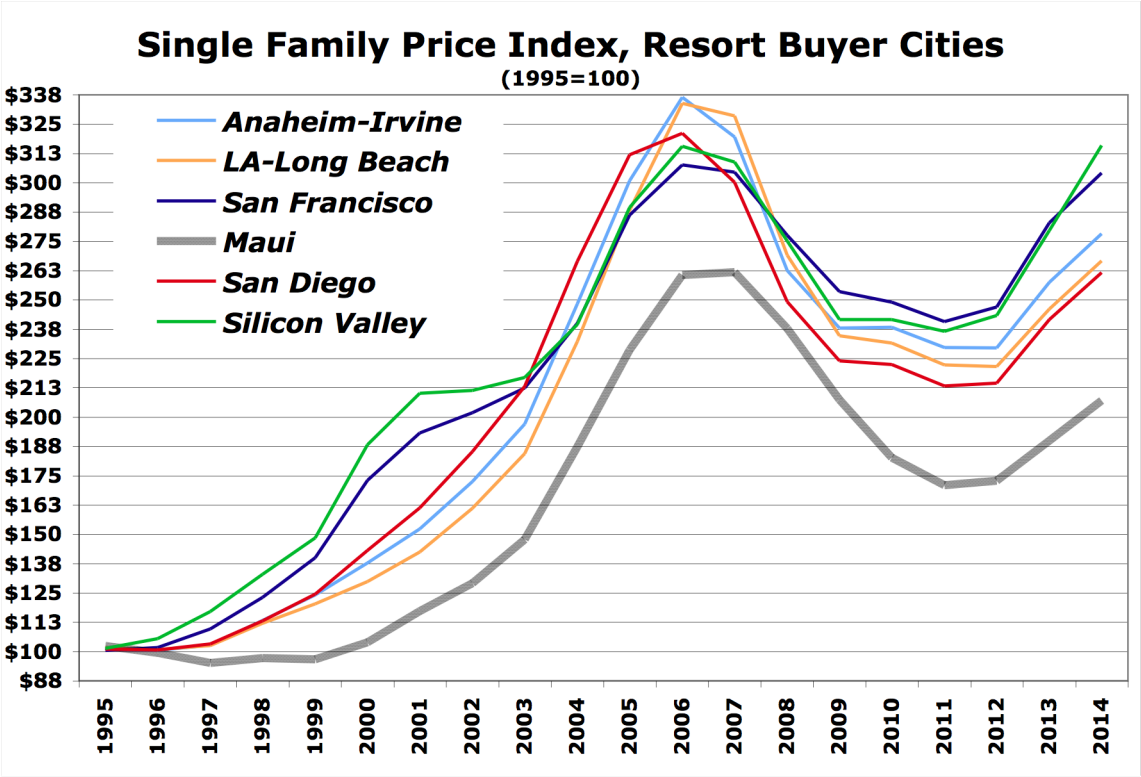
2012
2013
2014
2015
2019
Real GNP
Real Inflation
Unemployment



CALIFORNIA:

California's economy will continue to expand at a respectable pace in 2015, despite the drought and outsized economic gains over the past several years. Both employment and personal income growth are expected to be above the national average and population is expected to grow steadily, 0.2 percentage points faster than the national average. The most dynamic sectors in the state will continue to be professional and business services, leisure and hospitality, trade, and education and healthcare. All private sector industries are expected to add jobs and create new business opportunities for investors in traditional and emerging industries. Best of all, there is the better-than-expected budget outlook. Income tax revenues, the main driver of this positive force, will continue growing due to job and earnings advancement as well as expanding capital gains.

The Bay Area is projected to grow the fastest of any region of the state over the next few years as long as it remains competitive, continues attracting and retaining high-quality intellectual capital, and the elevated rate of IPO's, venture capital deals, and rapid increase in equity prices does not lead to an overheating in stock and housing prices. California Association of Realtor's forecast projects that the average interest rate for 30-year fixed mortgage will rise only slightly to 4.5 percent, still at historically low levels. Lastly, housing prices are positive and increasing, as has new homes production all positive. This is of particular import to the Oahu visitor industry, as California is a major source of Hawaii tourists and second homebuyers



Finally, the chart shows the price trends in cities where second home buyers (and short-term visitors) are located. Note that as the home prices rise in these communities on the mainland, they push prices in Hawaii up, as well.

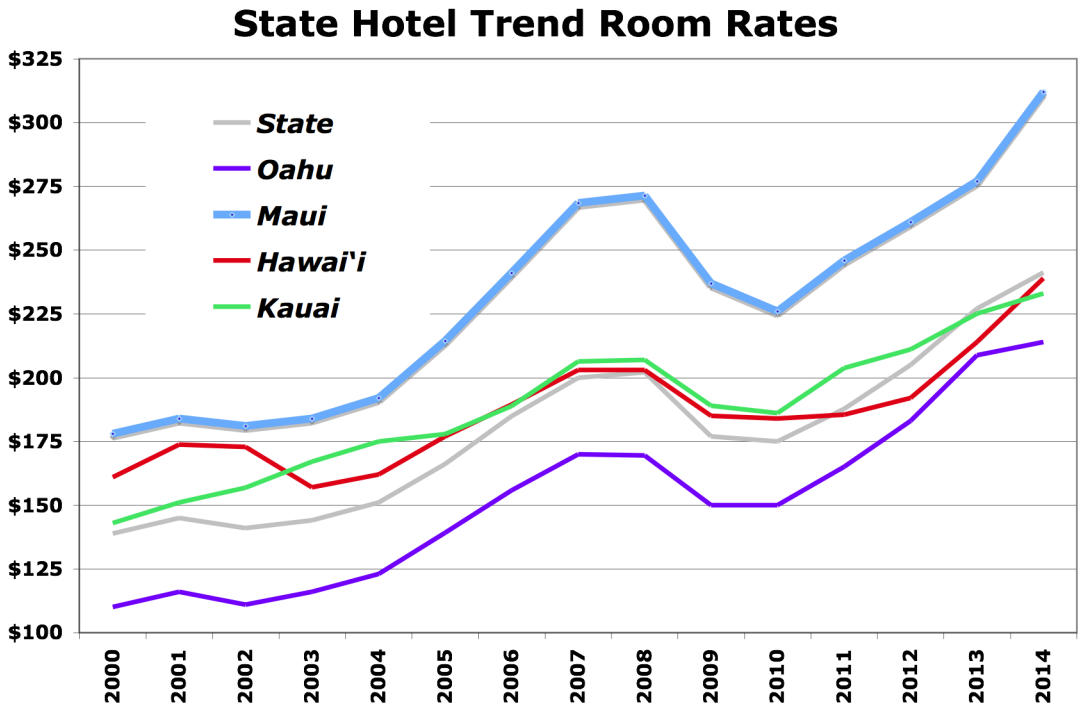
HAWAII STATE:

According to economists, Hawaii's gross domestic product is expected to hit a record $72 billion in 2014 and growth is expected to continue into 2015, although tourism could be tapering off and the state is still waiting for an anticipated boom in construction to materialize. Job growth has been uneven by sector and counties, with most hiring happening in the visitor industry, and Oahu recovering its jobs while the other counties lag.

Tourism remains the prime force in Hawaii's economy. Last year turned out to be a record year and the industry has struggled in 2014 but is keeping pace. Construction has picked up in some areas, such as Honolulu's rail system and Kakaako, but not in others - a drop-off in federal construction and solar photovoltaic systems. The move to condominium high-rise construction requires more concrete and specialized labor, while single-family home construction uses more lumber and carpenters. That notwithstanding, the state's unemployment rate dropped to 4.1 percent in October, from 4.9 percent during the same month a year ago, (the lowest jobless rate in more than six years).

Overall, the current 4Q 2014 DBEDT forecast is more optimistic compared with the previous one, as HTA is projecting 158,000 more visitors in 2015 than in 2014 spending over a half-billion dollars more (both new records).

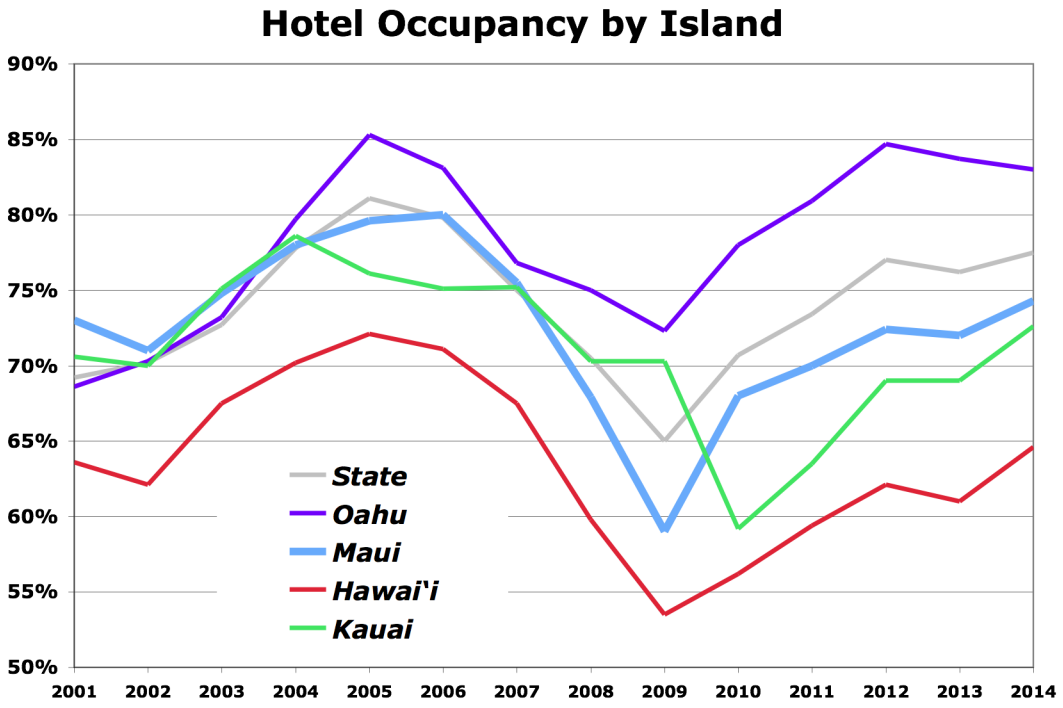
The thought is that Hawaii in 2015 will gain nearly 10,000 new jobs, and the unemployment rate will drop to 4 percent, very close to full employment (judging from the number of building permits pulled this year, 2015 will be a big year).



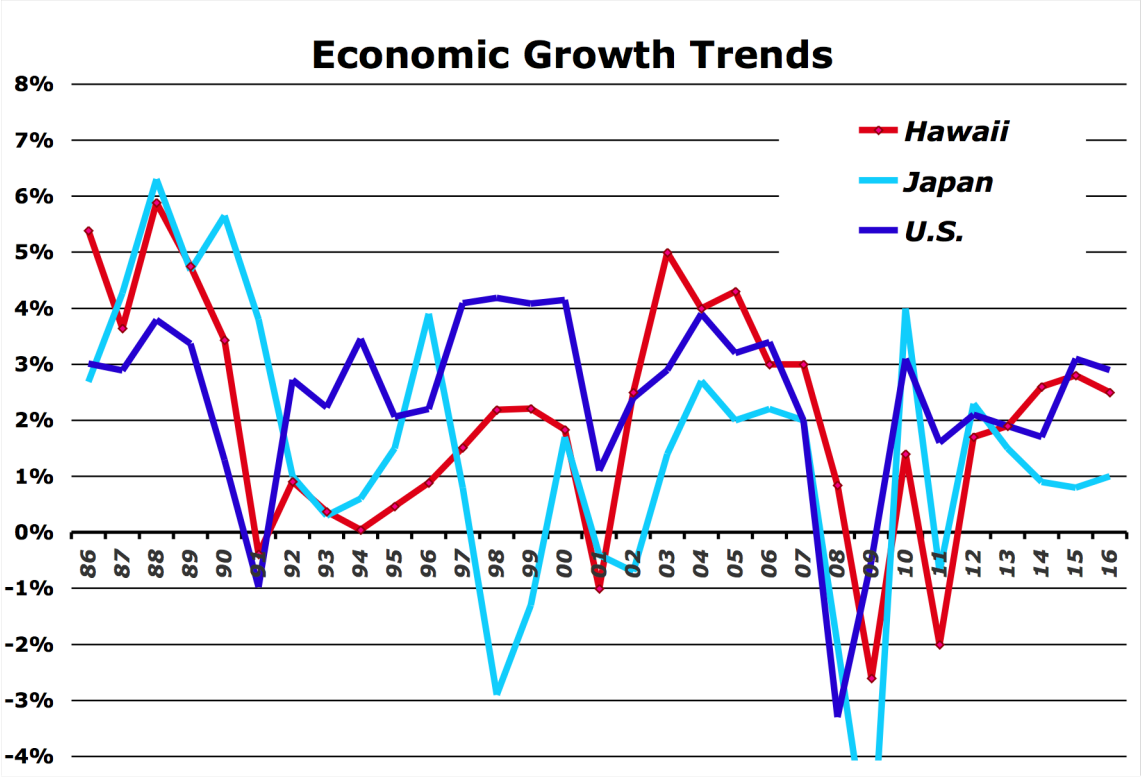
Per Hospitality Advisors LLC and Smith Travel Research, the visitor industry is well into a recovery that started in 2009-2010. Currently, it is into the stage where the rise in rates has begun to have a negative impact on occupancy. The question going forward is when this tips the industry into declining total revenues.

This balancing act will go on until there is a fundamental change in the macroeconomic health of Hawaii's major trading partners in this industry: the western part of North America, the large nations of Asia and the emerging economies of Asia.

The importance of the visitor industry to the real estate market of Oahu is that it is the driving force behind generating potential buyers and driving them to a developer's model complex. Thus, Hawaii's economy depends significantly on conditions in the U.S. economy and key international economies, especially Japan,



Thus, Hawaii's economy depends significantly on conditions in the U.S. economy and key international economies, especially Japan, The following chart shows the forecasts for this year and the next, according to the ECONOMIST Magazine's forecast group, UCLA and DBEDT for Hawaii.

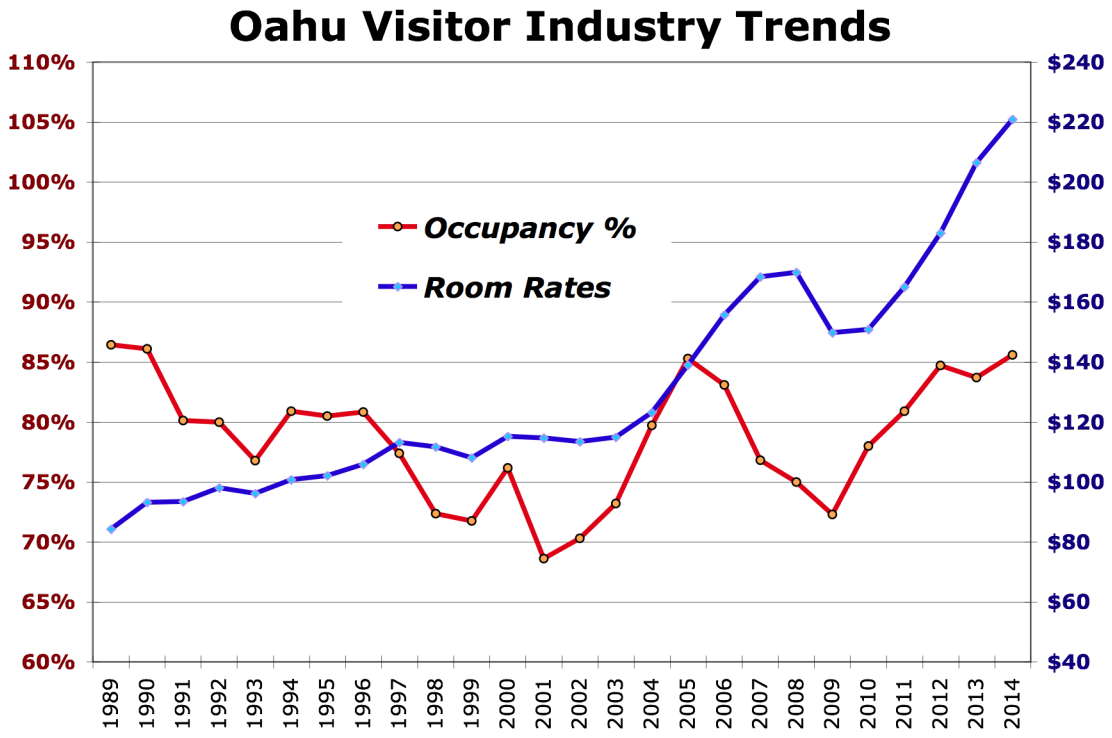


V HONOLULU HOUSING MARKET OVERVIEW

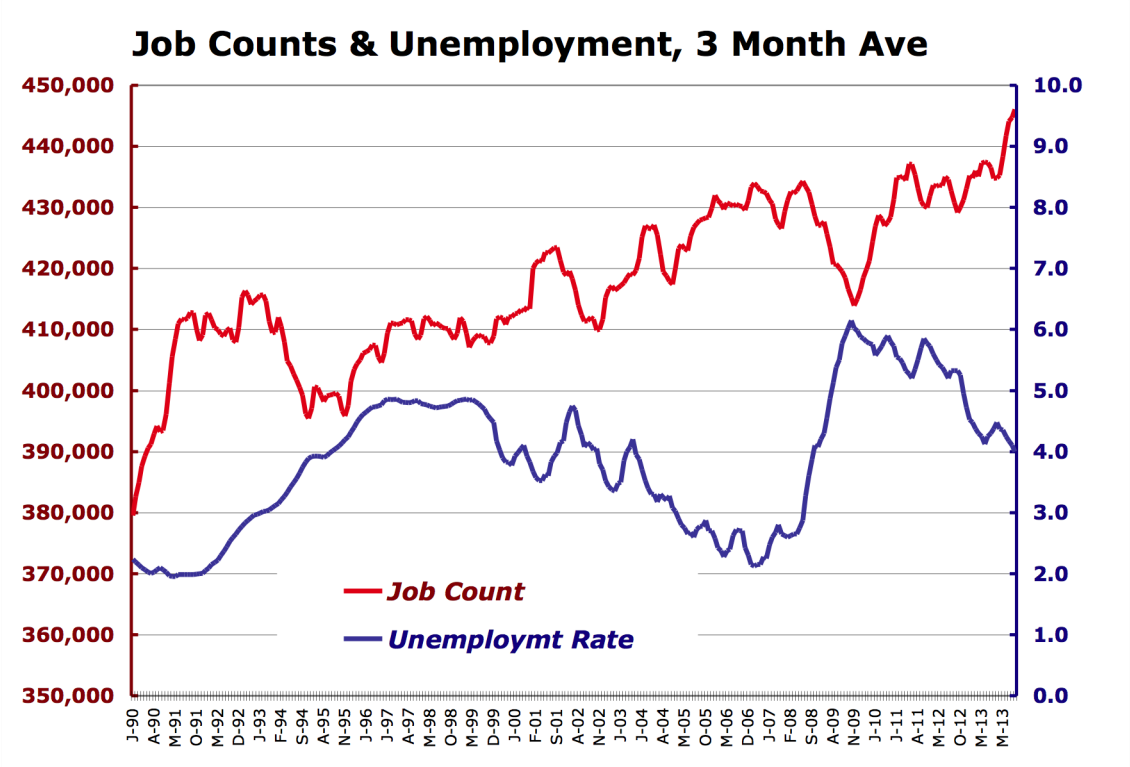
ECONOMIC BACKGROUND:

Honolulu draws more than 4.4 million visitors each year, with more than 2,600 businesses involved in the leisure and hospitality sector. It also is home to the United States Pacific Command headquarters, which contributes approximately 90 percent of the $12.2 billion in military economic impact in the state. Together, the growth in these two sectors fuel economic growth in Honolulu.

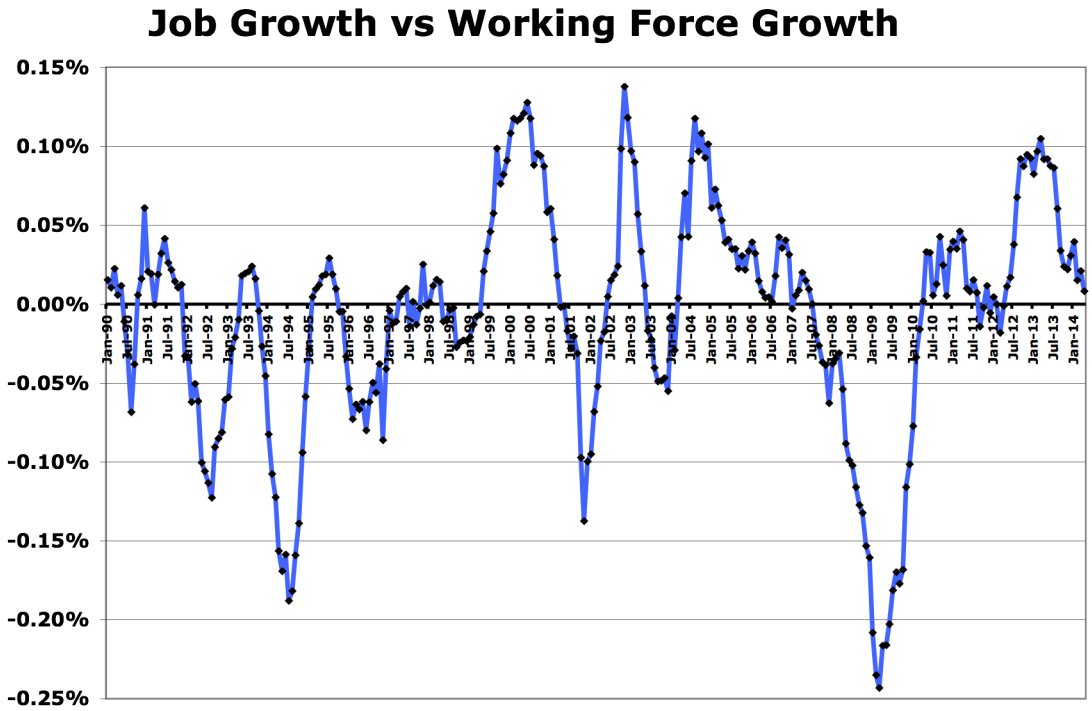
To date, visitor spending keeps pushing higher, with Waikiki hotels setting records for occupancy, daily room rates, and revenue per available room. Advantageous exchange rates are enticing droves of foreigners from Asia to vacation and shop, supporting job growth in retail trade and leisure/hospitality.



This has spurred hotels to build and renovate and coupled with increasing multifamily activity has firmed construction employment. Last year, tourism-related employment surpassed its pre-recession peak, and looks to continue again this year. Another sign of economic growth is the latest unemployment figures: Honolulu's unemployment rate declined since 2009, and is currently within the top ten lowest jobless rates among 372 metropolitan areas nationwide, per the Hawaii Department of Labor.



In addition, the job growth has increased faster than the working force, meaning both that local workers looking for jobs have choice, and that leads to either higher wages, better satisfaction, and that job seekers could immigrate to Oahu.



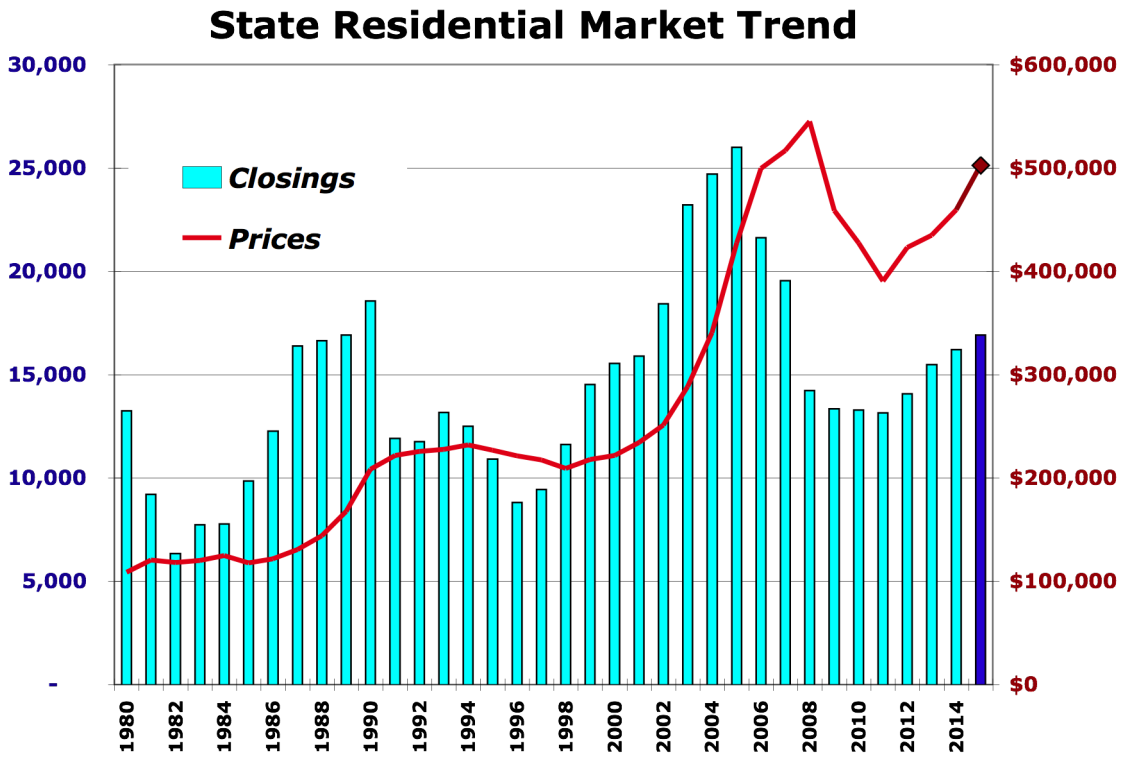
VI. STATE HOUSING MARKET

It is important to understand that the market for residential property in the state of Hawaii is and has been constrained in terms of supply, and flexible and deep in terms of demand. The net result is that the sales activity and the values of housing this market are often volatile, especially in an up market, but not as much in a down market.

Of note is how values (prices) are relatively free and uninhibited when the market is on the way upward – but that they are 'sticky' on the way downward (generally, prices do not give up the whole of their appreciation, but instead they 'hold' on to accumulated values).

Currently, Hawaii's residential markets are in the consolidation phase of the down-cycle, having gone through 5-6 years of dramatically lower sales and falling prices. The chart below shows total residential sales (combining resales and newly built units, as well as detached and attached housing) statewide, as well as an aggregate price index.

It confirms the cyclicality of the market, particularly the compressed price appreciation. A feature of the current market, not seen in times past, is the price deceleration (please note the 2013 data point is a personal projection, using data through July 2014, showing continued price appreciation and rising activity)



The following table takes the above 30 years of data from 1980-2010 and summarizes the swings in the market sales activity and sales prices.

TOTAL SALES ACTIVITY CYCLES, TERM AND CHANGES STATEWIDE

Period	Term	Start Sales	Finish Sales	Delta, Unit Sales	Delta, %ages
1982-1990	8	6,341	18,557	12,216	193%
1990-1996	6	18,557	8,801	-9,756	-53%
1996-2005	9	8,801	26,005	17,204	195%
2005-2011	6	26,005	13,235	-12,770	-49%
2011-2014	4	13,235	16,235	3,000	23%

It shows that the up cycle, 1982-1990, lasted 8 years, and saw an increase in 12,216 sales, or a change of 193%. It then saw a down cycle, lasting 6 years, losing almost 9,800 sales, or a falloff of 53%.

Generally speaking, the up cycles last 2-5 years longer the down cycles, and show 3-4 times more change (in this case, the growth cycle 1996-2005 of 195% is three times greater than the -49% deceleration in the following down cycle, 2005-2009).

Turning from sales activity to price changes, the following table analyzes the price cycle over the last 30 years. It shows that price wise the first up cycle was 1985-1994, lasted 9 years, and saw prices grow 96%. Following that, the down cycle saw prices retrench -13% over 4 years.

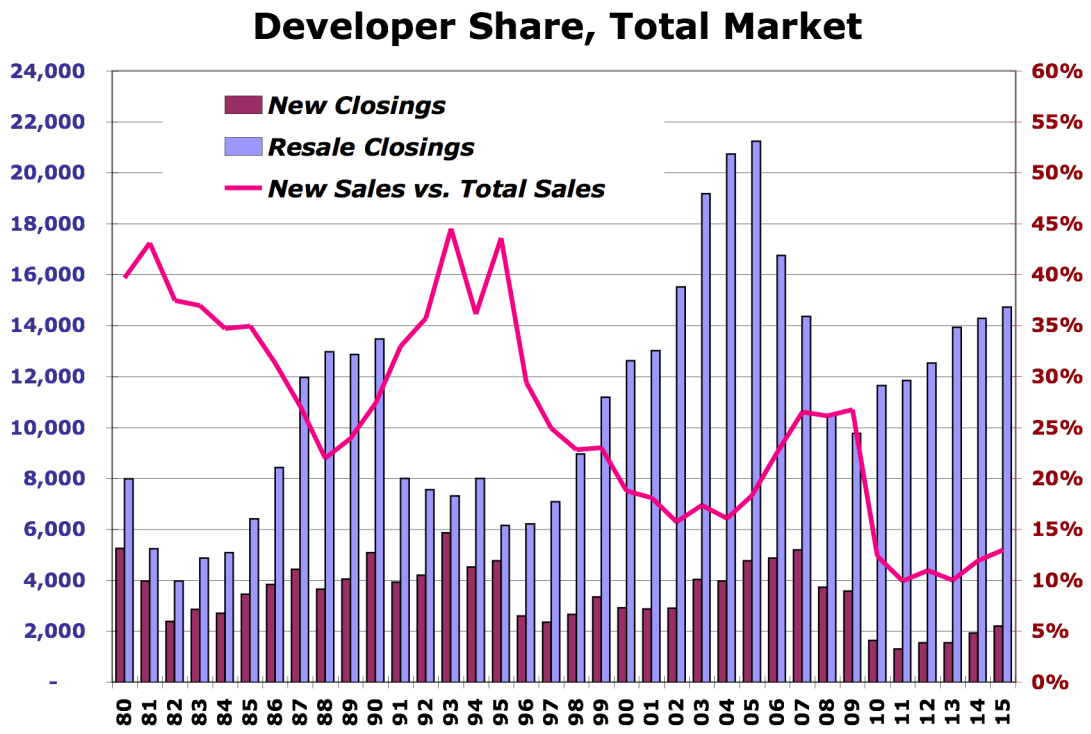
PRICE CYCLES, TERM AND CHANGES STATEWIDE

Period	Term	Start Price	Finish Price	Delta $	Delta %
1985-1994	9	$117,800	$231,966	$114,166	97%
1994-1998	4	$231,966	$209,027	-$22,939	-9.9%
1998-2008	10	$209,027	$545,254	$336,227	161%
2008-2011	3	$545,254	$389,089	-$156,165	-29%
2011-2014	3	$389,089	$459,000	$69,089	18%

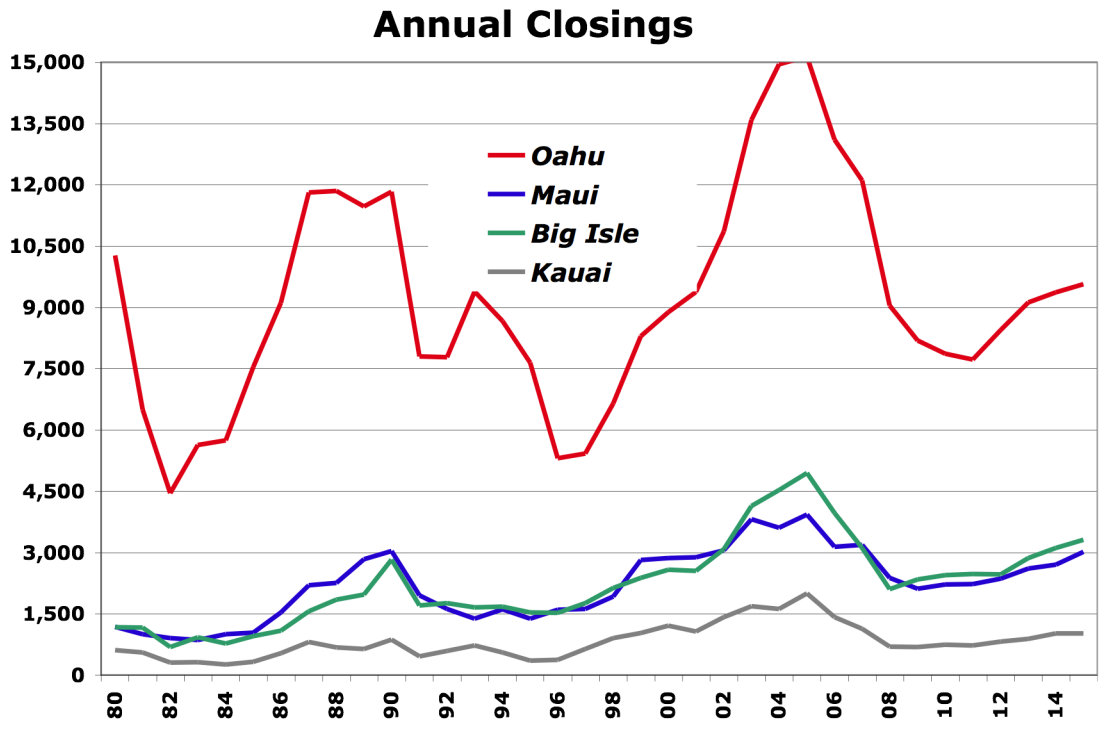
Then, the time it takes for pricing to go from trough to peak is longer than the time it takes to do the reverse, to go from peak to trough. As seen in the table, it takes 9+ years for the total move to happen on the upside, as opposed to 3-4 years going downwards.

Next, we look at total sales of all residential property in the state. Last year, 2013, there were 14,103 units sold (both SF & MF, and Resales & Newly Built). Of this, 10% were newly built 1,468) and the remainder were resales.

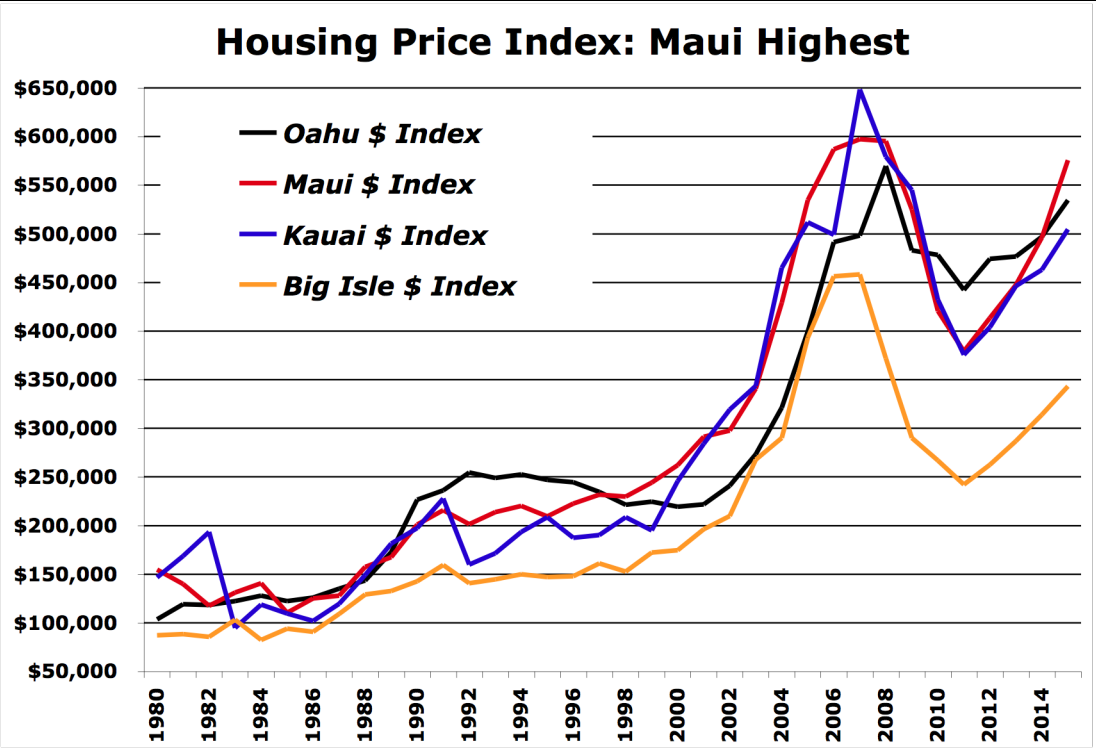
For the new homes segment, this was one of the lowest shares of market ever, as seen in the next chart.



Finally, we break the state markets into their respective island (separate counties), and see how their sales and price trends compare to the overall state ones.



As seen, Oahu is the state's major market, with Maui and the Big Island tied for second.



Per prices, Maui was the most expensive market statewide, but Oahu came in higher in 2011, Maui has the highest volatilities and Oahu is the least volatile island this cycle, but the most in the last one. This is because the 'hot' money chasing the high end in the last cycle was Japanese, focused on Oahu's south shore. This time, it was West Coast money focused on the outer islands.

VII. HONOLULU'S CONDOMINIUM MARKET

HISTORY

Inasmuch as the Hawaiian real estate market has been, is, and will be characterized by tight supply and high demand, it will experience dramatic swings in sales and values. Given this, the most critical component to successful development is timing the delivery of the units during the market upswing. This is when demand is being fueled by buyer capability and confidence. The next critical component is location, doing it in an area that is desirable AND equal or better than the comparable competition. The third component is doing it at a cost that allows pricing to be equal or lower than the comparable competition

Demand: Simply put, the high quality of life, especially in comparison with other locations, is the foundation of demand, both for residents and migrants, which supplement housing demand significantly. Hawaiian lifestyle is our comparative advantage, and is based on a unique combination of attributes, which include temperate climate, beautiful surroundings, accommodating society and culture, American jurisprudence and a dollar-denominated economy.

Supply: By national and international standards, Hawaii's, and Oahu's, housing development process is extremely restrictive: it is uncertain, time consuming and expensive. As such, the supply of entitled units is thin and tight.

This is firstly due to geography: land is limited, rugged and isolated.

Secondly, the body politic and its elected representatives have implemented a set of laws that making zoning and building a very lengthy process, as well as one fraught with controversy, by dint of having to consult with the public.

In the third place, building is costly: labor is in small supply and therefore expensive; the cost of inputs are driven up because of a long supply chain, plus expensive warehousing; and the weather, especially in the mauka mountain areas, like Mililani, cause construction schedules to lengthen (the counterpart to the urban construction process is finding bones on property).

The combination of inelastic supply and elastic demand makes this market extremely volatile: over the swing between the bottom and the top of the market, sales can more than triple and prices can more than double. Furthermore, the length of the cycle is usually 5 to 8 years, depending often on external conditions: the direction of interest rates, economic growth in the visitor and offshore buyer markets, and the costs of materials.

Demand:

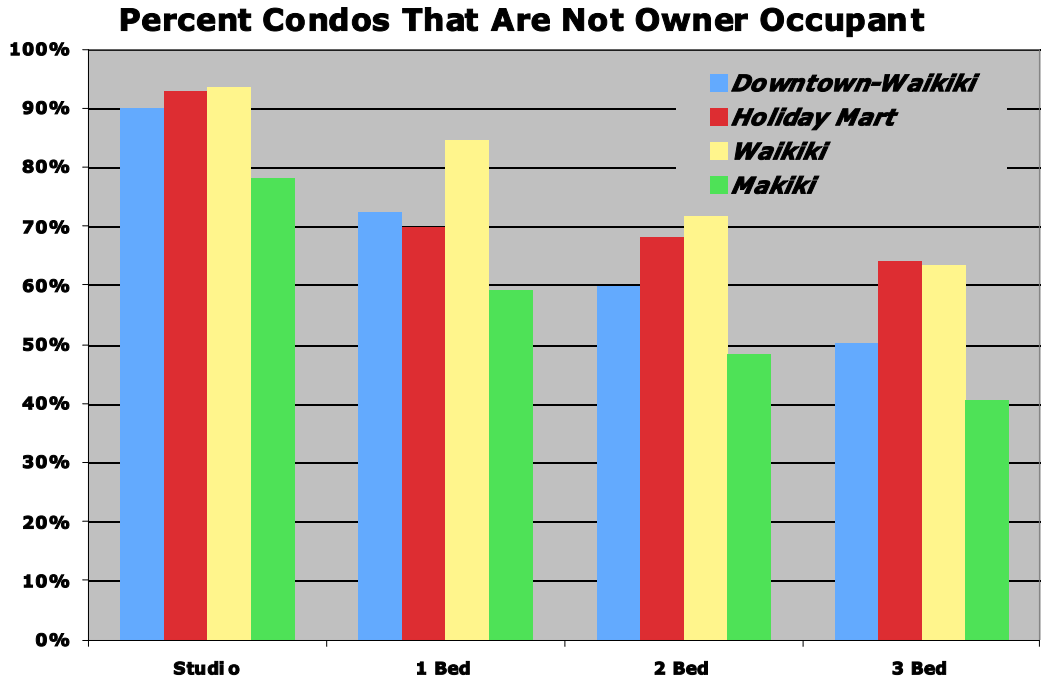
There are two components to residential housing demand:

1. Local residential housing demand (primary housing); and
2. Offshore demand (secondary housing, or second homes).

In terms of condominium ownership, the offshore buyers are significant. For instance, around 70% of all Maui Condos are owned offshore.

This not the case for Oahu or Honolulu, where most owners live and work on the island, except for certain areas: Waikiki, Ala Moana and Kakaako, where offshore ownership can be upwards of 60% of total units.

The following shows the percentage of condos that are not lived in by owners, meaning they are



investor units. Of 100% of these inventors, about 50% are non-resident of Hawaii.

Historically, this demand has been driven by economic growth and personal prosperity in the Pacific Rim countries. Indeed when there is an accumulation of wealth in these offshore markets, there is then a coincident and concurrent rise in the sales and the prices of residential units in and around Waikiki and Kapiolani on Oahu, and the resorts on the neighbor islands.

For example, demand in the last real estate cycle came from California residents who benefited from the growth of the technology, the real estate and the natural resource markets. The importance of the offshore market is shown in the chart above – very few units are ones in which their owners are the occupants.

Demand for residential units locally is driven by the visitor industry, in the first place, and then by government spending, which includes federal defense spending and local service spending and construction activities.

Currently, both these stimulants of economic activity and housing demand (which have been on the upswing) are flat: tourism has plateaued after hitting all-time highs, and federal spending in the Pacific has slowed, thanks to the miserable budget outlook. What is left is the growth in construction spending and the in-migration of second home buyers.

In terms of the real estate market cycle, we currently have come off of the cyclical bottom, and are now 3-4 years out from the low point, in terms of the average for sales and prices. On average, the up cycle for the market runs for 5-6 years, so we are 1 to 2 years away from that.

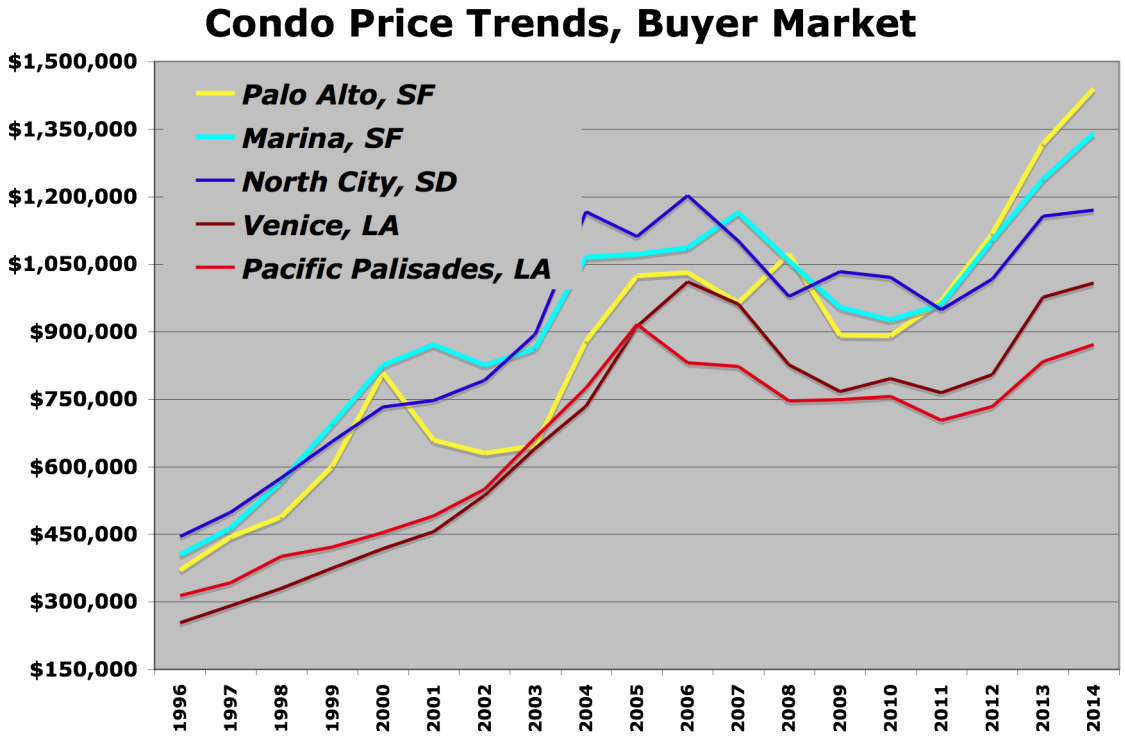
However, there are real observable differences in this recovery that might extend this up cycle.

First, the down cycle was particularly long and painful, meaning a sharp contraction of all sales activity. This however leads to the expectation that the up cycle, in kind, could also be long, and painful, meaning slow to take hold. To some extent, this is what is happening, although the recovery to date has not been particularly painful (nor has it been particularly pleasurable, in the sense that the rebound has been particularly festive. Suffice it to say the market is less volatile upwards than it was in the post-9/11 period, when prices spiraled upwards in a dramatic and in a sustained fashion).

Second, the interest rate regime has stayed particularly stable, meaning lower than average, given that the economy is coming out of a bad recession. This is caused by excess capacity in the US economy and a slowing global economy. And our expectation is that it will remain low for the near term, and perhaps into the mid term. This would extend the length of this housing recovery by a couple of years.

As such, we expect that the number of condominium sales will rise in each of the coming 3-4 years, albeit at lower rates than we have been experiencing. Indeed, the rise in prices recently has something to do with this. As for prices, we expect them to moderate, perhaps even flatten, particularly in the higher-end markets that cater to local residents and primary home owners, Hawaii Kai, Manoa, etc. The lower-end markets, Salt Lake and Downtown, still have good potential in terms of raising prices.

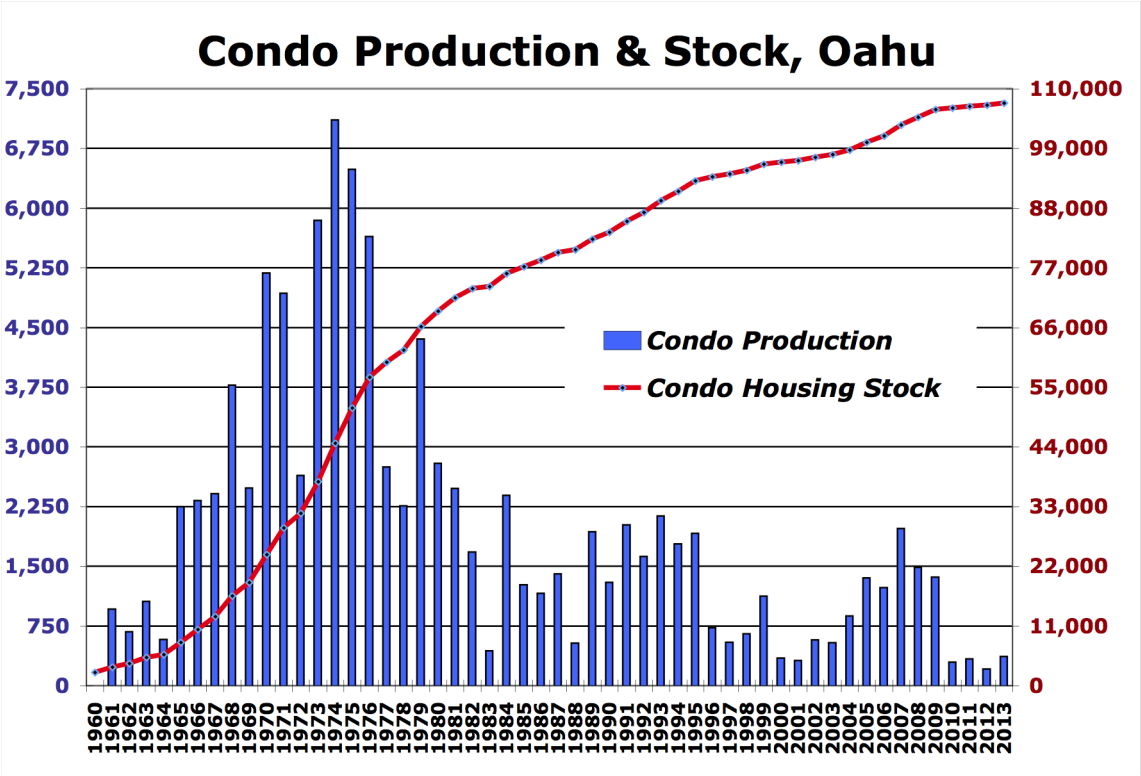
Finally, the highest end of the market, the one for second homes being bought by offshore investors, we do not expect there to be much change. On the demand side, there has been good growth in the numbers of high-net worth individuals in North America and Asia. Indeed, Credit Suisse reported the number of those with $50 million plus in assets grew in the US by over 15%, an “an astonishing rise for a single year.” On the supply side, it is clear that high-end development is growing just as quickly, if not more. The question however is less one about the trend than about absolute numbers: will there be sufficient demand from the 128,000 individuals world-wide with assets above the $50 million market (plus their brethren) to absorb the 3,100 units being built at prices above $1 million.



Supply:

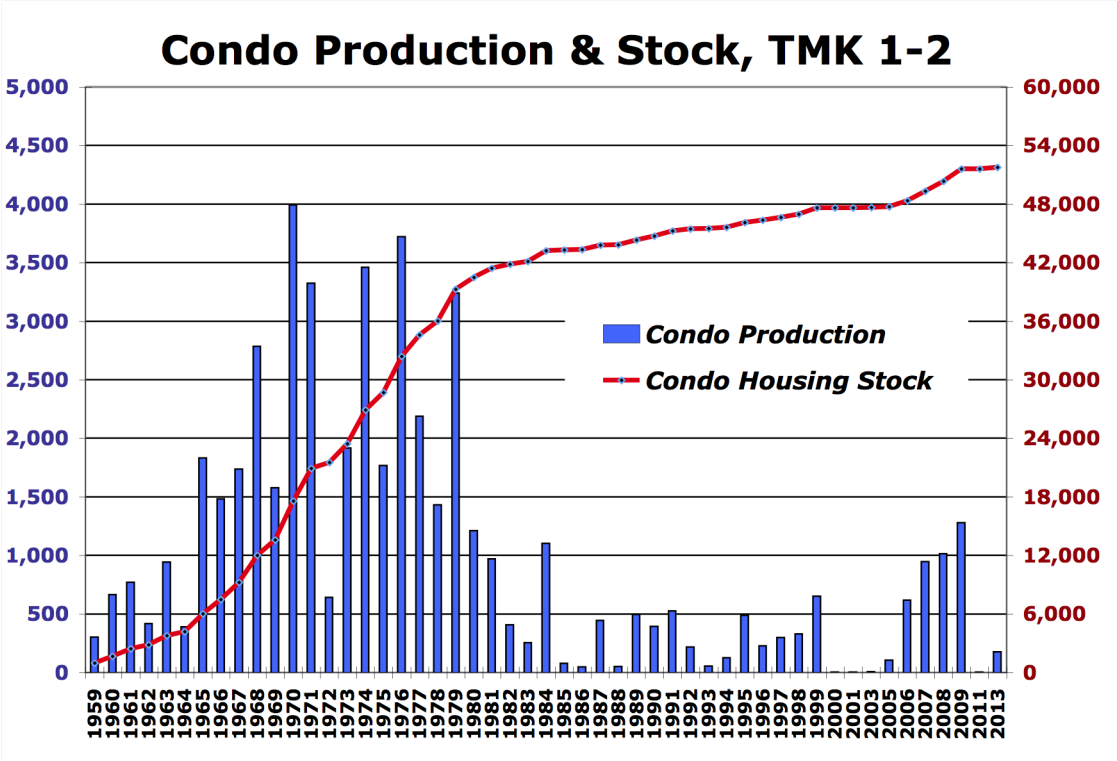
On the supply side of the market, we see low capacity, due to the long recession that eroded developer's capacity to build homes (as well as depleted the ranks of construction labor).

As seen in the chart below, condo production has been declining since the 1970s, for reasons noted above. This is true both island-wide and urban core.

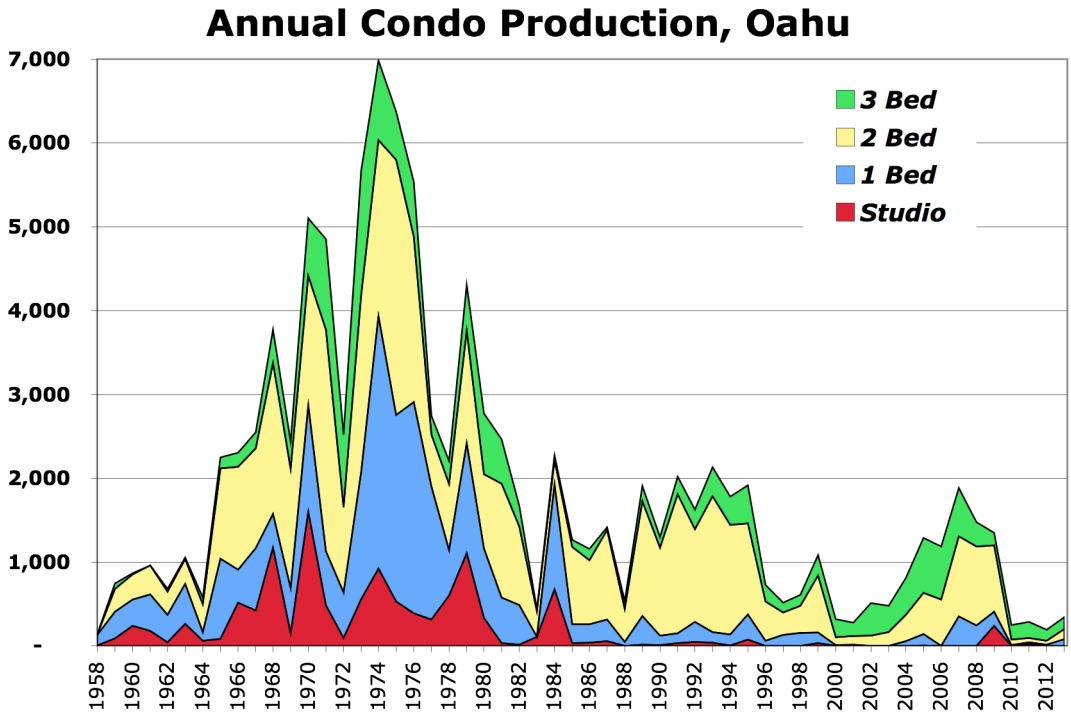


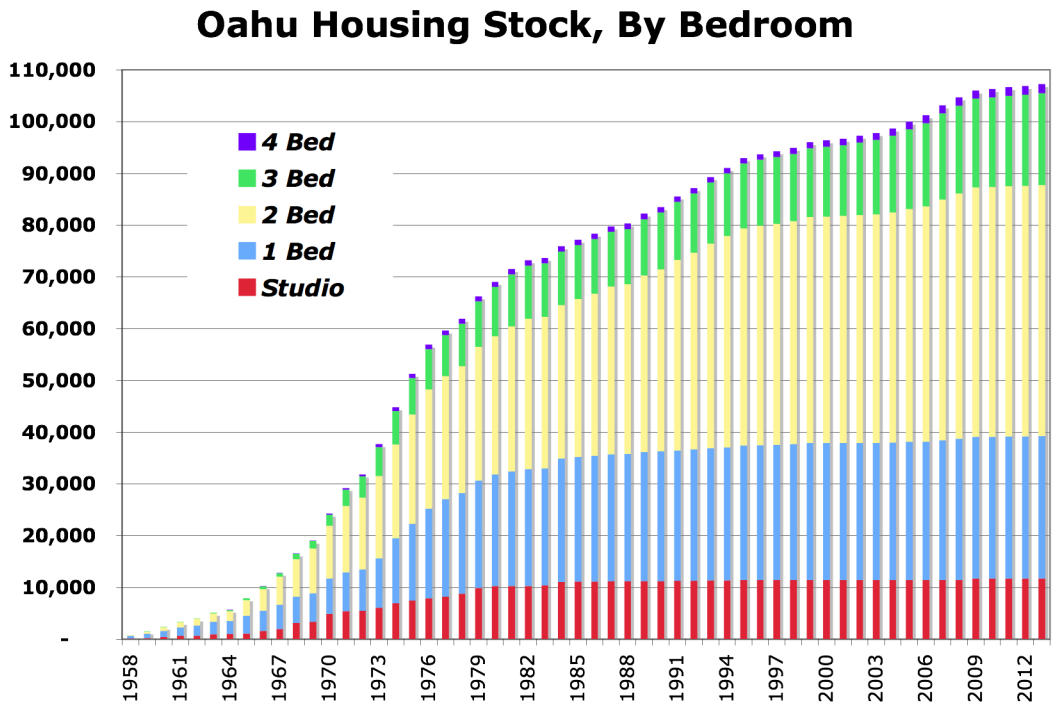
Going forward, we think that, as usual, the supply of residential units will be slow to respond to current and future demand.

Furthermore, we think there will be a shift in where housing will be supplied, moving from the outlying areas and into the urban core areas. In the last two market cycle upswings, housing production has been far below what it was historically, post-statehood in 1959.

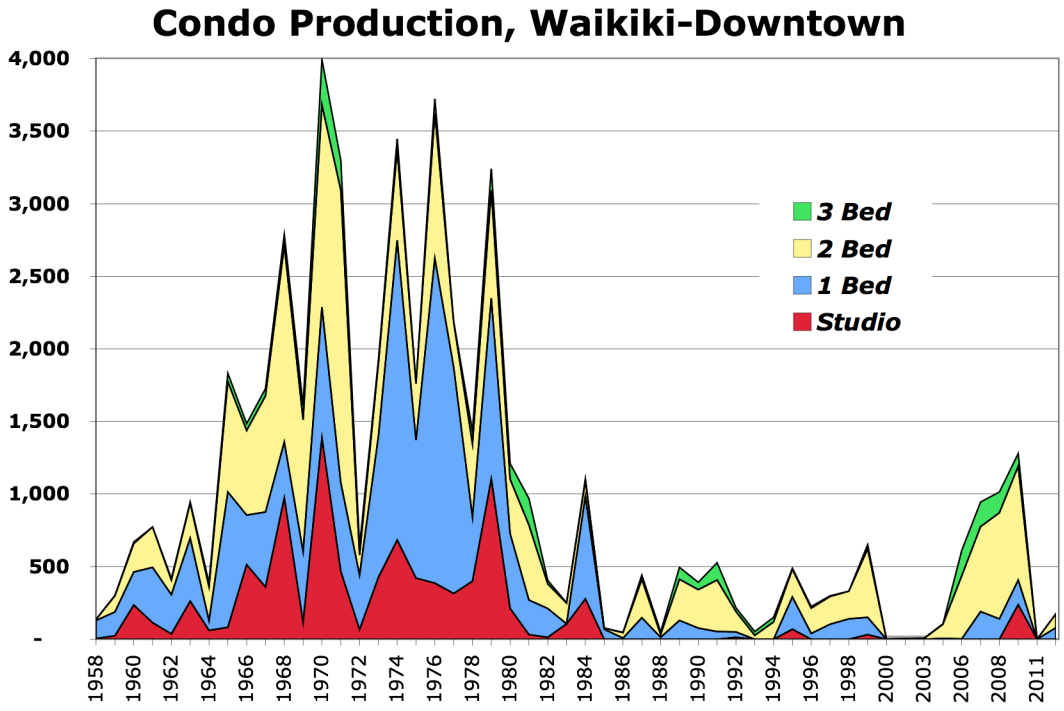


Next, we look at the composition of housing stock on Oahu and in the Downtown-Waikiki area, in terms of their bedroom counts.

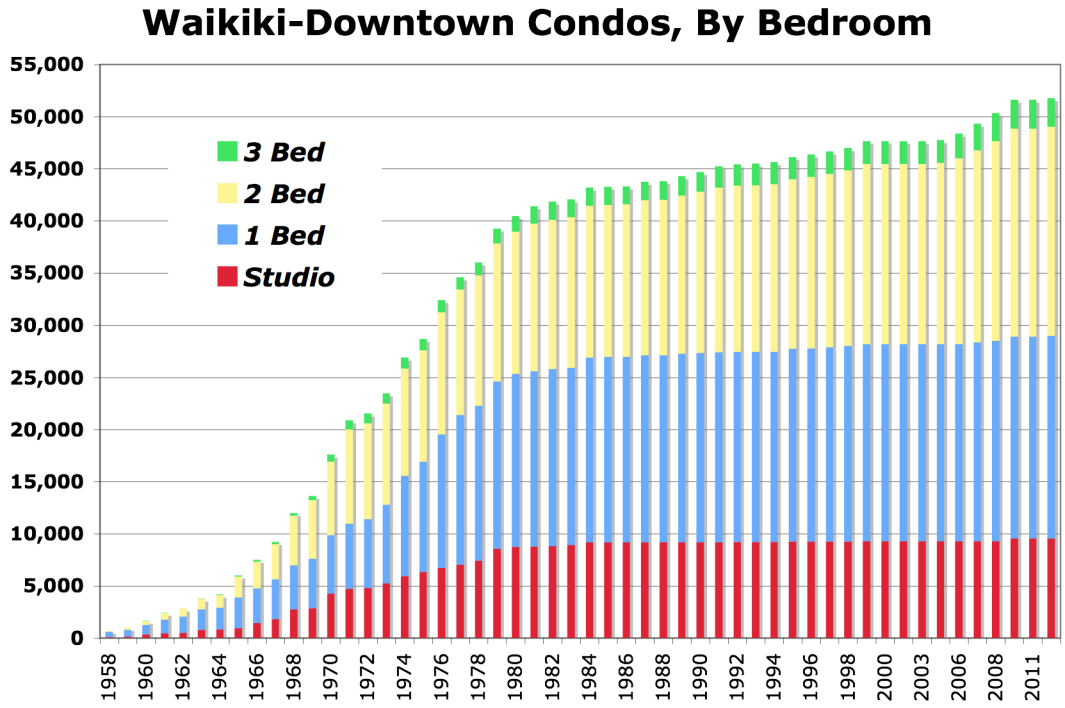




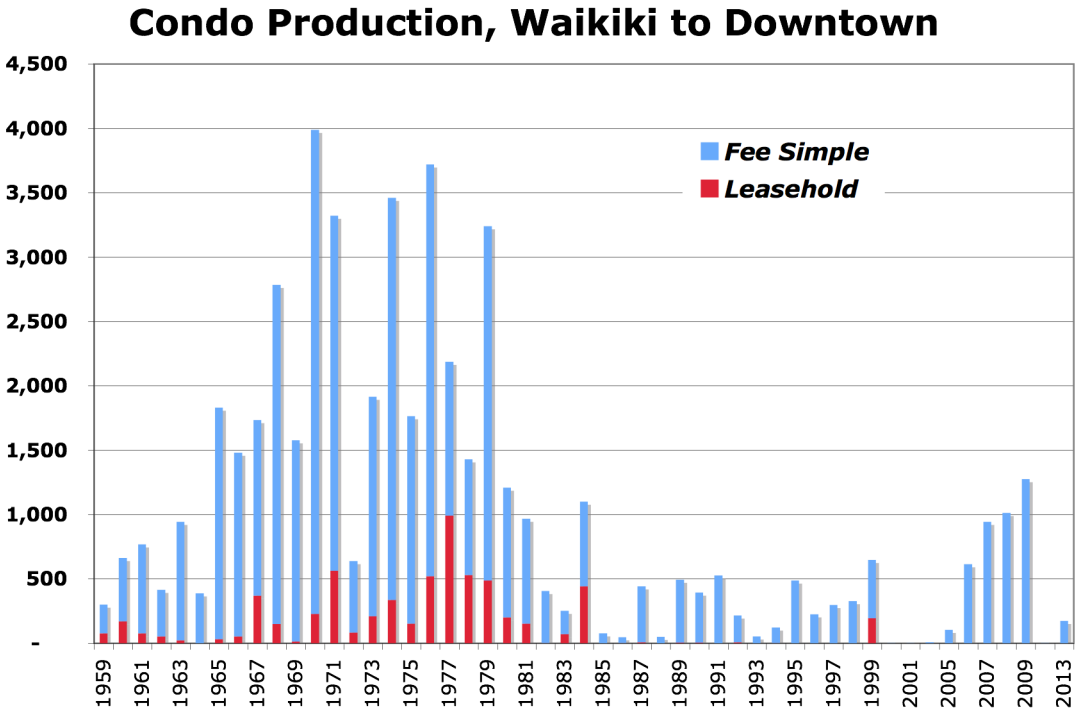
Note that, in the last two cycles, condominium production was concentrated in larger (more bedrooms, two and three bedroom) units, both for all Oahu and for the urban area.



Note also that the studio and one bedroom units are much more prevalent in the urban core, thanks to Waikiki.



Although less profitable, the three bedroom unit is under-represented in the urban core, relative to the other bedroom types – thus, this might be a market opportunity. The other market opportunity we see is converting leasehold units to fee-simple ones, the landlord permitting (the red bar area, converting to blue).



This especially is viable in areas of highest demand, like Waikiki to Kakaako.

Looking at the Owner-Occupant vs. Investor, the following tables show just how big that market has been (and growing) in importance for developer sales and prices. The units described were new units closed, 2003-2013

OWNER OCCUPANT VS INVESTORS, DEVELOPER SALES, ALL OAHU

	Investor	Owner	Investor Prices	Owner Prices
2003	307	232	$579,673	$520,213
2004	477	399	$564,677	$529,508
2005	824	530	$485,668	$460,655
2006	823	409	$1,063,170	$992,499
2007	1,229	744	$654,746	$452,149
2008	861	627	$766,002	$606,579
2009	1,044	322	$1,058,923	$684,708
2010	93	203	$414,561	$407,720
2011	98	237	$391,921	$390,487
2012	78	131	$340,094	$402,480
2013	170	197	$419,486	$426,139

OWNER OCCUPANT VS INVESTORS, DEVELOPER SALES, TMK 1-2 ONLY

	Investor	Owner	Investor Prices	Owner Prices
2003	8		$660,613	
2005	77	29	$732,964	$688,245
2006	429	188	$1,638,205	$1,654,020
2007	657	289	$664,854	$611,251
2008	631	384	$896,143	$735,847
2009	1,009	269	$1,081,704	$736,017
2011	4		$726,300	
2013	102	74	$407,075	$390,504

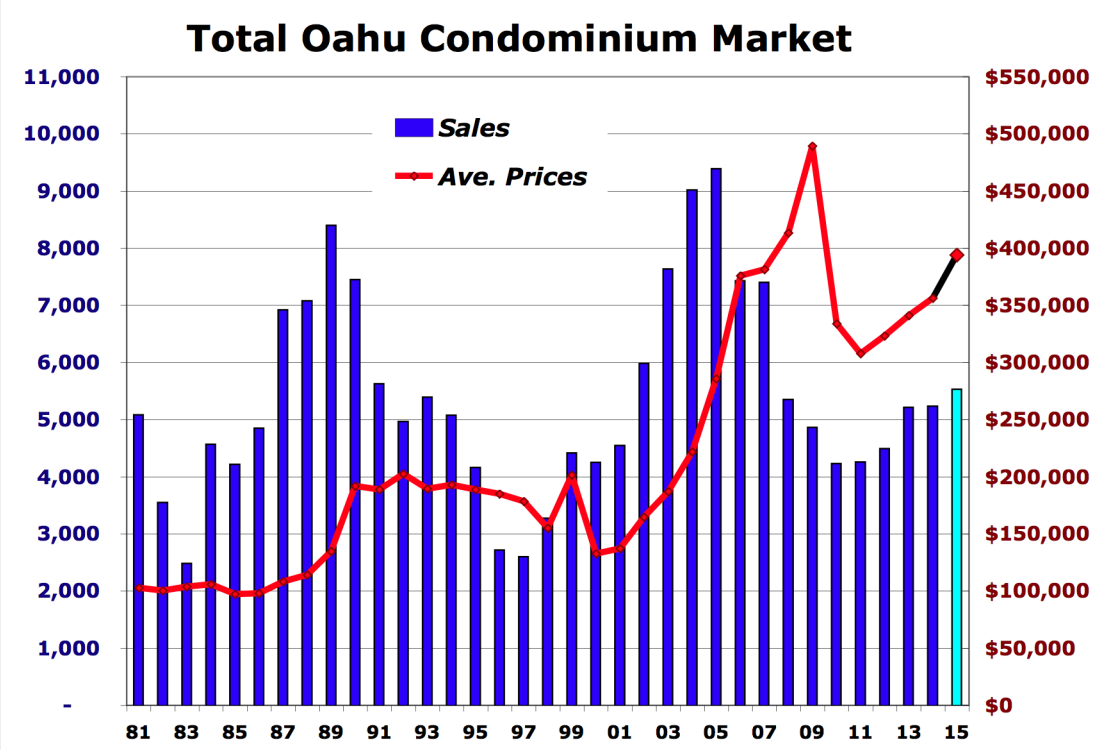
CURRENT MARKET TREND: Like the larger market, the condominium market is well into the upward swing of the housing cycle in terms of sales activity and for price levels (data source is the MLS of the Honolulu Board of Realtors and the Bureau of Conveyances of the State).

The last such swing started in 1998 and ended in 2005, ran for some 7-8 years and then had 4-5 years of falling sales and prices. It turned in 2011-2012, with a reversal of the trend for lower sales and prices, as demand grew at a time of shrinking inventory.

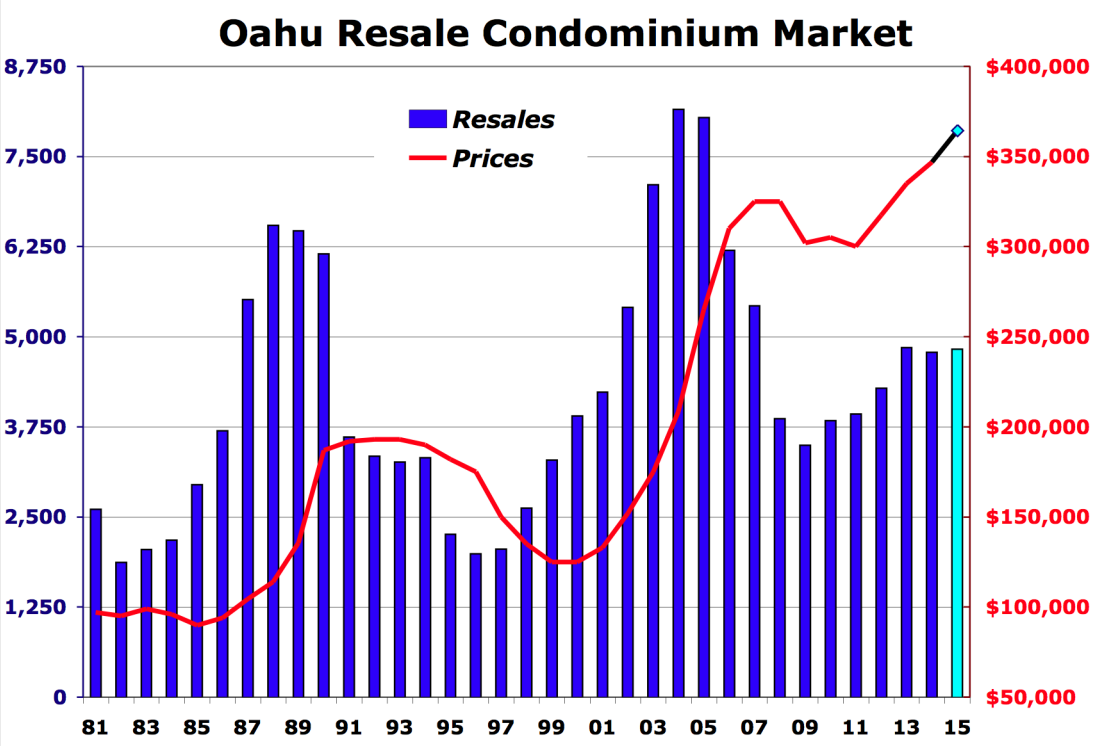
Going forward, we foresee that this cycle's sales and price levels will run for the next several years, and exceed the peaks of the last cycle. The chart above shows the actual activity through 4Q 2014, with 2014 extrapolated and 2015 forecasted. As seen in the extrapolation for 2015 sales and prices, the trend for these will jump again next year, and in an accelerated fashion.

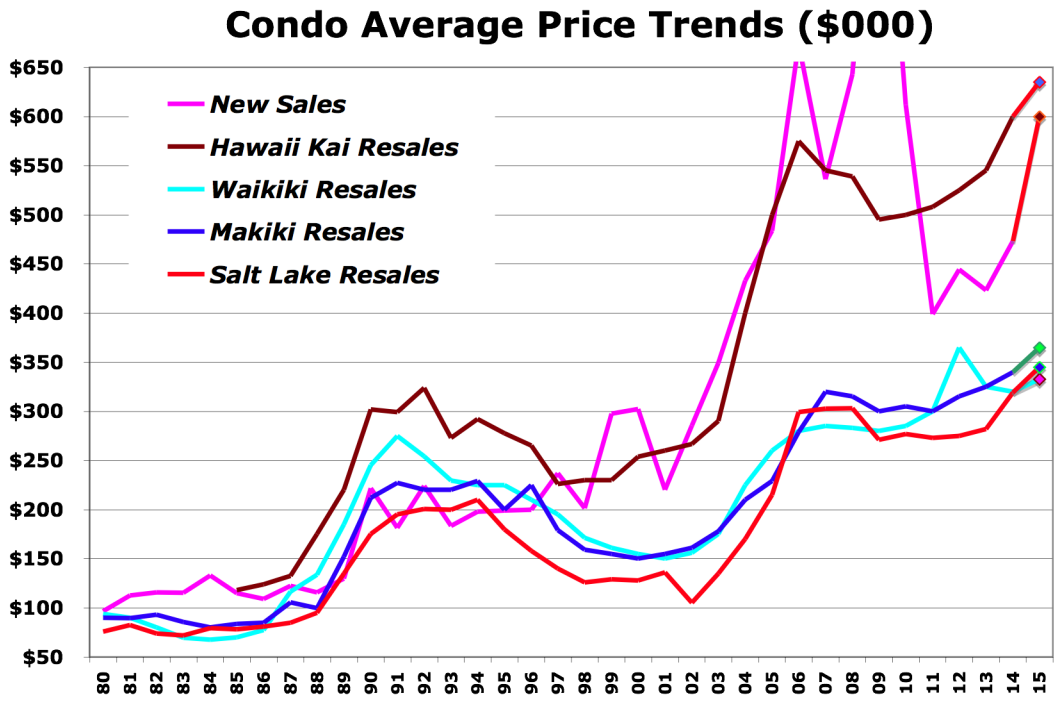
The question going forward is how high prices are likely to go, as that will impact negatively the rental market by taking units off the market. Indeed, as prices of one type of housing rise, it usually affects the price of other housing types.

Many in the industry gage the market by looking at just the resale component. This is because they are a better indicator of spot (actual) demand, inasmuch as they can close as soon as 3 months after going to contract.

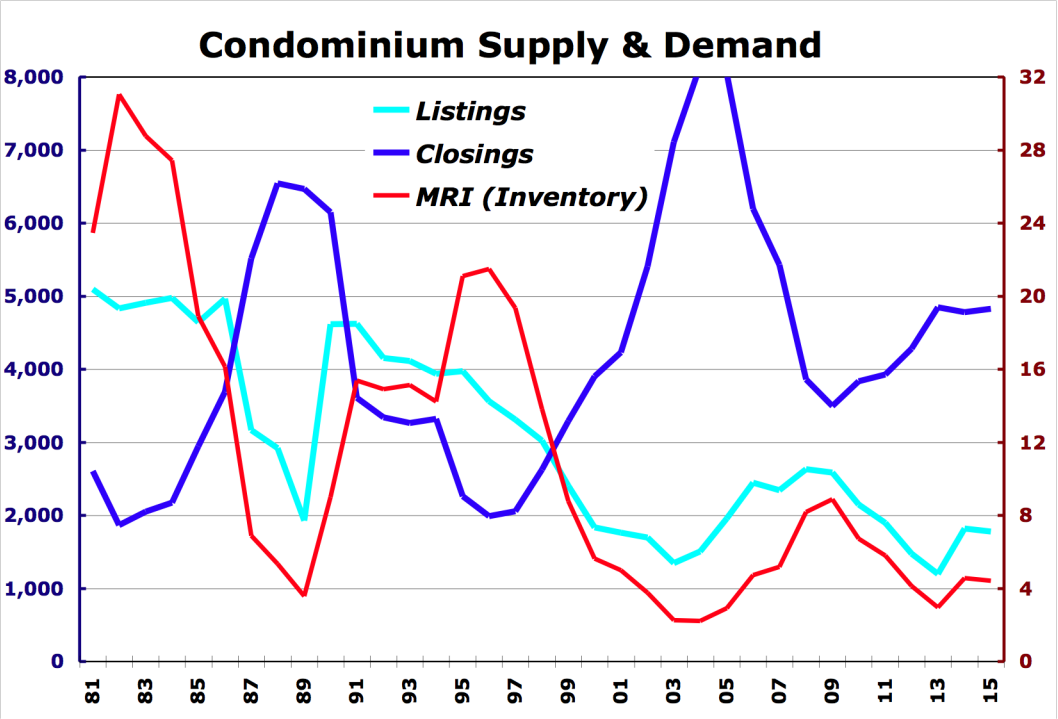


In comparing the two charts, one can see that resales prices have risen to a point higher than their last peak. Many developers take that as a sign that the market will support development.

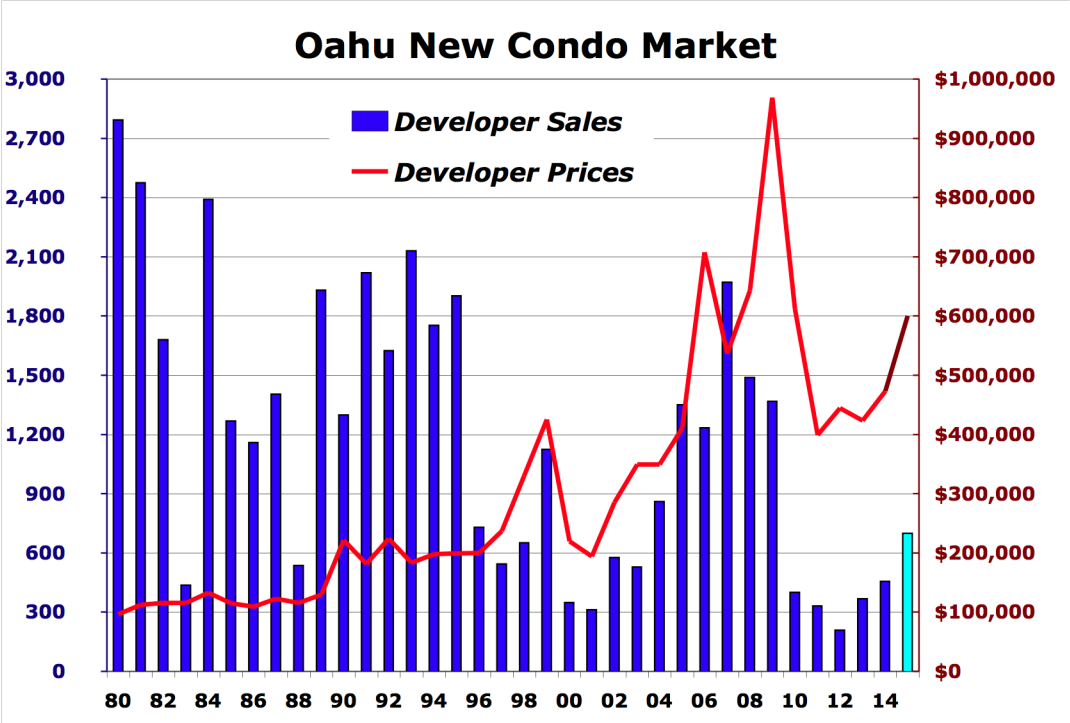




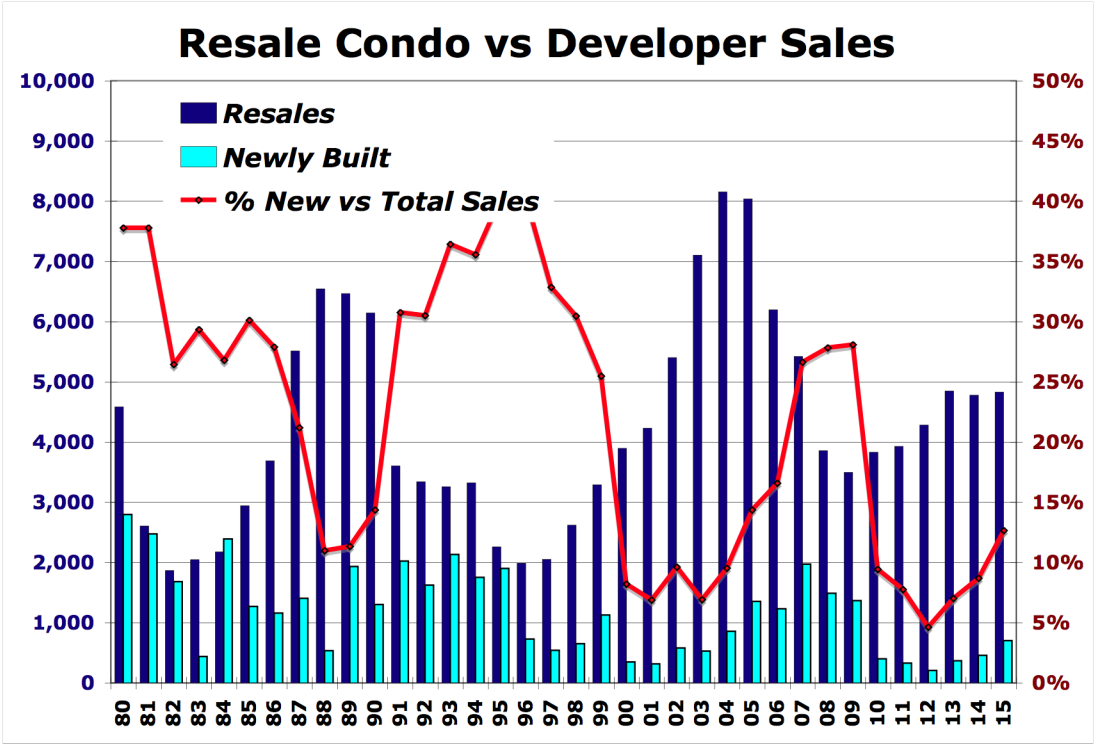
The chart above shows how prices have risen, with next year building on this one. The prices in 2014 are slowing at the high end, but picking up at the lower ends. The chart below compares supply and demand, with supply being listings and sales being demand. Currently, fewer listings (Tighter Supply) and higher sales (Strong Demand) leads us to expect that prices will rise, especially in light of low interest rates.



The following chart shows developer activity in the condo market. As seen, is very low.

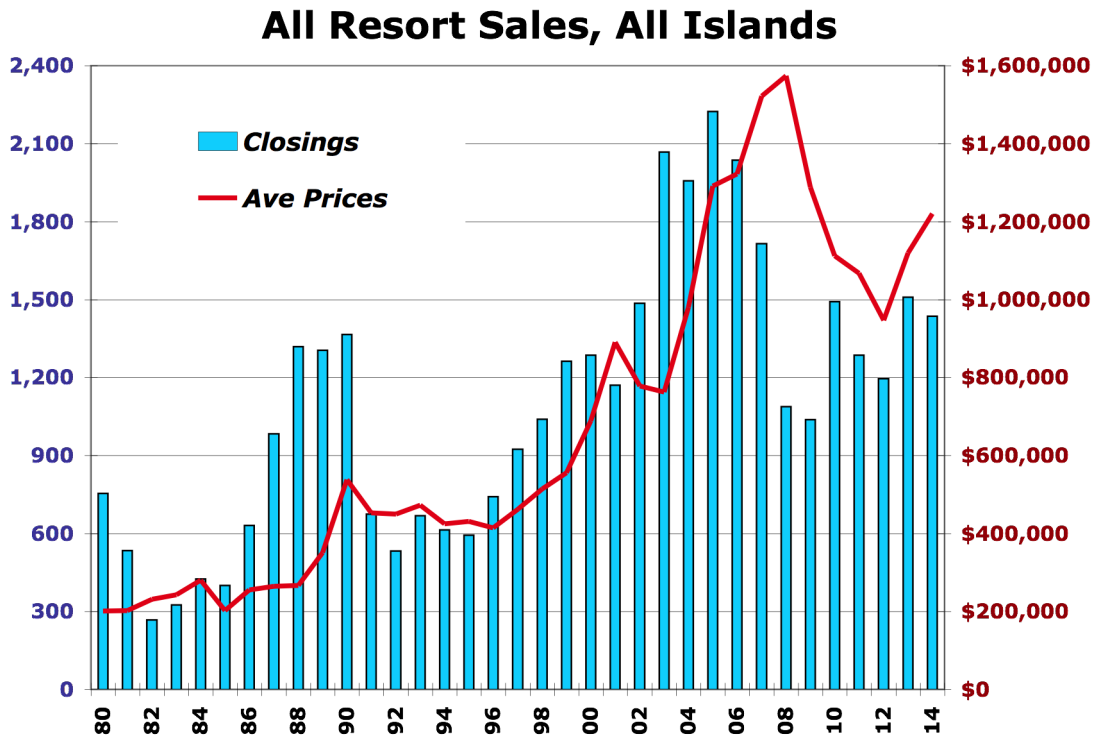


Per the chart above, developer supply is dramatically down since 1984-94, with the last 20 years being woeful. The chart below shows the same thing: new sales, compared to resales, are only around 10-15% of the total sales, whereas traditionally, in the last up cycle, they went above 25%.



Further, not only is the supply of housing down in terms of new production, it also is down in terms of the inventory of resales, listings, as seen in the previous chart.

This low inventory, coupled with higher demand, will result in higher prices. Note that the resort market is a leading indicator for condo prices on Oahu traditionally, particularly the high-end, and it is signaling today that there will be higher prices ahead.



It is worth noting that, of the visitor industry, demand that normally falls on hotel rooms is being extended into demand for residential units in the resort area, or a suitably high quality one (Kailua Beach). With no more hotels being built, this demand can find it's way into condo units in and around Waikiki and Ala Moana.

The antidote here would be an increase in the supply of reasonably priced housing, either via more listings or more new units from developers. However, little new housing was developed and built during the recent market downturn – no financing, too risky – and what was delivered was targeted to a higher income market. Indeed, the bias in new development of condos continues being weighted towards the high-end of the market, as seen in the previous chart.

The longer these trends stay in place – higher demand, lower (than necessary) supply, the more pressure there will be on prices to move higher. And they (and rental prices) already are extremely high. Indeed, there are many studies (the Center for Housing Policy's Paycheck to Paycheck Rankings, 2013) showing that Honolulu is the most expensive of 206 Metropolitan areas, nationwide for renting (and the fifth for home ownership).

To wit: the table below shows the income needed in order to afford the Fair Market Rent for a one or a two-bedroom rental (no more than 30% of income for fair market rent, which includes utilities).

MOST EXPENSIVE CITIES TO RENT A UNIT: MINIMIUM INCOME NEEDED

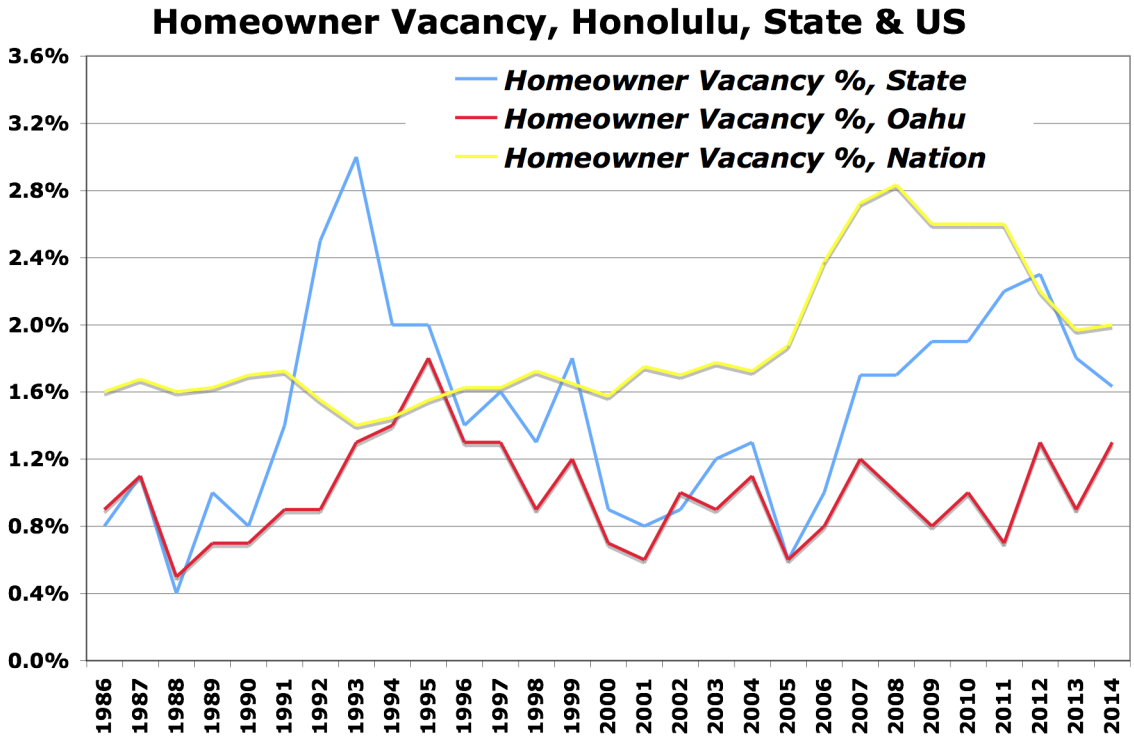
City	2 Bedroom	1 Bedroom
Honolulu, HI	$73,320	$55,680
San Francisco, CA	$71,800	$56,920
Santa Ana, CA	$64,840	$51,760
San Jose, CA	$64,400	$50,480
Santa Cruz, CA	$63,480	$46,920
Suffolk-Nassau, NY	$63,320	$51,400
Oxnard, CA	$59,960	$44,640
New York, NY	$58,960	$49,720
Boston, MA	$57,760	$46,240

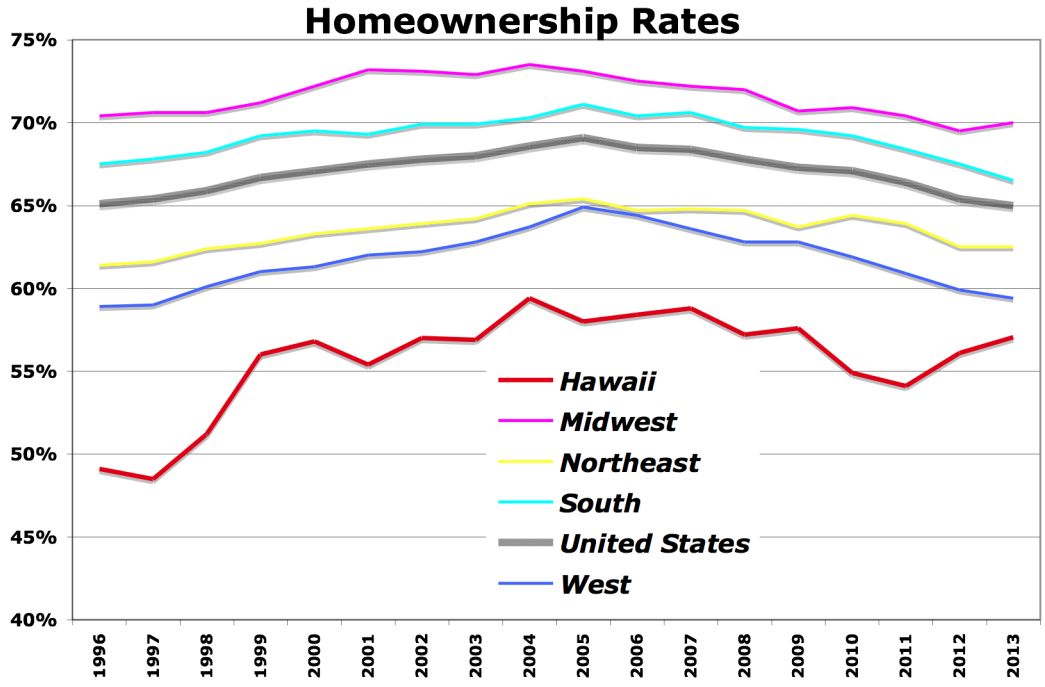
And the next table shows the minimum income (1Q 2013) needed to buy a median priced home in, with Honolulu coming in fifth.

THE MOST EXPENSIVE CITIES FOR HOMEOWNERSHIP: MINIMIUM INCOME NEEDED

City	Minimum Income
San Francisco, CA	$179,097
San Jose, CA	$145,931
Santa Ana, CA	$131,868
New York, NY	$119,133
Honolulu, HI	$115,949

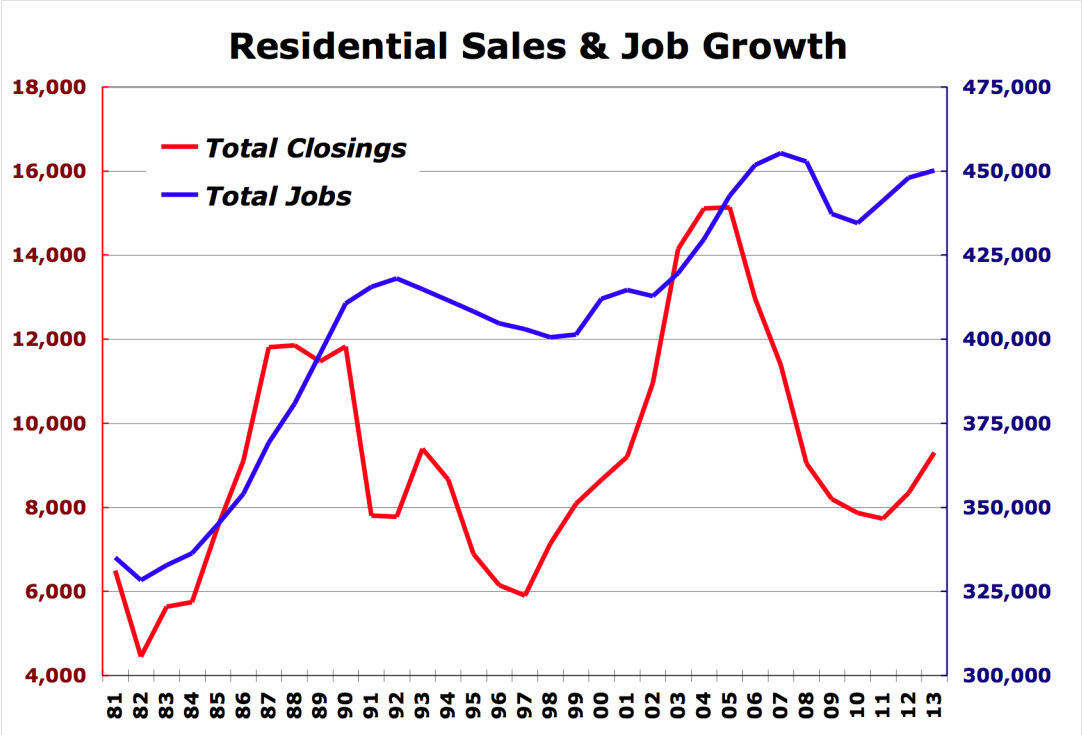
Another way of looking at this is to see the low levels of homeowner vacancy and homeownership in the state and in the county, particularly when compared to national levels.




Homeownership Rates
75%
70%
65%
60%
55%
50%
45%
40%
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
Hawaii
Midwest
Northeast
South
United States
West

VIII. HOUSING DEMAND POTENTIAL & PROJECTION

The prime determinant of housing demand is household formation, which itself is a function of the economy growth and demographic trends. As noted above, in the short term, residential housing demand is driven by economics – specifically of job creation/income growth, as well as interest rate trends. In the long term, housing demand is driven by population growth, demographic changes and lifestyle attitudes (indeed, faster population growth means higher land and housing values).



JOB CREATION:

Second to none, housing demand is driven by the creation of jobs – jobs provide the incomes to buy homes, and they drive immigration, which is a prime source of housing demand (sometimes linked to population growth). This linkage is best illustrated in the Residential Sales & Job Growth Chart.

What is notable is how job creation was quite steady up until 2008, when the financial conflagration globally caught up with Oahu's economy. Since then, the market has stabilized somewhat, with fewer and fewer job losses in the ensuing two years.

What's also notable is that, in the short run, housing sales are a leading indicator for job creation: as can be seen in the early 1980s and the late 1990s.

JOB GROWTH TO HOUSING DEMAND:

In the tables below, we describe DBEDT's predictions for wage and salary job creation on Oahu, and derive from that a general expectation for housing demand over the next five to nine years (in

other words, we will translate it into housing demand). Note that the model* used here ran from 2007, but was updated in 2009

DBEDT'S 2035 JOB FORECAST FOR HONOLULU COUNTY, WAGE & SALARY JOBS

	2007	2015	2020
Total civilian wage and salary jobs	479,629	506,210	527,530
5 Year Growth		26,581	21,320
Annual Job Growth		3,797	4,264
Annual Housing Demand (2 Jobs: 1 Home)		1,899	2,132

*(http://hawaii.gov/dbedt/info/economic/data_reports/2035LongRangeSeries/LRFreport_2035series_revised_Aug09.pdf)

As seen, we use the annual changes in job counts to derive housing demand on the conservative premise that it will take 2 new jobs to generate demand for one new house (with the lower the salaries, the smaller or cheaper the house needs to be).

However, the job counts used in the charts and tables above are just the number of wage and salary jobholders, and do not encompass the self-employed or home worker. According to DBEDT's projections, self-employed workers consist of about 20% of the total work force, but are growing to 25% in the next ten to twenty years.

The following takes the annual job creation demand for housing and expands it by 20% to reflect the growth of self-employed workers. It then summarizes it in a complete DBEDT projection table.

DBEDT'S 2035 JOB FORECAST FOR HONOLULU COUNTY, TOTALED

	2007 to 2015	2015 to 2020
Annual Housing Demand (2 Jobs: 1 Home)	2,278	2,558

Note that the average production of new housing on Oahu over the last ten years has been 1,872 dwellings per year. This is about 20% under what future job growth will be generating, in terms of housing demand. This will put pressure on prices, both for-sale and rental housing, upwards.

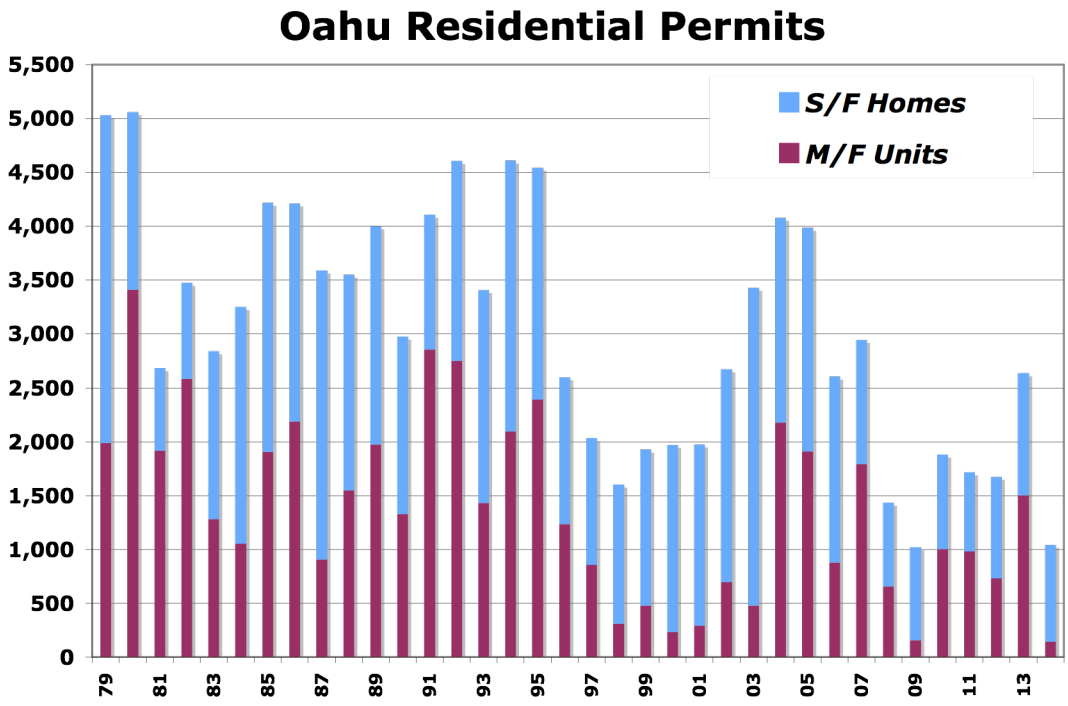
VII. HOUSING SUPPLY PROJECTION

NEAR TERM SUPPLY – PERMITS:

The easiest way to look ahead to where the housing market is going in the short-term is by examining the activity in permits (where developers apply for permission, and pay their fees, for building residential units).

A high level of activity indicates more supply, which means that more demand will be met, and the potential for prices adjusting downwards. Obviously, a low level of permits indicates less supply of housing (and potentially higher prices).

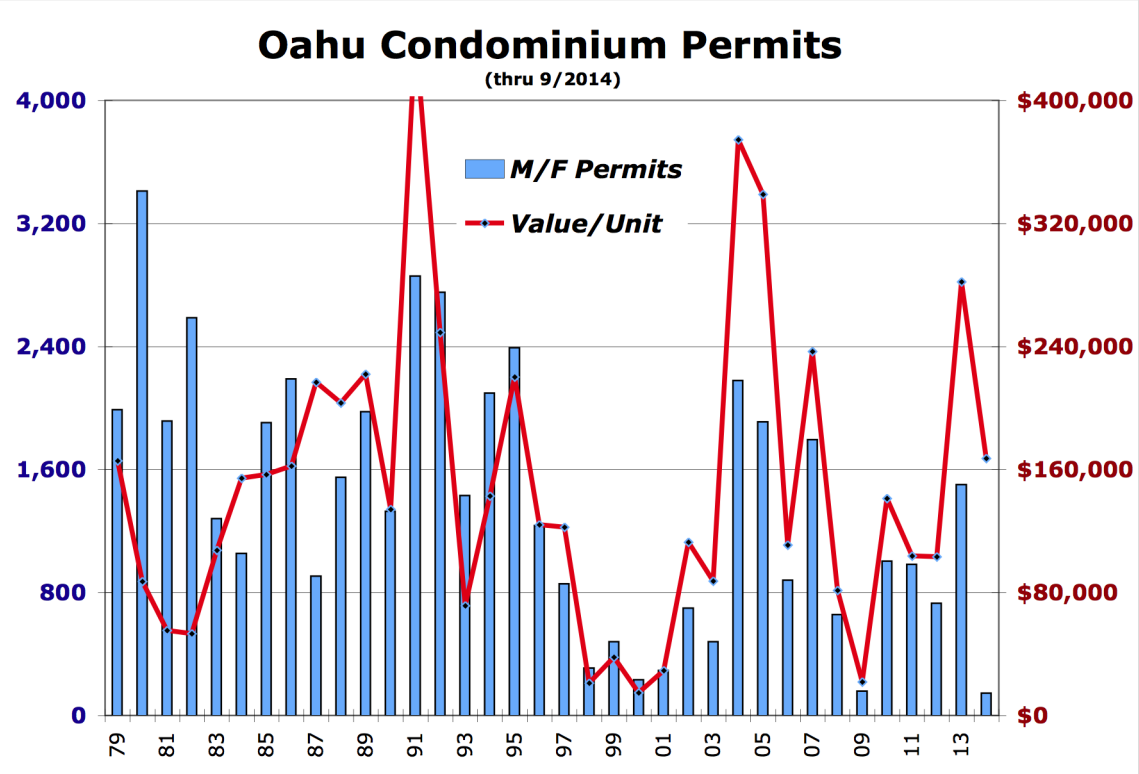
It should be noted that the long-term trend for permits – 1976 to 2014 (data through Sept 2104), over 30 years - is downward. This is a function primarily of land use laws, which started in the 70s, and took hold thereafter. Indeed, this restriction in the supply of land, nominally done in order to promote good planning, has acted also to raise the price of housing. It has done this by raising the cost via a limitation of supply, as well as via making the process of entitling land more time consuming, more costly and particularly more risky.

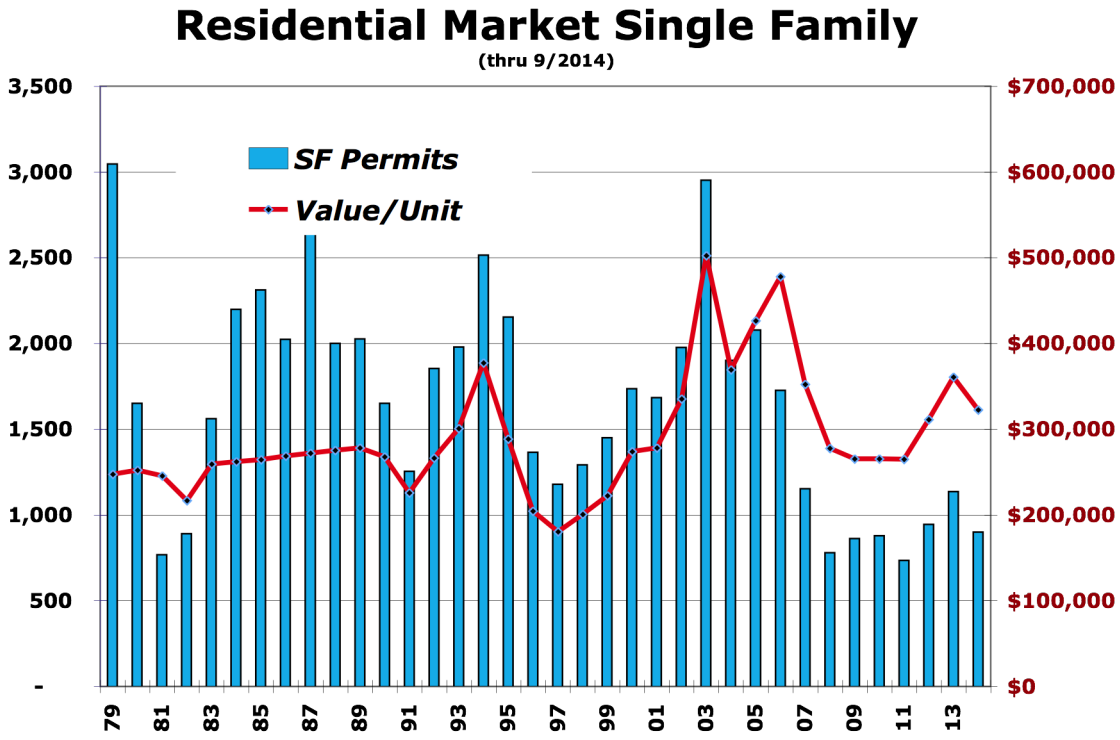


Further, the ensuing high cost of land has caused development, when conditions are right, to be focused on the most profitable segments of the housing market. For Honolulu, this is the high-end of the buyer demand. By being focused there, there has been a lack of resources devoted to the housing of the lower and mid-level income households.

This fact is evident in the trend in the average dollar value per permit, in the next chart. For condos, as seen, it is almost always over $100,000 (which translates to a unit price of 3-4 times that amount).

In addition, what is also seen in the Condominium Permit chart is just how low the number of permits that have been pulled this year – and this is in great contrast to how many have been pulled in the Single Family market.


Oahu Condominium Permits
(thru 9/2014)
M/F Permits
Value/Unit
4,000
3,200
2,400
1,600
800
0
$400,000
$320,000
$240,000
$160,000
$80,000
$0
79
81
83
85
87
89
91
93
95
97
99
01
03
05
07
09
11
13


Residential Market Single Family
(thru 9/2014)
SF Permits
Value/Unit
3,500
3,000
2,500
2,000
1,500
1,000
500
-
$700,000
$600,000
$500,000
$400,000
$300,000
$200,000
$100,000
$0
79
81
83
85
87
89
91
93
95
97
99
01
03
05
07
09
11
13

IX. DEMOGRAPHIC ANALYSIS OF TARGET MARKET

The table below describes and quantifies the number of Oahu households by income and age group:

CLARITAS AGE/INCOME TABLES, HONOLULU CITY & COUNTY

	25 - 34	35 - 44	45 - 54	55 - 64	65 - 74	75 - 84	85+	Totals
Under $15K	3,630	3,163	4,070	4,732	3,257	3,370	2,415	24,637
$15-$25K	3,098	2,772	2,983	3,325	3,047	3,458	2,234	20,917
$25-$35K	3,875	3,558	3,263	3,525	3,272	3,010	1,956	22,459
$35-$50K	6,989	6,044	5,516	6,254	5,275	3,948	1,675	35,701
$50 - $74.9K	9,664	10,101	10,595	10,316	8,009	4,389	1,893	54,967
$75 - $100K	7,575	9,446	9,702	9,060	6,725	3,438	1,103	47,049
$100 - $125K	4,479	7,241	8,267	7,394	4,631	2,106	1,121	35,239

Given that, one can calculate the number of potential buyers from the income ranges the range of their purchasing power, in terms of buying a home. In doing this, one will be using a 4.5% interest rate, a 95% LTV, and a housing expense of 33% of income, fairly standard parameters.

The table below shows the potential demand per price range of housing. For instance, for a home between $158,408 and $244,105, there are some 35,701 households who could qualify and complete a purchase of a dwelling priced in this range.

HOUSEHOLD INCOME HOUSING PURCHASING POWER TABLE

	Starting Price	Ending Price	Total Households
$15-$25,000	$64,921	$111,665	20,917
$25-$35,000	$111,665	$158,408	22,459
$35-$50,000	$158,408	$244,104	35,701
$50-$75,000	$244,104	$386,932	54,967
$75-$99,000	$386,932	$519,371	47,049
$99-$125,000	$519,371	$672,378	35,239

This table says that a household making a combined income of $35,000 to $50,000 a year has the purchasing power to go out and buy a house at a price in the potential price range of this project, or within the $244,000 to $384,854 ranges.

The unit the proposed project will be supplying that this group could qualify financially to purchase would be the studio unit, tentatively priced at $300,000 to $310,000 price range for the 120% of AMI units and $330,000 to $340,000 for the 140% of AMI units. The number of households on Oahu that could make a purchase in this range numbers about 35,000. This compares with 52 affordable studios to be supplied by the proposed project.

By the same token, the table shows those making $50,000 to $75,000 is some 55,000 households able to purchase a unit priced between $386,932 to $519,371. This price range fits within the $420,000 to $519,200 price range posited for the one and the two bedroom affordable units in the proposed project. Thus the 202 units to be supplied by the project will have some 55,000 potential buyers interested.

Note, since this analysis does not consider the asset base of the household, only the income, it cannot take into account the possibility that any of these particular households would be able to purchase a home using built up home equity, in addition to their potential purchasing power.

Next, the table describes the affordable guidelines on income limits, which can then be used to calculate a price range that a family potentially could pay for housing.

HUD AFFORDABLE INCOME GUIDELINES, 2014 HONOLULU

	1 Person	2 Person	3 Person	4 Person	5 Person	6 Person	7 Person
80%	$53,700	$61,350	$69,000	$76,650	$82,800	$88,950	$95,050
100%	$67,100	$76,700	$86,300	$95,800	$103,500	$111,200	$118,800
120%	$80,520	$92,040	$103,560	$114,960	$124,200	$133,440	$142,560
140%	$93,940	$107,380	$120,820	$134,120	$144,900	$155,680	$166,320

Using these income guidelines, HCDCH then sets the prices that can be charged to households under the affordable housing regulations. These affordable housing prices are set according to, primarily, the size of household (number of persons) and annual interest rates. Per household size, there is an occupancy requirement for the minimum and maximum number of persons in a household buying (or renting) an affordable unit.

OCCUPANCY REQUIREMENT

Bedrooms	Occupancy Range	Occupancy Likely
0 Bedroom	1-2 Persons	1-2 Persons
1 Bedroom	1-3 Persons	1-2 Persons
2 Bedroom	2-5 Persons	2-3 Persons
3 Bedroom	3-7 Persons	3-4 Persons

Thus, the maximum household size for a studio unit is two persons a one-bedroom unit is three persons and for a two-bedroom unit, it is five persons. However, for practical purposes, and to be conservative, we will assume that most of these units will be bought by less than the number allowable. For instance we think the likely occupancy for a one-bedroom units will be a household having two people qualifying.

Given that, tables below describe the HUD approved maximum prices at which these units can be sold at, depending on how many people are in the household. These HUD price tables also are predicated by a certain interest rate. We show a range, assuming that the likely interest rate at the time of purchase will be 4.50%.

HONOLULU AFFORDABLE SALES PRICE GUIDELINES

Type	Units	1 pp/80%	2 pp/80%	1 pp/100%	2 pp/100%	1 pp/120%	2 pp/120%
Studio	56	$259,700	$296,600	$315,100	$370,900	$389,300	$445,000

Type	Units	2 pp/80%	3 pp/80%	2 pp/100%	3 pp/100%	2 pp/120%	3 pp/120%
1-Bedroom	104	$296,600	$333,600	$370,900	$417,300	$445,000	$500,700

Type	Units	2 pp/80%	5 pp/80%	2 pp/100%	5 pp/100%	2 pp/120%	5 pp/120%
2-Bedroom	108	$296,600	$400,400	$370,900	$500,500	$445,000	$600,600

Type	Units	3 pp/80%	7 pp/80%	3 pp/100%	7 pp/100%	3 pp/120%	7 pp/120%
3-Bedroom	24	$333,600	$459,600	$417,300	$574,400	$500,700	$689,300

PROJECT SUPPLY BY AMI TARGET MARKET:

As of January 11, 2015, the project supply per the affordables is:

UNIT COUNT OF PROJECT BY BEDROOM TYPE & AMI

AMI Target	80%-120%
Studio	56
1-Bedroom	104
2-Bedroom	108
3-Bedroom	24
Totals	292

Note, the developer has yet to place these into their respective affordable categories, as stated: 80%, 100% and 120%.

Note also that the developer has been given representations for the regulating authority that these affordable units may be sold at prices at the top end of the HUD limits. However, final pricing will depend on economic conditions, on the marketing efforts and on the specific regulations for selling a unit under the affordable rental regime.

For instance, if the prices for the market unit fall, these affordable units will not be sold for over what the market is charging.

Finally, it is worth remembering that the units are sold with conditions, such as shared appreciation, and those conditions make the unit less desirable than a market one

The next section will compare that to what average prices the market is charging currently for similar units.

X. AFFORDABLE HOUSING PRICING

To get a sense of the potential demand for these units, this analysis will start by looking at the broadest market, the one for all of Oahu, and then narrow it down by more specific areas, arriving finally at the Kakaako Ala Moana market location.

STUDIOS: The following tables look at the market the last nine years (plus the first 10 months of 2014). It shows the sales and listings for condominiums on Oahu, fee-simple sales only.

CONDO SALES & LISTINGS, ALL OAHU STUDIOS, FEE-SIMPLE ONLY

	Sold	Price	Intr sf	DOM	Sale$/List$	$/sf
2006	999	$232,745	346	36	97.8%	$673
2007	464	$225,880	375	68	96.6%	$603
2008	393	$202,311	338	79	95.5%	$599
2009	346	$253,269	377	86	93.8%	$672
2010	439	$292,959	404	79	95.5%	$725
2011	477	$243,465	403	70	96.1%	$605
2012	515	$213,114	356	72	96.0%	$599
2013	560	$186,144	342	66	97.2%	$545
2014	619	$201,616	340	76	97.2%	$592
12 Months	599	$199,257	340	75	97.1%	$587
	Listings	**Price**	**Intr sf**	**DOM**		**$/sf**
2009	146	$204,440	360	135		$567
2010	204	$260,993	360	120		$726
2011	192	$292,702	359	116		$815
2012	141	$288,705	351	94		$822
2013	178	$357,655	448	106		$798
2014-3Q-S	192	$310,804	378	96		$822

Overall, the market has stabilized since the fall off that happened in 2008, but is not quite yet back to 2006 peak levels. The last year and this one show that the market trend is higher sales, but with up and down prices. The price per square foot however shows a generally upward trend. The DOM (Days on Market) indicator is up this year, so not everything is encouraging, but that is to be expected with a rising number of listings. On the other hand, the Sales to List price ratio is trending better, which is encouraging, and listings are coming in at higher prices.

STUDIO SALES & LISTINGS, DOWNTOWN - WAIKIKI, STUDIOS, FEE-SIMPLE

	Sold	Price	Intr sf	DOM	Sale$/List$	$/sf
2006	895	$235,456	340	35	97.8%	$693
2007	383	$231,402	369	72	96.6%	$627
2008	309	$197,339	342	79	95.4%	$577
2009	308	$262,415	376	84	93.6%	$698
2010	370	$316,138	404	80	95.6%	$782
2011	409	$249,052	376	67	96.0%	$662
2012	446	$222,758	351	74	96.1%	$635
2013	469	$189,292	334	64	97.3%	$567
2014	521	$205,685	331	75	97.5%	$621
12 Months	499	$203,933	330	74	97.3%	$618
	Listings	**Price**	**Intr sf**	**DOM**		**$/sf**
2009	100	$190,178	336	146		$566
2010	204	$260,993	360	120		$726
2011	192	$292,702	359	116		$815
2012	141	$288,705	351	94		$822
2013	178	$357,655	448	106		$798
2014-3Q-S	192	$310,804	378	96		$822

The studio market in the urban core of Downtown to Waikiki (TMK Zone 1-2) shows the same trends as the larger market: higher sales, choppy prices (albeit with higher values) and rising prices per square feet.

STUDIO SALES & LISTINGS, DOWNTOWN - WAIKIKI, STUDIOS, $250-$350,000

	Sold	Price	Intr sf	DOM	Sale$/List$	$/sf
2006	92	$282,859	400	59	97.9%	$708
2007	75	$276,586	402	58	96.4%	$688
2008	32	$268,309	409	66	95.7%	$656
2009	17	$274,368	420	57	95.7%	$654
2010	8	$260,500	502	88	95.4%	$519
2011	22	$272,904	473	54	97.3%	$577
2012	32	$262,914	423	68	97.0%	$621
2013	56	$266,427	389	46	98.5%	$686
2014	55	$280,735	399	63	98.5%	$704
12 months	77	$277,127	393	59	98.6%	$705
	Listings	Price	Intr sf	DOM		$/sf
2009	5	$282,836	341	122		$829
2010	16	$274,362	431	121		$637
2011	20	$276,743	392	101		$706
2012	15	$269,361	404	86		$666
2013	28	$275,930	373	77		$740
2014-3Q-S	35	$289,786	379	91		$765

Again, this sub-market mirrors the larger ones, but with much stronger sales, along with higher prices. The Sales to List price ratio is trending better, and the listing prices are up, both of which are encouraging.

In comparison with the proposed studio product offerings, the market prices range in and around the $260,500 to $280,735, as drawn from the table above.

These prices however are units in a broader area than that of the subject property, 1360 Kapiolani, located in the Ala Moana and Kakaako community. Generally speaking, this area can command higher prices than the broader Downtown to Waikiki area. However, as seen in the table below, there are not many sales of studios in this area.

STUDIO SALES & LISTINGS, KAKAAKO-ALA MOANA, $250-$450,000

	Sold	Price	Intr sf	DOM	Sale$/List$	$/sf
2005	14	$302,571	631	54	96.8%	$480
2006	32	$280,313	334	79	96.2%	$839
2007	15	$268,333	419	78	96.3%	$640
2008	3	$310,667	471	61	94.8%	$659
2009	1	$252,000	510	13	97.7%	$494
2010	2	$253,500	510	11	96.2%	$497
2011	5	$260,800	509	25	98.0%	$513
2012	7	$264,036	479	121	97.2%	$551
2013	5	$268,400	407	55	98.4%	$659
2014	6	$306,333	451	90	97.5%	$679
	Listings	Price	Intr sf	DOM		$/sf
2010	2	$261,500	460	75		$569
2011	5	$275,000	301	76		$914
2012	2	$267,000	510	50		$524
2013	2	$277,675	299	162		$929
2014-4Q-D	4	$280,000	321	168		$874

Note that these prices are well below what would be allowed under the current AMI guidelines, $389,300, as seen earlier and as seen in the table below.

Note that the comparable sales in the sales 2006-2014 YTD table above (the $260,500 to $280,735 average) are for units that are on average 20 years old and in locations not anywhere as desirable as this one. Thus, a better comparison for these units would have to be against developer, or new units, (rather than resale ones) in Kakaako.

In that regard, there are some comparable studio units that have come to market recently and sold out completely, the 801 South Street, Tower A. They sold 90 units at an average square footage of 417 sf for an average price of $304,000, making their price per square foot around $730/sf.

This is within easy range of the $704/sf price per square foot for 2014, noted in the table above. As such, it leads us to believe that these sales can be considered in relation to the proposed units of this project.

Another Kakaako project, Franco Molla's 803 Waimanu Street, has 123 studio units in a six story building, priced at $303,000 on average, for 394 square feet, or $768 $/sf.

Mindful of this, it follows that the price range for these proposed units should valued today in the range in the $305,000 to $315,000 price range for any of the affordables with restrictions. Note that this pricing is above the maximum that a buying in the 80% AMI would have to pay, or $296,600.

POSSIBLE PRICING FOR STUDIOS, AFFORDABLE GUIDELINES

Type	Units	1 pp/80%	2 pp/80%	1 pp/100%	2 pp/100%	1 pp/120%	2 pp/120%
Studio	56	$259,700	$296,600	$315,100	$370,900	$389,300	$445,000

ONE BEDROOMS: Next, this section looks at the one bedroom affordable market.

CONDO SALES & LISTINGS, ALL OAHU, ONE BEDROOMS, FEE-SIMPLE ONLY

	Sold	Price	Intr sf	DOM	Sale$/List$	$/sf
2006	1,545	$308,906	591	51	97.3%	$523
2007	1,655	$328,647	588	58	97.1%	$558
2008	1,275	$322,042	604	64	96.4%	$533
2009	981	$294,393	601	75	95.9%	$490
2010	1,038	$327,665	615	61	96.6%	$533
2011	1,076	$313,395	610	67	96.3%	$514
2012	1,055	$309,132	601	57	97.1%	$514
2013	1,351	$320,264	595	67	98.0%	$539
2014	1,364	$326,108	592	85	97.4%	$551
12 months	1,348	$323,771	589	82	97.7%	$550
	Listings	Price	Intr sf	DOM		$/sf
2010	483	$339,173	596	98		$569
2011	487	$349,103	600	89		$581
2012	454	$358,539	606	81		$591
2013	373	$376,112	615	79		$611
2014-3Q-S	582	$350,860	600	92		$584

CONDO SALES & LISTINGS, DOWNTOWN - WAIKIKI, ONE BEDROOMS, FEE-SIMPLE

	Sold	Price	Intr sf	DOM	Sale$/List$	$/sf
2006	1,024	$318,383	583	54	97.0%	$546
2007	1,261	$339,041	587	58	97.1%	$578
2008	904	$347,731	620	69	96.1%	$561
2009	643	$310,997	601	75	95.9%	$518
2010	743	$352,785	616	61	96.4%	$572
2011	785	$332,870	606	66	96.1%	$549
2012	757	$322,407	595	55	97.3%	$542
2013	999	$335,308	589	67	98.0%	$569
2014	903	$345,792	594	85	97.6%	$582
12 months	924	$341,500	589	83	97.8%	$580
	Listings	Price	Intr sf	DOM		$/sf
2010	327	$364,981	591	97		$618
2011	335	$374,280	593	90		$631
2012	316	$396,522	602	78		$659
2013	275	$447,563	601	71		$745
2014-3Q-S	448	$347,159	593	94		$585

Even better than the market for studio units, this one has rebounded since the fall off that happened in 2009, but is not quite yet back to 2006 peak levels, neither for the island or for the urban sub-market, Downtown to Waikiki. The sales trend is rising, as is the price trend and value tend - the price per square foot values. The DOM (Days on Market) indicator is up this year on the sales side, again thanks to higher listings being available. Finally, the Sales to List price ratio is bouncing around.

Now, we focus on the specific market segment for the proposed units.

CONDO SALES & LISTINGS, DOWNTOWN - WAIKIKI, ONE BEDROOMS, $400-$600,000

	Sold	Price	Intr sf	DOM	Sale$/List$	$/sf
2006	157	$468,020	651	51	96.4%	$718
2007	261	$456,604	638	45	96.5%	$715
2008	210	$467,431	680	62	96.8%	$687
2009	71	$448,021	706	69	96.3%	$635
2010	88	$466,174	737	67	96.5%	$632
2011	118	$455,649	707	57	97.4%	$645
2012	98	$463,004	665	58	97.9%	$696
2013	209	$470,050	643	62	98.3%	$731
2014	184	$482,604	649	73	98.6%	$744
12 months	190	$481,977	638	74	98.5%	$756
	Listings	Price	Intr sf	DOM		$/sf
2010	44	$486,600	729	101		$668
2011	45	$480,096	708	90		$678
2012	58	$475,396	683	79		$697
2013	60	$472,162	655	66		$720
2014-3Q-S	77	$495,058	637	77		$777

As seen above, the market trend for prices for these units are higher than prices that existed at the top of the last cycle. In addition, the number of sales now verse then are within a close range. Thus, this leads one to believe that this market is strong, one that favors sellers over buyers.

Again, as noted in the last section, our focus is to look at just the Kakaako-Ala Moana market.

ONE BEDROOM SALES & LISTINGS, KAKAAKO-ALA MOANA, $400-$600,000

	Sold	Price	Intr sf	DOM	Sale$/List$	$/sf
2004	23	$454,900	890	46	97.1%	$511
2005	25	$498,320	829	22	97.9%	$601
2006	23	$516,522	771	81	96.4%	$670
2007	33	$495,685	759	81	95.6%	$653
2008	15	$483,367	743	71	95.9%	$651
2009	25	$457,841	738	81	96.5%	$620
2010	16	$498,175	806	90	96.7%	$618
2011	37	$464,263	767	71	96.2%	$606
2012	33	$475,466	754	64	98.0%	$631
2013	51	$491,245	736	67	98.1%	$668
2014	54	$497,555	694	69	98.8%	$717
	Listings	Price	Intr sf	DOM		$/sf
2010	14	$479,696	739	96		$649
2011	17	$480,800	749	82		$642
2012	17	$484,846	727	115		$667
2013	18	$486,611	673	59		$723
2014-4Q-D	18	$504,250	676	97		$746

Note that the sales are less, the prices higher and the units larger.

Looking at the new projects in and around the area: 803 Waimanu has a tentative pricing for their 29 one bedrooms units of $430,000, for a 606 sq ft unit or $710 $/sf. Then, 400 Keawe Street has 15 large one bedrooms at $450,000 average price, for 731 square foot unit, or $611 $/sf. The South Street Tower B has 88 units for almost $400,000, for a 564 sq ft unit. Stanford Carr's Keauhou Lane will have 130 one bedrooms at 640 square feet for a little over $500,000 per unit average price.

Given higher developer prices, the table was rebuilt but at a higher price range.

ONE BEDROOM SALES & LISTINGS, KAKAAKO-ALA MOANA, $500-$750,000

	Sold	Price	Intr sf	DOM	Sale$/List$	$/sf
2004	6	$544,833	940	76	97.0%	$580
2005	18	$576,833	865	41	98.1%	$667
2006	16	$537,188	810	87	96.4%	$664
2007	23	$572,348	835	102	95.5%	$685
2008	6	$555,333	820	59	96.9%	$678
2009	7	$531,000	848	121	95.8%	$626
2010	10	$564,250	902	85	96.9%	$626
2011	10	$555,817	847	33	95.9%	$656
2012	12	$568,540	862	59	98.7%	$660
2013	25	$539,540	786	56	98.9%	$686
2014	40	$587,125	763	66	98.5%	$770
	Listings	Price	Intr sf	DOM		$/sf
2010	8	$582,063	836	52		$696
2011	7	$562,482	845	67		$666
2012	6	$569,750	844	101		$675
2013	7	$547,571	685	38		$799
2014-4Q-D	13	$606,885	779	64		$779

And, in light of this market trend and the current comparable units being offered by developers, we think the one bedroom units in the subject property could be valued today in the $490,000 to $510,000 price range for these affordable units, mindful that they come with restrictions. Note that this pricing is above the maximum that a buying in the 80%, the 100% and 120% AMI would have to pay – meaning the project's gross revenues will be lower than they would be if these units were sold at market-rates.

POSSIBLE PRICING FOR ONE BEDROOMS, AFFORDABLE GUIDELINES

Type	Units	2 pp/80%	3 pp/80%	2 pp/100%	3 pp/100%	2 pp/120%	3 pp/120%
1-Bedroom	104	$296,600	$333,600	$370,900	$417,300	$445,000	$500,700

TWO BEDROOM UNITS: Next, this section looks at the two-bedroom market, all Oahu.

CONDO SALES & LISTINGS, ALL OAHU, TWO BEDROOMS, FEE-SIMPLE ONLY

	Sold	Price	Intr sf	DOM	Sale$/List$	$/sf
2006	3,648	$463,277	960	46	97.8%	$482
2007	3,197	$455,047	918	56	97.8%	$496
2008	2,485	$515,466	938	64	96.8%	$549
2009	1,996	$421,314	905	72	96.5%	$465
2010	2,097	$475,260	962	61	97.4%	$494
2011	2,363	$454,920	923	68	97.1%	$493
2012	1,993	$443,283	943	60	97.7%	$470
2013	2,308	$437,534	914	68	98.6%	$479
2014	2,519	$473,174	923	81	98.4%	$513
12 months	2,447	$456,127	916	80	98.3%	$498
	Listings	Price	Intr sf	DOM		$/sf
2010	1,094	$491,366	957	103		$513
2011	1,049	$494,045	962	94		$514
2012	834	$499,845	969	81		$516
2013	796	$517,799	945	72		$548
2014-3Q-S	859	$601,641	956	82		$629

CONDO SALES & LISTINGS, DOWNTOWN - WAIKIKI, TWO BEDROOMS, FEE-SIMPLE

	Sold	Price	Intr sf	DOM	Sale$/List$	$/sf
2006	1,390	$633,907	1,092	41	96.7%	$580
2007	1,426	$577,580	975	51	97.3%	$593
2008	1,380	$651,360	998	71	95.9%	$653
2009	762	$561,400	967	76	95.5%	$580
2010	1,000	$633,860	1,038	66	96.6%	$611
2011	1,244	$582,687	960	72	96.4%	$607
2012	914	$581,913	999	63	97.0%	$583
2013	1,027	$557,021	951	69	98.1%	$586
2014	1,036	$610,876	977	86	97.7%	$625
12 months	994	$591,302	967	86	97.7%	$611
	Listings	Price	Intr sf	DOM		$/sf
2010	403	$775,938	1,068	106		$727
2011	430	$767,304	1,078	88		$712
2012	313	$726,296	1,062	85		$684
2013	301	$785,437	1,031	71		$762
2014-3Q-S	433	$812,335	1,024	90		$793

The two-bedroom market is the largest market for all units and, as seen, has not quite recovered to the 2006 levels, either for the island for the urban sub-segment. That said, it has rebounded and the sales trend is rising, at least for the whole island. Prices, including the price per square foot values are moving up. The DOM (Days on Market) indicator is up this year, again thanks to higher listings. Finally, the Sales to List price ratio is generally up.

Note that, clearly, the values in the urban market are much higher than those for the overall market, befitting it being the choice of most in terms of location.

CONDO SALES & LISTINGS, DOWNTOWN - WAIKIKI, TWO BEDROOMS, $400-$600,000

	Sold	Price	Intr sf	DOM	Sale$/List$	$/sf
2006	323	$480,752	973	61	96.8%	$494
2007	573	$500,960	941	47	97.4%	$532
2008	399	$493,120	928	73	95.9%	$531
2009	258	$483,964	992	76	95.7%	$488
2010	316	$499,828	1,016	61	96.7%	$492
2011	517	$486,214	915	59	97.3%	$531
2012	276	$481,845	982	66	97.2%	$491
2013	376	$476,053	906	66	98.5%	$525
2014	228	$487,485	942	76	98.6%	$517
12 months	241	$486,484	932	82	98.6%	$522
	Listings	Price	Intr sf	DOM		$/sf
2010	121	$486,257	959	81		$507
2011	143	$485,027	957	76		$507
2012	109	$488,526	978	75		$500
2013	98	$491,486	928	66		$529
2014-3Q-S	110	$487,608	923	68		$528

Again, the data is narrowed down to the area of Kakaako – Ala Moana.

CONDO SALES & LISTINGS, KAKAAKO-ALA MOANA, TWO BEDROOMS, $400-$600,000

	Sold	Price	Intr sf	DOM	Sale$/List$	$/sf
2004	49	$503,051	1,161	67	96.0%	$433
2005	48	$515,141	1,038	50	98.0%	$496
2006	30	$506,650	938	66	96.2%	$540
2007	47	$525,463	959	51	97.1%	$548
2008	20	$521,050	903	59	96.6%	$577
2009	45	$492,794	927	79	97.7%	$532
2010	36	$540,416	1,021	63	98.1%	$529
2011	46	$528,575	1,005	56	97.4%	$526
2012	55	$520,789	925	61	97.7%	$563
2013	50	$520,460	952	79	98.2%	$546
2014	37	$519,849	892	79	98.6%	$583
	Listings	Price	Intr sf	DOM		$/sf
2010	25	$524,592	956	87		$549
2011	23	$537,722	984	62		$547
2012	18	$543,611	1,017	29		$534
2013	14	$503,207	893	61		$564
2014-4Q-D	6	$483,083	855	82		$565

In just the smaller Kakaako to Ala Moana market, the table shows lower sale counts, higher prices, and higher price per sq. ft. values.

As a point of reference, the next table looked at the market segment immediately above the $400,000-$600,000, and found the same trends, but a slightly larger market.

SALES & LISTINGS, KAKAAKO-ALA MOANA, TWO BEDROOMS, $600-$800,000

	Sold	Price	Intr sf	DOM	Sale$/List$	$/sf
2004	63	$682,495	1,299	73	96.1%	$525
2005	51	$690,204	1,166	57	97.0%	$592
2006	58	$702,881	1,184	69	96.7%	$594
2007	91	$709,319	1,091	66	97.5%	$650
2008	28	$717,054	1,163	54	96.3%	$616
2009	33	$672,421	1,129	68	96.5%	$596
2010	35	$683,768	1,218	87	96.5%	$561
2011	60	$689,376	1,183	60	97.1%	$583
2012	70	$693,769	1,136	70	98.0%	$611
2013	87	$694,701	1,110	66	98.7%	$626
2014	103	$689,057	1,002	92	98.0%	$688
	Listings	Price	Intr sf	DOM		$/sf
2010	32	$701,681	1,248	143		$562
2011	35	$681,913	1,188	69		$574
2012	28	$698,533	1,177	98		$594
2013	27	$711,810	1,066	66		$668
2014-4Q-D	20	$741,140	1,066	69		$695

Next, the section looks at the new projects in and around the area.

400 Keawe Street has 30 large two bedrooms at $651,375 average price, for 1,090 square foot unit, or $586 $/sf. The South Street Tower B has 264 units for almost $510,000, for a 857 sq ft unit, or $593 $/sf. Stanford Carr's Keauhou Lane will have 206 units at 929 square feet for a little over $550,000 per unit average price, or $592/sf. Note, he has 29 additional market units that will be sold at market, and they average over $730,000 a unit for 1,034 square feet, for around $705/sf value.

Relative to those developer prices, and in recognition of the clear views to the east that the upper units will have, the table for Kakaako-Ala Moana was redone at a higher price range.

CONDO SALES & LISTINGS, KAKAAKO-ALA MOANA, $700-$1,000,000

	Sold	Price	Intr sf	DOM	Sale$/List$	$/sf
2004	37	$786,197	1,310	66	96.5%	$600
2005	71	$835,155	1,246	54	97.3%	$670
2006	64	$824,855	1,257	74	96.9%	$656
2007	104	$824,267	1,196	87	97.4%	$689
2008	32	$816,844	1,207	70	96.5%	$677
2009	29	$821,086	1,238	78	95.3%	$663
2010	28	$797,460	1,337	92	96.1%	$596
2011	51	$805,807	1,238	53	96.2%	$651
2012	49	$804,061	1,208	77	97.9%	$666
2013	74	$798,301	1,208	67	98.5%	$661
2014	101	$819,681	1,130	89	98.1%	$725
	Listings	Price	Intr sf	DOM		$/sf
2010	41	$849,352	1,342	147		$633
2011	35	$846,511	1,317	116		$643
2012	23	$828,364	1,326	98		$625
2013	29	$813,717	1,132	74		$719
2014-4Q-D	47	$864,336	1,132	90		$763

Given the current prices prevailing in this two-bedroom market, it follows that prices for any of the affordable units with restrictions should be at the maximum of the current 120% AMI guidelines, or $600,600.

POSSIBLE PRICING FOR TWO BEDROOMS, AFFORDABLE GUIDELINES

Type	Units	3 pp/80%	5 pp/80%	3 pp/100%	5 pp/100%	3 pp/120%	5 pp/120%
2-Bedroom	108	$333,600	$400,400	$417,300	$500,500	$500,700	$600,600

Note that this pricing is above the maximum that a buying in the 80% and 120% AMI would have to pay, save for the largest family size, or $600,600.

THREE BEDROOM UNITS: The tables describe the three-bedroom market.

CONDO SALES & LISTINGS, ALL OAHU, THREE BEDROOMS, FEE-SIMPLE ONLY

	Sold	*Price*	*Intr sf*	*DOM*	*Sale$/List$*	*$/sf*
2006	1,541	$589,604	1,340	36	98.2%	$440
2007	1,138	$564,232	1,250	51	97.7%	$451
2008	904	$590,060	1,289	68	97.1%	$458
2009	650	$521,047	1,290	83	96.5%	$404
2010	677	$578,456	1,325	65	98.1%	$437
2011	824	$528,821	1,296	68	97.8%	$408
2012	762	$468,494	1,279	58	98.1%	$366
2013	780	$518,862	1,281	72	98.8%	$405
2014	996	$569,194	1,275	82	98.8%	$446
12 months	966	$548,924	1,268	82	98.8%	$433
	Listings	*Price*	*Intr sf*	*DOM*		*$/sf*
2010	410	$641,444	1,343	99		$478
2011	408	$549,946	1,324	96		$415
2012	335	$587,471	1,340	81		$438
2013	311	$685,350	1,355	66		$506
2014-3Q-S	335	$864,882	1,399	86		$618

CONDO SALES & LISTINGS, DOWNTOWN - WAIKIKI, THREE BEDROOMS, FEE-SIMPLE

	Sold	*Price*	*Intr sf*	*DOM*	*Sale$/List$*	*$/sf*
2006	276	$1,049,911	1,647	29	96.3%	$638
2007	232	$903,213	1,318	35	95.4%	$685
2008	245	$950,463	1,425	87	95.1%	$667
2009	91	$937,061	1,460	111	93.8%	$642
2010	123	$1,245,267	1,601	80	95.8%	$778
2011	147	$1,034,436	1,475	75	96.5%	$701
2012	100	$757,607	1,391	71	96.8%	$545
2013	125	$830,302	1,434	91	96.6%	$579
2014	135	$1,064,683	1,483	97	96.5%	$718
12 months	132	$990,091	1,443	98	96.8%	$686
	Listings	*Price*	*Intr sf*	*DOM*		*$/sf*
2010	110	$1,196,363	1,539	127		$777
2011	90	$868,383	1,419	127		$612
2012	67	$1,206,633	1,630	94		$740
2013	80	$1,338,442	1,629	79		$822
2014-3Q-S	95	$1,651,453	1,689	108		$978

For all Oahu, the trend shows sales rebounding to a level half way between the low in 2010 and the high in 2006. Prices also are up, but with a bit more volatility. For urban Honolulu, the sales and prices trends are similar to the overall market.

Turning to just the market that matches up with the affordable component of this project, the following table shows the sales in the $500,000 to $700,000 price segment, followed by the pricing for the three bedroom units.

CONDO SALES & LISTINGS, DOWNTOWN - WAIKIKI, THREE BEDROOMS, $500-$700,000

	Sold	Price	Intr sf	DOM	Sale$/List$	$/sf
2006	42	$626,488	1,467	63	96.8%	$427
2007	76	$618,086	1,216	30	95.9%	$508
2008	43	$612,479	1,274	95	94.8%	$481
2009	24	$575,663	1,298	90	95.9%	$444
2010	41	$634,915	1,349	71	96.4%	$471
2011	37	$601,839	1,341	76	96.9%	$449
2012	33	$593,806	1,326	82	97.7%	$448
2013	37	$586,514	1,286	100	97.4%	$456
2014	24	$600,000	1,262	79	98.5%	$476
12 months	31	$592,129	1,262	81	98.7%	$469
	Listings	Price	Intr sf	DOM		$/sf
2010	28	$616,474	1,278	112		$482
2011	18	$610,132	1,360	96		$449
2012	15	$594,308	1,422	75		$418
2013	20	$618,200	1,424	84		$434
2014-3Q-S	17	$602,676	1,261	70		$478

Here, there is no comparison with Kakaako – Ala Moana, as there are only a handful of sales in this price range. Therefore, the focus shifted to look at the prices being charged by the new projects in and around the area- and thus, to determine a suitable price range.

This showed that 400 Keawe Street has 15 large three bedrooms at $735,000 average price, for 1,332 square foot unit, or about $550 $/sf. Stanford Carr's Keauhou Lane will have 55 market only units at 1,390 square feet for a little over $950,000 per unit average price, or about $680/sf.

Therefore, relative to those developer prices, this table was redone for Kakaako-Ala Moana at a higher price range. It was set at $700,000 to $1.2 Million, based on the new unit pricing in Kakaako of a comparable building, Keauhou Lane.

SALES & LISTINGS, KAKAAKO-ALA MOANA, THREE BEDROOMS, $700,000 - $1.2 M

	Sold	Price	Intr sf	DOM	Sale$/List$	$/sf
2004	2	$1,037,500	2,032	67	91.3%	$511
2005	4	$822,750	1,831	35	98.8%	$449
2006	15	$973,800	1,475	77	95.5%	$660
2007	19	$861,737	1,273	81	97.9%	$677
2008	8	$845,875	1,257	89	95.5%	$673
2009	8	$853,438	1,424	101	93.2%	$600
2010	4	$879,750	1,339	134	95.6%	$657
2011	6	$845,667	1,427	70	96.1%	$593
2012	6	$831,667	1,422	48	96.0%	$585
2013	22	$903,227	1,363	87	97.5%	$663
2014	28	$920,946	1,326	131	97.2%	$694
	Listings	Price	Intr sf	DOM		$/sf
2010	6	$880,533	1,329	129		$662
2011	6	$1,017,500	1,591	78		$640
2012	10	$966,129	1,573	99		$614
2013	11	$1,045,182	1,373	82		$761
2014-4Q-D	14	$924,119	1,281	126		$721

Again, this smaller Kakaako-Ala Moana market showed lower sales counts, but much higher prices, and higher price per sq. ft. values.

Given the current prices prevailing in this three-bedroom market, it follows that prices for any of the affordable units should be at the maximum of the current 120% AMI guidelines, or $689,300.

POSSIBLE PRICING FOR THREE BEDROOMS, AFFORDABLE GUIDELINES

Type	Units	3 pp/80%	7 pp/80%	3 pp/100%	7 pp/100%	3 pp/120%	7 pp/120%
3-Bedroom	24	$333,600	$459,600	$417,300	$574,400	$500,700	$689,300

XI. MARKET RATE HOUSING PRICING

The following describes our proposed pricing for the market rate units. We set potential prices for these units, given trends in the resale market and given pricing for the new projects going forward in the Kakaako area, including ones that have affordable and/or market units. The projects that are roughly comparable to the proposed project include 400 Keawe, Keauhou Lane, 1183 Waimanu, and the two 801 South Street towers. We looked at The Collections and Symphony for reference, but did not let their pricing influence these projected prices. Starting with the studio units:

STUDIOS: Here is the table describing the sales and listings from the last section.

STUDIO SALES & LISTINGS, KAKAAKO-ALA MOANA, $250-$450,000

	Sold	*Price*	*Intr sf*	*DOM*	*Sale$/List$*	*$/sf*
2005	14	$302,571	631	54	96.8%	$480
2006	32	$280,313	334	79	96.2%	$839
2007	15	$268,333	419	78	96.3%	$640
2008	3	$310,667	471	61	94.8%	$659
2009	1	$252,000	510	13	97.7%	$494
2010	2	$253,500	510	11	96.2%	$497
2011	5	$260,800	509	25	98.0%	$513
2012	7	$264,036	479	121	97.2%	$551
2013	5	$268,400	407	55	98.4%	$659
2014	6	$306,333	451	90	97.5%	$679
	Listings	*Price*	*Intr sf*	*DOM*		*$/sf*
2010	2	$261,500	460	75		$569
2011	5	$275,000	301	76		$914
2012	2	$267,000	510	50		$524
2013	2	$277,675	299	162		$929
2014-4Q-D	4	$280,000	321	168		$874

Being mindful of recent 90 unit sales at 801 South Street, at an average price of $304,000, the market rate studio units here could be priced at a $50,000+ premium to the affordable units, or $350,000 to $370,000.

PROPOSED PROJECT PRICING, MARKET STUDIOS

	Units	Kakaako Resale Market	Kakaako New Market	Market @ 1631 Kapiolani	2015 Prices
Studio	32	$306,000	$305,000	$360,000	$370,000

ONE BEDROOMS: Here is the table describing the sales and listings from the last section.

ONE BEDROOM SALES & LISTINGS, KAKAAKO-ALA MOANA, $500-$750,000

	Sold	Price	Intr sf	DOM	Sale$/List$	$/sf
2004	6	$544,833	940	76	97.0%	$580
2005	18	$576,833	865	41	98.1%	$667
2006	16	$537,188	810	87	96.4%	$664
2007	23	$572,348	835	102	95.5%	$685
2008	6	$555,333	820	59	96.9%	$678
2009	7	$531,000	848	121	95.8%	$626
2010	10	$564,250	902	85	96.9%	$626
2011	10	$555,817	847	33	95.9%	$656
2012	12	$568,540	862	59	98.7%	$660
2013	25	$539,540	786	56	98.9%	$686
2014	40	$587,125	763	66	98.5%	$770
	Listings	Price	Intr sf	DOM		$/sf
2010	8	$582,063	836	52		$696
2011	7	$562,482	845	67		$666
2012	6	$569,750	844	101		$675
2013	7	$547,571	685	38		$799
2014-4Q-D	13	$606,885	779	64		$779

With recent sales at Keola Lai coming in at an average of around $535,000 per unit, Pacifica at $567,000 and Keauhou Lane at $510,000, it is reasonable to assume that these units could come in around $550,000 to $580,000.

PROPOSED PROJECT PRICING, MARKET ONE-BEDROOMS

	Units	Kakaako Resale Market	Kakaako New Market	Market @ 1631 Kapiolani	2015 Prices
1-Bedroom	72	$587,125	$510,000	$570,000	$585,000

TWO BEDROOMS: Here is the table describing the sales and listings from the last section.

SALES & LISTINGS, KAKAAKO-ALA MOANA, TWO BEDROOMS, $600-$800,000

	Sold	*Price*	*Intr sf*	*DOM*	*Sale$/List$*	*$/sf*
2004	63	$682,495	1,299	73	96.1%	$525
2005	51	$690,204	1,166	57	97.0%	$592
2006	58	$702,881	1,184	69	96.7%	$594
2007	91	$709,319	1,091	66	97.5%	$650
2008	28	$717,054	1,163	54	96.3%	$616
2009	33	$672,421	1,129	68	96.5%	$596
2010	35	$683,768	1,218	87	96.5%	$561
2011	60	$689,376	1,183	60	97.1%	$583
2012	70	$693,769	1,136	70	98.0%	$611
2013	87	$694,701	1,110	66	98.7%	$626
2014	103	$689,057	1,002	92	98.0%	$688
	Listings	*Price*	*Intr sf*	*DOM*		*$/sf*
2010	32	$701,681	1,248	143		$562
2011	35	$681,913	1,188	69		$574
2012	28	$698,533	1,177	98		$594
2013	27	$711,810	1,066	66		$668
2014-4Q-D	20	$741,140	1,066	69		$695

With sales coming in at 909 Kapiolani at an average of around $650,000, Keola Lai at $650,000 per unit, and Pacifica at $660,000, a good assumption is that these units could be priced starting at $700,000 without a view, but starting at $775,000 with a view. The average could be $737,500. That is in line with Carr's Keauhou Lane units, which average over $730,000 a unit for 1,034 square feet, for around $705/sf value.

PROPOSED PROJECT PRICING, MARKET TWO-BEDROOMS

	Units	Kakaako Resale Market	Kakaako New Market	Market @ 1631 Kapiolani	2015 Prices
2-Bedroom	69	$689,000	$730,000	$737,500	$750,000

THREE BEDROOMS: Here is the table describing the sales and listings from the last section.

SALES & LISTINGS, KAKAAKO-ALA MOANA, THREE BEDROOMS, $700,000 - $1.2 M

	Sold	*Price*	*Intr sf*	*DOM*	*Sale$/List$*	*$/sf*
2004	2	$1,037,500	2,032	67	91.3%	$511
2005	4	$822,750	1,831	35	98.8%	$449
2006	15	$973,800	1,475	77	95.5%	$660
2007	19	$861,737	1,273	81	97.9%	$677
2008	8	$845,875	1,257	89	95.5%	$673
2009	8	$853,438	1,424	101	93.2%	$600
2010	4	$879,750	1,339	134	95.6%	$657
2011	6	$845,667	1,427	70	96.1%	$593
2012	6	$831,667	1,422	48	96.0%	$585
2013	22	$903,227	1,363	87	97.5%	$663
2014	28	$920,946	1,326	131	97.2%	$694
	Listings	*Price*	*Intr sf*	*DOM*		*$/sf*
2010	6	$880,533	1,329	129		$662
2011	6	$1,017,500	1,591	78		$640
2012	10	$966,129	1,573	99		$614
2013	11	$1,045,182	1,373	82		$761
2014-4Q-D	14	$924,119	1,281	126		$721

With sales coming in at Keola Lai at $940,000 per unit, Pacifica at $850,000 and Keauhou Lane at $920,000, these units could be priced from $915,000 to $965,000, or around $940,000.

PROPOSED PROJECT PRICING, MARKET

	Units	Kakaako Resale Market	Kakaako New Market	Market @ 1631 Kapiolani	2015 Prices
3-Bedroom	20	$920,000	$950,000	$940,000	$970,000

SUMMARY TABLE:

PROPOSED PROJECT PRICING

Type	Affordable Units	Market Units	Maximum Affordable Pricing	Potential Market Pricing
Studio	56	32	$310,000	$360,000
1-Bedroom	104	72	$500,700	$570,000
2-Bedroom	108	69	$600,600	$737,500
3-Bedroom	24	20	$689,300	$940,000

XII. TREND ANALYSIS AND PROJECTION:

SALES TREND ANALYSIS:

The future direction of the market trend here is important, as the development is supplying units into the market that have some restrictions on them – the sharing of the appreciation being the one that is most sensitive, in the eyes of potential purchasers.

The circumstances that offset the sensitivity of this condition would include living in a new unit, living in one that has a better location than other units and the fact that there is no units available to them in an affordable price range (which is akin to saying they are priced out of the market by rising prices). Arguably, this last factor is the most important one in their mind.

To that end, we looked into the historical data for resale condominium sales and used that to derive the annual percentage change when there's appreciation for periods that are three years or longer (2+ years of positive growth). The table below describes this.

PER ANNUM GROWTH IN MARKET PRICE APPRECIATION, CYCLE UPSWING

Period	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
1986-1992	4.7%	11.2%	9.1%	18.9%	38.0%	2.7%	0.5%
2001-2007	6.4%	14.3%	15.1%	19.1%	27.1%	17.0%	4.8%
2012-2014	5.8%	5.5%	3.6%				

This indicates that – given past history - there could well be potential for price appreciation in the future for condos sold on Oahu. If that is then the case, this makes it more likely that the demand going forward for these housing units will strengthen, and to so in a way that make it likely that the project will enjoy sell-out within a 2-3 year time frame.

XIII. CONCLUSIONS

Simply put, it has been shown that there is sufficient potential demand in place to absorb all (and then some more) of the supply of new housing priced under the HHFDC affordable guidelines, as is being contemplated here. Additionally, the comparable market for the market rate units were examined and found to be sufficient to assume that these units have the potential to be sold out in a 2-3 year time frame. Finally, if current conditions continue into 2015 and beyond to 2017, the proposed project should be able to complete both pre-sales and final closings in that time frame.

D. ARCHITECTURAL DRAWINGS

SAMKOO KAPIOLANI RESIDENCE

1631 KAPIOLANI BOULEVARD, HONOLULU, HAWAII

March 13, 2015

Design
Partners
Incorporated

PROJECT SITE INFORMATION

TAX MAP KEY NO: 2-3-041:009 & 2-3-041:006
SITE ADDRESS: 1631 KAPIOLANI BLVD.
HONOLULU, HAWAII

LOT INFORMATION

LOT AREA:	2-3-041:009	2-3-041:006	TOTAL:
ACRES	.574 ACRES	.717 ACRES	1.291 ACRES
SQUARE FEET (SF)	25,000 SF	31,250 SF	56,250 SF

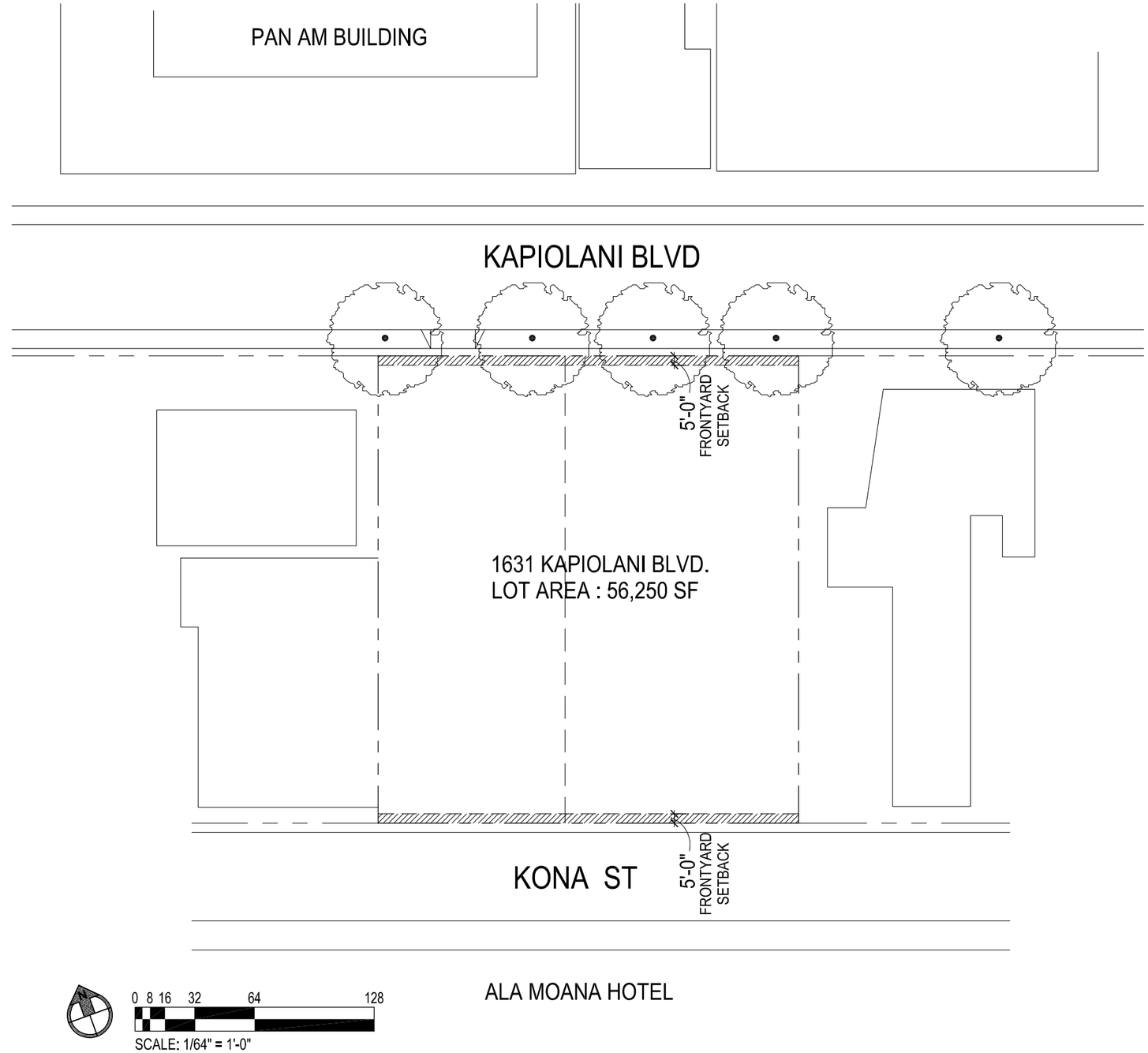
LOT DIMENSIONS:
LENGTH: 225 FT.
DEPTH: 250 FT.

LAND CONTROL CODES & DEVELOPMENT STANDARDS

ZONING: BMX-3 COMMUNITY BUSINESS DISTRICT
FLOOD ZONE: X
HISTORIC SITE REGISTRY: NONE
LOT RESTRICTIONS: NONE
SMA / SHORELINE: NOT IN SMA
SPECIAL DISTRICT: NOT IN SPECIAL DISTRICT
STATE LAND USE: URBAN DISTRICT
HEIGHT LIMIT: 350 FT.
HEIGHT SETBACKS: NO PORTION OF A STRUCTURE SHALL EXCEED A HEIGHT EQUAL TO TWICE THE DISTANCE FROM THE STRUCTURE TO THE VERTICAL PROJECTION OF THE CENTER LINE OF ANY STREET.

STREET SETBACKS
FRONT: 10 FT. FOR DWELLINGS; 5 FT. FOR OTHER USES
SIDE & REAR: 10 FT. FOR MULTI-FAMILY DWELLINGS; 0 FT. FOR OTHER USES

MAX. BUILDING AREA: NOT REGULATED (PERCENT OF ZONING LOT)
MAX. DENSITY (FAR): 2.5 (OR 140,625 SF)
OPEN SPACE BONUS: FOR EACH SQUARE FOOT OF PUBLIC OPEN SPACE PROVIDED, FIVE SQUARE FEET OF FLOOR AREA CAN BE ADDED, EXCLUSIVE OF ALL REQUIRED YARDS; FOR EACH SQUARE FOOT OF ARCADE AREA PROVIDED, THREE SQUARE FEET OF FLOOR AREA CAN BE ADDED, EXCLUSIVE OF ALL REQUIRED YARDS
MAX. FAR WITH OPEN SPACE BONUS: 3.5 (OR 196,875 SF)
OFF-STREET PARKING: REQUIREMENTS VARY BY USAGE
OFF-STREET LOADING: REQUIREMENTS VARY BY USAGE



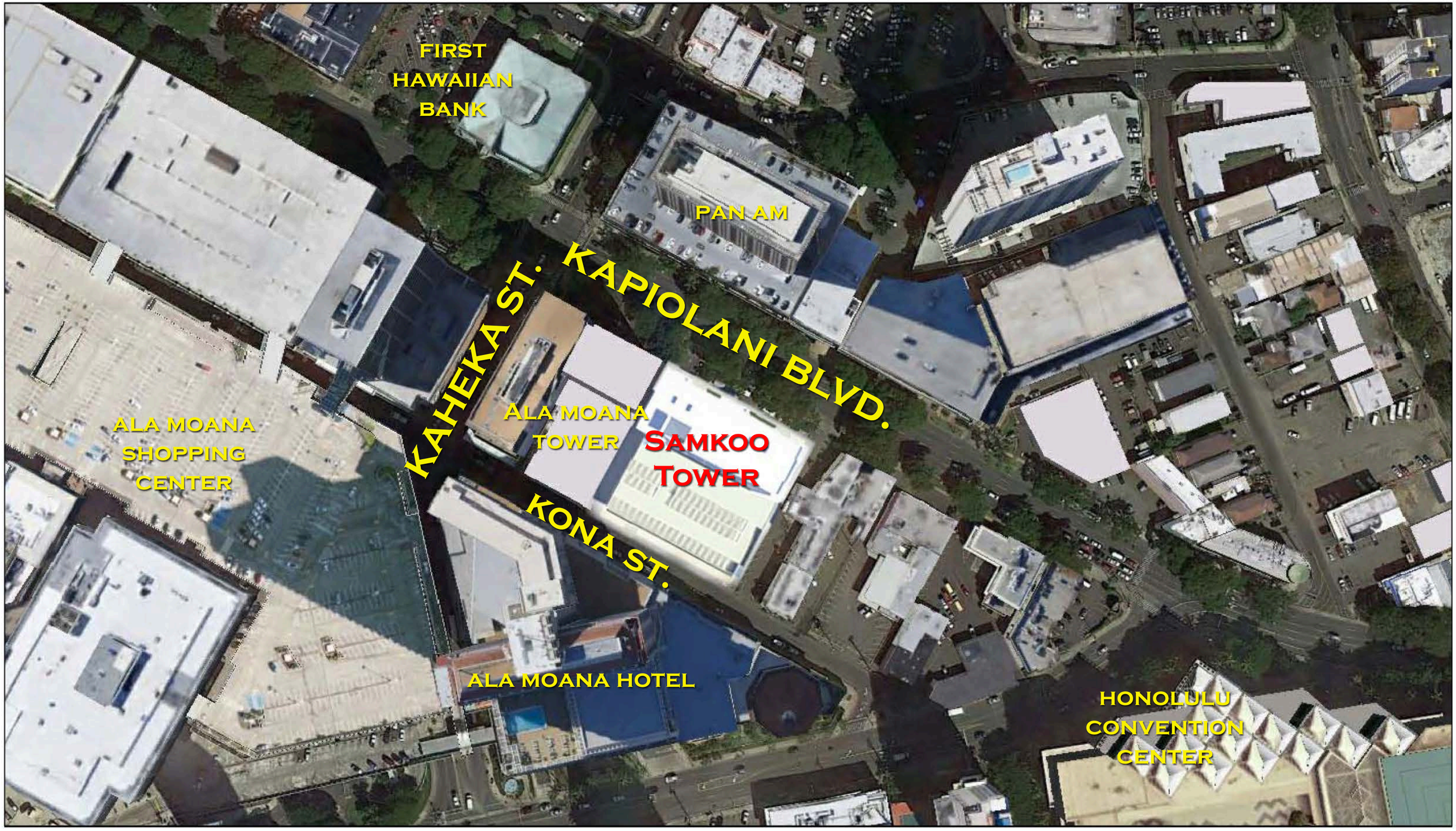
SAMKOO KAPIOLANI RESIDENCE
1631 KAPIOLANI BOULEVARD, HONOLULU, HAWAII

EXISTING CONDITIONS SITE MAP

Design Partners Incorporated

DRAWING NO.

13 MARCH 2015



SAMKOO KAPIOLANI RESIDENCE
1631 KAPIOLANI BOULEVARD, HONOLULU, HAWAII

SITE PLAN

Design
Partners
Incorporated

DRAWING NO.
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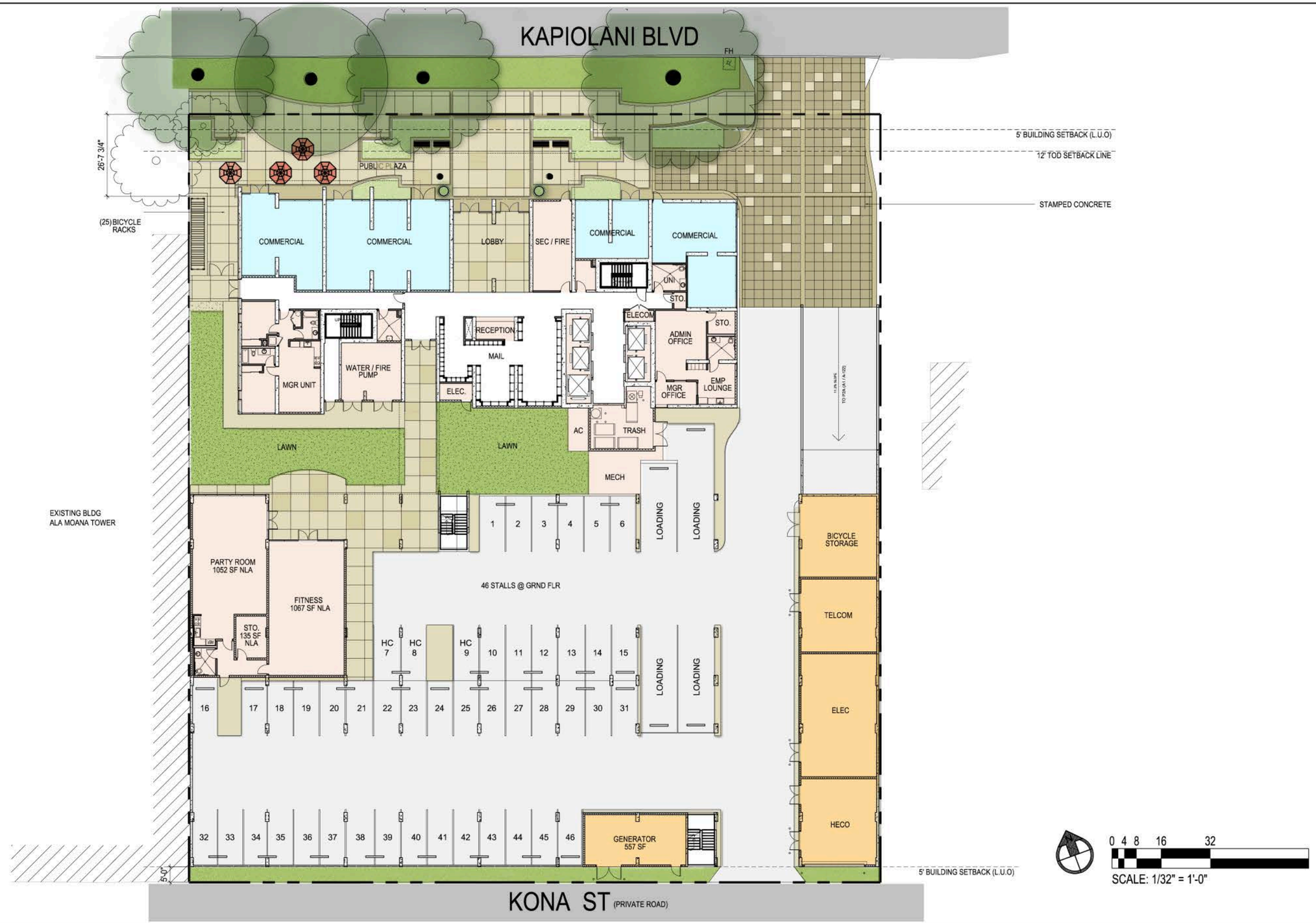
13 MARCH 2015



SAMKOO KAPIOLANI RESIDENCE

1631 KAPIOLANI BOULEVARD, HONOLULU, HAWAII

Design Partners Incorporated

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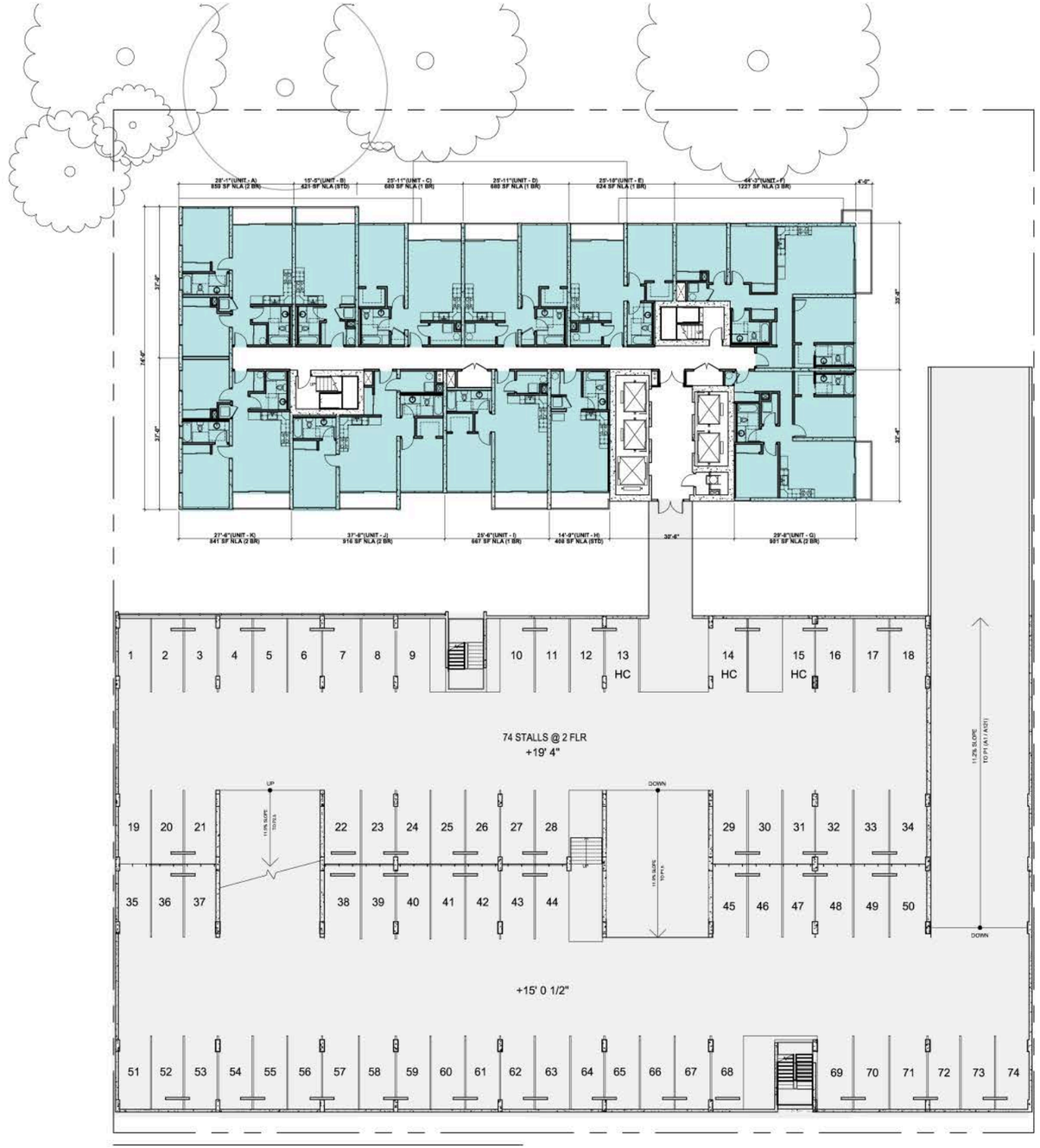
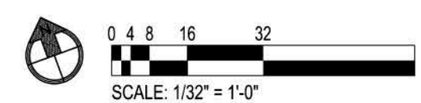




SAMKOO KAPIOLANI RESIDENCE

1631 KAPIOLANI BOULEVARD, HONOLULU, HAWAII

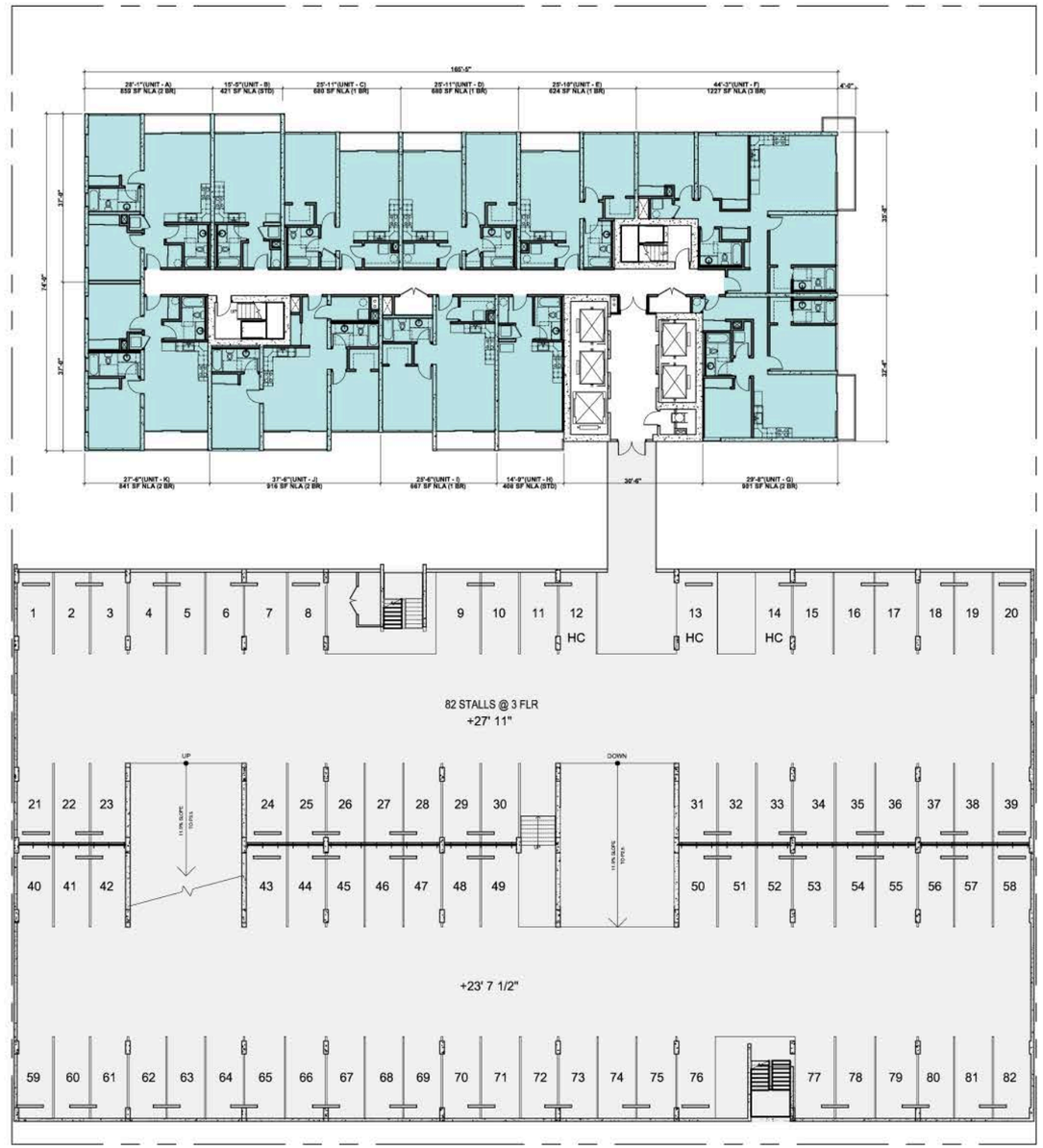
SECOND FLOOR PLAN

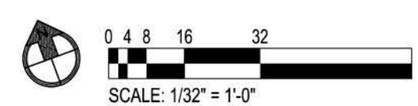
Design Partners Incorporated

DRAWING NO.

02

13 MARCH 2015





SAMKOO KAPIOLANI RESIDENCE

1631 KAPIOLANI BOULEVARD, HONOLULU, HAWAII

3RD THRU 10TH FLOOR PLAN

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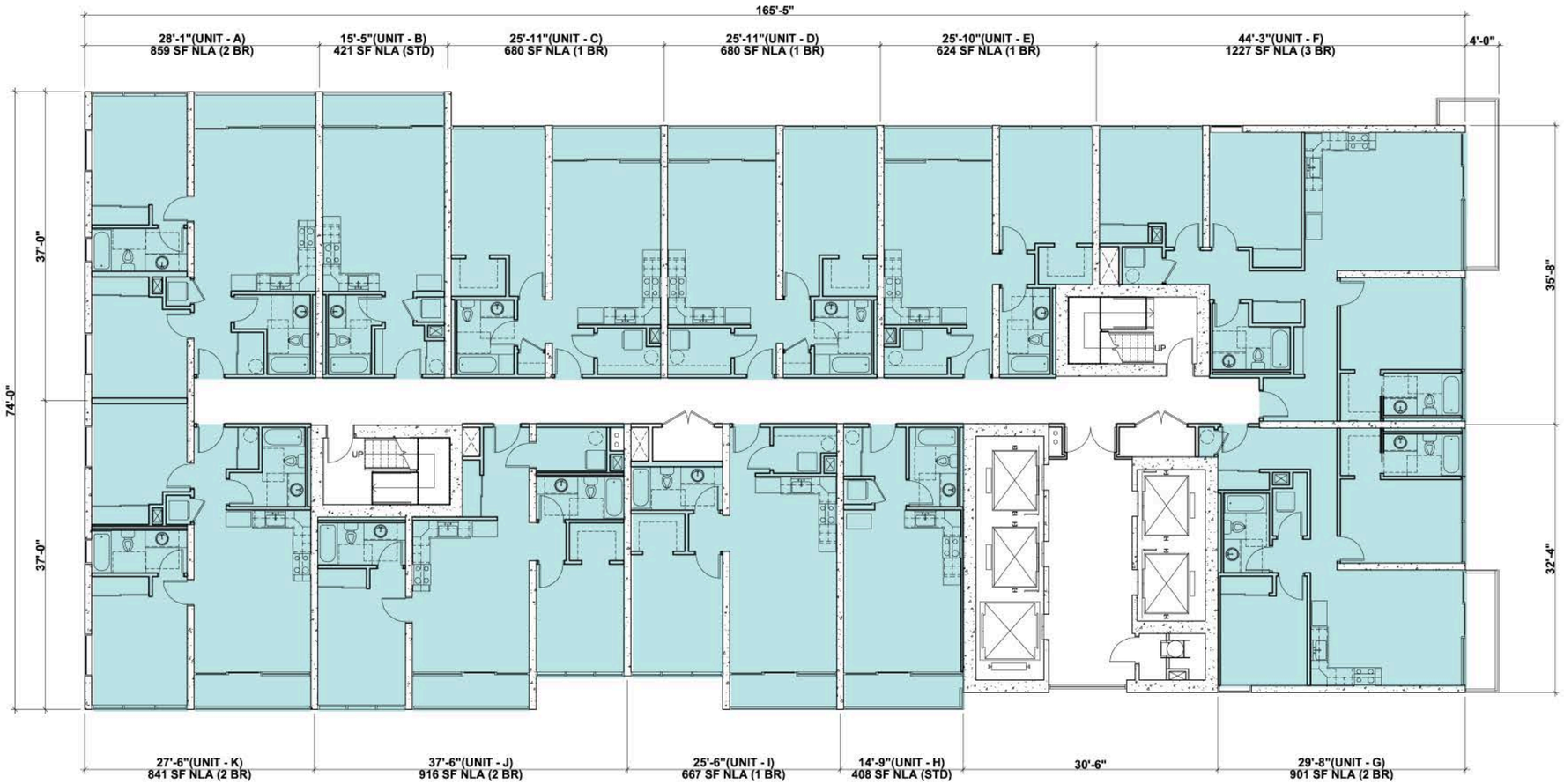
DRAWING NO.

03

13 MARCH 2015



NUMBER OF UNITS PER FLOOR:

STUDIO UNITS:	2
1 BEDROOM UNITS:	4
2 BEDROOM UNITS:	4
3 BEDROOM UNITS:	1

0 2 4 8 16

SCALE: 1/16" = 1'-0"

SAMKOO KAPIOLANI RESIDENCE

1631 KAPIOLANI BOULEVARD, HONOLULU, HAWAII

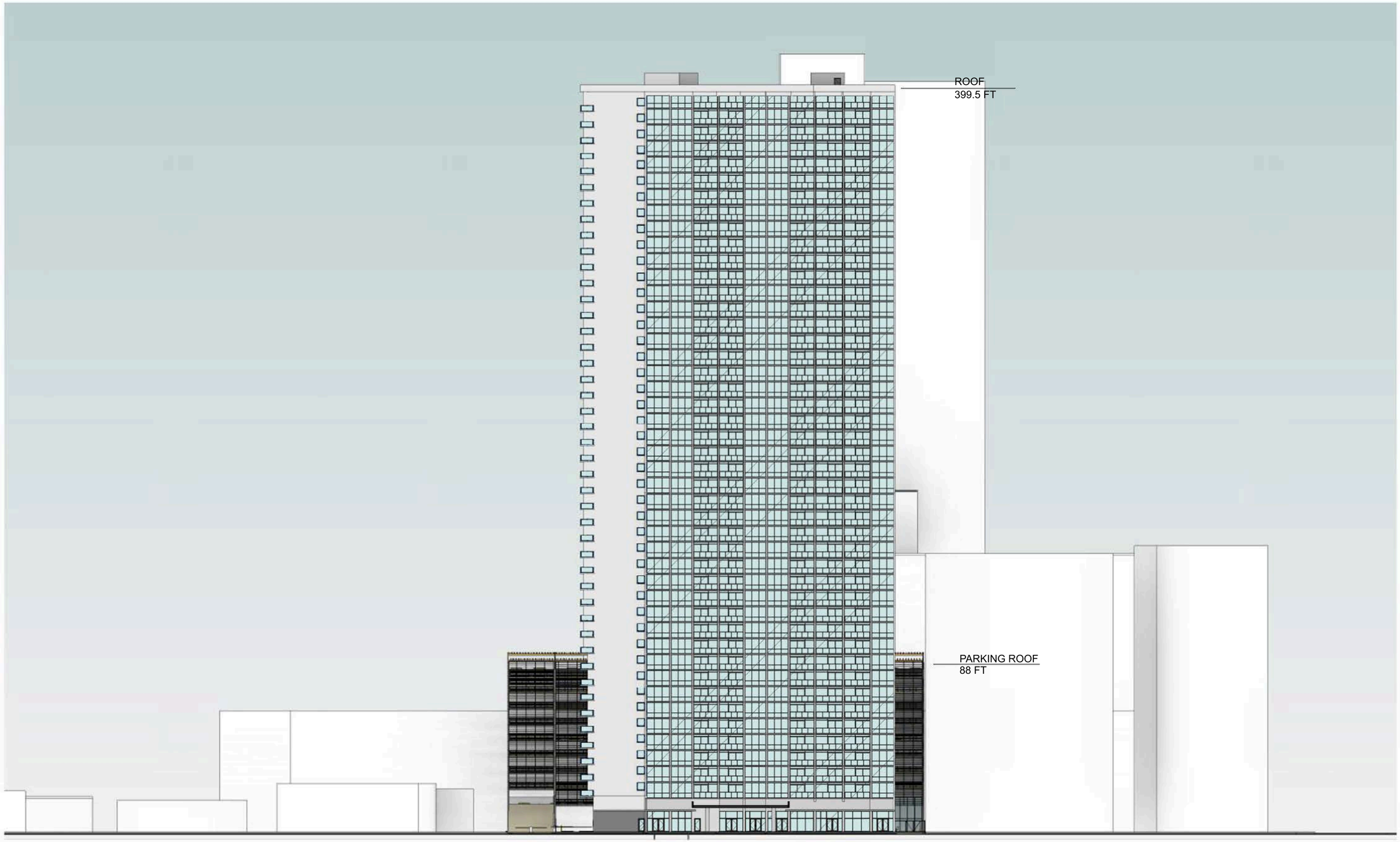
11TH THRU 45TH FLOOR PLAN

Design Partners Incorporated

DRAWING NO.

04

13 MARCH 2015



SAMKOO KAPIOLANI RESIDENCE

1631 KAPIOLANI BOULEVARD, HONOLULU, HAWAII

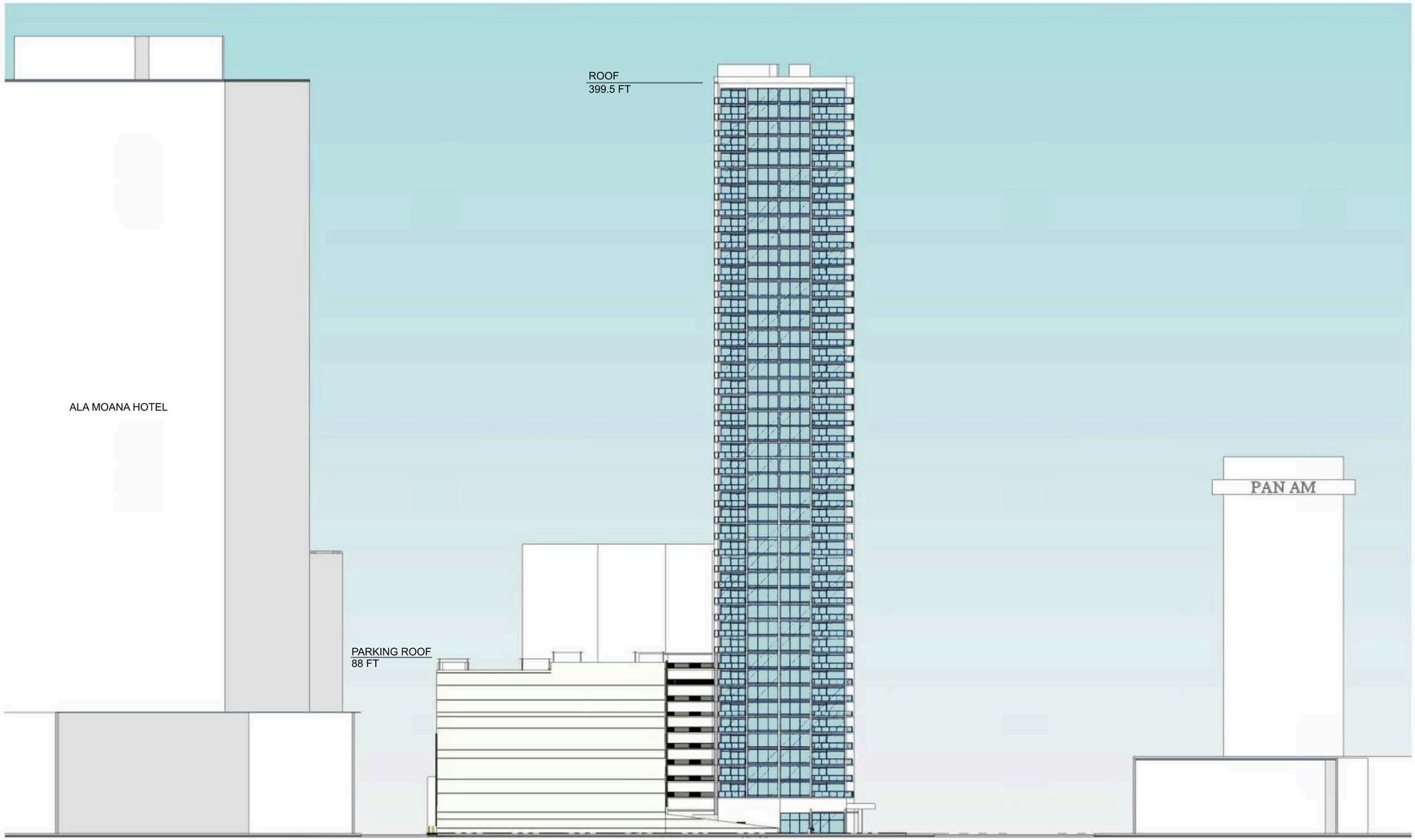
FRONT ELEVATION

Design Partners Incorporated

DRAWING NO.

05

13 March 2015



SAMKOO KAPIOLANI RESIDENCE

1631 KAPIOLANI BOULEVARD, HONOLULU, HAWAII

LEFT ELEVATION

Design Partners Incorporated

DRAWING NO.

06

13 March 2015

SAMKOO KAPIOLANI RESIDENCE

1631 KAPIOLANI BOULEVARD, HONOLULU, HAWAII

PERSPECTIVE VIEWS

Design Partners Incorporated

DRAWING NO.

07

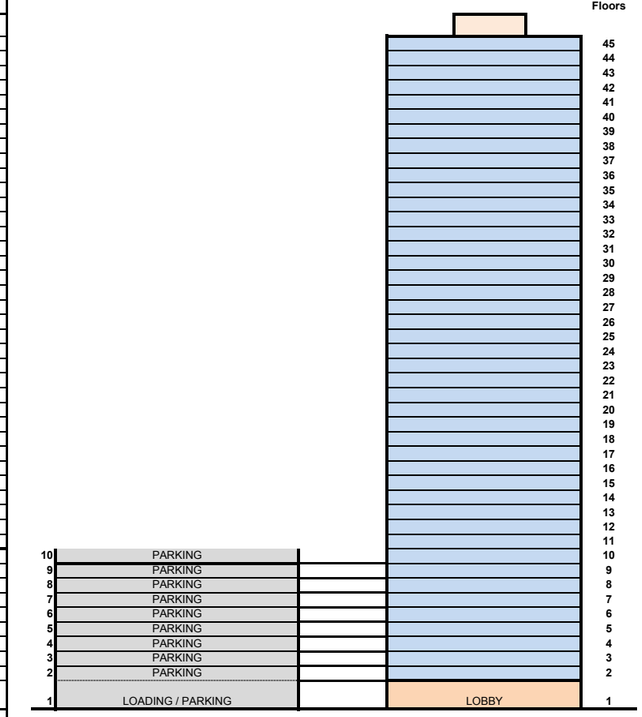
13 March 2015

SAMKOO PACIFIC DEVELOPMENT

Building Summary

3/13/2015

Resident Floors	Floors	Building Height per Floor	Building Height	Gross Floor Plate: Includes All Balconies SF	Gross Floor Plate: Excludes All Balconies SF	Gross Floor Plate: FAR Less F&G Bal	Residential (Saleable) No Balconies Net SF	Commercial (Tenant Space) SF	Amenities (Party room & Fitness) SF	Parking SF	Studio 18%	1 BR 36%	2 BR 36%	3 BR 9%	TOTAL UNITS per Floor	Required Number of Parking Per LUO
	Roof Element	18.0'	417.5	1,088	1,088	1,088										
	45	12.58'	399.5	11,623	10,956	11,540	8,282				2	4	4	1	11	15.5
	44	8.58'	386.9	11,623	10,956	11,540	8,282				2	4	4	1	11	15.5
	43	8.58'	378.4	11,623	10,956	11,540	8,282				2	4	4	1	11	15.5
	42	8.58'	369.8	11,623	10,956	11,540	8,282				2	4	4	1	11	15.5
	41	8.58'	361.2	11,623	10,956	11,540	8,282				2	4	4	1	11	15.5
	40	8.58'	352.6	11,623	10,956	11,540	8,282				2	4	4	1	11	15.5
	39	8.58'	344.0	11,623	10,956	11,540	8,282				2	4	4	1	11	15.5
	38	8.58'	335.5	11,623	10,956	11,540	8,282				2	4	4	1	11	15.5
	37	8.58'	326.9	11,623	10,956	11,540	8,282				2	4	4	1	11	15.5
	36	8.58'	318.3	11,623	10,956	11,540	8,282				2	4	4	1	11	15.5
	35	8.58'	309.7	11,623	10,956	11,540	8,282				2	4	4	1	11	15.5
	34	8.58'	301.1	11,623	10,956	11,540	8,282				2	4	4	1	11	15.5
	33	8.58'	292.6	11,623	10,956	11,540	8,282				2	4	4	1	11	15.5
	32	8.58'	284.0	11,623	10,956	11,540	8,282				2	4	4	1	11	15.5
	31	8.58'	275.4	11,623	10,956	11,540	8,282				2	4	4	1	11	15.5
	30	8.58'	266.8	11,623	10,956	11,540	8,282				2	4	4	1	11	15.5
	29	8.58'	258.2	11,623	10,956	11,540	8,282				2	4	4	1	11	15.5
	28	8.58'	249.7	11,623	10,956	11,540	8,282				2	4	4	1	11	15.5
	27	8.58'	241.1	11,623	10,956	11,540	8,282				2	4	4	1	11	15.5
	26	8.58'	232.5	11,623	10,956	11,540	8,282				2	4	4	1	11	15.5
	25	8.58'	223.9	11,623	10,956	11,540	8,282				2	4	4	1	11	15.5
	24	8.58'	215.3	11,623	10,956	11,540	8,282				2	4	4	1	11	15.5
	23	8.58'	206.8	11,623	10,956	11,540	8,282				2	4	4	1	11	15.5
	22	8.58'	198.2	11,623	10,956	11,540	8,282				2	4	4	1	11	15.5
	21	8.58'	189.6	11,623	10,956	11,540	8,282				2	4	4	1	11	15.5
	20	8.58'	181.0	11,623	10,956	11,540	8,224				2	4	4	1	11	15.5
	19	8.58'	172.4	11,623	10,956	11,540	8,224				2	4	4	1	11	15.5
	18	8.58'	163.9	11,623	10,956	11,540	8,224				2	4	4	1	11	15.5
	17	8.58'	155.3	11,623	10,956	11,540	8,224				2	4	4	1	11	15.5
	16	8.58'	146.7	11,623	10,956	11,540	8,224				2	4	4	1	11	15.5
	15	8.58'	138.1	11,623	10,956	11,540	8,224				2	4	4	1	11	15.5
	14	8.58'	129.5	11,623	10,956	11,540	8,224				2	4	4	1	11	15.5
	13	8.58'	121.0	11,623	10,956	11,540	8,224				2	4	4	1	11	15.5
	12	8.58'	112.4	11,623	10,956	11,540	8,224				2	4	4	1	11	15.5
	11	8.58'	103.8	11,623	10,956	11,540	8,224				2	4	4	1	11	15.5
	10	8.58'	95.2	11,623	10,956	11,540	8,224			26,827	2	4	4	1	11	15.5
	9	8.58'	86.6	11,623	10,956	11,540	8,224			26,827	2	4	4	1	11	15.5
	8	8.58'	78.1	11,623	10,956	11,540	8,224			26,827	2	4	4	1	11	15.5
	7	8.58'	69.5	11,623	10,956	11,540	8,224			26,827	2	4	4	1	11	15.5
	6	8.58'	60.9	11,623	10,956	11,540	8,224			26,827	2	4	4	1	11	15.5
	5	8.58'	52.3	11,623	10,956	11,540	8,224			26,827	2	4	4	1	11	15.5
	4	8.58'	43.7	11,623	10,956	11,540	8,224			26,827	2	4	4	1	11	15.5
	3	8.58'	35.2	11,623	10,956	11,540	8,224			26,827	2	4	4	1	11	15.5
	2	8.58'	26.6	11,623	10,956	11,540	8,224			26,827	2	4	4	1	11	15.5
	1	18.0'	18.0	17,486	17,486	17,486	877	3,358	2,628	22,650			1		1	
	Sub-total															
	TOTAL	399.52'		529,986	500,638	526,334	322,773	3,358	2,628	264,093	88	176	177	44	485	682



Building Gross Area Summary

Tower Gross w/ Balconies		529,986
Amenities (Party Room and Fitness)	(2,628)	
Commercial	(3,358)	
Parking		264,093
TOTAL		794,079
FAR		9.36

Land Area 56,250

RESIDENTIAL PARKING REQUIRED: 682

GUEST PARKING REQUIRED (10%): 49

ELECTRIC CAR CHARGING PARKING PROPOSED (1%): 8

COMMERCIAL PARKING REQUIRED: 6

TOTAL PARKING REQUIRED: 745

E. PHASE I ENVIRONMENTAL ASSESSMENT

PHASE I
ENVIRONMENTAL SITE ASSESSMENT

TMK: (1) 2-3-041:009 & (1) 2-3-041:006
1631 & 1637 KAPIOLANI BOULEVARD
HONOLULU, OAHU, HAWAII

Prepared For:

Sam Koo Pacific, LLC & Sam Koo Hawaii, LLC
1631 Kapiolani Boulevard, Suite 200
Honolulu, Hawaii 96814

September 29, 2014

Prepared By:

Central Planet Repair, LLC.
236 Kuahiwi Avenue
Wahiawa, HI 96786
808/216-6555
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CPR PROJECT 74-2

Central Planet Repair, LLC

Comprehensive Environmental Services
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236 Kuahiwi Avenue, Wahiawa, Hawaii 96786
Phone: 808/216-6555

September 29, 2014

Sam Koo Pacific, LLC
Sam Koo Hawaii, LLC
1631 Kapiolani Boulevard, Suite 200
Honolulu, Hawaii 96814

Attention: Mr. Timothy Yi, General Manager

Subject: **Phase I Environmental Site Assessment**
TMK: (1) 2-3-041:009 & (1) 2-3-041:006
1631 & 1637 Kapiolani Boulevard
Honolulu, Oahu, Hawaii
CPR Project: 74-2

Dear Mr. Yi:

Central Planet Repair, LLC (CPR) has performed a Phase I Environmental Site Assessment (ESA) of the subject site. The purpose of this investigation was to evaluate the presence or likely presence of materials considered hazardous to human health and the environment that may impact the site.

Our Phase I ESA was conducted in accordance with the scope of work contained in our proposal dated August 19, 2014. A Phase I ESA comprises a number of individual elements whose basic nature and extent are determined in accordance with the standard of care applicable to Phase I ESAs. The standard of care is commonly defined as the care applied by the ordinary practitioner at the time and in the area where the ESA was performed. We believe that we have complied with the applicable standard of care within the limits of our scope of service described in our proposal and repeated below.

The accompanying report is an instrument of service of CPR. The report summarizes our findings and relates our opinions with respect to the site and potential sources of contamination at the site. Note that our findings and opinions are based on information that we obtained on given dates through records review, site review, and related activities. It is possible that other information exists or subsequently has become known, just as it is possible for conditions we observed to have changed after our observation. For these and associated reasons, CPR and many of its peers routinely advise clients for ESA services that it would be a mistake to place unmerited faith in findings and opinions conveyed via ESA reports. CPR cannot under any circumstances warrant or guarantee that not finding indicators of hazardous materials means that hazardous materials do not exist on the site.

-oOo-

Please contact us at (808) 216-6555 with any questions or comments regarding this project.

Sincerely,
Central Planet Repair, LLC

Ned Murphy
Consulting Geochemist

Three copies submitted

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LIST OF STANDARD ACRONYMS

ASTM	American Society for Testing and Materials
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CERCLIS	Comprehensive Environmental Response Compensation and Liability Information System
CFR	Code of Federal Regulations
CPR	Central Planet Repair, LLC
DOCKET	Civil Enforcement cases
EPA	U.S. Environmental Protection Agency
ERNS	Emergency Response Notification System
ESA	Environmental Site Assessment
FIRM	Flood Insurance Rate Map
HDOH	State of Hawaii, Department of Health
HEER	Department of Health, Hazard Evaluation and Emergency Response Office
LUST	leaking underground storage tank
NASA	National Aeronautical and Space Administration
NFA	No Further Action
NPL	National Priorities List (Superfund sites)
PADS	PCB Activity Database
PAH	Polynuclear aromatic hydrocarbon
PCB	Polychlorinated biphenyl
RCRA	Resource Conservation and Recovery Act
SOSC NFA	State On-Scene Coordinator No Further Action
SSTS	Section Seven Tracking System (pesticide producers)
TMK	Tax Map Key
TRI	Toxic Release Inventory
TSCA	Toxic Substances Control Act
TSD	Treatment, storage or disposal (category of RCRA facility)
UIC	Underground Injection Control
U.S.	United States
USC	United States Code
USDA	United States Department of Agriculture
USGS	United States Geological Survey (US Dept. of the Interior)
UST	Underground storage tank
VCP	Voluntary Response Program

PHASE I
ENVIRONMENTAL SITE ASSESSMENT
TMK: (1) 2-3-041:009 & (1) 2-3-041:006
1631 & 1637 KAPIOLANI BOULEVARD
HONOLULU, OAHU, HAWAII

1.0 EXECUTIVE SUMMARY

This report presents the results of Central Planet Repair, LLC's (CPR's) Phase I Environmental Site Assessment (ESA) of TMK: (1) 2-3-041:009 & (1) 2-3-041:006, 1631 & 1637 Kapiolani Boulevard, Honolulu, Oahu, Hawaii (the "subject property").

CPR has performed this Phase I Environmental Site Assessment in accordance with the scope and limitations of ASTM Practice E1527-13 (ASTM E1527-13) and All Appropriate Inquiry (AAI) which includes 40 CFR Part 312, §312.21 and §312.31. Any exceptions to, or deletions from, this practice are described in Section 2.5 of this report.

The findings of this Phase I ESA are that the following recognized environmental conditions (RECs) were likely present on the subject property:

- The 1949 Sanborn Map shows the structure located at the west side of the Parcel 009 as "clo. clean'g" that probably means "clothes cleaning". It is noted that the Sanborn Maps typically indicate "dry cleaning" as separate from "clothes cleaning". The 1949 Sanborn Map does not show the presence of a fuel storage tank on site. The source of hot water for the laundry is not known. The presence of a laundry without indications of dry cleaning or fuel storage does not constitute a recognized environmental condition.

- The R. M. Towill Corporation noted that the general area around the property has received fill material from a number of sources over the years, including trash, construction debris, and sugar processing by products, dredged materials, and fill dirt. A subsurface investigation performed on an adjacent property did not reveal any hazardous materials. If excavation work is planned for the subject property, additional subsurface investigations may be recommended or the excavation may be monitored by

a qualified professional to allow for the identification of suspect hazardous materials (*Kapiolani Commercial Property Parcel (1)-2-3-41: 009, Honolulu, Hawaii.* R. M. Towill Corporation, February, 2002).

The following environmental conditions, which are not considered to be *recognized environmental conditions*, as defined by ASTM, were revealed during this assessment:

- Because the buildings on the subject property were built prior to 1980, suspect asbestos-containing materials (ACM) may be an issue at the subject property. An asbestos inspection was performed on February 7, 2001 by the R. M. Towill Corporation to identify any friable asbestos containing building materials. A total of seven building materials were sampled and no asbestos was in any of the samples. However, no samples of floor tiles, mastics, roofing materials or other not friable materials were collected as a part of this inspection.

- Because the buildings on the subject property were built prior to 1978, lead-based paint (LBP) could be an issue at the subject property.

The findings of this Phase I ESA are that the following Recognized Environmental Conditions (RECs) are present on the adjoining properties:

- *Ala Moana Hotel.* 410 Atkinson Dr. SSW 0.080 mi. - Small quantity generator (SQG). SQG generates between 100 kg and 1,000 kg of hazardous waste per month. Violation Status: No violations found.

- *Pan Am Bldg*. 1600 Kapiolani Blvd. NW 0.036 mi. - Conditionally Exempt Small Quantity generator (CESQG). CESQG generates less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month. Violation Status: No violations found.

  The SQG and CESQG sites will not affect the environmental condition of the subject property if they are operated and maintained in accordance with the Federal and State of Hawaii rules and regulations.

- The 1955 Sanborn Map shows an auto repairing facility including a gas station marked as "gas & oil" on the south adjoining property located across Kona street. This property is now occupied by the Ala Moana Hotel. Substantial excavation was conducted during the construction of this building. No adverse effect on the subject property is expected from the former "gas & oil" sites due to the site distance to the subject property and downgradient location.

The findings of this Phase I ESA are that the Recognized Environmental Conditions (RECs) are present on the surrounding properties. However, no adverse effects on the subject property are expected from these properties due to the distance to the subject property.

Based on the findings of this Phase I ESA, no additional environmental actions are warranted for the subject property at the date of this report.

2.0 INTRODUCTION

2.1 OVERVIEW

This report presents the results of Central Planet Repair, LLCs (CPR's) Phase I Environmental Site Assessment (ESA) for the subject site. The general location of the site is shown on the Site Location Map in Appendix A, Figure 1.

Our work was performed as summarized in our proposal, dated August 19, 2014, which constitutes the contractual agreement between CPR and Sam Koo Pacific, LLC & Sam Koo Hawaii, LLC for the services provided. Our Phase I investigation was performed in general accordance with the American Society for Testing and Materials (ASTM) "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process" (ASTM Designation E1527-13) and All Appropriate Inquiry (AAI).

Good commercial and customary practice for conducting environmental site assessments has the goal of providing an independent, professional opinion regarding recognized environmental conditions, as defined by ASTM, associated with the subject property. The term *recognized environmental conditions* means the presence or likely presence of any *hazardous substances* or *petroleum products* in, on, or at a *property*: (*1*) due to any *release* to the *environment*; (*2*) under conditions indicative of a *release* to the *environment*; or (*3*) under conditions that pose a *material threat* of a future *release* to the *environment*. *De minimis* conditions are not *recognized environmental conditions*.

The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include *de minimis* conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be *de minimis* are not RECs.

2.2 PURPOSE

CPR conducted this ESA to evaluate whether materials considered hazardous to human health and the environment, present on the site or in the surrounding area,

may impact the subject site. We conducted the environmental assessment using available information sources with the potential to identify past or on-going problems at the subject property or adjacent properties. The ASTM Standard prescribes that the goal of the ESA process is to identify "Recognized Environmental Conditions" (RECs) which are defined as the "presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property, or into the ground, groundwater, or surface water of the property."

2.3 SCOPE OF WORK

CPR performed the following scope of work for this ESA:

- **Review of site history.** CPR examined readily available documents, consisting of previous environmental reports, topographic maps, and insurance maps.

- **Review of regulatory records.** We examined government records regarding environmental conditions, citations, complaints, and permits at the site and at neighboring properties. We reviewed records from or contacted the following agencies: U.S. Environmental Protection Agency (EPA), State of Hawaii Department of Health (DOH) Hazardous Waste Program, DOH Underground Storage Tank (UST) Program, DOH Underground Injection Control Program, and DOH Hazard Evaluation and Emergency Response (HEER) Program.

- **Review of site geology and hydrogeology.** We reviewed readily available published information on surface and subsurface conditions at the site and surrounding area. We used this information to assess topography, drainage, surface water bodies, anticipated subsurface geology, and groundwater occurrence and usage in the area.

- **Site reconnaissance.** We performed a site reconnaissance of the site to note visual signs of contamination, and conducted a brief assessment of neighboring properties. During our site reconnaissance we specifically looked for stained soil, dead or stressed vegetation, hazardous materials, electrical transformers and capacitors, above ground and underground storage tanks, disposal areas,

maintenance areas, groundwater wells, sumps, storm drains, and cesspools/sewers.

- **Data evaluation and report preparation.** We evaluated the information collected and prepared this report documenting our assessment and providing our conclusions.

2.4 SIGNIFICANT ASSUMPTIONS

While this report provides an overview of potential environmental conditions, both past and present, the environmental assessment is limited by the availability of information at the time of the assessment. It is possible that unreported disposal of waste or illegal activities impairing the environmental status of the property may have occurred which could not be identified. The conclusions and recommendations regarding environmental conditions that are presented in this report are based on the scope of work authorized by Sam Koo Pacific, LLC & Sam Koo Hawaii, LLC. Note, however, that virtually no scope of work, no matter how exhaustive, can identify all contaminants or all conditions above and below ground.

No assumptions apply to the findings of this Phase I ESA other than specifically referenced in the individual sections of text or as provided in the ASTM E1527-13 Standard (ASTM E1527-13).

2.5 LIMITATIONS AND EXCEPTIONS OF ASSESSMENT

The report has been prepared in accordance with generally accepted environmental methodologies referred to in ASTM E1527-13, and contains all of the limitations inherent in these methodologies. No other warranties, expressed or implied, are made as to the professional services provided under the terms of our contract and included in this report.

The conclusions of this report are based in part, on the information provided by others. The possibility remains that unexpected environmental conditions may be encountered at the site in locations not specifically investigated. Should such an event occur, CPR must be notified in order that we may determine if modifications to our conclusions are necessary.

The services performed and outlined in this report were based, in part, upon visual observations of the site and attendant structures. Our opinion cannot be extended to portions of the site that were unavailable for direct observation, reasonably beyond the control of CPR.

The objective of this report was to assess environmental conditions at the site, within the context of our contract and existing environmental regulations within the applicable jurisdiction. Evaluating compliance of past or future owners with applicable local, provincial and federal government laws and regulations was not included in our contract for services.

Our observations relating to the condition of environmental media at the site are described in this report. It should be noted that compounds or materials other than those described could be present in the site environment.

Phase I ESAs, by their very nature, are limited. CPR has endeavored to meet what it believes is the applicable standard of care and, in so doing, is obliged to advise Sam Koo Pacific, LLC & Sam Koo Hawaii, LLC of Phase I ESA limitations. This ESA did not include any investigation with respect to site geotechnical concerns, and did not include any sampling or laboratory testing for mold or bioaerosols, radon, methane, asbestos-containing building materials, or lead-based paint. No subsurface environmental investigation or sampling was performed. Our investigation was limited to the procedures described in the Phase I ESA Standard Practice ASTM E1527-13 and AAI.

CPR has made one exception to the Phase I ESA procedures specified by ASTM E1527-13. Because the State of Hawaii does not compile a list of hazardous waste sites identified for investigation or remediation (NPL or CERCLIS equivalents), we are unable to include such a list in our records review. The database search firm reviewed the HDOH HEER *Sites of Interest Database* instead (see section 5.1.12).

2.5.1 Data Gaps

The following data gaps were identified during the investigation:

- No data gaps were identified during the investigation.

2.6 SPECIAL TERMS AND CONDITIONS

Sam Koo Pacific, LLC & Sam Koo Hawaii, LLC contracted CPR to perform this Phase I ESA. The ESA was conducted and this report was prepared for the sole use of Sam Koo Pacific, LLC & Sam Koo Hawaii, LLC. This report shall not be relied upon by or transferred to any other party without express written authorization from CPR.

2.7 USER RELIANCE

The conclusions presented in this report are professional opinions based solely upon visual observations of the site and vicinity, and our interpretation of the available historical and regulatory information and documents reviewed. They are intended exclusively for the purpose outlined herein and apply only to the site location and Sam Koo Pacific, LLC & Sam Koo Hawaii, LLC. The scope of services performed in execution of this investigation may not be appropriate to satisfy the needs of other users, and any use or re-use of this document or the findings, conclusions, or recommendations presented herein is at the sole risk of said user.

Opinions and recommendations presented herein apply to site conditions existing at the time of our investigations and those reasonably foreseeable; they cannot necessarily apply to site changes of which this office is not aware and has not had the opportunity to evaluate.

3.0 SITE DESCRIPTION

3.1 LOCATION AND LEGAL DESCRIPTION

The subject property is located in Honolulu, Oahu, Hawaii (Figure 1 - Site Location Map in Appendix A). The subject property is depicted on Figure 2 - Tax Map in Appendix B and on Figure 3 – Site Plan in Appendix C. The TMK: (1) 2-3-041:009 & (1) 2-3-041:006 parcels are located at 1631 & 1637 Kapiolani Boulevard, Honolulu and contains an area of 1.2913 Acres.

Site photographs are provided in Appendix D. Historical research documentation is provided in Appendix E.

3.2 CURRENT USES OF THE PROPERTY

Three buildings are located at TMK: (1) 2-3-041:009 & (1) 2-3-041:006 parcel of land. The buildings are occupied by three restaurants, a hair dresser, an auto dealership, and offices.

3.3 STRUCTURES, ROADS, AND OTHER IMPROVEMENTS ON THE SITE

Three buildings and parking for personal, customers, and dealership vehicles are located at the TMK: (1) 2-3-041:009 & (1) 2-3-041:006 parcels (Appendix C, Figure 3).

Utilities provided to the subject sites include water, sanitary sewer, electricity, and telephone.

3.4 CURRENT USES OF ADJOINING PROPERTIES

The current uses of the adjoining properties are (Figures 3, Appendix C):

North	Kapiolani Boulevard. Restaurants, shops, and offices are located across the boulevard.
East	Parking stalls and Buildings. The buildings area occupied by shops, restaurants and clubs.

South	Kona Street. Ala Moana Hotel Complex is located across Kona Street.
West	Multi-story office building and condos.

4.0 USER PROVIDED INFORMATION

4.1 TITLE RECORDS

The client did not provide recorded land title records and lien records. The property ownership information was obtained from the City and County of Honolulu's Real Property Assessment and Tax Billing Information web site. Chain of Title information was not provided. The property ownership is discussed in Section 4.5 below.

4.2 ENVIRONMENTAL LIENS OR ACTIVITY AND USE LIMITATIONS

CPR is not aware of any environmental cleanup liens against the property that are filed or recorded under federal, tribal, state or local law.

CPR is not aware of any Activity and Use Limitations, such as engineering controls, land use restrictions or institutional controls that are in place at the site and/or have been filed or recorded in a registry.

4.3 SPECIALIZED KNOWLEDGE OR EXPERIENCE

CPR does not have any specialized knowledge or experience related to the property or nearby properties.

4.4 COMMONLY KNOWN OR REASONABLY ASCERTAINABLE INFORMATION

The recent past uses of the property were obtained from interviews with the property owner. The historical use of the property was obtained from publicly available records.

The property owner does not know of any specific chemicals that are present or once were present at the property.

4.5 OWNER, PROPERTY MANAGER, AND OCCUPANT INFORMATION

Based on knowledge obtained from the City and County of Honolulu's Real Property Assessment and Tax Billing Information web site, the property is owned by Sam Koo Pacific LLC.

TMK: (1) 2-3-041:009 & (1) 2-3-041:006 parcels of land are occupied by three restaurants, a hair dresser, an auto dealership, and offices.

4.6 REASON FOR PERFORMING THIS PHASE I ASSESSMENT

The Phase I ESA was prepared by CPR at the request of Sam Koo Pacific, LLC & Sam Koo Hawaii, LLC. This Phase I ESA was requested for the following reasons:

- Due diligence for financing the site development.

4.7 OTHER USER PROVIDED INFORMATION

Sam Koo Pacific, LLC provided the 1990 Geotechnical Engineering Exploration Report, 2002 Phase I Reports for the Parcel (1) 2-3-041: 009, and the 2006 Phase I Reports for the Parcel (1) 2-3-041: 006 (see Section 5.4.4).

5.0 RECORDS REVIEW

5.1 STANDARD ENVIRONMENTAL RECORD SOURCES

5.1.1 Overview

CPR used a regulatory database search service, Environmental Data Resources, Incorporated (EDR), to review standard federal and state government databases of known or potential sources of hazardous materials or waste. The site assessment report provided to CPR by EDR is attached as Appendix F. ASTM E1527-13 (ASTM, 2013) specifies a minimum search distance for specific environmental record sources. The following record sources were searched for incidents or sites within the listed search distances of the proposed project site.

Standard Environmental Record Sources	**Search Distance (miles)**
Federal NPL (National Priorities List)	1.0
Federal Proposed NPL (Proposed National Priorities List)	1.0
Federal Delisted NPL Site List	0.5
Federal NPL LIENS (Superfund Liens)	Target Property
Federal CERCLIS (Comprehensive Environmental Response, Compensation and Liability Information System)	0.5
Federal CERCLIS NFRAP (CERCLIS sites where no further remedial action is planned under CERCLA)	0.5
Federal LIENS 2 (CERCLA Lien Information)	Target Property
Federal CORRACTS (Corrective Action Report)	1.0
Federal RCRA-TSDF (Resource Conservation and Recovery Act – Transportation, Storage and Disposal)	0.5
Federal RCRA-LQG (RCRA – Large Quantity Generators)	0.25
Federal RCRA-SQG (RCRA – Small Quantity Generators)	0.25
Federal US ENG CONTROLS (Engineering Controls Sites List)	0.5

Federal US INST CONTROL (Sites with Institutional Controls)	0.5
Federal ERNS (Emergency Response Notification System)	Target Property
Federal HMIRS (Hazardous Materials Information Reporting System)	Target Property
Federal DOT OPS (Incident and Accident Data)	Target Property
Federal US CDL (Clandestine Drug Labs)	Target Property
Federal US BROWNFIELDS (A Listing of Brownfields Sites)	0.5
Federal DOD (Department of Defense Sites)	1.0
Federal FUDS (Formerly Used Defense Sites)	1.0
Federal LUCIS (Land Use Control Information System)	0.5
Federal CONSENT (Superfund (CERCLA) Consent Decrees)	1.0
Federal ROD (Records Of Decision)	1.0
Federal UMTRA (Uranium Mill Tailings Sites)	0.5
Federal DEBRIS REGION 9 (Torres Martinez Reservation Illegal Dump Site Locations)	0.5
Federal ODI (Open Dump Inventory)	0.5
Federal MINES (Mines Master Index File)	0.25
Federal TRIS (Toxic Chemical Release Inventory System)	Target Property
Federal TSCA (Toxic Substances Control Act)	Target Property
Federal FTTS (FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)	Target Property
Federal HIST FTTS (FIFRA/TSCA Tracking System Administrative Case Listing)	Target Property
Federal SSTS (Section 7 Tracking Systems)	Target Property
Federal ICIS (Integrated Compliance Information System)	Target Property
Federal PADS (PCB Activity Database System)	Target Property
Federal MLTS (Material Licensing Tracking System)	Target Property
Federal RADINFO (Radiation Information Database)	Target Property
Federal RAATS (RCRA Administrative Action Tracking System)	Target Property
PWS (Public Water System Data)	Target Property

State DRYCLEANERS (Permitted Drycleaner Facility Listing)	0.25
State SCRD DRYCLEANERS (State Coalition for Remediation of Drycleaners Listing)	Target Property
State BROWNFIELDS (Brownfields Sites)	0.5
State AIRS (List of Permitted Facilities)	Target Property
State HWS (Hazardous waste sites, NPL or CERCLA equivalents) *	1.0
State LUST (Leaking underground storage tank) list	0.5
State registered UST list	0.25
State and tribal institutional control / engineering control registries (ENG CONTROLS, INST CONTROL)	0.5
Facility Index System/Facility Registry System (FINDS)	Target Property
Release Notifications (SPILS)	Target Property
State and tribal landfill and/or solid waste disposal site lists (SWF/LF)	0.5
State and tribal voluntary cleanup sites(VCP)	0.5

* Since there is no State database of NPL or CERCLA equivalents, this database was not included in EDR's report. EDR reviewed the State of Hawaii Department of Health (DOH) Office of Hazard Evaluation and Emergency Response (HEER) "Sites of Interest" database instead.

The Subject Property was not listed in any of the databases searched by EDR.

Surrounding sites were identified in the following databases.

5.1.2 U.S. EPA National Priorities List

The NPL is a list of properties with the highest priority for cleanup under the EPA Hazard Ranking System (40 CFR Part 300). The list is compiled by the EPA pursuant to CERCLA 42 USC §9605 (a)(8)(B).

EDR found no listed or proposed NPL facilities in the area vicinity of the site.

5.1.3 U.S. EPA Delisted National Priorities List

The delisted NPL is a list of properties that have undergone ranking for the NPL and initially scored high enough to be on the NPL. These sites subsequently have either been cleaned up to applicable standards or have been reevaluated with additional information to be removed or "delisted" from the NPL.

EDR found no delisted NPL facilities in the area vicinity of the site.

5.1.4 U.S. EPA CERCLIS List

This list is compiled by EPA and contains sites that EPA has investigated or is currently investigating for potential hazardous substance contamination for possible inclusion on the NPL.

EDR found no listed or proposed CERCLIS facilities within one-half mile of the subject property.

5.1.5 Federal CERCLIS NFRAP site list

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned. Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

A review of the CERC-NFRAP list, as provided by EDR, and dated 10/25/2013 has revealed that there is 1 CERC-NFRAP site within approximately 0.5 miles of the target property.

First Development Inc. 1777 Kapiolani Blvd E 0.173 mi. Priority Level: NFRAP-Site does not qualify for the NPL based on existing information.

No adverse effect on the subject property is anticipated due to the CERC-NFRAP site distance to the subject property.

5.1.6 U.S. EPA CORRACTS Lists

The CORRACTS list is compiled by the EPA and contains those regulated facilities that have notified EPA as facilities regulated by RCRA. The RCRA list is compiled by the EPA and contains those regulated facilities that have notified EPA as hazardous waste generators, transporters or treatment, storage or disposal facilities under RCRA.

EDR found no CORRACTS site within one mile of the subject property.

5.1.7 Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

EDR found no RCRA-TSDF Facilities within one-half mile of the subject property.

5.1.8 U.S. EPA RCRA-LQG, RCRA-SQG, and RCRA-CESQG Lists

The RCRA database is compiled by the EPA and contains those regulated facilities that have notified the EPA as being hazardous waste generators, transporters, or treatment, storage or disposal facilities under RCRA. Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month. Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month. Conditionally Exempt

Small Quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 03/11/2014 has revealed that there are 4 RCRA-SQG sites within approximately 0.25 miles of the target property.

Ala Moana Hotel. 410 Atkinson Dr SSW 0.080 mi. Violation Status: No violations found.

Holiday Action Gas. 801 Kaheka St N 0.130 mi. Violation Status: No violations found.

Walgreens Store No. 12072. 1470 Kapiolani Blvd. NW 0.205 mi. Violation Status: No violations found.

State of Hawaii DLNR Dobor. 1651 Ala Moana Blvd SSW 0.238 mi. Violation Status: No violations found.

The RCRA-SQG sites will not affect the environmental condition of the subject property if they are operated and maintained in accordance with the Federal and State of Hawaii rules and regulations.

A review of the RCRA-CESQG list, as provided by EDR, and dated 03/11/2014 has revealed that there are 7 RCRA-CESQG sites within approximately 0.25 miles of the target property.

Pan Am Bldg. 1600 Kapiolani Blvd NW 0.036 mi. Violation Status: No violations found.

AOAO Yacht Harbor Towers. 1600_1650 Ala Moana Blvd SSW 0.145 mi. Violation Status: No violations found.

Rogers Repair Inc. 1687 Kalakaua Ave ENE 0.149 mi. Violation Status: No violations found.

Kalakua Transmission Inc. 1665 Kalakua Ave NE 0.162 mi. Violation Status: No violations found.

First Development Inc. 1777 Kapiolani Blvd E 0.173 mi. Violation Status: No violations found.

Hawaii Convention Center. 1801 Kalakaua Avenue E 0.204 mi. Violation Status: No violations found.

Ala Moana Unocal. 1651 Ala Moana Blvd SSW 0.238 mi. Violation Status: No violations found.

The RCRA-CESQG sites will not affect the environmental condition of the subject property if they are operated and maintained in accordance with the Federal and State of Hawaii rules and regulations.

5.1.9 U.S. ENG CONTROLS List

U.S. ENG CONTROLS: Engineering Controls Sites List. A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

EDR found no listed or proposed ENG CONTROLS facilities within one-half mile of the subject property.

5.1.10 U.S. INST CONTROL List

US INST CONTROL: Sites with Institutional Controls. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

EDR found no listed or proposed INST CONTROL facilities within one-half mile of the subject property.

5.1.11 U.S. EPA ERNS List

This list is compiled by the EPA and contains reported CERCLA hazardous substance releases or spills in quantities greater than the reportable quantity, as maintained at the National Response Center.

EDR examined this list, and found no reported incidents to have occurred on the subject site.

5.1.12 State of Hawaii DOH Hazardous Waste Sites (SHWS)

The State Hazardous Waste Sites records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. The data come from the State of Hawaii, Department of Health.

A review of the HI SHWS list, as provided by EDR, and dated 01/04/2014 has revealed that there are 48 HI SHWS sites within approximately 1 mile of the target property.

New Office Lounge. 1551 Kapiolani Blvd NW 0.086 mi. Hazard Priority: Medium. Facility Status: Site Cleanup Completed (NFA).

HECO Substation: Makaloa Substation. 1544 Makaloa St NW 0.144 mi. Hazard Priority: Low.

Roger's Repair Inc. 1687 Kalakaua Ave ENE 0.149 mi. Hazard Priority: NFA.

Former Kalakaua Transmission Inc. 1665 Kalakaua Ave NE 0.159 mi. Hazard Priority: NFA.

Yacht Harbor Towers. 1600 Ala Moana Blvd SSW 0.164 mi. Hazard Priority: NFA.

Aloha Motors 1777 Kapiolani Blvd. 1777 Kapiolani Blvd E 0.173 mi. Hazard Priority: NFA.

1609 Ala Wai Diesel Release. 1609 Ala Wai Blvd SSE 0.204 mi. Hazard Priority: NFA.

Hawaii Convention Center. 1801 Kalakaua Ave E 0.204 mi. Hazard Priority: NFA.

Walgreens Keeamoku. 1460 Kapiolani Boulevar NW 0.216 mi. Hazard Priority: Not reported.

Like Like Plaza Petroleum Contamination. 745 Keeaumoku St NNW 0.315 mi. Hazard Priority: NFA.

Cutter Chevrolet. 1391 Kapiolani Blvd WNW 0.328 mi. Hazard Priority: NFA.

Hobron Hotel. 1744 Kaioo Dr SSE 0.354 mi. Hazard Priority: NFA.

Motor Supply. 726 Sheridan St NW 0.372 mi. Hazard Priority: NFA.

Hakuyosha Hawaii, Inc. 730 Sheridan St NW 0.372 mi. Hazard Priority: High.

Sears Ala Moana. 1450 Ala Moana Blvd W 0.396 mi. Hazard Priority: NFA.

Aloha/King Self Storage. 1414 Kalakaua Ave NNE 0.470 mi. Hazard Priority: NFA.

The Pavillion. 1925 Kalakaua Ave SE 0.473 mi. Hazard Priority: NFA.

Cenpac Properties - Office Building. 615 Piikoi St WNW 0.496 mi. Hazard Priority: Medium.

Continental Auto Services. 1918 Algaroba St ENE 0.520 mi. Hazard Priority: NFA.

Meadow Gold Dairies (Ice Cream Plant). 1418 Young ST N 0.520 mi. Hazard Priority: NFA.

7-11 Kalakaua. 1323 Kalakaua Ave NNE 0.531 mi. Hazard Priority: NFA.

Durant Properties. 1235 Kona St WNW 0.564 mi. Hazard Priority: NFA.

Evershine X. 1230 Kapiolani Blvd WNW 0.574 mi. Hazard Priority: NFA.

Chevron 2002 Kalakaua. 2002 Kalakaua Ave SE 0.578 mi. Hazard Priority: NFA.

Grace Otsuka Apartment Complex. 1233 Young St NNW 0.639 mi. Hazard Priority: NFA.

Wallys Garden Center. 1935 S Beretania St NE 0.649 mi. Hazard Priority: Medium.

1012 Piikoi Street, Anin-Piikoi. 1012 Piikoi St NNW 0.649 mi. Hazard Priority: NFA.

McCully Union Service. 2105 S King St ENE 0.663 mi. Hazard Priority: NFA.

Kapiolani Women's & Children's Medical Center. 1319 Punahou St NNE 0.668 mi. Hazard Priority: NFA.

McDonald's Restaurant Soil & Groundwater Contamination. 2121 S King St ENE 0.670 mi. Hazard Priority: Low.

Koolani Tower Project. 1189 Waimanu St WNW 0.672 mi. Hazard Priority: NFA.

Cartwright Neighborhood Park. Keeaumoku St & Matlock Ave N 0.696 mi. Hazard Priority: NFA.

Schuman Carriage Motors, Ltd. 1234 S Beretania St NNW 0.717 mi. Hazard Priority: NFA.

Royal Gardens Hotel Diesel. 440 Olohana St SE 0.723 mi. Hazard Priority: NFA.

King Kalakaua Plaza. 2080 Kalakaua Ave SE 0.724 mi. Hazard Priority: NFA.

Reserve Housing Tower Soil Contamination. 1141 Waimanu St WNW 0.726 mi. Hazard Priority: NFA.

Self Storage 1. 438 Kamakee St WNW 0.787 mi. Hazard Priority: NFA.

Ala Wai Cove Condominium Apartments. 509 University Ave ESE 0.820 mi. Hazard Priority: Low.

Jas W Glover Ltd. 1046 Waimamu St WNW 0.839 mi. Hazard Priority: NFA.

1310 Pensacola Street. 1310 Pensacola St NNW 0.872 mi. Hazard Priority: NFA.

Pacifica Condominium. 1009 Kapiolani Blvd WNW 0.872 mi. Hazard Priority: NFA.

Waikiki Bazaar. 2174 Kalakaua Ave SE 0.896 mi. Hazard Priority: NFA.

Hale Pua Nui UST Removal. 228 Beach Walk SSE 0.901 mi. Hazard Priority: Low.

Waikiki Beach Walk Resort. 205 Beach Walk Ave SSE 0.925 mi. Hazard Priority: NFA.

Iolani School Petroleum Odor. 563 Kamoku St ESE 0.945 mi. Hazard Priority: NFA.

Hawaii Opera Theater Sets & Props Warehouse. 962 Kawaiahao St WNW 0.986 mi. Hazard Priority: NFA.

Symphony Park. 850 Kapiolani Blvd WNW 0.995 mi. Hazard Priority: NFA.

Punahou School - Barwick Playground. 1601 Punahou St NNE 0.999 mi. Hazard Priority: NFA.

No adverse effect on the subject property is anticipated due to the SHWS site status (NFA) and/or distance to the subject property.

5.1.13 State of Hawaii Landfill/Solid Waste Disposal Sites (SWF/LF)

EDR examined DOH Solid and Hazardous Waste Branch's list of permitted landfills in the State of Hawaii for landfills or disposal sites located within one-half (0.5) mile of the subject site. None of the permitted landfills on the Island of Oahu are within one-half (0.5) mile of the subject site.

5.1.14 State of Hawaii DOH Leaking UST List (LUST)

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come

from the Department of Health's Active Leaking Underground Storage Tank Log Listing.

A review of the HI LUST list, as provided by EDR, and dated 06/30/2014 has revealed that there are 29 HI LUST sites within approximately 0.5 miles of the target property.

C&C Pawaa Fire Station. 1610 Makaloa St NNE 0.061 mi.
Facility Status: Site Cleanup Completed (NFA)

New Office Lounge. 1551 Kapiolani Blvd NW 0.086 mi.
Facility Status: Site Cleanup Completed (NFA)

Firestone Store. 801 Kaheka St N 0.130 mi.
Facility Status: Site Cleanup Completed (NFA)

Gas 'N GLO Inc. 1670 Makaloa St NE 0.139 mi.
Facility Status: Site Cleanup Completed (NFA)

Aloha Motors. Kapiolani Blvd X Kalakaua Ave ESE 0.193 mi.
Facility Status: Site Cleanup Completed (NFA)

The Watermark Waikiki. 1551 Ala Wai Blvd S 0.201 mi.
Facility Status: Confirmed Release

Funai's Union Service L-5583. 1810 Kapiolani Blvd E 0.220 mi.
Facility Status: Site Cleanup Completed (NFA)

Ling Brothers, Ltd. 1819-E Lipeepee St SSE 0.223 mi.
Facility Status: Site Cleanup Completed (NFA)

Aloha Marine. 1651 Ala Moana Blvd SSW 0.238 mi.
Facility Status: Site Cleanup Completed (NFA)

Superblock Properties. South Block (Bldg S20) NW 0.302 mi.
Facility Status: Site Cleanup Completed (NFA)

Superblock Properties. North Block (Bldg N8) / Keeaumoku St NW 0.309 mi.

Facility Status: Site Cleanup Completed (NFA)

Cutter Chevrolet. 1391 Kapiolani Blvd WNW 0.328 mi.
Facility Status: Site Cleanup Completed (NFA)

Superblock Properties. South Block (Bldg S25) NW 0.337 mi.
Facility Status: Site Cleanup Completed (NFA)

Sears Roebuck & Company 1158. 1450 Ala Moana Blvd #1000 WSW 0.342 mi.
Facility Status: Site Cleanup Completed (NFA)

Superblock Properties. South Block (Bldg S13) NW 0.364 mi.
Facility Status: Site Cleanup Completed (NFA)

Ilikai Hotel. 1777 Ala Moana Blvd S 0.366 mi.
Facility Status: Site Cleanup Completed (NFA)

Superblock Properties. North Block (Bldg N15) NW 0.373 mi.
Facility Status: Site Cleanup Completed (NFA)

Superblock Properties. South Block (Bldg S1) / Sheridan St NW 0.374 mi.
Facility Status: Site Cleanup Completed (NFA)

Wens Life Co., Inc. 808 Sheridan St NNW 0.393 mi.
Facility Status: Site Cleanup Completed (NFA)

Discovery Bay. 1778 Ala Moana Blvd S 0.395 mi.
Facility Status: Site Cleanup Completed (NFA)

Tesoro 2go 61018. 1549 S King St NNE 0.407 mi.
Facility Status: LUST Cleanup Initiated

Gas Plus. 1524 S King St NNE 0.420 mi.
Facility Status: Site Cleanup Completed (NFA)

Mid Pac Petroleum 253943 (Prev: Lionel's Unocal). 1505 S. King St. N 0.422 mi.
Facility Status: Site Cleanup Completed (NFA)

Punahou Repair Shop. 1558 S King St NNE 0.423 mi.
Facility Status: Site Cleanup Completed (NFA)

Ala Moana Unocal. 1322 Kapiolani Blvd WNW 0.431 mi.
Facility Status: Site Cleanup Completed (NFA)

Yajima Oil of USA Inc. 1375 S King St N 0.484 mi.
Facility Status: Site Cleanup Completed (NFA)

Aloha Ala Moana. 451 Piikoi St WNW 0.486 mi.
Facility Status: Site Cleanup Completed (NFA)

Nauru Phosphate Royalties Trust. 404 Piikoi St/1330 Ala Moana Blvd WNW 0.495 mi.
Facility Status: Site Cleanup Completed (NFA)

Cenpac Properties - Office Building. 615 Piikoi St WNW 0.496 mi.
Facility Status: Site Cleanup Completed (NFA)

No adverse effect on the subject property is expected from the LUST sites due to the site status (NFA) and/or distance to the subject property.

5.1.15 State of Hawaii DOH UST Section Database Listing

The Underground Storage Tank database contains information regarding registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data comes from the Department of Health's Listing of Underground Storage Tanks.

A review of the HI UST list, as provided by EDR, and dated 06/30/2014 has revealed that there are 8 HI UST sites within approximately 0.25 miles of the target property.

New Office Lounge. 1551 Kapiolani Blvd NW 0.086 mi.

Firestone Store. 801 Kaheka St N 0.130 mi.

Gas 'N GLO Inc. 1670 Makaloa St NE 0.139 mi.

Kalakaua Transmission Inc. 1665 Kalakaua Ave NE 0.159 mi.

Aloha Motors. Kapiolani Blvd X Kalakaua Ave ESE 0.193 mi.

Funai's Union Service L-5583. 1810 Kapiolani Blvd E 0.220 mi.

Aloha Marine. 1651 Ala Moana Blvd SSW 0.238 mi.

Moana Park Wastewater Pump Station. 1501 Ala Moana Blvd WSW 0.245 mi.

The UST sites will not affect the environmental condition of the subject property if they are operated and maintained in accordance with the Federal and State of Hawaii rules and regulations.

5.1.16 State and Tribal Institutional Control / Engineering Control Registries

ENG CONTROLS: A listing of sites with engineering controls in place.
INST CONTROL: Voluntary Remediation Program and Brownfields sites with institutional controls in place.

A review of the HI ENG CONTROLS list, as provided by EDR, and dated 01/04/2014 has revealed that there are 3 HI ENG CONTROLS sites within approximately 0.5 miles of the target property.

Former Kalakaua Transmission Inc. 1665 Kalakaua Ave NE 0.159 mi. Hazard Priority: NFA. Engineering Control: Engineering Control Required

Yacht Harbor Towers. 1600 Ala Moana Blvd SSW 0.164 mi. Hazard Priority: NFA. Engineering Control: Engineering Control Required

Aloha/King Self Storage. 1414 Kalakaua Ave NNE 0.470 mi. Hazard Priority: NFA. Engineering Control: Engineering Control Required

No adverse effect on the subject property is expected from the ENG CONTROL sites due to the site status (NFA) and distance to the subject property.

A review of the HI INST CONTROL list, as provided by EDR, and dated 01/04/2014 has revealed that there are 6 HI INST CONTROL sites within approximately 0.5 miles of the target property.

HECO Substation: Makaloa Substation. 1544 Makaloa St NW 0.144 mi. Hazard Priority: Low. Institutional Control Required

Former Kalakaua Transmission Inc. 1665 Kalakaua Ave NE 0.159 mi. Hazard Priority: NFA. Institutional Control Required

Yacht Harbor Towers. 1600 Ala Moana Blvd SSW 0.164 mi. Hazard Priority: NFA. Institutional Control Required

Motor Supply. 726 Sheridan St NW 0.372 mi. Hazard Priority: NFA. Institutional Control Required

Hakuyosha Hawaii, Inc. 730 Sheridan St NW 0.372 mi. Hazard Priority: High. Institutional Control: Government - Hawaii Dept. of Health Letter Issued

Aloha/King Self Storage. 1414 Kalakaua Ave NNE 0.470 mi. Hazard Priority: NFA. Institutional Control Required

No adverse effect on the subject property is expected from the INST CONTROL sites due to the site status (NFA) and distance to the subject property.

5.1.17 State of Hawaii DOH Brownfield Sites

This list is compiled by the State DOH Solid and Hazardous Waste Branch UST Section. The ASTM designated search area for Brownfield sites is 0.5 miles of the subject site.

EDR searched and found no Brownfield sites within one-half (0.5) miles of the subject sites.

5.1.18 Other Regulatory Databases

A number of other regulatory databases, not specified by ASTM guidance, are included in the attached EDR report.

EDR reported listed sites in the vicinity of the subject property in the following databases:

VCP: Voluntary Response Program Sites. Sites participating in the Voluntary Response Program. The purpose of the VRP is to streamline the cleanup process in a way that will encourage prospective developers, lenders, and purchasers to voluntarily cleanup properties.

A review of the HI VCP list, as provided by EDR, and dated 01/04/2014 has revealed that there is 1 HI VCP site within approximately 0.5 miles of the target property.

Aloha/King Self Storage. 1414 Kalakaua Ave NNE 0.470 mi. Hazard Priority: NFA

No adverse effect on the subject property is expected from the VCP site due to the site status (NFA) and distance to the subject property.

RCRA-NonGen: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 03/11/2014 has revealed that there are 4 RCRA NonGen / NLR sites within approximately 0.25 miles of the target property.

I L W U Local 142. 451 Atkinson Dr S 0.048 mi. Violation Status: No violations found

B & S Automotive Technicians. 1789 Kapiolani Blvd E 0.188 mi. Violation Status: No violations found

Fuji Photo Film USA Inc. 1801 Kalakaua Ave E 0.204 mi. Violation Status: No violations found

Unocal 76 SS L 5583. 1818 Kapiolani Blvd E 0.231 mi. Violation Status: No violations found

The RCRA NonGen / NLR sites will not affect the environmental condition of the subject property if they are operated and maintained in accordance with the Federal and State of Hawaii rules and regulations.

EDR US Hist Auto Stat: EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers.

A review of the EDR US Hist Auto Stat list, as provided by EDR, has revealed that there are 8 EDR US Hist Auto Stat sites within approximately 0.25 miles of the target property.

801 Kaheka St N 0.130 mi.
1735 Kalakaua Ave ENE 0.157 mi.
1712 Kalakaua Ave ENE 0.158 mi.
1665 Kalakaua Ave NE 0.159 mi.
1500 Kapiolani Blvd NW 0.168 mi.
1750 Kalakaua Ave E 0.169 mi.
641 Keeaumoku St NW 0.245 mi.
1830 Kapiolani Blvd E 0.246 mi.

No adverse effect on the subject property is expected from the EDR US Hist Auto Stat sites due to the site distances to the subject property.

EDR US Hist Cleaners: EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers.

A review of the EDR US Hist Cleaners list, as provided by EDR, has revealed that there are 4 EDR US Hist Cleaners sites within approximately 0.25 miles of the target property.

801 Kaheka St N 0.130 mi.
1868 Kahakai Dr SSE 0.132 mi.
1750 Kalakaua Ave E 0.169 mi.
1518 Makaloa St NW 0.197 mi.

No adverse effect on the subject property is expected from the EDR US Hist Cleaners sites due to the site distances to the subject property.

5.2 ADDITIONAL ENVIRONMENTAL RECORDS SOURCES

CPR searched and found no additional records sources for the subject site.

5.3 PHYSICAL SETTING SOURCES

CPR reviewed published geologic and hydrogeologic reports, maps, and the site assessment report provided by EDR (Appendix F) to obtain information regarding surface and subsurface conditions in the general area of the site.

5.3.1 Topography

The elevation of the subject sites is approximately 3 feet above mean sea level (Appendix F). The center of the site is located at approximately 21° 17' 27.9" north latitude and 157° 50' 21.06" west longitude. The site is flat.

5.3.2 Geology and Soil

The island of Oahu is formed by the remnants of two coalesced shield volcanoes, the Koolau Volcano to the east and the Waianae Volcano to the west. A shield volcano is formed by eruptions of very fluid lava originating on the ocean floor that builds a dome-shaped structure resembling a shield. Submarine volcanic deposits include

pillow lavas, hyaloclastite, and flow-foot breccia. Building of the Waianae and Koolau Volcanoes occurred during the Pliocene and Pleistocene epochs.

The subject property is located on the southeast side of the Oahu Island of Hawaii, in Honolulu (Appendix A). The site soils consist of silty clay. The soil hydrologic group is Class C – slow infiltration rates (Appendix F).

The detailed site soil description is given in Section 5.4.4 "Prior Environmental Investigations" in *Geotechnical Engineering Exploration. Proposed Torson Ala Moana Tower, 1651 Kapiolani Boulevard, Honolulu, Oahu, Hawaii, T.M.K.: 2-3-41 Parcel 6.* C.W. Associates Inc., DBA Geolabs-Hawall, January 15, 1990.

5.3.3 Groundwater

The groundwater in the area is part of the Nuuanu Aquifer System of the Honolulu Aquifer Sector as classified by Mink and Lau (1990). The groundwater is basal, freshwater in contact with seawater, unconfined, and is hosted in horizontally extensive lavas. The groundwater is classified as potentially used, drinking, frersh (<250 mg/L chloride), irreplaceable, and highly vulnerable to contamination. The hydrogeologic gradient is expected to be toward the Pacific Ocean. This assumption is based on the area topographic profile.

The site is located below (downgradient of) the Underground Injection Control (UIC) line as shown on the UIC map of Oahu, HDOH. This typically indicates that the underlying aquifer is not considered a drinking water source, limited types of injection wells are allowed, and injection wells need a UIC Permit or Permit Exemption.

There is no well at the subject property.

Groundwater level was encountered in the drilled site borings at depths of 4.0 to 7.9 feet below the existing ground.

5.4 PAST USES OF THE PROPERTY

Information regarding past uses of the subject site was obtained from our review of Sanborn Fire Insurance Company maps (1949, 1951, 1955, 1973, 1975, 1980, 1985, 1991, and 1993), U.S. Geological Survey (USGS) topographic maps (USGS, 1928, 1953, 1954, 1959, 1969, 1970, 1983, and 1998), and Historic Aerial Photographs (1952, 1959, 1963, 1968, 1978, 1993, and 2000) (Appendix E).

5.4.1 Sanborn Maps

The 1949 Sanborn Map shows two-level storage facility at the north part of the Parcel 006. The structure located at the west side of the Parcel 009 is marked as "clo. clean'g".

The 1951 Sanborn Map appeared similar to the 1949 Sanborn Map.

The 1955 Sanborn Map shows the new 2-level structure constructed in 1953 at the northeast area of the Parcel 009. The structure at the Parcel 006 has a 1-level addition to its southeast part. The additional structure is marked as "Restaurant". The central part of the existing before 1955 structure also is marked as "Restaurant" now.

The 1973 Sanborn Map shows new building at the east part of the Parcel 009. The building is marked as "office". The one-level structure shown on the 1955 map as "restaurant" now is marked as "office". The cleaning facility shown on the previous maps now is marked as "restaurant".

The 1975, 1980, and 1985 Sanborn Maps appeared similar to the 1973 Sanborn Map.

The 1991 Sanborn Map shows no structures at the Parcel 006. The Parcel is marked as "parking".

The 1993 Sanborn Map appeared similar to the 1991 Sanborn Map.

No readily apparent evidence of recognized environmental conditions at the subject property was noted on the Sanborn Maps reviewed, except that a clothes cleaning facility appeared in the western portion of the subject property in the maps from

1949 to 1955. It is noted that the Sanborn Maps typically indicate "dry cleaning" as separate from "clothes cleaning". The 1949 Sanborn Map does not show the presence of a fuel storage tank on site. The source of hot water for the laundry is not known. The presence of a laundry without indications of dry cleaning or fuel storage does not constitute a recognized environmental condition.

5.4.2 USGS Maps

The subject site USGS maps are provided in Appendix E. The 1928-1998 USGS maps shows the site area as the built-up area.

No readily apparent evidence of recognized environmental conditions at the subject property was noted on the topographic maps reviewed.

5.4.3 Historic Aerial Photographs

CPR used the University of Hawaii at Manoa Library service to review historic aerial photographs. The subject site aerial photographs are provided in Appendix E.

1952 Photo: The site appears to contain two structures. The big one is located at the north side of the Parcel 006. There are a few cars parked outside of the structures, but the nature of the operation cannot be determined. The Parcel 009 looks unpaved.

1959 Photo: The site contains three structures. One structure is located at the north part of the Parcel 006 and two others are located at the Parcel 009. There are cars parked outside of the structures, but the nature of the operation cannot be determined. The Parcel 009 is paved.

1963 Photo: Details of the project site were obscured by poor photographic resolution.

1968 Photo: The 1968 aerial photograph shows no change from the 1959 photograph except two new structures were added to Parcel 009.

1978 Photo: Details of the project site were obscured by poor photographic resolution.

1993 Photo: The building at the north area of the Parcel 006 is not shown.

2000 Photo: The subject property has not changed since 1993.

No readily apparent evidence of recognized environmental conditions at the subject property was noted on the historic aerial photograph reviewed.

5.4.4 Prior Environmental Investigations

CPR reviewed the following documents provided by Sam Koo Pacific, LLC for the subject property:

1. *Geotechnical Engineering Exploration. Proposed Torson Ala Moana Tower, 1651 Kapiolani Boulevard, Honolulu, Oahu, Hawaii, T.M.K.: 2-3-41 Parcel 6.* C.W. Associates Inc., DBA Geolabs-Hawall, January 15, 1990.

   Five (5) additional borings, 8-101 to 8-105, were drilled to depths ranging from 46 to 192 feet below the existing ground surface after demolition of the previously existing buildings. In general, the additional borings encountered soil conditions similar to those encountered in the previous borings, which can be generalized as follows: a 4- 6-foot-thick crust of medium stiff clayey silt overlying lagoonal and alluvial deposits varying from loose to very loose silty sand with coral gravel to medium dense moderately cemented coral detritus to medium stiff clayey silt. However, the relatively competent coral ledge material at depths of 25 to 45 feet in the easterly half of the site, as noted in previous report of November 16, 1990, was discovered by the recent additional borings to be not as really consistent as previously assumed. Instead, a relatively competent coral ledge of only about ten (10) feet thick was encountered in the recent borings at about 25 to 35 feet below the existing ground surface. Moreover, the white coral and tan cemented coral sand and silt encountered at depths of about 130 to 155 feet in the previous borings were not encountered in the recently drilled additional deep boring B-105. Medium dense coral detritus and lagoonal deposits consisting of uncemented to moderately cemented coral gravel, silt and sand were encountered from depths of about 130 to 192 feet in

boring B-105. Groundwater level was encountered in the drilled borings at depths of 4.0 to 5.5 feet below the existing ground surface in the recent borings as compared to 4.8 to 7.9 feet in the previous borings.

2. *Kapiolani Commercial Property Parcel (1)-2-3-41: 009, Honolulu, Hawaii.* R. M. Towill Corporation, February, 2002.

   The R. M. Towill Corporation (RMTC) performed a Phase I Environmental Site Assessment for a single commercial property located on Kapiolani Boulevard in the Ala Moana area of east Honolulu on the Island of Oahu identified by the Tax Map Key No. (1)-2-3-041:009. This assessment has revealed no significant environmental conditions on the subject property from past or current uses.

   A site reconnaissance at the property performed on February 7, 2001, did not reveal any significant environmental problems with the property. All premises were found to be in good, clean condition with no recognizable environmental problems.

   An asbestos inspection was also performed on February 7, 2001 to identify any friable asbestos containing building materials. No samples of floor tiles, mastics, roofing materials or other not friable materials were collected as a part of this inspection. A total of seven building materials were sampled and no asbestos was in any of the samples.

   The R. M. Towill Corporation noted that the general area around the property has received fill material from a number of sources over the years, including trash, construction debris, sugar processing by products, dredged materials, and fill dirt. A subsurface investigation performed on an adjacent property did not reveal any hazardous materials. If excavation work is planned for the subject property, additional subsurface investigations may be recommended or the excavation may be monitored by a qualified professional to allow for the identification of suspect hazardous materials.

3. *Phase I Environmental Site Assessment. 1637 Kapiolani Boulevard, Honolulu, Oahu, Hawaii, TMK: (1) 2-3-41: Parcel 6.* Element Environmental LLC (E2), October 30, 2006.

This assessment has revealed no significant evidence of recognized environmental conditions in connection with the property. E2 identified a possible release of an unknown substance at the subject property. The aerial photograph from 1974 shows an area of possible soil staining on site. No records of a release of a hazardous waste or substance were found with the Department of Health's databases. Lease records from the City and County of Honolulu, indicate that one of the tenants in the building was a diner. It is possible that the stain was related to a grease trap. It is also possible that the apparent staining could be ponding water or other soil disturbance.

5.5 PAST USES OF THE ADJOINING PROPERTIES

Information regarding past uses of the adjoining properties was obtained from our review of Sanborn Fire Insurance Company maps (1949, 1951, 1955, 1973, 1975, 1980, 1985, 1991, and 1993), U.S. Geological Survey (USGS) topographic maps (USGS, 1928, 1953, 1954, 1959, 1969, 1970, 1983, and 1998), and Historic Aerial Photographs (1952, 1959, 1963, 1968, 1978, 1993, and 2000) (Appendix E).

5.5.1 Sanborn Maps

The 1949 Sanborn Map shows the north and south adjoining areas located across the Kapiolani Boulevard and Kona Street as vacant. The west adjoining area is marked as "Used Auto Sale" with one small office structure on it. Several paint storage structures are shown on the east adjoining area.

The 1951 Sanborn Map shows the adjoining areas with no remarkable changes since 1949.

The 1955 Sanborn Map shows a restaurant and auto repairing facility including a gas station marked as "gas & oil" on the south adjoining property located across Kona street.

The 1973 Sanborn Map shows a 17-story building and 2-story parking on the west adjoining area. The American Saving & Loan Building and the Honolulu Toho Theater building are shown across Kapiolani Boulevard on the north adjoining area. The auto repairing facility is shown across Kapiolani Boulevard on the northeast

adjoining area. There is no auto repairing facility with a gas station on the south adjoining area. The south adjoining area across Kona Street is occupied by Ala Moana Hotel.

The 1980 and 1985 Sanborn Maps show the adjoining areas with no remarkable changes since 1973.

The 1991 Sanborn Map shows that the auto repairing facility shown at the north-west adjoining area on 1973-1985 maps has been substituted by the "Health Club".

The 1993 Sanborn Map shows that the health club had been replaced by offices.

No readily apparent evidence of recognized environmental conditions at the adjoining properties was noted on the maps reviewed except the facility marked as "gas & oil" shown across Kona Street at the south adjoining area on the 1955 map.

5.5.2 USGS Maps

The subject site USGS maps are provided in Appendix E. The 1928-1998 USGS maps shows the adjoining areas as the built-up areas.

No readily apparent evidence of recognized environmental conditions at the adjoining properties was noted on the topographic maps reviewed.

5.5.3 Historic Aerial Photographs

1952 Photo: This photograph shows the north adjoining area located across the Kapiolani Boulevard as vacant. The other adjoining areas are developed with commercial uses.

1959, 1963, 1968, 1978, 1993, and 2000 Photos: This photographs show the adjoining areas as areas with a significant amount of commercial structures. Details of the area around the project site were obscured by poor photographic resolution.

No readily apparent evidence of recognized environmental conditions at the adjoining properties was noted on the historic aerial photograph reviewed.

5.5.4 Prior Environmental Investigations

No documentation of prior environmental investigations for the surrounding area was available for review.

6.0 SITE RECONNAISSANCE

6.1 METHODOLOGY AND LIMITING CONDITIONS

The subject property was inspected by CPR personnel on September 10, 2014. The exterior of adjoining properties was visually evaluated for the presence of recognized environmental conditions (RECs).

6.2 GENERAL SITE SETTING

6.2.1 Current Use(s) of the Property

The buildings at TMK: (1) 2-3-041:009 & (1) 2-3-041:006 parcels of land are occupied by restaurants, a hair dresser, an auto dealership, and offices. The rest of the subject property is used for parking.

6.2.2 Past Use(s) of the Property

The building that is "Yakiniku Korea House" restaurant now was used as a clothes cleaner. There was a storage building at the north part of the property that was demolished between 1985 and 1991.

6.2.3 Current Use(s) of Adjoining Properties

The current uses of the adjoining properties are (Figure 3, Appendix C):

North	Kapiolani Boulevard. Restaurants, shops, and offices are located across the boulevard.
East	Parking stalls and Buildings. The buildings area occupied by shops,

	restaurants and clubs.
South	Kona Street. Ala Moana Hotel Complex is located across Kona Street.
West	Multi-story office building and condos.

No recognized environmental conditions (RECs) were identified on the adjoining properties.

6.2.4 Past Use(s) of Adjoining Properties

No recognized environmental conditions (RECs) from past uses were identified on the adjoining properties during the visual evaluation.

6.2.5 Current or Past Uses in the Surrounding Area

The general area in the vicinity of the property is used for commercial and residential purposes.

6.2.6 Geologic, Hydrologic, and Topographic Conditions

The topography of the property and the surrounding areas is relatively flat.

6.2.7 General Description of Structures and Roads

General description of structures was obtained from the City and County of Honolulu's Real Property Assessment and Tax Billing Information web site. The following building is located on the subject property:

Parcel	Building No.	Construction Date (Age)	Number of Stories	Use	Construction
(1) 2-3-041:006	-	-	-	-	-
(1) 2-3-041:009	1	1952	1	Warehouse	Steel

	2	1954	2	Offices	Masonry
	3	1956	3	Offices	Masonry

Parking facilities are located on the property. There are no roads on the parcels.

6.2.8 Potable Water Supply

Potable water on the property is supplied by the municipal water distribution system from the Honolulu Board of Water Supply.

6.2.9 Sewage Disposal System

Sanitary sewage is discharged into municipal sanitary sewer system. A grease interceptor is located at the property (Photo 5, Appendix D) next to "Yakiniku Korea House" restaurant. The grease interceptor will not affect the environmental condition of the subject property if it is operated and maintained in accordance with the Federal and State of Hawaii rules and regulations.

6.3 EXTERIOR OBSERVATIONS

During the site reconnaissance conducted on September 10, 2014, CPR personnel visually inspected the subject site and limited portions of adjacent properties. The following are observations noted during the site inspection.

6.3.1 Hazardous Substances, Wastes and Materials

No hazardous substances, wastes, or materials were observed on the subject property.

6.3.2 Storage Tanks

No tanks were observed.

6.3.3 Odors

No strong, pungent or noxious odors were observed.

6.3.4 Pools of Liquid

No standing surface water was observed

6.3.5 Drums

None

6.3.6 Containers of Hazardous Materials and Petroleum Products

None

6.3.7 Unidentified Substance Containers

None

6.3.8 Indications of PCBs

There are four (4) pole-mounted transformers at two poles along Kona Street. No stains representing oil leaks were observed under the poles. It was not determined whether any of these transformers contain polychlorinated biphenyls (PCBs).

6.3.9 Pits, Ponds, or Lagoons

No pits, ponds, or lagoons were observed.

6.3.10 Stained Soil or Pavement

None

6.3.11 Stressed Vegetation

No areas of stressed vegetation were observed.

6.3.12 Solid Waste

None

6.3.13 Waste Water

None

6.3.14 Wells

No wells were observed on the property.

6.3.15 Septic Systems

No septic systems or cesspools were observed on the property.

6.3.16 Migration of Off-Site Contamination

No migration of off-site contamination was observed

6.3.17 Air Emissions

No onsite sources of air emissions were noted.

6.3.18 Dry-Cleaning Operations

The building currently used as "Yakiniku Korea House" restaurant was historically used as a clothes cleaning facility (Section 5.4.1, above). This site assessment did not locate information that would indicate the building may be used for dry-cleaning or laundry operations.

6.4 INTERIOR OBSERVATIONS

6.4.1 Heating/Cooling

The buildings on the property are cooled by central air conditioning units.

6.4.2 Stains or Corrosion

There were no stains or corrosion on the floors, walls, or ceilings in the buildings.

6.4.3 Drains and Sumps

No drains and sumps were observed other than the grease interceptor next to "Yakiniku Korea House" restaurant.

6.5 NON-ASTM ISSUES

6.5.1 Radon Concentrations in Buildings

Two studies were conducted by the State of Hawaii DOH, in coordination with the EPA, to investigate radon concentrations in private residences (1989-1990) and in public elementary schools (1993-1996). The residential study included over 500 homes located throughout the state and found the average radon concentration to be 0.5 picoCuries per liter (pCi/L) (Takata, 1998). The school study included 97 schools on Hawaii, Maui, Molokai, Oahu, and Kauai and found the average concentration to be 0.1 pCi/L (Takata, 1998). The HDOH concluded that no further research into the

potential health effects of radon exposure was required because the study results were well below the EPA action level of 4 pCi/L (Takata, 1998).

The EDR report lists that 209 sites were tested in the Honolulu County with all testing below the 4 pCi/L action level for living areas (Appendix F). Therefore, potential human health risks due to elevated radon concentrations are not anticipated to be an issue at the subject site.

6.5.2 Asbestos-Containing Materials

Physical sampling and analysis of suspect ACM was not conducted during the assessment as it is not a scope item for a Phase I ESA under ASTM E1527-13.

Because the buildings on the subject property were built prior to 1980, ACM may be present. Prior to any activities (i.e., repair, renovation, demolition) which may disturb ACM, the building owner or leased space tenant may be required to comply with applicable United States Environmental Protection Agency (USEPA) National Emissions Standards for Hazardous Air Pollutants (NESHAPS), Occupational Safety and Health Administration (OSHA), and state and local regulations. If suspect ACM will be disturbed, these and similar materials should be sampled and analyzed for possible asbestos content.

6.5.3 Lead-Based Paint

Physical sampling and analysis of suspect Lead-based paint was not conducted during the assessment as it is not a scope item for a Phase I ESA under ASTM E1527-13.

Lead-based paint was commonly used for corrosion protection in the 1960s, and in prime, intermediate, and finish coats well into the 1970s. Regulations specifically addressing lead-based paint include Housing and Urban Development (HUD) (1995) guidelines and the Consumer Product Safety Act (1977).

These regulations define lead-based paint as containing 0.5% lead by weight (5,000 ppm) for housing products. There are specific testing methods for sampling and analyzing lead in paint.

Because the buildings on the subject property were built prior to 1978, lead-based paint could be an issue at the subject property. Prior to any activities (i.e., repair, renovation, demolition) which may disturb painted building surfaces, sampling should be conducted to determine the presence or absence of lead in the painted surfaces.

7.0 INTERVIEWS

The purpose of interviews is to obtain information indicating recognized environmental conditions in connection with the property. Copies of the interview documentation can be found in Appendix G.

7.1 OWNER INTERVIEW

CPR interviewed Mr. Timothy Yi of Sam Koo Hawaii, LLC regarding his knowledge of the site history and development plans for the property. According to Mr. Yi, the subject properties have been owned by Sam Koo for 7 years. Mr. Yi has been involved with the properties for 7 years. Mr. Yi does not have knowledge of the site use prior to acquisition of the property by Sam Koo. Mr. Yi does not have knowledge of the environmental history of the subject property. Mr. Yi indicated that contaminated soil was not encountered during the recent installation of the grease trap at the restaurant on the 1631 Kapiolani Parcel.

In regard to the proposed site development, the building foundation details for the subject property have not been determined.

8.0 FINDINGS

The findings of this Phase I ESA are that the following recognized environmental conditions (RECs) were likely present on the subject property:

- The 1949 Sanborn Map shows the structure located at the west side of the Parcel 009 as "clo. clean'g" that probably means "clothes cleaning". It is

noted that the Sanborn Maps typically indicate "dry cleaning" as separate from "clothes cleaning". The 1949 Sanborn Map does not show the presence of a fuel storage tank on site. The source of hot water for the laundry is not known. The presence of a laundry without indications of dry cleaning or fuel storage does not constitute a recognized environmental condition.

- The R. M. Towill Corporation noted that the general area around the property has received fill material from a number of sources over the years, including trash, construction debris, and sugar processing by products, dredged materials, and fill dirt. A subsurface investigation performed on an adjacent property did not reveal any hazardous materials. If excavation work is planned for the subject property, additional subsurface investigations may be recommended or the excavation may be monitored by a qualified professional to allow for the identification of suspect hazardous materials (*Kapiolani Commercial Property Parcel (1)-2-3-41: 009, Honolulu, Hawaii.* R. M. Towill Corporation, February, 2002).

The following environmental conditions, which are not considered to be *recognized environmental condition*s, as defined by ASTM, were revealed during this assessment:

- Because the buildings on the subject property were built prior to 1980, suspect asbestos-containing materials (ACM) may be an issue at the subject property. An asbestos inspection was performed on February 7, 2001 by the R. M. Towill Corporation to identify any friable asbestos containing building materials. A total of seven building materials were sampled and no asbestos was in any of the samples. However, no samples of floor tiles, mastics, roofing materials or other not friable materials were collected as a part of this inspection.

- Because the buildings on the subject property were built prior to 1978, lead-based paint (LBP) could be an issue at the subject property.

The findings of this Phase I ESA are that the following Recognized Environmental Conditions (RECs) are present on the adjoining properties:

- *Ala Moana Hotel.* 410 Atkinson Dr. SSW 0.080 mi. - Small quantity generator (SQG). SQG generates between 100 kg and 1,000 kg of hazardous waste per month. Violation Status: No violations found.

- *Pan Am Bldg*. 1600 Kapiolani Blvd. NW 0.036 mi. - Conditionally Exempt Small Quantity generator (CESQG). CESQG generates less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month. Violation Status: No violations found.

  The SQG and CESQG sites will not affect the environmental condition of the subject property if they are operated and maintained in accordance with the Federal and State of Hawaii rules and regulations.

- The 1955 Sanborn Map shows an auto repairing facility including a gas station marked as "gas & oil" on the south adjoining property located across Kona street. This property is now occupied by the Ala Moana Hotel. Substantial excavation was conducted during the construction of this building. No adverse effect on the subject property is expected from the former "gas & oil" sites due to the site distance to the subject property and downgradient location.

The findings of this Phase I ESA are that the Recognized Environmental Conditions (RECs) are present on the surrounding properties. However, no adverse effects on the subject property are expected from these properties due to the distance to the subject property.

9.0 OPINION

CPR has conducted a Phase I ESA of the subject properties. The noted item of primary concern is the reported filling of the area as described above in Section 5.4.4. However, the geotechnical investigation did not report encountering refuse in the onsite soil (Section 5.4.4, above).

The historical use of the property for clothes cleaning as shown on the 1949 Sanborn Map (Section 5.4.1, above) is not a significant concern. The potential use of the site for dry cleaning was not indicated on the map. Also, the presence of fuel storage tanks was not shown. Both dry cleaning and fuel storage are typically shown on

Sanborn Maps. While this does not fully rule out the presence of concerns related to dry cleaning or fuel storage it does significantly decrease the likelihood of their presenting a concern to the site development.

Several offsite occurrences of potentially hazardous materials are note, however, these are not anticipated to adversely affect the subject property.

Based on the findings of this Phase I ESA, no additional environmental actions are warranted for the subject property at the date of this report.

9.1 VALUATION REDUCTION FOR ENVIRONMENTAL ISSUES

Based on the evaluation of the recognized environmental condition presented in this report, no substantial reduction in valuation for environmental issues is warranted. This evaluation has considered the information obtained from the Purchaser and Seller, and the compiled information assembled for the Subject Property and study area during the performance of this Phase I ESA.

10.0 CONCLUSIONS

CPR has performed a Phase I Environmental Site Assessment (ESA) of TMK: (1) 2-3-041:009 & (1) 2-3-041:006, 1631 & 1637 Kapiolani Boulevard, Honolulu, Oahu, Hawaii.

CPR has performed this Phase I Environmental Site Assessment in accordance with the scope and limitations of ASTM Practice E1527-13 (ASTM E1527-13) and All Appropriate Inquiry (AAI). Any exceptions to, or deletions from, this practice are described in Section 2.5 of this report.

The findings of this Phase I ESA are that the following recognized environmental conditions (RECs) were likely present on the subject property:

- The 1949 Sanborn Map shows the structure located at the west side of the Parcel 009 as “clo. clean’g” that probably means “clothes cleaning”. It is noted that the Sanborn Maps typically indicate "dry cleaning" as separate from "clothes cleaning". The 1949 Sanborn Map does not show the presence

of a fuel storage tank on site. The source of hot water for the laundry is not known. The presence of a laundry without indications of dry cleaning or fuel storage does not constitute a recognized environmental condition.

- The R. M. Towill Corporation noted that the general area around the property has received fill material from a number of sources over the years, including trash, construction debris, and sugar processing by products, dredged materials, and fill dirt. A subsurface investigation performed on an adjacent property did not reveal any hazardous materials. If excavation work is planned for the subject property, additional subsurface investigations may be recommended or the excavation may be monitored by a qualified professional to allow for the identification of suspect hazardous materials (*Kapiolani Commercial Property Parcel (1)-2-3-41: 009, Honolulu, Hawaii.* R. M. Towill Corporation, February, 2002).

The following environmental conditions, which are not considered to be *recognized environmental condition*s, as defined by ASTM, were revealed during this assessment:

- Because the buildings on the subject property were built prior to 1980, suspect asbestos-containing materials (ACM) may be an issue at the subject property. An asbestos inspection was performed on February 7, 2001 by the R. M. Towill Corporation to identify any friable asbestos containing building materials. A total of seven building materials were sampled and no asbestos was in any of the samples. However, no samples of floor tiles, mastics, roofing materials or other not friable materials were collected as a part of this inspection.

- Because the buildings on the subject property were built prior to 1978, lead-based paint (LBP) could be an issue at the subject property.

The findings of this Phase I ESA are that the following Recognized Environmental Conditions (RECs) are present on the adjoining properties:

- *Ala Moana Hotel.* 410 Atkinson Dr. SSW 0.080 mi. - Small quantity generator (SQG). SQG generates between 100 kg and 1,000 kg of hazardous waste per month. Violation Status: No violations found.

- *Pan Am Bldg*. 1600 Kapiolani Blvd. NW 0.036 mi. - Conditionally Exempt Small Quantity generator (CESQG). CESQG generates less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month. Violation Status: No violations found.

  The SQG and CESQG sites will not affect the environmental condition of the subject property if they are operated and maintained in accordance with the Federal and State of Hawaii rules and regulations.

- The 1955 Sanborn Map shows an auto repairing facility including a gas station marked as "gas & oil" on the south adjoining property located across Kona street. This property is now occupied by the Ala Moana Hotel. Substantial excavation was conducted during the construction of this building. No adverse effect on the subject property is expected from the former "gas & oil" sites due to the site distance to the subject property and downgradient location.

The findings of this Phase I ESA are that the Recognized Environmental Conditions (RECs) are present on the surrounding properties. However, no adverse effects on the subject property are expected from these properties due to the distance to the subject property.

Based on the findings of this Phase I ESA, no additional environmental actions are warranted for the subject property at the date of this report.

11.0 DEVIATIONS

CPR has made one exception to the Phase I ESA procedures specified by ASTM E1527-13. Because the State of Hawaii does not compile a list of hazardous waste sites identified for investigation or remediation (NPL or CERCLIS equivalents), we are unable to include such a list in our records review. We reviewed the DOH HEER *Sites of Interest Database* instead (see Section 5.1.12).

12.0 ADDITIONAL SERVICES

No additional services beyond the standard practice were performed as part of this project.

13.0 REFERENCES

ASTM, 2013. Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (ASTM Designation E1527-13). American Society for Testing and Materials (ASTM), Washington, 2013.

Macdonald et al., 1983. G.A. Macdonald, A.T. Abbott, F.L. Peterson. Volcanoes in the Sea. The Geology of Hawaii. Second Edition, 1983. University of Hawaii Press, Honolulu.

Mink J.F. and L.S. Lau, 1990. Aquifer Identification and Classification for Oahu: Groundwater Protection Strategy for Hawaii. Water Resources Research Center, University of Hawaii at Manoa.

Takata, 1998. Telecommunication with Mr. Russell Takata, Radon Section Supervisor for the Department of Health Radiation Section, June 4, 1998.

14.0 QUALIFICATIONS

We declare that, to the best of our professional knowledge and belief, we meet the definition of Environmental Professional as defined in §312.10 of 40 CFR Part 312. We have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. We have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

A listing of the qualifications of the environmental professionals involved with this report is supplied in Appendix H.

15.0 SIGNATURES

We appreciate the opportunity to work with you on this project. If you have any questions concerning the findings and conclusions contained in this report, please call Mr. Ned Murphy at (808) 216-6555.

Prepared by:

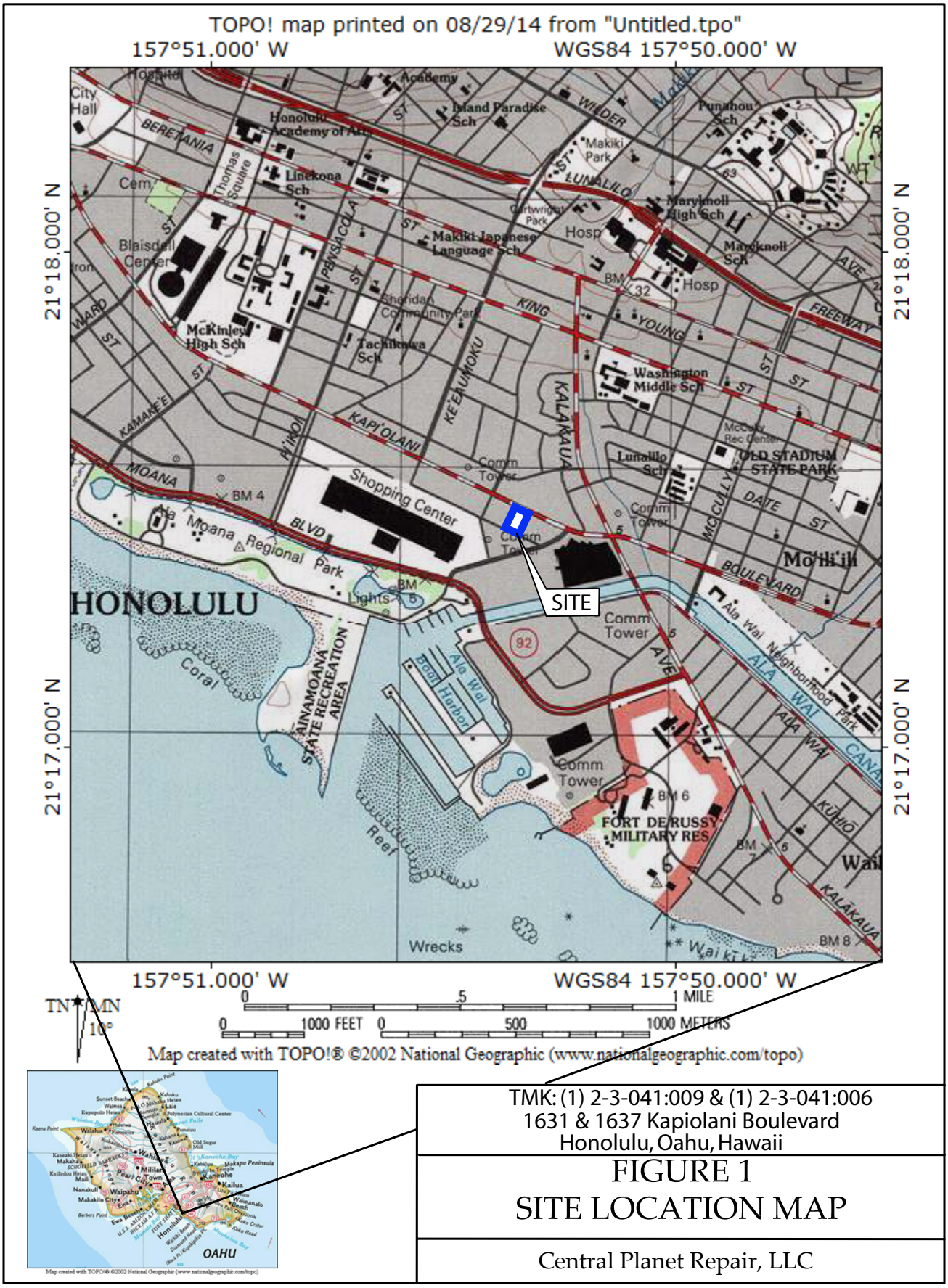
Alexander Grafchikov
Environmental Specialist

Reviewed by:

Ned Murphy
Consulting Geochemist

APPENDIX A

Figure 1 - Site Location Map



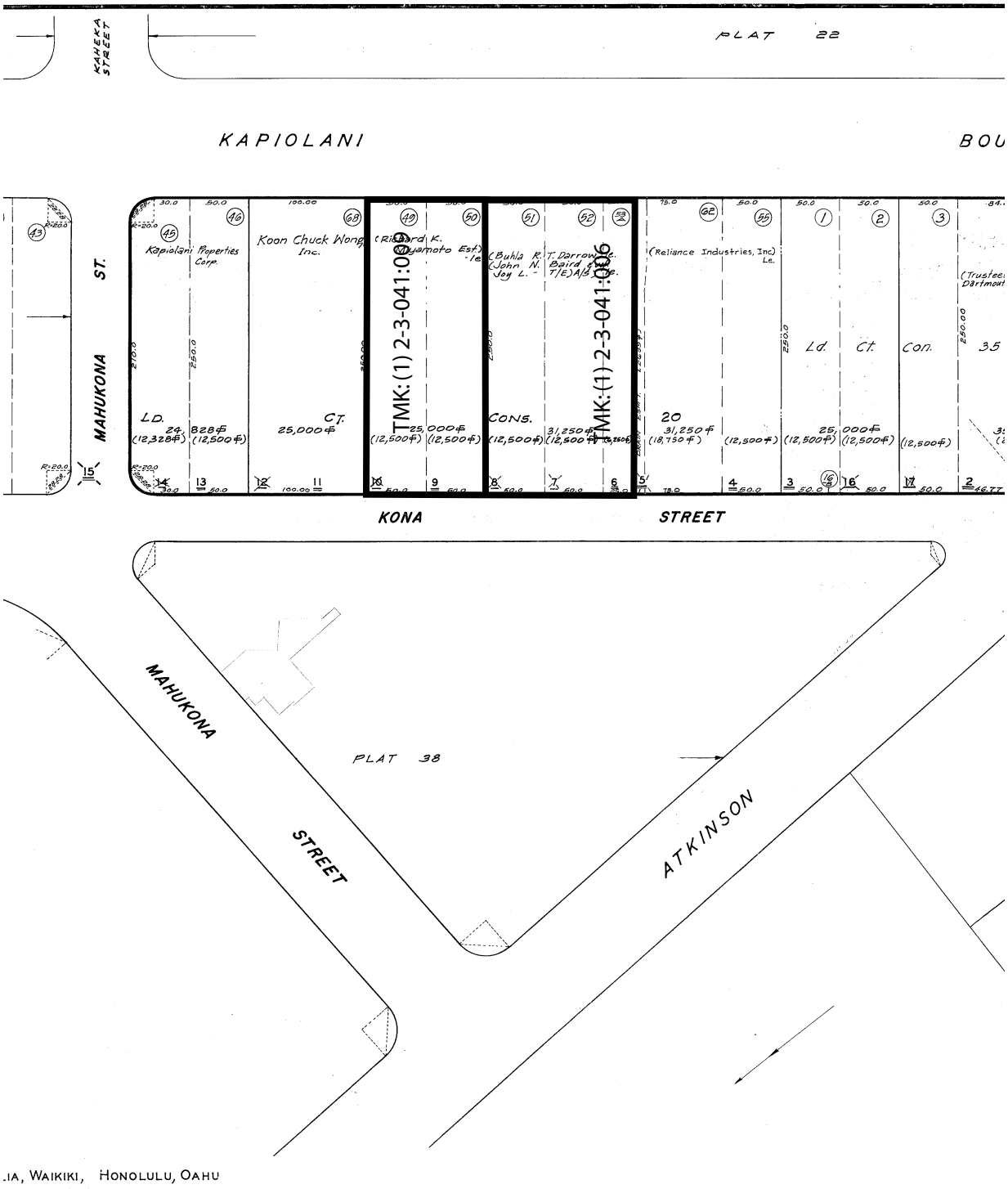
TMK: (1) 2-3-041:009 & (1) 2-3-041:006
1631 & 1637 Kapiolani Boulevard
Honolulu, Oahu, Hawaii

FIGURE 1
SITE LOCATION MAP

Central Planet Repair, LLC

APPENDIX B

Figure 2 - Tax Map



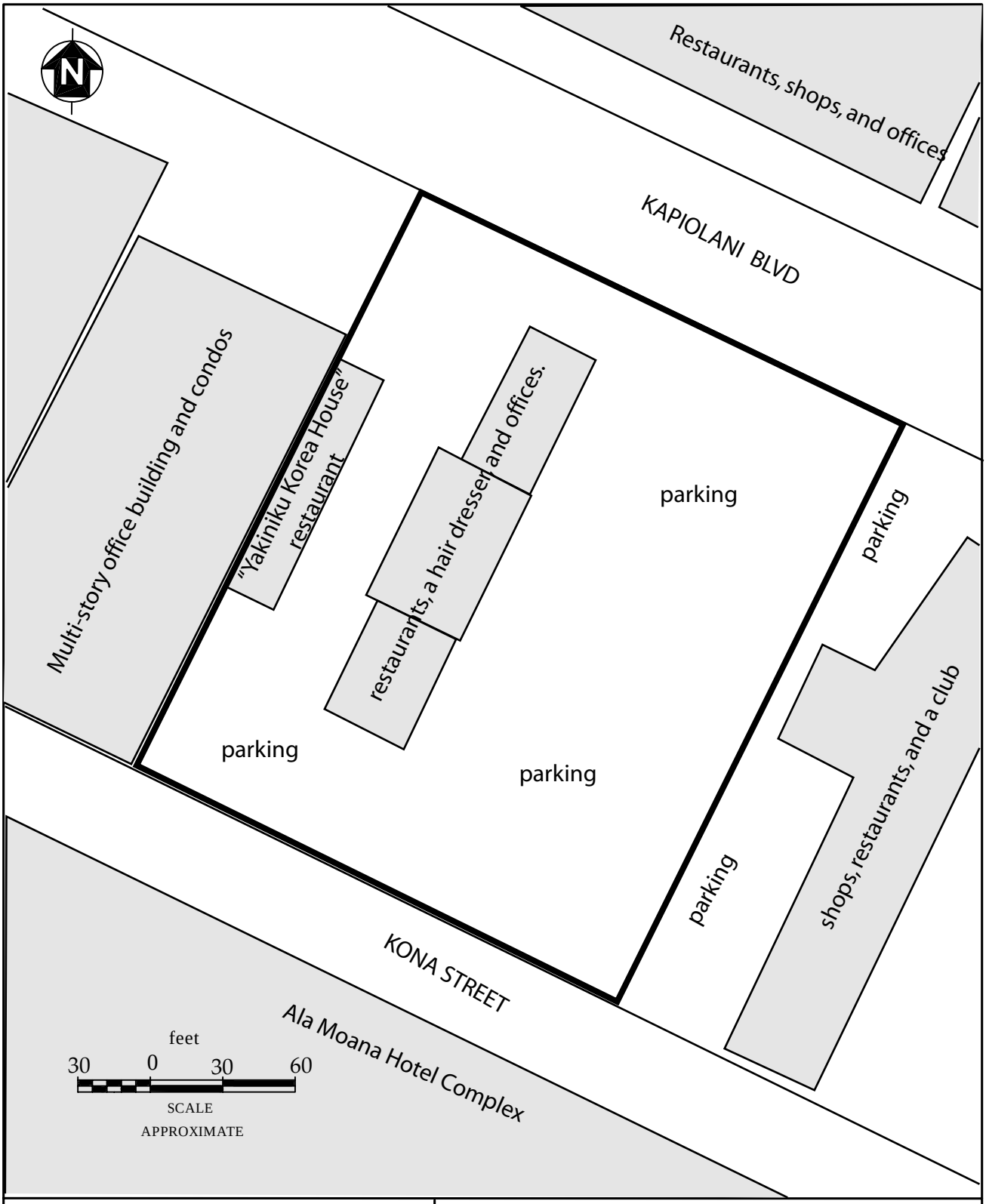
TMK: (1) 2-3-041:009 & (1) 2-3-041:006
1631 & 1637 Kapiolani Boulevard
Honolulu, Oahu, Hawaii

FIGURE 2
TAX MAP

Central Planet Repair, LLC

APPENDIX C

Figure 3 - Site Plan



LEGEND:

Site Boundaries

Buildings and Structures

TMK: (1) 2-3-041:009 & (1) 2-3-041:006
1631 & 1637 Kapiolani Boulevard
Honolulu, Oahu, Hawaii

FIGURE 3
SITE PLAN

Central Planet Repair, LLC

APPENDIX D

Site Photographs

Photo 1. View of the Southwest area of the Subject Property from Kapiolani Boulevard.

Photo 2. View of the Commercial and Office Building at the Central part of the Subject Property Looking South.

Photo 3. View of the Dealership Parking at the Southwest Area of the Subject Property from Kona Street.

Photo 4. View of the Parking at the East Area of the Subject Property from Kapiolani Boulevard.

Photo 5. Interceptor Located Next to "Yakiniku Korea House" Restaurant.

Photo 6. Looking East Across Kapiolani Boulevard to Adjoining Properties.

Photo 7. Looking South across Kona Street to Ala Moana Hotel.

Photo 8. Looking South to the East Adjoining Properties.

APPENDIX E

Historical Research Documentation (Sanborn® Map Report, Historical USGS Maps, and Historic Aerial Photographs)

Sam Koo Pacific, LLC
1631 and 1637 Kapiolani Boulevard
Honolulu, HI 96814

Inquiry Number: 4046277.3
August 25, 2014

Certified Sanborn® Map Report

6 Armstrong Road, 4th Floor
Shelton, Connecticut 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

8/25/14

Site Name:
Sam Koo Pacific, LLC
1631 and 1637 Kapiolani
Honolulu, HI 96814

Client Name:
Central Planet Repair
236 Kuahiwi Avenue
Wahiawa, HI 96786

EDR Inquiry # 4046277.3

Contact: Ned Murphy

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Central Planet Repair were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

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Certified Sanborn Results:

Site Name: Sam Koo Pacific, LLC
Address: 1631 and 1637 Kapiolani Boulevard
City, State, Zip: Honolulu, HI 96814
Cross Street:
P.O. # CPR 74-2
Project: Sam Koo Pacific 1631 & 1637 Ka
Certification # 1B31-4A39-A6DE

Maps Provided:

1993	1955
1991	1951
1985	1949
1980	
1975	
1973	

Sanborn® Library search results
Certification # 1B31-4A39-A6DE

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- ✔ Library of Congress
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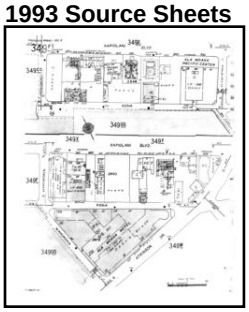
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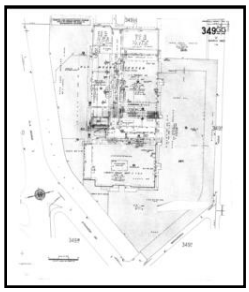
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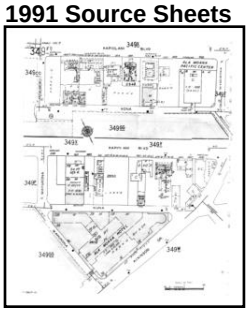
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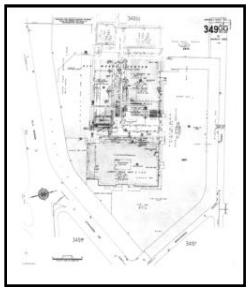
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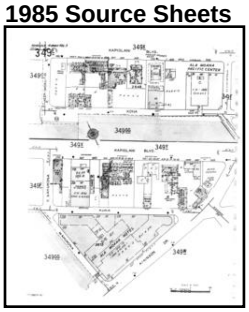
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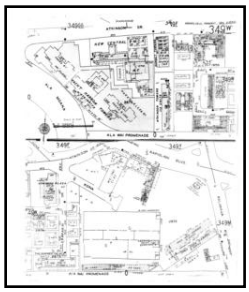
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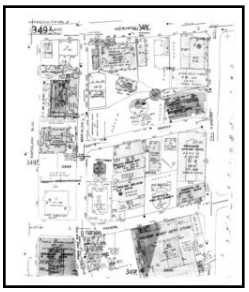
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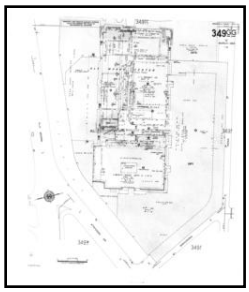
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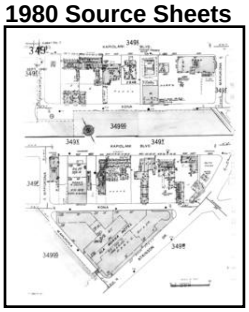
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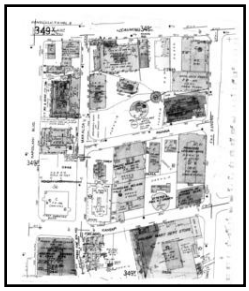
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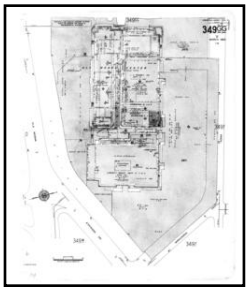
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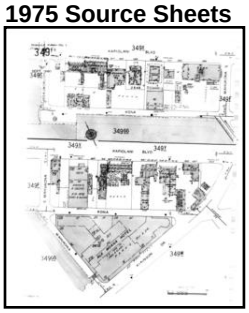

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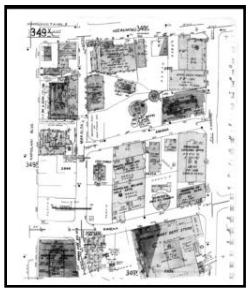

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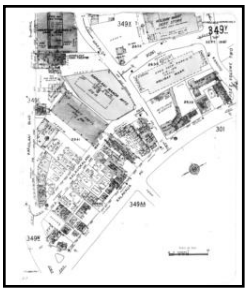

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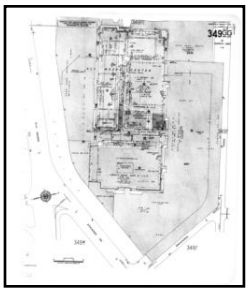

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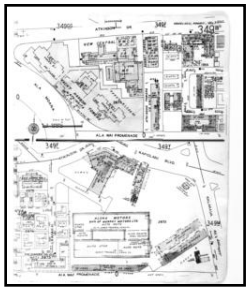

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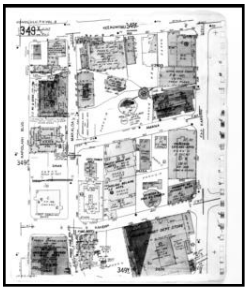

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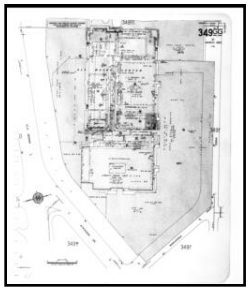

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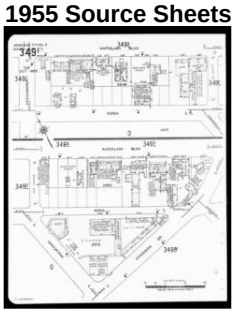

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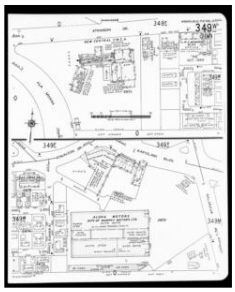

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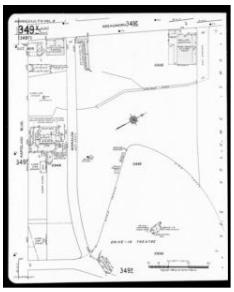

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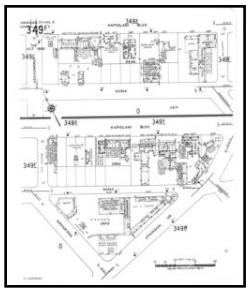

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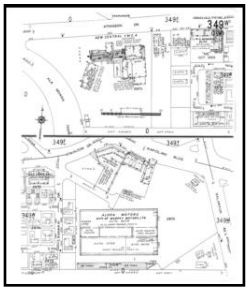

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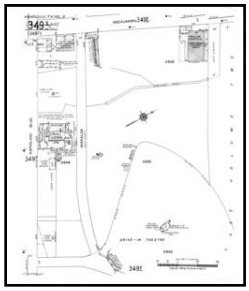

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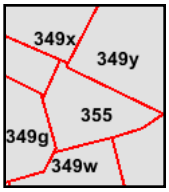

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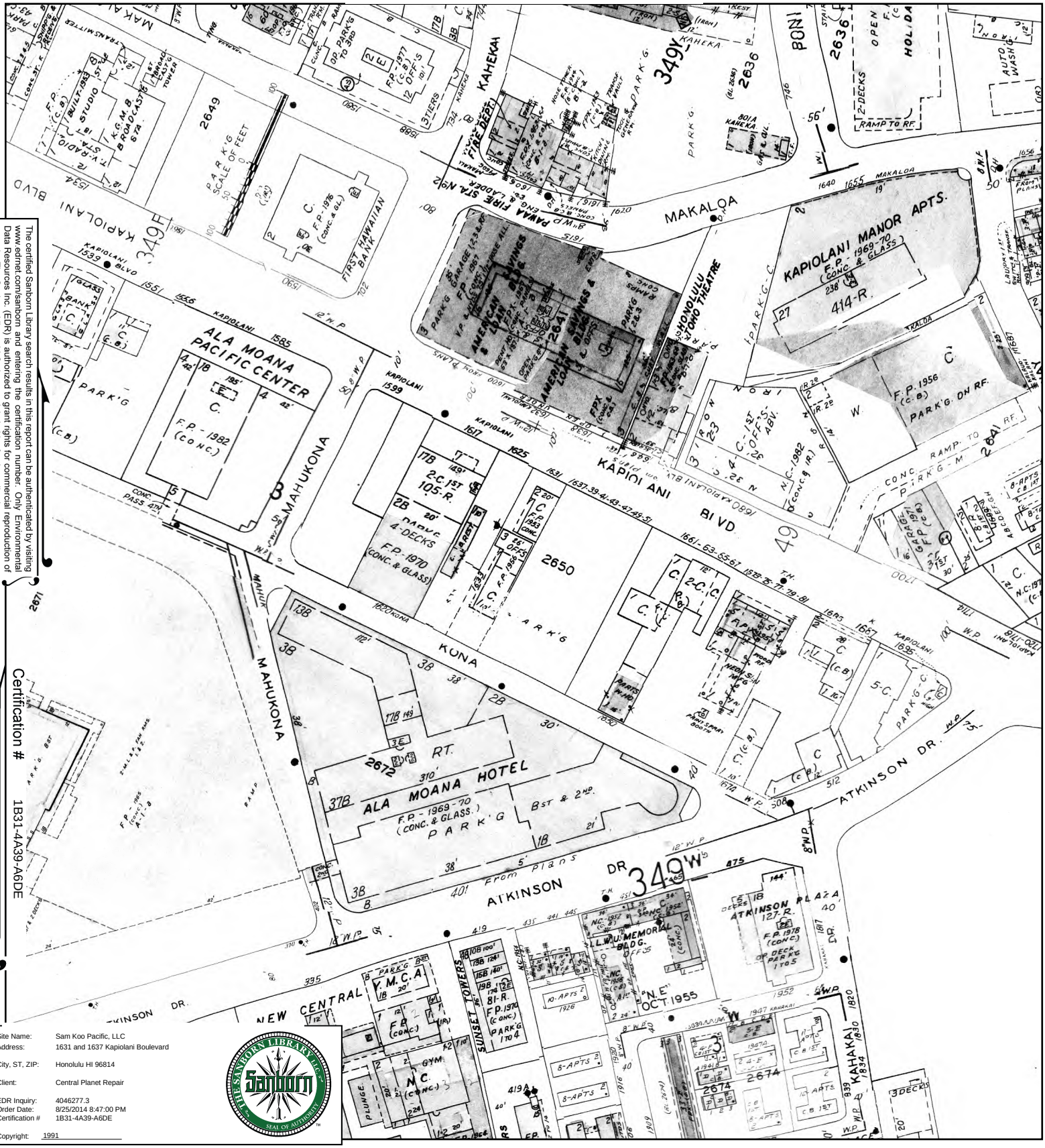

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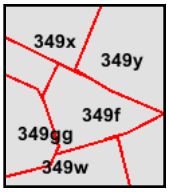

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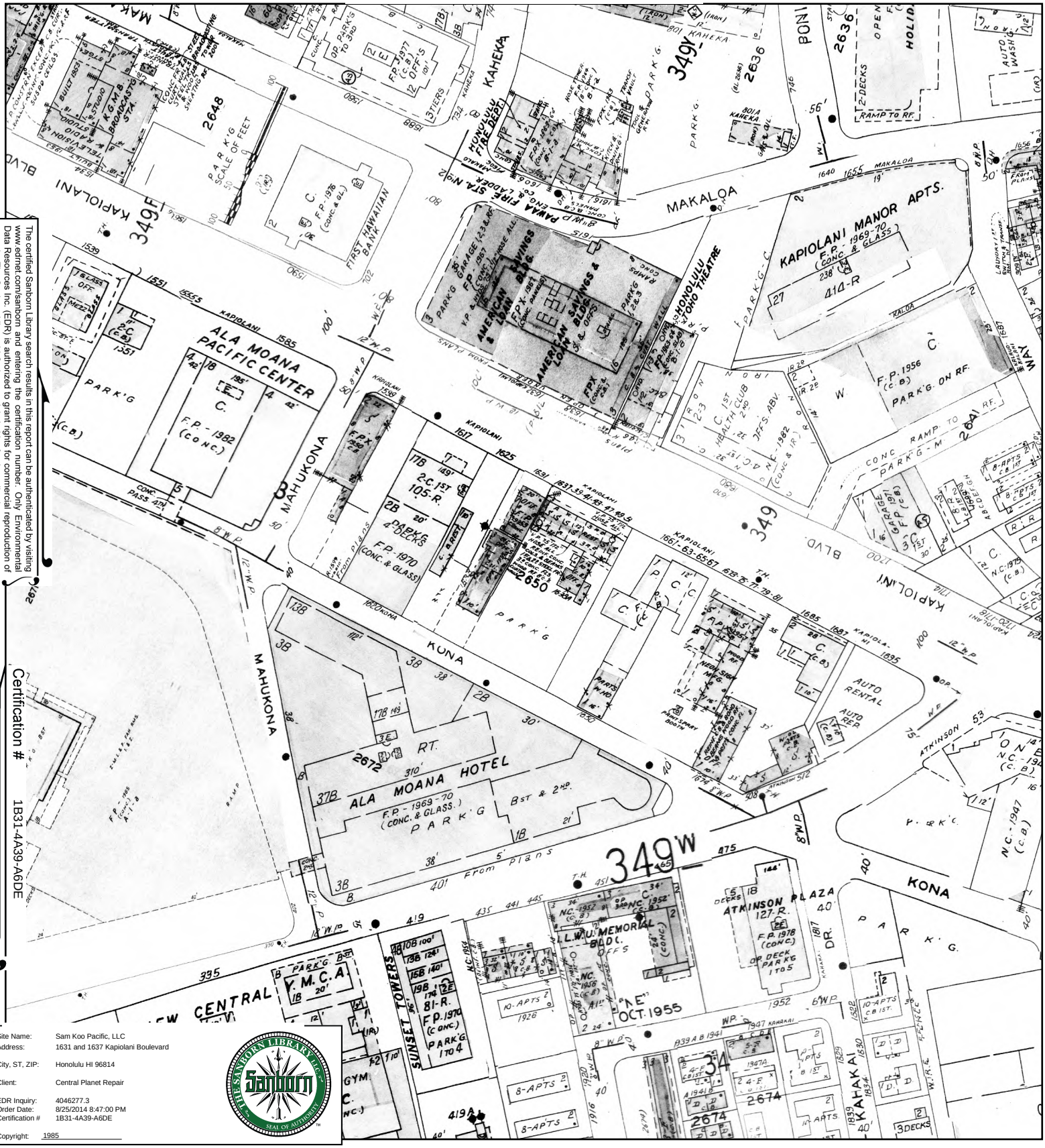

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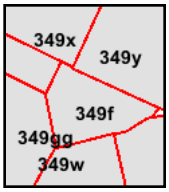

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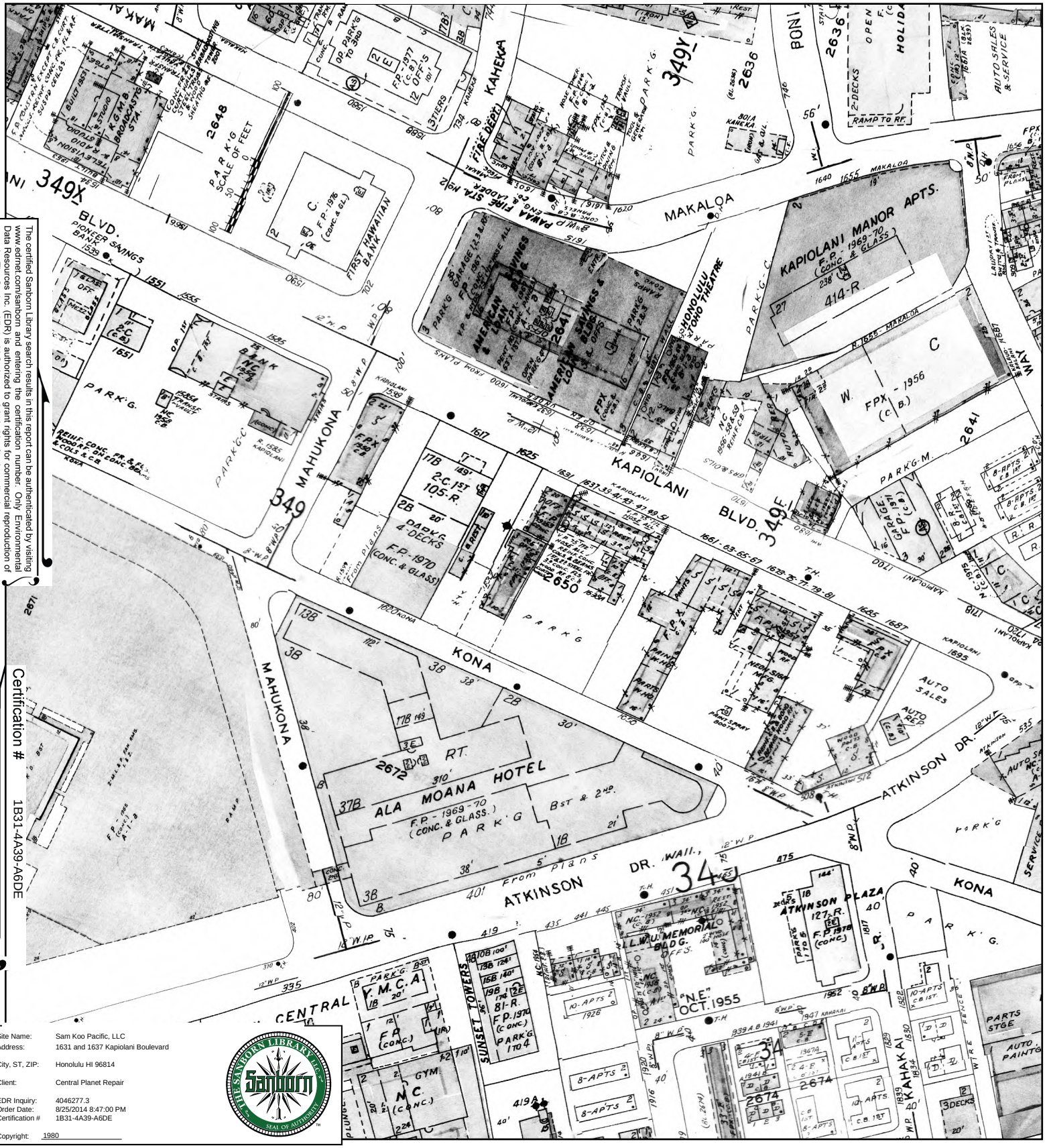

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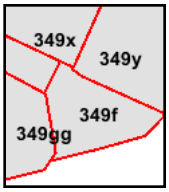

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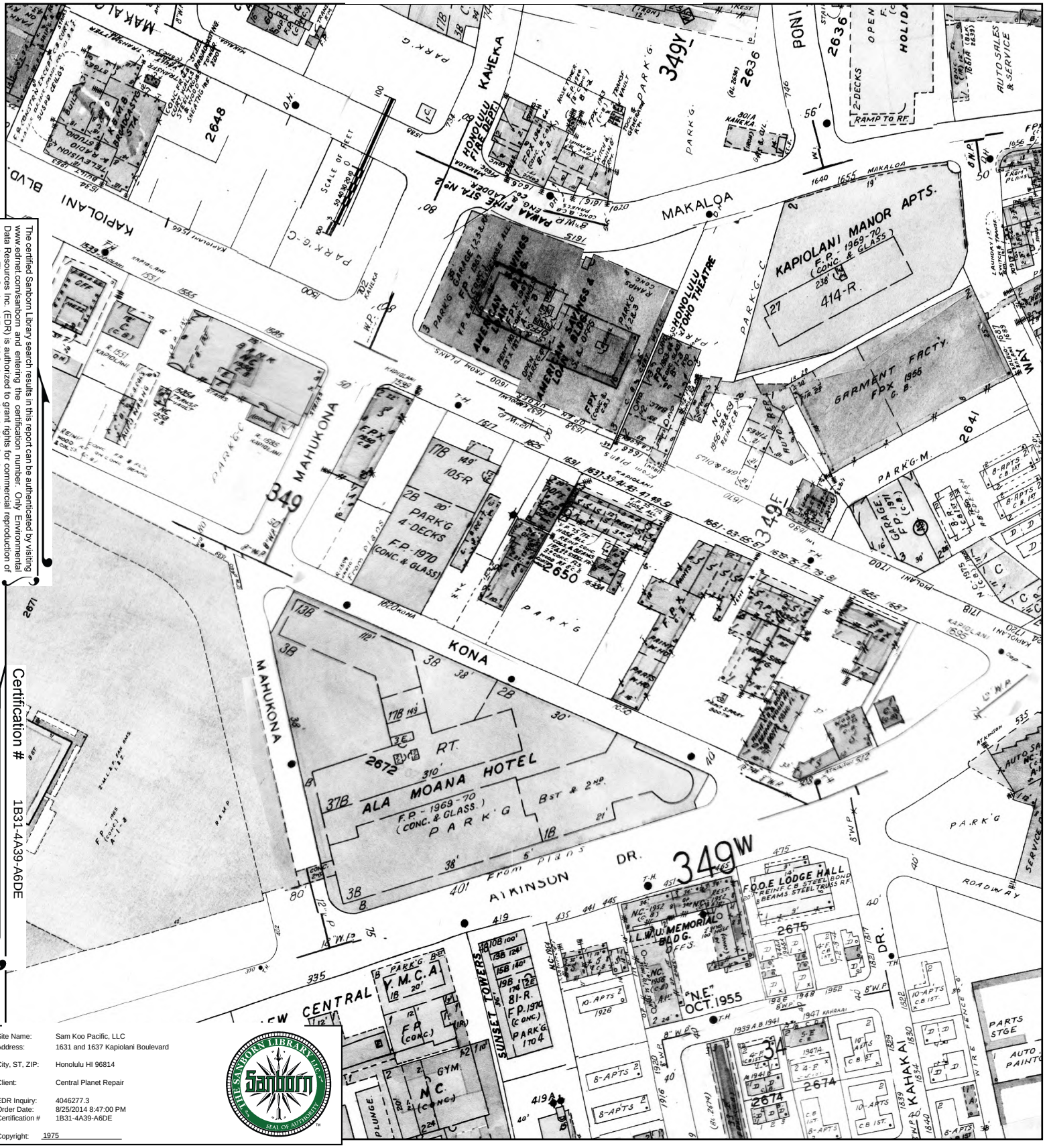

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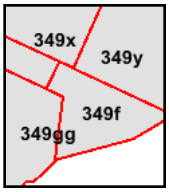

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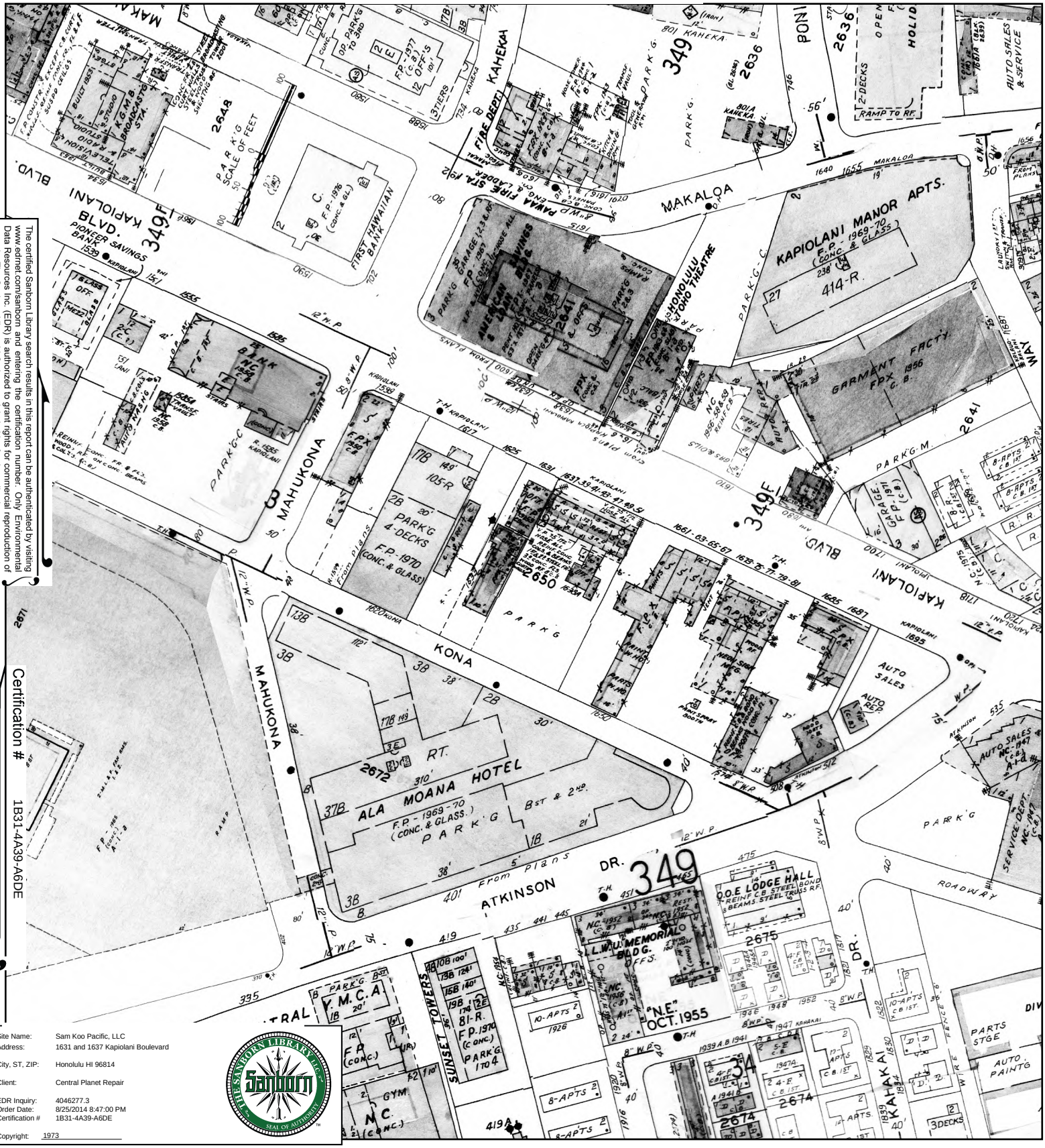
1973 Certified Sanborn Map



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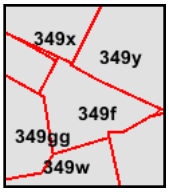
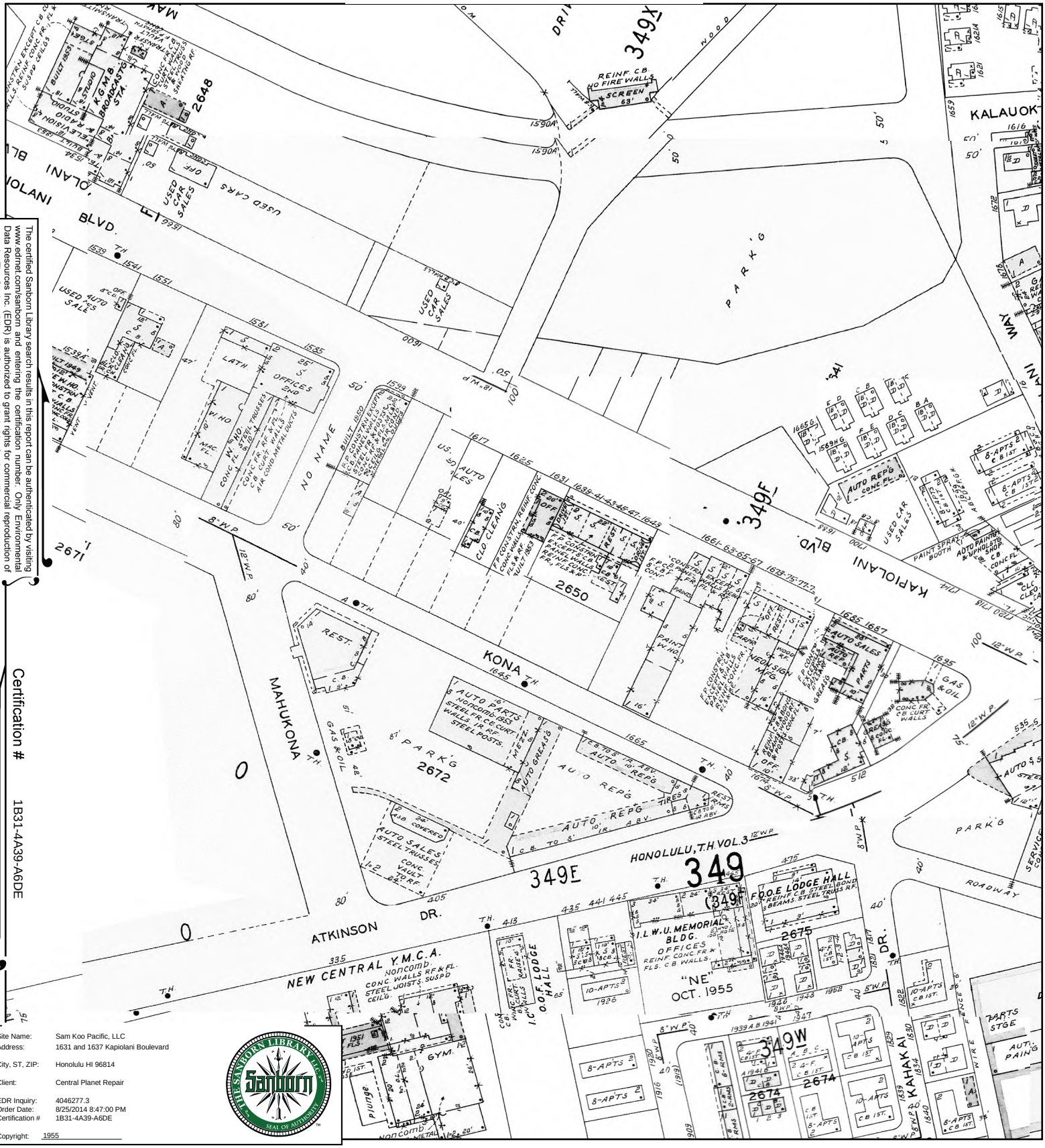


Volume 3, Sheet 349f
Volume 3, Sheet 349w
Volume 3, Sheet 349x
Volume 3, Sheet 349y
Volume 3, Sheet 349gg

N

1955 Certified Sanborn Map



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Certification # 1B31-4A39-A6DE

Site Name:	Sam Koo Pacific, LLC
Address:	1631 and 1637 Kapiolani Boulevard
City, ST, ZIP:	Honolulu HI 96814
Client:	Central Planet Repair
EDR Inquiry:	4046277.3
Order Date:	8/25/2014 8:47:00 PM
Certification #	1B31-4A39-A6DE
Copyright:	1955

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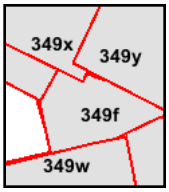
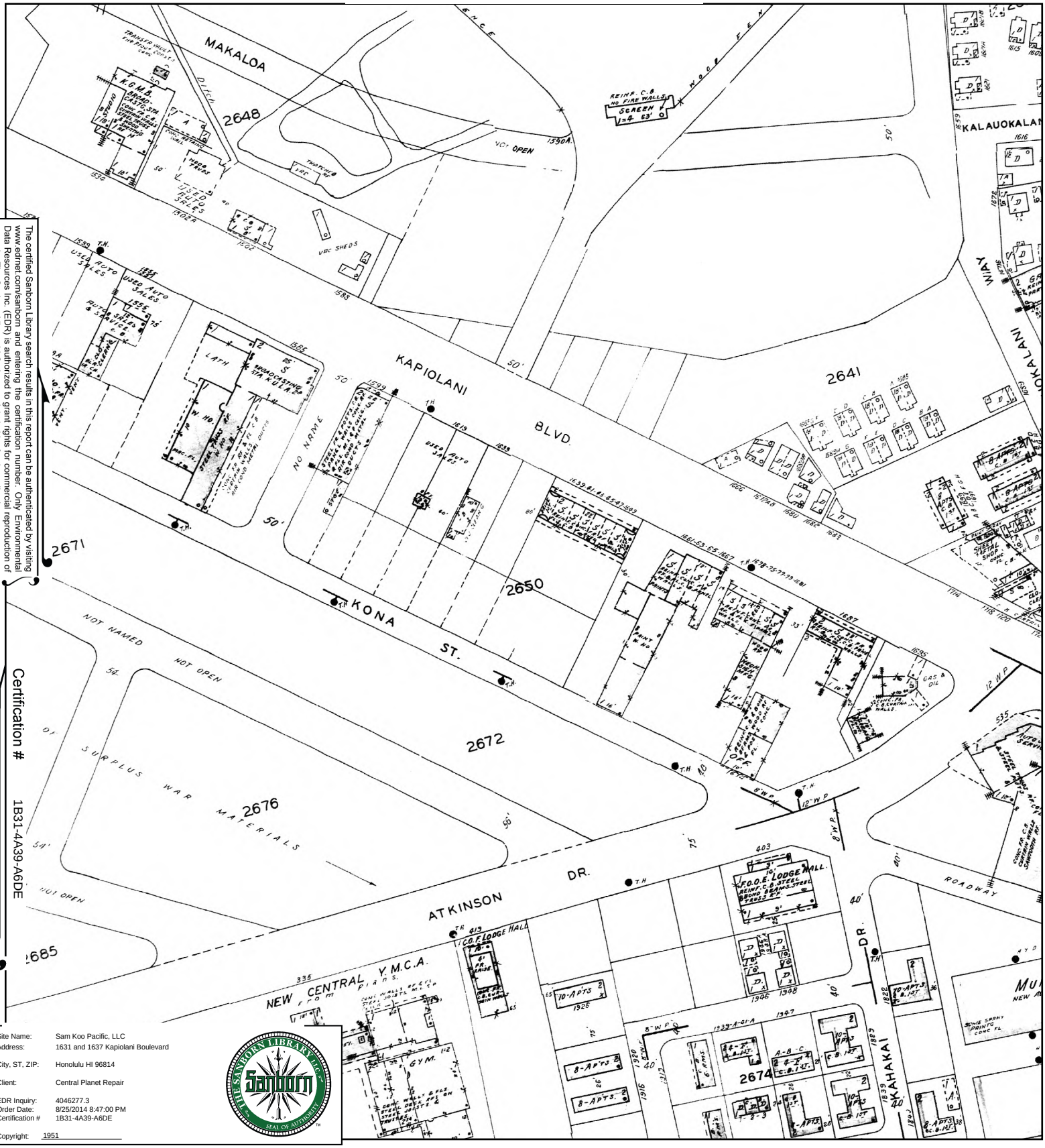


Volume 3, Sheet 349f
Volume 3, Sheet 349w
Volume 3, Sheet 349x
Volume 3, Sheet 349y
Volume 3, Sheet 349f
Volume 3, Sheet 349w
Volume 3, Sheet 349x
Volume 3, Sheet 349y

N

1951 Certified Sanborn Map



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Site Name:	Sam Koo Pacific, LLC
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Client:	Central Planet Repair
EDR Inquiry:	4046277.3
Order Date:	8/25/2014 8:47:00 PM
Certification #	1B31-4A39-A6DE
Copyright:	1951

This Certified Sanborn Map combines the following sheets.
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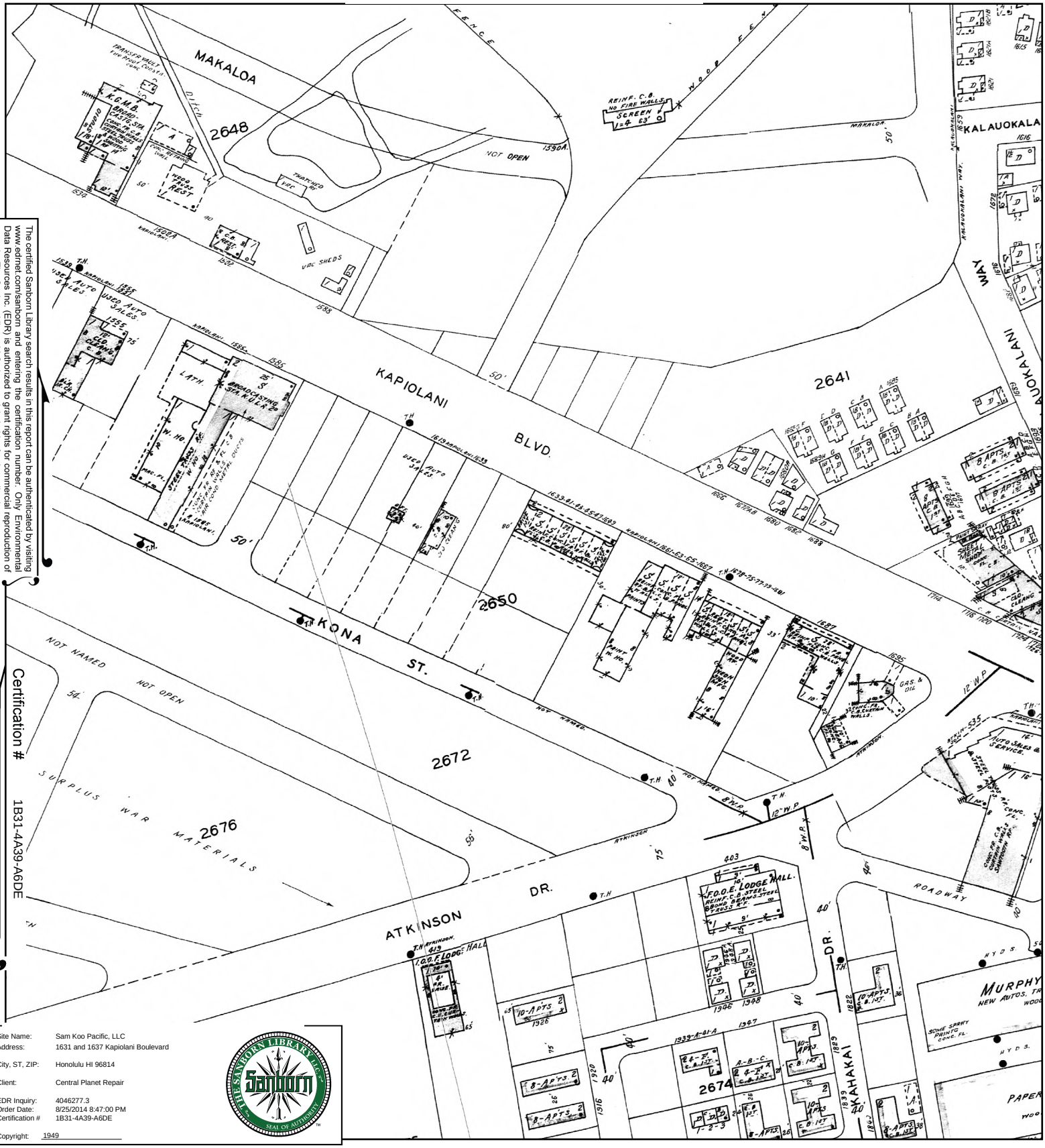
0 Feet 150 300 600

349f

Volume 3, Sheet 349f

N

1949 Certified Sanborn Map



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Client:	Central Planet Repair
EDR Inquiry:	4046277.3
Order Date:	8/25/2014 8:47:00 PM
Certification #	1B31-4A39-A6DE
Copyright:	1949

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Outlined areas indicate map sheets within the collection.

0 Feet 150 300 600

349f

Volume 3, Sheet 349f

N

Sam Koo Pacific, LLC
1631 and 1637 Kapiolani Boulevard
Honolulu, HI 96814

Inquiry Number: 4046277.4
August 25, 2014

EDR Historical Topographic Map Report

6 Armstrong Road, 4th Floor
Shelton, Connecticut 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Historical Topographic Map Report

Environmental Data Resources, Inc.s (EDR) Historical Topographic Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topographic Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the early 1900s.

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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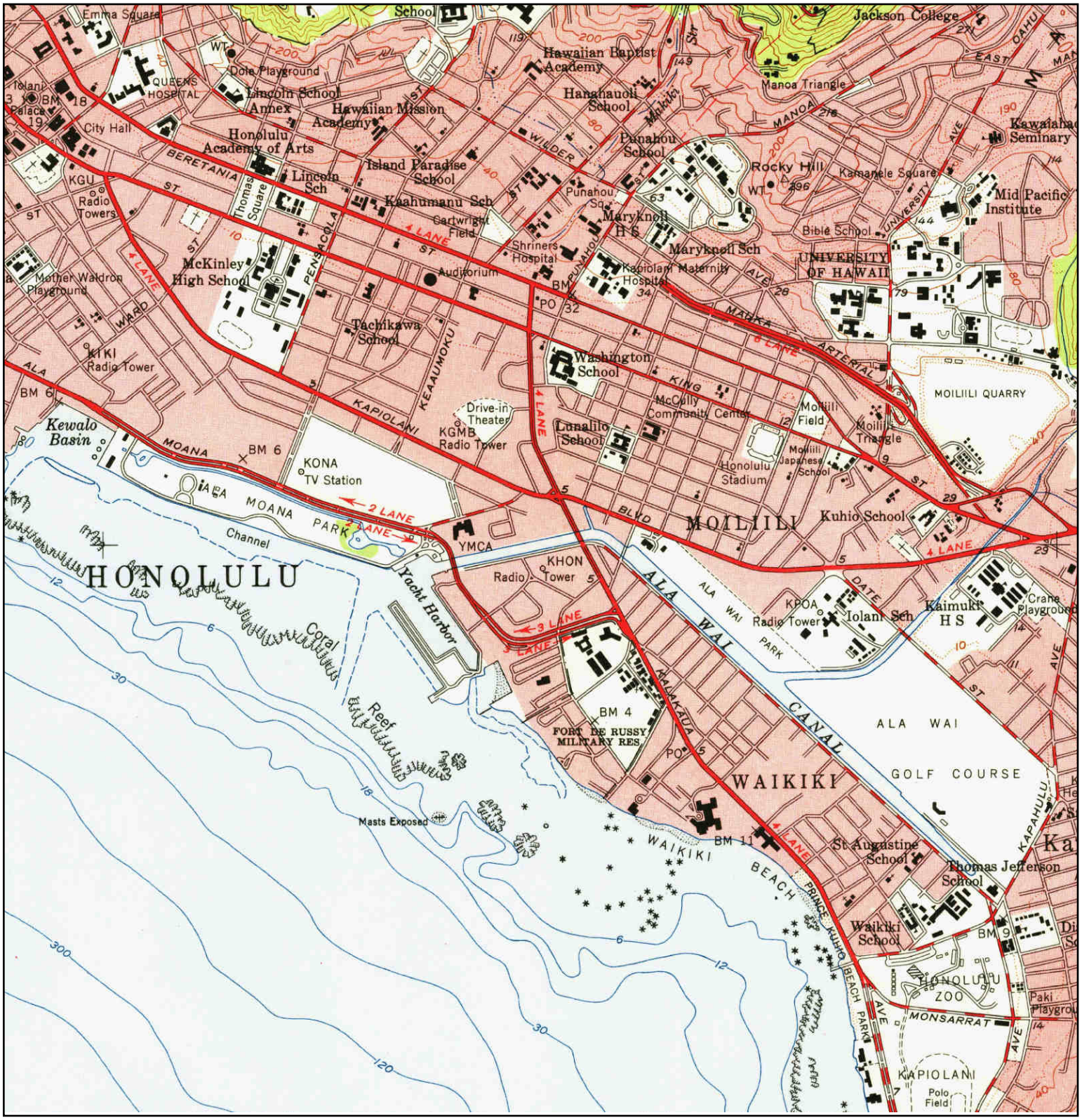
Historical Topographic Map

N	TARGET QUAD NAME: HONOLULU MAP YEAR: 1928 SERIES: 7.5 SCALE: 1:20000	SITE NAME: Sam Koo Pacific, LLC ADDRESS: 1631 and 1637 Kapiolani Boulevard Honolulu, HI 96814 LAT/LONG: 21.2911 / -157.8392	CLIENT: Central Planet Repair CONTACT: Ned Murphy INQUIRY#: 4046277.4 RESEARCH DATE: 08/25/2014

Historical Topographic Map

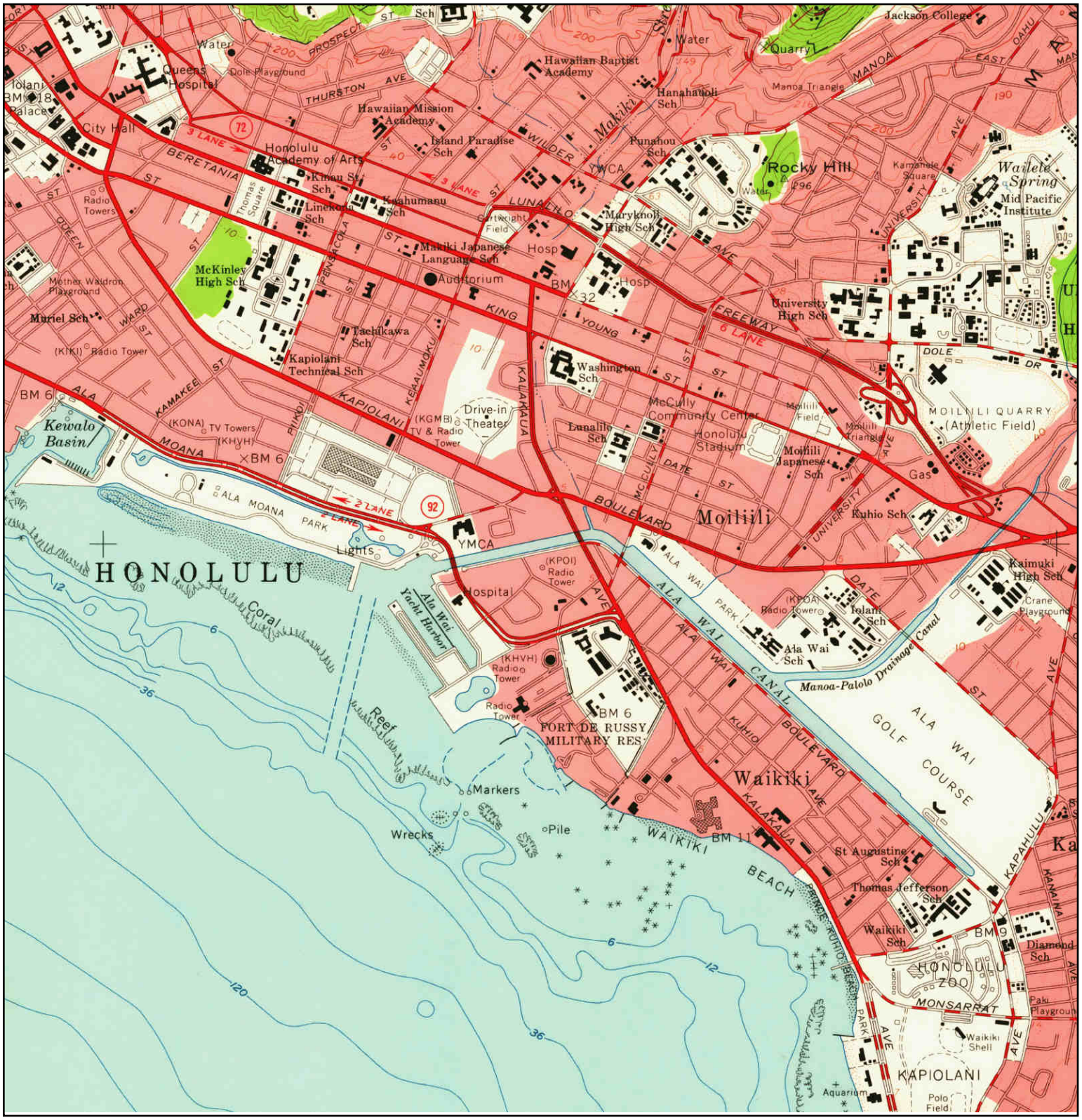


TARGET QUAD NAME: HONOLULU MAP YEAR: 1953 SERIES: 7.5 SCALE: 1:24000	SITE NAME: Sam Koo Pacific, LLC ADDRESS: 1631 and 1637 Kapiolani Boulevard Honolulu, HI 96814 LAT/LONG: 21.2911 / -157.8392	CLIENT: Central Planet Repair CONTACT: Ned Murphy INQUIRY#: 4046277.4 RESEARCH DATE: 08/25/2014	

Historical Topographic Map

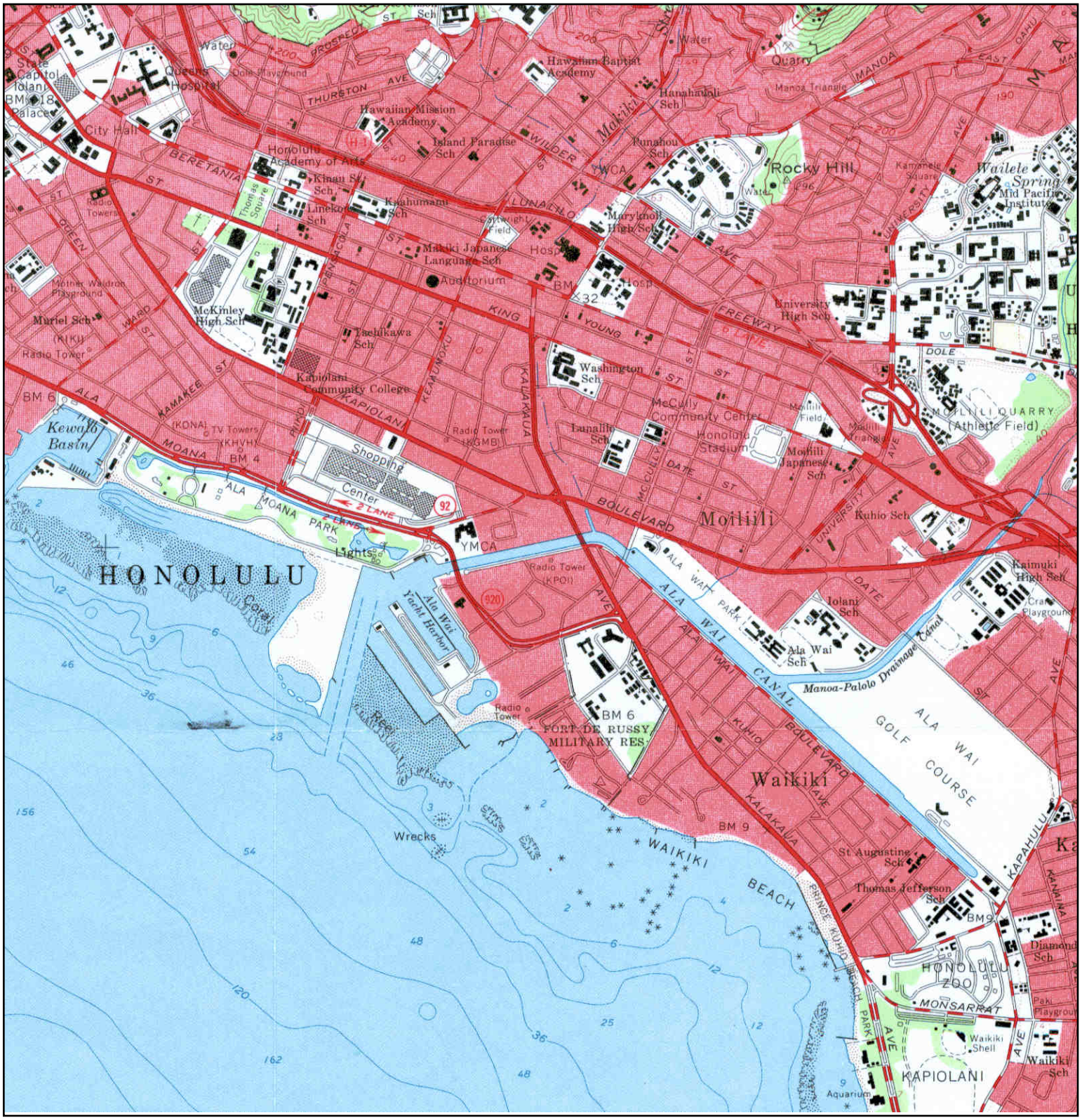
N	TARGET QUAD NAME: HONOLULU VICINITY SOUTH MAP YEAR: 1954 SERIES: 7.5 SCALE: 1:24000	SITE NAME: Sam Koo Pacific, LLC ADDRESS: 1631 and 1637 Kapiolani Boulevard Honolulu, HI 96814 LAT/LONG: 21.2911 / -157.8392	CLIENT: Central Planet Repair CONTACT: Ned Murphy INQUIRY#: 4046277.4 RESEARCH DATE: 08/25/2014

Historical Topographic Map



N	TARGET QUAD NAME: HONOLULU MAP YEAR: 1959 SERIES: 7.5 SCALE: 1:24000	SITE NAME: Sam Koo Pacific, LLC ADDRESS: 1631 and 1637 Kapiolani Boulevard Honolulu, HI 96814 LAT/LONG: 21.2911 / -157.8392	CLIENT: Central Planet Repair CONTACT: Ned Murphy INQUIRY#: 4046277.4 RESEARCH DATE: 08/25/2014

Historical Topographic Map



N	**TARGET QUAD** NAME: HONOLULU MAP YEAR: 1969 SERIES: 7.5 SCALE: 1:24000	SITE NAME: Sam Koo Pacific, LLC ADDRESS: 1631 and 1637 Kapiolani Boulevard Honolulu, HI 96814 LAT/LONG: 21.2911 / -157.8392	CLIENT: Central Planet Repair CONTACT: Ned Murphy INQUIRY#: 4046277.4 RESEARCH DATE: 08/25/2014

Historical Topographic Map

N ↑	TARGET QUAD NAME: OAHU MAP YEAR: 1970 REVISED FROM :1954 SERIES: 15 SCALE: 1:62500	SITE NAME: Sam Koo Pacific, LLC ADDRESS: 1631 and 1637 Kapiolani Boulevard Honolulu, HI 96814 LAT/LONG: 21.2911 / -157.8392	CLIENT: Central Planet Repair CONTACT: Ned Murphy INQUIRY#: 4046277.4 RESEARCH DATE: 08/25/2014

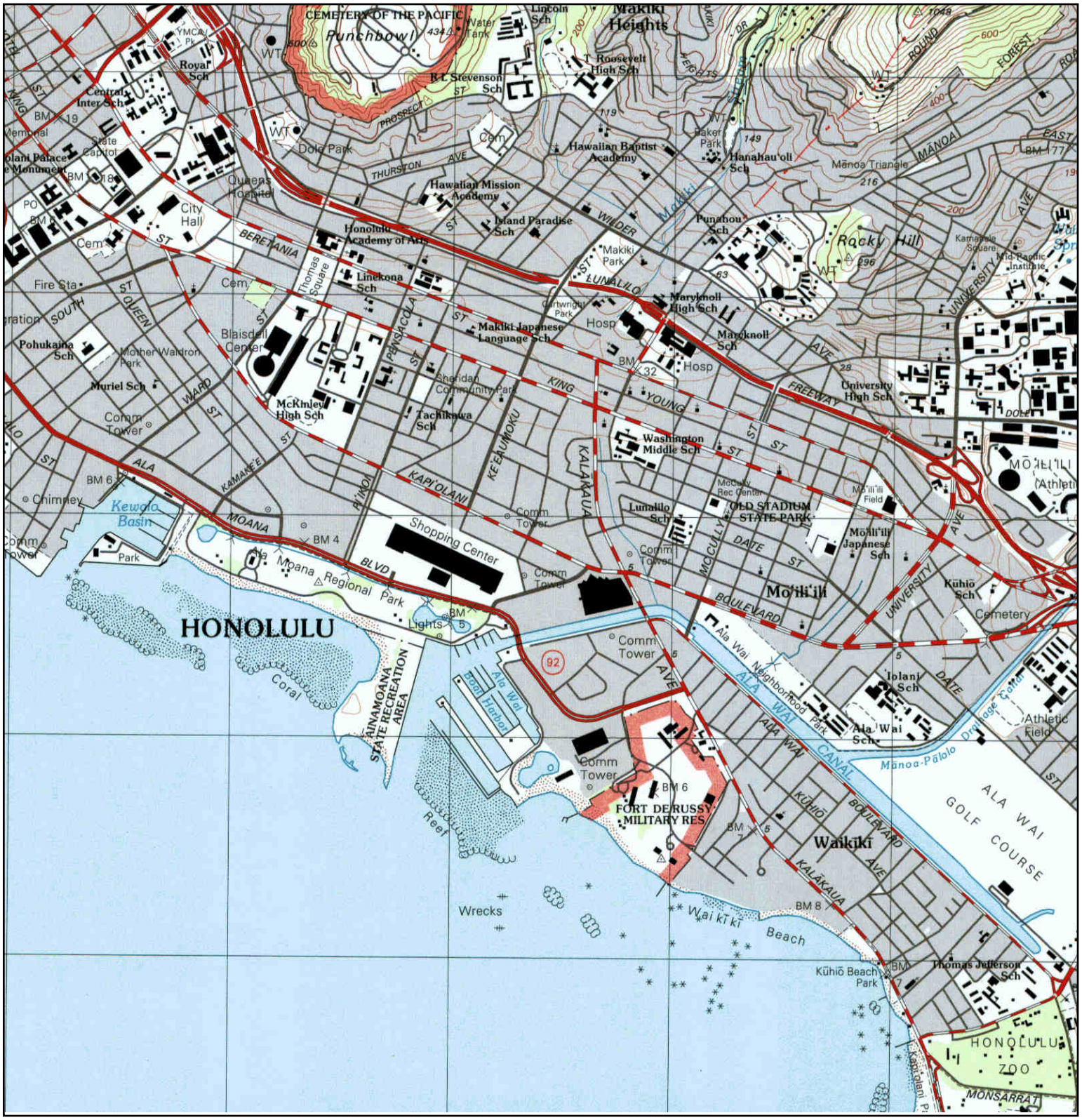
Historical Topographic Map

N ↑	TARGET QUAD NAME: HONOLULU MAP YEAR: 1983 SERIES: 7.5 SCALE: 1:24000	SITE NAME: Sam Koo Pacific, LLC ADDRESS: 1631 and 1637 Kapiolani Boulevard Honolulu, HI 96814 LAT/LONG: 21.2911 / -157.8392	CLIENT: Central Planet Repair CONTACT: Ned Murphy INQUIRY#: 4046277.4 RESEARCH DATE: 08/25/2014

Historical Topographic Map

N	TARGET QUAD NAME: HONOLULU MAP YEAR: 1983 SERIES: 15 SCALE: 1:50000	SITE NAME: Sam Koo Pacific, LLC ADDRESS: 1631 and 1637 Kapiolani Boulevard Honolulu, HI 96814 LAT/LONG: 21.2911 / -157.8392	CLIENT: Central Planet Repair CONTACT: Ned Murphy INQUIRY#: 4046277.4 RESEARCH DATE: 08/25/2014

Historical Topographic Map



N	TARGET QUAD NAME: HONOLULU MAP YEAR: 1998 SERIES: 7.5 SCALE: 1:24000	SITE NAME: Sam Koo Pacific, LLC ADDRESS: 1631 and 1637 Kapiolani Boulevard Honolulu, HI 96814 LAT/LONG: 21.2911 / -157.8392	CLIENT: Central Planet Repair CONTACT: Ned Murphy INQUIRY#: 4046277.4 RESEARCH DATE: 08/25/2014

1952

1959

1963

1968

1978

1993

2000

APPENDIX F

Environmental Data Resources, Inc. EDR Radius Map with GeoCheck®

Sam Koo Pacific, LLC
1631 and 1637 Kapiolani Boulevard
Honolulu, HI 96814

Inquiry Number: 4046277.2s
August 25, 2014

The EDR Radius Map™ Report with GeoCheck®

EDR® Environmental Data Resources Inc

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

1631 AND 1637 KAPIOLANI BOULEVARD
HONOLULU, HI 96814

COORDINATES

Latitude (North):	21.2911000 - 21˚ 17' 27.96''
Longitude (West):	157.8392000 - 157˚ 50' 21.12''
Universal Tranverse Mercator:	Zone 4
UTM X (Meters):	620413.1
UTM Y (Meters):	2354669.2
Elevation:	3 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	21157-C7 HONOLULU, HI
Most Recent Revision:	Not reported

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL..... National Priority List
Proposed NPL..... Proposed National Priority List Sites
NPL LIENS..... Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL..... National Priority List Deletions

EXECUTIVE SUMMARY

Federal CERCLIS list

CERCLIS..... Comprehensive Environmental Response, Compensation, and Liability Information System
FEDERAL FACILITY..... Federal Facility Site Information listing

Federal RCRA CORRACTS facilities list

CORRACTS..... Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF..... RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-LQG..... RCRA - Large Quantity Generators

Federal institutional controls / engineering controls registries

US ENG CONTROLS..... Engineering Controls Sites List
US INST CONTROL..... Sites with Institutional Controls
LUCIS..... Land Use Control Information System

Federal ERNS list

ERNS..... Emergency Response Notification System

State and tribal landfill and/or solid waste disposal site lists

HI SWF/LF..... Permitted Landfills in the State of Hawaii

State and tribal leaking storage tank lists

INDIAN LUST..... Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

INDIAN UST..... Underground Storage Tanks on Indian Land
FEMA UST..... Underground Storage Tank Listing

State and tribal voluntary cleanup sites

INDIAN VCP..... Voluntary Cleanup Priority Listing

State and tribal Brownfields sites

HI BROWNFIELDS..... Brownfields Sites

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS..... A Listing of Brownfields Sites

EXECUTIVE SUMMARY

Local Lists of Landfill / Solid Waste Disposal Sites

DEBRIS REGION 9	Torres Martinez Reservation Illegal Dump Site Locations
ODI	Open Dump Inventory
INDIAN ODI	Report on the Status of Open Dumps on Indian Lands

Local Lists of Hazardous waste / Contaminated Sites

US CDL	Clandestine Drug Labs
HI CDL	Clandestine Drug Lab Listing
US HIST CDL	National Clandestine Laboratory Register

Local Land Records

LIENS 2	CERCLA Lien Information

Records of Emergency Release Reports

HMIRS	Hazardous Materials Information Reporting System
HI SPILLS 90	SPILLS 90 data from FirstSearch

Other Ascertainable Records

DOT OPS	Incident and Accident Data
DOD	Department of Defense Sites
FUDS	Formerly Used Defense Sites
CONSENT	Superfund (CERCLA) Consent Decrees
ROD	Records Of Decision
UMTRA	Uranium Mill Tailings Sites
US MINES	Mines Master Index File
TRIS	Toxic Chemical Release Inventory System
TSCA	Toxic Substances Control Act
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
SSTS	Section 7 Tracking Systems
ICIS	Integrated Compliance Information System
PADS	PCB Activity Database System
MLTS	Material Licensing Tracking System
RADINFO	Radiation Information Database
RAATS	RCRA Administrative Action Tracking System
RMP	Risk Management Plans
HI UIC	Underground Injection Wells Listing
HI DRYCLEANERS	Permitted Drycleaner Facility Listing
INDIAN RESERV	Indian Reservations
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
EPA WATCH LIST	EPA WATCH LIST
COAL ASH DOE	Steam-Electric Plant Operation Data
US FIN ASSUR	Financial Assurance Information
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER	PCB Transformer Registration Database
US AIRS	Aerometric Information Retrieval System Facility Subsystem
PRP	Potentially Responsible Parties
2020 COR ACTION	2020 Corrective Action Program List

EXECUTIVE SUMMARY

LEAD SMELTERS..... Lead Smelter Sites

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP..... EDR Proprietary Manufactured Gas Plants

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

HI RGA LF..... Recovered Government Archive Solid Waste Facilities List
HI RGA LUST..... Recovered Government Archive Leaking Underground Storage Tank
HI RGA HWS..... Recovered Government Archive State Hazardous Waste Facilities List

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Federal CERCLIS NFRAP site List

CERC-NFRAP: Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

A review of the CERC-NFRAP list, as provided by EDR, and dated 10/25/2013 has revealed that there is 1 CERC-NFRAP site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
FIRST DEVELOPMENT INC	***1777 KAPIOLANI BLVD***	***E 1/8 - 1/4 (0.173 mi.)***	***I27***	***32***

EXECUTIVE SUMMARY

Federal RCRA generators list

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 03/11/2014 has revealed that there are 4 RCRA-SQG sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
ALAMOANA HOTEL	***410 ATKINSON DR***	***SSW 0 - 1/8 (0.080 mi.)***	***B4***	***9***
HOLIDAY ACTION GAS	801 KAHEKA ST	N 1/8 - 1/4 (0.130 mi.)	C7	13
WALGREENS STORE NO. 12072	1470 KAPIOLANI BLVD.	NW 1/8 - 1/4 (0.205 mi.)	H36	43
STATE OF HAWAII DLNR DOBOR	1651 ALA MOANA BLVD	SSW 1/8 - 1/4 (0.238 mi.)	K42	53

RCRA-CESQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

A review of the RCRA-CESQG list, as provided by EDR, and dated 03/11/2014 has revealed that there are 7 RCRA-CESQG sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
PAN AM BLDG	***1600 KAPIOLANI BLVD***	***NW 0 - 1/8 (0.036 mi.)***	***A1***	***7***
AOAO YACHT HARBOR TOWERS	1600_1650 ALA MOANA BLV	SSW 1/8 - 1/4 (0.145 mi.)	F13	20
ROGERS REPAIR INC	***1687 KALAKAUA AVE***	***ENE 1/8 - 1/4 (0.149 mi.)***	***D15***	***22***
KALAKUA TRANSMISSION INC	***1665 KALAKUA AVE***	***NE 1/8 - 1/4 (0.162 mi.)***	***D21***	***26***
FIRST DEVELOPMENT INC	***1777 KAPIOLANI BLVD***	***E 1/8 - 1/4 (0.173 mi.)***	***I27***	***32***
HAWAII CONVENTION CENTER	1801 KALAKAUA AVENUE	E 1/8 - 1/4 (0.204 mi.)	I35	41
ALA MOANA UNOCAL	***1651 ALA MOANA BLVD***	***SSW 1/8 - 1/4 (0.238 mi.)***	***K41***	***48***

State- and tribal - equivalent CERCLIS

HI SHWS: The State Hazardous Waste Sites records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. The data come from the Department of Health.

A review of the HI SHWS list, as provided by EDR, and dated 01/04/2014 has revealed that there are 48 HI SHWS sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
NEW OFFICE LOUNGE	***1551 KAPIOLANI BLVD***	***NW 0 - 1/8 (0.086 mi.)***	***A5***	***11***
HECO SUBSTATION: MAKALOA SUBST	***1544 MAKALOA ST***	***NW 1/8 - 1/4 (0.144 mi.)***	***E12***	***18***
ROGER'S REPAIR INC	1687 KALAKAUA AVE	ENE 1/8 - 1/4 (0.149 mi.)	D14	21
FORMER KALAKAUA TRANSMISSION I	***1665 KALAKAUA AVE***	***NE 1/8 - 1/4 (0.159 mi.)***	***D19***	***25***
YACHT HARBOR TOWERS	***1600 ALA MOANA BLVD***	***SSW 1/8 - 1/4 (0.164 mi.)***	***F22***	***28***

EXECUTIVE SUMMARY

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
ALOHA MOTORS 1777 KAPIOLANI BL	***1777 KAPIOLANI BLVD***	***E 1/8 - 1/4 (0.173 mi.)***	***I26***	***30***
1609 ALA WAI DIESEL RELEASE	***1609 ALA WAI BLVD***	***SSE 1/8 - 1/4 (0.204 mi.)***	***J32***	***36***
HAWAII CONVENTION CENTER	***1801 KALAKAUA AVE***	***E 1/8 - 1/4 (0.204 mi.)***	***I33***	***38***
WALGREENS KEEAMOKU	1460 KAPIOLANI BOULEVAR	NW 1/8 - 1/4 (0.216 mi.)	H37	45
LIKE LIKE PLAZA PETROLEUM CONT	745 KEEAUMOKU ST	NNW 1/4 - 1/2 (0.315 mi.)	49	58
CUTTER CHEVROLET	***1391 KAPIOLANI BLVD***	***WNW 1/4 - 1/2 (0.328 mi.)***	***50***	***59***
HOBRON HOTEL	1744 KAIOO DR	SSE 1/4 - 1/2 (0.354 mi.)	N53	62
MOTOR SUPPLY	***726 SHERIDAN ST***	***NW 1/4 - 1/2 (0.372 mi.)***	***O56***	***65***
HAKUYOSHA HAWAII, INC	***730 SHERIDAN ST***	***NW 1/4 - 1/2 (0.372 mi.)***	***O57***	***66***
SEARS ALA MOANA	1450 ALA MOANA BLVD	W 1/4 - 1/2 (0.396 mi.)	M62	70
ALOHA/KING SELF STORAGE	***1414 KALAKAUA AVE***	***NNE 1/4 - 1/2 (0.470 mi.)***	***Q68***	***81***
THE PAVILLION	***1925 KALAKAUA AVE***	***SE 1/4 - 1/2 (0.473 mi.)***	***69***	***82***
CENPAC PROPERTIES - OFFICE BUI	***615 PIIKOI ST***	***WNW 1/4 - 1/2 (0.496 mi.)***	***73***	***86***
CONTINENTAL AUTO SERVICES	***1918 ALGAROBA ST***	***ENE 1/2 - 1 (0.520 mi.)***	***74***	***88***
MEADOW GOLD DAIRIES (ICE CREAM	***1418 YOUNG ST***	***N 1/2 - 1 (0.520 mi.)***	***75***	***89***
7-11 KALAKAUA	***1323 KALAKAUA AVE***	***NNE 1/2 - 1 (0.531 mi.)***	***76***	***91***
DURANT PROPERTIES	***1235 KONA ST***	***WNW 1/2 - 1 (0.564 mi.)***	***77***	***93***
EVERSHINE X	***1230 KAPIOLANI BLVD***	***WNW 1/2 - 1 (0.574 mi.)***	***78***	***94***
CHEVRON 2002 KALAKAUA	***2002 KALAKAUA AVE***	***SE 1/2 - 1 (0.578 mi.)***	***79***	***95***
GRACE OTSUKA APARTMENT COMPLEX	***1233 YOUNG ST***	***NNW 1/2 - 1 (0.639 mi.)***	***80***	***96***
WALLYS GARDEN CENTER	***1935 S BERETANIA ST***	***NE 1/2 - 1 (0.649 mi.)***	***81***	***97***
1012 PIIKOI STREET, ANIN-PIIKO	***1012 PIIKOI ST***	***NNW 1/2 - 1 (0.649 mi.)***	***82***	***98***
MCCULLY UNION SERVICE	***2105 S KING ST***	***ENE 1/2 - 1 (0.663 mi.)***	***S83***	***100***
KAPIOLANI WOMEN'S & CHILDREN'S	***1319 PUNAHOU ST***	***NNE 1/2 - 1 (0.668 mi.)***	***84***	***106***
MCDONALD'S RESTAURANT SOIL & G	***2121 S KING ST***	***ENE 1/2 - 1 (0.670 mi.)***	***S85***	***108***
KOOLANI TOWER PROJECT	***1189 WAIMANU ST***	***WNW 1/2 - 1 (0.672 mi.)***	***T86***	***109***
CARTWRIGHT NEIGHBORHOOD PARK	KEEAUMOKU ST & MATLOCK	N 1/2 - 1 (0.696 mi.)	87	111
SCHUMAN CARRIAGE MOTORS, LTD.	***1234 S BERETANIA ST***	***NNW 1/2 - 1 (0.717 mi.)***	***88***	***111***
ROYAL GARDENS HOTEL DIESEL	***440 OLOHANA ST***	***SE 1/2 - 1 (0.723 mi.)***	***89***	***115***
KING KALAKAUA PLAZA	***2080 KALAKAUA AVE***	***SE 1/2 - 1 (0.724 mi.)***	***90***	***116***
RESERVE HOUSING TOWER SOIL CON	***1141 WAIMANU ST***	***WNW 1/2 - 1 (0.726 mi.)***	***T91***	***118***
SELF STORAGE 1	***438 KAMAKEE ST***	***WNW 1/2 - 1 (0.787 mi.)***	***92***	***119***
ALA WAI COVE CONDOMINIUM APART	***509 UNIVERSITY AVE***	***ESE 1/2 - 1 (0.820 mi.)***	***93***	***121***
JAS W GLOVER LTD	***1046 WAIMAMU ST***	***WNW 1/2 - 1 (0.839 mi.)***	***94***	***122***
1310 PENSACOLA STREET	1310 PENSACOLA ST	NNW 1/2 - 1 (0.872 mi.)	95	124
PACIFICA CONDOMINIUM	***1009 KAPIOLANI BLVD***	***WNW 1/2 - 1 (0.872 mi.)***	***96***	***125***
WAIKIKI BAZAAR	***2174 KALAKAUA AVE***	***SE 1/2 - 1 (0.896 mi.)***	***97***	***126***
HALE PUA NUI UST REMOVAL	***228 BEACH WALK***	***SSE 1/2 - 1 (0.901 mi.)***	***U98***	***127***
WAIKIKI BEACH WALK RESORT	***205 BEACH WALK AVE***	***SSE 1/2 - 1 (0.925 mi.)***	***U99***	***128***
IOLANI SCHOOL PETROLEUM ODOR	***563 KAMOKU ST***	***ESE 1/2 - 1 (0.945 mi.)***	***100***	***129***
HAWAII OPERA THEATER SETS & PR	***962 KAWAIAHAO ST***	***WNW 1/2 - 1 (0.986 mi.)***	***101***	***131***
SYMPHONY PARK	850 KAPIOLANI BLVD	WNW 1/2 - 1 (0.995 mi.)	102	132
PUNAHOU SCHOOL - BARWICK PLAYG	***1601 PUNAHOU ST***	***NNE 1/2 - 1 (0.999 mi.)***	***103***	***133***

State and tribal leaking storage tank lists

HI LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the Department of Health's Active Leaking Underground Storage Tank Log Listing.

A review of the HI LUST list, as provided by EDR, and dated 06/30/2014 has revealed that there are 29

EXECUTIVE SUMMARY

HI LUST sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
C&CH PAWAA FIRE STATION Facility Status: Site Cleanup Completed (NFA)	1610 MAKALOA ST	NNE 0 - 1/8 (0.061 mi.)	3	9
NEW OFFICE LOUNGE Facility Status: Site Cleanup Completed (NFA)	***1551 KAPIOLANI BLVD***	***NW 0 - 1/8 (0.086 mi.)***	***A5***	***11***
FIRESTONE STORE Facility Status: Site Cleanup Completed with EHE/EHMP Facility Status: Site Cleanup Completed (NFA)	***801 KAHEKA ST***	***N 1/8 - 1/4 (0.130 mi.)***	***C8***	***14***
GAS 'N GLO INC Facility Status: Site Cleanup Completed (NFA)	***1670 MAKALOA ST***	***NE 1/8 - 1/4 (0.139 mi.)***	***D11***	***17***
ALOHA MOTORS Facility Status: Site Cleanup Completed (NFA)	***KAPIOLANI BLVD X KALAKA***	***ESE 1/8 - 1/4 (0.193 mi.)***	***I29***	***35***
THE WATERMARK WAIKIKI Facility Status: Confirmed Release	1551 ALA WAI BLVD	S 1/8 - 1/4 (0.201 mi.)	31	36
FUNAI'S UNION SERVICE L-5583 Facility Status: Site Cleanup Completed (NFA)	***1810 KAPIOLANI BLVD***	***E 1/8 - 1/4 (0.220 mi.)***	***I38***	***45***
LING BROTHERS, LTD. Facility Status: Site Cleanup Completed (NFA)	1819-E LIPEEPEE ST	SSE 1/8 - 1/4 (0.223 mi.)	J39	47
ALOHA MARINE Facility Status: Site Cleanup Completed (NFA)	***1651 ALA MOANA BLVD***	***SSW 1/8 - 1/4 (0.238 mi.)***	***K43***	***54***
SUPERBLOCK PROPERTIES Facility Status: Site Cleanup Completed (NFA)	***SOUTH BLOCK (BLDG S20)***	***NW 1/4 - 1/2 (0.302 mi.)***	***L47***	***57***
SUPERBLOCK PROPERTIES Facility Status: Site Cleanup Completed (NFA)	***NORTH BLOCK (BLDG N8) /***	***NW 1/4 - 1/2 (0.309 mi.)***	***L48***	***57***
CUTTER CHEVROLET Facility Status: Site Cleanup Completed (NFA)	***1391 KAPIOLANI BLVD***	***WNW 1/4 - 1/2 (0.328 mi.)***	***50***	***59***
SUPERBLOCK PROPERTIES Facility Status: Site Cleanup Completed (NFA)	***SOUTH BLOCK (BLDG S25)***	***NW 1/4 - 1/2 (0.337 mi.)***	***L51***	***60***
SEARS ROEBUCK & COMPANY 1158 Facility Status: Site Cleanup Completed (NFA)	***1450 ALA MOANA BLVD #10***	***WSW 1/4 - 1/2 (0.342 mi.)***	***M52***	***61***
SUPERBLOCK PROPERTIES Facility Status: Site Cleanup Completed (NFA)	***SOUTH BLOCK (BLDG S13)***	***NW 1/4 - 1/2 (0.364 mi.)***	***O54***	***63***
ILIKAI HOTEL Facility Status: Site Cleanup Completed (NFA)	***1777 ALA MOANA BLVD***	***S 1/4 - 1/2 (0.366 mi.)***	***55***	***64***
SUPERBLOCK PROPERTIES Facility Status: Site Cleanup Completed (NFA)	***NORTH BLOCK (BLDG N15)***	***NW 1/4 - 1/2 (0.373 mi.)***	***58***	***68***
SUPERBLOCK PROPERTIES Facility Status: Site Cleanup Completed (NFA)	***SOUTH BLOCK (BLDG S1) /***	***NW 1/4 - 1/2 (0.374 mi.)***	***O59***	***68***
WENS LIFE CO., INC Facility Status: Site Cleanup Completed (NFA)	***808 SHERIDAN ST***	***NNW 1/4 - 1/2 (0.393 mi.)***	***60***	***69***
DISCOVERY BAY Facility Status: Site Cleanup Completed (NFA)	***1778 ALA MOANA BLVD***	***S 1/4 - 1/2 (0.395 mi.)***	***N61***	***70***
TESORO 2GO 61018 Facility Status: LUST Cleanup Initiated	***1549 S KING ST***	***NNE 1/4 - 1/2 (0.407 mi.)***	***P63***	***71***
GAS PLUS Facility Status: Site Cleanup Completed (NFA)	***1524 S KING ST***	***NNE 1/4 - 1/2 (0.420 mi.)***	***Q64***	***76***
MID PAC PETROLEUM 253943 (PREV Facility Status: Site Cleanup Completed (NFA)	***1505 S. KING ST.***	***N 1/4 - 1/2 (0.422 mi.)***	***Q65***	***77***

EXECUTIVE SUMMARY

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
PUNAHOU REPAIR SHOP	***1558 S KING ST***	***NNE 1/4 - 1/2 (0.423 mi.)***	***P66***	***79***
Facility Status: Site Cleanup Completed (NFA)				
ALA MOANA UNOCAL	***1322 KAPIOLANI BLVD***	***WNW 1/4 - 1/2 (0.431 mi.)***	***67***	***80***
Facility Status: Site Cleanup Completed (NFA)				
YAJIMA OIL OF USA INC	***1375 S KING ST***	***N 1/4 - 1/2 (0.484 mi.)***	***70***	***83***
Facility Status: Site Cleanup Completed (NFA)				
ALOHA ALA MOANA	***451 PIIKOI ST***	***WNW 1/4 - 1/2 (0.486 mi.)***	***R71***	***85***
Facility Status: Site Cleanup Completed (NFA)				
NAURU PHOSPHATE ROYALTIES TRUS	404 PIIKOI ST/1330 ALA	WNW 1/4 - 1/2 (0.495 mi.)	R72	86
Facility Status: Site Cleanup Completed (NFA)				
CENPAC PROPERTIES - OFFICE BUI	***615 PIIKOI ST***	***WNW 1/4 - 1/2 (0.496 mi.)***	***73***	***86***
Facility Status: Site Cleanup Completed (NFA)				

State and tribal registered storage tank lists

HI UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Health's Listing of Underground Storage Tanks.

A review of the HI UST list, as provided by EDR, and dated 06/30/2014 has revealed that there are 8 HI UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
NEW OFFICE LOUNGE	***1551 KAPIOLANI BLVD***	***NW 0 - 1/8 (0.086 mi.)***	***A5***	***11***
FIRESTONE STORE	***801 KAHEKA ST***	***N 1/8 - 1/4 (0.130 mi.)***	***C8***	***14***
GAS 'N GLO INC	***1670 MAKALOA ST***	***NE 1/8 - 1/4 (0.139 mi.)***	***D11***	***17***
KALAKAUA TRANSMISSION INC.	1665 KALAKAUA AVE	NE 1/8 - 1/4 (0.159 mi.)	D18	24
ALOHA MOTORS	***KAPIOLANI BLVD X KALAKA***	***ESE 1/8 - 1/4 (0.193 mi.)***	***I29***	***35***
FUNAI'S UNION SERVICE L-5583	***1810 KAPIOLANI BLVD***	***E 1/8 - 1/4 (0.220 mi.)***	***I38***	***45***
ALOHA MARINE	***1651 ALA MOANA BLVD***	***SSW 1/8 - 1/4 (0.238 mi.)***	***K43***	***54***
MOANA PARK WASTEWATER PUMP STA	***1501 ALA MOANA BLVD***	***WSW 1/8 - 1/4 (0.245 mi.)***	***45***	***56***

State and tribal institutional control / engineering control registries

HI ENG CONTROLS: A listing of sites with engineering controls in place.

A review of the HI ENG CONTROLS list, as provided by EDR, and dated 01/04/2014 has revealed that there are 3 HI ENG CONTROLS sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
FORMER KALAKAUA TRANSMISSION I	***1665 KALAKAUA AVE***	***NE 1/8 - 1/4 (0.159 mi.)***	***D19***	***25***
YACHT HARBOR TOWERS	***1600 ALA MOANA BLVD***	***SSW 1/8 - 1/4 (0.164 mi.)***	***F22***	***28***
ALOHA/KING SELF STORAGE	***1414 KALAKAUA AVE***	***NNE 1/4 - 1/2 (0.470 mi.)***	***Q68***	***81***

EXECUTIVE SUMMARY

Voluntary Remediation Program and Brownfields sites with institutional controls in place.

A review of the HI INST CONTROL list, as provided by EDR, and dated 01/04/2014 has revealed that there are 6 HI INST CONTROL sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
HECO SUBSTATION: MAKALOA SUBST	***1544 MAKALOA ST***	***NW 1/8 - 1/4 (0.144 mi.)***	***E12***	***18***
FORMER KALAKAUA TRANSMISSION I	***1665 KALAKAUA AVE***	***NE 1/8 - 1/4 (0.159 mi.)***	***D19***	***25***
YACHT HARBOR TOWERS	***1600 ALA MOANA BLVD***	***SSW 1/8 - 1/4 (0.164 mi.)***	***F22***	***28***
MOTOR SUPPLY	***726 SHERIDAN ST***	***NW 1/4 - 1/2 (0.372 mi.)***	***O56***	***65***
HAKUYOSHA HAWAII, INC	***730 SHERIDAN ST***	***NW 1/4 - 1/2 (0.372 mi.)***	***O57***	***66***
ALOHA/KING SELF STORAGE	***1414 KALAKAUA AVE***	***NNE 1/4 - 1/2 (0.470 mi.)***	***Q68***	***81***

State and tribal voluntary cleanup sites

HI VCP: Voluntary Response Program Sites.

A review of the HI VCP list, as provided by EDR, and dated 01/04/2014 has revealed that there is 1 HI VCP site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
ALOHA/KING SELF STORAGE	***1414 KALAKAUA AVE***	***NNE 1/4 - 1/2 (0.470 mi.)***	***Q68***	***81***

ADDITIONAL ENVIRONMENTAL RECORDS

Other Ascertainable Records

RCRA NonGen / NLR: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 03/11/2014 has revealed that there are 4 RCRA NonGen / NLR sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
I L W U LOCAL 142	451 ATKINSON DR	S 0 - 1/8 (0.048 mi.)	B2	8
B & S AUTOMOTIVE TECHNICIANS	***1789 KAPIOLANI***	***E 1/8 - 1/4 (0.188 mi.)***	***I28***	***34***
FUJI PHOTO FILM U S A INC	***1801 KALAKAUA AVE***	***E 1/8 - 1/4 (0.204 mi.)***	***I34***	***40***
UNOCAL 76 SS L 5583	***1818 KAPIOLANI BLVD***	***E 1/8 - 1/4 (0.231 mi.)***	***I40***	***47***

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EXECUTIVE SUMMARY

EDR US Hist Auto Stat: EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR US Hist Auto Stat list, as provided by EDR, has revealed that there are 8 EDR US Hist Auto Stat sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
Not reported	801 KAHEKA ST	N 1/8 - 1/4 (0.130 mi.)	C6	12
Not reported	1735 KALAKAUA AVE	ENE 1/8 - 1/4 (0.157 mi.)	G16	24
Not reported	1712 KALAKAUA AVE	ENE 1/8 - 1/4 (0.158 mi.)	G17	24
Not reported	1665 KALAKAUA AVE	NE 1/8 - 1/4 (0.159 mi.)	D20	26
Not reported	1500 KAPIOLANI BLVD	NW 1/8 - 1/4 (0.168 mi.)	H23	29
Not reported	1750 KALAKAUA AVE	E 1/8 - 1/4 (0.169 mi.)	G25	30
Not reported	641 KEEAUMOKU ST	NW 1/8 - 1/4 (0.245 mi.)	44	56
Not reported	1830 KAPIOLANI BLVD	E 1/8 - 1/4 (0.246 mi.)	46	56

EDR US Hist Cleaners: EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR US Hist Cleaners list, as provided by EDR, has revealed that there are 4 EDR US Hist Cleaners sites within approximately 0.25 miles of the target property.

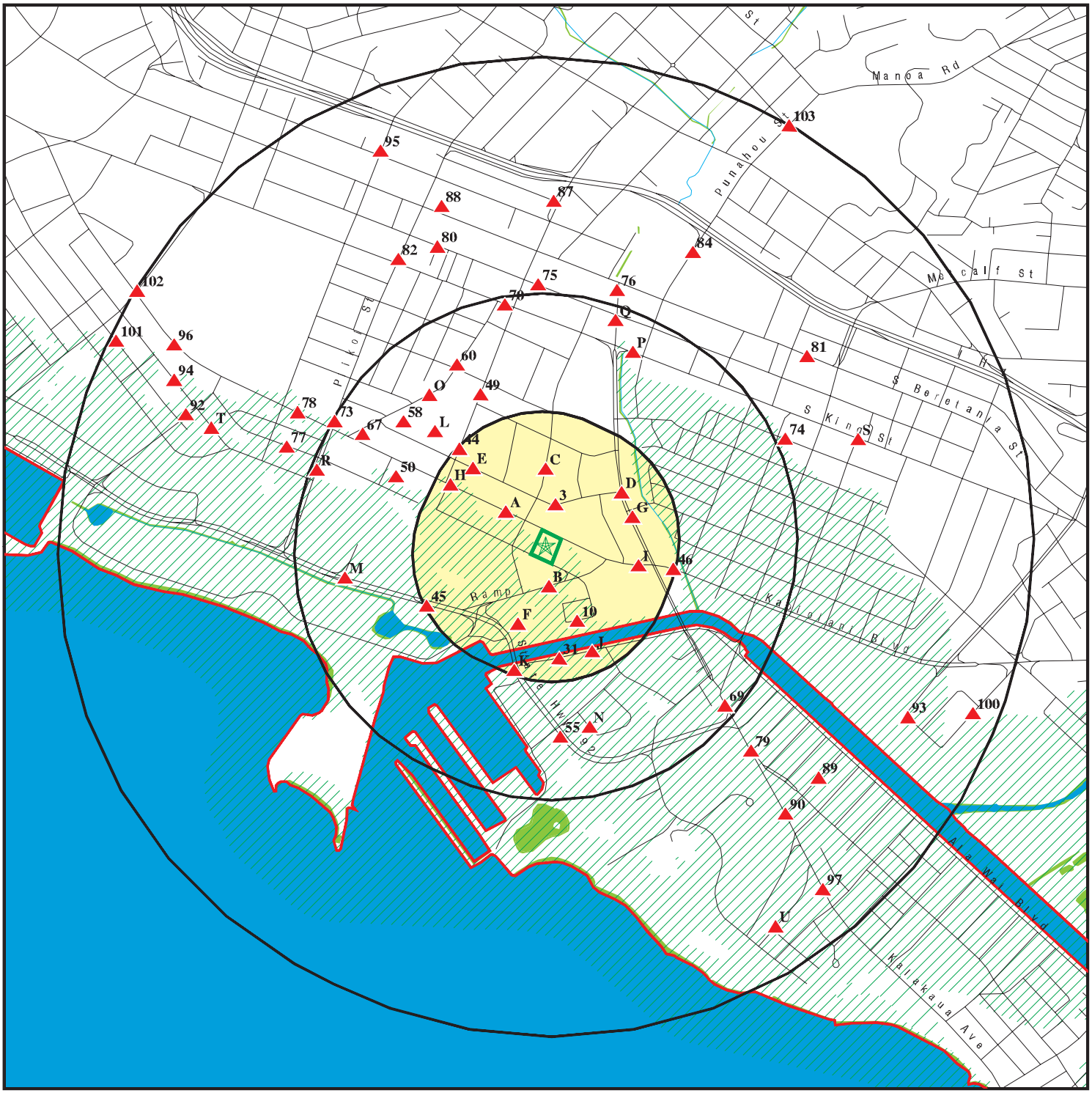
Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
Not reported	801 KAHEKA ST	N 1/8 - 1/4 (0.130 mi.)	C9	17
Not reported	1868 KAHAKAI DR	SSE 1/8 - 1/4 (0.132 mi.)	10	17
Not reported	1750 KALAKAUA AVE	E 1/8 - 1/4 (0.169 mi.)	G24	29
Not reported	1518 MAKALOA ST	NW 1/8 - 1/4 (0.197 mi.)	E30	36

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 20 records.

Site Name	Database(s)
CITIZENS ENERGY SERVICES PIER 38	HI SHWS, HI SPILLS, HI ENG CONTROLS, HI INST CONTROL
KAKAAKO MAKAI GATEWAY	HI SHWS
FORMER KAPALAMA MILITARY RESERVATI	HI SHWS
HAWAIIAN BITUMULS PAVING & PRECAST	HI SHWS
HAWAII BITUMULS & PAVING CO.	CERC-NFRAP
KEWALO BASIN HARBOR	RCRA NonGen / NLR, CA HAZNET
MRC ROOFING, LLC	FINDS
PACIFIC COMMERICIAL SERVICES, LLC	FINDS
PENDELTON FLOUR MILLS, LLC DBA HAW	FINDS
PACIFIC AVIATION MUSEUM PEARL HARB	FINDS
SUN PACIFIC SERVICES	FINDS
HORIZON LINES, LLC	FINDS
INSTITUTE OF PACIFIC ISLANDS	FINDS
PACIFIC HEIGHTS WSI, PART 1	FINDS
HORIZON LINES LLC	FINDS
PACIFIC SHIPYARDS INTERNATIONAL	FINDS
HONOLULU MARINE, LLC	FINDS
HORIZON LINES, LLC	FINDS
ALLIED PACIFIC COMPANY OF HAWAII	FINDS
NOAA PACIFIC REGIONAL CENTER FORD	FINDS

OVERVIEW MAP - 4046277.2s



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

National Priority List Sites

Dept. Defense Sites

0 1/4 1/2 1 Miles

Indian Reservations BIA

County Boundary

Oil & Gas pipelines from USGS

100-year flood zone

500-year flood zone

National Wetland Inventory

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	Sam Koo Pacific, LLC	CLIENT:	Central Planet Repair
ADDRESS:	1631 and 1637 Kapiolani Boulevard Honolulu HI 96814	CONTACT:	Ned Murphy
		INQUIRY #:	4046277.2s
LAT/LONG:	21.2911 / 157.8392	DATE:	August 25, 2014 1:47 pm

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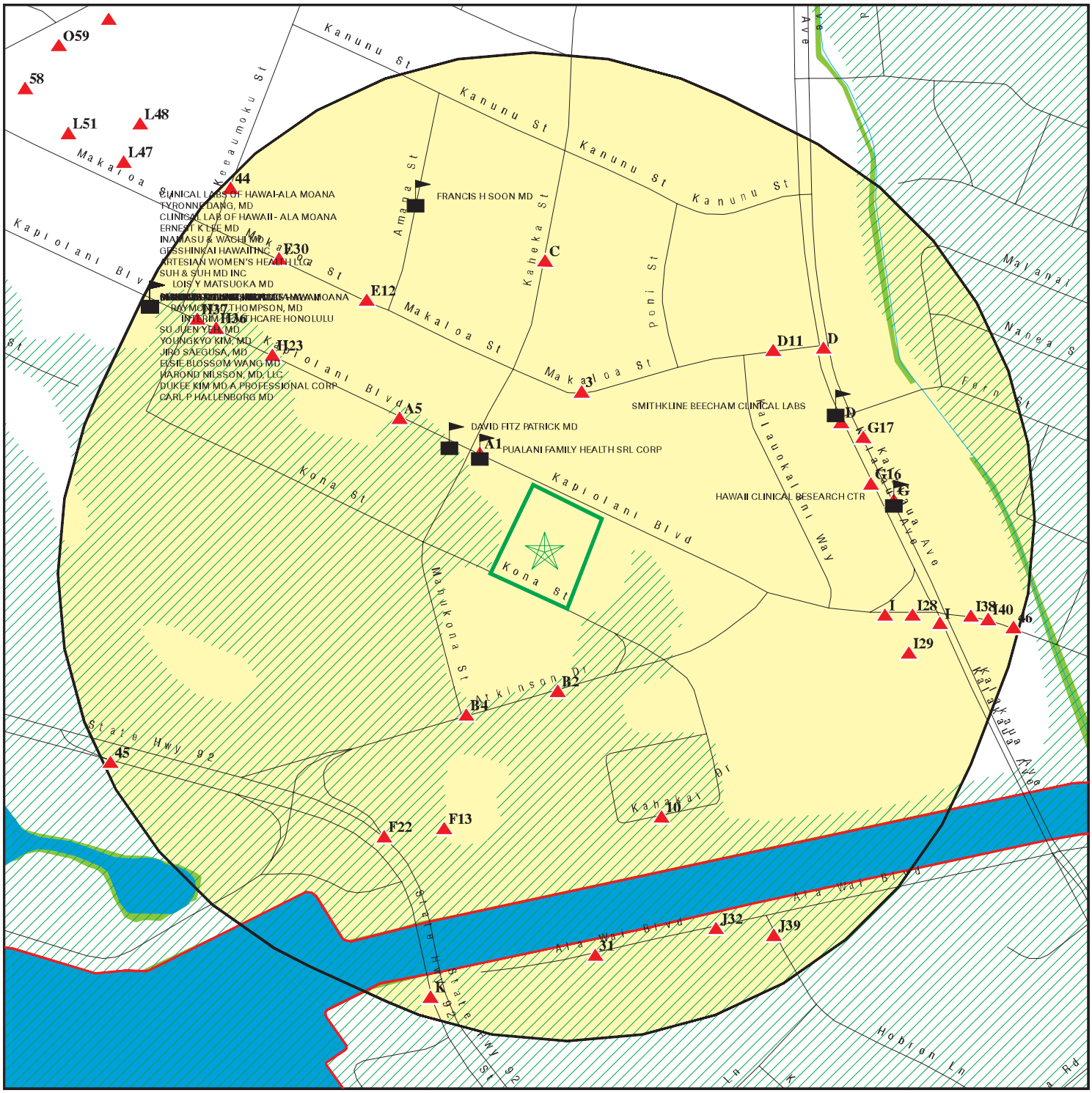
DETAIL MAP - 4046277.2s



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

Sensitive Receptors

National Priority List Sites

Dept. Defense Sites

Indian Reservations BIA

County Boundary

Oil & Gas pipelines from USGS

100-year flood zone

500-year flood zone

National Wetland Inventory

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Sam Koo Pacific, LLC	CLIENT: Central Planet Repair
ADDRESS: 1631 and 1637 Kapiolani Boulevard Honolulu HI 96814	CONTACT: Ned Murphy
LAT/LONG: 21.2911 / 157.8392	INQUIRY #: 4046277.2s
	DATE: August 25, 2014 1:47 pm

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MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	TP		NR	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
CERCLIS	0.500		0	0	0	NR	NR	0
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site List								
CERC-NFRAP	0.500		0	1	0	NR	NR	1
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		1	3	NR	NR	NR	4
RCRA-CESQG	0.250		1	6	NR	NR	NR	7
Federal institutional controls / engineering controls registries								
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
LUCIS	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	TP		NR	NR	NR	NR	NR	0
State- and tribal - equivalent CERCLIS								
HI SHWS	1.000		1	8	9	30	NR	48
State and tribal landfill and/or solid waste disposal site lists								
HI SWF/LF	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
HI LUST	0.500		2	7	20	NR	NR	29
INDIAN LUST	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
HI UST	0.250		1	7	NR	NR	NR	8

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN UST	0.250		0	0	NR	NR	NR	0
FEMA UST	0.250		0	0	NR	NR	NR	0
State and tribal institutional control / engineering control registries								
HI ENG CONTROLS	0.500		0	2	1	NR	NR	3
HI INST CONTROL	0.500		0	3	3	NR	NR	6
State and tribal voluntary cleanup sites								
HI VCP	0.500		0	0	1	NR	NR	1
INDIAN VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
HI BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US CDL	TP		NR	NR	NR	NR	NR	0
HI CDL	TP		NR	NR	NR	NR	NR	0
US HIST CDL	TP		NR	NR	NR	NR	NR	0
Local Land Records								
LIENS 2	TP		NR	NR	NR	NR	NR	0
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0
HI SPILLS	TP		NR	NR	NR	NR	NR	0
HI SPILLS 90	TP		NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		1	3	NR	NR	NR	4
DOT OPS	TP		NR	NR	NR	NR	NR	0
DOD	1.000		0	0	0	0	NR	0
FUDS	1.000		0	0	0	0	NR	0
CONSENT	1.000		0	0	0	0	NR	0
ROD	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
TSCA	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
FINDS	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
HI UIC	TP		NR	NR	NR	NR	NR	0
HI DRYCLEANERS	0.250		0	0	NR	NR	NR	0
CA HAZNET	TP		NR	NR	NR	NR	NR	0
HI AIRS	TP		NR	NR	NR	NR	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
HI Financial Assurance	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR US Hist Auto Stat	0.250		0	8	NR	NR	NR	8
EDR US Hist Cleaners	0.250		0	4	NR	NR	NR	4
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
HI RGA LF	TP		NR	NR	NR	NR	NR	0
HI RGA LUST	TP		NR	NR	NR	NR	NR	0
HI RGA HWS	TP		NR	NR	NR	NR	NR	0

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

A1 NW < 1/8 0.036 mi. 190 ft. | **PAN AM BLDG**
1600 KAPIOLANI BLVD
HONOLULU, HI 96814

RCRA-CESQG FINDS | **1004688981 HIR000052431**

Site 1 of 2 in cluster A

Relative: Higher

Actual: 3 ft.

RCRA-CESQG:

Date form received by agency:	05/20/1999
Facility name:	PAN AM BLDG
Facility address:	1600 KAPIOLANI BLVD HONOLULU, HI 96814
EPA ID:	HIR000052431
Contact:	TIMOTHY RYCHLEC
Contact address:	1600 KAPIOLANI BLVD HONOLULU, HI 96814
Contact country:	US
Contact telephone:	(808) 944-8100
Contact email:	Not reported
EPA Region:	09
Classification:	Conditionally Exempt Small Quantity Generator
Description:	Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name:	STATE TEACHERS RETIREMNT SYS
Owner/operator address:	1600 KAPIOLANI BLVD HONOLULU, HI 96814
Owner/operator country:	Not reported
Owner/operator telephone:	(808) 944-8100
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No

PAN AM BLDG (Continued) **1004688981**

Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

FINDS:

Registry ID: 110005730389

Environmental Interest/Information System
NCDB (National Compliance Data Base) supports implementation of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and the Toxic Substances Control Act (TSCA). The system tracks inspections in regions and states with cooperative agreements, enforcement actions, and settlements.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

STATE MASTER

B2 **I L W U LOCAL 142** **RCRA NonGen / NLR** **1012178202**
South **451 ATKINSON DR** **HIP000122101**
< 1/8 **HONOLULU, HI 96814**
0.048 mi.
252 ft. **Site 1 of 2 in cluster B**

Relative:
Higher

Actual:
3 ft.

RCRA NonGen / NLR:
Date form received by agency: 08/18/2009
Facility name: I L W U LOCAL 142
Facility address: 451 ATKINSON DR
HONOLULU, HI 968144796
EPA ID: HIP000122101
Contact: JAMES BAUCKHAM
Contact address: 451 ATKINSON DR
HONOLULU, HI 968144796
Contact country: US
Contact telephone: (808) 947-7233
Contact email: Not reported
EPA Region: 09
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: I L W U MEMORIAL ASSOCIATION
Owner/operator address: 451 ATKINSON DR
HONOLULU, HI 96814
Owner/operator country: Not reported
Owner/operator telephone: (808) 949-4161
Legal status: Private
Owner/Operator Type: Owner

I L W U LOCAL 142 (Continued) **1012178202**

Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 06/14/2002
Site name: I L W U LOCAL 142
Classification: Small Quantity Generator

Violation Status: No violations found

3
NNE
< 1/8
0.061 mi.
322 ft.

C&CH PAWAA FIRE STATION **HI LUST** **1006843337**
1610 MAKALOA ST **N/A**
HONOLULU, HI 96814

Relative:
Higher

Actual:
3 ft.

LUST:
Facility ID: 9-100087
Facility Status: Site Cleanup Completed (NFA)
Facility Status Date: 01/06/1999
Release ID: 940137
Project Officer: Eric Sadoyama

B4
SSW
< 1/8
0.080 mi.
422 ft.

ALAMOANA HOTEL **RCRA-SQG** **1001116172**
410 ATKINSON DR **FINDS** **HIR000000992**
HONOLULU, HI 96814

Site 2 of 2 in cluster B

Relative:
Higher

Actual:
3 ft.

RCRA-SQG:
Date form received by agency: 08/19/1996
Facility name: ALAMOANA HOTEL
Facility address: 410 ATKINSON DR
HONOLULU, HI 968144722
EPA ID: HIR000000992
Mailing address: ATKINSON DR
HONOLULU, HI 968144722
Contact: TODD SHERMAN
Contact address: 410 ATKINSON DR

ALAMOANA HOTEL (Continued) **1001116172**

HONOLULU, HI 968144722
Contact country: US
Contact telephone: (808) 955-4811
Contact email: Not reported
EPA Region: 09
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: AZABU USA CORP
Owner/operator address: 410 ATKINSON DR
HONOLULU, HI 96814
Owner/operator country: Not reported
Owner/operator telephone: (808) 955-4811
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

FINDS:

Registry ID: 110046200366

Environmental Interest/Information System
STATE MASTER

Registry ID: 110005729694

Environmental Interest/Information System
NCDB (National Compliance Data Base) supports implementation of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and the Toxic Substances Control Act (TSCA). The system tracks inspections in regions and states with cooperative agreements, enforcement actions, and settlements.

ALAMOANA HOTEL (Continued) **1001116172**

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

STATE MASTER

A5 **NEW OFFICE LOUNGE** **HI SHWS** **1006843573**
NW **1551 KAPIOLANI BLVD** **HI LUST** **N/A**
< 1/8 **HONOLULU, HI 96814** **HI UST**
0.086 mi.
456 ft. **Site 2 of 2 in cluster A**

Relative:
Higher

Actual:
3 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	New Office Lounge
HID Number:	Not reported
Facility Registry Identifier:	110013783469
Lead Agency:	SHWB
Program:	State
Project Manager:	Mark Sutterfield
Hazard Priority:	Medium
Potential Hazards And Controls:	No Hazard
Organization:	Not reported
Island:	Oahu
Supplemental Location Text:	Not reported
SDAR Environmental Interest Name:	New Office Lounge
HID Number:	Not reported
Facility Registry Identifier:	110013783469
Lead Agency:	SHWB
Progran Name:	State
Potential Hazard And Controls:	No Hazard
Priority:	Medium
Assessment:	Response Not Necessary
Response:	Not reported
Nature of Contamination:	Not reported
Nature of Residual Contamination:	Not reported
Use Restrictions:	No Hazard Present for Unrestricted Residential Use
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Action Letter
Document Date:	10/26/2004
Document Number:	Not reported
Document Subject:	Not reported
Project Manager:	Mark Sutterfield
Contact Information:	(808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

LUST:

Facility ID:	9-103517
Facility Status:	Site Cleanup Completed (NFA)

NEW OFFICE LOUNGE (Continued) **1006843573**

Facility Status Date: 03/10/2008
Release ID: 060012
Project Officer: Shunsheng Fu

Facility ID: 9-103517
Facility Status: Site Cleanup Completed (NFA)
Facility Status Date: 03/10/2008
Release ID: 060033
Project Officer: Shunsheng Fu

UST:
Facility ID: 9-103517
Owner: CEC HAWAII INC
Owner Address: 1517 kapiolani blvD, SUITE 201
Ownder City,St,Zip: Honolulu, 96814 96814

Tank ID: r-1
Date Installed: Not reported
Tank Status: Permanently out of Use
Date Closed: 01/15/2006
Tank Capacity: 1100
Substance: Gasoline

Tank ID: r-2
Date Installed: Not reported
Tank Status: Permanently out of Use
Date Closed: 01/15/2006
Tank Capacity: 1100
Substance: Gasoline

Tank ID: r-3
Date Installed: Not reported
Tank Status: Permanently out of Use
Date Closed: 01/15/2006
Tank Capacity: 420
Substance: Gasoline

C6 **EDR US Hist Auto Stat** **1015638698**
North **801 KAHEKA ST** **N/A**
1/8-1/4 **HONOLULU, HI 96814**
0.130 mi.
686 ft. **Site 1 of 4 in cluster C**

Relative:
Higher

Actual:
3 ft.

EDR Historical Auto Stations:
Name: HOLIDAY ACTION GAS INCORPORATED STATIONS
Year: 1999
Address: 801 KAHEKA ST

Name: HOLIDAY ACTION GAS INC
Year: 2001
Address: 801 KAHEKA ST

C7 North 1/8-1/4 0.130 mi. 686 ft. | **HOLIDAY ACTION GAS**
801 KAHEKA ST
HONOLULU, HI 96814 | **RCRA-SQG** | **1000223098**
HID981577265

Site 2 of 4 in cluster C

Relative: Higher

Actual: 3 ft.

RCRA-SQG:

Date form received by agency:	11/16/1995
Facility name:	HOLIDAY ACTION GAS
Facility address:	801 KAHEKA ST HONOLULU, HI 96814
EPA ID:	HID981577265
Mailing address:	KAPIOLANI HONOLULU, HI 96814
Contact:	CHE HWAN CHANG
Contact address:	1517 KAPIOLANI HONOLULU, HI 96814
Contact country:	US
Contact telephone:	(808) 973-6688
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	DAIEI USA INC
Owner/operator address:	801 KAHEKA ST HONOLULU, HI 96814
Owner/operator country:	Not reported
Owner/operator telephone:	(808) 973-6688
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported
Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No

HOLIDAY ACTION GAS (Continued) **1000223098**

Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

C8 North 1/8-1/4 0.130 mi. 686 ft. **FIRESTONE STORE** **HI LUST** **U001235963**
801 KAHEKA ST **HI UST** **N/A**
HONOLULU, HI 96814 **HI Financial Assurance**

Site 3 of 4 in cluster C

Relative: Higher

Actual: 3 ft.

LUST:
Facility ID: 9-102591
Facility Status: Site Cleanup Completed with EHE/EHMP
Facility Status Date: 09/28/2010
Release ID: 970086
Project Officer: Shaobin Li

Facility ID: 9-102591
Facility Status: Site Cleanup Completed with EHE/EHMP
Facility Status Date: 09/28/2010
Release ID: 980048
Project Officer: Shaobin Li

Facility ID: 9-102403
Facility Status: Site Cleanup Completed (NFA)
Facility Status Date: 10/21/1996
Release ID: 920148
Project Officer: Janet Sherrer

UST:
Facility ID: 9-102591
Owner: HOLIDAY ACTION GAS INC.
Owner Address: 801 KAHEKA ST
Ownder City,St,Zip: Honolulu, 96814 96814

Tank ID: R-1
Date Installed: 01/01/1984
Tank Status: Permanently Out of Use
Date Closed: 02/01/1999
Tank Capacity: 10000
Substance: Gasoline

Tank ID: R-1
Date Installed: Not reported
Tank Status: Permanently Out of Use
Date Closed: 03/23/1992
Tank Capacity: 550
Substance: Used Oil

Tank ID: R-2

FIRESTONE STORE (Continued) **U001235963**

Date Installed: 01/01/1984
Tank Status: Permanently Out of Use
Date Closed: 02/01/1999
Tank Capacity: 10000
Substance: Gasoline

Tank ID: R-3
Date Installed: 01/01/1978
Tank Status: Permanently Out of Use
Date Closed: 02/01/1999
Tank Capacity: 4000
Substance: Diesel

Tank ID: R-4
Date Installed: 01/01/1978
Tank Status: Permanently Out of Use
Date Closed: 02/01/1999
Tank Capacity: 4000
Substance: Gasoline

Tank ID: R-5
Date Installed: 01/01/1978
Tank Status: Permanently Out of Use
Date Closed: 02/01/1999
Tank Capacity: 4000
Substance: Gasoline

Tank ID: R-6
Date Installed: Not reported
Tank Status: Permanently Out of Use
Date Closed: 02/01/1999
Tank Capacity: 4000
Substance: Gasoline

Tank ID: R-7
Date Installed: Not reported
Tank Status: Permanently Out of Use
Date Closed: 02/01/1999
Tank Capacity: 4000
Substance: Gasoline

Tank ID: R-8
Date Installed: Not reported
Tank Status: Permanently Out of Use
Date Closed: 02/01/1999
Tank Capacity: 4000
Substance: Gasoline

HI Financial Assurance:
Alt Facility ID: 9-102403
Tank Id: R-1

FIRESTONE STORE (Continued) **U001235963**

Tank Status: Permanently Out of Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-102403
Tank Id: R-1
Tank Status: Permanently Out of Use
FRTYPE: Self Insured
Expiration Date: Not reported

Alt Facility ID: 9-102591
Tank Id: R-1
Tank Status: Permanently Out of Use
FRTYPE: Insurance
Expiration Date: Not reported

Alt Facility ID: 9-102591
Tank Id: R-8
Tank Status: Permanently Out of Use
FRTYPE: Insurance
Expiration Date: Not reported

Alt Facility ID: 9-102591
Tank Id: R-7
Tank Status: Permanently Out of Use
FRTYPE: Insurance
Expiration Date: Not reported

Alt Facility ID: 9-102591
Tank Id: R-6
Tank Status: Permanently Out of Use
FRTYPE: Insurance
Expiration Date: Not reported

Alt Facility ID: 9-102591
Tank Id: R-5
Tank Status: Permanently Out of Use
FRTYPE: Insurance
Expiration Date: Not reported

Alt Facility ID: 9-102591
Tank Id: R-4
Tank Status: Permanently Out of Use
FRTYPE: Insurance
Expiration Date: Not reported

Alt Facility ID: 9-102591
Tank Id: R-2
Tank Status: Permanently Out of Use
FRTYPE: Insurance
Expiration Date: Not reported

Alt Facility ID: 9-102591
Tank Id: R-3
Tank Status: Permanently Out of Use
FRTYPE: Insurance
Expiration Date: Not reported

C9
North
1/8-1/4
0.130 mi.
686 ft.

801 KAHEKA ST
HONOLULU, HI 96814

Site 4 of 4 in cluster C

EDR US Hist Cleaners **1015096937**
N/A

Relative:
Higher

Actual:
3 ft.

EDR Historical Cleaners:

Name:	HOLIDAY MART LAUNDROMAT
Year:	1999
Address:	801 KAHEKA ST

10
SSE
1/8-1/4
0.132 mi.
696 ft.

1868 KAHAKAI DR
HONOLULU, HI 96814

EDR US Hist Cleaners **1015008556**
N/A

Relative:
Higher

Actual:
3 ft.

EDR Historical Cleaners:

Name:	SOUTH BAY CARPET & UPHOLSTERY CLEANING
Year:	1999
Address:	1868 KAHAKAI DR

D11
NE
1/8-1/4
0.139 mi.
734 ft.

GAS 'N GLO INC
1670 MAKALOA ST
HONOLULU, HI 96814

Site 1 of 7 in cluster D

HI LUST **U001235256**
HI UST **N/A**

Relative:
Higher

Actual:
3 ft.

LUST:

Facility ID:	9-100834
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	07/22/1998
Release ID:	980097
Project Officer:	Lene Ichinotsubo

UST:

Facility ID:	9-100834
Owner:	GAS 'N GLO INC
Owner Address:	Not reported
Ownder City,St,Zip:	Honolulu, 96814 96814
Tank ID:	R-1
Date Installed:	04/03/1983
Tank Status:	**Permanently Out of Use**
Date Closed:	05/20/1998
Tank Capacity:	10000
Substance:	Gasoline
Tank ID:	R-2
Date Installed:	04/03/1983
Tank Status:	**Permanently Out of Use**
Date Closed:	05/20/1998
Tank Capacity:	10000
Substance:	Gasoline
Tank ID:	R-3

GAS 'N GLO INC (Continued) **U001235256**

Date Installed: 04/03/1983
Tank Status: Permanently Out of Use
Date Closed: 05/20/1998
Tank Capacity: 10000
Substance: Gasoline

Tank ID: R-4
Date Installed: 04/03/1983
Tank Status: Permanently Out of Use
Date Closed: 05/20/1998
Tank Capacity: 5000
Substance: Gasoline

Tank ID: R-5
Date Installed: 04/03/1983
Tank Status: Permanently Out of Use
Date Closed: 05/20/1998
Tank Capacity: 5000
Substance: Diesel

E12 **HECO SUBSTATION: MAKALOA SUBSTATION** **HI SHWS** **S106817457**
NW **1544 MAKALOA ST** **HI SPILLS** **N/A**
1/8-1/4 **HONOLULU, HI 96814** **HI INST CONTROL**
0.144 mi.
760 ft. **Site 1 of 2 in cluster E**

Relative:
Higher

Actual:
3 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	HECO Makaloa Substation
HID Number:	Not reported
Facility Registry Identifier:	110013790237
Lead Agency:	HEER
Program:	State
Project Manager:	Laura Young
Hazard Priority:	Low
Potential Hazards And Controls:	Hazard Managed With Controls
Organization:	Not reported
Island:	Oahu
Supplemental Location Text:	Not reported
SDAR Environmental Interest Name:	HECO Makaloa Substation
HID Number:	Not reported
Facility Registry Identifier:	110013790237
Lead Agency:	HEER
Progran Name:	State
Potential Hazard And Controls:	Hazard Managed With Controls
Priority:	Low
Assessment:	Response Necessary
Response:	Response Complete
Nature of Contamination:	Found: COCs below DOH EALs, except arsenic in soil (20.7 mg/kg in one sample)
Nature of Residual Contamination:	Soil below the pad should be investigated if the pad is ever removed or damaged. Contaminants of concern include TPH as diesel and/or transformer oil, and possible PCB.
Use Restrictions:	Controls Required to Manage Contamination

HECO SUBSTATION: MAKALOA SUBSTATION (Continued) **S106817457**

Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Government - Hawaii Dept. of Health Letter Issued
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Restricted Use
Document Date:	03/06/2007
Document Number:	2007-109-LY
Document Subject:	No Further Action Determination
Project Manager:	Laura Young
Contact Information:	(808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

HI SPILLS:

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	20020815-1119
HID Number:	Not reported
Facility Registry Id:	110013790237
Lead and Program:	HEER EP&R
ER:	Site Visit
Units:	HECO Transformer 21707
Substances:	Shell Diala Oil
Less Or Greater Than:	>
Numerical Quantity:	25
Units:	Gallons
Activity Type:	Response
Activity Lead:	Terry Corpus
Assignment End Date:	Not reported
Result:	SOSC NFA
File Under:	Hawaiian Electric Co., Inc. (HECO)

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	20110620-1451
HID Number:	Not reported
Facility Registry Id:	110013790237
Lead and Program:	HEER EP&R
ER:	None
Units:	HECO substation transformer #18639 release
Substances:	Transformer Oil
Less Or Greater Than:	>
Numerical Quantity:	5
Units:	Gallons
Activity Type:	Response
Activity Lead:	Curtis Martin
Assignment End Date:	Not reported
Result:	Not reported
File Under:	Hawaiian Electric Co., Inc. (HECO)

INST CONTROL:

Potential hazards and controls:	Hazard Managed With Controls
Supplemental Location:	Not reported
Zip Suffix:	Not reported
Island:	Oahu
Institutional Control:	Government - Hawaii Dept. of Health Letter Issued

F13 SSW 1/8-1/4 0.145 mi. 765 ft. | **AOAO YACHT HARBOR TOWERS**
1600_1650 ALA MOANA BLVD
HONOLULU, HI 96815 | **RCRA-CESQG** | **1004688961**
HIR000037002

Site 1 of 2 in cluster F

Relative: Higher

Actual: 3 ft.

RCRA-CESQG:

Date form received by agency:	03/09/1998
Facility name:	AOAO YACHT HARBOR TOWERS
Facility address:	1600_1650 ALA MOANA BLVD HONOLULU, HI 96815
EPA ID:	HIR000037002
Mailing address:	1600 1650 ALA MOANA BLVD HONOLULU, HI 96815
Contact:	SCOTT LUONGO
Contact address:	1600 1650 ALA MOANA BLVD HONOLULU, HI 96815
Contact country:	US
Contact telephone:	(808) 942-5712
Contact email:	Not reported
EPA Region:	09
Classification:	Conditionally Exempt Small Quantity Generator
Description:	Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name:	AOAO YACHT HARBOR TOWERS
Owner/operator address:	1600 1650 ALA MOANA BLVD HONOLULU, HI 96815
Owner/operator country:	Not reported
Owner/operator telephone:	(808) 947-1855
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No

AOAO YACHT HARBOR TOWERS (Continued) **1004688961**

Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Hazardous Waste Summary:

Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: F001
Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLOROETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE, AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: F003
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Violation Status: No violations found

D14 **ROGER'S REPAIR INC** **HI SHWS** **S106820247**
ENE **1687 KALAKAUA AVE** **N/A**
1/8-1/4 **HONOLULU, HI 96826**
0.149 mi.
788 ft. **Site 2 of 7 in cluster D**

Relative:
Higher

Actual:
3 ft.

SHWS:
Organization: Not reported
Supplemental Location: Not reported
Island: Oahu
Environmental Interest: Roger's Repair Inc
HID Number: Not reported
Facility Registry Identifier: 110005723903
Lead Agency: Not reported
Program: State
Project Manager: Laura Young
Hazard Priority: NFA

ROGER'S REPAIR INC (Continued) **S106820247**

Potential Hazards And Controls:	Hazard Undetermined
Organization:	Not reported
Island:	Oahu
Supplemental Location Text:	Not reported
SDAR Environmental Interest Name:	Roger's Repair Inc
HID Number:	Not reported
Facility Registry Identifier:	110005723903
Lead Agency:	Not reported
Progran Name:	State
Potential Hazard And Controls:	Hazard Undetermined
Priority:	NFA
Assessment:	Assessment Ongoing
Response:	Not reported
Nature of Contamination:	Not reported
Nature of Residual Contamination:	Not reported
Use Restrictions:	Undetermined
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action - Type Undetermined
Document Date:	06/04/1999
Document Number:	Not reported
Document Subject:	Not reported
Project Manager:	Laura Young
Contact Information:	(808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

D15 **ROGERS REPAIR INC** **RCRA-CESQG** **1000742297**
ENE **1687 KALAKAUA AVE** **FINDS** **HID981615222**
1/8-1/4 **HONOLULU, HI 96826**
0.149 mi.
788 ft. **Site 3 of 7 in cluster D**

Relative:
Higher

Actual:
3 ft.

RCRA-CESQG:

Date form received by agency:	07/19/1993
Facility name:	ROGERS REPAIR INC
Facility address:	1687 KALAKAUA AVE HONOLULU, HI 96826
EPA ID:	HID981615222
Contact:	ROGER NISHIMURA
Contact address:	1687 KALAKAUA AVE HONOLULU, HI 96826
Contact country:	US
Contact telephone:	(808) 949-4137
Contact email:	Not reported
EPA Region:	09
Land type:	Other land type
Classification:	Conditionally Exempt Small Quantity Generator
Description:	Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any

ROGERS REPAIR INC (Continued) **1000742297**

time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name:	ROGER NISHIMURA
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

Evaluation Action Summary:

Evaluation date:	01/13/1997
Evaluation:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation:	Not reported
Date achieved compliance:	Not reported
Evaluation lead agency:	State

FINDS:

Registry ID: 110005723903

ROGERS REPAIR INC (Continued) **1000742297**

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

STATE MASTER

G16 **EDR US Hist Auto Stat** **1015271300**
ENE **1735 KALAKAUA AVE** **N/A**
1/8-1/4 **HONOLULU, HI 96826**
0.157 mi.
828 ft. **Site 1 of 4 in cluster G**

Relative:
Higher

Actual:
3 ft.

EDR Historical Auto Stations:

Name:	GAS STATION TRADING POST
Year:	2001
Address:	1735 KALAKAUA AVE

G17 **EDR US Hist Auto Stat** **1015268165**
ENE **1712 KALAKAUA AVE** **N/A**
1/8-1/4 **HONOLULU, HI 96826**
0.158 mi.
836 ft. **Site 2 of 4 in cluster G**

Relative:
Higher

Actual:
3 ft.

EDR Historical Auto Stations:

Name:	ON SITE AUTO REPAIR SVC
Year:	2010
Address:	1712 KALAKAUA AVE

D18 **KALAKAUA TRANSMISSION INC.** **HI UST** **1000147228**
NE **1665 KALAKAUA AVE** **N/A**
1/8-1/4 **HONOLULU, HI 96826**
0.159 mi.
840 ft. **Site 4 of 7 in cluster D**

Relative:
Higher

Actual:
3 ft.

UST:

Facility ID:	9-100763
Owner:	IMAI BROTHERS ENTERPRISES
Owner Address:	2433 PUUNUI ST
Ownder City,St,Zip:	Honolulu, 96826 96826
Tank ID:	R-001
Date Installed:	07/26/1951
Tank Status:	**Permanently Out of Use**
Date Closed:	12/01/1989
Tank Capacity:	500
Substance:	Used Oil
Tank ID:	R-002
Date Installed:	07/26/1951

KALAKAUA TRANSMISSION INC. (Continued) **1000147228**

Tank Status:	**Permanently Out of Use**
Date Closed:	12/01/1989
Tank Capacity:	500
Substance:	Used Oil

D19 **FORMER KALAKAUA TRANSMISSION INC** **HI SHWS** **S106817112**
NE **1665 KALAKAUA AVE** **HI ENG CONTROLS** **N/A**
1/8-1/4 **HONOLULU, HI 96826** **HI INST CONTROL**
0.159 mi.
840 ft. **Site 5 of 7 in cluster D**

Relative:
Higher

Actual:
3 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	Former Kalakaua Transmission Inc
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	Not reported
Program:	State
Project Manager:	Diane England
Hazard Priority:	NFA
Potential Hazards And Controls:	Hazard Managed With Controls
Organization:	Not reported
Island:	Oahu
Supplemental Location Text:	Not reported
SDAR Environmental Interest Name:	Former Kalakaua Transmission Inc
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	Not reported
Progran Name:	State
Potential Hazard And Controls:	Hazard Managed With Controls
Priority:	NFA
Assessment:	Assessment Ongoing
Response:	Not reported
Nature of Contamination:	Found: Petroleum and soil in groundwater.
Nature of Residual Contamination:	Not reported
Use Restrictions:	Controls Required to Manage Contamination
Engineering Control:	Engineering Control Required
Description of Restrictions:	(Concrete Cap) Building foundation must remain in place. If the foundation is disturbed/removed, additional soil and groundwater characterization must be conducted and appropriate remedial measures employed.
Institutional Control:	Government - Hawaii Dept. of Health Letter Issued
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Restricted Use
Document Date:	03/28/2006
Document Number:	2006-1850-DE
Document Subject:	No Further Action Determination for Oil-Range Hydrocarbons in Soil and Groundwater
Project Manager:	Diane England
Contact Information:	(808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

ENG CONTROLS:

Supplemental Location Text:	Not reported
Zip Suffix:	Not reported
Island:	Oahu

FORMER KALAKAUA TRANSMISSION INC (Continued) **S106817112**

Potential Hazards And Controls: Hazard Managed With Controls
Engineering Control: Engineering Control Required

INST CONTROL:
Potential hazards and controls: Hazard Managed With Controls
Supplemental Location: Not reported
Zip Suffix: Not reported
Island: Oahu
Institutional Control: Government - Hawaii Dept. of Health Letter Issued

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D20 **EDR US Hist Auto Stat** **1015261837**
NE **1665 KALAKAUA AVE** **N/A**
1/8-1/4 **HONOLULU, HI 96826**
0.159 mi.
840 ft. **Site 6 of 7 in cluster D**

Relative:
Higher

Actual:
3 ft.

EDR Historical Auto Stations:
Name: KALAKAUA TRANSMISSION INC
Year: 2001
Address: 1665 KALAKAUA AVE

Name: KALAKAUA TRANSMISSION INC
Year: 2002
Address: 1665 KALAKAUA AVE

D21 **KALAKUA TRANSMISSION INC** **RCRA-CESQG** **1004688784**
NE **1665 KALAKUA AVE** **FINDS** **HID981637564**
1/8-1/4 **HONOLULU, HI 96826**
0.162 mi.
855 ft. **Site 7 of 7 in cluster D**

Relative:
Higher

Actual:
3 ft.

RCRA-CESQG:
Date form received by agency: 07/21/1993
Facility name: KALAKUA TRANSMISSION INC
Facility address: 1665 KALAKUA AVE
HONOLULU, HI 96826
EPA ID: HID981637564
Mailing address: KALAKUA AVE
HONOLULU, HI 96826
Contact: URAGO ISAO
Contact address: 1665 KALAKUA AVE
HONOLULU, HI 96826
Contact country: US
Contact telephone: (808) 941-9188
Contact email: Not reported
EPA Region: 09
Classification: Conditionally Exempt Small Quantity Generator
Description: Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely

KALAKUA TRANSMISSION INC (Continued) **1004688784**

hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name:	IMAI BROS ENTERPRISE
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

FINDS:

Registry ID: 110005724190

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

F22 SSW 1/8-1/4 0.164 mi. 864 ft. | **YACHT HARBOR TOWERS**
1600 ALA MOANA BLVD
HONOLULU, HI 96815

Site 2 of 2 in cluster F

HI SHWS | **S106821166**
HI SPILLS | **N/A**
HI ENG CONTROLS
HI INST CONTROL

Relative: Higher

Actual: 3 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Yacht Harbor Towers
Island:	Oahu
Environmental Interest:	Yacht Harbor Towers Generator
HID Number:	Not reported
Facility Registry Identifier:	110013774629
Lead Agency:	HEER
Program:	State
Project Manager:	Anna Fernandez
Hazard Priority:	NFA
Potential Hazards And Controls:	Hazard Managed With Controls
Organization:	Not reported
Island:	Oahu
Supplemental Location Text:	Yacht Harbor Towers
SDAR Environmental Interest Name:	Yacht Harbor Towers Generator
HID Number:	Not reported
Facility Registry Identifier:	110013774629
Lead Agency:	HEER
Progran Name:	State
Potential Hazard And Controls:	Hazard Managed With Controls
Priority:	NFA
Assessment:	Response Necessary
Response:	Response Complete
Nature of Contamination:	Found: TPH-d
Nature of Residual Contamination:	Soil exceeding Tier 1 levels near the generator.
Use Restrictions:	Controls Required to Manage Contamination
Engineering Control:	Engineering Control Required
Description of Restrictions:	The No Further Action with Institutional Controls determination is in effect only as long as the generator and associated concrete pad remain in place. When they are removed, appropriate response action will be required.
Institutional Control:	Government - Hawaii Dept. of Health Letter Issued
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Restricted Use
Document Date:	01/08/2009
Document Number:	2009-009-SPM
Document Subject:	No Further Action (NFA) with Institutional Controls Determination, for the Yacht Harbor Towers Gener
Project Manager:	Anna Fernandez
Contact Information:	(808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

HI SPILLS:

Island:	Oahu
Supplemental Loc. Text:	Yacht Harbor Towers
Case Number:	19990301-1550
HID Number:	Not reported
Facility Registry Id:	110013774629
Lead and Program:	HEER EP&R
ER:	Referred
Units:	Yacht Harbor Tower Generator
Substances:	Unknown
Less Or Greater Than:	Not reported

YACHT HARBOR TOWERS (Continued) **S106821166**

Numerical Quantity: 60
Units: Gallons
Activity Type: Response
Activity Lead: Mike Cripps
Assignment End Date: Not reported
Result: Refer to ISST
File Under: Yacht Harbor Towers

ENG CONTROLS:
Supplemental Location Text: Yacht Harbor Towers
Zip Suffix: Not reported
Island: Oahu
Potential Hazards And Controls: Hazard Managed With Controls
Engineering Control: Engineering Control Required

INST CONTROL:
Potential hazards and controls: Hazard Managed With Controls
Supplemental Location: Yacht Harbor Towers
Zip Suffix: Not reported
Island: Oahu
Institutional Control: Government - Hawaii Dept. of Health Letter Issued

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H23 **EDR US Hist Auto Stat** **1015237305**
NW **1500 KAPIOLANI BLVD** **N/A**
1/8-1/4 **HONOLULU, HI 96814**
0.168 mi.
888 ft. **Site 1 of 3 in cluster H**

Relative:
Higher

Actual:
3 ft.

EDR Historical Auto Stations:
Name: AAMCO TRANSMISSIONS
Year: 2007
Address: 1500 KAPIOLANI BLVD

G24 **EDR US Hist Cleaners** **1015005226**
East **1750 KALAKAUA AVE** **N/A**
1/8-1/4 **HONOLULU, HI 96826**
0.169 mi.
893 ft. **Site 3 of 4 in cluster G**

Relative:
Higher

Actual:
3 ft.

EDR Historical Cleaners:
Name: STEFANS CARPET CLEANING
Year: 2002
Address: 1750 KALAKAUA AVE

Name: STEFANS CARPET CLEANING
Year: 2003
Address: 1750 KALAKAUA AVE

Name: STEFANS CARPET CLEANING
Year: 2004
Address: 1750 KALAKAUA AVE

Name: STEFANS CARPET CLEANING
Year: 2005
Address: 1750 KALAKAUA AVE

(Continued) **1015005226**

Name: STEFANS CARPET CLEANING
Year: 2006
Address: 1750 KALAKAUA AVE

G25 **EDR US Hist Auto Stat** **1015273014**
East **1750 KALAKAUA AVE** **N/A**
1/8-1/4 **HONOLULU, HI 96826**
0.169 mi.
893 ft. **Site 4 of 4 in cluster G**

Relative:
Higher

Actual:
3 ft.

EDR Historical Auto Stations:
Name: ALOHA MOBILE AUTO GLASS
Year: 2012
Address: 1750 KALAKAUA AVE

I26 **ALOHA MOTORS 1777 KAPIOLANI BLVD** **HI SHWS** **1006820308**
East **1777 KAPIOLANI BLVD** **HI SPILLS** **N/A**
1/8-1/4 **HONOLULU, HI 96813**
0.173 mi.
912 ft. **Site 1 of 9 in cluster I**

Relative:
Higher

Actual:
3 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	Aloha Motors
HID Number:	HID984466060
Facility Registry Identifier:	110013782479
Lead Agency:	Not reported
Program:	State
Project Manager:	Unassigned
Hazard Priority:	NFA
Potential Hazards And Controls:	Hazard Undetermined
Organization:	Not reported
Island:	Oahu
Supplemental Location Text:	Not reported
SDAR Environmental Interest Name:	Aloha Motors
HID Number:	HID984466060
Facility Registry Identifier:	110013782479
Lead Agency:	Not reported
Progran Name:	State
Potential Hazard And Controls:	Hazard Undetermined
Priority:	NFA
Assessment:	Assessment Ongoing
Response:	Not reported
Nature of Contamination:	Found: Petroleum products
Nature of Residual Contamination:	Not reported
Use Restrictions:	Undetermined
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	ISST NFA - No Letter
Document Date:	01/19/1995
Document Number:	Not reported
Document Subject:	Not reported

ALOHA MOTORS 1777 KAPIOLANI BLVD (Continued) **1006820308**

Project Manager: Unassigned
Contact Information: (808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

HI SPILLS:

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	19920128
HID Number:	HID984466060
Facility Registry Id:	110013782479
Lead and Program:	HEER EP&R
ER:	Not reported
Units:	Aloha Motors - Kapiolani & Kalakaua Avenues
Substances:	Petroleum HyrocarbonsSpent solvents & thinners
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Not reported
Assignment End Date:	Not reported
Result:	SOSC NFA
File Under:	Aloha Motors

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	19900411-1
HID Number:	HID984466060
Facility Registry Id:	110013782479
Lead and Program:	HEER EP&R
ER:	Not reported
Units:	Aloha Motors, First Development Inc.
Substances:	Not reported
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Sheila Mackenzie
Assignment End Date:	Not reported
Result:	SOSC NFA
File Under:	Aloha Motors

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	19900821-5
HID Number:	HID984466060
Facility Registry Id:	110013782479
Lead and Program:	HEER EP&R
ER:	Not reported
Units:	ALOHA MOTORS, KALAKAUA AVE.
Substances:	Unknown
Less Or Greater Than:	Not reported
Numerical Quantity:	15
Units:	Gallons
Activity Type:	Response
Activity Lead:	Not reported
Assignment End Date:	Not reported
Result:	SOSC NFA
File Under:	Aloha Motors

I27 East 1/8-1/4 0.173 mi. 912 ft. | **FIRST DEVELOPMENT INC**
1777 KAPIOLANI BLVD
HONOLULU, HI 96814 | **CERC-NFRAP**
RCRA-CESQG
FINDS | **1003879446**
HID984466060

Site 2 of 9 in cluster I

Relative: Higher

Actual: 3 ft.

CERC-NFRAP:

Site ID:	0903612
Federal Facility:	Not a Federal Facility
NPL Status:	Not on the NPL
Non NPL Status:	NFRAP-Site does not qualify for the NPL based on existing information

CERCLIS-NFRAP Site Contact Details:

Contact Sequence ID:	13037524.00000
Person ID:	9000059.00000

CERCLIS-NFRAP Assessment History:

Action:	PRELIMINARY ASSESSMENT
Date Started:	/ /
Date Completed:	04/22/91
Priority Level:	Higher priority for further assessment
Action:	ARCHIVE SITE
Date Started:	/ /
Date Completed:	03/23/92
Priority Level:	Not reported
Action:	SITE INSPECTION
Date Started:	/ /
Date Completed:	03/23/92
Priority Level:	NFRAP-Site does not qualify for the NPL based on existing information
Action:	DISCOVERY
Date Started:	/ /
Date Completed:	09/24/90
Priority Level:	Not reported

RCRA-CESQG:

Date form received by agency:	08/13/1992
Facility name:	FIRST DEVELOPMENT INC
Facility address:	1777 KAPIOLANI BLVD HONOLULU, HI 96814
EPA ID:	HID984466060
Mailing address:	FORT ST HAWAII TWR STE 1501 HONOLULU, HI 96813
Contact:	HITOSHI UCHINO
Contact address:	745 FORT ST HAWAII TWR STE 1501 HONOLULU, HI 96813
Contact country:	US
Contact telephone:	(808) 545-1953
Contact email:	Not reported
EPA Region:	09
Classification:	Conditionally Exempt Small Quantity Generator
Description:	Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous

FIRST DEVELOPMENT INC (Continued) **1003879446**

waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name:	FIRST DEVELOPMENT INC
Owner/operator address:	745 FORT ST HAWAII TWR 1501 HONOLULU, HI 96813
Owner/operator country:	Not reported
Owner/operator telephone:	(808) 545-1953
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

FINDS:

Registry ID: 110005727204

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

STATE MASTER

I28 East 1/8-1/4 0.188 mi. 992 ft. | **B & S AUTOMOTIVE TECHNICIANS** | **RCRA NonGen / NLR FINDS** | **1000130413 HID981573959**
1789 KAPIOLANI
HONOLULU, HI 96814

Site 3 of 9 in cluster I

Relative: Higher

Actual: 3 ft.

RCRA NonGen / NLR:

Date form received by agency:	12/10/1993
Facility name:	B & S AUTOMOTIVE TECHNICIANS
Facility address:	1789 KAPIOLANI HONOLULU, HI 96814
EPA ID:	HID981573959
Mailing address:	KAPIOLANI HONOLULU, HI 96814
Contact:	ENVIRONMENTAL MANAGER
Contact address:	1789 KAPIOLANI HONOLULU, HI 96814
Contact country:	US
Contact telephone:	(808) 946-0677
Contact email:	Not reported
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	UEHARA BLAKE
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No

B & S AUTOMOTIVE TECHNICIANS (Continued) **1000130413**

Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

FINDS:

Registry ID: 110005723770

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

I29
ESE
1/8-1/4
0.193 mi.
1020 ft.

ALOHA MOTORS **HI LUST** **U001235755**
KAPIOLANI BLVD X KALAKAUA AVE **HI UST** **N/A**
HONOLULU, HI 96815

Site 4 of 9 in cluster I

Relative:
Higher

Actual:
3 ft.

LUST:
Facility ID: 9-102160
Facility Status: Site Cleanup Completed (NFA)
Facility Status Date: 04/12/1993
Release ID: 890025
Project Officer: Raymond Seid

UST:
Facility ID: 9-102160
Owner: STATE DBEDT - CONVENTION CENTER AUTHORITY
Owner Address: 1833 KALAKAUA AVE, SUITE 800
Ownder City,St,Zip: Honolulu, 96815 96815

Tank ID: 1
Date Installed: Not reported
Tank Status: Permanently Out of Use
Date Closed: Not reported
Tank Capacity: Not reported
Substance: Not Listed

Tank ID: R-2
Date Installed: Not reported
Tank Status: Permanently Out of Use
Date Closed: 08/21/1995
Tank Capacity: 550
Substance: Not Listed

Tank ID: R-3
Date Installed: Not reported
Tank Status: Permanently Out of Use
Date Closed: 08/24/1995

ALOHA MOTORS (Continued) **U001235755**

Tank Capacity: 260
Substance: Not Listed

Tank ID: R-4
Date Installed: Not reported
Tank Status: Permanently Out of Use
Date Closed: 10/18/1995
Tank Capacity: 550
Substance: Not Listed

Tank ID: R-5
Date Installed: Not reported
Tank Status: Permanently Out of Use
Date Closed: 10/29/1996
Tank Capacity: 250
Substance: Not Listed

E30
NW
1/8-1/4
0.197 mi.
1039 ft.

1518 MAKALOA ST **EDR US Hist Cleaners** **1014997169**
HONOLULU, HI 96814 **N/A**

Site 2 of 2 in cluster E

Relative: Higher
Actual: 3 ft.

EDR Historical Cleaners:
Name: FANTASTIQUE DRY CLEANING
Year: 2002
Address: 1518 MAKALOA ST

31
South
1/8-1/4
0.201 mi.
1060 ft.

THE WATERMARK WAIKIKI **HI LUST** **S109467327**
1551 ALA WAI BLVD **N/A**
HONOLULU, HI 96815

Relative: Higher
Actual: 3 ft.

LUST:
Facility ID: 9-103868
Facility Status: Confirmed Release
Facility Status Date: 11/04/2008
Release ID: 090003
Project Officer: Josh Nagashima

J32
SSE
1/8-1/4
0.204 mi.
1075 ft.

1609 ALA WAI DIESEL RELEASE **HI SHWS** **S108008656**
1609 ALA WAI BLVD **HI SPILLS** **N/A**
HONOLULU, HI

Site 1 of 2 in cluster J

Relative: Higher
Actual: 3 ft.

SHWS:
Organization: Not reported
Supplemental Location: Not reported
Island: Oahu
Environmental Interest: 1609 Ala Wai Diesel Release
HID Number: Not reported

1609 ALA WAI DIESEL RELEASE (Continued) **S108008656**

Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Program:	State
Project Manager:	Laura Young
Hazard Priority:	NFA
Potential Hazards And Controls:	No Hazard
Organization:	Not reported
Island:	Oahu
Supplemental Location Text:	Not reported
SDAR Environmental Interest Name:	1609 Ala Wai Diesel Release
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Progran Name:	State
Potential Hazard And Controls:	No Hazard
Priority:	NFA
Assessment:	Response Necessary
Response:	Response Complete
Nature of Contamination:	Not reported
Nature of Residual Contamination:	Diesel contaminated soil
Use Restrictions:	No Hazard Present For Unrestricted Residential Use
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Unrestricted Residential Use
Document Date:	10/07/2005
Document Number:	2005-511-LY
Document Subject:	1609 Ala Wai Diesel Release No Further Action Letter
Project Manager:	Laura Young
Contact Information:	(808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

HI SPILLS:

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	20050523-1552
HID Number:	Not reported
Facility Registry Id:	Not reported
Lead and Program:	HEER EP&R
ER:	Site Visit
Units:	1609 Ala Wai Diesel Release
Substances:	Diesel Fuel
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Sheen
Activity Type:	Response
Activity Lead:	Liz Galvez
Assignment End Date:	2005-06-09 00:00:00
Result:	Refer to SDAR
File Under:	Ala Wai Watermark Development , LLC

I33 East 1/8-1/4 0.204 mi. 1079 ft. | **HAWAII CONVENTION CENTER**
1801 KALAKAUA AVE
HONOLULU, HI 96814 | **HI SHWS** | **1006820847**
HI SPILLS | **N/A**

Site 5 of 9 in cluster I

Relative: Higher

Actual: 3 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Kalakaua Ave & Kapiolani Blvd
Island:	Oahu
Environmental Interest:	Hawaii Convention Center
HID Number:	Not reported
Facility Registry Identifier:	110013788641
Lead Agency:	SHWB
Program:	State
Project Manager:	Not reported
Hazard Priority:	NFA
Potential Hazards And Controls:	Hazard Undetermined
Organization:	Not reported
Island:	Oahu
Supplemental Location Text:	Kalakaua Ave & Kapiolani Blvd
SDAR Environmental Interest Name:	Hawaii Convention Center
HID Number:	Not reported
Facility Registry Identifier:	110013788641
Lead Agency:	SHWB
Progran Name:	State
Potential Hazard And Controls:	Hazard Undetermined
Priority:	NFA
Assessment:	Response Necessary
Response:	Response Complete
Nature of Contamination:	Not reported
Nature of Residual Contamination:	Not reported
Use Restrictions:	Undetermined
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action - Type Undetermined
Document Date:	09/03/1997
Document Number:	Not reported
Document Subject:	Letter Report Removal and Disposal of Transite Pipes, Hawaii Convention Center, Honolulu HI
Project Manager:	Not reported
Contact Information:	(808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

HI SPILLS:

Island:	Oahu
Supplemental Loc. Text:	Kalakaua Ave & Kapiolani Blvd
Case Number:	19980426-1349
HID Number:	Not reported
Facility Registry Id:	110013788641
Lead and Program:	HEER EP&R
ER:	Not reported
Units:	Hawaii Convention Center Brick Sealer Odor
Substances:	Not reported
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response

HAWAII CONVENTION CENTER (Continued) **1006820847**

Activity Lead:	Liz Galvez
Assignment End Date:	Not reported
Result:	Not reported
File Under:	State of Hawaii, Department of Business, Economic Development & Tourism, Convention Center Authority

Island:	Oahu
Supplemental Loc. Text:	Kalakaua Ave & Kapiolani Blvd
Case Number:	19960207-1016
HID Number:	Not reported
Facility Registry Id:	110013788641
Lead and Program:	HEER EP&R
ER:	No
Units:	Convention Center
Substances:	Oil
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Terry Corpus
Assignment End Date:	Not reported
Result:	SOSC NFA
File Under:	State of Hawaii, Department of Business, Economic Development & Tourism, Convention Center Authority

Island:	Oahu
Supplemental Loc. Text:	Kalakaua Ave & Kapiolani Blvd
Case Number:	19960314-0000
HID Number:	Not reported
Facility Registry Id:	110013788641
Lead and Program:	HEER EP&R
ER:	Not reported
Units:	Hawaii Convention Center
Substances:	Lubricating Oil.
Less Or Greater Than:	Not reported
Numerical Quantity:	1
Units:	Gallons
Activity Type:	Response
Activity Lead:	Not reported
Assignment End Date:	Not reported
Result:	SOSC NFA
File Under:	State of Hawaii, Department of Business, Economic Development & Tourism, Convention Center Authority

Island:	Oahu
Supplemental Loc. Text:	Kalakaua Ave & Kapiolani Blvd
Case Number:	19970301-1010
HID Number:	Not reported
Facility Registry Id:	110013788641
Lead and Program:	HEER EP&R
ER:	No
Units:	Convention Center White Liquid Emptying Into Ala Wai
Substances:	UNKN white liquid
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response

HAWAII CONVENTION CENTER (Continued) **1006820847**

Activity Lead: Terry Corpus
Assignment End Date: Not reported
Result: SOSC NFA
File Under: State of Hawaii, Department of Business, Economic Development & Tourism, Convention Center Authority

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I34 East 1/8-1/4 0.204 mi. 1079 ft.

FUJI PHOTO FILM U S A INC **RCRA NonGen / NLR** **1012178122**
1801 KALAKAUA AVE **FINDS** **HIP000040451**
HONOLULU, HI 96815

Site 6 of 9 in cluster I

Relative: Higher

Actual: 3 ft.

RCRA NonGen / NLR:
Date form received by agency: 06/24/2009
Facility name: FUJI PHOTO FILM U S A INC
Facility address: 1801 KALAKAUA AVE
HAWAII CONVENTION CENTER
HONOLULU, HI 96815
EPA ID: HIP000040451
Mailing address: 555 TAXTER RD
ELMSFORD, NY 10523
Contact: ANDREA MANNO
Contact address: 555 TAXTER RD
ELMSFORD, NY 10523
Contact country: US
Contact telephone: (914) 789-8793
Contact email: Not reported
EPA Region: 09
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: FUJI PHOTO FILM U S A INC
Owner/operator address: 555 TAXTER RD
ELMSFORD, NY 10523
Owner/operator country: Not reported
Owner/operator telephone: (914) 789-8100
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No

FUJI PHOTO FILM U S A INC (Continued) **1012178122**

Used oil transporter: No

Historical Generators:
Date form received by agency: 06/05/1998
Site name: FUJI PHOTO FILM U S A INC
Classification: Small Quantity Generator

Violation Status: No violations found

FINDS:

Registry ID: 110005724172

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

STATE MASTER

HAZARDOUS WASTE BIENNIAL REPORTER

I35 East 1/8-1/4 0.204 mi. 1079 ft. | **HAWAII CONVENTION CENTER** | **RCRA-CESQG** | **1000277482**
1801 KALAKAUA AVENUE | **HID981633647**
HONOLULU, HI 96815

Site 7 of 9 in cluster I

Relative: Higher

Actual: 3 ft.

RCRA-CESQG:
Date form received by agency: 03/25/2010
Facility name: HAWAII CONVENTION CENTER
Facility address: 1801 KALAKAUA AVENUE
HONOLULU, HI 96815
EPA ID: HID981633647
Mailing address: KALAKAUA AVENUE
HONOLULU, HI 96815
Contact: JOE DAVIS
Contact address: KALAKAUA AVENUE
HONOLULU, HI 96815
Contact country: Not reported
Contact telephone: (808) 943-3000
Contact email: JDAVIS@HCCSMG.COM
EPA Region: 09
Classification: Conditionally Exempt Small Quantity Generator
Description: Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any

HAWAII CONVENTION CENTER (Continued) **1000277482**

time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name:	STATE OF HAWAII
Owner/operator address:	KALAKAUA AVENUE HONOLULU, HI 96815
Owner/operator country:	US
Owner/operator telephone:	(808) 943-3000
Legal status:	State
Owner/Operator Type:	Owner
Owner/Op start date:	01/01/1997
Owner/Op end date:	Not reported

Owner/operator name:	SMG
Owner/operator address:	KALAKAUA AVENUE HONOLULU, HI 96815
Owner/operator country:	Not reported
Owner/operator telephone:	(808) 943-3000
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	01/01/1997
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Historical Generators:

Date form received by agency:	10/15/2009
Site name:	HAWAII CONVENTION CENTER
Classification:	Large Quantity Generator

Date form received by agency:	01/21/1987
Site name:	DOLLAR RENT A CAR
Classification:	Not a generator, verified

Hazardous Waste Summary:

Waste code:	D001
Waste name:	IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF

HAWAII CONVENTION CENTER (Continued) **1000277482**

LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

Waste code: F003
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Waste code: F005
Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Violation Status: No violations found

H36 **WALGREENS STORE NO. 12072** **RCRA-SQG** **1016453153**
NW **1470 KAPIOLANI BLVD.** **HIP000141887**
1/8-1/4 **HONOLULU, HI 96814**
0.205 mi.
1080 ft. **Site 2 of 3 in cluster H**

Relative:
Higher

Actual:
3 ft.

RCRA-SQG:
Date form received by agency: 02/18/2014
Facility name: WALGREENS STORE NO. 12072
Facility address: 1470 KAPIOLANI BLVD.
HONOLULU, HI 96814
EPA ID: HIP000141887
Mailing address: KAPIOLANI BLVD.
HONOLULU, HI 96814
Contact: JEFFREY M GRONCKI
Contact address: WILMOT ROAD MS 1630
DEERFIELD, IL 60015
Contact country: US
Contact telephone: (847) 315-3571
Contact email: JEFF.GRONCKI@WALGREENS.COM

WALGREENS STORE NO. 12072 (Continued) **1016453153**

EPA Region: 09
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: WALGREEN CO.
Owner/operator address: WILMOT ROAD MS 1420
DEERFIELD, IL 60015
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 01/01/2007
Owner/Op end date: Not reported

Owner/operator name: WALGREEN CO.
Owner/operator address: WILMOT ROAD MS 1420
DEERFIELD, IL 60015
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 01/01/2007
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Hazardous Waste Summary:
Waste code: D008
Waste name: LEAD

Violation Status: No violations found

H37 NW 1/8-1/4 0.216 mi. 1143 ft. — **WALGREENS KEEAMOKU**, **1460 KAPIOLANI BOULEVARD**, **HONOLULU, HI 96814** — **HI SHWS** — **S115488729** / **N/A**

Site 3 of 3 in cluster H

Relative: Higher

Actual: 3 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	Walgreens Keeamoku
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Program:	Fast Track
Project Manager:	Jordan Nakayama
Hazard Priority:	Not reported
Potential Hazards And Controls:	Hazard Undetermined
Organization:	Not reported
Island:	Oahu
Supplemental Location Text:	Not reported
SDAR Environmental Interest Name:	Walgreens Keeamoku
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Progran Name:	Fast Track
Potential Hazard And Controls:	Hazard Undetermined
Priority:	Not reported
Assessment:	Assessment Ongoing
Response:	Not reported
Nature of Contamination:	Not reported
Nature of Residual Contamination:	Not reported
Use Restrictions:	Undetermined
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	Not reported
Document Date:	Not reported
Document Number:	Not reported
Document Subject:	Not reported
Project Manager:	Jordan Nakayama
Contact Information:	(808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

I38 East 1/8-1/4 0.220 mi. 1164 ft. — **FUNAI'S UNION SERVICE L-5583**, **1810 KAPIOLANI BLVD**, **HONOLULU, HI 96813** — **HI LUST**, **HI UST**, **HI Financial Assurance** — **U001235021** / **N/A**

Site 8 of 9 in cluster I

Relative: Higher

Actual: 3 ft.

LUST:

Facility ID:	9-100047
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	02/08/2002
Release ID:	910048
Project Officer:	Shunsheng Fu

UST:

Facility ID:	9-100047

FUNAI'S UNION SERVICE L-5583 (Continued) **U001235021**

Owner: UNOCAL CORPORATION
Owner Address: 3915 Mission Avenue #7416
Ownder City,St,Zip: Honolulu, 96813 96813

Tank ID: R-1
Date Installed: 03/26/1966
Tank Status: Permanently Out of Use
Date Closed: 06/10/1991
Tank Capacity: 8000
Substance: Gasoline

Tank ID: R-2
Date Installed: 03/26/1966
Tank Status: Permanently Out of Use
Date Closed: 06/10/1991
Tank Capacity: 6000
Substance: Gasoline

Tank ID: R-3
Date Installed: 03/26/1966
Tank Status: Permanently Out of Use
Date Closed: 06/10/1991
Tank Capacity: 250
Substance: Used Oil

HI Financial Assurance:
Alt Facility ID: 9-100047
Tank Id: R-3
Tank Status: Permanently Out of Use
FRTYPE: Risk Retention Group
Expiration Date: Not reported

Alt Facility ID: 9-100047
Tank Id: R-3
Tank Status: Permanently Out of Use
FRTYPE: Not Listed
Expiration Date: Not reported

Alt Facility ID: 9-100047
Tank Id: R-2
Tank Status: Permanently Out of Use
FRTYPE: Risk Retention Group
Expiration Date: Not reported

Alt Facility ID: 9-100047
Tank Id: R-1
Tank Status: Permanently Out of Use
FRTYPE: Not Listed
Expiration Date: Not reported

Alt Facility ID: 9-100047
Tank Id: R-1
Tank Status: Permanently Out of Use
FRTYPE: Risk Retention Group
Expiration Date: Not reported

FUNAI'S UNION SERVICE L-5583 (Continued) **U001235021**

Alt Facility ID: 9-100047
Tank Id: R-2
Tank Status: Permanently Out of Use
FRTYPE: Not Listed
Expiration Date: Not reported

J39
SSE
1/8-1/4
0.223 mi.
1178 ft.

LING BROTHERS, LTD. **HI LUST** **S108009335**
1819-E LIPEEPEE ST **N/A**
HONOLULU, HI 96815

Site 2 of 2 in cluster J

Relative:
Higher

Actual:
3 ft.

LUST:
Facility ID: 9-100819
Facility Status: Site Cleanup Completed (NFA)
Facility Status Date: 10/16/2007
Release ID: 060020
Project Officer: Richard Takaba

I40
East
1/8-1/4
0.231 mi.
1218 ft.

UNOCAL 76 SS L 5583 **RCRA NonGen / NLR** **1000823237**
1818 KAPIOLANI BLVD **FINDS** **HID984468769**
HONOLULU, HI 96826

Site 9 of 9 in cluster I

Relative:
Higher

Actual:
3 ft.

RCRA NonGen / NLR:
Date form received by agency: 08/27/1993
Facility name: UNOCAL 76 SS L 5583
Facility address: 1818 KAPIOLANI BLVD
HONOLULU, HI 96826
EPA ID: HID984468769
Mailing address: PO BOX 659
HONOLULU, HI 96809
Contact: A FRITZ
Contact address: PO BOX 659
HONOLULU, HI 96809
Contact country: US
Contact telephone: (808) 522-7657
Contact email: Not reported
EPA Region: 09
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: UNOCAL 76
Owner/operator address: 911 WILSHIRE BLVD STE 1010
LOS ANGELES, CA 90017
Owner/operator country: Not reported
Owner/operator telephone: (213) 977-7600
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:

UNOCAL 76 SS L 5583 (Continued) **1000823237**

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

FINDS:

Registry ID: 110005728169

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

K41 **ALA MOANA UNOCAL** **RCRA-CESQG** **1004464898**
SSW **1651 ALA MOANA BLVD** **FINDS** **HID981969983**
1/8-1/4 **HONOLULU, HI 96815** **HI SPILLS**
0.238 mi. **CA HAZNET**
1256 ft. **Site 1 of 3 in cluster K**

Relative:
Higher

Actual:
3 ft.

RCRA-CESQG:

Date form received by agency:	07/22/1993
Facility name:	ALA WAI MARINE LTD
Facility address:	1651 ALA MOANA BLVD HONOLULU, HI 96815
EPA ID:	HID981969983
Mailing address:	ALA MOANA BLVD HONOLULU, HI 96815
Contact:	STEVE LEWIS
Contact address:	1651 ALA MOANA BLVD HONOLULU, HI 96815
Contact country:	US
Contact telephone:	(808) 946-4213
Contact email:	Not reported
EPA Region:	09
Land type:	Facility is not located on Indian land. Additional information is not known.
Classification:	Conditionally Exempt Small Quantity Generator
Description:	Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous

ALA MOANA UNOCAL (Continued) **1004464898**

waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name:	ARAPOFF PETER
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

Evaluation Action Summary:

Evaluation date:	10/23/2003
Evaluation:	FOCUSED COMPLIANCE INSPECTION
Area of violation:	Not reported
Date achieved compliance:	Not reported

ALA MOANA UNOCAL (Continued) **1004464898**

Evaluation lead agency: State

FINDS:

Registry ID: 110022917593

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

US National Pollutant Discharge Elimination System (NPDES) module of the Compliance Information System (ICIS) tracks surface water permits issued under the Clean Water Act. Under NPDES, all facilities that discharge pollutants from any point source into waters of the United States are required to obtain a permit. The permit will likely contain limits on what can be discharged, impose monitoring and reporting requirements, and include other provisions to ensure that the discharge does not adversely affect water quality.

STATE MASTER

LEAKING UNDERGROUND STORAGE TANK - ARRA

PCS (Permit Compliance System) is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.

HI SPILLS:

Island:	Oahu
Supplemental Loc. Text:	Ala Wai Yacht Harbor Slot 61/62
Case Number:	20010517-1241
HID Number:	Not reported
Facility Registry Id:	Not reported
Lead and Program:	HEER EP&R
ER:	No
Units:	Ala Wai Boat Harbor Slot 61 & 62
Substances:	Ethylene Glycol
Less Or Greater Than:	Not reported
Numerical Quantity:	1
Units:	Gallons
Activity Type:	Response
Activity Lead:	Liz Galvez
Assignment End Date:	Not reported
Result:	SOSC NFA
File Under:	Not reported

Island:	Oahu
Supplemental Loc. Text:	Ala Wai Yacht Harbor
Case Number:	19970712-0651
HID Number:	Not reported
Facility Registry Id:	Not reported

ALA MOANA UNOCAL (Continued) **1004464898**

Lead and Program:	HEER EP&R
ER:	No
Units:	Ala Wai Boat Harbor, oil sheen sighting
Substances:	Oil
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Mike Cripps
Assignment End Date:	Not reported
Result:	SOSC NFA
File Under:	Not reported

Island:	Oahu
Supplemental Loc. Text:	Ala Wai Yacht Harbor
Case Number:	19980811-0758
HID Number:	Not reported
Facility Registry Id:	Not reported
Lead and Program:	HEER EP&R
ER:	Not reported
Units:	Ala Wai Boat Harbor, oil sheen
Substances:	unk oil
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Not reported
Assignment End Date:	Not reported
Result:	Not reported
File Under:	Not reported

Island:	Oahu
Supplemental Loc. Text:	Ala Wai Yacht Harbor 400 Row Dock B/C
Case Number:	20021011-0736
HID Number:	Not reported
Facility Registry Id:	110013783218
Lead and Program:	HEER EP&R
ER:	No
Units:	Sheen 400 row, B-C dock
Substances:	Not reported
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Ed Gomes
Assignment End Date:	Not reported
Result:	SOSC NFA
File Under:	Not reported

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	20110927-0733
HID Number:	Not reported
Facility Registry Id:	Not reported
Lead and Program:	HEER EP&R
ER:	None
Units:	Unknown Sheen at Alawai Boat Harbor

ALA MOANA UNOCAL (Continued) **1004464898**

Substances:	Oil
Less Or Greater Than:	Not reported
Numerical Quantity:	0
Units:	Not reported
Activity Type:	Response
Activity Lead:	Liz Galvez
Assignment End Date:	Not reported
Result:	Not reported
File Under:	Not reported

Click this hyperlink while viewing on your computer to access
3 additional HI SPILLS: record(s) in the EDR Site Report.

HAZNET:

Year:	2002
Gepaid:	HID981969983
Contact:	STEVE LEWIS
Telephone:	8089464213
Mailing Name:	Not reported
Mailing Address:	1651 ALA MOANA BLVD
Mailing City,St,Zip:	HONOLULU, HI 968150000
Gen County:	Not reported
TSD EPA ID:	CAD028409019
TSD County:	Not reported
Waste Category:	Waste oil and mixed oil
Disposal Method:	Transfer Station
Tons:	0.45
Facility County:	99

Year:	2002
Gepaid:	HID981969983
Contact:	STEVE LEWIS
Telephone:	8089464213
Mailing Name:	Not reported
Mailing Address:	1651 ALA MOANA BLVD
Mailing City,St,Zip:	HONOLULU, HI 968150000
Gen County:	Not reported
TSD EPA ID:	CAD028409019
TSD County:	Not reported
Waste Category:	Off-specification, aged or surplus organics
Disposal Method:	Transfer Station
Tons:	0.15
Facility County:	99

Year:	2001
Gepaid:	HID981969983
Contact:	STEVE LEWIS
Telephone:	8089464213
Mailing Name:	Not reported
Mailing Address:	1651 ALA MOANA BLVD
Mailing City,St,Zip:	HONOLULU, HI 968150000
Gen County:	Not reported
TSD EPA ID:	CAD028409019
TSD County:	Not reported
Waste Category:	Waste oil and mixed oil
Disposal Method:	Transfer Station
Tons:	0.22

ALA MOANA UNOCAL (Continued) **1004464898**

Facility County: 99

Year: 2001
Gepaid: HID981969983
Contact: STEVE LEWIS
Telephone: 8089464213
Mailing Name: Not reported
Mailing Address: 1651 ALA MOANA BLVD
Mailing City,St,Zip: HONOLULU, HI 968150000
Gen County: Not reported
TSD EPA ID: AZD983473539
TSD County: Not reported
Waste Category: Not reported
Disposal Method: Recycler
Tons: 0.04
Facility County: 99

Year: 2001
Gepaid: HID981969983
Contact: STEVE LEWIS
Telephone: 8089464213
Mailing Name: Not reported
Mailing Address: 1651 ALA MOANA BLVD
Mailing City,St,Zip: HONOLULU, HI 968150000
Gen County: Not reported
TSD EPA ID: CAD028409019
TSD County: Not reported
Waste Category: Waste oil and mixed oil
Disposal Method: Treatment, Tank
Tons: 0.85
Facility County: 99

Click this hyperlink while viewing on your computer to access
1 additional CA_HAZNET: record(s) in the EDR Site Report.

K42 **STATE OF HAWAII DLNR DOBOR** **RCRA-SQG** **1001481551**
SSW **1651 ALA MOANA BLVD** **HIR000050146**
1/8-1/4 **HONOLULU, HI 96815**
0.238 mi.
1256 ft. **Site 2 of 3 in cluster K**

Relative:
Higher

Actual:
3 ft.

RCRA-SQG:
Date form received by agency: 03/15/1999
Facility name: STATE OF HAWAII DLNR DOBOR
Facility address: 1651 ALA MOANA BLVD
ALA WAI SMALL BOAT HARBOR
HONOLULU, HI 96815
EPA ID: HIR000050146
Mailing address: 333 QUEEN ST STE 300
HONOLULU, HI 96813
Contact: ROBERT RUSHFORTH
Contact address: 333 QUEEN ST STE 300
HONOLULU, HI 96813
Contact country: US
Contact telephone: (808) 973-9727
Contact email: Not reported
EPA Region: 09
Classification: Small Small Quantity Generator

STATE OF HAWAII DLNR DOBOR (Continued) **1001481551**

Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: STATE OF HAWAII DLNR DOBOR
Owner/operator address: 333 QUEEN ST STE 300
HONOLULU, HI 96813
Owner/operator country: Not reported
Owner/operator telephone: (808) 587-1973
Legal status: State
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Hazardous Waste Summary:
Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Violation Status: No violations found

K43 **ALOHA MARINE** **HI LUST** **U001235075**
SSW **1651 ALA MOANA BLVD** **HI UST** **N/A**
1/8-1/4 **HONOLULU, HI 96815**
0.238 mi.
1256 ft. **Site 3 of 3 in cluster K**

Relative:
Higher

Actual:
3 ft.

LUST:
Facility ID: 9-100167
Facility Status: Site Cleanup Completed (NFA)
Facility Status Date: 03/21/2012
Release ID: 110012

ALOHA MARINE (Continued) **U001235075**

Project Officer: To Heer

UST:
Facility ID: 9-100167
Owner: TEXACO REFINING & MARKETING INC.
Owner Address: ENVIRONMENTAL SERVICES800 SW FIRST AVE., SUITE 180
Ownder City,St,Zip: Honolulu, 96815 96815

Tank ID: R-1
Date Installed: 07/07/1965
Tank Status: Permanently Out of Use
Date Closed: Not reported
Tank Capacity: 1000
Substance: Used Oil

Tank ID: R-2
Date Installed: 07/07/1965
Tank Status: Permanently Out of Use
Date Closed: Not reported
Tank Capacity: 4000
Substance: Diesel

Tank ID: R-3
Date Installed: 07/07/1965
Tank Status: Permanently Out of Use
Date Closed: Not reported
Tank Capacity: 4000
Substance: Diesel

Tank ID: R-4
Date Installed: 07/07/1965
Tank Status: Permanently Out of Use
Date Closed: Not reported
Tank Capacity: 4000
Substance: Gasoline

Tank ID: R-5
Date Installed: 07/07/1965
Tank Status: Permanently Out of Use
Date Closed: Not reported
Tank Capacity: 4000
Substance: Gasoline

Tank ID: R-6
Date Installed: 07/07/1965
Tank Status: Permanently Out of Use
Date Closed: 06/01/1985
Tank Capacity: 4000
Substance: Not Listed

Tank ID: R-7

ALOHA MARINE (Continued) **U001235075**

Date Installed: 07/07/1965
Tank Status: Permanently Out of Use
Date Closed: Not reported
Tank Capacity: 4000
Substance: Not Listed

44
NW
1/8-1/4
0.245 mi.
1294 ft.

641 KEEAUMOKU ST
HONOLULU, HI 96814

EDR US Hist Auto Stat **1015587841**
N/A

Relative:
Higher

Actual:
3 ft.

EDR Historical Auto Stations:
Name: AAMCO TRANSMISSIONS
Year: 2007
Address: 641 KEEAUMOKU ST

45
WSW
1/8-1/4
0.245 mi.
1295 ft.

MOANA PARK WASTEWATER PUMP STATION
1501 ALA MOANA BLVD
HONOLULU, HI 96814

HI UST **U003762121**
HI Financial Assurance **N/A**

Relative:
Higher

Actual:
3 ft.

UST:
Facility ID: 9-103665
Owner: C&C HNL - DEPT OF ENVIRONMENTAL SERVICES
Owner Address: 1000 ULU'OHIA STREET, SUITE 308
Ownder City,St,Zip: Honolulu, 96814 96814

Tank ID: M-1
Date Installed: 12/01/1994
Tank Status: Currently In Use
Date Closed: Not reported
Tank Capacity: 600
Substance: Diesel

HI Financial Assurance:
Alt Facility ID: 9-103665
Tank Id: M-1
Tank Status: Currently In Use
FRTYPE: Other
Expiration Date: 06/30/2014

46
East
1/8-1/4
0.246 mi.
1298 ft.

1830 KAPIOLANI BLVD
HONOLULU, HI 96826

EDR US Hist Auto Stat **1015282816**
N/A

Relative:
Higher

Actual:
3 ft.

EDR Historical Auto Stations:
Name: OAHU AUTO SERVICE INCORPORATED
Year: 1999
Address: 1830 KAPIOLANI BLVD

L47
NW
1/4-1/2
0.302 mi.
1592 ft.

SUPERBLOCK PROPERTIES
SOUTH BLOCK (BLDG S20) / MAKALOA ST
HONOLULU, HI 96814

HI LUST **U001235973**
HI UST **N/A**

Site 1 of 3 in cluster L

Relative:
Higher

Actual:
3 ft.

LUST:

Facility ID:	9-102602
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	12/06/1993
Release ID:	920143
Project Officer:	Stanton Enomoto

UST:

Facility ID:	9-102602
Owner:	KEEAUMOKU PARTNERS
Owner Address:	820 MILILANI ST, SUITE 820
Ownder City,St,Zip:	Honolulu, 96814 96814
Tank ID:	R-ST12
Date Installed:	Not reported
Tank Status:	**Permanently Out of Use**
Date Closed:	10/22/1991
Tank Capacity:	1000
Substance:	Used Oil

L48
NW
1/4-1/2
0.309 mi.
1630 ft.

SUPERBLOCK PROPERTIES
NORTH BLOCK (BLDG N8) / KEEAUMOKU ST
HONOLULU, HI 96814

HI LUST **U003221767**
HI UST **N/A**

Site 2 of 3 in cluster L

Relative:
Higher

Actual:
3 ft.

LUST:

Facility ID:	9-102594
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	12/20/1993
Release ID:	920139
Project Officer:	Stanton Enomoto

UST:

Facility ID:	9-102594
Owner:	KEEAUMOKU PARTNERS
Owner Address:	820 MILILANI ST, SUITE 820
Ownder City,St,Zip:	Honolulu, 96814 96814
Tank ID:	R-NT3
Date Installed:	Not reported
Tank Status:	**Permanently Out of Use**
Date Closed:	07/23/1991
Tank Capacity:	250
Substance:	Used Oil
Tank ID:	R-NT4
Date Installed:	Not reported
Tank Status:	**Permanently Out of Use**
Date Closed:	07/23/1991
Tank Capacity:	8000
Substance:	Gasoline

SUPERBLOCK PROPERTIES (Continued) **U003221767**

Tank ID:	R-NT5
Date Installed:	Not reported
Tank Status:	**Permanently Out of Use**
Date Closed:	07/23/1991
Tank Capacity:	8000
Substance:	Gasoline

49
NNW
1/4-1/2
0.315 mi.
1664 ft.

LIKE LIKE PLAZA PETROLEUM CONTAMINATION
745 KEEAUMOKU ST
HONOLULU, HI 96814

HI SHWS **1006819347**
N/A

Relative:
Higher

Actual:
7 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	Like Like Plaza Petroleum Contamination
HID Number:	Not reported
Facility Registry Identifier:	110013771383
Lead Agency:	HEER
Program:	State
Project Manager:	Anna Fernandez
Hazard Priority:	NFA
Potential Hazards And Controls:	No Hazard
Organization:	Not reported
Island:	Oahu
Supplemental Location Text:	Not reported
SDAR Environmental Interest Name:	Like Like Plaza Petroleum Contamination
HID Number:	Not reported
Facility Registry Identifier:	110013771383
Lead Agency:	HEER
Progran Name:	State
Potential Hazard And Controls:	No Hazard
Priority:	NFA
Assessment:	Response Necessary
Response:	Response Complete
Nature of Contamination:	Found: petroleum-impacted soils
Nature of Residual Contamination:	Petroleum impacted soil
Use Restrictions:	No Hazard Present For Unrestricted Residential Use
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Unrestricted Residential Use
Document Date:	05/04/2006
Document Number:	2006-266-AF
Document Subject:	NFA determination
Project Manager:	Anna Fernandez
Contact Information:	(808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

50 WNW 1/4-1/2 0.328 mi. 1732 ft.

CUTTER CHEVROLET
1391 KAPIOLANI BLVD
HONOLULU, HI 96814

HI SHWS
HI LUST
HI UST
HI Financial Assurance

U001235085
N/A

Relative: Higher

Actual: 3 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	2nd Driveway from Kona Iki St
Island:	Oahu
Environmental Interest:	Cutter Chevrolet Hydraulic Lift
HID Number:	Not reported
Facility Registry Identifier:	110005725028
Lead Agency:	HEER
Program:	State
Project Manager:	Steve Mow
Hazard Priority:	NFA
Potential Hazards And Controls:	No Hazard
Organization:	Not reported
Island:	Oahu
Supplemental Location Text:	2nd Driveway from Kona Iki St
SDAR Environmental Interest Name:	Cutter Chevrolet Hydraulic Lift
HID Number:	Not reported
Facility Registry Identifier:	110005725028
Lead Agency:	HEER
Progran Name:	State
Potential Hazard And Controls:	No Hazard
Priority:	NFA
Assessment:	Response Necessary
Response:	Response Complete
Nature of Contamination:	Not reported
Nature of Residual Contamination:	Not reported
Use Restrictions:	No Hazard Present For Unrestricted Residential Use
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Unrestricted Residential Use
Document Date:	09/09/2005
Document Number:	2005-454-SPM
Document Subject:	No Further Action Required at Cutter Chevrolet at 1391 Kapiolani Blvd
Project Manager:	Steve Mow
Contact Information:	(808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

LUST:

Facility ID:	9-100185
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	10/26/1999
Release ID:	950131
Project Officer:	Renato Maniulit

UST:

Facility ID:	9-100185
Owner:	MOTOR SUPPLY LTD
Owner Address:	726 SHERIDAN ST
Ownder City,St,Zip:	Honolulu, 96814 96814
Tank ID:	R-1

CUTTER CHEVROLET (Continued) **U001235085**

Date Installed: 05/03/1971
Tank Status: Permanently Out of Use
Date Closed: 09/02/1995
Tank Capacity: 500
Substance: Used Oil

HI Financial Assurance:
Alt Facility ID: 9-100185
Tank Id: R-1
Tank Status: Permanently Out of Use
FRTYPE: Not Listed
Expiration Date: Not reported

Alt Facility ID: 9-100185
Tank Id: R-1
Tank Status: Permanently Out of Use
FRTYPE: Self Insured
Expiration Date: Not reported

L51 **SUPERBLOCK PROPERTIES** **HI LUST** **U001235974**
NW **SOUTH BLOCK (BLDG S25) / MAKALOA ST** **HI UST** **N/A**
1/4-1/2 **HONOLULU, HI 96814**
0.337 mi.
1779 ft. **Site 3 of 3 in cluster L**

Relative:
Higher

Actual:
3 ft.

LUST:
Facility ID: 9-102603
Facility Status: Site Cleanup Completed (NFA)
Facility Status Date: 12/06/1993
Release ID: 920144
Project Officer: Stanton Enomoto

UST:
Facility ID: 9-102603
Owner: KEEAUMOKU PARTNERS
Owner Address: 820 MILILANI ST, SUITE 820
Ownder City,St,Zip: Honolulu, 96814 96814

Tank ID: R-6
Date Installed: Not reported
Tank Status: Permanently Out of Use
Date Closed: 01/15/2003
Tank Capacity: 250
Substance: Not Listed

Tank ID: R-ST16
Date Installed: Not reported
Tank Status: Permanently Out of Use
Date Closed: 11/21/1991
Tank Capacity: 5000
Substance: Gasoline

Tank ID: R-ST17
Date Installed: Not reported
Tank Status: Permanently Out of Use

SUPERBLOCK PROPERTIES (Continued) **U001235974**

Date Closed: 11/21/1991
Tank Capacity: 5000
Substance: Gasoline

M52 **SEARS ROEBUCK & COMPANY 1158** **HI LUST** **U001235603**
WSW **1450 ALA MOANA BLVD #1000** **HI UST** **N/A**
1/4-1/2 **HONOLULU, HI 96814** **HI SPILLS**
0.342 mi.
1804 ft. **Site 1 of 2 in cluster M**

Relative:
Higher

Actual:
3 ft.

LUST:
Facility ID: 9-101837
Facility Status: Site Cleanup Completed (NFA)
Facility Status Date: 10/06/1998
Release ID: 930057
Project Officer: Eric Sadoyama

UST:
Facility ID: 9-101837
Owner: D/E HAWAII c/o EQUITABLE LIFE
Owner Address: SOCIETY OF THE U.S. / 787 SEVENTH AVENUE
Ownder City,St,Zip: Honolulu, 96814 96814

Tank ID: R-1
Date Installed: 05/07/1959
Tank Status: **Permanently Out of Use**
Date Closed: 02/01/1994
Tank Capacity: 2000
Substance: Used Oil

Tank ID: R-2
Date Installed: 05/07/1959
Tank Status: **Permanently Out of Use**
Date Closed: 02/01/1994
Tank Capacity: 2000
Substance: Other

Tank ID: R-3
Date Installed: 05/07/1959
Tank Status: **Permanently Out of Use**
Date Closed: 02/01/1994
Tank Capacity: 4000
Substance: Other

Tank ID: R-4
Date Installed: 05/07/1959
Tank Status: **Permanently Out of Use**
Date Closed: 02/01/1994
Tank Capacity: 4000
Substance: Other

Tank ID: R-5
Date Installed: 05/07/1959

SEARS ROEBUCK & COMPANY 1158 (Continued) **U001235603**

Tank Status:	**Permanently Out of Use**
Date Closed:	02/01/1994
Tank Capacity:	4000
Substance:	Other

Tank ID:	R-6
Date Installed:	05/07/1959
Tank Status:	**Permanently Out of Use**
Date Closed:	02/01/1994
Tank Capacity:	4000
Substance:	Other

Tank ID:	R-7
Date Installed:	05/07/1959
Tank Status:	**Permanently Out of Use**
Date Closed:	02/01/1994
Tank Capacity:	3000
Substance:	Other

HI SPILLS:

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	20001102-1124
HID Number:	Not reported
Facility Registry Id:	Not reported
Lead and Program:	HEER EP&R
ER:	Not reported
Units:	Ala Moana Center, cleaning chemicals
Substances:	Not reported
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Liz Galvez
Assignment End Date:	Not reported
Result:	Not reported
File Under:	Not reported

N53 **HOBRON HOTEL** **HI SHWS** **S106817744**
SSE **1744 KAIOO DR** **N/A**
1/4-1/2 **HONOLULU, HI 96815**
0.354 mi.
1867 ft. **Site 1 of 2 in cluster N**

Relative:
Higher

Actual:
3 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	Hobron Hotel
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Program:	State
Project Manager:	Clarence Callahan
Hazard Priority:	NFA

HOBRON HOTEL (Continued) **S106817744**

Potential Hazards And Controls:	No Hazard
Organization:	Not reported
Island:	Oahu
Supplemental Location Text:	Not reported
SDAR Environmental Interest Name:	Hobron Hotel
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Progran Name:	State
Potential Hazard And Controls:	No Hazard
Priority:	NFA
Assessment:	Response Necessary
Response:	Response Complete
Nature of Contamination:	Found: diesel fuel from leaking UST
Nature of Residual Contamination:	Petroleum from UST
Use Restrictions:	No Hazard Present For Unrestricted Residential Use
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Unrestricted Residential Use
Document Date:	01/15/2004
Document Number:	2004-015-CAC
Document Subject:	NFA Additional Site Assessment, Former Hobron Hotel, 1744 Kaioo Dr, Honolulu HI [TMK No. (1)2-6-012:
Project Manager:	Clarence Callahan
Contact Information:	(808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

O54 **SUPERBLOCK PROPERTIES** **HI LUST** **U001235971**
NW **SOUTH BLOCK (BLDG S13) / MAKALOA ST** **HI UST** **N/A**
1/4-1/2 **HONOLULU, HI 96814**
0.364 mi.
1924 ft. **Site 1 of 4 in cluster O**

Relative:
Higher

Actual:
5 ft.

LUST:

Facility ID:	9-102600
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	06/28/1993
Release ID:	920142
Project Officer:	Stanton Enomoto

UST:

Facility ID:	9-102600
Owner:	KEEAUMOKU PARTNERS
Owner Address:	820 MILILANI ST, SUITE 820
Ownder City,St,Zip:	Honolulu, 96814 96814
Tank ID:	R-ST10
Date Installed:	Not reported
Tank Status:	**Permanently Out of Use**
Date Closed:	11/02/1991
Tank Capacity:	500
Substance:	Diesel

55 South 1/4-1/2 0.366 mi. 1933 ft.

ILIKAI HOTEL
1777 ALA MOANA BLVD
HONOLULU, HI 96815

HI LUST **1000267863**
HI UST **N/A**
HI SPILLS

Relative: Higher

Actual: 3 ft.

LUST:

Facility ID:	9-102181
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	09/26/1994
Release ID:	900084
Project Officer:	Eric Sadoyama

UST:

Facility ID:	9-102181
Owner:	ILIKAI HOTEL
Owner Address:	1777 ALA MOANA BLVD
Ownder City,St,Zip:	Honolulu, 96815 96815
Tank ID:	R-1
Date Installed:	Not reported
Tank Status:	**Permanently Out of Use**
Date Closed:	05/15/1990
Tank Capacity:	10000
Substance:	Diesel

HI SPILLS:

Island:	Oahu
Supplemental Loc. Text:	Ilikai Hotel & Suites
Case Number:	20100212-0900
HID Number:	Not reported
Facility Registry Id:	Not reported
Lead and Program:	HEER EP&R
ER:	None
Units:	Mysterious substance causing various health problems
Substances:	Unknown
Less Or Greater Than:	Not reported
Numerical Quantity:	0
Units:	Not reported
Activity Type:	Response
Activity Lead:	TC
Assignment End Date:	Not reported
Result:	Not reported
File Under:	Not reported
Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	20020927-1325
HID Number:	Not reported
Facility Registry Id:	Not reported
Lead and Program:	HEER EP&R
ER:	Site Visit
Units:	White substance in film canister under bed
Substances:	Unknown
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response

ILIKAI HOTEL (Continued) **1000267863**

Activity Lead:	Terry Corpus
Assignment End Date:	Not reported
Result:	SOSC NFA
File Under:	Not reported
Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	19890314
HID Number:	Not reported
Facility Registry Id:	Not reported
Lead and Program:	HEER EP&R
ER:	Not reported
Units:	Ilikai Hotel, Ewa Entrance
Substances:	Oil
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Not reported
Assignment End Date:	Not reported
Result:	SOSC NFA
File Under:	Not reported

O56 **MOTOR SUPPLY** **HI SHWS** **S108008592**
NW **726 SHERIDAN ST** **HI INST CONTROL** **N/A**
1/4-1/2 **HONOLULU, HI 96814**
0.372 mi.
1965 ft. **Site 2 of 4 in cluster O**

Relative:
Higher

Actual:
6 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	Motor Supply
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Program:	State
Project Manager:	Steve Mow
Hazard Priority:	NFA
Potential Hazards And Controls:	Hazard Managed With Controls
Organization:	Not reported
Island:	Oahu
Supplemental Location Text:	Not reported
SDAR Environmental Interest Name:	Motor Supply
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Progran Name:	State
Potential Hazard And Controls:	Hazard Managed With Controls
Priority:	NFA
Assessment:	Response Necessary
Response:	Response Complete
Nature of Contamination:	Found: Tetrachloroethylene.
Nature of Residual Contamination:	Not reported
Use Restrictions:	Controls Required to Manage Contamination
Engineering Control:	Not reported
Description of Restrictions:	Prohibit Any Activity That May Disturb the Integrity of the Capping or

MOTOR SUPPLY (Continued) **S108008592**

	Monitoring Systems
Institutional Control:	Government - Hawaii Dept. of Health Letter Issued
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Restricted Use
Document Date:	03/30/2011
Document Number:	2011-184-SPM
Document Subject:	No Further Action with Institutional Controls Determination for Clean Living - Hakuyosha Internation
Project Manager:	Steve Mow
Contact Information:	(808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

INST CONTROL:

Potential hazards and controls:	Hazard Managed With Controls
Supplemental Location:	Not reported
Zip Suffix:	Not reported
Island:	Oahu
Institutional Control:	Government - Hawaii Dept. of Health Letter Issued

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O57 **HAKUYOSHA HAWAII, INC** **HI SHWS** **S106817254**
NW **730 SHERIDAN ST** **HI SPILLS** **N/A**
1/4-1/2 **HONOLULU, HI 96814** **HI INST CONTROL**
0.372 mi. **HI AIRS**
1965 ft. **Site 3 of 4 in cluster O**

Relative:
Higher

Actual:
6 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	Hakuyosha Hawaii, Inc.
HID Number:	Not reported
Facility Registry Identifier:	110005284414
Lead Agency:	HEER
Program:	State
Project Manager:	Steve Mow
Hazard Priority:	High
Potential Hazards And Controls:	Hazard Managed With Controls
Organization:	Not reported
Island:	Oahu
Supplemental Location Text:	Not reported
SDAR Environmental Interest Name:	Hakuyosha Hawaii, Inc.
HID Number:	Not reported
Facility Registry Identifier:	110005284414
Lead Agency:	HEER
Progran Name:	State
Potential Hazard And Controls:	Hazard Managed With Controls
Priority:	High
Assessment:	Response Necessary
Response:	Response Complete
Nature of Contamination:	Found: tetrachloroethylene
Nature of Residual Contamination:	Not reported
Use Restrictions:	Controls Required to Manage Contamination
Engineering Control:	Not reported
Description of Restrictions:	Prohibit Any Activity That May Disturb the Integrity of the Capping or Monitoring System
Institutional Control:	Government - Hawaii Dept. of Health Letter Issued
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Restricted Use

HAKUYOSHA HAWAII, INC (Continued) **S106817254**

Document Date:	03/30/2011
Document Number:	2011-184-SPM
Document Subject:	No Further Action with Institutional Controls Determination for Clean Living - Hakuyosha Internation
Project Manager:	Steve Mow
Contact Information:	(808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

HI SPILLS:

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	19950303
HID Number:	Not reported
Facility Registry Id:	110005284414
Lead and Program:	HEER EP&R
ER:	No
Units:	Hakuyosha Hawaii Inc.
Substances:	Diesel Fuel
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Bryce Hataoka
Assignment End Date:	Not reported
Result:	Refer to ISST
File Under:	Hakuyosha Hawaii Inc.

INST CONTROL:

Potential hazards and controls:	Hazard Managed With Controls
Supplemental Location:	Not reported
Zip Suffix:	Not reported
Island:	Oahu
Institutional Control:	Government - Hawaii Dept. of Health Letter Issued

AIRS:

Facility ID:	0564-01-C
Island:	Oahu
Mailing Address:	730 Sheridan Street
Locale:	Not reported
Mailing City,St,Zip:	Honolulu, HI 96814
Contact Name:	Carl Patton
Contact Title:	Manager
Description:	Petroleum Solvent Dry Cleaning EquipmentThis permit encompasses the following equipment and associated appurtenances:a.Hoyt Petro-Miser Petroleum Solvent Recovery DryerModel PET-50 Serial no. 50-519-GE Maximum capacity: 50 poundsb.Hoyt Petro-Miser Petroleum Solvent Recovery DryerModel PET-50 Serial no. 50-707-GE Maximum capacity: 50 poundsc.Hoyt Petro-Miser Petroleum Solvent Recovery DryerModel PET-50RSerial no. 50R-1074GEMaximum capacity: 50 poundsd.J & T Petroleum Solvent WasherModel 40Serial no. 1024Maximum capacity: 40 poundse.J & T Petroleum Solvent WasherModel 40Serial no. 1023Maximum capacity: 40 pounds

Facility ID:	0462-01-N
Island:	Oahu
Mailing Address:	730 Sheridan Street
Locale:	Not reported

HAKUYOSHA HAWAII, INC (Continued) **S106817254**

Mailing City,St,Zip: Honolulu, HI 96814
Contact Name: Carl Patton
Contact Title: Manager
Description: 100 hp Steam BoilerThis noncovered source permit, encompasses the following equipment and associated appurtenances:100 hp Steam Boiler, Cleaver-Brooks, model no. CB-200-100-150, serial no. unknown, manufactured date unknown.

58
NW
1/4-1/2
0.373 mi.
1967 ft.

SUPERBLOCK PROPERTIES **HI LUST** **U003221768**
NORTH BLOCK (BLDG N15) / SHERIDAN ST **HI UST** **N/A**
HONOLULU, HI 96814

Relative:
Higher

Actual:
3 ft.

LUST:
Facility ID: 9-102595
Facility Status: Site Cleanup Completed (NFA)
Facility Status Date: 06/28/1993
Release ID: 920140
Project Officer: Stanton Enomoto

UST:
Facility ID: 9-102595
Owner: KEEAUMOKU PARTNERS
Owner Address: 820 MILILANI ST, SUITE 820
Ownder City,St,Zip: Honolulu, 96814 96814

Tank ID: R-NT10
Date Installed: Not reported
Tank Status: Permanently Out of Use
Date Closed: 01/07/1992
Tank Capacity: 500
Substance: Used Oil

O59
NW
1/4-1/2
0.374 mi.
1974 ft.

SUPERBLOCK PROPERTIES **HI LUST** **U003221769**
SOUTH BLOCK (BLDG S1) / SHERIDAN ST **HI UST** **N/A**
HONOLULU, HI 96814

Site 4 of 4 in cluster O

Relative:
Higher

Actual:
3 ft.

LUST:
Facility ID: 9-102596
Facility Status: Site Cleanup Completed (NFA)
Facility Status Date: 11/29/1993
Release ID: 920141
Project Officer: Jose Ruiz

Facility ID: 9-102596
Facility Status: Site Cleanup Completed (NFA)
Facility Status Date: 01/05/2004
Release ID: 030033
Project Officer: Jose Ruiz

UST:
Facility ID: 9-102596

SUPERBLOCK PROPERTIES (Continued) **U003221769**

Owner: KEEAUMOKU PARTNERS
Owner Address: 820 MILILANI ST, SUITE 820
Ownder City,St,Zip: Honolulu, 96814 96814

Tank ID: 2
Date Installed: Not reported
Tank Status: Permanently Out of Use
Date Closed: 04/28/2003
Tank Capacity: 1000
Substance: Not Listed

Tank ID: R-ST1
Date Installed: Not reported
Tank Status: Permanently Out of Use
Date Closed: 10/04/1991
Tank Capacity: 1000
Substance: Gasoline

60
NNW
1/4-1/2
0.393 mi.
2077 ft.

Relative:
Higher

Actual:
9 ft.

WENS LIFE CO., INC
808 SHERIDAN ST
HONOLULU, HI 96814

HI LUST **U001235446**
HI UST **N/A**

LUST:
Facility ID: 9-101330
Facility Status: Site Cleanup Completed (NFA)
Facility Status Date: 06/25/2003
Release ID: 030035
Project Officer: Richard Takaba

UST:
Facility ID: 9-101330
Owner: WENS LIFE CO., INC
Owner Address: 441 WALINA ST. #101
Ownder City,St,Zip: Honolulu, 96814 96814

Tank ID: R-1
Date Installed: 04/22/1979
Tank Status: Permanently Out of Use
Date Closed: 01/13/1998
Tank Capacity: 4000
Substance: Gasoline

Tank ID: R-2
Date Installed: 04/22/1979
Tank Status: Permanently Out of Use
Date Closed: 01/13/1998
Tank Capacity: 2000
Substance: Gasoline

Tank ID: R-3
Date Installed: 04/22/1979
Tank Status: Permanently Out of Use

WENS LIFE CO., INC (Continued) **U001235446**

Date Closed: 01/13/1998
Tank Capacity: 500
Substance: Other

Tank ID: R-4
Date Installed: 04/22/1979
Tank Status: Permanently Out of Use
Date Closed: 01/13/1998
Tank Capacity: 500
Substance: Other

N61
South
1/4-1/2
0.395 mi.
2086 ft.

DISCOVERY BAY **HI LUST** **U001235625**
1778 ALA MOANA BLVD **HI UST** **N/A**
HONOLULU, HI 96815

Site 2 of 2 in cluster N

Relative:
Higher

Actual:
3 ft.

LUST:
Facility ID: 9-101921
Facility Status: Site Cleanup Completed (NFA)
Facility Status Date: 08/31/1995
Release ID: 900018
Project Officer: Not Assigned

UST:
Facility ID: 9-101921
Owner: DISCOVERY BAY
Owner Address: 1778 ALA MOANA BLVD
Ownder City,St,Zip: Honolulu, 96815 96815

Tank ID: R-1
Date Installed: 02/05/1977
Tank Status: Permanently Out of Use
Date Closed: 01/04/1990
Tank Capacity: 2000
Substance: Diesel

M62
West
1/4-1/2
0.396 mi.
2089 ft.

SEARS ALA MOANA **HI SHWS** **S115488724**
1450 ALA MOANA BLVD **N/A**
HONOLULU, HI 96814

Site 2 of 2 in cluster M

Relative:
Higher

Actual:
3 ft.

SHWS:
Organization: Not reported
Supplemental Location: Ala Moana Center
Island: Oahu
Environmental Interest: Sears Ala Moana
HID Number: Not reported
Facility Registry Identifier: Not reported
Lead Agency: HEER
Program: State
Project Manager: Cal Miyahara
Hazard Priority: NFA
Potential Hazards And Controls: No Hazard

SEARS ALA MOANA (Continued) **S115488724**

Organization:	Not reported
Island:	Oahu
Supplemental Location Text:	Ala Moana Center
SDAR Environmental Interest Name:	Sears Ala Moana
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Progran Name:	State
Potential Hazard And Controls:	No Hazard
Priority:	NFA
Assessment:	Assessment Ongoing
Response:	Response Complete
Nature of Contamination:	Not reported
Nature of Residual Contamination:	Not reported
Use Restrictions:	No Hazard Present For Unrestricted Residential Use
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Unrestricted Residential Use
Document Date:	12/30/2013
Document Number:	Not reported
Document Subject:	Final Site Investigation and Response Action Report Sears Car Care Facility, 1450 Ala Moana Boulevar
Project Manager:	Cal Miyahara
Contact Information:	(808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

P63 **TESORO 2GO 61018** **HI LUST** **U003402801**
NNE **1549 S KING ST** **HI UST** **N/A**
1/4-1/2 **HONOLULU, HI 96826** **HI Financial Assurance**
0.407 mi.
2147 ft. **Site 1 of 2 in cluster P**

Relative:
Higher

Actual:
15 ft.

LUST:

Facility ID:	9-100059
Facility Status:	LUST Cleanup Initiated
Facility Status Date:	08/22/2010
Release ID:	100006
Project Officer:	Shunsheng Fu

UST:

Facility ID:	9-100059
Owner:	HIE Retail, LLC
Owner Address:	800 Gessner Road, Suite 875
Ownder City,St,Zip:	Honolulu, 96826 96826
Tank ID:	1 - 87
Date Installed:	03/07/2014
Tank Status:	**Currently In Use**
Date Closed:	Not reported
Tank Capacity:	10000
Substance:	Gasohol
Tank ID:	1 - 87
Date Installed:	03/07/2014
Tank Status:	**Currently In Use**

TESORO 2GO 61018 (Continued) **U003402801**

Date Closed: Not reported
Tank Capacity: 10000
Substance: Gasohol

Tank ID: 2 - 87
Date Installed: 03/07/2014
Tank Status: Currently In Use
Date Closed: Not reported
Tank Capacity: 10000
Substance: Gasohol

Tank ID: 2 - 87
Date Installed: 03/07/2014
Tank Status: Currently In Use
Date Closed: Not reported
Tank Capacity: 10000
Substance: Gasohol

Tank ID: 3-92
Date Installed: 03/07/2014
Tank Status: Currently In Use
Date Closed: Not reported
Tank Capacity: 10000
Substance: Gasohol

Tank ID: 3-92
Date Installed: 03/07/2014
Tank Status: Currently In Use
Date Closed: Not reported
Tank Capacity: 10000
Substance: Gasohol

Tank ID: r-3
Date Installed: 01/25/1987
Tank Status: Permanently out of Use
Date Closed: 01/19/2014
Tank Capacity: 10000
Substance: Gasoline

Tank ID: r-3
Date Installed: 01/25/1987
Tank Status: Permanently out of Use
Date Closed: 01/19/2014
Tank Capacity: 10000
Substance: Gasoline

Tank ID: r-87
Date Installed: 01/25/1987
Tank Status: Permanently out of Use
Date Closed: 01/29/2014

TESORO 2GO 61018 (Continued) **U003402801**

Tank Capacity: 10000
Substance: Gasoline

Tank ID: r-87
Date Installed: 01/25/1987
Tank Status: Permanently out of Use
Date Closed: 01/29/2014
Tank Capacity: 10000
Substance: Gasoline

Tank ID: r-92
Date Installed: 01/25/1987
Tank Status: Permanently out of Use
Date Closed: 01/29/2014
Tank Capacity: 10000
Substance: Gasoline

Tank ID: r-92
Date Installed: 01/25/1987
Tank Status: Permanently out of Use
Date Closed: 01/29/2014
Tank Capacity: 10000
Substance: Gasoline

HI Financial Assurance:
Alt Facility ID: 9-100059
Tank Id: r-3
Tank Status: Permanently out of Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-100059
Tank Id: 3-92
Tank Status: Currently In Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-100059
Tank Id: r-3
Tank Status: Permanently out of Use
FRTYPE: Trust Fund
Expiration Date: Not reported

Alt Facility ID: 9-100059
Tank Id: 2 - 87
Tank Status: Currently In Use
FRTYPE: Trust Fund
Expiration Date: Not reported

Alt Facility ID: 9-100059
Tank Id: r-92
Tank Status: Permanently out of Use
FRTYPE: Trust Fund
Expiration Date: Not reported

TESORO 2GO 61018 (Continued) **U003402801**

Alt Facility ID: 9-100059
Tank Id: r-87
Tank Status: Permanently out of Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-100059
Tank Id: 1 - 87
Tank Status: Currently In Use
FRTYPE: Trust Fund
Expiration Date: Not reported

Alt Facility ID: 9-100059
Tank Id: r-87
Tank Status: Permanently out of Use
FRTYPE: Trust Fund
Expiration Date: Not reported

Alt Facility ID: 9-100059
Tank Id: 1 - 87
Tank Status: Currently In Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-100059
Tank Id: r-92
Tank Status: Permanently out of Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-100059
Tank Id: 3-92
Tank Status: Currently In Use
FRTYPE: Trust Fund
Expiration Date: Not reported

Alt Facility ID: 9-100059
Tank Id: 2 - 87
Tank Status: Currently In Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-100059
Tank Id: r-92
Tank Status: Permanently out of Use
FRTYPE: Self Insured
Expiration Date: 03/31/2010

Alt Facility ID: 9-100059
Tank Id: r-3
Tank Status: Permanently out of Use
FRTYPE: Self Insured
Expiration Date: 03/31/2010

Alt Facility ID: 9-100059
Tank Id: r-87
Tank Status: Permanently out of Use

TESORO 2GO 61018 (Continued) **U003402801**

FRTYPE:	Self Insured
Expiration Date:	03/31/2010
Alt Facility ID:	9-100059
Tank Id:	2 - 87
Tank Status:	Currently In Use
FRTYPE:	Self Insured
Expiration Date:	03/31/2010
Alt Facility ID:	9-100059
Tank Id:	1 - 87
Tank Status:	Currently In Use
FRTYPE:	Self Insured
Expiration Date:	03/31/2010
Alt Facility ID:	9-100059
Tank Id:	3-92
Tank Status:	Currently In Use
FRTYPE:	Self Insured
Expiration Date:	03/31/2010
Alt Facility ID:	9-100059
Tank Id:	3-92
Tank Status:	Currently In Use
FRTYPE:	Guarantee
Expiration Date:	03/31/2012
Alt Facility ID:	9-100059
Tank Id:	r-87
Tank Status:	Permanently out of Use
FRTYPE:	Guarantee
Expiration Date:	03/31/2012
Alt Facility ID:	9-100059
Tank Id:	r-3
Tank Status:	Permanently out of Use
FRTYPE:	Guarantee
Expiration Date:	03/31/2012
Alt Facility ID:	9-100059
Tank Id:	r-92
Tank Status:	Permanently out of Use
FRTYPE:	Guarantee
Expiration Date:	03/31/2012
Alt Facility ID:	9-100059
Tank Id:	1 - 87
Tank Status:	Currently In Use
FRTYPE:	Guarantee
Expiration Date:	03/31/2012
Alt Facility ID:	9-100059
Tank Id:	2 - 87
Tank Status:	Currently In Use
FRTYPE:	Guarantee
Expiration Date:	03/31/2012

TESORO 2GO 61018 (Continued) **U003402801**

Alt Facility ID: 9-100059
Tank Id: 3-92
Tank Status: Currently In Use
FRTYPE: Insurance
Expiration Date: 09/25/2014

Alt Facility ID: 9-100059
Tank Id: r-87
Tank Status: Permanently out of Use
FRTYPE: Insurance
Expiration Date: 09/25/2014

Alt Facility ID: 9-100059
Tank Id: r-3
Tank Status: Permanently out of Use
FRTYPE: Insurance
Expiration Date: 09/25/2014

Alt Facility ID: 9-100059
Tank Id: 2 - 87
Tank Status: Currently In Use
FRTYPE: Insurance
Expiration Date: 09/25/2014

Alt Facility ID: 9-100059
Tank Id: r-92
Tank Status: Permanently out of Use
FRTYPE: Insurance
Expiration Date: 09/25/2014

Alt Facility ID: 9-100059
Tank Id: 1 - 87
Tank Status: Currently In Use
FRTYPE: Insurance
Expiration Date: 09/25/2014

Q64 **GAS PLUS** **HI LUST** **U001235103**
NNE **1524 S KING ST** **HI UST** **N/A**
1/4-1/2 **HONOLULU, HI 96826**
0.420 mi.
2220 ft. **Site 1 of 3 in cluster Q**

Relative:
Higher

Actual:
17 ft.

LUST:
Facility ID: 9-100224
Facility Status: Site Cleanup Completed (NFA)
Facility Status Date: 06/01/2011
Release ID: 960030
Project Officer: To VRP

UST:
Facility ID: 9-100224
Owner: FIRST DISCOUNT AUTO LEASING CORP
Owner Address: 1580 MAKALOA ST., SUITE 880
Ownder City,St,Zip: Honolulu, 96826 96826

Tank ID: R-001
Date Installed: 05/16/1985

GAS PLUS (Continued) **U001235103**

Tank Status:	**Permanently Out of Use**
Date Closed:	07/20/1995
Tank Capacity:	10000
Substance:	Gasoline

Tank ID:	R-002
Date Installed:	05/16/1985
Tank Status:	**Permanently Out of Use**
Date Closed:	07/21/1995
Tank Capacity:	12000
Substance:	Gasoline

Tank ID:	R-003
Date Installed:	05/16/1985
Tank Status:	**Permanently Out of Use**
Date Closed:	07/21/1995
Tank Capacity:	12000
Substance:	Gasoline

Q65 **MID PAC PETROLEUM 253943 (PREV: LIONEL'S UNOCAL)** **HI LUST** **U001235016**
North **1505 S. KING ST.** **HI UST** **N/A**
1/4-1/2 **HONOLULU, HI 96826** **HI Financial Assurance**
0.422 mi.
2228 ft. **Site 2 of 3 in cluster Q**

Relative:
Higher

Actual:
17 ft.

LUST:

Facility ID:	9-100041
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	12/09/1998
Release ID:	960074
Project Officer:	Shunsheng Fu

Facility ID:	9-100041
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	05/20/1996
Release ID:	930032
Project Officer:	Shunsheng Fu

Facility ID:	9-100041
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	10/01/2007
Release ID:	070020
Project Officer:	Shunsheng Fu

UST:

Facility ID:	9-100041
Owner:	Mid Pac Petroleum LLC
Owner Address:	677 Ala Moana Blvd Suite 625
Ownder City,St,Zip:	Honolulu, 96826 96826

Tank ID:	R-3943-1
Date Installed:	08/12/1956
Tank Status:	**Permanently Out of Use**
Date Closed:	07/01/1996
Tank Capacity:	5000

MID PAC PETROLEUM 253943 (PREV: LIONEL'S UNOCAL) (Continued) **U001235016**

Substance: Gasoline

Tank ID: R-3943-2
Date Installed: 08/12/1956
Tank Status: Permanently Out of Use
Date Closed: 07/01/1996
Tank Capacity: 7500
Substance: Gasoline

Tank ID: R-3943-4
Date Installed: 08/12/1956
Tank Status: Permanently Out of Use
Date Closed: 07/01/1996
Tank Capacity: 550
Substance: Used Oil

Tank ID: r-87
Date Installed: 01/01/1990
Tank Status: Permanently out of Use
Date Closed: 03/29/2007
Tank Capacity: 12000
Substance: Gasoline

Tank ID: r-92
Date Installed: 01/01/1990
Tank Status: Permanently out of Use
Date Closed: 03/29/2007
Tank Capacity: 12000
Substance: Gasoline

HI Financial Assurance:
Alt Facility ID: 9-100041
Tank Id: R-3943-4
Tank Status: Permanently Out of Use
FRTYPE: Insurance
Expiration Date: Not reported

Alt Facility ID: 9-100041
Tank Id: r-92
Tank Status: Permanently out of Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-100041
Tank Id: r-92
Tank Status: Permanently out of Use
FRTYPE: Insurance
Expiration Date: Not reported

Alt Facility ID: 9-100041
Tank Id: r-87
Tank Status: Permanently out of Use
FRTYPE: Other

MID PAC PETROLEUM 253943 (PREV: LIONEL'S UNOCAL) (Continued) **U001235016**

Expiration Date: Not reported

Alt Facility ID: 9-100041
Tank Id: R-3943-4
Tank Status: Permanently Out of Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-100041
Tank Id: R-3943-2
Tank Status: Permanently Out of Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-100041
Tank Id: R-3943-2
Tank Status: Permanently Out of Use
FRTYPE: Insurance
Expiration Date: Not reported

Alt Facility ID: 9-100041
Tank Id: R-3943-1
Tank Status: Permanently Out of Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-100041
Tank Id: R-3943-1
Tank Status: Permanently Out of Use
FRTYPE: Insurance
Expiration Date: Not reported

Alt Facility ID: 9-100041
Tank Id: r-87
Tank Status: Permanently out of Use
FRTYPE: Insurance
Expiration Date: Not reported

P66 **PUNAHOU REPAIR SHOP** **HI LUST** **1000146579**
NNE **1558 S KING ST** **HI UST** **N/A**
1/4-1/2 **HONOLULU, HI 96826**
0.423 mi.
2231 ft. **Site 2 of 2 in cluster P**

Relative:
Higher

Actual:
17 ft.

LUST:
Facility ID: 9-101387
Facility Status: Site Cleanup Completed (NFA)
Facility Status Date: 09/26/1997
Release ID: 920184
Project Officer: David Hodges

UST:
Facility ID: 9-101387
Owner: PUNAHOU REPAIR SHOP
Owner Address: 1558 S KING ST
Ownder City,St,Zip: Honolulu, 96826 96826

PUNAHOU REPAIR SHOP (Continued) **1000146579**

Tank ID: R-1
Date Installed: 03/15/1951
Tank Status: Permanently Out of Use
Date Closed: 06/11/1992
Tank Capacity: 2000
Substance: Used Oil

Tank ID: R-2
Date Installed: Not reported
Tank Status: Permanently Out of Use
Date Closed: 06/11/1992
Tank Capacity: 3000
Substance: Gasoline

Tank ID: R-3
Date Installed: Not reported
Tank Status: Permanently Out of Use
Date Closed: 06/11/1992
Tank Capacity: 150
Substance: Used Oil

67
WNW
1/4-1/2
0.431 mi.
2276 ft.

ALA MOANA UNOCAL
1322 KAPIOLANI BLVD
HONOLULU, HI 96814

HI LUST **U001235012**
HI UST **N/A**

Relative:
Higher

Actual:
3 ft.

LUST:
Facility ID: 9-100037
Facility Status: Site Cleanup Completed (NFA)
Facility Status Date: 10/30/1998
Release ID: 900119
Project Officer: Eric Sadoyama

UST:
Facility ID: 9-100037
Owner: Tosco Marketing Company
Owner Address: P. O. Box 25376
Ownder City,St,Zip: Honolulu, 96814 96814

Tank ID: R-2877-1
Date Installed: 03/27/1967
Tank Status: Permanently Out of Use
Date Closed: 04/01/1990
Tank Capacity: 8000
Substance: Gasoline

Tank ID: R-2877-2
Date Installed: 03/27/1967
Tank Status: Permanently Out of Use
Date Closed: 04/01/1992
Tank Capacity: 8000
Substance: Gasoline

ALA MOANA UNOCAL (Continued) **U001235012**

Tank ID:	R-2877-4
Date Installed:	03/27/1967
Tank Status:	**Permanently Out of Use**
Date Closed:	04/01/1990
Tank Capacity:	285
Substance:	Used Oil

Tank ID:	R-2877-5
Date Installed:	05/31/1990
Tank Status:	**Permanently Out of Use**
Date Closed:	10/06/1992
Tank Capacity:	12000
Substance:	Gasoline

Tank ID:	R-2877-6
Date Installed:	05/31/1990
Tank Status:	**Permanently Out of Use**
Date Closed:	10/06/1992
Tank Capacity:	12000
Substance:	Gasoline

Tank ID:	R-2877-7
Date Installed:	05/31/1990
Tank Status:	**Permanently Out of Use**
Date Closed:	10/06/1992
Tank Capacity:	520
Substance:	Used Oil

Q68 **ALOHA/KING SELF STORAGE** **HI SHWS** **S106816203**
NNE **1414 KALAKAUA AVE** **HI ENG CONTROLS** **N/A**
1/4-1/2 **HONOLULU, HI** **HI INST CONTROL**
0.470 mi. **HI VCP**
2484 ft. **Site 3 of 3 in cluster Q**

Relative:
Higher

Actual:
22 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	1524 S King St corner (property on both addresses)
Island:	Oahu
Environmental Interest:	1414 Kalakaua Avenue-Aloha/King LLC
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Program:	Voluntary Response Program
Project Manager:	Cal Miyahara
Hazard Priority:	NFA
Potential Hazards And Controls:	Hazard Managed With Controls
Organization:	Not reported
Island:	Oahu
Supplemental Location Text:	1524 S King St corner (property on both addresses)
SDAR Environmental Interest Name:	1414 Kalakaua Avenue-Aloha/King LLC
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Progran Name:	Voluntary Response Program
Potential Hazard And Controls:	Hazard Managed With Controls

ALOHA/KING SELF STORAGE (Continued) **S106816203**

Priority:	NFA
Assessment:	Response Necessary
Response:	Response Complete
Nature of Contamination:	Found: TPH-GRO, Benzene, Ethylbenzene, and Xylene remain in the soil at concentrations above residential EALs. Poses Direct Exposure, Gross Contamination, and Soil Vapor hazards.
Nature of Residual Contamination:	Not reported
Use Restrictions:	Controls Required to Manage Contamination
Engineering Control:	Engineering Control Required
Description of Restrictions:	Prohibit Any Activity That May Disturb the Integrity of the Capping System
Institutional Control:	Government - Hawaii Dept. of Health Letter Issued
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	Letter of Completion - Restricted Use
Document Date:	07/27/2011
Document Number:	2011-438-CMM
Document Subject:	Memo to ASO - Refund for VRP site (Aloha/King)
Project Manager:	Cal Miyahara
Contact Information:	(808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

ENG CONTROLS:

Supplemental Location Text:	1524 S King St corner (property on both addresses)
Zip Suffix:	Not reported
Island:	Oahu
Potential Hazards And Controls:	Hazard Managed With Controls
Engineering Control:	Engineering Control Required

INST CONTROL:

Potential hazards and controls:	Hazard Managed With Controls
Supplemental Location:	1524 S King St corner (property on both addresses)
Zip Suffix:	Not reported
Island:	Oahu
Institutional Control:	Government - Hawaii Dept. of Health Letter Issued

VCP:

Program:	Voluntary Response Program
Zip Suffix:	Not reported
Supplemental Location:	1524 S King St corner (property on both addresses)
Island:	Oahu

69
SE
1/4-1/2
0.473 mi.
2500 ft.

Relative:
Higher

Actual:
3 ft.

THE PAVILLION **HI SHWS** **S106820617**
1925 KALAKAUA AVE **HI SPILLS** **N/A**
HONOLULU, HI 96815

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	The Pavillion
HID Number:	Not reported
Facility Registry Identifier:	110013773693
Lead Agency:	SHWB
Program:	State
Project Manager:	Steve Mow

THE PAVILLION (Continued) **S106820617**

Hazard Priority:	NFA
Potential Hazards And Controls:	Hazard Undetermined
Organization:	Not reported
Island:	Oahu
Supplemental Location Text:	Not reported
SDAR Environmental Interest Name:	The Pavillion
HID Number:	Not reported
Facility Registry Identifier:	110013773693
Lead Agency:	SHWB
Progran Name:	State
Potential Hazard And Controls:	Hazard Undetermined
Priority:	NFA
Assessment:	Response Not Necessary
Response:	Not reported
Nature of Contamination:	Not reported
Nature of Residual Contamination:	Not reported
Use Restrictions:	Undetermined
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action - Type Undetermined
Document Date:	03/02/1998
Document Number:	Not reported
Document Subject:	Results of Soil Sampling and Analysis for AOAO the Pavillion
Project Manager:	Steve Mow
Contact Information:	(808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

HI SPILLS:

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	19980120-1455
HID Number:	Not reported
Facility Registry Id:	110013773693
Lead and Program:	HEER EP&R
ER:	No
Units:	The Pavilion at Waikiki Contaminated Soil
Substances:	Gasoline
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Terry Corpus
Assignment End Date:	Not reported
Result:	Referred
File Under:	The Pavilion

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70 North 1/4-1/2 0.484 mi. 2553 ft. | **YAJIMA OIL OF USA INC** | **HI LUST** | **U001235254**
1375 S KING ST | **HI UST** | **N/A**
HONOLULU, HI 96814 | **HI Financial Assurance**

Relative: Higher

Actual: 15 ft.

LUST:

Facility ID:	9-100832
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	04/25/2003

YAJIMA OIL OF USA INC (Continued) **U001235254**

Release ID: 030031
Project Officer: Shunsheng Fu

Facility ID: 9-100832
Facility Status: Site Cleanup Completed (NFA)
Facility Status Date: 06/30/2005
Release ID: 930001
Project Officer: Shunsheng Fu

UST:
Facility ID: 9-100832
Owner: YAJIMA OIL OF USA, INC.
Owner Address: 1375 SOUTH KING ST
Ownder City,St,Zip: Honolulu, 96814 96814

Tank ID: 87
Date Installed: 10/01/1985
Tank Status: Currently in Use
Date Closed: Not reported
Tank Capacity: 8000
Substance: Gasoline

Tank ID: 87
Date Installed: 10/01/1985
Tank Status: Currently in Use
Date Closed: Not reported
Tank Capacity: 8000
Substance: Gasoline

Tank ID: 92
Date Installed: 10/01/1985
Tank Status: Currently in Use
Date Closed: Not reported
Tank Capacity: 8000
Substance: Gasoline

Tank ID: R-1
Date Installed: 01/01/1953
Tank Status: Permanently Out of Use
Date Closed: 04/29/1993
Tank Capacity: 350
Substance: Used Oil

HI Financial Assurance:
Alt Facility ID: 9-100832
Tank Id: 87
Tank Status: Currently in Use
FRTYPE: Insurance
Expiration Date: 04/01/2013

Alt Facility ID: 9-100832
Tank Id: R-1
Tank Status: Permanently Out of Use

YAJIMA OIL OF USA INC (Continued) **U001235254**

FRTYPE: Insurance
Expiration Date: 04/01/2013

Alt Facility ID: 9-100832
Tank Id: 92
Tank Status: Currently in Use
FRTYPE: Insurance
Expiration Date: 04/01/2013

R71
WNW
1/4-1/2
0.486 mi.
2568 ft.

ALOHA ALA MOANA **HI LUST** **U001235401**
451 PIIKOI ST **HI UST** **N/A**
HONOLULU, HI 96814

Site 1 of 2 in cluster R

Relative:
Higher

Actual:
3 ft.

LUST:
Facility ID: 9-101180
Facility Status: Site Cleanup Completed (NFA)
Facility Status Date: 03/11/1996
Release ID: 890004
Project Officer: Roger Brewer

UST:
Facility ID: 9-101180
Owner: ALOHA PETROLEUM, LTD.
Owner Address: 1132 BISHOP STREET, SUITE 1700
Ownder City,St,Zip: Honolulu, 96814 96814

Tank ID: R-01
Date Installed: 04/04/1968
Tank Status: Permanently Out of Use
Date Closed: Not reported
Tank Capacity: 3000
Substance: Gasoline

Tank ID: R-02
Date Installed: 04/04/1968
Tank Status: Permanently Out of Use
Date Closed: Not reported
Tank Capacity: 5000
Substance: Gasoline

Tank ID: R-03
Date Installed: 04/04/1968
Tank Status: Permanently Out of Use
Date Closed: Not reported
Tank Capacity: 4000
Substance: Gasoline

Tank ID: R-04
Date Installed: 04/04/1968
Tank Status: Permanently Out of Use
Date Closed: 08/30/1988
Tank Capacity: 550

ALOHA ALA MOANA (Continued) **U001235401**

Substance: Used Oil

Tank ID: R-05
Date Installed: 04/04/1968
Tank Status: Permanently Out of Use
Date Closed: 08/30/1988
Tank Capacity: 285
Substance: Diesel

R72
WNW
1/4-1/2
0.495 mi.
2611 ft.

NAURU PHOSPHATE ROYALTIES TRUST
404 PIIKOI ST/1330 ALA MOANA BLVD
HONOLULU, HI 96813

HI LUST **U001235758**
N/A

Site 2 of 2 in cluster R

Relative:
Higher

Actual:
3 ft.

LUST:
Facility ID: 9-102168
Facility Status: Site Cleanup Completed (NFA)
Facility Status Date: 09/07/1999
Release ID: 900009
Project Officer: Eric Sadoyama

73
WNW
1/4-1/2
0.496 mi.
2619 ft.

CENPAC PROPERTIES - OFFICE BUILDING
615 PIIKOI ST
HONOLULU, HI 96814

HI SHWS **U003402842**
HI LUST **N/A**
HI UST
HI SPILLS
HI Financial Assurance

Relative:
Higher

Actual:
3 ft.

SHWS:
Organization: Not reported
Supplemental Location: Iwilei, Honolulu Harbor
Island: Oahu
Environmental Interest: Honolulu Harbor Iwilei District Operating Parties
HID Number: Not reported
Facility Registry Identifier: 110013785868
Lead Agency: HEER
Program: State
Project Manager: Mike Cripps
Hazard Priority: Medium
Potential Hazards And Controls: Hazard Undetermined
Organization: Not reported
Island: Oahu
Supplemental Location Text: Iwilei, Honolulu Harbor
SDAR Environmental Interest Name: Honolulu Harbor Iwilei District Operating Parties
HID Number: Not reported
Facility Registry Identifier: 110013785868
Lead Agency: HEER
Progran Name: State
Potential Hazard And Controls: Hazard Undetermined
Priority: Medium
Assessment: Assessment Ongoing
Response: Not reported
Nature of Contamination: Not reported
Nature of Residual Contamination: Not reported
Use Restrictions: Undetermined

CENPAC PROPERTIES - OFFICE BUILDING (Continued) **U003402842**

Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Honolulu Harbor Iwilei Unit
Site Closure Type:	Not reported
Document Date:	Not reported
Document Number:	Not reported
Document Subject:	Not reported
Project Manager:	Mike Cripps
Contact Information:	(808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

LUST:

Facility ID:	9-103438
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	07/07/1999
Release ID:	990205
Project Officer:	David Hodges

UST:

Facility ID:	9-103438
Owner:	CENPAC PROPERTIES
Owner Address:	1150 S KING ST SUITE 1101
Ownder City,St,Zip:	Honolulu, 96814 96814
Tank ID:	R-M-1
Date Installed:	Not reported
Tank Status:	**Permanently Out of Use**
Date Closed:	10/20/1998
Tank Capacity:	150
Substance:	Diesel

HI SPILLS:

Island:	Oahu
Supplemental Loc. Text:	Honolulu Harbor
Case Number:	20101216-1230
HID Number:	Not reported
Facility Registry Id:	110013785868
Lead and Program:	HEER EP&R
ER:	None
Units:	Potential to release OU1C
Substances:	Petroleum
Less Or Greater Than:	Not reported
Numerical Quantity:	0
Units:	Not reported
Activity Type:	Response
Activity Lead:	Liz Galvez
Assignment End Date:	Not reported
Result:	Pending
File Under:	Iwilei District Participating Parties, LLC

HI Financial Assurance:

Alt Facility ID:	9-103438
Tank Id:	R-M-1
Tank Status:	Permanently Out of Use
FRTYPE:	Insurance

CENPAC PROPERTIES - OFFICE BUILDING (Continued) **U003402842**

Expiration Date: Not reported

Alt Facility ID: 9-103438
Tank Id: R-M-1
Tank Status: Permanently Out of Use
FRTYPE: Surety Bond
Expiration Date: Not reported

74
ENE
1/2-1
0.520 mi.
2743 ft.

CONTINENTAL AUTO SERVICES
1918 ALGAROBA ST
HONOLULU, HI 96826

HI SHWS **S104534121**
HI SPILLS **N/A**

Relative:
Higher

Actual:
7 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	Continental Auto Services
HID Number:	Not reported
Facility Registry Identifier:	110005723850
Lead Agency:	Not reported
Program:	State
Project Manager:	Charley Langer
Hazard Priority:	NFA
Potential Hazards And Controls:	Hazard Undetermined
Organization:	Not reported
Island:	Oahu
Supplemental Location Text:	Not reported
SDAR Environmental Interest Name:	Continental Auto Services
HID Number:	Not reported
Facility Registry Identifier:	110005723850
Lead Agency:	Not reported
Progran Name:	State
Potential Hazard And Controls:	Hazard Undetermined
Priority:	NFA
Assessment:	Assessment Ongoing
Response:	Not reported
Nature of Contamination:	Not reported
Nature of Residual Contamination:	Not reported
Use Restrictions:	Undetermined
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action - Type Undetermined
Document Date:	10/08/1999
Document Number:	Not reported
Document Subject:	Not reported
Project Manager:	Charley Langer
Contact Information:	(808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

HI SPILLS:

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	19990119-1030
HID Number:	Not reported

CONTINENTAL AUTO SERVICES (Continued) **S104534121**

Facility Registry Id:	110005723850
Lead and Program:	HEER EP&R
ER:	No
Units:	Continental Auto Service
Substances:	Hydraulic Fluid
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Liz Galvez
Assignment End Date:	Not reported
Result:	Refer to ISST
File Under:	Continental Auto Services

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75 North 1/2-1 0.520 mi. 2743 ft.

MEADOW GOLD DAIRIES (ICE CREAM PLANT) **HI SHWS** **S104657475**
1418 YOUNG ST **HI SPILLS** **N/A**
HONOLULU, HI 96814

Relative: Higher

Actual: 20 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	Meadow Gold Ice Cream Plant Fuel Oil Spill
HID Number:	Not reported
Facility Registry Identifier:	110013767726
Lead Agency:	HEER
Program:	State
Project Manager:	Cal Miyahara
Hazard Priority:	NFA
Potential Hazards And Controls:	No Hazard
Organization:	Not reported
Island:	Oahu
Supplemental Location Text:	Not reported
SDAR Environmental Interest Name:	Meadow Gold Ice Cream Plant Fuel Oil Spill
HID Number:	Not reported
Facility Registry Identifier:	110013767726
Lead Agency:	HEER
Progran Name:	State
Potential Hazard And Controls:	No Hazard
Priority:	NFA
Assessment:	Response Necessary
Response:	Response Complete
Nature of Contamination:	Found: Low levels of TPH diesel and oil in soil and groundwater - no EAL exceedances.
Nature of Residual Contamination:	Residual TPH at GW smear zone located approximately 20 feet bgs.
Use Restrictions:	No Hazard Present for Unrestricted Residential Use
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Unrestricted Residential Use
Document Date:	09/30/2008
Document Number:	2008-664-CMM
Document Subject:	Removal Action Report Former Meadow Gold Dairy 1418 Young St, Honolulu HI
Project Manager:	Cal Miyahara

MEADOW GOLD DAIRIES (ICE CREAM PLANT) (Continued) **S104657475**

Contact Information: (808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

HI SPILLS:

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	19900904
HID Number:	Not reported
Facility Registry Id:	110013767726
Lead and Program:	HEER EP&R
ER:	Not reported
Units:	MEADOW GOLD DAIRY, YOUNG ST. 1418
Substances:	Ammonia
Less Or Greater Than:	Not reported
Numerical Quantity:	1200
Units:	Pounds
Activity Type:	Response
Activity Lead:	Not reported
Assignment End Date:	Not reported
Result:	SOSC NFA
File Under:	Meadow Gold Dairies, Division of Southern Foods Group, LP

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	19900904-1
HID Number:	Not reported
Facility Registry Id:	110013767726
Lead and Program:	HEER EP&R
ER:	Not reported
Units:	YOUNG ST. 1418
Substances:	Ammonia
Less Or Greater Than:	Not reported
Numerical Quantity:	200
Units:	Pounds
Activity Type:	Response
Activity Lead:	Not reported
Assignment End Date:	Not reported
Result:	SOSC NFA
File Under:	Meadow Gold Dairies, Division of Southern Foods Group, LP

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	19901224
HID Number:	Not reported
Facility Registry Id:	110013767726
Lead and Program:	HEER EP&R
ER:	Not reported
Units:	Meadow Gold Ammonia Leak from Chiller
Substances:	Ammonia
Less Or Greater Than:	Not reported
Numerical Quantity:	250
Units:	Pounds
Activity Type:	Response
Activity Lead:	Not reported
Assignment End Date:	Not reported
Result:	SOSC NFA
File Under:	Meadow Gold Dairies, Division of Southern Foods Group, LP

MEADOW GOLD DAIRIES (ICE CREAM PLANT) (Continued) **S104657475**

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	20071212-1530
HID Number:	Not reported
Facility Registry Id:	110013767726
Lead and Program:	HEER EP&R
ER:	No
Units:	Meadow Gold oil release from a 1000-gallon tank
Substances:	Oil
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Unknown
Activity Type:	Response
Activity Lead:	Liz Galvez
Assignment End Date:	2007-12-13 00:00:00
Result:	Refer to SDAR
File Under:	Meadow Gold Dairies, Division of Southern Foods Group, LP

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	19960603-1628
HID Number:	Not reported
Facility Registry Id:	110013767726
Lead and Program:	HEER EP&R
ER:	No
Units:	Meadow Gold - Hawaii
Substances:	Ammonia
Less Or Greater Than:	Not reported
Numerical Quantity:	600
Units:	Pounds
Activity Type:	Response
Activity Lead:	Terry Corpus
Assignment End Date:	Not reported
Result:	SOSC NFA
File Under:	Meadow Gold Dairies, Division of Southern Foods Group, LP

Click this hyperlink while viewing on your computer to access
4 additional HI SPILLS: record(s) in the EDR Site Report.

76
NNE
1/2-1
0.531 mi.
2806 ft.

7-11 KALAKAUA
1323 KALAKAUA AVE
HONOLULU, HI 96826

HI SHWS **U001235396**
HI UST **N/A**
HI Financial Assurance

Relative:
Higher

Actual:
29 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Kalakaua Ave & Young St
Island:	Oahu
Environmental Interest:	Aloha 7-Eleven Kalakaua
HID Number:	Not reported
Facility Registry Identifier:	110013782184
Lead Agency:	HEER
Program:	State
Project Manager:	Mark Sutterfield
Hazard Priority:	NFA
Potential Hazards And Controls:	No Hazard
Organization:	Not reported

7-11 KALAKAUA (Continued) **U001235396**

Island:	Oahu
Supplemental Location Text:	Kalakaua Ave & Young St
SDAR Environmental Interest Name:	Aloha 7-Eleven Kalakaua
HID Number:	Not reported
Facility Registry Identifier:	110013782184
Lead Agency:	HEER
Progran Name:	State
Potential Hazard And Controls:	No Hazard
Priority:	NFA
Assessment:	Assessment Ongoing
Response:	Response Complete
Nature of Contamination:	Not reported
Nature of Residual Contamination:	Not reported
Use Restrictions:	No Hazard Present For Unrestricted Residential Use
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Unrestricted Residential Use
Document Date:	05/20/2004
Document Number:	Not reported
Document Subject:	Not reported
Project Manager:	Mark Sutterfield
Contact Information:	(808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

UST:

Facility ID:	9-101172
Owner:	Mid Pac Petroleum LLC
Owner Address:	1100 Alakea Street, 8th floor
Ownder City,St,Zip:	Honolulu, 96826 96826

Tank ID:	1a
Date Installed:	06/19/2009
Tank Status:	**Currently in Use**
Date Closed:	Not reported
Tank Capacity:	7000
Substance:	Gasoline

Tank ID:	1b
Date Installed:	06/19/2009
Tank Status:	**Currently In Use**
Date Closed:	Not reported
Tank Capacity:	5000
Substance:	Gasoline

Tank ID:	r-87
Date Installed:	04/04/1985
Tank Status:	**Permanently out of Use**
Date Closed:	06/12/2009
Tank Capacity:	8000
Substance:	Gasoline

Tank ID:	r-89
Date Installed:	04/04/1985

7-11 KALAKAUA (Continued) **U001235396**

Tank Status: **Permanently out of Use**
Date Closed: 06/12/2009
Tank Capacity: 8000
Substance: Gasoline

Tank ID: r-92
Date Installed: 04/04/1985
Tank Status: **Permanently out of Use**
Date Closed: 06/12/2009
Tank Capacity: 8000
Substance: Gasoline

HI Financial Assurance:
Alt Facility ID: 9-101172
Tank Id: 1a
Tank Status: Currently in Use
FRTYPE: Insurance
Expiration Date: 03/31/2013

Alt Facility ID: 9-101172
Tank Id: 1b
Tank Status: Currently In Use
FRTYPE: Insurance
Expiration Date: 03/31/2013

Alt Facility ID: 9-101172
Tank Id: r-87
Tank Status: Permanently out of Use
FRTYPE: Insurance
Expiration Date: 03/31/2013

Alt Facility ID: 9-101172
Tank Id: r-89
Tank Status: Permanently out of Use
FRTYPE: Insurance
Expiration Date: 03/31/2013

Alt Facility ID: 9-101172
Tank Id: r-92
Tank Status: Permanently out of Use
FRTYPE: Insurance
Expiration Date: 03/31/2013

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77 **DURANT PROPERTIES** **HI SHWS** **S109096045**
WNW **1235 KONA ST** **HI INST CONTROL** **N/A**
1/2-1 **HONOLULU, HI**
0.564 mi.
2976 ft.

Relative:
Higher

Actual:
3 ft.

SHWS:
Organization: Not reported
Supplemental Location: 1226 Waimanu St
Island: Oahu
Environmental Interest: Durant Properties
HID Number: Not reported
Facility Registry Identifier: Not reported

DURANT PROPERTIES (Continued) **S109096045**

Lead Agency:	HEER
Program:	State
Project Manager:	Cal Miyahara
Hazard Priority:	NFA
Potential Hazards And Controls:	Hazard Managed With Controls
Organization:	Not reported
Island:	Oahu
Supplemental Location Text:	1226 Waimanu St
SDAR Environmental Interest Name:	Durant Properties
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Progran Name:	State
Potential Hazard And Controls:	Hazard Managed With Controls
Priority:	NFA
Assessment:	Response Necessary
Response:	Response Complete
Nature of Contamination:	Found: Nickel above Tier 1 EAL in GW and Cadmium above Tier 1 EAL in soil.
Nature of Residual Contamination:	Not reported
Use Restrictions:	Controls Required to Manage Contamination
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Government - Hawaii Dept. of Health Letter Issued
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Restricted Use
Document Date:	06/17/2011
Document Number:	2011-323-CMM
Document Subject:	Environmental Hazard Evaluation & Environmental Hazard Management Plan, 1235 Kona St, February 2011
Project Manager:	Cal Miyahara
Contact Information:	(808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

INST CONTROL:

Potential hazards and controls:	Hazard Managed With Controls
Supplemental Location:	1226 Waimanu St
Zip Suffix:	Not reported
Island:	Oahu
Institutional Control:	Government - Hawaii Dept. of Health Letter Issued

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78
WNW
1/2-1
0.574 mi.
3031 ft.

Relative:
Higher

Actual:
3 ft.

EVERSHINE X **HI SHWS** **S105262688**
1230 KAPIOLANI BLVD **HI VCP** **N/A**
HONOLULU, HI 96814

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	Evershine X
HID Number:	Not reported
Facility Registry Identifier:	110013780934
Lead Agency:	HEER
Program:	Voluntary Response Program
Project Manager:	Mark Sutterfield
Hazard Priority:	NFA

EVERSHINE X (Continued) **S105262688**

Potential Hazards And Controls:	No Hazard
Organization:	Not reported
Island:	Oahu
Supplemental Location Text:	Not reported
SDAR Environmental Interest Name:	Evershine X
HID Number:	Not reported
Facility Registry Identifier:	110013780934
Lead Agency:	HEER
Progran Name:	Voluntary Response Program
Potential Hazard And Controls:	No Hazard
Priority:	NFA
Assessment:	Response Necessary
Response:	Response Complete
Nature of Contamination:	Found: Petroleum products
Nature of Residual Contamination:	Petroleum contaminated soil
Use Restrictions:	No Hazard Present For Unrestricted Residential Use
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	Letter of Completion - Unrestricted Residential Use
Document Date:	08/18/2004
Document Number:	2004-338-MS
Document Subject:	LOC for Evershine X no conditions
Project Manager:	Mark Sutterfield
Contact Information:	(808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

VCP:

Program:	Voluntary Response Program
Zip Suffix:	Not reported
Supplemental Location:	Not reported
Island:	Oahu

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79 **CHEVRON 2002 KALAKAUA** **HI SHWS** **U001235436**
SE **2002 KALAKAUA AVE** **HI LUST** **N/A**
1/2-1 **HONOLULU, HI 96815**
0.578 mi.
3054 ft.

Relative:
Higher

Actual:
3 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	Chevron 2002 Kalakaua
HID Number:	Not reported
Facility Registry Identifier:	110013779045
Lead Agency:	Not reported
Program:	State
Project Manager:	Amy Playdon
Hazard Priority:	NFA
Potential Hazards And Controls:	No Hazard
Organization:	Not reported
Island:	Oahu
Supplemental Location Text:	Not reported
SDAR Environmental Interest Name:	Chevron 2002 Kalakaua
HID Number:	Not reported
Facility Registry Identifier:	110013779045

CHEVRON 2002 KALAKAUA (Continued) **U001235436**

Lead Agency:	Not reported
Progran Name:	State
Potential Hazard And Controls:	No Hazard
Priority:	NFA
Assessment:	Response Not Necessary
Response:	Not reported
Nature of Contamination:	Found: TPH as diesel and gasoline, BTEX, PAHs, HVOCs, PCBs, metals
Nature of Residual Contamination:	Most TPH levels below HDOH EALs
Use Restrictions:	No Hazard Present For Unrestricted Residential Use
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	Historic NFA - Incomplete Documentation
Document Date:	10/01/1997
Document Number:	Not reported
Document Subject:	Not reported
Project Manager:	Amy Playdon
Contact Information:	(808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

LUST:

Facility ID:	9-101266
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	06/10/1997
Release ID:	920073
Project Officer:	Steven Okoji

80
NNW
1/2-1
0.639 mi.
3374 ft.

Relative:
Higher

Actual:
17 ft.

GRACE OTSUKA APARTMENT COMPLEX **HI SHWS** **S110061466**
1233 YOUNG ST **HI ENG CONTROLS** **N/A**
HONOLULU, HI 96814 **HI INST CONTROL**

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	Grace Otsuka Apartment Complex
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Program:	State
Project Manager:	Kelton Otsuka
Hazard Priority:	NFA
Potential Hazards And Controls:	Hazard Managed With Controls
Organization:	Not reported
Island:	Oahu
Supplemental Location Text:	Not reported
SDAR Environmental Interest Name:	Grace Otsuka Apartment Complex
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Progran Name:	State
Potential Hazard And Controls:	Hazard Managed With Controls
Priority:	NFA
Assessment:	Response Necessary
Response:	Response Complete

GRACE OTSUKA APARTMENT COMPLEX (Continued) **S110061466**

Nature of Contamination:	Not reported
Nature of Residual Contamination:	Soil contaminated with diesel.
Use Restrictions:	Controls Required to Manage Contamination
Engineering Control:	Engineering Control Required
Description of Restrictions:	Not reported
Institutional Control:	Government - Hawaii Dept. of Health Letter Issued
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Restricted Use
Document Date:	07/21/2008
Document Number:	2008-482-KO
Document Subject:	Underground Storage Tank Closure and Release Response Report, April 2008, Grace Otsuka Apartment Com
Project Manager:	Kelton Otsuka
Contact Information:	(808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

ENG CONTROLS:

Supplemental Location Text:	Not reported
Zip Suffix:	Not reported
Island:	Oahu
Potential Hazards And Controls:	Hazard Managed With Controls
Engineering Control:	Engineering Control Required

INST CONTROL:

Potential hazards and controls:	Hazard Managed With Controls
Supplemental Location:	Not reported
Zip Suffix:	Not reported
Island:	Oahu
Institutional Control:	Government - Hawaii Dept. of Health Letter Issued

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81 **WALLYS GARDEN CENTER** **HI SHWS** **S111678012**
NE **1935 S BERETANIA ST** **HI SPILLS** **N/A**
1/2-1 **HONOLULU, HI**
0.649 mi.
3425 ft.

Relative:
Higher

Actual:
20 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	Wallys Garden Center
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Program:	State
Project Manager:	Cal Miyahara
Hazard Priority:	Medium
Potential Hazards And Controls:	Hazard Present
Organization:	Not reported
Island:	Oahu
Supplemental Location Text:	Not reported
SDAR Environmental Interest Name:	Wallys Garden Center
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Progran Name:	State
Potential Hazard And Controls:	Hazard Present
Priority:	Medium

WALLYS GARDEN CENTER (Continued) **S111678012**

Assessment:	Assessment Ongoing
Response:	Not reported
Nature of Contamination:	Found: TPH diesel (326 mg/kg) and oil (2390 mg/kg) in the parking lot at 4.5 ft bgs.
Nature of Residual Contamination:	Not reported
Use Restrictions:	Controls Required to Manage Contamination
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	Not reported
Document Date:	Not reported
Document Number:	Not reported
Document Subject:	Not reported
Project Manager:	Cal Miyahara
Contact Information:	(808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

HI SPILLS:

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	20100518-1410
HID Number:	Not reported
Facility Registry Id:	Not reported
Lead and Program:	HEER EP&R
ER:	None
Units:	1935 South Beretania Street
Substances:	Oil
Less Or Greater Than:	Not reported
Numerical Quantity:	0
Units:	Unknown
Activity Type:	Response
Activity Lead:	Liz Galvez
Assignment End Date:	2010-06-21 00:00:00
Result:	Refer to SDAR
File Under:	Asanoma Trust

82
NNW
1/2-1
0.649 mi.
3426 ft.

1012 PIIKOI STREET, ANIN-PIIKOI BUILDING **HI SHWS** **S106815117**
1012 PIIKOI ST **HI SPILLS** **N/A**
HONOLULU, HI 96814

Relative:
Higher

Actual:
13 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Anin-Piikoi Building
Island:	Oahu
Environmental Interest:	Anin-Piikoi Building Site
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	Not reported
Program:	State
Project Manager:	Richard Palmer
Hazard Priority:	NFA
Potential Hazards And Controls:	No Hazard
Organization:	Not reported
Island:	Oahu
Supplemental Location Text:	Anin-Piikoi Building

1012 PIIKOI STREET, ANIN-PIIKOI BUILDING (Continued) **S106815117**

SDAR Environmental Interest Name:	Anin-Piikoi Building Site
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	Not reported
Progran Name:	State
Potential Hazard And Controls:	No Hazard
Priority:	NFA
Assessment:	Response Necessary
Response:	Response Complete
Nature of Contamination:	Not reported
Nature of Residual Contamination:	Not reported
Use Restrictions:	No Hazard Present for Unrestricted Residential Use
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Unrestricted Residential Use
Document Date:	03/16/2004
Document Number:	2004-103-MS
Document Subject:	NFA Anin-Piikoi
Project Manager:	Richard Palmer
Contact Information:	(808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

HI SPILLS:

Island:	Oahu
Supplemental Loc. Text:	Anin-Piikoi Building
Case Number:	20020523-1051
HID Number:	Not reported
Facility Registry Id:	Not reported
Lead and Program:	HEER EP&R
ER:	Not reported
Units:	Anin-Piikoi Building Chemical Spill
Substances:	Chlordane
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Terry Corpus
Assignment End Date:	2003-10-07 00:00:00
Result:	Refer to ISST
File Under:	SCI Noel

Island:	Oahu
Supplemental Loc. Text:	Anin-Piikoi Building
Case Number:	20020523-1051
HID Number:	Not reported
Facility Registry Id:	Not reported
Lead and Program:	HEER EP&R
ER:	Not reported
Units:	Anin-Piikoi Building Chemical Spill
Substances:	dieldrin
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Terry Corpus
Assignment End Date:	2003-10-07 00:00:00

1012 PIIKOI STREET, ANIN-PIIKOI BUILDING (Continued) **S106815117**

Result:	Refer to ISST
File Under:	SCI Noel
Island:	Oahu
Supplemental Loc. Text:	Anin-Piikoi Building
Case Number:	20020523-1051
HID Number:	Not reported
Facility Registry Id:	Not reported
Lead and Program:	HEER EP&R
ER:	Not reported
Units:	Anin-Piikoi Building Chemical Spill
Substances:	fluoranthene
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Terry Corpus
Assignment End Date:	2003-10-07 00:00:00
Result:	Refer to ISST
File Under:	SCI Noel

S83 **MCCULLY UNION SERVICE** **HI SHWS** **U001235168**
ENE **2105 S KING ST** **HI LUST** **N/A**
1/2-1 **HONOLULU, HI 96826** **HI UST**
0.663 mi. **HI ENG CONTROLS**
3500 ft. **Site 1 of 2 in cluster S** **HI INST CONTROL**
HI Financial Assurance

Relative:
Higher

Actual:
10 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	Former ARCO AM/PM #82111
HID Number:	Not reported
Facility Registry Identifier:	110010627660
Lead Agency:	HEER
Program:	State
Project Manager:	Eric Sadoyama
Hazard Priority:	NFA
Potential Hazards And Controls:	Hazard Managed With Controls
Organization:	Not reported
Island:	Oahu
Supplemental Location Text:	Not reported
SDAR Environmental Interest Name:	Former ARCO AM/PM #82111
HID Number:	Not reported
Facility Registry Identifier:	110010627660
Lead Agency:	HEER
Progran Name:	State
Potential Hazard And Controls:	Hazard Managed With Controls
Priority:	NFA
Assessment:	Response Necessary
Response:	Response Complete
Nature of Contamination:	Found: Petroleum in soil.
Nature of Residual Contamination:	Benzo(a)pyrene in soil.
Use Restrictions:	Controls Required to Manage Contamination
Engineering Control:	Engineering Control Required
Description of Restrictions:	Not reported
Institutional Control:	Government - Hawaii Dept. of Health Letter Issued

MCCULLY UNION SERVICE (Continued) **U001235168**

Within Designated Areawide Contamination: Not reported
Site Closure Type: No Further Action Letter - Restricted Use
Document Date: 08/24/2009
Document Number: 2009-538-ES
Document Subject: Review of Hydraulic Hoist and Clarifier Removal Report, dated November 2002 by Walker Consultants, a
Project Manager: Eric Sadoyama
Contact Information: (808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

LUST:
Facility ID: 9-100341
Facility Status: Monitored Natural Attenuation
Facility Status Date: 10/05/2006
Release ID: 020038
Project Officer: Shunsheng Fu

Facility ID: 9-100341
Facility Status: Active Remediation
Facility Status Date: 04/21/2004
Release ID: 940104
Project Officer: Shunsheng Fu

UST:
Facility ID: 9-100341
Owner: Mid Pac Petroleum LLC
Owner Address: 1100 Alakea Street, 8th floor
Ownder City,St,Zip: Honolulu, 96826 96826

Tank ID: 2A
Date Installed: 04/21/2003
Tank Status: Currently In Use
Date Closed: Not reported
Tank Capacity: 10000
Substance: Gasoline

Tank ID: 2B 92
Date Installed: 04/21/2003
Tank Status: Currently In Use
Date Closed: Not reported
Tank Capacity: 5000
Substance: Gasoline

Tank ID: 87
Date Installed: 04/21/2003
Tank Status: Currently In Use
Date Closed: Not reported
Tank Capacity: 15000
Substance: Gasoline

Tank ID: R-2
Date Installed: 02/07/1983
Tank Status: Permanently Out of Use
Date Closed: 07/19/2002

MCCULLY UNION SERVICE (Continued) **U001235168**

Tank Capacity: 10000
Substance: Gasoline

Tank ID: R-3
Date Installed: 02/07/1983
Tank Status: Permanently Out of Use
Date Closed: 07/19/2002
Tank Capacity: 10000
Substance: Gasoline

Tank ID: R-4
Date Installed: 02/07/1983
Tank Status: Permanently Out of Use
Date Closed: 07/19/2002
Tank Capacity: 10000
Substance: Gasoline

Tank ID: R-5
Date Installed: 02/07/1983
Tank Status: Permanently Out of Use
Date Closed: 07/19/2002
Tank Capacity: 10000
Substance: Gasoline

Tank ID: R-A1
Date Installed: 01/01/1968
Tank Status: Permanently Out of Use
Date Closed: 01/01/1983
Tank Capacity: Not reported
Substance: Gasoline

Tank ID: R-A2
Date Installed: 01/01/1968
Tank Status: Permanently Out of Use
Date Closed: 01/01/1983
Tank Capacity: Not reported
Substance: Gasoline

Tank ID: R-A3
Date Installed: 01/01/1968
Tank Status: Permanently Out of Use
Date Closed: 01/01/1983
Tank Capacity: Not reported
Substance: Gasoline

Tank ID: R-A4
Date Installed: 01/01/1968
Tank Status: Permanently Out of Use
Date Closed: 01/01/1983
Tank Capacity: Not reported

MCCULLY UNION SERVICE (Continued) **U001235168**

Substance: Diesel

Tank ID: R-A5
Date Installed: 01/01/1968
Tank Status: Permanently Out of Use
Date Closed: 01/01/1983
Tank Capacity: Not reported
Substance: Used Oil

Tank ID: R-I-1
Date Installed: 02/07/1983
Tank Status: Permanently Out of Use
Date Closed: 07/16/2002
Tank Capacity: 550
Substance: Used Oil

ENG CONTROLS:
Supplemental Location Text: Not reported
Zip Suffix: Not reported
Island: Oahu
Potential Hazards And Controls: Hazard Managed With Controls
Engineering Control: Engineering Control Required

INST CONTROL:
Potential hazards and controls: Hazard Managed With Controls
Supplemental Location: Not reported
Zip Suffix: Not reported
Island: Oahu
Institutional Control: Government - Hawaii Dept. of Health Letter Issued

HI Financial Assurance:
Alt Facility ID: 9-100341
Tank Id: R-2
Tank Status: Permanently Out of Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-100341
Tank Id: R-I-1
Tank Status: Permanently Out of Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-100341
Tank Id: R-5
Tank Status: Permanently Out of Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-100341
Tank Id: R-A1
Tank Status: Permanently Out of Use
FRTYPE: Other
Expiration Date: Not reported

MCCULLY UNION SERVICE (Continued) **U001235168**

Alt Facility ID: 9-100341
Tank Id: R-A3
Tank Status: Permanently Out of Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-100341
Tank Id: R-4
Tank Status: Permanently Out of Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-100341
Tank Id: R-3
Tank Status: Permanently Out of Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-100341
Tank Id: R-A4
Tank Status: Permanently Out of Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-100341
Tank Id: 87
Tank Status: Currently In Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-100341
Tank Id: R-A5
Tank Status: Permanently Out of Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-100341
Tank Id: 2B 92
Tank Status: Currently In Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-100341
Tank Id: 2A
Tank Status: Currently In Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-100341
Tank Id: R-A2
Tank Status: Permanently Out of Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-100341
Tank Id: R-A5
Tank Status: Permanently Out of Use

MCCULLY UNION SERVICE (Continued) **U001235168**

FRTYPE:	Insurance
Expiration Date:	03/31/2014
Alt Facility ID:	9-100341
Tank Id:	R-A4
Tank Status:	Permanently Out of Use
FRTYPE:	Insurance
Expiration Date:	03/31/2014
Alt Facility ID:	9-100341
Tank Id:	R-A3
Tank Status:	Permanently Out of Use
FRTYPE:	Insurance
Expiration Date:	03/31/2014
Alt Facility ID:	9-100341
Tank Id:	R-I-1
Tank Status:	Permanently Out of Use
FRTYPE:	Insurance
Expiration Date:	03/31/2014
Alt Facility ID:	9-100341
Tank Id:	R-A1
Tank Status:	Permanently Out of Use
FRTYPE:	Insurance
Expiration Date:	03/31/2014
Alt Facility ID:	9-100341
Tank Id:	R-5
Tank Status:	Permanently Out of Use
FRTYPE:	Insurance
Expiration Date:	03/31/2014
Alt Facility ID:	9-100341
Tank Id:	R-4
Tank Status:	Permanently Out of Use
FRTYPE:	Insurance
Expiration Date:	03/31/2014
Alt Facility ID:	9-100341
Tank Id:	R-2
Tank Status:	Permanently Out of Use
FRTYPE:	Insurance
Expiration Date:	03/31/2014
Alt Facility ID:	9-100341
Tank Id:	R-3
Tank Status:	Permanently Out of Use
FRTYPE:	Insurance
Expiration Date:	03/31/2014
Alt Facility ID:	9-100341
Tank Id:	87
Tank Status:	Currently In Use
FRTYPE:	Insurance
Expiration Date:	03/31/2014

MCCULLY UNION SERVICE (Continued) **U001235168**

Alt Facility ID:	9-100341
Tank Id:	2B 92
Tank Status:	Currently In Use
FRTYPE:	Insurance
Expiration Date:	03/31/2014
Alt Facility ID:	9-100341
Tank Id:	2A
Tank Status:	Currently In Use
FRTYPE:	Insurance
Expiration Date:	03/31/2014
Alt Facility ID:	9-100341
Tank Id:	R-A2
Tank Status:	Permanently Out of Use
FRTYPE:	Insurance
Expiration Date:	03/31/2014

84
NNE
1/2-1
0.668 mi.
3528 ft.

KAPIOLANI WOMEN'S & CHILDREN'S MEDICAL CENTER
1319 PUNAHOU ST
HONOLULU, HI 96826

HI SHWS **U001235208**
HI UST **N/A**
HI AIRS
HI Financial Assurance

Relative:
Higher

Actual:
43 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	Kapiolani Medical Center for Women and Children
HID Number:	Not reported
Facility Registry Identifier:	110005730067
Lead Agency:	Not reported
Program:	State
Project Manager:	Unassigned
Hazard Priority:	NFA
Potential Hazards And Controls:	No Hazard
Organization:	Not reported
Island:	Oahu
Supplemental Location Text:	Not reported
SDAR Environmental Interest Name:	Kapiolani Medical Center for Women and Children
HID Number:	Not reported
Facility Registry Identifier:	110005730067
Lead Agency:	Not reported
Progran Name:	State
Potential Hazard And Controls:	No Hazard
Priority:	NFA
Assessment:	Response Not Necessary
Response:	Not reported
Nature of Contamination:	Found: TPH as diesel below DOH EALs following removal of storage tanks
Nature of Residual Contamination:	No contamination remaining
Use Restrictions:	No Hazard Present For Unrestricted Residential Use
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Unrestricted Residential Use
Document Date:	07/17/1997
Document Number:	1997-249-RK

KAPIOLANI WOMEN'S & CHILDREN'S MEDICAL CENTER (Continued) **U001235208**

Document Subject: Hazardous Waste Release Response Determination for Kapiolani Medical Center for Women and Children,
Project Manager: Unassigned
Contact Information: (808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

UST:
Facility ID: 9-100740
Owner: KAPIOLANI WOMEN'S & CHILDREN'S MEDICAL CENTER
Owner Address: 1319 PUNAHOU ST
Ownder City,St,Zip: Honolulu, 96826 96826

Tank ID: 1
Date Installed: 10/01/1995
Tank Status: Currently in Use
Date Closed: Not reported
Tank Capacity: 15000
Substance: Diesel

Tank ID: R-001
Date Installed: 03/22/1971
Tank Status: Permanently Out of Use
Date Closed: 04/16/1996
Tank Capacity: 1000
Substance: Diesel

AIRS:
Facility ID: 0588-01-N
Island: Oahu
Mailing Address: 1319 Punahou Street
Locale: Not reported
Mailing City,St,Zip: Honolulu, HI 96826
Contact Name: Francisco "Kiko" Riego De Dios
Contact Title: Facilities Management Director
Description: 125 HP Boiler and 50 HP Exempt Boiler1.Boiler No.1 - 50 HP Cleaver-Brooks boiler #1 (model no. CB 200-50, serial no. L102531, 2.09 MMBtu/hr, fired primarily on synthetic natural gas (SNG) and fuel oil no.2 as a back-up). This boiler is exempt pursuant to Directors discretion as specified in Attachment II, Special Conditions No. B.1.d.2.Boiler No.2 - 125 HP Cleaver-Brooks boiler (model no. CB 200-125-150ST, serial no. L88692, 5.23 MMBtu/hr, fired primarily on SNG and fuel oil no. 2 as back-up).

HI Financial Assurance:
Alt Facility ID: 9-100740
Tank Id: R-001
Tank Status: Permanently Out of Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-100740
Tank Id: 1
Tank Status: Currently in Use
FRTYPE: Other
Expiration Date: Not reported

KAPIOLANI WOMEN'S & CHILDREN'S MEDICAL CENTER (Continued) **U001235208**

Alt Facility ID:	9-100740
Tank Id:	1
Tank Status:	Currently in Use
FRTYPE:	Insurance
Expiration Date:	08/01/2014

Alt Facility ID:	9-100740
Tank Id:	R-001
Tank Status:	Permanently Out of Use
FRTYPE:	Insurance
Expiration Date:	08/01/2014

S85 **MCDONALD'S RESTAURANT SOIL & GROUNDWATER CONTAMINATION** **HI SHWS** **S105264711**
ENE **2121 S KING ST** **HI SPILLS** **N/A**
1/2-1 **HONOLULU, HI 96826**
0.670 mi.
3538 ft. **Site 2 of 2 in cluster S**

Relative:
Higher

Actual:
10 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	McDonald's Restaurant Soil & Groundwater Contamination
HID Number:	Not reported
Facility Registry Identifier:	110013767129
Lead Agency:	SHWB
Program:	State
Project Manager:	Richard Palmer
Hazard Priority:	Low
Potential Hazards And Controls:	Hazard Present
Organization:	Not reported
Island:	Oahu
Supplemental Location Text:	Not reported
SDAR Environmental Interest Name:	McDonald's Restaurant Soil & Groundwater Contamination
HID Number:	Not reported
Facility Registry Identifier:	110013767129
Lead Agency:	SHWB
Progran Name:	State
Potential Hazard And Controls:	Hazard Present
Priority:	Low
Assessment:	Assessment Ongoing
Response:	Not reported
Nature of Contamination:	Not reported
Nature of Residual Contamination:	Not reported
Use Restrictions:	Controls Required to Manage Contamination
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	Not reported
Document Date:	Not reported
Document Number:	Not reported
Document Subject:	Not reported
Project Manager:	Richard Palmer
Contact Information:	(808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

HI SPILLS:

MCDONALD'S RESTAURANT SOIL & GROUNDWATER CONTAMINATION (Continued) **S105264711**

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	19941013
HID Number:	Not reported
Facility Registry Id:	110013767129
Lead and Program:	HEER EP&R
ER:	Not reported
Units:	McDonalds
Substances:	Gasoline
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Not reported
Assignment End Date:	Not reported
Result:	SOSC NFA
File Under:	McDonald's Restaurants

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	19990429-1156
HID Number:	Not reported
Facility Registry Id:	110013767129
Lead and Program:	HEER EP&R
ER:	No
Units:	McDonald's Restaurant Soil & Groundwater Contamination
Substances:	Petroleum
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Liz Galvez
Assignment End Date:	Not reported
Result:	Refer to ISST
File Under:	McDonald's Restaurants

T86 **KOOLANI TOWER PROJECT** **HI SHWS** **S106818609**
WNW **1189 WAIMANU ST** **HI SPILLS** **N/A**
1/2-1 **HONOLULU, HI 96814** **HI ENG CONTROLS**
0.672 mi. **HI INST CONTROL**
3550 ft. **Site 1 of 2 in cluster T**

Relative:
Higher

Actual:
3 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	Koolani Tower Project
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Program:	State
Project Manager:	Mark Sutterfield
Hazard Priority:	NFA
Potential Hazards And Controls:	Hazard Managed With Controls
Organization:	Not reported
Island:	Oahu
Supplemental Location Text:	Not reported
SDAR Environmental Interest Name:	Koolani Tower Project

KOOLANI TOWER PROJECT (Continued) **S106818609**

HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Progran Name:	State
Potential Hazard And Controls:	Hazard Managed With Controls
Priority:	NFA
Assessment:	Response Necessary
Response:	Response Complete
Nature of Contamination:	Found: Lead
Nature of Residual Contamination:	Thin layer of lead covered by new condominium building
Use Restrictions:	Controls Required to Manage Contamination
Engineering Control:	Engineering Control Required
Description of Restrictions:	Prohibit Any Activity That May Disturb the Integrity of the Capping System. Thin layer of lead covered by new condominium building.
Institutional Control:	Government - Hawaii Dept. of Health Letter Issued
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Restricted Use
Document Date:	02/02/2006
Document Number:	2006-059-MS
Document Subject:	NFA for footprint of building and parking lot in Area 2
Project Manager:	Mark Sutterfield
Contact Information:	(808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

HI SPILLS:

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	20040615-1651
HID Number:	Not reported
Facility Registry Id:	Not reported
Lead and Program:	HEER EP&R
ER:	Not reported
Units:	Koolani Tower Project
Substances:	Diesel Fuel
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Unknown
Activity Type:	Response
Activity Lead:	Liz Galvez
Assignment End Date:	Not reported
Result:	Refer to ISST
File Under:	Cresent Heights

ENG CONTROLS:

Supplemental Location Text:	Not reported
Zip Suffix:	Not reported
Island:	Oahu
Potential Hazards And Controls:	Hazard Managed With Controls
Engineering Control:	Engineering Control Required

INST CONTROL:

Potential hazards and controls:	Hazard Managed With Controls
Supplemental Location:	Not reported
Zip Suffix:	Not reported
Island:	Oahu
Institutional Control:	Government - Hawaii Dept. of Health Letter Issued

87
North
1/2-1
0.696 mi.
3676 ft.

CARTWRIGHT NEIGHBORHOOD PARK
KEEAUMOKU ST & MATLOCK AVE
HONOLULU, HI 96814

HI SHWS

1006820122
N/A

Relative:
Higher

Actual:
30 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	Cartwright Neighborhood Park
HID Number:	Not reported
Facility Registry Identifier:	110013780257
Lead Agency:	HEER
Program:	State
Project Manager:	Steve Mow
Hazard Priority:	NFA
Potential Hazards And Controls:	No Hazard
Organization:	Not reported
Island:	Oahu
Supplemental Location Text:	Not reported
SDAR Environmental Interest Name:	Cartwright Neighborhood Park
HID Number:	Not reported
Facility Registry Identifier:	110013780257
Lead Agency:	HEER
Progran Name:	State
Potential Hazard And Controls:	No Hazard
Priority:	NFA
Assessment:	Response Necessary
Response:	Response Complete
Nature of Contamination:	Found: Transformer oil (no PCBs) found on site.
Nature of Residual Contamination:	Not reported
Use Restrictions:	No Hazard Present for Unrestricted Residential Use
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Unrestricted Residential Use
Document Date:	05/12/2005
Document Number:	2005-257-SPM
Document Subject:	No Further Action Required at Cartwright Neighborhood Park
Project Manager:	Steve Mow
Contact Information:	(808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

88
NNW
1/2-1
0.717 mi.
3787 ft.

SCHUMAN CARRIAGE MOTORS, LTD.
1234 S BERETANIA ST
HONOLULU, HI 96814

HI SHWS
HI LUST
HI UST
HI SPILLS
HI INST CONTROL
HI Financial Assurance

U003221663
N/A

Relative:
Higher

Actual:
20 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	Safeway 1234 South Beretania Street Hydraulic Fluid
HID Number:	Not reported
Facility Registry Identifier:	110013778698
Lead Agency:	HEER
Program:	State

SCHUMAN CARRIAGE MOTORS, LTD. (Continued) **U003221663**

Project Manager:	Kelton Otsuka
Hazard Priority:	NFA
Potential Hazards And Controls:	Hazard Managed With Controls
Organization:	Not reported
Island:	Oahu
Supplemental Location Text:	Not reported
SDAR Environmental Interest Name:	Safeway 1234 South Beretania Street Hydraulic Fluid
HID Number:	Not reported
Facility Registry Identifier:	110013778698
Lead Agency:	HEER
Progran Name:	State
Potential Hazard And Controls:	Hazard Managed With Controls
Priority:	NFA
Assessment:	Response Necessary
Response:	Response Complete
Nature of Contamination:	Found: Hydraulic Fluid
Nature of Residual Contamination:	TPH-O from hydraulic lifts. NFA with IC. Contamination left at depths below 7' bgs.
Use Restrictions:	Controls Required to Manage Contamination
Engineering Control:	No Engineering Control Required
Description of Restrictions:	Not reported
Institutional Control:	Government - Hawaii Dept. of Health Letter Issued
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Restricted Use
Document Date:	08/26/2011
Document Number:	2011-493-KO
Document Subject:	No Further Action Determination with Institutional Controls for the Safeway #2944 (former Schuman Ca
Project Manager:	Kelton Otsuka
Contact Information:	(808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

LUST:

Facility ID:	9-101276
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	11/03/2005
Release ID:	060001
Project Officer:	Richard Takaba

Facility ID:	9-101276
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	04/19/2000
Release ID:	900058
Project Officer:	Richard Takaba

UST:

Facility ID:	9-101276
Owner:	SCHUMAN CARRIAGE MOTORS, LTD.
Owner Address:	1234 S BERETANIA STP.O. BOX 2420
Ownder City,St,Zip:	Honolulu, 96814 96814

Tank ID:	R-1
Date Installed:	05/05/1961
Tank Status:	**Permanently Out of Use**
Date Closed:	11/09/1999
Tank Capacity:	3000
Substance:	Gasoline

SCHUMAN CARRIAGE MOTORS, LTD. (Continued) **U003221663**

Tank ID: R-2
Date Installed: 05/05/1961
Tank Status: Permanently Out of Use
Date Closed: 11/08/1999
Tank Capacity: 550
Substance: Other

Tank ID: R-3
Date Installed: 05/05/1961
Tank Status: Permanently Out of Use
Date Closed: 11/08/1999
Tank Capacity: 550
Substance: Other

Tank ID: R-4
Date Installed: 05/05/1961
Tank Status: Permanently Out of Use
Date Closed: 12/01/1990
Tank Capacity: 500
Substance: Used Oil

Tank ID: R-6
Date Installed: 05/05/1961
Tank Status: Permanently Out of Use
Date Closed: 12/01/1990
Tank Capacity: 550
Substance: Other

Tank ID: r-5
Date Installed: 03/01/1990
Tank Status: Permanently Out of Use
Date Closed: 01/26/2005
Tank Capacity: 1000
Substance: Used Oil

HI SPILLS:
Island: Oahu
Supplemental Loc. Text: Not reported
Case Number: 19991210-1047
HID Number: Not reported
Facility Registry Id: 110013778698
Lead and Program: HEER EP&R
ER: Referred
Units: Schuman Carriage
Substances: Hydraulic Fluid
Less Or Greater Than: Not reported
Numerical Quantity: Not reported
Units: Not reported
Activity Type: Response
Activity Lead: Liz Galvez
Assignment End Date: Not reported
Result: Refer to ISST
File Under: Safeway, Inc.

SCHUMAN CARRIAGE MOTORS, LTD. (Continued) **U003221663**

INST CONTROL:

Potential hazards and controls:	Hazard Managed With Controls
Supplemental Location:	Not reported
Zip Suffix:	Not reported
Island:	Oahu
Institutional Control:	Government - Hawaii Dept. of Health Letter Issued

HI Financial Assurance:

Alt Facility ID:	9-101276
Tank Id:	R-4
Tank Status:	Permanently Out of Use
FRTYPE:	Other
Expiration Date:	Not reported

Alt Facility ID:	9-101276
Tank Id:	R-6
Tank Status:	Permanently Out of Use
FRTYPE:	Other
Expiration Date:	Not reported

Alt Facility ID:	9-101276
Tank Id:	R-6
Tank Status:	Permanently Out of Use
FRTYPE:	Insurance
Expiration Date:	Not reported

Alt Facility ID:	9-101276
Tank Id:	r-5
Tank Status:	Permanently Out of Use
FRTYPE:	Other
Expiration Date:	Not reported

Alt Facility ID:	9-101276
Tank Id:	R-4
Tank Status:	Permanently Out of Use
FRTYPE:	Insurance
Expiration Date:	Not reported

Alt Facility ID:	9-101276
Tank Id:	r-5
Tank Status:	Permanently Out of Use
FRTYPE:	Insurance
Expiration Date:	Not reported

Alt Facility ID:	9-101276
Tank Id:	R-3
Tank Status:	Permanently Out of Use
FRTYPE:	Insurance
Expiration Date:	Not reported

Alt Facility ID:	9-101276
Tank Id:	R-2
Tank Status:	Permanently Out of Use
FRTYPE:	Other
Expiration Date:	Not reported

SCHUMAN CARRIAGE MOTORS, LTD. (Continued) **U003221663**

Alt Facility ID:	9-101276
Tank Id:	R-2
Tank Status:	Permanently Out of Use
FRTYPE:	Insurance
Expiration Date:	Not reported

Alt Facility ID:	9-101276
Tank Id:	R-1
Tank Status:	Permanently Out of Use
FRTYPE:	Other
Expiration Date:	Not reported

Alt Facility ID:	9-101276
Tank Id:	R-1
Tank Status:	Permanently Out of Use
FRTYPE:	Insurance
Expiration Date:	Not reported

Alt Facility ID:	9-101276
Tank Id:	R-3
Tank Status:	Permanently Out of Use
FRTYPE:	Other
Expiration Date:	Not reported

89
SE
1/2-1
0.723 mi.
3819 ft.

ROYAL GARDENS HOTEL DIESEL **HI SHWS** **S110061800**
440 OLOHANA ST **HI SPILLS** **N/A**
HONOLULU, HI

Relative:
Higher

Actual:
3 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Dumpster alleyway right side of bldg from street.
Island:	Oahu
Environmental Interest:	Royal Gardens Hotel Diesel
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Program:	State
Project Manager:	Roger Brewer
Hazard Priority:	NFA
Potential Hazards And Controls:	No Hazard
Organization:	Not reported
Island:	Oahu
Supplemental Location Text:	Dumpster alleyway right side of bldg from street.
SDAR Environmental Interest Name:	Royal Gardens Hotel Diesel
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Progran Name:	State
Potential Hazard And Controls:	No Hazard
Priority:	NFA
Assessment:	Response Not Necessary
Response:	Not reported
Nature of Contamination:	Not reported
Nature of Residual Contamination:	Diesel in soil at less than EALs.
Use Restrictions:	No Hazard Present for Unrestricted Residential Use
Engineering Control:	Not reported

ROYAL GARDENS HOTEL DIESEL (Continued) **S110061800**

Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Action Letter
Document Date:	12/27/2007
Document Number:	2007-862-RB
Document Subject:	NFA for minor soil removal under drums (not a formal case).
Project Manager:	Roger Brewer
Contact Information:	(808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

HI SPILLS:

Island:	Oahu
Supplemental Loc. Text:	Dumpster alleyway right side of bldg from street.
Case Number:	20071029-0953
HID Number:	Not reported
Facility Registry Id:	Not reported
Lead and Program:	HEER EP&R
ER:	Off Scene
Units:	Royal Gardens Hotel Diesel
Substances:	Diesel Fuel
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Unknown
Activity Type:	Response
Activity Lead:	Mike Cripps
Assignment End Date:	2008-01-07 00:00:00
Result:	SOSC NFA
File Under:	Royal Gardens Hotel

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90 SE 1/2-1 0.724 mi. 3821 ft. | **KING KALAKAUA PLAZA**
2080 KALAKAUA AVE
HONOLULU, HI 96815

HI SHWS **U003154872**
HI LUST **N/A**
HI UST
HI SPILLS
HI INST CONTROL

Relative: Higher

Actual: 3 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Block bounded by Kalakaua/Olohana/Kuhio/Kalanimoku
Island:	Oahu
Environmental Interest:	King Kalakaua Plaza Development
HID Number:	Not reported
Facility Registry Identifier:	110013769886
Lead Agency:	HEER
Program:	State
Project Manager:	Greg Olmsted
Hazard Priority:	NFA
Potential Hazards And Controls:	No Hazard
Organization:	Not reported
Island:	Oahu
Supplemental Location Text:	Block bounded by Kalakaua/Olohana/Kuhio/Kalanimoku
SDAR Environmental Interest Name:	King Kalakaua Plaza Development
HID Number:	Not reported
Facility Registry Identifier:	110013769886
Lead Agency:	HEER
Progran Name:	State
Potential Hazard And Controls:	No Hazard
Priority:	NFA

KING KALAKAUA PLAZA (Continued) **U003154872**

Assessment:	Response Necessary
Response:	Response Complete
Nature of Contamination:	Not reported
Nature of Residual Contamination:	Confirmation samples showed maximum concentrations of contaminants including TPH at 14 mg/kg; BTX at 0.15 mg/kg. PAHs were not detected. No contamination above HDOH EALs
Use Restrictions:	No Hazard Present For Unrestricted Residential Use
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Government - Hawaii Dept. of Health Letter Issued
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Unrestricted Residential Use
Document Date:	09/28/1998
Document Number:	1998-311-GO
Document Subject:	NFA for Waikiki Gateway Park Site (2080 Kalakaua Ave)
Project Manager:	Greg Olmsted
Contact Information:	(808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

LUST:

Facility ID:	9-103235
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	03/17/2000
Release ID:	960085
Project Officer:	Renato Maniulit

UST:

Facility ID:	9-103235
Owner:	K. YOUNG KALAKAUA PARTNERS INC.
Owner Address:	841 BISHOP ST, SUITE 2250
Ownder City,St,Zip:	Honolulu, 96815 96815
Tank ID:	R-1
Date Installed:	Not reported
Tank Status:	**Permanently Out of Use**
Date Closed:	07/24/1996
Tank Capacity:	300
Substance:	Diesel

HI SPILLS:

Island:	Oahu
Supplemental Loc. Text:	Block bounded by Kalakaua/Olohana/Kuhio/Kalanimoku
Case Number:	20011017-1508
HID Number:	Not reported
Facility Registry Id:	110013769886
Lead and Program:	HEER EP&R
ER:	Not reported
Units:	Fed Ex boxes with white powdery substance
Substances:	Not reported
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Terry Corpus
Assignment End Date:	Not reported
Result:	SOSC NFA
File Under:	K. Young-Kalakaua Partners

KING KALAKAUA PLAZA (Continued) **U003154872**

Island:	Oahu
Supplemental Loc. Text:	Block bounded by Kalakaua/Olohana/Kuhio/Kalanimoku
Case Number:	19951114-0900
HID Number:	Not reported
Facility Registry Id:	110013769886
Lead and Program:	HEER EP&R
ER:	No
Units:	Nike Town Building (2080 Kalakaua Ave)
Substances:	Gasoline
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Chris Takeno
Assignment End Date:	Not reported
Result:	Refer to ISST
File Under:	K. Young-Kalakaua Partners

INST CONTROL:

Potential hazards and controls:	No Hazard
Supplemental Location:	Block bounded by Kalakaua/Olohana/Kuhio/Kalanimoku
Zip Suffix:	Not reported
Island:	Oahu
Institutional Control:	Government - Hawaii Dept. of Health Letter Issued

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T91 **RESERVE HOUSING TOWER SOIL CONTAMINATION** **HI SHWS** **1006819959**
WNW **1141 WAIMANU ST** **HI SPILLS** **N/A**
1/2-1 **HONOLULU, HI 96813**
0.726 mi.
3834 ft. **Site 2 of 2 in cluster T**

Relative:
Higher

Actual:
3 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	Reserve Housing Tower Soil Contamination
HID Number:	Not reported
Facility Registry Identifier:	110013778322
Lead Agency:	Not reported
Program:	State
Project Manager:	Unassigned
Hazard Priority:	NFA
Potential Hazards And Controls:	Hazard Undetermined
Organization:	Not reported
Island:	Oahu
Supplemental Location Text:	Not reported
SDAR Environmental Interest Name:	Reserve Housing Tower Soil Contamination
HID Number:	Not reported
Facility Registry Identifier:	110013778322
Lead Agency:	Not reported
Progran Name:	State
Potential Hazard And Controls:	Hazard Undetermined
Priority:	NFA
Assessment:	Assessment Ongoing
Response:	Not reported
Nature of Contamination:	Found: oil
Nature of Residual Contamination:	contaminants below HDOH EALs, and under a parking garage.

RESERVE HOUSING TOWER SOIL CONTAMINATION (Continued) **1006819959**

Use Restrictions:	Undetermined
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action - Type Undetermined
Document Date:	10/25/1995
Document Number:	Not reported
Document Subject:	Not reported
Project Manager:	Unassigned
Contact Information:	(808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

HI SPILLS:

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	19951025-2
HID Number:	Not reported
Facility Registry Id:	110013778322
Lead and Program:	HEER EP&R
ER:	No
Units:	Reserve Housing Tower
Substances:	oil/stained soil
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Bill Perry
Assignment End Date:	Not reported
Result:	Refer to ISST
File Under:	Reserve Housing Tower

92
WNW
1/2-1
0.787 mi.
4156 ft.

SELF STORAGE 1 **HI SHWS** **1006819998**
438 KAMAKEE ST **HI SPILLS** **N/A**
HONOLULU, HI 96814

Relative:
Higher

Actual:
3 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	Honolulu Laundry
HID Number:	Not reported
Facility Registry Identifier:	110013778769
Lead Agency:	HEER
Program:	State
Project Manager:	Mark Sutterfield
Hazard Priority:	NFA
Potential Hazards And Controls:	No Hazard
Organization:	Not reported
Island:	Oahu
Supplemental Location Text:	Not reported
SDAR Environmental Interest Name:	Honolulu Laundry
HID Number:	Not reported
Facility Registry Identifier:	110013778769
Lead Agency:	HEER
Progran Name:	State

SELF STORAGE 1 (Continued) **1006819998**

Potential Hazard And Controls:	No Hazard
Priority:	NFA
Assessment:	Response Necessary
Response:	Response Complete
Nature of Contamination:	Not reported
Nature of Residual Contamination:	Petroleum contaminated soil. 2 tanks closed in place; suggested they be removed when site is redeveloped.
Use Restrictions:	No Hazard Present For Unrestricted Residential Use
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Unrestricted Residential Use
Document Date:	08/26/2004
Document Number:	2004-350-MS
Document Subject:	NFA letter for Self Storage 1at 438 Kamakee St
Project Manager:	Mark Sutterfield
Contact Information:	(808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

HI SPILLS:

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	19981028-1300
HID Number:	Not reported
Facility Registry Id:	110013778769
Lead and Program:	HEER EP&R
ER:	Yes
Units:	Self Storage 1 (previously Volkswagon repair shop, Laundry Facility) 5 sand filled UST's onsite
Substances:	Oil/Hydraulic Fluid/Solvents
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Cost Recovery
Activity Lead:	Tricia Nagatani
Assignment End Date:	2002-11-30 00:00:00
Result:	New PM
File Under:	Self Storage 1

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	19981028-1300
HID Number:	Not reported
Facility Registry Id:	110013778769
Lead and Program:	HEER EP&R
ER:	Yes
Units:	Self Storage 1 (previously Volkswagon repair shop, Laundry Facility) 5 sand filled UST's onsite
Substances:	Oil/Hydraulic Fluid/Solvents
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Bill Perry
Assignment End Date:	Not reported
Result:	Refer to ISST
File Under:	Self Storage 1

93 ESE 1/2-1 0.820 mi. 4332 ft. | **ALA WAI COVE CONDOMINIUM APARTMENTS**
509 UNIVERSITY AVE
HONOLULU, HI 96815 | **HI SHWS** | **1006820430**
HI SPILLS | **N/A**

Relative: Higher

Actual: 3 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	Ala Wai Cove Condominium Apartments
HID Number:	Not reported
Facility Registry Identifier:	110013783888
Lead Agency:	HEER
Program:	State
Project Manager:	John Peard
Hazard Priority:	Low
Potential Hazards And Controls:	Hazard Undetermined
Organization:	Not reported
Island:	Oahu
Supplemental Location Text:	Not reported
SDAR Environmental Interest Name:	Ala Wai Cove Condominium Apartments
HID Number:	Not reported
Facility Registry Identifier:	110013783888
Lead Agency:	HEER
Progran Name:	State
Potential Hazard And Controls:	Hazard Undetermined
Priority:	Low
Assessment:	Assessment Ongoing
Response:	Not reported
Nature of Contamination:	Found: Petroleum in soil.
Nature of Residual Contamination:	Not reported
Use Restrictions:	Undetermined
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	Closed - Documentation Inadequate to Evaluate Risk
Document Date:	07/14/1992
Document Number:	Not reported
Document Subject:	Site Assessment for the Removal of An Underground Storage Tank At the Ala Wai Cove Condominium Apart
Project Manager:	John Peard
Contact Information:	(808) 933-9921 Environmental Health Bldg, 1582 Kamehameha Ave, Hilo, HI 96720

HI SPILLS:

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	19920714
HID Number:	Not reported
Facility Registry Id:	110013783888
Lead and Program:	HEER EP&R
ER:	Not reported
Units:	Ala Wai Cove Condominium Apartments
Substances:	Not reported
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported

ALA WAI COVE CONDOMINIUM APARTMENTS (Continued) **1006820430**

Activity Type:	Response
Activity Lead:	Not reported
Assignment End Date:	Not reported
Result:	SOSC NFA
File Under:	Ala Wai Cove Condominium Apartments

94
WNW
1/2-1
0.839 mi.
4432 ft.

JAS W GLOVER LTD
1046 WAIMAMU ST
HONOLULU, HI 96814

RCRA NonGen / NLR
FINDS
HI SHWS
HI LUST
HI UST

1000135795
HID981637861

Relative:
Higher

Actual:
3 ft.

RCRA NonGen / NLR:

Date form received by agency:	01/09/1987
Facility name:	JAS W GLOVER LTD
Facility address:	1046 WAIMAMU ST HONOLULU, HI 96814
EPA ID:	HID981637861
Mailing address:	PO BOX 579 HONOLULU, HI 96809
Contact:	ENVIRONMENTAL MANAGER
Contact address:	1046 WAIMAMU ST HONOLULU, HI 96814
Contact country:	US
Contact telephone:	(808) 533-1777
Contact email:	Not reported
EPA Region:	09
Land type:	Other land type
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	JAS W GLOVER
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No

JAS W GLOVER LTD (Continued) **1000135795**

Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

Evaluation Action Summary:

Evaluation date:	12/21/1995
Evaluation:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation:	Not reported
Date achieved compliance:	Not reported
Evaluation lead agency:	State

FINDS:

Registry ID: 110005724252

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	Glover Building
HID Number:	Not reported
Facility Registry Identifier:	110005724252
Lead Agency:	HEER
Program:	State
Project Manager:	Melody Calisay
Hazard Priority:	NFA
Potential Hazards And Controls:	Hazard Undetermined
Organization:	Not reported
Island:	Oahu
Supplemental Location Text:	Not reported
SDAR Environmental Interest Name:	Glover Building
HID Number:	Not reported
Facility Registry Identifier:	110005724252
Lead Agency:	HEER
Progran Name:	State
Potential Hazard And Controls:	Hazard Undetermined
Priority:	NFA
Assessment:	Response Necessary

JAS W GLOVER LTD (Continued) **1000135795**

Response:	Response Complete
Nature of Contamination:	Found: Hydraulic fluid
Nature of Residual Contamination:	unknown
Use Restrictions:	Undetermined
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	ISST NFA - No Letter
Document Date:	06/10/2004
Document Number:	Not reported
Document Subject:	Not reported
Project Manager:	Melody Calisay
Contact Information:	(808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

LUST:

Facility ID:	9-100835
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	05/26/2004
Release ID:	020019
Project Officer:	Richard Takaba

UST:

Facility ID:	9-100835
Owner:	JAS W. GLOVER, LTD
Owner Address:	725 KAPIOLANI BLVD, SUITE 306
Ownder City,St,Zip:	Honolulu, 96814 96814
Tank ID:	R-1
Date Installed:	03/07/1937
Tank Status:	**Permanently Out of Use**
Date Closed:	11/12/1990
Tank Capacity:	600
Substance:	Gasoline

95
NNW
1/2-1
0.872 mi.
4603 ft.

Relative:
Higher

Actual:
27 ft.

1310 PENSACOLA STREET **HI SHWS** **S111704658**
1310 PENSACOLA ST **N/A**
HONOLULU, HI

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	1310 Pensacola Street
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Program:	State
Project Manager:	Paul Chong
Hazard Priority:	NFA
Potential Hazards And Controls:	No Hazard
Organization:	Not reported
Island:	Oahu
Supplemental Location Text:	Not reported
SDAR Environmental Interest Name:	1310 Pensacola Street

1310 PENSACOLA STREET (Continued) **S111704658**

HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Progran Name:	State
Potential Hazard And Controls:	No Hazard
Priority:	NFA
Assessment:	Response Necessary
Response:	Response Complete
Nature of Contamination:	Not reported
Nature of Residual Contamination:	Not reported
Use Restrictions:	No Hazard Present For Unrestricted Residential Use
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Unrestricted Residential Use
Document Date:	07/26/2011
Document Number:	2011-433-PC
Document Subject:	No Further Action Determination for the Underground Storage Tank Closure and Release Report dated Ma
Project Manager:	Paul Chong
Contact Information:	(808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

96
WNW
1/2-1
0.872 mi.
4603 ft.

PACIFICA CONDOMINIUM
1009 KAPIOLANI BLVD
HONOLULU, HI 96814

HI SHWS **S110765470**
HI LUST **N/A**

Relative:
Higher

Actual:
3 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	Pacifica Condominiums
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Program:	State
Project Manager:	Paul Chong
Hazard Priority:	NFA
Potential Hazards And Controls:	No Hazard
Organization:	Not reported
Island:	Oahu
Supplemental Location Text:	Not reported
SDAR Environmental Interest Name:	Pacifica Condominiums
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Progran Name:	State
Potential Hazard And Controls:	No Hazard
Priority:	NFA
Assessment:	Response Necessary
Response:	Response Complete
Nature of Contamination:	Found: Low levels of contaminated soil left in place. Area capped with multistory building
Nature of Residual Contamination:	Not reported
Use Restrictions:	No Hazard Present For Unrestricted Residential Use
Engineering Control:	Not reported

PACIFICA CONDOMINIUM (Continued) **S110765470**

Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Unrestricted Residential Use
Document Date:	07/19/2011
Document Number:	2011-399-PC
Document Subject:	Subsurface Soil Assessment Report, Honolulu HI dated October 28, 2010
Project Manager:	Paul Chong
Contact Information:	(808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

LUST:

Facility ID:	9-103909
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	11/07/2011
Release ID:	110013
Project Officer:	Shunsheng Fu

97
SE
1/2-1
0.896 mi.
4730 ft.

WAIKIKI BAZAAR
2174 KALAKAUA AVE
HONOLULU, HI 96816

HI SHWS **1006819697**
HI SPILLS **N/A**

Relative:
Higher

Actual:
3 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	2174/2190 Kalakaua Ave
Island:	Oahu
Environmental Interest:	Waikiki Bazaar
HID Number:	Not reported
Facility Registry Identifier:	110013775478
Lead Agency:	HEER
Program:	State
Project Manager:	Diane England
Hazard Priority:	NFA
Potential Hazards And Controls:	No Hazard
Organization:	Not reported
Island:	Oahu
Supplemental Location Text:	2174/2190 Kalakaua Ave
SDAR Environmental Interest Name:	Waikiki Bazaar
HID Number:	Not reported
Facility Registry Identifier:	110013775478
Lead Agency:	HEER
Progran Name:	State
Potential Hazard And Controls:	No Hazard
Priority:	NFA
Assessment:	Response Necessary
Response:	Response Complete
Nature of Contamination:	Found: Petroleum in soil
Nature of Residual Contamination:	No (petroleum in soil) contamination left on site is above EALs.
Use Restrictions:	No Hazard Present For Unrestricted Residential Use
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Unrestricted Residential Use
Document Date:	11/09/2005
Document Number:	2005-573-DE

WAIKIKI BAZAAR (Continued) **1006819697**

Document Subject: No Further Action Determination for Release No. 19950222-2
Project Manager: Diane England
Contact Information: (808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

HI SPILLS:

Island:	Oahu
Supplemental Loc. Text:	2174/2190 Kalakaua Ave
Case Number:	19950222-2
HID Number:	Not reported
Facility Registry Id:	110013775478
Lead and Program:	HEER EP&R
ER:	Not reported
Units:	Waikiki Bazaar
Substances:	petroleum
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Terry Corpus
Assignment End Date:	Not reported
Result:	Refer to ISST
File Under:	Yoneoka and Associates

U98 **HALE PUA NUI UST REMOVAL** **HI SHWS** **S108859671**
SSE **228 BEACH WALK** **HI SPILLS** **N/A**
1/2-1 **HONOLULU, HI 96815**
0.901 mi.
4759 ft. **Site 1 of 2 in cluster U**

Relative:
Higher

Actual:
3 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Former Hale Pua Nui Hotel
Island:	Oahu
Environmental Interest:	Hale Pua Nui UST Removal
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Program:	State
Project Manager:	Paul Chong
Hazard Priority:	Low
Potential Hazards And Controls:	Hazard Undetermined
Organization:	Not reported
Island:	Oahu
Supplemental Location Text:	Former Hale Pua Nui Hotel
SDAR Environmental Interest Name:	Hale Pua Nui UST Removal
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Progran Name:	State
Potential Hazard And Controls:	Hazard Undetermined
Priority:	Low
Assessment:	Response Necessary
Response:	Response Ongoing
Nature of Contamination:	Found: Diesel Fuel.
Nature of Residual Contamination:	Not reported
Use Restrictions:	Undetermined
Engineering Control:	Not reported

HALE PUA NUI UST REMOVAL (Continued) **S108859671**

Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	Not reported
Document Date:	Not reported
Document Number:	Not reported
Document Subject:	Not reported
Project Manager:	Paul Chong
Contact Information:	(808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

HI SPILLS:

Island:	Oahu
Supplemental Loc. Text:	Former Hale Pua Nui Hotel
Case Number:	20061020-1430
HID Number:	Not reported
Facility Registry Id:	Not reported
Lead and Program:	HEER EP&R
ER:	Not reported
Units:	UST Release Former Hale Pua Nui Hotel
Substances:	Unknown
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Not reported
Assignment End Date:	Not reported
Result:	Not reported
File Under:	Brett Hill Management Group

U99 **WAIKIKI BEACH WALK RESORT** **HI SHWS** **S108859866**
SSE **205 BEACH WALK AVE** **HI SPILLS** **N/A**
1/2-1 **HONOLULU, HI** **HI INST CONTROL**
0.925 mi.
4882 ft. **Site 2 of 2 in cluster U**

Relative:
Higher

Actual:
3 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Waikiki
Island:	Oahu
Environmental Interest:	205 Beach Walk
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Program:	State
Project Manager:	Diane England
Hazard Priority:	NFA
Potential Hazards And Controls:	Hazard Managed With Controls
Organization:	Not reported
Island:	Oahu
Supplemental Location Text:	Waikiki
SDAR Environmental Interest Name:	205 Beach Walk
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Progran Name:	State
Potential Hazard And Controls:	Hazard Managed With Controls
Priority:	NFA

WAIKIKI BEACH WALK RESORT (Continued) **S108859866**

Assessment:	Response Necessary
Response:	Response Complete
Nature of Contamination:	Found: Petroleum in groundwater and soil
Nature of Residual Contamination:	TPH D and Bis(2-theylhexy1)phthalate
Use Restrictions:	Controls Required to Manage Contamination
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Government - Hawaii Dept. of Health Letter Issued
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Restricted Use
Document Date:	10/16/2006
Document Number:	2006-641-DE
Document Subject:	No Further Action Determination for Release ID 200511161220
Project Manager:	Diane England
Contact Information:	(808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

HI SPILLS:

Island:	Oahu
Supplemental Loc. Text:	Waikiki
Case Number:	20051116-1220
HID Number:	Not reported
Facility Registry Id:	Not reported
Lead and Program:	HEER EP&R
ER:	No
Units:	Fuel Oil (Diesel) Release
Substances:	Diesel Fuel
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Mike Cripps
Assignment End Date:	2005-11-17 00:00:00
Result:	SOSC NFA
File Under:	Waikiki Beach Walk Resort

INST CONTROL:

Potential hazards and controls:	Hazard Managed With Controls
Supplemental Location:	Waikiki
Zip Suffix:	Not reported
Island:	Oahu
Institutional Control:	Government - Hawaii Dept. of Health Letter Issued

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100 ESE 1/2-1 0.945 mi. 4989 ft.

IOLANI SCHOOL PETROLEUM ODOR **HI SHWS** **S106817948**
563 KAMOKU ST **HI SPILLS** **N/A**
HONOLULU, HI 96826

Relative: Higher

Actual: 3 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	Iolani School Petroleum
HID Number:	Not reported
Facility Registry Identifier:	110005723208
Lead Agency:	HEER
Program:	State

IOLANI SCHOOL PETROLEUM ODOR (Continued) **S106817948**

Project Manager:	Liz Galvez
Hazard Priority:	NFA
Potential Hazards And Controls:	No Hazard
Organization:	Not reported
Island:	Oahu
Supplemental Location Text:	Not reported
SDAR Environmental Interest Name:	Iolani School Petroleum
HID Number:	Not reported
Facility Registry Identifier:	110005723208
Lead Agency:	HEER
Progran Name:	State
Potential Hazard And Controls:	No Hazard
Priority:	NFA
Assessment:	Response Necessary
Response:	Response Complete
Nature of Contamination:	Not reported
Nature of Residual Contamination:	Not reported
Use Restrictions:	No Hazard Present For Unrestricted Residential Use
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Unrestricted Residential Use
Document Date:	02/13/2001
Document Number:	Not reported
Document Subject:	Limited Phase II Environmental Site Assessment Report
Project Manager:	Liz Galvez
Contact Information:	(808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

HI SPILLS:

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	20000814-1440
HID Number:	Not reported
Facility Registry Id:	110005723208
Lead and Program:	HEER EP&R
ER:	Site Visit
Units:	Iolani School Petroleum odor
Substances:	Not reported
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Liz Galvez
Assignment End Date:	Not reported
Result:	SOSC NFA
File Under:	Iolani School

101 WNW 1/2-1 0.986 mi. 5204 ft. | **HAWAII OPERA THEATER SETS & PROPS WAREHOUSE**
962 KAWAIAHAO ST
HONOLULU, HI | **HI SHWS**
HI SPILLS
HI ENG CONTROLS
HI INST CONTROL | **S115488700**
N/A

Relative: Higher

Actual: 3 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Not reported
Island:	Oahu
Environmental Interest:	Hawaii Opera Theater Sets & Props Warehouse
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	Not reported
Program:	State
Project Manager:	Steve Mow
Hazard Priority:	NFA
Potential Hazards And Controls:	Hazard Managed With Controls
Organization:	Not reported
Island:	Oahu
Supplemental Location Text:	Not reported
SDAR Environmental Interest Name:	Hawaii Opera Theater Sets & Props Warehouse
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	Not reported
Progran Name:	State
Potential Hazard And Controls:	Hazard Managed With Controls
Priority:	NFA
Assessment:	Response Necessary
Response:	Response Ongoing
Nature of Contamination:	Found: Capped petroleum and lead contamination.
Nature of Residual Contamination:	Not reported
Use Restrictions:	Controls Required to Manage Contamination
Engineering Control:	Engineering Control Required
Description of Restrictions:	Not reported
Institutional Control:	Government - Hawaii Dept. of Health Letter Issued
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Restricted Use
Document Date:	04/26/2012
Document Number:	2012-261-SPM
Document Subject:	No Further Action Determination with Institutional Controls for Hawaii Opera Theater Sets & Props Wa
Project Manager:	Steve Mow
Contact Information:	(808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

HI SPILLS:

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	20120201-1355
HID Number:	Not reported
Facility Registry Id:	Not reported
Lead and Program:	HEER EP&R
ER:	None
Units:	Hawaii Opera Theatre Prop Warehouse
Substances:	Benzopyrene
Less Or Greater Than:	Not reported
Numerical Quantity:	0
Units:	Not reported
Activity Type:	Response

HAWAII OPERA THEATER SETS & PROPS WAREHOUSE (Continued) **S115488700**

Activity Lead:	Curtis Martin
Assignment End Date:	Not reported
Result:	Not reported
File Under:	Hawaii Opera Theater Sets & Props Warehouse

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	20120201-1355
HID Number:	Not reported
Facility Registry Id:	Not reported
Lead and Program:	HEER EP&R
ER:	None
Units:	Hawaii Opera Theatre Prop Warehouse
Substances:	TPH
Less Or Greater Than:	Not reported
Numerical Quantity:	0
Units:	Not reported
Activity Type:	Response
Activity Lead:	Curtis Martin
Assignment End Date:	Not reported
Result:	Not reported
File Under:	Hawaii Opera Theater Sets & Props Warehouse

ENG CONTROLS:

Supplemental Location Text:	Not reported
Zip Suffix:	Not reported
Island:	Oahu
Potential Hazards And Controls:	Hazard Managed With Controls
Engineering Control:	Engineering Control Required

INST CONTROL:

Potential hazards and controls:	Hazard Managed With Controls
Supplemental Location:	Not reported
Zip Suffix:	Not reported
Island:	Oahu
Institutional Control:	Government - Hawaii Dept. of Health Letter Issued

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102
WNW
1/2-1
0.995 mi.
5255 ft.

SYMPHONY PARK **HI SHWS** **S107022567**
850 KAPIOLANI BLVD **N/A**
HONOLULU, HI 96807

Relative:
Higher

Actual:
3 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Intersection with Ward Avenue
Island:	Oahu
Environmental Interest:	Symphony Park
HID Number:	HID984467654
Facility Registry Identifier:	110013778206
Lead Agency:	HEER
Program:	State
Project Manager:	Liz Galvez
Hazard Priority:	NFA
Potential Hazards And Controls:	Hazard Undetermined
Organization:	Not reported
Island:	Oahu

SYMPHONY PARK (Continued) **S107022567**

Supplemental Location Text:	Intersection with Ward Avenue
SDAR Environmental Interest Name:	Symphony Park
HID Number:	HID984467654
Facility Registry Identifier:	110013778206
Lead Agency:	HEER
Progran Name:	State
Potential Hazard And Controls:	Hazard Undetermined
Priority:	NFA
Assessment:	Assessment Ongoing
Response:	Not reported
Nature of Contamination:	Not reported
Nature of Residual Contamination:	Not reported
Use Restrictions:	Undetermined
Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action - Type Undetermined
Document Date:	08/31/1995
Document Number:	Not reported
Document Subject:	Not reported
Project Manager:	Liz Galvez
Contact Information:	(808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

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103 **PUNAHOU SCHOOL - BARWICK PLAYGROUND** **HI SHWS** **U003541737**
NNE **1601 PUNAHOU ST** **HI LUST** **N/A**
1/2-1 **HONOLULU, HI 96822** **HI UST**
0.999 mi. **HI Financial Assurance**
5276 ft.

Relative:
Higher

Actual:
76 ft.

SHWS:

Organization:	Not reported
Supplemental Location:	Punahou School Firing Range
Island:	Oahu
Environmental Interest:	Punahou School Firing Range
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Program:	State
Project Manager:	Kelton Otsuka
Hazard Priority:	NFA
Potential Hazards And Controls:	No Hazard
Organization:	Not reported
Island:	Oahu
Supplemental Location Text:	Punahou School Firing Range
SDAR Environmental Interest Name:	Punahou School Firing Range
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Progran Name:	State
Potential Hazard And Controls:	No Hazard
Priority:	NFA
Assessment:	Response Necessary
Response:	Response Complete
Nature of Contamination:	Found: Lead in soil.
Nature of Residual Contamination:	Confirmation samples were below HDOH EALs for unrestricted use.
Use Restrictions:	No Hazard Present For Unrestricted Residential Use
Engineering Control:	Not reported

PUNAHOU SCHOOL - BARWICK PLAYGROUND (Continued) **U003541737**

Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	No Further Action Letter - Unrestricted Residential Use
Document Date:	04/06/2010
Document Number:	2010-228-KO
Document Subject:	No Further Action Determination at the Punahou School Firing Range Site
Project Manager:	Kelton Otsuka
Contact Information:	(808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

LUST:

Facility ID:	9-100297
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	02/08/2007
Release ID:	900015
Project Officer:	Shaobin Li

UST:

Facility ID:	9-101653
Owner:	PUNAHOU SCHOOL
Owner Address:	1601 Punahou Street
Ownder City,St,Zip:	Honolulu, 96822 96822

Tank ID:	87
Date Installed:	12/01/1985
Tank Status:	**Currently in Use**
Date Closed:	Not reported
Tank Capacity:	1000
Substance:	Gasoline

Tank ID:	R-1
Date Installed:	03/13/1956
Tank Status:	**Permanently Out of Use**
Date Closed:	12/11/1989
Tank Capacity:	500
Substance:	Gasoline

Tank ID:	R-1
Date Installed:	Not reported
Tank Status:	**Permanently Out of Use**
Date Closed:	12/06/1990
Tank Capacity:	Not reported
Substance:	Not Listed

Tank ID:	R-2
Date Installed:	Not reported
Tank Status:	**Permanently Out of Use**
Date Closed:	12/06/1990
Tank Capacity:	Not reported
Substance:	Not Listed

PUNAHOU SCHOOL - BARWICK PLAYGROUND (Continued) **U003541737**

Tank ID:	diesel
Date Installed:	12/01/1985
Tank Status:	**Currently in Use**
Date Closed:	Not reported
Tank Capacity:	2000
Substance:	Diesel

HI Financial Assurance:

Alt Facility ID:	9-101653
Tank Id:	87
Tank Status:	Currently in Use
FRTYPE:	Other
Expiration Date:	10/15/2004

Alt Facility ID:	9-101653
Tank Id:	diesel
Tank Status:	Currently in Use
FRTYPE:	Other
Expiration Date:	10/15/2004

Alt Facility ID:	9-101653
Tank Id:	87
Tank Status:	Currently in Use
FRTYPE:	Insurance
Expiration Date:	10/15/2014

Alt Facility ID:	9-101653
Tank Id:	diesel
Tank Status:	Currently in Use
FRTYPE:	Insurance
Expiration Date:	10/15/2014

Count: 20 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
HONOLULU	1000860447	KEWALO BASIN HARBOR	ALA MOANA BLVD	96814	RCRA NonGen / NLR, CA HAZNET
HONOLULU	1015940123	MRC ROOFING, LLC	P.O BOX 17947		FINDS
HONOLULU	1012087683	PACIFIC COMMERICIAL SERVICES, LLC	PO BOX 235117		FINDS
HONOLULU	1012087673	PENDELTON FLOUR MILLS, LLC DBA HAW	PO BOX 1238		FINDS
HONOLULU	1014696910	PACIFIC AVIATION MUSEUM PEARL HARB	S-84 CONTROL TOWER, FORD ISLAN		FINDS
HONOLULU	1006820751	KAKAAKO MAKAI GATEWAY	COOKE ST & ILALO ST	96814	HI SHWS
HONOLULU	1010349165	SUN PACIFIC SERVICES	309 KOKO ISLAND CIRCLE		FINDS
HONOLULU	1008170446	HORIZON LINES, LLC	1811 LELEIONA STREEET		FINDS
HONOLULU	1008011988	INSTITUTE OF PACIFIC ISLANDS	LOT # 1A KAHAKU RD		FINDS
HONOLULU	S111704706	FORMER KAPALAMA MILITARY RESERVATI	N NIMITZ HWY		HI SHWS
HONOLULU	S108008765	CITIZENS ENERGY SERVICES PIER 38	NIMITZ HWY		HI SHWS, HI SPILLS, HI ENG CONTROLS, HI INST CONTROL
HONOLULU	1012140206	PACIFIC HEIGHTS WSI, PART 1	PACIFIC HEIGHTS RD: HAILI RD T		FINDS
HONOLULU	1016301377	HORIZON LINES LLC	PIER 51 A		FINDS
HONOLULU	1016051998	PACIFIC SHIPYARDS INTERNATIONAL	PIER 41 NIMITZ HIGHWAY		FINDS
HONOLULU	1012302702	HONOLULU MARINE, LLC	PIER 27		FINDS
HONOLULU	1008002972	HORIZON LINES, LLC	PIER 51A SAND ISLAND ACCESS RD		FINDS
HONOLULU	1015951188	ALLIED PACIFIC COMPANY OF HAWAII	232 SAND ISLAND PARKWAY RD		FINDS
HONOLULU	1015915592	NOAA PACIFIC REGIONAL CENTER FORD	1845 WASP BOULEVARD		FINDS
MOKULEIA	S106817395	HAWAIIAN BITUMULS PAVING & PRECAST	FARRINGTON HWY	96826	HI SHWS
MOKULEIA	1003879503	HAWAII BITUMULS & PAVING CO.	TMK: 6-6-1: 2, 33 & 36/FARRING	96826	CERC-NFRAP

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 10/25/2013
Date Data Arrived at EDR: 11/11/2013
Date Made Active in Reports: 01/28/2014
Number of Days to Update: 78

Source: EPA
Telephone: N/A
Last EDR Contact: 07/08/2014
Next Scheduled EDR Contact: 10/20/2014
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 10/25/2013
Date Data Arrived at EDR: 11/11/2013
Date Made Active in Reports: 01/28/2014
Number of Days to Update: 78

Source: EPA
Telephone: N/A
Last EDR Contact: 07/08/2014
Next Scheduled EDR Contact: 10/20/2014
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Federal Delisted NPL site list

DELISTED NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 10/25/2013	Source: EPA
Date Data Arrived at EDR: 11/11/2013	Telephone: N/A
Date Made Active in Reports: 01/28/2014	Last EDR Contact: 07/08/2014
Number of Days to Update: 78	Next Scheduled EDR Contact: 10/20/2014
	Data Release Frequency: Quarterly

Federal CERCLIS list

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 10/25/2013	Source: EPA
Date Data Arrived at EDR: 11/11/2013	Telephone: 703-412-9810
Date Made Active in Reports: 02/13/2014	Last EDR Contact: 05/29/2014
Number of Days to Update: 94	Next Scheduled EDR Contact: 09/08/2014
	Data Release Frequency: Quarterly

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 04/01/2014	Source: Environmental Protection Agency
Date Data Arrived at EDR: 07/08/2014	Telephone: 703-603-8704
Date Made Active in Reports: 08/22/2014	Last EDR Contact: 07/08/2014
Number of Days to Update: 45	Next Scheduled EDR Contact: 10/20/2014
	Data Release Frequency: Varies

Federal CERCLIS NFRAP site List

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Date of Government Version: 10/25/2013	Source: EPA
Date Data Arrived at EDR: 11/11/2013	Telephone: 703-412-9810
Date Made Active in Reports: 02/13/2014	Last EDR Contact: 05/29/2014
Number of Days to Update: 94	Next Scheduled EDR Contact: 09/08/2014
	Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 03/11/2014
Date Data Arrived at EDR: 03/13/2014
Date Made Active in Reports: 04/09/2014
Number of Days to Update: 27

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 07/02/2014
Next Scheduled EDR Contact: 10/13/2014
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 03/11/2014
Date Data Arrived at EDR: 03/13/2014
Date Made Active in Reports: 04/09/2014
Number of Days to Update: 27

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 07/02/2014
Next Scheduled EDR Contact: 10/13/2014
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/11/2014
Date Data Arrived at EDR: 03/13/2014
Date Made Active in Reports: 04/09/2014
Number of Days to Update: 27

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 07/02/2014
Next Scheduled EDR Contact: 10/13/2014
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 03/11/2014
Date Data Arrived at EDR: 03/13/2014
Date Made Active in Reports: 04/09/2014
Number of Days to Update: 27

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 07/02/2014
Next Scheduled EDR Contact: 10/13/2014
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/11/2014
Date Data Arrived at EDR: 03/13/2014
Date Made Active in Reports: 04/09/2014
Number of Days to Update: 27

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 07/02/2014
Next Scheduled EDR Contact: 10/13/2014
Data Release Frequency: Varies

Federal institutional controls / engineering controls registries

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 03/19/2014
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 07/15/2014
Number of Days to Update: 116

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 06/05/2014
Next Scheduled EDR Contact: 09/22/2014
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 03/19/2014
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 07/15/2014
Number of Days to Update: 116

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 06/05/2014
Next Scheduled EDR Contact: 09/22/2014
Data Release Frequency: Varies

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 05/28/2014
Date Data Arrived at EDR: 05/30/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 18

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 08/14/2014
Next Scheduled EDR Contact: 12/01/2014
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 09/30/2013
Date Data Arrived at EDR: 10/01/2013
Date Made Active in Reports: 12/06/2013
Number of Days to Update: 66

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 07/03/2014
Next Scheduled EDR Contact: 07/14/2014
Data Release Frequency: Annually

State- and tribal - equivalent CERCLIS

SHWS: Sites List

Facilities, sites or areas in which the Office of Hazard Evaluation and Emergency Response has an interest, has investigated or may investigate under HRS 128D (includes CERCLIS sites).

Date of Government Version: 01/04/2014
Date Data Arrived at EDR: 02/26/2014
Date Made Active in Reports: 03/07/2014
Number of Days to Update: 9

Source: Department of Health
Telephone: 808-586-4249
Last EDR Contact: 05/30/2014
Next Scheduled EDR Contact: 09/08/2014
Data Release Frequency: Semi-Annually

State and tribal landfill and/or solid waste disposal site lists

SWF/LF: Permitted Landfills in the State of Hawaii
Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 09/17/2012
Date Data Arrived at EDR: 04/03/2013
Date Made Active in Reports: 05/10/2013
Number of Days to Update: 37

Source: Department of Health
Telephone: 808-586-4245
Last EDR Contact: 07/03/2014
Next Scheduled EDR Contact: 10/13/2014
Data Release Frequency: Varies

State and tribal leaking storage tank lists

LUST: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 06/30/2014
Date Data Arrived at EDR: 07/01/2014
Date Made Active in Reports: 07/02/2014
Number of Days to Update: 1

Source: Department of Health
Telephone: 808-586-4228
Last EDR Contact: 06/13/2014
Next Scheduled EDR Contact: 09/15/2014
Data Release Frequency: Semi-Annually

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 02/01/2013
Date Data Arrived at EDR: 05/01/2013
Date Made Active in Reports: 11/01/2013
Number of Days to Update: 184

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 08/01/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 08/04/2014
Date Data Arrived at EDR: 08/05/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 17

Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 04/28/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 05/20/2014
Date Data Arrived at EDR: 06/10/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 73

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 04/28/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Quarterly

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 03/01/2013
Date Data Arrived at EDR: 03/01/2013
Date Made Active in Reports: 04/12/2013
Number of Days to Update: 42

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 07/22/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Quarterly

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 08/13/2014
Date Data Arrived at EDR: 08/15/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 7

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 07/22/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Quarterly

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 04/28/2014
Date Data Arrived at EDR: 05/01/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 47

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 04/28/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 05/14/2014
Date Data Arrived at EDR: 05/15/2014
Date Made Active in Reports: 07/15/2014
Number of Days to Update: 61

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 07/22/2014
Next Scheduled EDR Contact: 11/20/2014
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 07/30/2014
Date Data Arrived at EDR: 08/12/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 10

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 04/22/2014
Next Scheduled EDR Contact: 08/11/2014
Data Release Frequency: Semi-Annually

State and tribal registered storage tank lists

UST: Underground Storage Tank Database
Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 06/30/2014
Date Data Arrived at EDR: 07/01/2014
Date Made Active in Reports: 07/02/2014
Number of Days to Update: 1

Source: Department of Health
Telephone: 808-586-4228
Last EDR Contact: 06/13/2014
Next Scheduled EDR Contact: 09/15/2014
Data Release Frequency: Semi-Annually

INDIAN UST R4: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 07/30/2014
Date Data Arrived at EDR: 08/12/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 10

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 04/22/2014
Next Scheduled EDR Contact: 08/11/2014
Data Release Frequency: Semi-Annually

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 05/20/2014
Date Data Arrived at EDR: 06/10/2014
Date Made Active in Reports: 08/15/2014
Number of Days to Update: 66

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 07/22/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Quarterly

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 02/01/2013
Date Data Arrived at EDR: 05/01/2013
Date Made Active in Reports: 01/27/2014
Number of Days to Update: 271

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 08/01/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 08/14/2014
Date Data Arrived at EDR: 08/15/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 7

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 07/22/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Quarterly

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 08/04/2014
Date Data Arrived at EDR: 08/05/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 17

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 04/28/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 07/25/2014
Date Data Arrived at EDR: 07/28/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 25

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 07/22/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Semi-Annually

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 05/28/2014
Date Data Arrived at EDR: 05/01/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 47

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 04/28/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 08/13/2014
Date Data Arrived at EDR: 08/15/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 7

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 07/22/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Quarterly

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 01/01/2010
Date Data Arrived at EDR: 02/16/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 55

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 07/08/2014
Next Scheduled EDR Contact: 10/27/2014
Data Release Frequency: Varies

State and tribal institutional control / engineering control registries

ENG CONTROLS: Engineering Control Sites
A listing of sites with engineering controls in place.

Date of Government Version: 01/04/2014
Date Data Arrived at EDR: 02/26/2014
Date Made Active in Reports: 03/07/2014
Number of Days to Update: 9

Source: Department of Health
Telephone: 404-586-4249
Last EDR Contact: 05/30/2014
Next Scheduled EDR Contact: 09/08/2014
Data Release Frequency: Varies

INST CONTROL: Sites with Institutional Controls
Voluntary Remediation Program and Brownfields sites with institutional controls in place.

Date of Government Version: 01/04/2014
Date Data Arrived at EDR: 02/26/2014
Date Made Active in Reports: 03/07/2014
Number of Days to Update: 9

Source: Department of Health
Telephone: 808-586-4249
Last EDR Contact: 05/30/2014
Next Scheduled EDR Contact: 09/08/2014
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

VCP: Voluntary Response Program Sites
Sites participating in the Voluntary Response Program. The purpose of the VRP is to streamline the cleanup process in a way that will encourage prospective developers, lenders, and purchasers to voluntarily cleanup properties.

Date of Government Version: 01/04/2014
Date Data Arrived at EDR: 02/26/2014
Date Made Active in Reports: 03/07/2014
Number of Days to Update: 9

Source: Department of Health
Telephone: 808-586-4249
Last EDR Contact: 05/30/2014
Next Scheduled EDR Contact: 09/08/2014
Data Release Frequency: Varies

INDIAN VCP R1: Voluntary Cleanup Priority Listing
A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 05/30/2014
Date Data Arrived at EDR: 07/01/2014
Date Made Active in Reports: 08/15/2014
Number of Days to Update: 45

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 07/01/2014
Next Scheduled EDR Contact: 10/13/2014
Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng
A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

State and tribal Brownfields sites

BROWNFIELDS: Brownfields Sites
With certain legal exclusions and additions, the term 'brownfield site' means real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant.

Date of Government Version: 01/04/2014
Date Data Arrived at EDR: 02/26/2014
Date Made Active in Reports: 03/07/2014
Number of Days to Update: 9

Source: Department of Health
Telephone: 808-586-4249
Last EDR Contact: 05/30/2014
Next Scheduled EDR Contact: 09/08/2014
Data Release Frequency: Varies

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites
Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 07/01/2014
Date Data Arrived at EDR: 07/03/2014
Date Made Active in Reports: 07/28/2014
Number of Days to Update: 25

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 07/03/2014
Next Scheduled EDR Contact: 10/06/2014
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

ODI: Open Dump Inventory
An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 07/25/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: No Update Planned

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands
Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 08/01/2014
Next Scheduled EDR Contact: 11/17/2014
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US CDL: Clandestine Drug Labs
A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 05/28/2014
Date Data Arrived at EDR: 06/20/2014
Date Made Active in Reports: 07/15/2014
Number of Days to Update: 25

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 06/04/2014
Next Scheduled EDR Contact: 09/15/2014
Data Release Frequency: Quarterly

CDL: Clandestine Drug Lab Listing
A listing of clandestine drug lab site locations.

Date of Government Version: 08/04/2010
Date Data Arrived at EDR: 09/10/2010
Date Made Active in Reports: 10/22/2010
Number of Days to Update: 42

Source: Department of Health
Telephone: 808-586-4249
Last EDR Contact: 07/30/2014
Next Scheduled EDR Contact: 09/15/2014
Data Release Frequency: Varies

US HIST CDL: National Clandestine Laboratory Register
A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 05/28/2014
Date Data Arrived at EDR: 06/20/2014
Date Made Active in Reports: 07/15/2014
Number of Days to Update: 25

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 06/04/2014
Next Scheduled EDR Contact: 09/15/2014
Data Release Frequency: No Update Planned

Local Land Records

LIENS 2: CERCLA Lien Information
A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 02/18/2014
Date Data Arrived at EDR: 03/18/2014
Date Made Active in Reports: 04/24/2014
Number of Days to Update: 37

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 07/22/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Varies

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System
Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 03/31/2014
Date Data Arrived at EDR: 04/01/2014
Date Made Active in Reports: 07/15/2014
Number of Days to Update: 105

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 07/01/2014
Next Scheduled EDR Contact: 10/13/2014
Data Release Frequency: Annually

SPILLS: Release Notifications
Releases of hazardous substances to the environment reported to the Office of Hazard Evaluation and Emergency Response since 1988.

Date of Government Version: 01/04/2014
Date Data Arrived at EDR: 02/26/2014
Date Made Active in Reports: 03/10/2014
Number of Days to Update: 12

Source: Department of Health
Telephone: 808-586-4249
Last EDR Contact: 05/30/2014
Next Scheduled EDR Contact: 09/08/2014
Data Release Frequency: Varies

SPILLS 90: SPILLS90 data from FirstSearch
Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 03/10/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/11/2013
Number of Days to Update: 39

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators
RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 03/11/2014
Date Data Arrived at EDR: 03/13/2014
Date Made Active in Reports: 04/09/2014
Number of Days to Update: 27

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 07/02/2014
Next Scheduled EDR Contact: 10/13/2014
Data Release Frequency: Varies

DOT OPS: Incident and Accident Data
Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 07/31/2012
Date Data Arrived at EDR: 08/07/2012
Date Made Active in Reports: 09/18/2012
Number of Days to Update: 42

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 08/06/2014
Next Scheduled EDR Contact: 11/17/2014
Data Release Frequency: Varies

DOD: Department of Defense Sites
This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 07/18/2014
Next Scheduled EDR Contact: 10/27/2014
Data Release Frequency: Semi-Annually

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 02/28/2014
Date Made Active in Reports: 04/24/2014
Number of Days to Update: 55

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 06/04/2014
Next Scheduled EDR Contact: 09/22/2014
Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 01/24/2014
Date Made Active in Reports: 02/24/2014
Number of Days to Update: 31

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 06/30/2014
Next Scheduled EDR Contact: 10/13/2014
Data Release Frequency: Varies

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 11/25/2013
Date Data Arrived at EDR: 12/12/2013
Date Made Active in Reports: 02/24/2014
Number of Days to Update: 74

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 06/10/2014
Next Scheduled EDR Contact: 09/22/2014
Data Release Frequency: Annually

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 09/14/2010
Date Data Arrived at EDR: 10/07/2011
Date Made Active in Reports: 03/01/2012
Number of Days to Update: 146

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 08/20/2014
Next Scheduled EDR Contact: 12/08/2014
Data Release Frequency: Varies

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 01/30/2014
Date Data Arrived at EDR: 03/05/2014
Date Made Active in Reports: 07/15/2014
Number of Days to Update: 132

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 06/06/2014
Next Scheduled EDR Contact: 09/15/2014
Data Release Frequency: Semi-Annually

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 07/31/2013
Date Made Active in Reports: 09/13/2013
Number of Days to Update: 44

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 05/30/2014
Next Scheduled EDR Contact: 09/08/2014
Data Release Frequency: Annually

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2006
Date Data Arrived at EDR: 09/29/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 64

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 06/25/2014
Next Scheduled EDR Contact: 10/06/2014
Data Release Frequency: Every 4 Years

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/19/2014
Next Scheduled EDR Contact: 12/08/2014
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/19/2014
Next Scheduled EDR Contact: 12/08/2014
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 12/10/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 77

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 07/22/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 05/06/2014
Date Data Arrived at EDR: 05/16/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 32

Source: Environmental Protection Agency
Telephone: 202-564-5088
Last EDR Contact: 10/09/2014
Next Scheduled EDR Contact: 10/27/2014
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 06/01/2013
Date Data Arrived at EDR: 07/17/2013
Date Made Active in Reports: 11/01/2013
Number of Days to Update: 107

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 07/18/2014
Next Scheduled EDR Contact: 10/27/2014
Data Release Frequency: Annually

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 07/22/2013
Date Data Arrived at EDR: 08/02/2013
Date Made Active in Reports: 11/01/2013
Number of Days to Update: 91

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 06/05/2014
Next Scheduled EDR Contact: 09/22/2014
Data Release Frequency: Quarterly

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/07/2014
Date Data Arrived at EDR: 07/10/2014
Date Made Active in Reports: 07/28/2014
Number of Days to Update: 18

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 07/10/2014
Next Scheduled EDR Contact: 10/20/2014
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 11/18/2013
Date Data Arrived at EDR: 02/27/2014
Date Made Active in Reports: 03/12/2014
Number of Days to Update: 13

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 06/13/2014
Next Scheduled EDR Contact: 09/22/2014
Data Release Frequency: Quarterly

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 05/23/2014
Date Made Active in Reports: 07/28/2014
Number of Days to Update: 66

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 07/22/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 02/26/2013
Date Made Active in Reports: 04/19/2013
Number of Days to Update: 52

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 05/30/2014
Next Scheduled EDR Contact: 09/08/2014
Data Release Frequency: Biennially

UIC: Underground Injection Wells Listing

A listing of underground injection well locations.

Date of Government Version: 02/07/2013
Date Data Arrived at EDR: 02/12/2013
Date Made Active in Reports: 04/09/2013
Number of Days to Update: 56

Source: Department of Health
Telephone: 808-586-4258
Last EDR Contact: 06/02/2014
Next Scheduled EDR Contact: 09/15/2014
Data Release Frequency: Varies

DRYCLEANERS: Permitted Drycleaner Facility Listing
A listing of permitted drycleaner facilities in the state.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 05/09/2014
Date Made Active in Reports: 06/03/2014
Number of Days to Update: 25

Source: Department of Health
Telephone: 808-586-4200
Last EDR Contact: 07/02/2014
Next Scheduled EDR Contact: 10/20/2014
Data Release Frequency: Varies

AIRS: List of Permitted Facilities
A listing of permitted facilities in the state.

Date of Government Version: 07/08/2014
Date Data Arrived at EDR: 07/10/2014
Date Made Active in Reports: 08/08/2014
Number of Days to Update: 29

Source: Department of Health
Telephone: 808-586-4200
Last EDR Contact: 07/02/2014
Next Scheduled EDR Contact: 10/20/2014
Data Release Frequency: Varies

INDIAN RESERV: Indian Reservations
This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 12/08/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 34

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 07/18/2014
Next Scheduled EDR Contact: 10/27/2014
Data Release Frequency: Semi-Annually

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing
The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 03/07/2011
Date Data Arrived at EDR: 03/09/2011
Date Made Active in Reports: 05/02/2011
Number of Days to Update: 54

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 07/25/2014
Next Scheduled EDR Contact: 11/03/2014
Data Release Frequency: Varies

Financial Assurance: Financial Assurance Information Listing
A listing of financial assurance information for underground storage tank facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 06/30/2014
Date Data Arrived at EDR: 07/01/2014
Date Made Active in Reports: 07/02/2014
Number of Days to Update: 1

Source: Department of Health
Telephone: 808-586-4226
Last EDR Contact: 06/13/2014
Next Scheduled EDR Contact: 09/29/2014
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information
All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 06/19/2014
Date Data Arrived at EDR: 06/20/2014
Date Made Active in Reports: 07/28/2014
Number of Days to Update: 38

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 08/14/2014
Next Scheduled EDR Contact: 12/01/2014
Data Release Frequency: Quarterly

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 03/14/2014
Date Data Arrived at EDR: 06/11/2014
Date Made Active in Reports: 07/28/2014
Number of Days to Update: 47

Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 06/11/2014
Next Scheduled EDR Contact: 09/22/2014
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 02/01/2011
Date Data Arrived at EDR: 10/19/2011
Date Made Active in Reports: 01/10/2012
Number of Days to Update: 83

Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 08/01/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Varies

EPA WATCH LIST: EPA WATCH LIST
EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 08/15/2014
Next Scheduled EDR Contact: 11/24/2014
Data Release Frequency: Quarterly

LEAD SMELTER 1: Lead Smelter Sites
A listing of former lead smelter site locations.

Date of Government Version: 06/04/2014
Date Data Arrived at EDR: 06/12/2014
Date Made Active in Reports: 07/28/2014
Number of Days to Update: 46

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 07/01/2014
Next Scheduled EDR Contact: 10/20/2014
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites
A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties
A listing of verified Potentially Responsible Parties

Date of Government Version: 04/15/2013
Date Data Arrived at EDR: 07/03/2013
Date Made Active in Reports: 09/13/2013
Number of Days to Update: 72

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 07/01/2014
Next Scheduled EDR Contact: 10/13/2014
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 11/11/2011
Date Data Arrived at EDR: 05/18/2012
Date Made Active in Reports: 05/25/2012
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 08/15/2014
Next Scheduled EDR Contact: 11/24/2014
Data Release Frequency: Varies

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 07/18/2014
Next Scheduled EDR Contact: 10/27/2014
Data Release Frequency: N/A

COAL ASH DOE: Sleam-Electric Plan Operation Data

A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76

Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 07/18/2014
Next Scheduled EDR Contact: 10/27/2014
Data Release Frequency: Varies

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/23/2013
Date Data Arrived at EDR: 11/06/2013
Date Made Active in Reports: 12/06/2013
Number of Days to Update: 30

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 06/25/2014
Next Scheduled EDR Contact: 10/13/2014
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/23/2013
Date Data Arrived at EDR: 11/06/2013
Date Made Active in Reports: 12/06/2013
Number of Days to Update: 30

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 06/25/2014
Next Scheduled EDR Contact: 10/13/2014
Data Release Frequency: Annually

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR US Hist Auto Stat: EDR Exclusive Historic Gas Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR US Hist Cleaners: EDR Exclusive Historic Dry Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Health in Hawaii.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/03/2014
Number of Days to Update: 186

Source: Department of Health
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LF: Recovered Government Archive Solid Waste Facilities List
The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Health in Hawaii.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/17/2014
Number of Days to Update: 200

Source: Department of Health
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA HWS: Recovered Government Archive State Hazardous Waste Facilities List
The EDR Recovered Government Archive State Hazardous Waste database provides a list of SHWS incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Health in Hawaii.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/08/2014
Number of Days to Update: 191

Source: Department of Health
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

SAM KOO PACIFIC, LLC
1631 AND 1637 KAPIOLANI BOULEVARD
HONOLULU, HI 96814

TARGET PROPERTY COORDINATES

Latitude (North):	21.2911 - 21˚ 17' 27.96''
Longitude (West):	157.8392 - 157˚ 50' 21.12''
Universal Tranverse Mercator:	Zone 4
UTM X (Meters):	620413.1
UTM Y (Meters):	2354669.2
Elevation:	3 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	21157-C7 HONOLULU, HI
Most Recent Revision:	Not reported

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principal investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

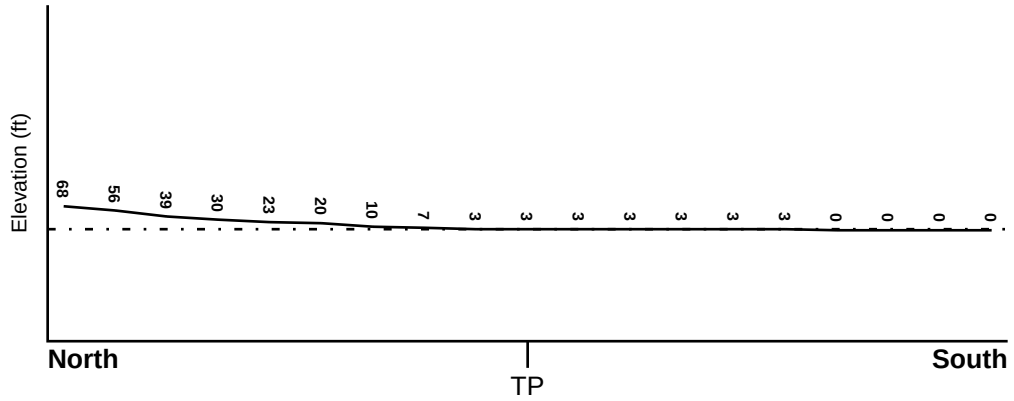
TOPOGRAPHIC INFORMATION

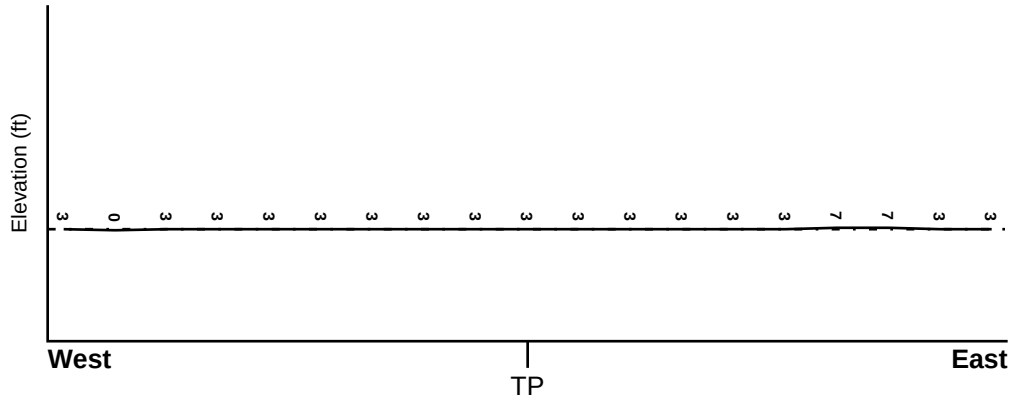
Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

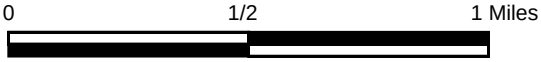
General Topographic Gradient: General South

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES





Target Property Elevation: 3 ft.



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Target Property County	FEMA Flood Electronic Data
HONOLULU, HI	YES - refer to the Overview Map and Detail Map

Flood Plain Panel at Target Property: 15003C - FEMA DFIRM Flood data

Additional Panels in search area: Not Reported

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
HONOLULU	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

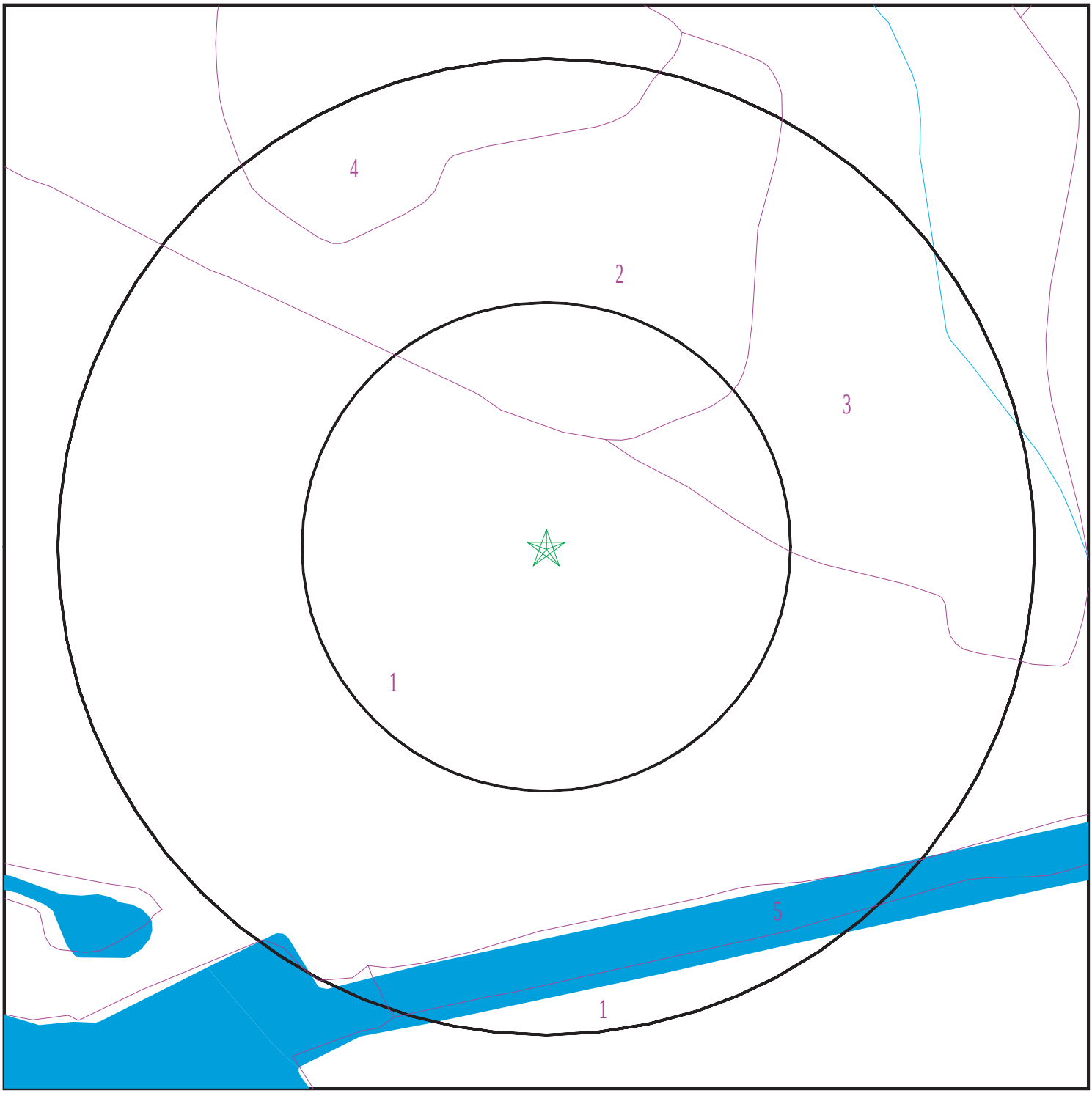
Era:	-
System:	-
Series:	-
Code:	N/A *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: -

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 4046277.2s



Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

SITE NAME:	Sam Koo Pacific, LLC	CLIENT:	Central Planet Repair
ADDRESS:	1631 and 1637 Kapiolani Boulevard Honolulu HI 96814	CONTACT:	Ned Murphy
		INQUIRY #:	4046277.2s
LAT/LONG:	21.2911 / 157.8392	DATE:	August 25, 2014 1:48 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: Fill land, mixed

Soil Surface Texture: gravelly sandy loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 152 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	5 inches	gravelly sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 1.41	Max: 7.3 Min: 6.1
2	5 inches	59 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 1.41	Max: 7.3 Min: 6.1
3	59 inches	70 inches	bedrock	Not reported	Not reported	Max: 0.42 Min: 0.02	Max: Min:

Soil Map ID: 2

Soil Component Name: Ewa

Soil Surface Texture: silty clay loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4.23	Max: 7.3 Min: 6.6
2	7 inches	29 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4.23	Max: 7.3 Min: 6.6
3	29 inches	38 inches	bedrock	Not reported	Not reported	Max: 42 Min: 1	Max: Min:

Soil Map ID: 3

Soil Component Name: Kawaihapai

Soil Surface Texture: clay loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Moderate

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	22 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 42.34 Min: 4.23	Max: 7.3 Min: 6.6
2	22 inches	31 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141.14 Min: 14.11	Max: 7.3 Min: 6.6
3	31 inches	53 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141.14 Min: 14.11	Max: 7.3 Min: 6.6

Soil Map ID: 4

Soil Component Name: Pearl Harbor

Soil Surface Texture: clay

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Poorly drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 30 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	11 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 4.23 Min: 0.42	Max: 7.3 Min: 6.6
2	11 inches	31 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 1.41 Min: 0.01	Max: 8.4 Min: 6.6
3	31 inches	48 inches	muck	A-8	Highly organic soils, Peat.	Max: 0.42 Min: 0.01	Max: 7.8 Min: 7.4

Soil Map ID: 5

Soil Component Name: Water > 40 acres

Soil Surface Texture: clay

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class:
Hydric Status: Unknown

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

No Layer Information available.

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
B5	USGS40000269556	1/4 - 1/2 Mile NNE
C8	USGS40000269561	1/4 - 1/2 Mile NNW
D9	USGS40000269567	1/4 - 1/2 Mile NNE
D10	USGS40000269568	1/4 - 1/2 Mile North
D11	USGS40000269571	1/4 - 1/2 Mile North
E14	USGS40000269572	1/4 - 1/2 Mile North
F16	USGS40000269569	1/4 - 1/2 Mile NNW
G19	USGS40000269559	1/4 - 1/2 Mile NE
H23	USGS40000269497	1/2 - 1 Mile SSE
H24	USGS40000269498	1/2 - 1 Mile SSE
G25	USGS40000269562	1/2 - 1 Mile NE
I28	USGS40000269580	1/2 - 1 Mile NNE
J29	USGS40000269578	1/2 - 1 Mile NNE
L35	USGS40000269555	1/2 - 1 Mile ENE
M37	USGS40000269584	1/2 - 1 Mile NNW
N41	USGS40000269592	1/2 - 1 Mile North
O43	USGS40000269570	1/2 - 1 Mile NE
P44	USGS40000269494	1/2 - 1 Mile SSE
N50	USGS40000269603	1/2 - 1 Mile North
51	USGS40000269490	1/2 - 1 Mile South
Q53	USGS40000269575	1/2 - 1 Mile NE
R55	USGS40000269591	1/2 - 1 Mile NNE
Q57	USGS40000269583	1/2 - 1 Mile NE
Q59	USGS40000269574	1/2 - 1 Mile NE
T60	USGS40000269585	1/2 - 1 Mile NW
U63	USGS40000269566	1/2 - 1 Mile NE
Q65	USGS40000269573	1/2 - 1 Mile NE
V67	USGS40000269607	1/2 - 1 Mile NNE
W69	USGS40000269614	1/2 - 1 Mile NNE
U71	USGS40000269565	1/2 - 1 Mile ENE
S73	USGS40000269590	1/2 - 1 Mile NE
U76	USGS40000269564	1/2 - 1 Mile ENE
X79	USGS40000269632	1/2 - 1 Mile North
Y81	USGS40000269589	1/2 - 1 Mile NE
Y83	USGS40000269587	1/2 - 1 Mile NE
Z84	USGS40000269615	1/2 - 1 Mile NNW
AA87	USGS40000269642	1/2 - 1 Mile North
AB89	USGS40000269619	1/2 - 1 Mile NW
AC90	USGS40000269611	1/2 - 1 Mile NE
AB93	USGS40000269620	1/2 - 1 Mile NW
AD96	USGS40000269602	1/2 - 1 Mile NE

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
AE98	USGS40000269604	1/2 - 1 Mile NW
AE99	USGS40000269605	1/2 - 1 Mile NW
AD100	USGS40000269593	1/2 - 1 Mile NE
AF103	USGS40000269616	1/2 - 1 Mile NW
AG105	USGS40000269530	1/2 - 1 Mile East
AH107	USGS40000269543	1/2 - 1 Mile East
AH108	USGS40000269544	1/2 - 1 Mile East

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
AD95	HI0000324	1/2 - 1 Mile NE

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A1	HI8000000002088	1/8 - 1/4 Mile SW
A2	HI8000000002089	1/8 - 1/4 Mile SW
A3	HI8000000002090	1/8 - 1/4 Mile WSW
4	HI8000000002091	1/8 - 1/4 Mile WSW
B6	HI8000000002117	1/4 - 1/2 Mile NNE
C7	HI8000000002120	1/4 - 1/2 Mile NNW
D12	HI8000000002130	1/4 - 1/2 Mile NNE
D13	HI8000000002134	1/4 - 1/2 Mile North
E15	HI8000000002136	1/4 - 1/2 Mile North
F17	HI8000000002133	1/4 - 1/2 Mile NNW
D18	HI8000000002137	1/4 - 1/2 Mile NNE
G20	HI8000000002123	1/4 - 1/2 Mile NE
H21	HI8000000002053	1/2 - 1 Mile SSE
H22	HI8000000002054	1/2 - 1 Mile SSE
G26	HI8000000002125	1/2 - 1 Mile NE
27	HI8000000002049	1/2 - 1 Mile South
30	HI8000000002099	1/2 - 1 Mile West
I31	HI8000000002146	1/2 - 1 Mile NNE
K32	HI8000000002045	1/2 - 1 Mile South
K33	HI8000000002046	1/2 - 1 Mile South
J34	HI8000000002145	1/2 - 1 Mile NNE
L36	HI8000000002115	1/2 - 1 Mile ENE
M38	HI8000000002148	1/2 - 1 Mile NNW
K39	HI8000000002042	1/2 - 1 Mile South
K40	HI8000000002043	1/2 - 1 Mile South
H42	HI8000000002047	1/2 - 1 Mile SSE
K45	HI8000000002040	1/2 - 1 Mile South
O46	HI8000000002138	1/2 - 1 Mile NE
K47	HI8000000002035	1/2 - 1 Mile South
K48	HI8000000002036	1/2 - 1 Mile South

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
P49	HI8000000002037	1/2 - 1 Mile SSE
N52	HI8000000002170	1/2 - 1 Mile North
Q54	HI8000000002139	1/2 - 1 Mile NE
R56	HI8000000002156	1/2 - 1 Mile NNE
S58	HI8000000002149	1/2 - 1 Mile NE
Q61	HI8000000002140	1/2 - 1 Mile NE
T62	HI8000000002147	1/2 - 1 Mile NW
T64	HI8000000002153	1/2 - 1 Mile NW
U66	HI8000000002131	1/2 - 1 Mile NE
Q68	HI8000000002141	1/2 - 1 Mile NE
V70	HI8000000002181	1/2 - 1 Mile NNE
W72	HI8000000002187	1/2 - 1 Mile NNE
U74	HI8000000002128	1/2 - 1 Mile ENE
S75	HI8000000002157	1/2 - 1 Mile NE
T77	HI8000000002155	1/2 - 1 Mile NW
U78	HI8000000002129	1/2 - 1 Mile ENE
X80	HI8000000002209	1/2 - 1 Mile North
Y82	HI8000000002158	1/2 - 1 Mile NE
Y85	HI8000000002154	1/2 - 1 Mile NE
Z86	HI8000000002188	1/2 - 1 Mile NNW
AA88	HI8000000002222	1/2 - 1 Mile North
AB91	HI8000000002192	1/2 - 1 Mile NW
AC92	HI8000000002183	1/2 - 1 Mile NE
AB94	HI8000000002191	1/2 - 1 Mile NW
AD97	HI8000000002174	1/2 - 1 Mile NE
AE101	HI8000000002169	1/2 - 1 Mile NW
AD102	HI8000000002165	1/2 - 1 Mile NE
AF104	HI8000000002186	1/2 - 1 Mile NW
AG106	HI8000000002092	1/2 - 1 Mile East
AH109	HI8000000002105	1/2 - 1 Mile East
AH110	HI8000000002106	1/2 - 1 Mile East

PHYSICAL SETTING SOURCE MAP - 4046277.2s

County Boundary
Major Roads
Contour Lines
Airports
Earthquake epicenter, Richter 5 or greater
Water Wells
Public Water Supply Wells
Cluster of Multiple Icons

0 1/4 1/2 1 Miles

Groundwater Flow Direction
GI Indeterminate Groundwater Flow at Location
GV Groundwater Flow Varies at Location

N

SITE NAME:	Sam Koo Pacific, LLC	CLIENT:	Central Planet Repair
ADDRESS:	1631 and 1637 Kapiolani Boulevard Honolulu HI 96814	CONTACT:	Ned Murphy
		INQUIRY #:	4046277.2s
LAT/LONG:	21.2911 / 157.8392	DATE:	August 25, 2014 1:48 pm

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Map ID Direction Distance Elevation	Database	EDR ID Number
A1 **SW** **1/8 - 1/4 Mile** **Higher**	**HI WELLS**	**HI8000000002088**

Objectid:	607	Wid:	3-1750-012
Island:	Oahu	Well name:	Yacht Harbor 1
Old name:	Not Reported		
Yr drilled:	1972		
Driller:	Not Reported		
Quad map:	13		
Long83dd:	-157.840833		
Lat83dd:	21.289167		
Gps:	0	Utm:	-1
Owner user:	Yacht Harbor Towers	Old number:	Not Reported
Well type:	Not Reported	Casing dia:	Not Reported
Ground el:	Not Reported		
Well depth:	0		
Solid case:	Not Reported	Perf case:	Not Reported
Use:	IND - Geothermal, Thermoelectric Cooling	Use2:	Power De Not Reported
Init head:	Not Reported	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	18750		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	1800		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	Not Reported		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	Not Reported
Bot solid:	Not Reported	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	2.592		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	(1) 2-3-036:039
Aqui code:	30102		
Latest hd:	Not Reported	Wcr:	30-DEC-99
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002088

A2 **SW** **1/8 - 1/4 Mile** **Higher**	**HI WELLS**	**HI8000000002089**

Objectid:	608	Wid:	3-1750-013
Island:	Oahu	Well name:	Yacht Harbor 2
Old name:	Not Reported		
Yr drilled:	1972		
Driller:	Not Reported		
Quad map:	13		
Long83dd:	-157.840833		
Lat83dd:	21.289167		
Gps:	0	Utm:	-1
Owner user:	Yacht Harbor Towers	Old number:	Not Reported

Well type:	Not Reported	Casing dia:	Not Reported
Ground el:	Not Reported		
Well depth:	0		
Solid case:	Not Reported	Perf case:	Not Reported
Use:	IND - Geothermal, Thermoelectric Cooling	Use year:	Power De Not Reported
Init head:	Not Reported	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	18750		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	1800		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	Not Reported		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	Not Reported
Bot solid:	Not Reported	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	2.592		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	(1) 2-3-036:039
Aqui code:	30102		
Latest hd:	Not Reported	Wcr:	30-DEC-99
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002089

A3
WSW
1/8 - 1/4 Mile
Higher

HI WELLS **HI8000000002090**

Objectid:	605	Wid:	3-1750-010
Island:	Oahu	Well name:	Ala Moana
Old name:	Not Reported		
Yr drilled:	1967		
Driller:	NAT WHITON		
Quad map:	13		
Long83dd:	-157.841944444		
Lat83dd:	21.2894444444		
Gps:	0	Utm:	-1
Owner user:	Ala Moana Ctr	Old number:	63-2A
Well type:	Not Reported	Casing dia:	18
Ground el:	4		
Well depth:	88		
Solid case:	42	Perf case:	Not Reported
Use:	Other	Use year:	Not Reported
Init head:	2.8	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	13954		
Test date:	Not Reported	Test gpm:	600
Test ddown:	0.8	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	Not Reported		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-84
Bot solid:	-38	Bot perf:	Not Reported
Spec capac:	750		
Pump mgd:	0		

Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	(1) 2-3-038:001
Aqui code:	30102		
Latest hd:	Not Reported	Wcr:	01-JAN-67
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002090

4
WSW **HI WELLS** **HI8000000002091**
1/8 - 1/4 Mile
Higher

Objectid:	606	Wid:	3-1750-011
Island:	Oahu	Well name:	Ala Moana
Old name:	Not Reported		
Yr drilled:	1967		
Driller:	NAT WHITON		
Quad map:	13		
Long83dd:	-157.842222222		
Lat83dd:	21.2897222222		
Gps:	0	Utm:	-1
Owner user:	Ala Moana Ctr	Old number:	63-2B
Well type:	Not Reported	Casing dia:	18
Ground el:	5		
Well depth:	55		
Solid case:	37	Perf case:	Not Reported
Use:	Other	Use year:	Not Reported
Init head:	2.9	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	13451		
Test date:	Not Reported	Test gpm:	550
Test ddown:	0.5	Test chlor:	17680
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	Not Reported		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-50
Bot solid:	-32	Bot perf:	Not Reported
Spec capac:	1100		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	(1) 2-3-038:001
Aqui code:	30102		
Latest hd:	Not Reported	Wcr:	01-JAN-67
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002091

B5
NNE **FED USGS** **USGS40000269556**
1/4 - 1/2 Mile
Higher

Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-211754157502301		
Monloc name:	3-1750-01 W61 MCCULY		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.2951692
Longitude:	-157.8369797	Sourcemap scale:	24000
Horiz Acc measure:	5	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	14.00
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	18810101	Welldepth:	475
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

B6
NNE
1/4 - 1/2 Mile
Higher

HI WELLS **HI8000000002117**

Objectid:	596	Wid:	3-1750-001
Island:	Oahu	Well name:	McCully
Old name:	Not Reported		
Yr drilled:	1881		
Driller:	Not Reported		
Quad map:	13		
Long83dd:	-157.836944444		
Lat83dd:	21.2952777778		
Gps:	0	Utm:	-1
Owner user:	C&C Honolulu	Old number:	61-
Well type:	Not Reported	Casing dia:	8
Ground el:	14		
Well depth:	475		
Solid case:	Not Reported	Perf case:	Not Reported
Use:	ABN - Sealed	Use year:	Not Reported
Init head:	29.9	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	42		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	Not Reported		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-461
Bot solid:	Not Reported	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		

Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	Not Reported
Aqui code:	30102		
Latest hd:	Not Reported	Wcr:	30-DEC-99
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002117

C7
NNW
1/4 - 1/2 Mile
Higher

HI WELLS **HI8000000002120**

Objectid:	604	Wid:	3-1750-009
Island:	Oahu	Well name:	Ala Moana
Old name:	Not Reported		
Yr drilled:	1964		
Driller:	NAT WHITON		
Quad map:	13		
Long83dd:	-157.840472		
Lat83dd:	21.295806		
Gps:	0	Utm:	-1
Owner user:	Pagoda Hotel	Old number:	63-1
Well type:	Not Reported	Casing dia:	16
Ground el:	7		
Well depth:	53		
Solid case:	21	Perf case:	Not Reported
Use:	IRR - Landscape/Water Features	Use year:	Not Reported
Init head:	Not Reported	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	0		
Test date:	Not Reported	Test gpm:	550
Test ddown:	2.9	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	Not Reported		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-46
Bot solid:	-14	Bot perf:	Not Reported
Spec capac:	190		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	(1) 2-3-017:016
Aqui code:	30102		
Latest hd:	Not Reported	Wcr:	01-MAR-64
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002120

C8
NNW
1/4 - 1/2 Mile
Higher

FED USGS **USGS40000269561**

Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-211757157503601		
Monloc name:	3-1750-09 W63-1 KAPI		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.2960026
Longitude:	-157.8405908	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	7.00
Vert measure units:	feet	Vertacc measure val:	2
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19640101	Welldepth:	53
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

D9
NNE **FED USGS** **USGS40000269567**
1/4 - 1/2 Mile
Higher

Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-211801157502401		
Monloc name:	3-1850-26 W59 MAKIKI		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.2971135
Longitude:	-157.8372574	Sourcemap scale:	24000
Horiz Acc measure:	5	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	15.00
Vert measure units:	feet	Vertacc measure val:	2
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19100101	Welldepth:	450
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

Map ID Direction Distance Elevation	Database	EDR ID Number
D10 **North** **1/4 - 1/2 Mile** **Higher**	**FED USGS**	**USGS40000269568**

Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-211802157502801		
Monloc name:	3-1850-22 W62 MAKIKI		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.2973913
Longitude:	-157.8383685	Sourcemap scale:	24000
Horiz Acc measure:	5	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	16.00
Vert measure units:	feet	Vertacc measure val:	2
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	18940101	Welldepth:	521
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

D11 **North** **1/4 - 1/2 Mile** **Higher**	**FED USGS**	**USGS40000269571**

Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-211803157502801		
Monloc name:	3-1850-21 W58 MAKIKI		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.2973913
Longitude:	-157.8383685	Sourcemap scale:	24000
Horiz Acc measure:	5	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	20.00
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		

Aquifer type:	Not Reported		
Construction date:	18940101	Welldepth:	409
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

D12
NNE
1/4 - 1/2 Mile
Higher

HI WELLS **HI8000000002130**

Objectid:	724	Wid:	3-1850-026
Island:	Oahu	Well name:	Makiki
Old name:	Not Reported		
Yr drilled:	1910		
Driller:	MCCANDLESS		
Quad map:	13		
Long83dd:	-157.837222222		
Lat83dd:	21.2972222222		
Gps:	0	Utm:	-1
Owner user:	Ii Estate	Old number:	59-
Well type:	Not Reported	Casing dia:	10
Ground el:	15		
Well depth:	450		
Solid case:	356	Perf case:	Not Reported
Use:	ABN - Sealed	Use year:	Not Reported
Init head:	27.7	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	57		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	TKB		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-435
Bot solid:	-341	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	Not Reported
Aqui code:	30102		
Latest hd:	Not Reported	Wcr:	01-JAN-10
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002130

D13
North
1/4 - 1/2 Mile
Higher

HI WELLS **HI8000000002134**

Objectid:	720	Wid:	3-1850-022
Island:	Oahu	Well name:	Makiki
Old name:	Not Reported		
Yr drilled:	1894		
Driller:	AHANA		
Quad map:	13		
Long83dd:	-157.838333333		
Lat83dd:	21.2975		
Gps:	0	Utm:	-1
Owner user:	KS/Bishop Estate	Old number:	62-
Well type:	Not Reported	Casing dia:	8
Ground el:	16		
Well depth:	521		
Solid case:	419	Perf case:	Not Reported
Use:	ABN - Sealed	Use year:	Not Reported
Init head:	27.6	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	61		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	Not Reported		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-505
Bot solid:	-403	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	Not Reported
Aqui code:	30102		
Latest hd:	Not Reported	Wcr:	30-DEC-99
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002134

E14
North
1/4 - 1/2 Mile
Higher

FED USGS **USGS40000269572**

Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-211803157503201		
Monloc name:	3-1850-20 W63 MAKIKI		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.2976691
Longitude:	-157.8394796	Sourcemap scale:	24000
Horiz Acc measure:	5	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	16.00
Vert measure units:	feet	Vertacc measure val:	2
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		

Aquifer type:	Not Reported		
Construction date:	18910101	Welldepth:	437
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

E15
North
1/4 - 1/2 Mile
Higher

HI WELLS **HI8000000002136**

Objectid:	718	Wid:	3-1850-020
Island:	Oahu	Well name:	Makiki
Old name:	Not Reported		
Yr drilled:	1891		
Driller:	MCCANDLESS		
Quad map:	13		
Long83dd:	-157.839444444		
Lat83dd:	21.2977777778		
Gps:	0	Utm:	-1
Owner user:	Plews&Wichman	Old number:	63-
Well type:	Not Reported	Casing dia:	8
Ground el:	16		
Well depth:	437		
Solid case:	377	Perf case:	Not Reported
Use:	ABN - Sealed	Use year:	Not Reported
Init head:	31	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	56		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	Not Reported		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-421
Bot solid:	-361	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	Not Reported
Aqui code:	30102		
Latest hd:	Not Reported	Wcr:	30-DEC-99
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002136

F16
NNW
1/4 - 1/2 Mile
Higher

FED USGS **USGS40000269569**

Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-211802157504201		
Monloc name:	3-1850-27 W75 MAKIKI		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.2973914
Longitude:	-157.8422574	Sourcemap scale:	24000
Horiz Acc measure:	5	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	8.00
Vert measure units:	feet	Vertacc measure val:	2
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19140101	Welldepth:	552
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

F17
NNW
1/4 - 1/2 Mile
Higher

HI WELLS **HI8000000002133**

Objectid:	725	Wid:	3-1850-027
Island:	Oahu	Well name:	Makiki
Old name:	Not Reported		
Yr drilled:	1914		
Driller:	Not Reported		
Quad map:	13		
Long83dd:	-157.842222222		
Lat83dd:	21.2975		
Gps:	0	Utm:	-1
Owner user:	Meadow Gold	Old number:	75-
Well type:	Not Reported	Casing dia:	10
Ground el:	8		
Well depth:	552		
Solid case:	486	Perf case:	Not Reported
Use:	ABN - Sealed	Use year:	Not Reported
Init head:	27	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	75		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	Not Reported		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-544
Bot solid:	-478	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		

Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	Not Reported
Aqui code:	30102		
Latest hd:	Not Reported	Wcr:	01-JAN-14
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002133

D18
NNE
1/4 - 1/2 Mile
Higher

HI WELLS **HI8000000002137**

Objectid:	719	Wid:	3-1850-021
Island:	Oahu	Well name:	Makiki
Old name:	Not Reported		
Yr drilled:	1894		
Driller:	MCCANDLESS		
Quad map:	13		
Long83dd:	-157.836944444		
Lat83dd:	21.2977777778		
Gps:	0	Utm:	-1
Owner user:	Honolulu BWS	Old number:	58-
Well type:	Not Reported	Casing dia:	8
Ground el:	20		
Well depth:	409		
Solid case:	312	Perf case:	Not Reported
Use:	ABN - Sealed	Use year:	Not Reported
Init head:	29.8	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	62		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	Not Reported		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-389
Bot solid:	-292	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	Not Reported
Aqui code:	30102		
Latest hd:	Not Reported	Wcr:	30-DEC-99
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002137

G19
NE
1/4 - 1/2 Mile
Higher

FED USGS **USGS40000269559**

Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-211756157501001		
Monloc name:	3-1750-03 W46 MCCULY		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.2957246
Longitude:	-157.8333685	Sourcemap scale:	24000
Horiz Acc measure:	5	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	10.00
Vert measure units:	feet	Vertacc measure val:	2
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	18900101	Welldepth:	374
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

G20
NE
1/4 - 1/2 Mile
Higher

HI WELLS **HI8000000002123**

Objectid:	598	Wid:	3-1750-003
Island:	Oahu	Well name:	McCully
Old name:	Not Reported		
Yr drilled:	1890		
Driller:	Not Reported		
Quad map:	13		
Long83dd:	-157.833333333		
Lat83dd:	21.2958333333		
Gps:	0	Utm:	-1
Owner user:	Not Reported	Old number:	Not Reported
Well type:	Not Reported	Casing dia:	8
Ground el:	10		
Well depth:	374		
Solid case:	340	Perf case:	Not Reported
Use:	ABN - Sealed	Use year:	Not Reported
Init head:	28.2	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	0		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	Not Reported		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-364
Bot solid:	-330	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		

Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	Not Reported
Aqui code:	30102		
Latest hd:	Not Reported	Wcr:	30-DEC-99
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002123

H21
SSE
1/2 - 1 Mile
Higher

HI WELLS **HI8000000002053**

Objectid:	602	Wid:	3-1750-007
Island:	Oahu	Well name:	Waikiki
Old name:	Not Reported		
Yr drilled:	1955		
Driller:	SAMSON-SMOCK		
Quad map:	13		
Long83dd:	-157.836666667		
Lat83dd:	21.2838888889		
Gps:	0	Utm:	-1
Owner user:	Hilton Hotel	Old number:	30-1
Well type:	Not Reported	Casing dia:	8
Ground el:	Not Reported		
Well depth:	120		
Solid case:	98	Perf case:	Not Reported
Use:	UNU - Unused	Use year:	Not Reported
Init head:	Not Reported	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	0		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	Not Reported		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	Not Reported
Bot solid:	Not Reported	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	(1) 2-6-009:009
Aqui code:	30101		
Latest hd:	Not Reported	Wcr:	01-JAN-55
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002053

H22
SSE
1/2 - 1 Mile
Higher

HI WELLS **HI8000000002054**

Objectid:	603	Wid:	3-1750-008
Island:	Oahu	Well name:	Waikiki
Old name:	Not Reported		
Yr drilled:	1955		
Driller:	Not Reported		
Quad map:	13		
Long83dd:	-157.836666667		
Lat83dd:	21.2838888889		
Gps:	0	Utm:	-1
Owner user:	Not Reported	Old number:	Not Reported
Well type:	Not Reported	Casing dia:	8
Ground el:	Not Reported		
Well depth:	90		
Solid case:	42	Perf case:	Not Reported
Use:	UNU - Unused	Use year:	Not Reported
Init head:	Not Reported	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	0		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	Not Reported		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	Not Reported
Bot solid:	Not Reported	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	Not Reported
Aqui code:	30102		
Latest hd:	Not Reported	Wcr:	30-DEC-99
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002054

H23
SSE **FED USGS** **USGS40000269497**
1/2 - 1 Mile
Higher

Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-211713157502201		
Monloc name:	3-1750-07 W30-1 DERU		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.283781
Longitude:	-157.8367022	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	3.00
Vert measure units:	feet	Vertacc measure val:	2
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		

Aquifer type:	Not Reported		
Construction date:	19551107	Welldepth:	120
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

H24
SSE **FED USGS** **USGS40000269498**
1/2 - 1 Mile
Higher

Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-211713157502202		
Monloc name:	3-1750-08 W30-2 DERU		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.283781
Longitude:	-157.8367022	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	3.00
Vert measure units:	feet	Vertacc measure val:	2
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19551107	Welldepth:	90
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

G25
NE **FED USGS** **USGS40000269562**
1/2 - 1 Mile
Higher

Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-211758157500901		
Monloc name:	3-1750-05 W50 MCCULY		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.2962801
Longitude:	-157.8330907	Sourcemap scale:	24000
Horiz Acc measure:	5	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	15.00
Vert measure units:	feet	Vertacc measure val:	1
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		

Aquifer type:	Not Reported		
Construction date:	19530801	Welldepth:	154
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1953-08-01	12.00	

G26
NE
1/2 - 1 Mile
Higher

HI WELLS **HI8000000002125**

Objectid:	600	Wid:	3-1750-005
Island:	Oahu	Well name:	McCully
Old name:	Not Reported		
Yr drilled:	1953		
Driller:	Not Reported		
Quad map:	13		
Long83dd:	-157.833055556		
Lat83dd:	21.2963888889		
Gps:	0	Utm:	-1
Owner user:	Not Reported	Old number:	Not Reported
Well type:	Not Reported	Casing dia:	8
Ground el:	Not Reported		
Well depth:	154		
Solid case:	70	Perf case:	Not Reported
Use:	UNU - Unused	Use year:	Not Reported
Init head:	Not Reported	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	0		
Test date:	Not Reported	Test gpm:	50
Test ddown:	8	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	Not Reported		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	Not Reported
Bot solid:	Not Reported	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	Not Reported
Aqui code:	30102		
Latest hd:	Not Reported	Wcr:	30-DEC-99
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002125

27
South
1/2 - 1 Mile
Higher

HI WELLS **HI8000000002049**

Objectid:	609	Wid:	3-1750-014
Island:	Oahu	Well name:	Hilton Lagoon
Old name:	Not Reported		
Yr drilled:	2003		
Driller:	BEYLIK DRLG		
Quad map:	13		
Long83dd:	-157.838333333		
Lat83dd:	21.2830555556		
Gps:	0	Utm:	-1
Owner user:	Hilton Hotels Corp.	Old number:	Not Reported
Well type:	PER	Casing dia:	14
Ground el:	Not Reported		
Well depth:	400		
Solid case:	29	Perf case:	Not Reported
Use:	UNU - Unused	Use year:	Not Reported
Init head:	Not Reported	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	18000		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	PLS		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	Not Reported
Bot solid:	Not Reported	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	(1) 2-6-009:010
Aqui code:	30101		
Latest hd:	Not Reported	Wcr:	30-DEC-99
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002049

I28
NNE
1/2 - 1 Mile
Higher

FED USGS **USGS40000269580**

Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-211807157502001		
Monloc name:	3-1850-05 W57 MAKIKI		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.2987801
Longitude:	-157.8361462	Sourcemap scale:	24000
Horiz Acc measure:	5	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	28.00
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		

Aquifer type:	Not Reported		
Construction date:	18820101	Welldepth:	310
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

J29
NNE
1/2 - 1 Mile
Higher

FED USGS **USGS40000269578**

Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-211805157501501		
Monloc name:	3-1850-18 W56 MAKIKI		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.2982245
Longitude:	-157.8347573	Sourcemap scale:	24000
Horiz Acc measure:	5	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	29.00
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	18900101	Welldepth:	383
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

30
West
1/2 - 1 Mile
Higher

HI WELLS **HI8000000002099**

Objectid:	620	Wid:	3-1751-004
Island:	Oahu	Well name:	Ala Moana
Old name:	Not Reported		
Yr drilled:	1967		
Driller:	NAT WHITON		
Quad map:	13		
Long83dd:	-157.848055556		
Lat83dd:	21.2913888889		
Gps:	0	Utm:	-1
Owner user:	1350 Ala Moana	Old number:	76-1
Well type:	Not Reported	Casing dia:	Not Reported
Ground el:	5		
Well depth:	0		
Solid case:	Not Reported	Perf case:	Not Reported
Use:	Other	Use year:	Not Reported
Init head:	Not Reported	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	0		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported

Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	RF		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	Not Reported
Bot solid:	Not Reported	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	(1) 2-3-006:001
Aqui code:	30102		
Latest hd:	Not Reported	Wcr:	01-JAN-67
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002099

I31
NNE
1/2 - 1 Mile
Higher

HI WELLS **HI8000000002146**

Objectid:	703	Wid:	3-1850-005
Island:	Oahu	Well name:	Makiki
Old name:	Not Reported		
Yr drilled:	1882		
Driller:	FESSLER		
Quad map:	13		
Long83dd:	-157.836111111		
Lat83dd:	21.2988888889		
Gps:	0	Utm:	-1
Owner user:	Rawlins M F	Old number:	57-
Well type:	Not Reported	Casing dia:	5
Ground el:	28		
Well depth:	310		
Solid case:	237	Perf case:	Not Reported
Use:	ABN - Sealed	Use year:	Not Reported
Init head:	29.7	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	61		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	Not Reported		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-282
Bot solid:	-209	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	(1) 3-9-010:001
Aqui code:	30102		
Latest hd:	Not Reported	Wcr:	30-DEC-99
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002146

Map ID Direction Distance Elevation	Database	EDR ID Number
K32 **South** **1/2 - 1 Mile** **Higher**	**HI WELLS**	**HI8000000002045**

Objectid:	610	Wid:	3-1750-015
Island:	Oahu	Well name:	HHV 1
Old name:	Not Reported		
Yr drilled:	2005		
Driller:	Not Reported		
Quad map:	13		
Long83dd:	-157.84		
Lat83dd:	21.2827777778		
Gps:	-1	Utm:	0
Owner user:	Not Reported	Old number:	Not Reported
Well type:	PER	Casing dia:	16
Ground el:	Not Reported		
Well depth:	205		
Solid case:	87	Perf case:	Not Reported
Use:	UNU - Unused	Use year:	Not Reported
Init head:	Not Reported	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	0		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	PLS		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	Not Reported
Bot solid:	Not Reported	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	(1) 2-3-037:012
Aqui code:	30101		
Latest hd:	Not Reported	Wcr:	03-JUN-05
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002045

K33 **South** **1/2 - 1 Mile** **Higher**	**HI WELLS**	**HI8000000002046**

Objectid:	611	Wid:	3-1750-016
Island:	Oahu	Well name:	HHV 2
Old name:	Not Reported		
Yr drilled:	2005		
Driller:	Not Reported		
Quad map:	13		
Long83dd:	-157.84		
Lat83dd:	21.2827777778		
Gps:	-1	Utm:	0
Owner user:	Not Reported	Old number:	Not Reported

Well type:	PER	Casing dia:	16
Ground el:	Not Reported		
Well depth:	250		
Solid case:	83	Perf case:	Not Reported
Use:	UNU - Unused	Use year:	Not Reported
Init head:	Not Reported	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	0		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	PLS		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	Not Reported
Bot solid:	Not Reported	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	(1) 2-3-037:012
Aqui code:	30101		
Latest hd:	Not Reported	Wcr:	03-JUN-05
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002046

J34
NNE **HI WELLS** **HI8000000002145**
1/2 - 1 Mile
Higher

Objectid:	716	Wid:	3-1850-018
Island:	Oahu	Well name:	Makiki
Old name:	Not Reported		
Yr drilled:	1890		
Driller:	Not Reported		
Quad map:	13		
Long83dd:	-157.834722222		
Lat83dd:	21.2983333333		
Gps:	0	Utm:	-1
Owner user:	Tanner J	Old number:	56-
Well type:	Not Reported	Casing dia:	8
Ground el:	29		
Well depth:	383		
Solid case:	Not Reported	Perf case:	Not Reported
Use:	ABN - Sealed	Use year:	Not Reported
Init head:	26.4	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	0		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	Not Reported		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-354
Bot solid:	Not Reported	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		

Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	Not Reported
Aqui code:	30102		
Latest hd:	Not Reported	Wcr:	30-DEC-99
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002145

L35
ENE
1/2 - 1 Mile
Higher

FED USGS **USGS40000269555**

Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-211753157500201		
Monloc name:	3-1750-02 W45 MCCULY		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.2948913
Longitude:	-157.8311463	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	8.00
Vert measure units:	feet	Vertacc measure val:	2
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	18900101	Welldepth:	416
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

L36
ENE
1/2 - 1 Mile
Higher

HI WELLS **HI8000000002115**

Objectid:	597	Wid:	3-1750-002
Island:	Oahu	Well name:	McCully
Old name:	Not Reported		
Yr drilled:	1890		
Driller:	Not Reported		
Quad map:	13		
Long83dd:	-157.831111111		
Lat83dd:	21.295		
Gps:	0	Utm:	-1
Owner user:	Not Reported	Old number:	Not Reported

Well type:	Not Reported	Casing dia:	6
Ground el:	9		
Well depth:	416		
Solid case:	363	Perf case:	Not Reported
Use:	ABN - Sealed	Use year:	Not Reported
Init head:	29.6	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	75		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	Not Reported		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-407
Bot solid:	-354	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	Not Reported
Aqui code:	30102		
Latest hd:	Not Reported	Wcr:	30-DEC-99
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002115

M37
NNW
1/2 - 1 Mile
Higher

FED USGS **USGS40000269584**

Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-211808157504301		
Monloc name:	3-1850-15 W76 MAKIKI		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.299058
Longitude:	-157.8425352	Sourcemap scale:	24000
Horiz Acc measure:	5	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	17.00
Vert measure units:	feet	Vertacc measure val:	2
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	18840101	Welldepth:	656
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

Map ID Direction Distance Elevation	Database	EDR ID Number
M38 **NNW** **1/2 - 1 Mile** **Higher**	**HI WELLS**	**HI8000000002148**

Objectid:	713	Wid:	3-1850-015
Island:	Oahu	Well name:	Makiki
Old name:	Not Reported		
Yr drilled:	1884		
Driller:	MCCANDLESS		
Quad map:	13		
Long83dd:	-157.8425		
Lat83dd:	21.2991666667		
Gps:	0	Utm:	-1
Owner user:	Wilcox G N	Old number:	76-
Well type:	Not Reported	Casing dia:	6
Ground el:	17		
Well depth:	656		
Solid case:	455	Perf case:	Not Reported
Use:	ABN - Sealed	Use year:	Not Reported
Init head:	19	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	0		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	TKB		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-639
Bot solid:	-438	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	Not Reported
Aqui code:	30102		
Latest hd:	Not Reported	Wcr:	30-DEC-99
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002148

K39 **South** **1/2 - 1 Mile** **Higher**	**HI WELLS**	**HI8000000002042**

Objectid:	612	Wid:	3-1750-017
Island:	Oahu	Well name:	HHV 3
Old name:	Not Reported		
Yr drilled:	2005		
Driller:	Not Reported		
Quad map:	13		
Long83dd:	-157.840277778		
Lat83dd:	21.2825		
Gps:	-1	Utm:	0
Owner user:	Not Reported	Old number:	Not Reported

Well type:	PER	Casing dia:	16
Ground el:	Not Reported		
Well depth:	250		
Solid case:	97	Perf case:	Not Reported
Use:	UNU - Unused	Use year:	Not Reported
Init head:	Not Reported	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	0		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	PLS		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	Not Reported
Bot solid:	Not Reported	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	(1) 2-3-037:012
Aqui code:	30101		
Latest hd:	Not Reported	Wcr:	03-JUN-05
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002042

K40
South
1/2 - 1 Mile
Higher

HI WELLS **HI8000000002043**

Objectid:	613	Wid:	3-1750-018
Island:	Oahu	Well name:	HHV 4
Old name:	Not Reported		
Yr drilled:	2005		
Driller:	Not Reported		
Quad map:	13		
Long83dd:	-157.840277778		
Lat83dd:	21.2825		
Gps:	-1	Utm:	0
Owner user:	Not Reported	Old number:	Not Reported
Well type:	PER	Casing dia:	16
Ground el:	Not Reported		
Well depth:	255		
Solid case:	82	Perf case:	Not Reported
Use:	UNU - Unused	Use year:	Not Reported
Init head:	Not Reported	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	0		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	PLS		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	Not Reported
Bot solid:	Not Reported	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		

Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	(1) 2-3-037:012
Aqui code:	30101		
Latest hd:	Not Reported	Wcr:	03-JUN-05
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002043

N41
North
1/2 - 1 Mile
Higher

FED USGS **USGS40000269592**

Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-211811157503201		
Monloc name:	3-1850-28 W74-1 MAKI		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.2998912
Longitude:	-157.8394796	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	20.00
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19380101	Welldepth:	71
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

H42
SSE
1/2 - 1 Mile
Higher

HI WELLS **HI8000000002047**

Objectid:	601	Wid:	3-1750-006
Island:	Oahu	Well name:	Waikiki
Old name:	Not Reported		
Yr drilled:	1955		
Driller:	SAMSON-SMOCK		
Quad map:	13		
Long83dd:	-157.836111111		
Lat83dd:	21.2827777778		
Gps:	0	Utm:	-1
Owner user:	Hilton Hotel	Old number:	30-

Well type:	Not Reported	Casing dia:	8
Ground el:	Not Reported		
Well depth:	122		
Solid case:	93	Perf case:	Not Reported
Use:	UNU - Unused	Use year:	Not Reported
Init head:	Not Reported	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	0		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	Not Reported		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	Not Reported
Bot solid:	Not Reported	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	(1) 2-6-008:034
Aqui code:	30101		
Latest hd:	Not Reported	Wcr:	01-JAN-55
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002047

O43
NE
1/2 - 1 Mile
Higher

FED USGS **USGS40000269570**

Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-211803157500801		
Monloc name:	3-1850-02 W51 MAKIKI		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.2976689
Longitude:	-157.8328129	Sourcemap scale:	24000
Horiz Acc measure:	5	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	25.00
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	18800101	Welldepth:	475
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

Map ID Direction Distance Elevation	Database	EDR ID Number
P44 **SSE** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS40000269494**

Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-211709157502001		
Monloc name:	3-1750-06 W30 DERUSY		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.28267
Longitude:	-157.8361467	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	5.00
Vert measure units:	feet	Vertacc measure val:	2
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19550607	Welldepth:	122
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

K45 **South** **1/2 - 1 Mile** **Higher**	**HI WELLS**	**HI8000000002040**

Objectid:	614	Wid:	3-1750-019
Island:	Oahu	Well name:	HHV 5
Old name:	Not Reported		
Yr drilled:	2005		
Driller:	Not Reported		
Quad map:	13		
Long83dd:	-157.840277778		
Lat83dd:	21.2822222222		
Gps:	-1	Utm:	0
Owner user:	Not Reported	Old number:	Not Reported
Well type:	PER	Casing dia:	16
Ground el:	Not Reported		
Well depth:	260		
Solid case:	83	Perf case:	Not Reported
Use:	UNU - Unused	Use year:	Not Reported
Init head:	Not Reported	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	0		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported

Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	PLS		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	Not Reported
Bot solid:	Not Reported	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	(1) 2-3-037:012
Aqui code:	30101		
Latest hd:	Not Reported	Wcr:	03-JUN-05
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002040

O46
NE
1/2 - 1 Mile
Higher

HI WELLS **HI8000000002138**

Objectid:	700	Wid:	3-1850-002
Island:	Oahu	Well name:	Makiki
Old name:	Not Reported		
Yr drilled:	1880		
Driller:	PIERCE		
Quad map:	13		
Long83dd:	-157.832777778		
Lat83dd:	21.2977777778		
Gps:	0	Utm:	-1
Owner user:	KS/Bishop Trust	Old number:	51-
Well type:	Not Reported	Casing dia:	5
Ground el:	25		
Well depth:	475		
Solid case:	347	Perf case:	Not Reported
Use:	ABN - Sealed	Use year:	Not Reported
Init head:	29.8	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	51		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	TKB		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-450
Bot solid:	-322	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	(1) 3-9-010:001
Aqui code:	30102		
Latest hd:	Not Reported	Wcr:	30-DEC-99
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002138

Map ID Direction Distance Elevation	Database	EDR ID Number
K47 **South** **1/2 - 1 Mile** **Higher**	**HI WELLS**	**HI8000000002035**

Objectid:	615	Wid:	3-1750-020
Island:	Oahu	Well name:	HHV 6
Old name:	Not Reported		
Yr drilled:	2005		
Driller:	Not Reported		
Quad map:	13		
Long83dd:	-157.840277778		
Lat83dd:	21.2819444444		
Gps:	-1	Utm:	0
Owner user:	Not Reported	Old number:	Not Reported
Well type:	PER	Casing dia:	16
Ground el:	Not Reported		
Well depth:	205		
Solid case:	87	Perf case:	Not Reported
Use:	UNU - Unused	Use year:	Not Reported
Init head:	Not Reported	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	0		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	PLS		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	Not Reported
Bot solid:	Not Reported	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	(1) 2-3-037:012
Aqui code:	30101		
Latest hd:	Not Reported	Wcr:	03-JUN-05
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002035

K48 **South** **1/2 - 1 Mile** **Higher**	**HI WELLS**	**HI8000000002036**

Objectid:	616	Wid:	3-1750-021
Island:	Oahu	Well name:	HHV 7
Old name:	Not Reported		
Yr drilled:	2005		
Driller:	Not Reported		
Quad map:	13		
Long83dd:	-157.840277778		
Lat83dd:	21.2819444444		
Gps:	-1	Utm:	0
Owner user:	Not Reported	Old number:	Not Reported

Well type:	PER	Casing dia:	16
Ground el:	Not Reported		
Well depth:	250		
Solid case:	82	Perf case:	Not Reported
Use:	UNU - Unused	Use year:	Not Reported
Init head:	Not Reported	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	0		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	PLS		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	Not Reported
Bot solid:	Not Reported	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	(1) 2-3-037:012
Aqui code:	30101		
Latest hd:	Not Reported	Wcr:	03-JUN-05
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002036

P49
SSE **HI WELLS** **HI8000000002037**
1/2 - 1 Mile
Higher

Objectid:	599	Wid:	3-1750-004
Island:	Oahu	Well name:	Waikiki
Old name:	Not Reported		
Yr drilled:	1950		
Driller:	SAMSON-SMOCK		
Quad map:	13		
Long83dd:	-157.837222222		
Lat83dd:	21.2819444444		
Gps:	0	Utm:	-1
Owner user:	Niumalu Hotel	Old number:	30-3
Well type:	Not Reported	Casing dia:	10
Ground el:	Not Reported		
Well depth:	62		
Solid case:	61	Perf case:	Not Reported
Use:	UNU - Unused	Use year:	Not Reported
Init head:	Not Reported	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	0		
Test date:	Not Reported	Test gpm:	230
Test ddown:	1	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	Not Reported		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	Not Reported
Bot solid:	Not Reported	Bot perf:	Not Reported
Spec capac:	230		
Pump mgd:	0		

Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	(1) 2-6-008:034
Aqui code:	30101		
Latest hd:	Not Reported	Wcr:	01-JAN-50
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002037

N50
North
1/2 - 1 Mile
Higher

FED USGS **USGS40000269603**

Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-211813157503101		
Monloc name:	3-1850-16 W74 MAKIKI		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.3004467
Longitude:	-157.8392018	Sourcemap scale:	24000
Horiz Acc measure:	5	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	22.00
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	18860101	Welldepth:	442
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

51
South
1/2 - 1 Mile
Higher

FED USGS **USGS40000269490**

Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-211706157502401		
Monloc name:	3-1750-04 W30-3		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.2818367
Longitude:	-157.8372579	Sourcemap scale:	24000

Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	3.00
Vert measure units:	feet	Vertacc measure val:	1
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19500501	Welldepth:	62
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1950-05-01	3.00	

N52
North
1/2 - 1 Mile
Higher

HI WELLS **HI8000000002170**

Objectid:	714	Wid:	3-1850-016
Island:	Oahu	Well name:	Makiki
Old name:	Not Reported		
Yr drilled:	1886		
Driller:	Not Reported		
Quad map:	13		
Long83dd:	-157.839166667		
Lat83dd:	21.3005555556		
Gps:	0	Utm:	-1
Owner user:	C&C Honolulu	Old number:	74-
Well type:	Not Reported	Casing dia:	6
Ground el:	22		
Well depth:	442		
Solid case:	400	Perf case:	Not Reported
Use:	ABN - Sealed	Use year:	Not Reported
Init head:	25.8	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	53		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	Not Reported		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-420
Bot solid:	-378	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		

Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	Not Reported
Aqui code:	30102		
Latest hd:	Not Reported	Wcr:	30-DEC-99
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002170

Q53
NE
1/2 - 1 Mile
Higher

FED USGS **USGS40000269575**

Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-211804157500301		
Monloc name:	3-1850-10 W49 MAKIKI		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.2979467
Longitude:	-157.831424	Sourcemap scale:	24000
Horiz Acc measure:	5	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	28.00
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	18830101	Welldepth:	281
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

Q54
NE
1/2 - 1 Mile
Higher

HI WELLS **HI8000000002139**

Objectid:	708	Wid:	3-1850-010
Island:	Oahu	Well name:	Makiki
Old name:	Not Reported		
Yr drilled:	1883		
Driller:	Not Reported		
Quad map:	13		
Long83dd:	-157.831388889		
Lat83dd:	21.2980555556		
Gps:	0	Utm:	-1
Owner user:	Yap Lin	Old number:	49-

Well type:	Not Reported	Casing dia:	6
Ground el:	28		
Well depth:	281		
Solid case:	234	Perf case:	Not Reported
Use:	ABN - Sealed	Use year:	Not Reported
Init head:	30.3	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	0		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	Not Reported		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-253
Bot solid:	-206	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	Not Reported
Aqui code:	30102		
Latest hd:	Not Reported	Wcr:	30-DEC-99
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002139

R55
NNE
1/2 - 1 Mile
Higher

FED USGS **USGS40000269591**

Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-211810157501001		
Monloc name:	3-1850-04 W55 MAKIKI		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.2996133
Longitude:	-157.8333684	Sourcemap scale:	24000
Horiz Acc measure:	5	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	36.00
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	18820101	Welldepth:	300
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

Map ID Direction Distance Elevation	Database	EDR ID Number
R56 **NNE** **1/2 - 1 Mile** **Higher**	**HI WELLS**	**HI8000000002156**

Objectid:	702	Wid:	3-1850-004
Island:	Oahu	Well name:	Makiki
Old name:	Not Reported		
Yr drilled:	1882		
Driller:	PIERCE		
Quad map:	13		
Long83dd:	-157.833333333		
Lat83dd:	21.2997222222		
Gps:	0	Utm:	-1
Owner user:	Dillingham B	Old number:	55-
Well type:	Not Reported	Casing dia:	6
Ground el:	36		
Well depth:	300		
Solid case:	Not Reported	Perf case:	Not Reported
Use:	ABN - Sealed	Use year:	Not Reported
Init head:	30	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	0		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	TKB		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-264
Bot solid:	Not Reported	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	(1) 3-9-010:001
Aqui code:	30102		
Latest hd:	Not Reported	Wcr:	30-DEC-99
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002156

Q57 **NE** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS40000269583**

Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-211808157500501		
Monloc name:	3-1850-11 W53 MAKIKI		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.2990577
Longitude:	-157.8319795	Sourcemap scale:	24000

Horiz Acc measure:	5	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	36.00
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	18830101	Welldepth:	310
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

S58
NE
1/2 - 1 Mile
Higher

HI WELLS **HI8000000002149**

Objectid:	709	Wid:	3-1850-011
Island:	Oahu	Well name:	Makiki
Old name:	Not Reported		
Yr drilled:	1882		
Driller:	Not Reported		
Quad map:	13		
Long83dd:	-157.831944444		
Lat83dd:	21.2991666667		
Gps:	0	Utm:	-1
Owner user:	Dillingham W	Old number:	53-
Well type:	Not Reported	Casing dia:	6
Ground el:	36		
Well depth:	310		
Solid case:	267	Perf case:	Not Reported
Use:	ABN - Sealed	Use year:	Not Reported
Init head:	24.1	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	0		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	TKB		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-274
Bot solid:	-231	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	Not Reported
Aqui code:	30102		
Latest hd:	Not Reported	Wcr:	30-DEC-99
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002149

Map ID Direction Distance Elevation	Database	EDR ID Number
Q59 **NE** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS40000269574**

Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-211804157500001		
Monloc name:	3-1850-12 W47 MAKIKI		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.2979466
Longitude:	-157.8305906	Sourcemap scale:	24000
Horiz Acc measure:	5	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	25.00
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	18840101	Welldepth:	311
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

T60 **NW** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS40000269585**

Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-211808157505801		
Monloc name:	3-1850-09 W77 MAKIKI		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.2990581
Longitude:	-157.8467019	Sourcemap scale:	24000
Horiz Acc measure:	5	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	6.00
Vert measure units:	feet	Vertacc measure val:	2
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		

Aquifer type:	Not Reported		
Construction date:	18820101	Welldepth:	620
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

Q61
NE
1/2 - 1 Mile
Higher

HI WELLS **HI8000000002140**

Objectid:	710	Wid:	3-1850-012
Island:	Oahu	Well name:	Makiki
Old name:	Not Reported		
Yr drilled:	1884		
Driller:	Not Reported		
Quad map:	13		
Long83dd:	-157.830555556		
Lat83dd:	21.2980555556		
Gps:	0	Utm:	-1
Owner user:	Howard M	Old number:	47-
Well type:	Not Reported	Casing dia:	6
Ground el:	25		
Well depth:	311		
Solid case:	305	Perf case:	Not Reported
Use:	ABN - Sealed	Use year:	Not Reported
Init head:	30.7	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	60		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	Not Reported		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-286
Bot solid:	-280	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	Not Reported
Aqui code:	30102		
Latest hd:	Not Reported	Wcr:	30-DEC-99
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002140

T62
NW
1/2 - 1 Mile
Higher

HI WELLS **HI8000000002147**

Objectid:	707	Wid:	3-1850-009
Island:	Oahu	Well name:	Makiki
Old name:	Not Reported		
Yr drilled:	1882		
Driller:	COOKE-PEDDLER		
Quad map:	13		
Long83dd:	-157.846666667		
Lat83dd:	21.2991666667		
Gps:	0	Utm:	-1
Owner user:	State Of Hawaii	Old number:	77-
Well type:	Not Reported	Casing dia:	6
Ground el:	6		
Well depth:	620		
Solid case:	Not Reported	Perf case:	Not Reported
Use:	ABN - Sealed	Use year:	Not Reported
Init head:	29.6	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	62		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	Not Reported		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-614
Bot solid:	Not Reported	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	Not Reported
Aqui code:	30102		
Latest hd:	Not Reported	Wcr:	30-DEC-99
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002147

U63
NE
1/2 - 1 Mile
Higher

FED USGS **USGS40000269566**

Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-211801157495701		
Monloc name:	3-1849-08 W44 MAKIKI		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.2971133
Longitude:	-157.8297573	Sourcemap scale:	24000
Horiz Acc measure:	5	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	20.00
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		

Aquifer type:	Not Reported		
Construction date:	18940101	Welldepth:	397
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

T64
NW
1/2 - 1 Mile
Higher

HI WELLS **HI8000000002153**

Objectid:	727	Wid:	3-1850-029
Island:	Oahu	Well name:	Mckinley Aqua 2
Old name:	Not Reported		
Yr drilled:	1993		
Driller:	ROSCOE MOSS		
Quad map:	13		
Long83dd:	-157.846388889		
Lat83dd:	21.2994444444		
Gps:	0	Utm:	-1
Owner user:	Mckinley H S	Old number:	Not Reported
Well type:	Not Reported	Casing dia:	8
Ground el:	10		
Well depth:	65		
Solid case:	45	Perf case:	65
Use:	AGR - Aquatic Plants and Animals	Use year:	Not Reported
Init head:	Not Reported	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	0		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	Not Reported		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-55
Bot solid:	-35	Bot perf:	-55
Spec capac:	Not Reported		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	(1) 2-3-009:001
Aqui code:	30102		
Latest hd:	Not Reported	Wcr:	17-AUG-93
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002153

Q65
NE
1/2 - 1 Mile
Higher

FED USGS **USGS40000269573**

Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-211804157495901		
Monloc name:	3-1849-02 W48 MAKIKI		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.2979466
Longitude:	-157.8303129	Sourcemap scale:	24000
Horiz Acc measure:	5	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	25.00
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	18810101	Welldepth:	358
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1881-01-01	-42.00	

U66
NE
1/2 - 1 Mile
Higher

HI WELLS **HI8000000002131**

Objectid:	690	Wid:	3-1849-008
Island:	Oahu	Well name:	Manoa Valley
Old name:	Not Reported		
Yr drilled:	1894		
Driller:	Not Reported		
Quad map:	13		
Long83dd:	-157.829722222		
Lat83dd:	21.2972222222		
Gps:	0	Utm:	-1
Owner user:	Chinn J T	Old number:	44-
Well type:	Not Reported	Casing dia:	8
Ground el:	20		
Well depth:	397		
Solid case:	337	Perf case:	Not Reported
Use:	ABN - Sealed	Use year:	Not Reported
Init head:	30.8	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	56		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported

Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	Not Reported		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-377
Bot solid:	-317	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	Not Reported
Aqui code:	30102		
Latest hd:	Not Reported	Wcr:	30-DEC-99
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002131

V67
NNE
1/2 - 1 Mile
Higher

FED USGS **USGS40000269607**

Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-211815157501401		
Monloc name:	3-1850-06 W64 MAKIKI		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.3010021
Longitude:	-157.8344795	Sourcemap scale:	24000
Horiz Acc measure:	5	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	47.00
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	18820101	Welldepth:	419
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

Q68
NE
1/2 - 1 Mile
Higher

HI WELLS **HI8000000002141**

Objectid:	684	Wid:	3-1849-002
Island:	Oahu	Well name:	Manoa Valley
Old name:	Not Reported		
Yr drilled:	1881		
Driller:	FESSLER		
Quad map:	13		
Long83dd:	-157.830277778		
Lat83dd:	21.2980555556		
Gps:	0	Utm:	-1
Owner user:	Howard M	Old number:	48-
Well type:	Not Reported	Casing dia:	8
Ground el:	25		
Well depth:	358		
Solid case:	306	Perf case:	Not Reported
Use:	ABN - Sealed	Use year:	Not Reported
Init head:	30	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	51		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	Not Reported		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-333
Bot solid:	-281	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	Not Reported
Aqui code:	30102		
Latest hd:	Not Reported	Wcr:	30-DEC-99
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002141

W69
NNE
1/2 - 1 Mile
Higher

FED USGS **USGS40000269614**

Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-211817157501901		
Monloc name:	3-1850-19 W65 MAKIKI		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.3015577
Longitude:	-157.8358684	Sourcemap scale:	24000
Horiz Acc measure:	5	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	41.00
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		

Aquifer type:	Not Reported		
Construction date:	18900101	Welldepth:	277
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

V70
NNE
1/2 - 1 Mile
Higher

HI WELLS **HI8000000002181**

Objectid:	704	Wid:	3-1850-006
Island:	Oahu	Well name:	Makiki
Old name:	Not Reported		
Yr drilled:	1882		
Driller:	Not Reported		
Quad map:	13		
Long83dd:	-157.834444444		
Lat83dd:	21.3011111111		
Gps:	0	Utm:	-1
Owner user:	Dowsett J M	Old number:	64-
Well type:	Not Reported	Casing dia:	4
Ground el:	47		
Well depth:	419		
Solid case:	177	Perf case:	Not Reported
Use:	ABN - Sealed	Use year:	Not Reported
Init head:	27.5	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	0		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	Not Reported		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-372
Bot solid:	-130	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	(1) 3-9-010:001
Aqui code:	30102		
Latest hd:	Not Reported	Wcr:	30-DEC-99
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002181

U71
ENE
1/2 - 1 Mile
Higher

FED USGS **USGS40000269565**

Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-211800157495501		
Monloc name:	3-1849-07 W43 MAKIKI		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.2968355
Longitude:	-157.8292018	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	18.00
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	18910701	Welldepth:	Not Reported
Welldepth units:	Not Reported	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

W72
NNE
1/2 - 1 Mile
Higher

HI WELLS **HI8000000002187**

Objectid:	717	Wid:	3-1850-019
Island:	Oahu	Well name:	Makiki
Old name:	Not Reported		
Yr drilled:	1890		
Driller:	Not Reported		
Quad map:	13		
Long83dd:	-157.835833333		
Lat83dd:	21.3016666667		
Gps:	0	Utm:	-1
Owner user:	Jodo Mission	Old number:	65-
Well type:	Not Reported	Casing dia:	10
Ground el:	41		
Well depth:	277		
Solid case:	220	Perf case:	Not Reported
Use:	ABN - Sealed	Use year:	Not Reported
Init head:	30.6	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	0		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	Not Reported		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-236
Bot solid:	-179	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		

Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	Not Reported
Aqui code:	30102		
Latest hd:	Not Reported	Wcr:	30-DEC-99
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002187

S73
NE
1/2 - 1 Mile
Higher

FED USGS **USGS40000269590**

Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-211810157500401		
Monloc name:	3-1850-14 W54 MAKIKI		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.2996132
Longitude:	-157.8317017	Sourcemap scale:	24000
Horiz Acc measure:	5	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	40.00
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	18840101	Welldepth:	271
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

U74
ENE
1/2 - 1 Mile
Higher

HI WELLS **HI8000000002128**

Objectid:	689	Wid:	3-1849-007
Island:	Oahu	Well name:	Manoa Valley
Old name:	Not Reported		
Yr drilled:	1891		
Driller:	MCCANDLESS		
Quad map:	13		
Long83dd:	-157.829166667		
Lat83dd:	21.2969444444		
Gps:	0	Utm:	-1
Owner user:	Land Proc Serv	Old number:	43-

Well type:	Not Reported	Casing dia:	8
Ground el:	18		
Well depth:	0		
Solid case:	Not Reported	Perf case:	Not Reported
Use:	UNU - Unused	Use year:	Not Reported
Init head:	30	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	55		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	36	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	Not Reported		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	Not Reported
Bot solid:	Not Reported	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	(1) 2-8-009:078
Aqui code:	30102		
Latest hd:	Not Reported	Wcr:	30-DEC-99
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002128

S75
NE
1/2 - 1 Mile
Higher

HI WELLS **HI8000000002157**

Objectid:	712	Wid:	3-1850-014
Island:	Oahu	Well name:	Makiki
Old name:	Not Reported		
Yr drilled:	1884		
Driller:	Not Reported		
Quad map:	13		
Long83dd:	-157.831666667		
Lat83dd:	21.2997222222		
Gps:	0	Utm:	-1
Owner user:	King R	Old number:	54-
Well type:	Not Reported	Casing dia:	6
Ground el:	40		
Well depth:	271		
Solid case:	240	Perf case:	Not Reported
Use:	ABN - Sealed	Use year:	Not Reported
Init head:	30.8	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	0		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	TKB		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-231
Bot solid:	-200	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		

Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	Not Reported
Aqui code:	30102		
Latest hd:	Not Reported	Wcr:	30-DEC-99
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002157

U76
ENE **FED USGS** **USGS40000269564**
1/2 - 1 Mile
Higher

Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-211800157495401		
Monloc name:	3-1849-06 W42 MAKIKI		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.2968355
Longitude:	-157.828924	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	17.00
Vert measure units:	feet	Vertacc measure val:	2
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	18910101	Welldepth:	160
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

T77
NW **HI WELLS** **HI8000000002155**
1/2 - 1 Mile
Higher

Objectid:	726	Wid:	3-1850-028
Island:	Oahu	Well name:	Mckinley Aqua 1
Old name:	Not Reported		
Yr drilled:	1990		
Driller:	PR DRILLING		
Quad map:	13		
Long83dd:	-157.846944444		
Lat83dd:	21.2997222222		
Gps:	0	Utm:	-1
Owner user:	Mckinley H S	Old number:	Not Reported

Well type:	ROT	Casing dia:	4
Ground el:	Not Reported		
Well depth:	35		
Solid case:	10	Perf case:	20
Use:	AGR - Aquatic Plants and Animals	Use year:	Not Reported
Init head:	Not Reported	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	0		
Test date:	7/9/1990	Test gpm:	50
Test ddown:	4.5	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	Not Reported		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	Not Reported
Bot solid:	Not Reported	Bot perf:	Not Reported
Spec capac:	11		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	(1) 2-3-009:001
Aqui code:	30102		
Latest hd:	Not Reported	Wcr:	10-JUL-90
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002155

U78
ENE
1/2 - 1 Mile
Higher

HI WELLS **HI8000000002129**

Objectid:	688	Wid:	3-1849-006
Island:	Oahu	Well name:	Manoa Valley
Old name:	Not Reported		
Yr drilled:	1891		
Driller:	MCCANDLESS		
Quad map:	13		
Long83dd:	-157.828888889		
Lat83dd:	21.2969444444		
Gps:	0	Utm:	-1
Owner user:	Ching S S	Old number:	42-
Well type:	Not Reported	Casing dia:	8
Ground el:	17		
Well depth:	160		
Solid case:	Not Reported	Perf case:	Not Reported
Use:	UNU - Unused	Use year:	Not Reported
Init head:	30.6	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	54		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	36	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	Not Reported		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-143
Bot solid:	Not Reported	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		

Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	(1) 2-8-009:080
Aqui code:	30102		
Latest hd:	Not Reported	Wcr:	30-DEC-99
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002129

X79
North
1/2 - 1 Mile
Higher

FED USGS **USGS40000269632**

Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-211821157503501		
Monloc name:	3-1850-08 W73 MAKIKI		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.3026689
Longitude:	-157.8403128	Sourcemap scale:	24000
Horiz Acc measure:	5	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	34.00
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	18820101	Welldepth:	358
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

X80
North
1/2 - 1 Mile
Higher

HI WELLS **HI8000000002209**

Objectid:	706	Wid:	3-1850-008
Island:	Oahu	Well name:	Makiki
Old name:	Not Reported		
Yr drilled:	1882		
Driller:	MCCANDLESS		
Quad map:	13		
Long83dd:	-157.840277778		
Lat83dd:	21.3027777778		
Gps:	0	Utm:	-1
Owner user:	Bank Of Haw	Old number:	73-

Well type:	Not Reported	Casing dia:	7
Ground el:	34		
Well depth:	358		
Solid case:	Not Reported	Perf case:	Not Reported
Use:	ABN - Sealed	Use year:	Not Reported
Init head:	11.8	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	0		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	TKB		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-324
Bot solid:	Not Reported	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	Not Reported
Aqui code:	30102		
Latest hd:	Not Reported	Wcr:	30-DEC-99
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002209

Y81
NE
1/2 - 1 Mile
Higher

FED USGS **USGS40000269589**

Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-211810157500001		
Monloc name:	3-1850-13 W52 MAKIKI		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.2996132
Longitude:	-157.8305906	Sourcemap scale:	24000
Horiz Acc measure:	5	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	37.00
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	18840101	Welldepth:	357
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

Map ID Direction Distance Elevation	Database	EDR ID Number
Y82 **NE** **1/2 - 1 Mile** **Higher**	**HI WELLS**	**HI8000000002158**

Objectid:	711	Wid:	3-1850-013
Island:	Oahu	Well name:	Makiki
Old name:	Not Reported		
Yr drilled:	1884		
Driller:	Not Reported		
Quad map:	13		
Long83dd:	-157.830555556		
Lat83dd:	21.2997222222		
Gps:	0	Utm:	-1
Owner user:	Villada J M	Old number:	52-
Well type:	Not Reported	Casing dia:	6
Ground el:	37		
Well depth:	357		
Solid case:	254	Perf case:	Not Reported
Use:	ABN - Sealed	Use year:	Not Reported
Init head:	42.9	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	54		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	Not Reported		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-320
Bot solid:	-217	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	Not Reported
Aqui code:	30102		
Latest hd:	Not Reported	Wcr:	30-DEC-99
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002158

Y83 **NE** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS40000269587**

Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-211809157495801		
Monloc name:	3-1849-04 W41 MAKIKI		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.2993354
Longitude:	-157.830035	Sourcemap scale:	24000

Horiz Acc measure:	5	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	30.00
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	18850101	Welldepth:	260
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1885-06-01	-42.00	

Z84
NNW
1/2 - 1 Mile
Higher

FED USGS **USGS40000269615**

Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-211817157505301		
Monloc name:	3-1850-17 W78 MAKIKI		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.3015579
Longitude:	-157.8453129	Sourcemap scale:	24000
Horiz Acc measure:	5	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	16.00
Vert measure units:	feet	Vertacc measure val:	2
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	18870101	Welldepth:	510
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

Y85
NE
1/2 - 1 Mile
Higher

HI WELLS **HI8000000002154**

Objectid:	686	Wid:	3-1849-004
Island:	Oahu	Well name:	Manoa Valley
Old name:	Not Reported		
Yr drilled:	1885		
Driller:	Not Reported		
Quad map:	13		
Long83dd:	-157.83		
Lat83dd:	21.2994444444		
Gps:	0	Utm:	-1
Owner user:	Soon T Y	Old number:	41-
Well type:	Not Reported	Casing dia:	6
Ground el:	30		
Well depth:	260		
Solid case:	181	Perf case:	Not Reported
Use:	ABN - Sealed	Use year:	Not Reported
Init head:	42	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	52		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	TKB		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-230
Bot solid:	-151	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	Not Reported
Aqui code:	30102		
Latest hd:	Not Reported	Wcr:	30-DEC-99
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002154

Z86
NNW
1/2 - 1 Mile
Higher

HI WELLS **HI8000000002188**

Objectid:	715	Wid:	3-1850-017
Island:	Oahu	Well name:	Makiki
Old name:	Not Reported		
Yr drilled:	1887		
Driller:	Not Reported		
Quad map:	13		
Long83dd:	-157.845278		
Lat83dd:	21.301667		
Gps:	0	Utm:	-1
Owner user:	HECO	Old number:	78-
Well type:	Not Reported	Casing dia:	8
Ground el:	16		
Well depth:	510		
Solid case:	Not Reported	Perf case:	Not Reported
Use:	ABN - Sealed	Use year:	Not Reported
Init head:	27.6	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	63		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported

Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	Not Reported		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-494
Bot solid:	Not Reported	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	Not Reported
Aqui code:	30102		
Latest hd:	Not Reported	Wcr:	30-DEC-99
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002188

AA87
North
1/2 - 1 Mile
Higher

FED USGS **USGS40000269642**

Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-211826157503501		
Monloc name:	3-1850-07 W72 MAKIKI		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.3040577
Longitude:	-157.8403128	Sourcemap scale:	24000
Horiz Acc measure:	5	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	37.00
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	18820101	Welldepth:	375
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

AA88
North
1/2 - 1 Mile
Higher

HI WELLS **HI8000000002222**

Objectid:	705	Wid:	3-1850-007
Island:	Oahu	Well name:	Makiki
Old name:	Not Reported		
Yr drilled:	1882		
Driller:	FESSLER		
Quad map:	13		
Long83dd:	-157.840277778		
Lat83dd:	21.3041666667		
Gps:	0	Utm:	-1
Owner user:	Babcock	Old number:	72-
Well type:	Not Reported	Casing dia:	7
Ground el:	37		
Well depth:	375		
Solid case:	Not Reported	Perf case:	Not Reported
Use:	ABN - Sealed	Use year:	Not Reported
Init head:	42	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	0		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	TKB		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-338
Bot solid:	Not Reported	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	(1) 3-9-010:001
Aqui code:	30102		
Latest hd:	Not Reported	Wcr:	30-DEC-99
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002222

AB89
NW
1/2 - 1 Mile
Higher

FED USGS **USGS40000269619**

Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-211818157510101		
Monloc name:	3-1851-06 W79 DWNTN		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.3018357
Longitude:	-157.847535	Sourcemap scale:	24000
Horiz Acc measure:	5	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	17.00
Vert measure units:	feet	Vertacc measure val:	2
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		

Aquifer type:	Not Reported		
Construction date:	18840101	Welldepth:	503
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

AC90
NE
1/2 - 1 Mile
Higher

FED USGS **USGS40000269611**

Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-211816157495801		
Monloc name:	3-1849-05 W39 MAKIKI		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.3012798
Longitude:	-157.830035	Sourcemap scale:	24000
Horiz Acc measure:	5	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	48.00
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	18890101	Welldepth:	213
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

AB91
NW
1/2 - 1 Mile
Higher

HI WELLS **HI8000000002192**

Objectid:	734	Wid:	3-1851-006
Island:	Oahu	Well name:	Young St
Old name:	Not Reported		
Yr drilled:	1883		
Driller:	Not Reported		
Quad map:	13		
Long83dd:	-157.8475		
Lat83dd:	21.3019444444		
Gps:	0	Utm:	-1
Owner user:	Vida Villa	Old number:	79-
Well type:	Not Reported	Casing dia:	6
Ground el:	17		
Well depth:	503		
Solid case:	234	Perf case:	Not Reported
Use:	ABN - Sealed	Use year:	Not Reported
Init head:	19.2	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	0		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported

Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	TKB		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-486
Bot solid:	-217	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	Not Reported
Aqui code:	30102		
Latest hd:	Not Reported	Wcr:	30-DEC-99
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002192

AC92
NE
1/2 - 1 Mile
Higher

HI WELLS **HI8000000002183**

Objectid:	687	Wid:	3-1849-005
Island:	Oahu	Well name:	Manoa Valley
Old name:	Not Reported		
Yr drilled:	1889		
Driller:	Not Reported		
Quad map:	13		
Long83dd:	-157.83		
Lat83dd:	21.3013888889		
Gps:	0	Utm:	-1
Owner user:	Punahou Sch	Old number:	39-
Well type:	Not Reported	Casing dia:	6
Ground el:	48		
Well depth:	213		
Solid case:	172	Perf case:	Not Reported
Use:	ABN - Sealed	Use year:	Not Reported
Init head:	35.8	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	55		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	Not Reported		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-165
Bot solid:	-124	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	Not Reported
Aqui code:	30102		
Latest hd:	Not Reported	Wcr:	30-DEC-99
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002183

Map ID Direction Distance Elevation	Database	EDR ID Number
AB93 **NW** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS40000269620**

Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-211818157510301		
Monloc name:	3-1851-28 W81 DWNTN		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.3018358
Longitude:	-157.8480907	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	18.00
Vert measure units:	feet	Vertacc measure val:	.5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19130101	Welldepth:	505
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1916-09-18	-12.26	

AB94 **NW** **1/2 - 1 Mile** **Higher**	**HI WELLS**	**HI8000000002191**

Objectid:	756	Wid:	3-1851-028
Island:	Oahu	Well name:	Young St
Old name:	Not Reported		
Yr drilled:	1913		
Driller:	MCCANDLESS		
Quad map:	13		
Long83dd:	-157.848055556		
Lat83dd:	21.3019444444		
Gps:	0	Utm:	-1
Owner user:	Med Arts Bldg	Old number:	Not Reported
Well type:	Not Reported	Casing dia:	8
Ground el:	18		
Well depth:	505		
Solid case:	476	Perf case:	Not Reported
Use:	UNU - Unused	Use year:	Not Reported
Init head:	30.3	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	41		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported

Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	36	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	Not Reported		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-487
Bot solid:	-458	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	(1) 2-4-002:006
Aqui code:	30102		
Latest hd:	Not Reported	Wcr:	01-JAN-13
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002191

AD95
NE **FRDS PWS** **HI0000324**
1/2 - 1 Mile
Higher

PWS ID:	HI0000324		
Date Initiated:	Not Reported	Date Deactivated:	Not Reported
PWS Name:	PUNAHOU SCHOOL 1601 PUNAHOU ST. HONOLULU, OAHU, HI 96822		
Addressee / Facility:	System Owner/Responsible Party MR. WILLIAM METZGER PUNAHOU SCHOOL 1601 PUNAHOU STREET HONOLULU, HI 96822		
Facility Latitude:	21 18 13.0000	Facility Longitude:	157 49 52.0000
City Served:	HONOLULU		
Treatment Class:	Treated	Population:	4000

PWS currently has or had major violation(s) or enforcement: YES

VIOLATIONS INFORMATION:

Violation ID:	9400001	Source ID:	001	PWS Phone:	Not Reported
Vio. beginning Date:	04/01/94	Vio. end Date:	04/30/94	Vio. Period:	001 Months
Num required Samples:	Not Reported	Number of Samples Taken:		Not Reported	
Analysis Result:	Not Reported	Maximum Contaminant Level:		Not Reported	
Analysis Method:	Not Reported				
Violation Type:	MCL, Monthly (TCR)				
Contaminant:	COLIFORM (TCR)				
Vio. Awareness Date:	041594				

ENFORCEMENT INFORMATION:

Truedate:	03/31/2009	Pwsid:	HI0000324
Pwsname:	PUNAHOU SCHOOL		
Retpopsrvd:	4000	Pwstypecod:	NTNC
Vioid:	107	Contaminant:	COLIFORM (TCR)
Viol. Type:	MCL, Monthly (TCR)		
Complperbe:	1/1/2007 0:00:00		
Complperen:	1/31/2007 0:00:00	Enfdate:	1/26/2007 0:00:00
Enf action:	State Violation/Reminder Notice		
Violmeasur:	Not Reported		

Truedate:	03/31/2009	Pwsid:	HI0000324
Pwsname:	PUNAHOU SCHOOL		
Retpopsrvd:	4000	Pwstypecod:	NTNC
Vioid:	107	Contaminant:	COLIFORM (TCR)
Viol. Type:	MCL, Monthly (TCR)		
Complperbe:	1/1/2007 0:00:00		
Complperen:	1/31/2007 0:00:00	Enfdate:	2/6/2007 0:00:00
Enf action:	State Public Notif Received		
Violmeasur:	Not Reported		

Truedate:	03/31/2009	Pwsid:	HI0000324
Pwsname:	PUNAHOU SCHOOL		
Retpopsrvd:	4000	Pwstypecod:	NTNC
Vioid:	107	Contaminant:	COLIFORM (TCR)
Viol. Type:	MCL, Monthly (TCR)		
Complperbe:	1/1/2007 0:00:00		
Complperen:	1/31/2007 0:00:00	Enfdate:	1/26/2007 0:00:00
Enf action:	State Public Notif Requested		
Violmeasur:	Not Reported		

System Name:	PUNAHOU SCHOOL		
Violation Type:	MCL, Monthly (TCR)		
Contaminant:	COLIFORM (TCR)		
Compliance Period:	1994-04-01 - 1994-04-30		
Violation ID:	9400001		
Enforcement Date:	1994-05-18	Enf. Action:	State Violation/Reminder Notice

System Name:	PUNAHOU SCHOOL		
Violation Type:	MCL, Monthly (TCR)		
Contaminant:	COLIFORM (TCR)		
Compliance Period:	1994-04-01 - 1994-04-30		
Violation ID:	9400001		
Enforcement Date:	1994-05-18	Enf. Action:	State Public Notif Requested

System Name:	PUNAHOU SCHOOL		
Violation Type:	MCL, Monthly (TCR)		
Contaminant:	COLIFORM (TCR)		
Compliance Period:	1994-04-01 - 1994-04-30		
Violation ID:	9400001		
Enforcement Date:	1994-05-25	Enf. Action:	State Public Notif Issued

CONTACT INFORMATION:

Name:	PUNAHOU SCHOOL	Population:	4000
Contact:	SCOTT, JAMES	Phone:	808-944-5811
Address:	Punahou School		
Address 2:	1601 Punahou Street HONOLULU, HI 96822		

AD96
NE
1/2 - 1 Mile
Higher

FED USGS **USGS40000269602**

Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-211813157495201		
Monloc name:	3-1849-10 W37 MAKIKI		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.3004465
Longitude:	-157.8283683	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	44.00
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19091101	Welldepth:	302
Welldepth units:	ft	Wellholedepth:	315
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

AD97
NE
1/2 - 1 Mile
Higher

HI WELLS **HI8000000002174**

Objectid:	692	Wid:	3-1849-010
Island:	Oahu	Well name:	Punahou
Old name:	Not Reported		
Yr drilled:	1909		
Driller:	MCCANDLESS		
Quad map:	13		
Long83dd:	-157.828333		
Lat83dd:	21.300556		
Gps:	0	Utm:	-1
Owner user:	Punahou High School	Old number:	37-
Well type:	Not Reported	Casing dia:	8
Ground el:	36		
Well depth:	315		
Solid case:	195	Perf case:	Not Reported
Use:	DOMN - Schools	Use year:	Not Reported
Init head:	29.1	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	48		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	TKB		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-279
Bot solid:	-159	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		

Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	(1) 2-8-018:001
Aqui code:	30102		
Latest hd:	Not Reported	Wcr:	01-JAN-09
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002174

AE98
NW
1/2 - 1 Mile
Higher

FED USGS **USGS40000269604**

Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-211813157511101		
Monloc name:	3-1851-63 W82-2B DWN		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.300447
Longitude:	-157.8503128	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	5.00
Vert measure units:	feet	Vertacc measure val:	2
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19670701	Welldepth:	Not Reported
Welldepth units:	Not Reported	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

AE99
NW
1/2 - 1 Mile
Higher

FED USGS **USGS40000269605**

Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-211813157511102		
Monloc name:	3-1851-62 W82-2A DWN		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.300447
Longitude:	-157.8503128	Sourcemap scale:	24000

Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	5.00
Vert measure units:	feet	Vertacc measure val:	2
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19670714	Welldepth:	65
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

AD100
NE
1/2 - 1 Mile
Higher

FED USGS **USGS40000269593**

Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-211812157495001		
Monloc name:	3-1849-01 W38 MAKIKI		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.3001687
Longitude:	-157.8278128	Sourcemap scale:	24000
Horiz Acc measure:	5	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	37.00
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	18800101	Welldepth:	295
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

AE101
NW
1/2 - 1 Mile
Higher

HI WELLS **HI8000000002169**

Objectid:	790	Wid:	3-1851-062
Island:	Oahu	Well name:	Nbc
Old name:	Not Reported		
Yr drilled:	1967		
Driller:	NAT WHITON		
Quad map:	13		
Long83dd:	-157.850277778		
Lat83dd:	21.3005555556		
Gps:	0	Utm:	-1
Owner user:	C&C Pks&Rec	Old number:	Not Reported

Well type:	Not Reported	Casing dia:	16
Ground el:	Not Reported		
Well depth:	65		
Solid case:	14	Perf case:	Not Reported
Use:	IRR - Landscape/Water Features	Use year:	Not Reported
Init head:	Not Reported	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	376		
Test date:	Not Reported	Test gpm:	600
Test ddown:	1.9	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	700		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	Not Reported		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	Not Reported
Bot solid:	Not Reported	Bot perf:	Not Reported
Spec capac:	316		
Pump mgd:	1.008		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	(1) 2-3-008:001
Aqui code:	30102		
Latest hd:	Not Reported	Wcr:	14-JUL-67
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002169

AD102
NE
1/2 - 1 Mile
Higher

HI WELLS **HI8000000002165**

Objectid:	683	Wid:	3-1849-001
Island:	Oahu	Well name:	Manoa Valley
Old name:	Not Reported		
Yr drilled:	1880		
Driller:	PIERCE		
Quad map:	13		
Long83dd:	-157.827777778		
Lat83dd:	21.3002777778		
Gps:	0	Utm:	-1
Owner user:	Marques E M	Old number:	38-
Well type:	Not Reported	Casing dia:	3
Ground el:	37		
Well depth:	295		
Solid case:	273	Perf case:	Not Reported
Use:	ABN - Sealed	Use year:	Not Reported
Init head:	43.5	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	49		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	TKB		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-258
Bot solid:	-236	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		

Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	Not Reported
Aqui code:	30102		
Latest hd:	Not Reported	Wcr:	30-DEC-99
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002165

AF103
NW
1/2 - 1 Mile
Higher

FED USGS **USGS40000269616**

Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-211817157510801		
Monloc name:	3-1851-01 W82 DWNTN		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.301558
Longitude:	-157.8494795	Sourcemap scale:	24000
Horiz Acc measure:	5	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	16.00
Vert measure units:	feet	Vertacc measure val:	2
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	18810101	Welldepth:	540
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

AF104
NW
1/2 - 1 Mile
Higher

HI WELLS **HI8000000002186**

Objectid:	729	Wid:	3-1851-001
Island:	Oahu	Well name:	H I C
Old name:	Not Reported		
Yr drilled:	1881		
Driller:	Not Reported		
Quad map:	13		
Long83dd:	-157.849444444		
Lat83dd:	21.3016666667		
Gps:	0	Utm:	-1
Owner user:	Ward C P	Old number:	82-

Well type:	Not Reported	Casing dia:	6
Ground el:	16		
Well depth:	540		
Solid case:	Not Reported	Perf case:	Not Reported
Use:	ABN - Sealed	Use year:	Not Reported
Init head:	30.8	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	65		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	TKB		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-524
Bot solid:	Not Reported	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	Not Reported
Aqui code:	30102		
Latest hd:	Not Reported	Wcr:	30-DEC-99
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002186

AG105
East
1/2 - 1 Mile
Higher

FED USGS **USGS40000269530**

Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-211734157493601		
Monloc name:	3-1749-03 W40 PALOLO		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.2896136
Longitude:	-157.8239242	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	10.00
Vert measure units:	feet	Vertacc measure val:	2
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	18820101	Welldepth:	730
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

Map ID Direction Distance Elevation	Database	EDR ID Number
AG106 **East** **1/2 - 1 Mile** **Higher**	**HI WELLS**	**HI8000000002092**

Objectid:	573	Wid:	3-1749-003
Island:	Oahu	Well name:	Kapahulu
Old name:	Not Reported		
Yr drilled:	1882		
Driller:	COOKE-PEDDLER		
Quad map:	13		
Long83dd:	-157.823888889		
Lat83dd:	21.2897222222		
Gps:	0	Utm:	-1
Owner user:	Magoon Trust	Old number:	40-
Well type:	Not Reported	Casing dia:	Not Reported
Ground el:	10		
Well depth:	730		
Solid case:	Not Reported	Perf case:	Not Reported
Use:	Other	Use year:	Not Reported
Init head:	Not Reported	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	0		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	Not Reported		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-720
Bot solid:	Not Reported	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	Not Reported
Aqui code:	30101		
Latest hd:	Not Reported	Wcr:	30-DEC-99
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002092

AH107 **East** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS40000269543**

Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-211746157493601		
Monloc name:	3-1749-20 W35-1A MOI		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.2929468
Longitude:	-157.823924	Sourcemap scale:	24000

Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	15.00
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19540101	Welldepth:	28
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

AH108
East
1/2 - 1 Mile
Higher

FED USGS **USGS40000269544**

Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-211746157493602		
Monloc name:	3-1749.01 STAR MARKET		
Monloc type:	Well		
Monloc desc:	FILE INFO FROM STATE COMPUTER PRINTOUT		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.2929468
Longitude:	-157.823924	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	9.00
Vert measure units:	feet	Vertacc measure val:	1
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19540910	Welldepth:	28
Welldepth units:	ft	Wellholedepth:	32
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1954-09-10	8.30	

Note: A nearby site that taps the same aquifer had been pumped recently.

AH109
East
1/2 - 1 Mile
Higher

HI WELLS **HI8000000002105**

Objectid:	590	Wid:	3-1749-020
Island:	Oahu	Well name:	Moiliili
Old name:	Not Reported		
Yr drilled:	1954		
Driller:	NAT WHITON		
Quad map:	13		
Long83dd:	-157.823888889		
Lat83dd:	21.2930555556		
Gps:	0	Utm:	-1
Owner user:	Star Market	Old number:	35-1A
Well type:	Not Reported	Casing dia:	12
Ground el:	Not Reported		
Well depth:	28		
Solid case:	10	Perf case:	Not Reported
Use:	ABN - Sealed	Use year:	Not Reported
Init head:	Not Reported	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	0		
Test date:	Not Reported	Test gpm:	200
Test ddown:	2.4	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	18		
Draft mgy:	14	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	Not Reported		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	Not Reported
Bot solid:	Not Reported	Bot perf:	Not Reported
Spec capac:	83		
Pump mgd:	.025		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	(1) 2-8-005:002
Aqui code:	30101		
Latest hd:	Not Reported	Wcr:	01-JAN-54
Pir:	1/1/1954	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002105

AH110
East
1/2 - 1 Mile
Higher

HI WELLS **HI8000000002106**

Objectid:	591	Wid:	3-1749-021
Island:	Oahu	Well name:	Moiliili
Old name:	Not Reported		
Yr drilled:	1954		
Driller:	NAT WHITON		
Quad map:	13		
Long83dd:	-157.823888889		
Lat83dd:	21.2930555556		
Gps:	0	Utm:	-1
Owner user:	Star Market	Old number:	35-1B
Well type:	Not Reported	Casing dia:	12
Ground el:	Not Reported		
Well depth:	28		
Solid case:	11	Perf case:	Not Reported
Use:	ABN - Sealed	Use year:	Not Reported
Init head:	Not Reported	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	0		
Test date:	Not Reported	Test gpm:	100
Test ddown:	1	Test chlor:	Not Reported

Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	Not Reported		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	Not Reported
Bot solid:	Not Reported	Bot perf:	Not Reported
Spec capac:	100		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	(1) 2-8-005:002
Aqui code:	30101		
Latest hd:	Not Reported	Wcr:	01-JAN-54
Pir:	Not Reported	Surveyor:	Not Reported
T:	Not Reported	Site id:	HI8000000002106

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

Federal EPA Radon Zone for HONOLULU County: 3

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for HONOLULU COUNTY, HI

Number of sites tested: 209

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.015 pCi/L	100%	0%	0%
Living Area - 2nd Floor	0.125 pCi/L	100%	0%	0%
Basement	0.415 pCi/L	96%	4%	0%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

HYDROGEOLOGIC INFORMATION

AQUIFLOW[R] Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Services, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Well Index Database
Source: Commission on Water Resource Management
Telephone: 808-587-0214
CWRM maintains a Well Index Database to track specific information pertaining to the construction and installation of production wells in Hawaii

OTHER STATE DATABASE INFORMATION

RADON

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STREET AND ADDRESS INFORMATION

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APPENDIX G

Interview Documentation

Central Planet Repair, LLC
Comprehensive Environmental Services
www.geochemist.net
236 Kuahiwi Avenue, Wahiawa, Hawaii 96786
USA: +1 808 216-6555
Singapore: +65 8247 9061

September 23, 2014

SamKoo Pacific, LLC
SamKoo Hawaii, LLC
1631 Kapiolani Boulevard, Suite 200
Honolulu, Hawaii 96814

Attn: Mr. Timothy Yi, General Manager, via email

Subject: **Proposal**
Phase I Environmental Site Assessments
1391 Kapiolani Boulevard
TMK: (1) 2-3-039:011
1631 & 1637 Kapiolani Boulevard
TMK: (1) 2-3-041:009
TMK: (1) 2-3-041:006
Honolulu, Oahu, Hawaii
CPR P-451

Dear Mr. Yi:

Central Planet Repair LLC (CPR) is requesting that you provide information to the extent possible regarding the subject properties for the Phase I Environmental Site Assessments. We have compiled much information during the other stages of the project including the historical document review and the site inspection.

The final few questions for inquiry are:

How long has your company owned the subject properties and how long have you been involved with the properties?

1391 Kapiolani: 7 years, 7 years

1631 Kapiolani: 7 years, 7 years

Do you have knowledge about the historical use of the properties prior to your company ownership? No

Was there any evidence of soil contamination found during the installation of the grease trap at the restaurant on the 1631 Kapiolani parcel? No

For the proposed construction on the properties, is there a preliminary design for the foundation and subgrade structures? Will the buildings be similar in concept or different? 1391 Yes, Yes
1631 No

Do you know of any other information regarding the environmental history of the properties? No

Do you know if the property values at the time of purchase were discounted due to environmental issues? No

-o0o-

Your authorization of this project can be made by signing in the appropriate space provided below. This proposal is valid for 30 days. We appreciate this opportunity to be of service to you. Please contact me at 808/216-6555, if you have any questions or comments regarding your project.

Very truly yours,
Central Planet Repair, LLC

Ned Murphy
Consulting Geochemist

PROPOSAL ACCEPTED BY:

Signature_____ Firm Samkoo Pacific, LLC
Samkoo Hawaii, LLC

Name Timothy Yi Date 9/22/14

cc: Mr. Lowell Chun, Pacific Catalyst

APPENDIX H

Qualifications of the Environmental Professionals

STATEMENT OF QUALIFICATIONS

Central Planet Repair, LLC

CPR is a Hawaii-based Small Business Administration certified HUBZone small business enterprise, professional environmental services firm, offering high quality technical services to private, commercial, industrial, and government clients in Hawaii and the Pacific Rim.

Ned Murphy formed CPR in February 2002 to present a more practical and low cost approach to providing environmental consulting services to clients. The lower cost came from the ability to bypass the middle management and overhead contained in the large consulting firms by providing contact directly with the technical team and providing innovative solutions to traditional problems.

A few of the numerous industries we have worked for are petroleum, telecommunication, metal finishing, financial, recycling, construction, waste management, and automotive rental. We have been able to provide effective environmental engineering and consulting services to assist our clients in managing their environmental affairs and maintaining their compliance with regulatory agency requirements. CPR has contracted over 60 clients. Of the clients, approximately 80% have retained CPR for additional services outside of the original scope of work and approximately 50% have contracted new projects to CPR.

CPR has performed approximately 100 Phase I Due Diligence Environmental Site Assessments (ESA). These assessments included value consideration and hazard risk analysis. Additionally, CPR has performed over 80 site investigations to satisfy responses to HDOH and EPA notifications of deficiency and compliance purposes.

Documentation of CPR's five consecutive years of business existence is provided on the Certificate of Good Standing from DCCA.

CPR has not been involved in any lawsuits or complaints filed against us since our organization on January 28, 2002.

Experience and professional qualifications relevant to this project

Key personnel for this project included Mr. Ned Murphy and Dr. Alexander Grafchikov. The project was directed and managed by Mr. Murphy. Mr. Murphy also was the contractor interface.

NED MURPHY– CONSULTING GEOCHEMIST

Ned formed the company in February of 2002 and has over 26 years of environmental engineering and project management experience. He has conducted and managed a broad range of projects and is experienced in site investigations and remediation methods with an emphasis on hydrocarbon projects. He has been conducting Soil Gas investigations and remedial design including methane abatement in Hawaii since 1990.

Ned has extensive experience of the processes involved with Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), Resource Conservation and Recovery Act (RCRA), Clean Water Act (CWA), and Superfund Amendments and Reauthorization Act (SARA) compliance. He has completed multiple environmental investigations, ASTM Phase I and Phase II environmental site assessments, compliance audits, sampling and analysis, permitting, underground and aboveground storage tank (UST and AST) investigations, UST and AST removal and replacements, geotechnical and geophysical investigations, infrastructure design, utility engineering, and preparation of work plans and closure reports.

DR. ALEXANDER GRAFCHIKOV – SENIOR GEOCHEMIST

Alexander joined the company in July of 2006. Alexander has over 35 years experience in experimental and environmental geochemistry. Since joining CPR, he has been conducting the calculation of risk values and risk assessments for several sites, ASTM Phase I and Phase II environmental site assessments, computer modeling the effects of remediation designs for several sites, designing an oxygen release compound treatment system, sampling and analysis, preparation of work plans and closure reports, and developing databases of collected sampling results.

F. ARCHAEOLOGICAL INVENTORY

G. TRAFFIC IMPACT ANALYSIS

FINAL

KAPI‘OLANI RESIDENCE

1630-1631 Kapi‘olani Boulevard

Honolulu, Hawai‘i

Traffic Impact Analysis Report

January 26, 2015

Prepared for

Samkoo Pacific, LLC

Prepared by

SSFM INTERNATIONAL

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I. INTRODUCTION

Samkoo Pacific, LLC is proposing to develop Kapi‘olani Residence, a 485-unit affordable housing condominium at 1630-1631 Kapi‘olani Boulevard in Honolulu. The project site is on the block bordered by Kapi‘olani Boulevard on the mauka (mountain) side, Kona Street on the makai (ocean) side, Mahukona Street on the west and Atkinson on the east (see Figure 1). It is anticipated that the condominium will be comprised of affordable housing residential units including studios, one-bedrooms, two-bedrooms, and three bedrooms with some commercial area. Primary access to the condominium is being proposed off of Kapi‘olani Boulevard with a secondary access off of Kona Street for residents and deliveries (see Figure 2). The proposed Kapi‘olani Residence project has an anticipated full build-out and occupancy year of 2017. The project site is currently comprised of one and two-story commercial buildings which house offices and commercial enterprises.

The proposed Honolulu Rail Transit project fixed guideway runs between East Kapolei and Ala Moana Center. The closest rail transit station will be at Ala Moana Center near the intersection of Kona Street and Kona Iki Street, 0.4-miles from the proposed development. The rail transit guideway and Ala Moana Rail Station have a proposed full build-out and operation year of 2019. In association with the Honolulu Rail Transit project, transit-oriented development (TOD) plans are being prepared for the neighborhoods surrounding each rail transit station site that integrate land use and transportation planning. Higher densities are an important characteristic of TOD, focusing on pedestrian facilities and a mix of land uses that include residential and commercial activities.

Samkoo Pacific, LLC is developing the project as a 201H Affordable housing project under the auspices of the State of Hawaii Housing Finance and Development Corporation (HHFDC). The 201H program, under the discretion of HHFDC, allows exemptions from underlying city zoning development standards and permitting fees.

This traffic impact analysis report (TIAR) is being prepared in support of the project’s 201H application for the proposed condominium development. Existing (2014) conditions are established. Future (2017) Without Project and Future (2017) With Project conditions are evaluated for determination of project impact. In addition, Future (2030) With Project conditions are documented to establish the impact on the study area as a result of the proposed development and completion of the Honolulu Rail Transit project.

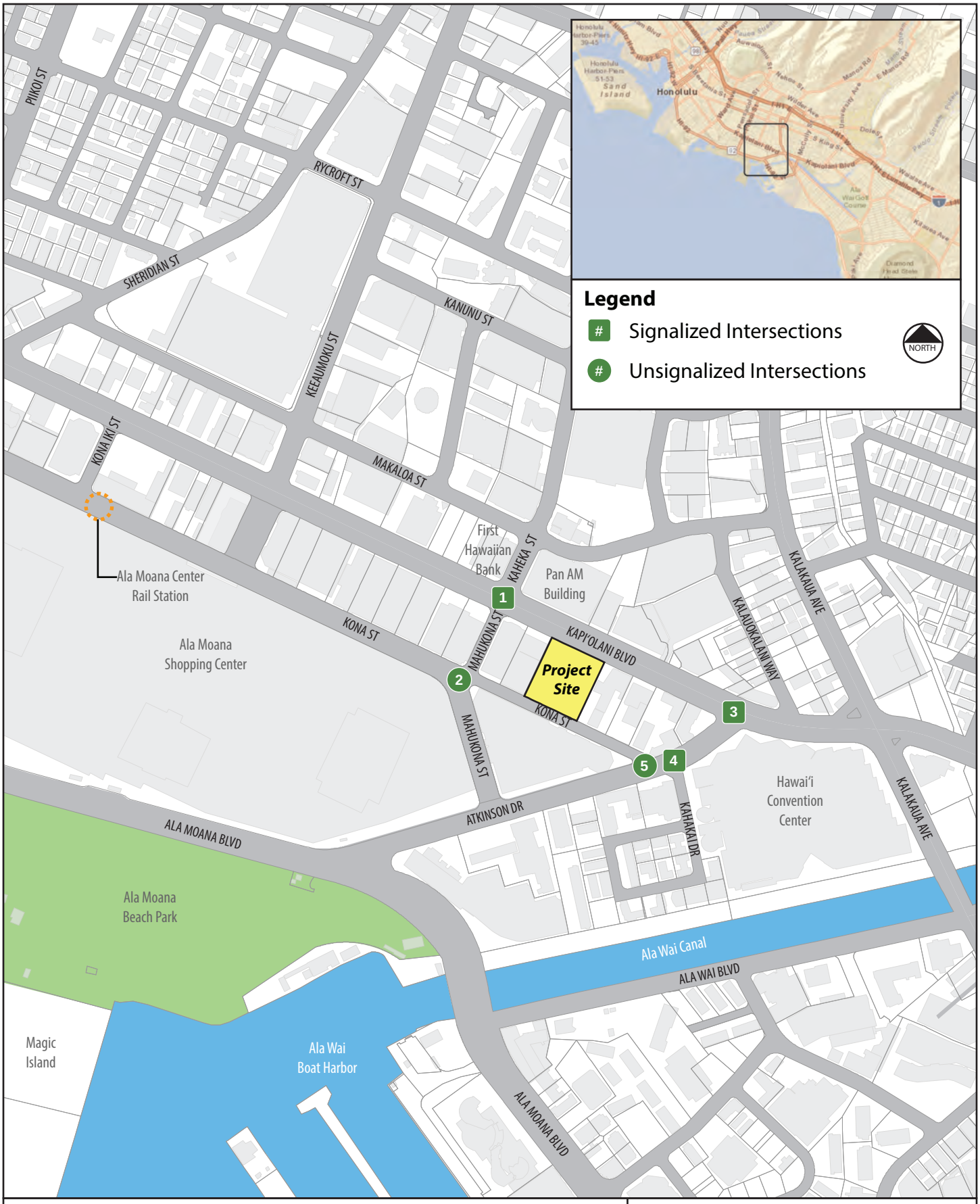

Figure 1: Project Location Map

Kapi'olani Residence – Honolulu, Hawai'i

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Figure 2: Kapi'olani Residence Site Plan

II. EXISTING PLANS AND PROCESSES

A. Transit Oriented Development Plan

The Land Use Ordinance (LUO) provisions for TOD special districts was adopted by the Honolulu City Council in 2009. They authorize preparation of a neighborhood TOD plan to serve as the basis for creation of a TOD Zone and the accompanying development regulations. The City is currently in the public review process for the *Ala Moana Neighborhood Transit-Oriented Development Plan, Public Review Draft* (RTKL, July 2014). The predecessor reports include: *Ala Moana Neighborhood Transit-Oriented Development Plan, Existing Conditions Report* (RTKL, August 2012), *Ala Moana Neighborhood Transit-Development Plan, Existing Conditions Report, Supplement – Market Opportunities Study* (KMA, October 2012), and *Ala Moana Neighborhood Transit-Development Plan, Station Area Alternatives Report* (RTKL, February 2013). The TOD plan is compliant with past plans and policies including the October 2002 *Oahu General Plan* and the June 2004 *Primary Urban Center Development Plan*.

TOD refers to development within a comfortable (five to ten minute) walking distance of a transit stop which translates into a ¼- to ½-mile radius from the station. Higher densities are an important characteristic of TOD development and are often achieved through development of vacant land or redevelopment of low density sites. The project site is located within ½ mile of the future Ala Moana Station. Although it is being developed under 201H rules, it generally observes and responds to TOD intent to provide housing for a range of income groups within the TOD area.

B. 201H Affordable Housing Program Application

Currently, the Kapi'olani Residence project site is under the zoning designation of BMX-3: Community Business Mixed Use District. This designation has a maximum building height of 350-feet and a maximum FAR (floor-area ratio) of 3.5. Figure 3 shows the existing zoning height limitations overlaid on the ¼ to ½-mile walking radius as referenced in the *Ala Moana Neighborhood Transit-Oriented Development Plan, Existing Conditions Report* (RTKL, August 2012).

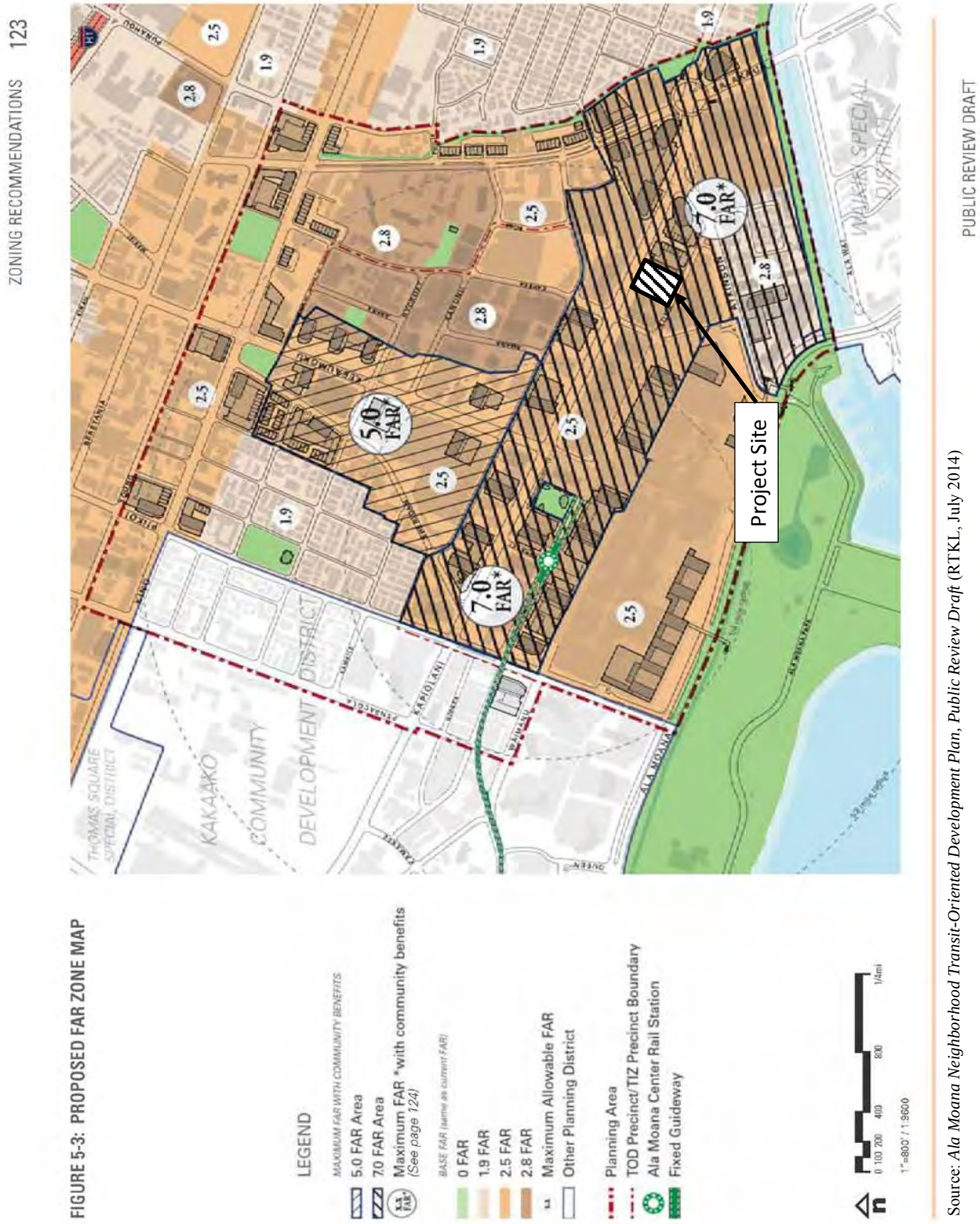
While the project site is located in the Ala Moana TOD neighborhood, the developer is pursuing the development through the 201H Affordable Housing Program under the auspices of the Hawai'i Housing Finance and Development Corporation. The proposed development is predominately affordable housing. 201H allows for expedited project approval process, in contrast to the TOD review process which is currently under review and subject to change.

The *Ala Moana Neighborhood Transit-Oriented Development Plan, Public Review Draft* (RTKL, July 2014) proposed FAR Zone Map shown in Figure 4 and Building Height Zone Map in Figure 5. The developer plans to request exemptions from the existing zoning standards, TOD policy, and other project requirements for this proposed project. The main exemption request is to allow a 400-foot building height with an additional 18 feet for mechanical equipment. This height would allow the residential tower to build the necessary number of residential units making the project economically feasibility. It would allow FAR of 8.43. Additional exemptions to be sought relate to parking, loading, park dedication and project fee requirements. Appendix A includes a report of the exemptions requested by the developer.

This TIAR is being developed to accompany the 201H application. The TIAR is to include general street patterns and intended connections of the proposed development to the regional roadway network, transit network and pedestrian and bicycle facilities. The TIAR must discuss the impact of the proposed project on surrounding streets, including traffic and transportation concerns, as well as identification of transportation network improvements that will be necessary.

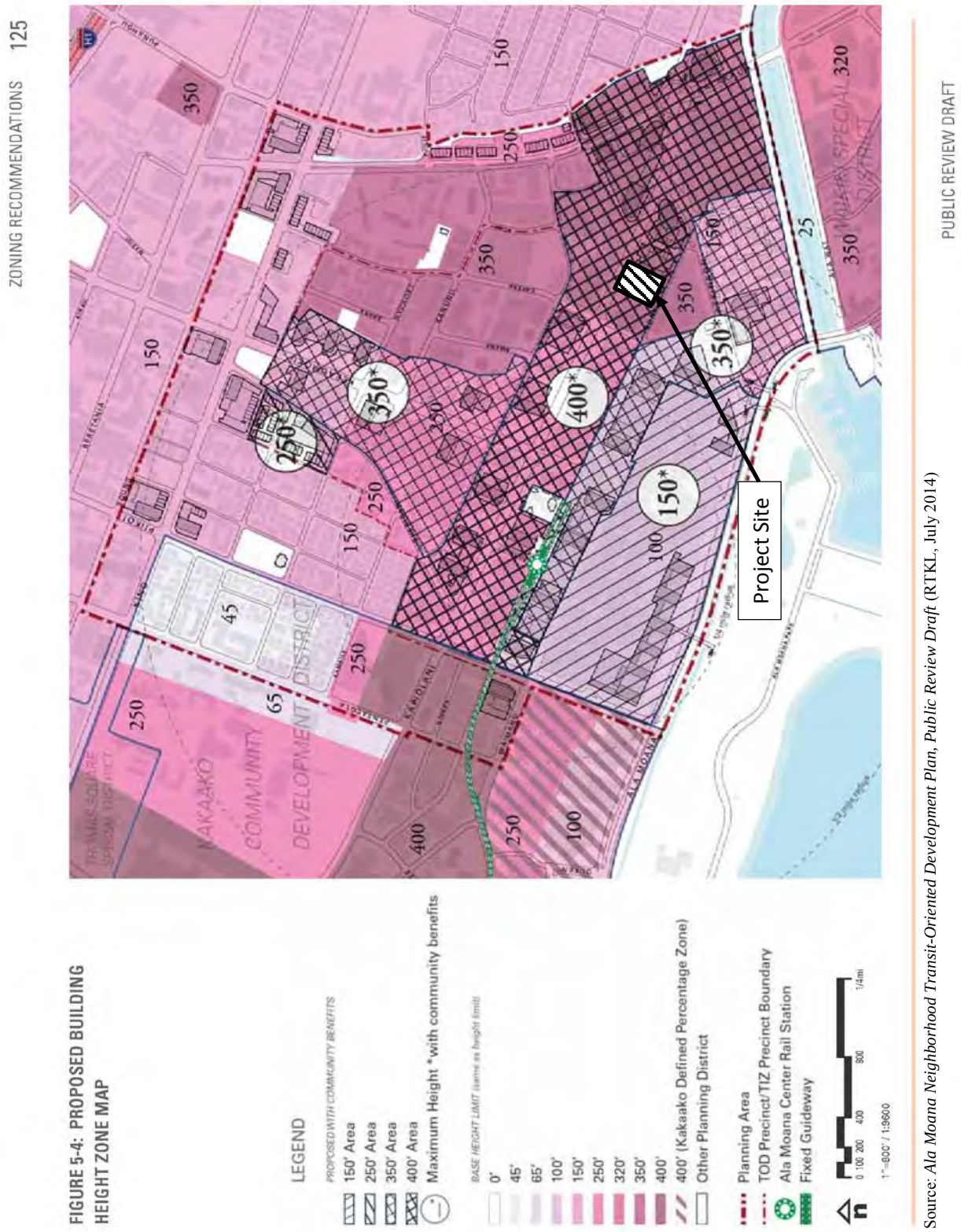
Source: Ala Moana Neighborhood Transit-Oriented Development Plan, Existing Conditions Report (RTKL, August 2012)

Figure 3: Existing Zoning Height Limitations



Source: *Ala Moana Neighborhood Transit-Oriented Development Plan, Public Review Draft* (RTKL, July 2014)

Figure 4: Proposed FAR Zone Map for TOD



Source: *Ala Moana Neighborhood Transit-Oriented Development Plan, Public Review Draft* (RTKL, July 2014)

Figure 5: Proposed Building Height Zone Map for TOD

III. EXISTING (2014) CONDITIONS

The surrounding Ala Moana neighborhood is an urban district that has a mix of commercial and residential uses. The neighborhood is a high employment zone due to the existence of Ala Moana Center and other surrounding commercial and retail establishments. Several high-rise condominiums have been constructed over the past ten years which adds to the neighborhood being a major residential area. Recently along Kapi‘olani Boulevard small retail, dining, and entertainment establishments have been replaced by newer, higher value and higher capacity buildings. Currently, the project site at 1630-1631 Kapi‘olani Boulevard is comprised of one and two-story commercial buildings which house offices and commercial enterprises.

A. Transportation Network

1. Vehicular Facilities

a) Passenger Vehicles

The surrounding transportation network consists of a gridded network of streets (see Figure 6). The *Ala Moana Neighborhood Transit-Oriented Development Plan, Existing Conditions Report* (RTKL, August 2012) states that the transportation network is disrupted by the existence of “superblocks” (large blocks that interrupt the street grid). These superblocks concentrate vehicular volumes at major intersections resulting in long signal timing cycle lengths of 120 seconds and strained capacity. They also make it difficult to maintain connectivity and mobility for other transportation modes.

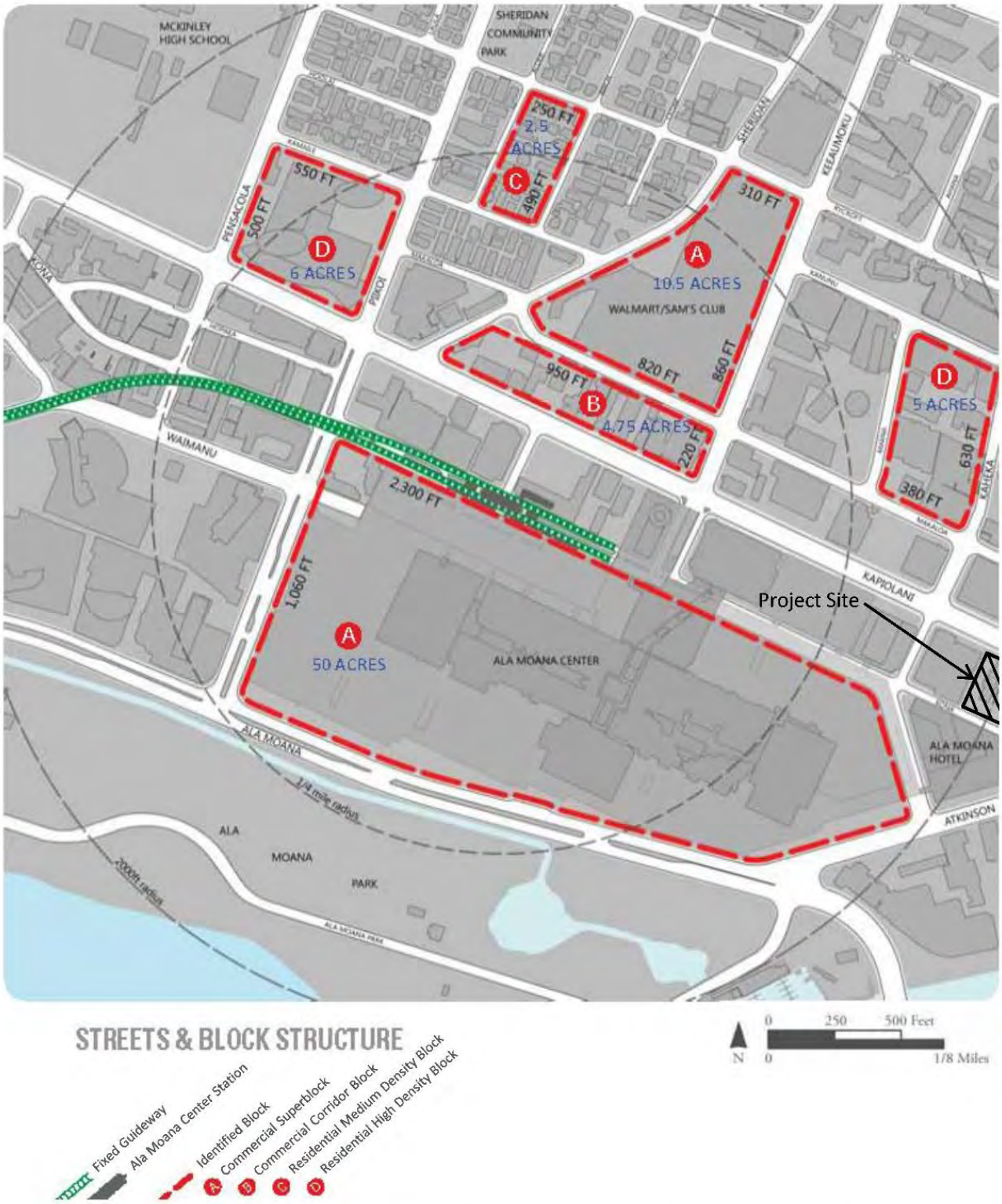
b) Buses and Heavy Vehicles

Ala Moana Center is the primary transfer point for TheBus system with a transit center located along Kona Street, adjacent to Ala Moana Center. Buses that service this area include Routes: C, 6, 8, 23, 40, 52, 53, 55, 56, 57, 57A, 62, 65 and 88A. Additional buses that stop along Kapi‘olani Boulevard in the project area include Routes: A, 3, 9, 13, 17, and 18. See Figure 7 for locations of TheBus system stops and available routes surrounding Ala Moana Center. Included in the figure are the approximate bus stop “geoid” (identified as HEA Stop #), the physical identification of the stop according to TheBus internal management system used for tracking of buses using the TheBus smartphone application. Private bus and trolley services also have stops within the Ala Moana Center parking complex of garages and multi-storied lots.

2. Pedestrian Facilities

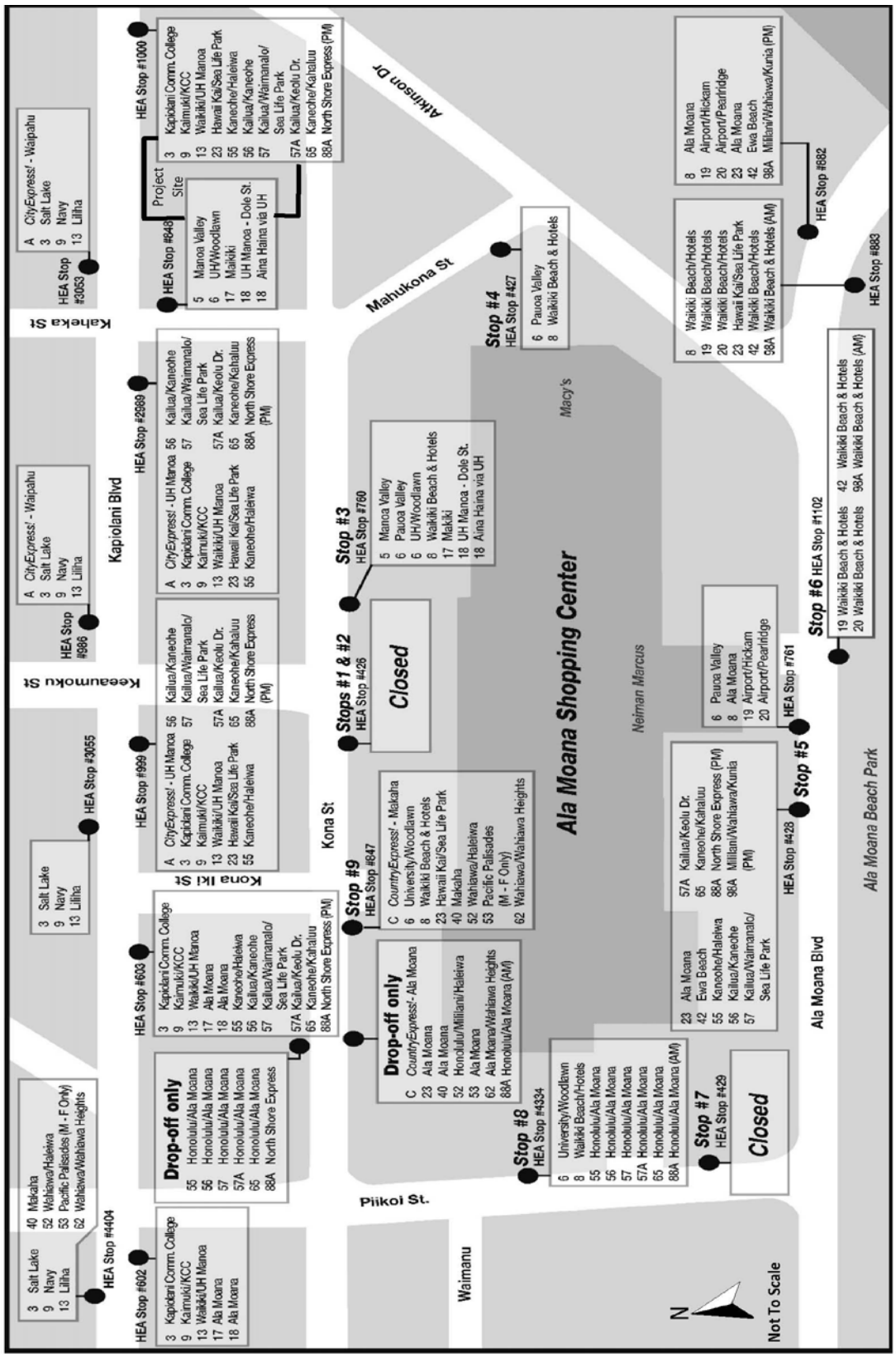
Sidewalks line both sides of Kapi‘olani Boulevard with landscaped planter strips separating vehicular travel ways from pedestrians in most locations. Along Kona Street, sidewalks exist only along the makai side of the street. Fronting the project site along Kona Street, there is no sidewalk. Sidewalks widths in the surrounding project area range from 5-feet on Kona Street to 6 to 8-feet on Kapi‘olani Boulevard. Other sidewalks on Kaheka Street and Mahukona Street range from 5 to 8-feet (see Figure 8). The City and County of Honolulu’s *Traffic Standards Manual* (C&C, 1979) states that in most cases, concrete sidewalks shall be at least four feet wide in residential districts. The *Hawaii Statewide Design Manual* (HDOT, 1980) states that clear sidewalk width should be four feet minimum although widths of eight feet or greater may be needed in commercial areas. Along Kona Street, adjacent to the project area, there are frequent driveway locations that interrupt the sidewalks along both sides of the street.

Marked crosswalks exist at most major intersections with pedestrian signal heads and push-buttons for signalized intersections. Signalized intersections reflect vehicle and pedestrian actuated traffic control in the traffic model.



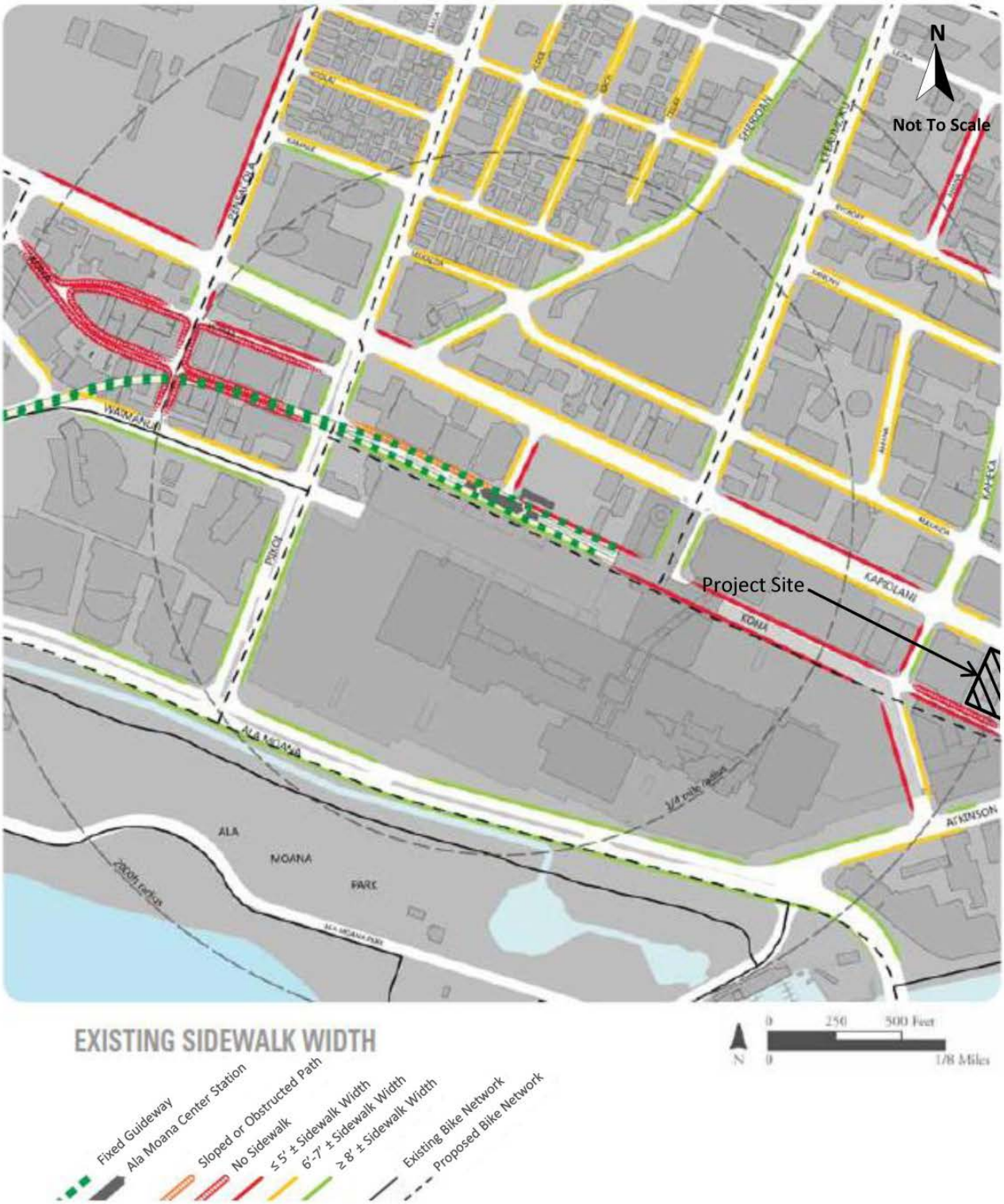
Source: Ala Moana Neighborhood Transit-Oriented Development Plan, Existing Conditions Report (RTKL, August 2012)

Figure 6: Street Network



Source: TheBus website (August 2, 2014)

Figure 7: TheBus Stops and Routes



Source: Ala Moana Neighborhood Transit-Oriented Development Plan, Existing Conditions Report (RTKL, August 2012)

Figure 8: Sidewalk Width

3. Bicycle Facilities

Oahu Bike Plan, A Bicycle Master Plan (HHF, August 2012) has no designated bike paths, lanes or routes on Kapi‘olani Boulevard. However, the Hawaii Revised Statutes states that bicyclists traveling along the roadway slower than the normal speed of traffic should ride as close as practicable to the right-hand curb or edge of the road where bike lanes are not available. In areas other than business or prohibited districts, bicycles may be ridden on sidewalks provided the speed is 10 mph or less. On sidewalks, the bicycle operator must yield the right-of-way to pedestrians.

Ease of biking in the surrounding project area is not optimal because of the lack of designated bikeways, the presence of heavy vehicle traffic, and narrow sidewalk widths. For Diamond Head-‘Ewa (east-west) travel, a cycle track (i.e., bike lanes that are physically separated from traffic) exists along South King Street, between Alapai Street and Isenberg Street, a bike route exists along Young Street and a bike path is adjacent to Ala Moana Boulevard. All of these are less than ¼-mile from the site. There are no existing designated mauka-makai bike ways. Future mauka-makai bikeways on Pi‘ikoi Street and Ke‘eaumoku Street are shown in the *Oahu Bike Plan, A Bicycle Master Plan* (HHF, August 2012) (see Figure 9).

B. Geometric Configuration

1. Intersection Configuration

Considering existing traffic movements in the project area and the anticipated impact of the proposed development, the following intersections were selected for study:

1. Kapi‘olani Boulevard and Kaheka Street/Mahukona Street
2. Kona Street and Mahukona Street
3. Kapi‘olani Boulevard and Atkinson Drive
4. Atkinson Drive and Kahakai Drive
5. Atkinson Drive and Kona Street

Existing (2014) lane configurations, pedestrian crosswalks, and traffic control at the study intersections are shown in Figure 10.

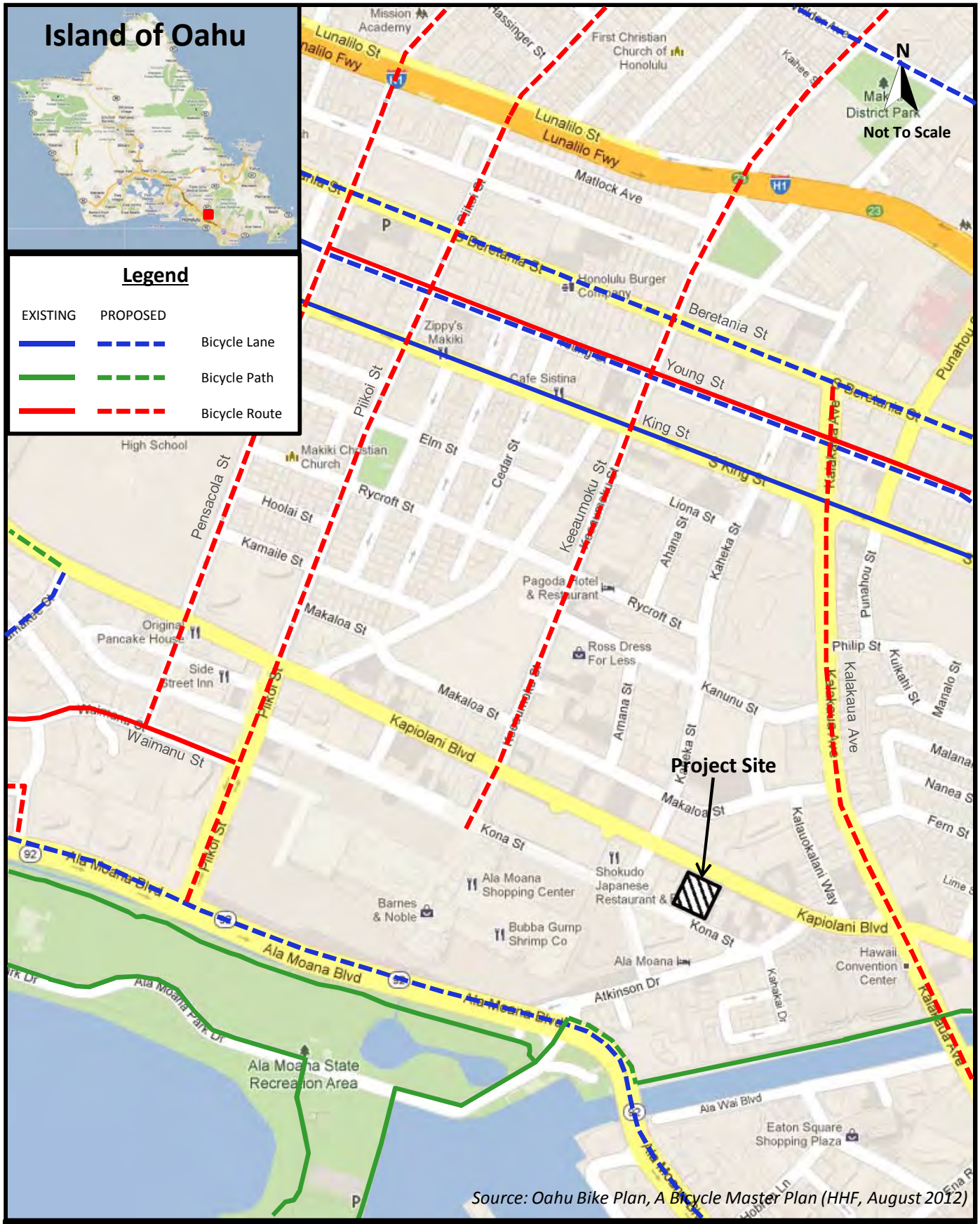


Figure 9: Bikeway Details

Kapi'olani Residence – Honolulu, Hawai'i

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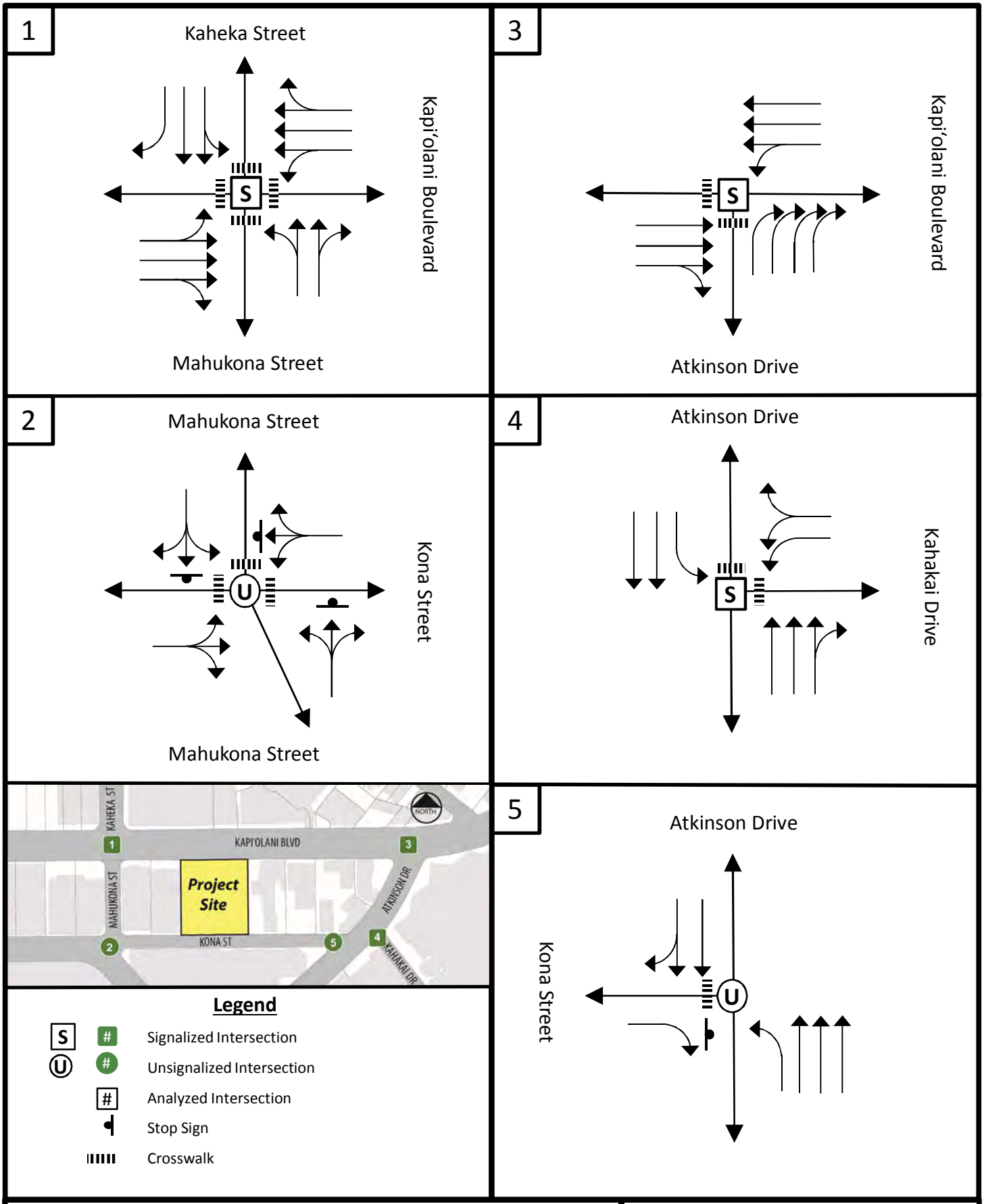

Figure 10: Existing (2014) Lane Configurations

Kapi'olani Residence – Honolulu, Hawai'i

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2. Roadway Configuration

Kapiʻolani Boulevard is an urban principal arterial owned by the County that runs in the Diamond Head-ʻEwa direction. In the project area, Kapiʻolani Boulevard is a six-lane, undivided, signalized arterial with a 35 mph posted speed limit. During the AM peak period the corridor is coned for contraflow operations, providing an additional lane for approximately 2.3 miles in the ʻEwa-bound direction between the H-1 Freeway near South King Street to west of Ward Avenue. Left turns are prohibited for the Diamond Head direction during the AM contraflow (see Figure 11). During the PM peak period, an additional contraflow lane is provided in the Diamond Head-bound direction between Pensacola Street to McCully Street. Left turns are prohibited for the ʻEwa-bound direction during the PM contraflow.

Driveway accesses to existing properties in the project area, including the subject project site, are prevalent along Kapiʻolani Boulevard and have no mid-block dedicated turn lanes. Kapiʻolani Boulevard serves as a major bus route with no bus pullouts. Fronting the property, sidewalks exist along both sides of the street, with various widths and an 11-foot landscaped area providing a buffer from vehicular travel lanes.

Mahukona Street is a two-lane roadway that runs mauka-makai between Kapiʻolani Boulevard and Atkinson Drive with a 15 mph posted speed limit. Mahukona Street is privately owned by General Growth Properties, the owners of Ala Moana Center. At the intersection with Kapiʻolani Boulevard, the northbound approach is striped as a one-lane for all turning movements. However, it was observed that motorists utilize the approach as a two-lane roadway in order to separate conflicting movements, thereby resulting in a left-through and right-through lane. This aligns with the two receiving lanes on the other side of Kapiʻolani Boulevard. Mahukona Street provides access to the Ala Moana Center parking garage. There is also a bus stop located on Mahukona Street in the mauka-bound direction, before its intersection with Kapiʻolani Boulevard. Parking is permitted in designated meter parking stalls adjacent to the Ala Moana Shopping Center parking garage. Sidewalks line both sides of the street.

Kaheka Street is an urban major collector owned by the City that runs in the mauka-makai direction. No posted speed limit sign exists in this section and therefore is regulated to be 25 mph. Kaheka Street is the mauka leg at the intersection of Kapiʻolani Boulevard and Mahukona Street. Between Kapiʻolani Boulevard and Makaloa Street, Kaheka Street has two lanes in the mauka direction and three lanes in the makai direction with on-street parking on the Diamond Head side of the street. Mauka of Makaloa Street, Kaheka Street turns into a two-way, two-lane corridor with a posted speed of 25 mph and on-street parking on either sides of the roadway. Sidewalks exist on both sides of the street.

Kona Street, between Mahukona Street and Atkinson Drive, is a two-lane roadway that runs in the Diamond Head-ʻEwa direction with a 15 mph posted speed limit. Like Mahukona Street, Kona Street is privately owned by General Growth Properties. Kona Street in this area serves as access for residential and delivery loading areas for apartments, condominiums, hotel and commercial areas. There is a sidewalk on the makai side of Kona Street with permitted on-street parking. At the T-intersection with Atkinson Drive, there is a right-turn out only for the eastbound approach. A raised island separates the right-in movements from the right-out movements.

Atkinson Drive is an urban minor arterial owned by the City that runs in the mauka-makai direction. It primarily has four lanes with dedicated left-turn lanes. At the T-intersection with Kapiʻolani Boulevard, starting mauka of Kahakai Drive, Atkinson is seven lanes with four right-turn lanes in the mauka direction and three receiving lanes in the makai direction. There is on-street parking on Atkinson Drive makai of

Kona Street on the Diamond Head side of the road. Atkinson Drive provides access to Ala Moana Shopping Center, Ala Moana Beach Park, hotels, apartments/condominiums and other commercial and office spaces.

Kahakai Drive is a two-lane road owned by the County. The road provides access to residential units and for those leaving the Hawaiʻi Convention Center parking garage. Parking is allowed along the makai side of the roadway. Sidewalks exist along both sides of the street.

C. Volumes

The project is located in the urban Ala Moana neighborhood which experiences high vehicle volumes and multi-modal movements. The Ala Moana area has a high concentration of transit-dependent households, as noted in the *HHCTC, Transportation Technical Report, Addendum 2* (PB, October 2009).

1. Peak Hour Volumes

Intersection peak period turning movement traffic counts were taken on Wednesday, October 1, 2014 and Thursday, October 2, 2014. These counts also included classification of heavy vehicles as well as the tabulation of pedestrian movements at all intersections. Counts were taken during the AM and PM peak periods from 6:45–8:45 AM and 4:00–6:00 PM. Appendix B includes the detailed traffic count data. Peak hours varied per intersection and are provided in Table 1.

Table 1: Intersection Peak Hours

Intersection	AM Peak Hour	PM Peak Hour
Kapiʻolani Boulevard and Kaheka Street/ Mahukona Street	7:15 – 8:15 AM	4:30 – 5:30 PM
Kona Street and Mahukona Street	7:45 – 8:45 AM	4:30 – 5:30 PM
Kapiʻolani Boulevard and Atkinson Drive	7:30 – 8:30 AM	4:30 – 5:30 PM
Atkinson Drive and Kahakai Drive	7:45 – 8:45 AM	4:15 – 5:15 PM
Atkinson Drive and Kona Street	7:30 – 8:30 AM	5:00 – 6:00 PM

During the data collection at the intersection of Kapiʻolani Boulevard and Kaheka Street/Mahukona Street, an accident occurred during the PM peak period along Kapiʻolani Boulevard east of Kalakaua Avenue. Therefore, traffic counts from the *TIAR for Ala Moana ʻEwa Expansion* (WOC, 2012) were used to compare and balance the traffic data collected to best represent existing conditions. Vehicles were observed making prohibited turning movements at study intersections and thus were included in traffic volumes figures and existing conditions analysis. Peak hour vehicle volumes were balanced and are shown in Figure 12.

2. 24-Hour Volumes

Average daily traffic (ADT) along Kapiʻolani Boulevard, based on Hawaii Department of Transportation (HDOT) *Historical Traffic Station Maps*, is shown in Table 2.

Table 2: Roadway ADT

Roadway	Station	Location	Year	ADT
Kapiʻolani Boulevard	B727 503 00077	Between Sheridan Street and Keʻeaumoku Street	2010	46,000
	B727 503 00153	Between Atkinson Drive and Kalauokalani Way	2010	65,300

Source: *Historical Traffic Station Maps* (HDOT)

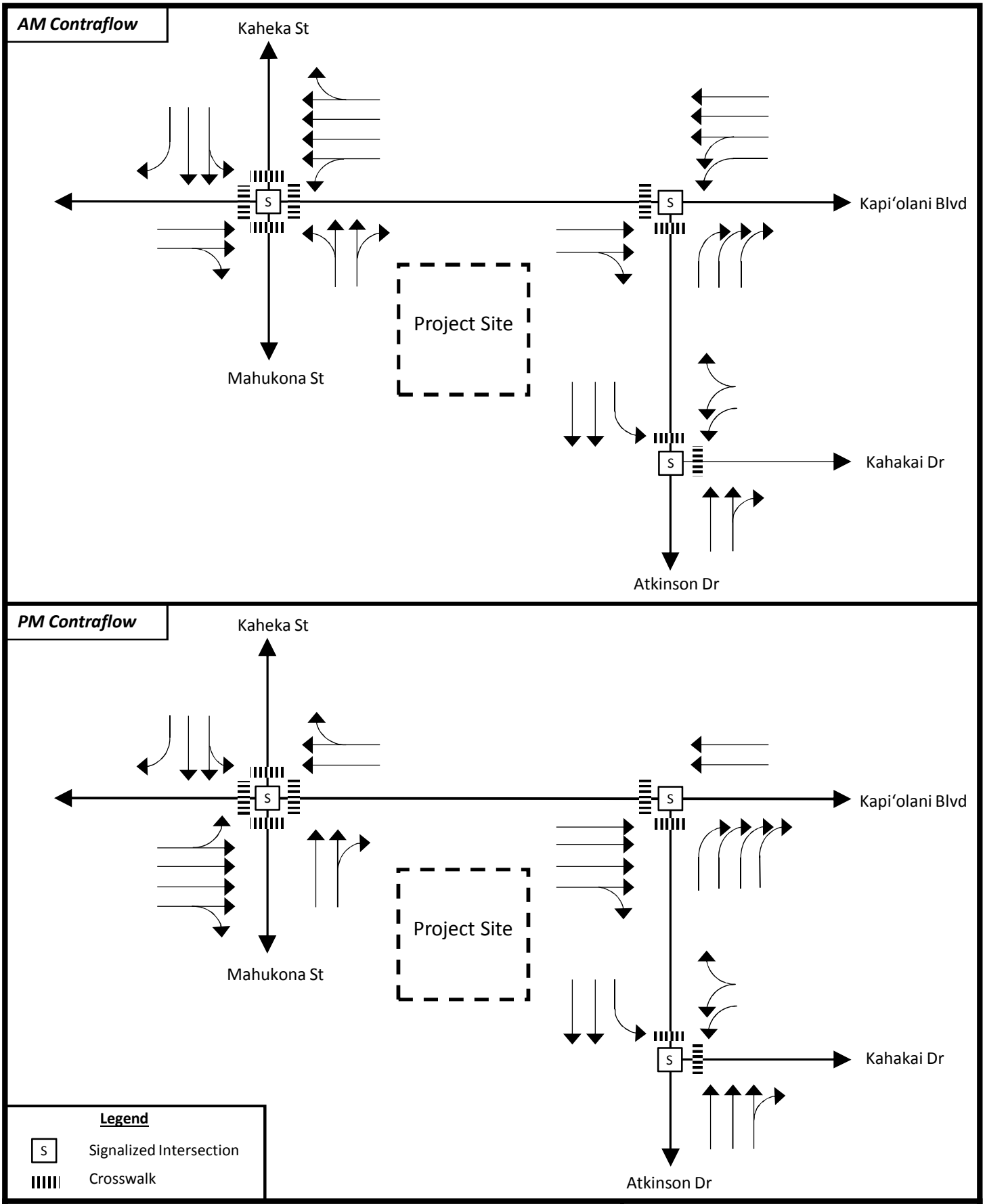

Figure 11: Existing (2014) Contraflow

Kapiʻolani Residence – Honolulu, Hawaiʻi

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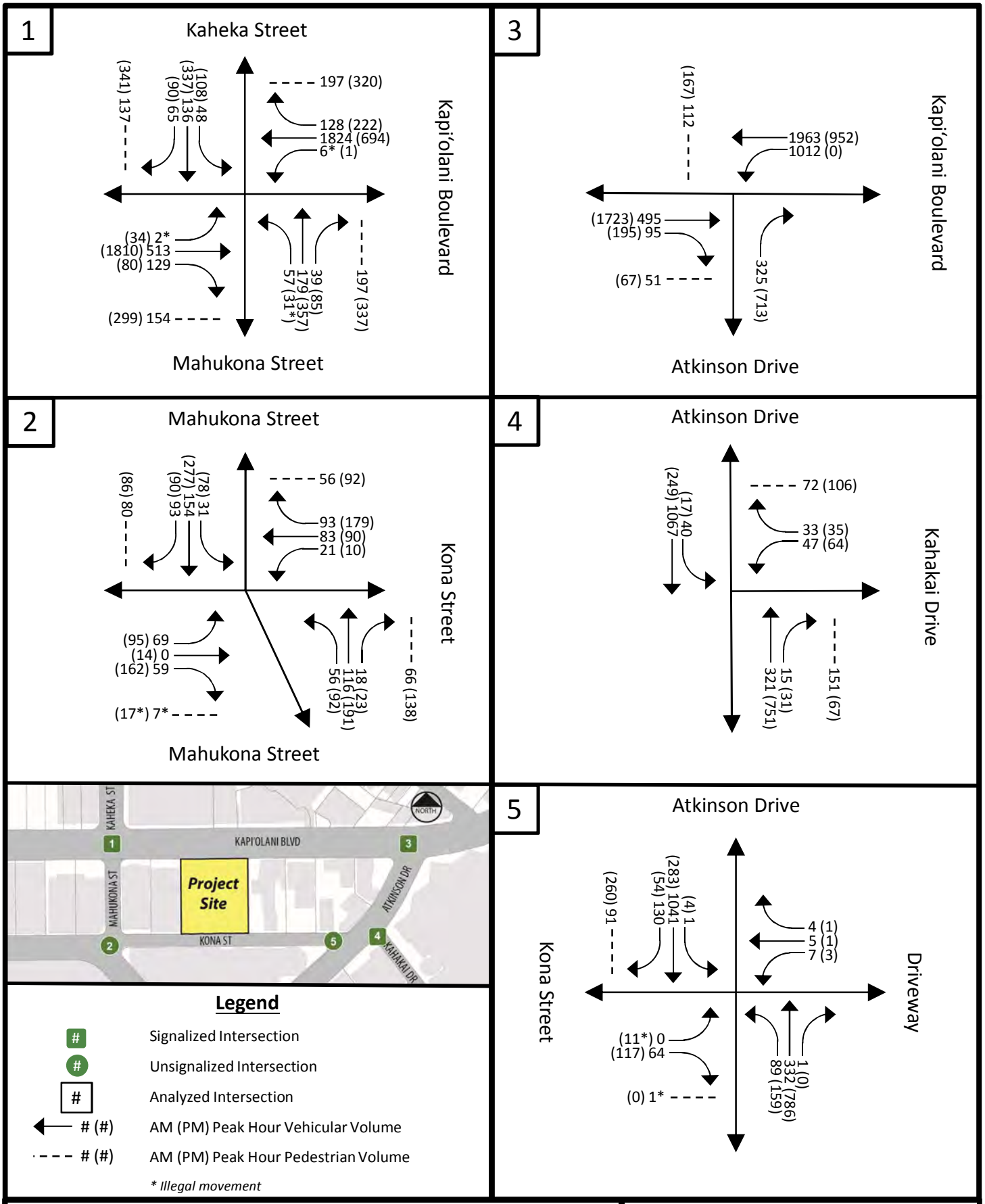

Figure 12: Existing (2014) Peak Hour Volumes

Kapi'olani Residence – Honolulu, Hawai'i

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3. Multi-Modal Volumes

a) Buses and Heavy Vehicles

Heavy vehicle movements consists of TheBus transit service, tourist bus/trolleys, and delivery trucks. Daily total ridership per stop for TheBus in the study area (see Table 3) was provided by the City and County of Honolulu, Department of Transportation Services, Public Transit Division.

Table 3: TheBus Daily Totals

Geoid	TheBus Stop	Daily Totals	
		On	Off
847	Kona Street, Opposite Kona Iki Street	3,053	1,174
1313	Kona Street, Opposite Kona Iki Street	19	1,544
425	Kona Street, Opposite Kona Iki Street	61	1,677
426*	Kona Street, Opposite Ke'eaumoku Street	2,723	38
760	Kona Street, Opposite Ke'eaumoku Street	356	246
427	Mahukona Street Atkinson Drive	12	17
602	Kapi'olani Boulevard – Eastbound, Pi'ikoi Street	157	360
603	Kapi'olani Boulevard – Eastbound, Kona Iki Street	479	691
999	Kapi'olani Boulevard – Eastbound, Ke'eaumoku Street	1,251	2,308
2989	Kapi'olani Boulevard – Eastbound, Ke'eaumoku Street	274	422
1000	Kapi'olani Boulevard – Eastbound, Atkinson Drive	260	427
985+	Kapi'olani Boulevard – Westbound, Atkinson Drive	327	340
3053	Kapi'olani Boulevard – Westbound, Kaheka Street	357	349
986**	Kapi'olani Boulevard – Westbound, Ke'eaumoku Street	1,738	1,762
3055	Kapi'olani Boulevard – Westbound, Kona Iki Street	148	108
4404	Kapi'olani Boulevard – Westbound, Pi'ikoi Street	208	150
Daily Totals		11,418	11,613

*-Per Ala Moana Area Bus Stop Listing dated August 2, 2014, bus stop is closed.
+-Not shown in Figure 7.
**-As of September 29, 2014, bus stop closed at Kapi'olani/Ke'eaumoku in the westbound direction.
Source: *City and County of Honolulu, DTS, Public Transit Division* (2013)

b) Pedestrians

Large pedestrian volumes were counted at the study intersections during the AM and PM peak hours (see Table 4) at the same time that vehicle turning movements were being counted. This is a result of the neighborhood being an urban district with high employment and residential accessibility. Additionally, a large number of pedestrians are generated by the TheBus transit center at Ala Moana Center.

Table 4: Intersection Peak Hour Pedestrian Volumes

Intersection	AM	PM
Kapi'olani Boulevard and Kaheka Street/ Mahukona Street	685	1,297
Kona Street and Mahukona Street	209	333
Kapi'olani Boulevard and Atkinson Drive	163	234
Atkinson Drive and Kahakai Drive	223	173
Atkinson Drive and Kona Street	92	260

c) Bicycles

Minimal bicycles were observed in the project area which are likely due to no dedicated on-street facilities being present, bicycling being prohibited on the sidewalk, and alternate parallel facilities existing.

D. Level of Service

1. Methodology

Level of service (LOS) is an operational analysis rating system used in traffic engineering to measure the effectiveness of roadway operating conditions. There are six LOS ranging from A to F. LOS A is defined as being the least interrupted flow conditions with little or no delays, whereas LOS F is defined as conditions where extreme delays exist. Guidelines from *A Policy on Geometric Design of Highways and Streets* (AASHTO, 2011) states that appropriate LOS for an urban road is LOS D or better. *Synchro Version 9.0* utilizes the methodology of the *Highway Capacity Manual* (*HCM*) (TRB, 2000 and TRB, 2010) to calculate delay and LOS. With the updates of the 2010 *HCM*, certain intersections were not considered NEPA-compliant and thereby not able to be tabulated. Therefore HCM 2000 methodology were used when analyzing intersection analysis in *Synchro*.

Pedestrian conflict volumes were included to reflect delay resulting from the conflict of turning vehicles and crossing pedestrians progressing in the same signal timing phase. For roadways and intersections near capacity the actual LOS may be worse than reported because intersection delay analysis is performed based on traffic volumes that are able to pass through intersections rather than on the actual demand volumes.

a) Two-Way Stop Controlled Intersection

The Highway Capacity Manual (TRB, 2010) LOS for a two-way stop controlled (TWSC) intersection is determined by the measured control delay (see Table 5). It is defined for each minor movement, not for the intersection as a whole. Vehicles traveling along the major, free-flow road, of a TWSC intersection, proceed through with minimal delay. Those vehicles approaching the intersection along the minor movement are controlled by a stop sign and thus experience delay attributable to the volume of vehicles passing along the free-flow road and the gaps available.

Table 5: LOS Criteria for Unsignalized Intersections

Average Control Delay (s/veh)	LOS by v/c Ratio	
	<=1.0	>1.0
≤ 10.0	A	F
>10 and ≤15	B	F
>15 and ≤25	C	F
>25 and ≤35	D	F
>35 and ≤50	E	F
>50	F	F

Source: *HCM* (TRB, 2010)

b) Signalized Intersection

The LOS analysis for signalized intersections is based on average total vehicle delay based on the methodologies of the *HCM* (TRB, 2010) shown in Table 6. High numbers of vehicles passing the intersection, long cycle lengths, inappropriate signal phasing, or a poor signal progression can result in long delays, and consequently poor LOS.

Table 6: LOS Criteria for Signalized Intersections

Average Control Delay (s/veh)	LOS by v/c Ratio	
	<=1.0	>1.0
≤ 10.0	A	F
>10 and ≤20	B	F
>20 and ≤35	C	F
>35 and ≤55	D	F
>55 and ≤80	E	F
>80	F	F

Source: *HCM* (TRB, 2010)

Another measure of intersection operation is the volume to capacity (v/c) ratio. This is the ratio of the volume of traffic utilizing the intersection compared to the maximum volume of vehicles that can be accommodated by the intersection during a specific period of time. A v/c ratio under 0.85 means the intersection is operating under capacity and excessive delays are not experienced. An intersection is operating near its capacity when v/c ratios range from 0.85 to 0.95. Unstable flows are expected when the v/c ratio is between 0.95 and 1.0. Any v/c ratio greater than or equal to 1.0 indicates that the intersection is operating at or above capacity which results in a LOS F per the *HCM* (TRB, 2010). A traffic movement can have a poor LOS but low v/c which suggests that the traffic volumes along that movement are low but have to wait a long time to make the movement. This is common for low volume protected turn movements or side streets that have to wait through a long cycle length for their split to come up.

2. Intersection Conditions

Existing (2014) unsignalized and signalized intersection LOS and delay were determined for the AM and PM peak hours (see Tables 7 and 8). Intersection traffic signal timing was optimized for the network which resulted in retaining the existing cycle length with updates to split times. Detailed analysis reports for these intersections during Existing (2014) conditions are provided in Appendix C. All signalized intersection conditions reported appropriate LOS although the southbound approach of Mahukona Street and Kona Street has LOS F in the PM peak hour and the eastbound approach of Atkinson Drive and Kona Street is LOS E in the PM peak hour. V/C for these movements were high but still less than 1.0 thereby suggesting additional capacity exists.

Table 7: Existing (2014) Unsignalized Intersection Level of Service

Unsignalized Intersection	Approach	Movement	AM			PM		
			Delay (s/veh)	v/c	LOS	Delay (s/veh)	v/c	LOS
Mahukona Street and Kona Street	Eastbound	LTR	9.9	0.21	A	24.2	0.64	C
	Westbound	LTR	10.6	0.30	B	24.4	0.65	C
	Northbound	LTR	10.7	0.30	B	29.4	0.73	D
	Southbound	LTR	11.7	0.41	B	**63.8**	0.98	**F**
Atkinson Drive and Kona Street	Eastbound	R	11.1	0.10	B	**43.8**	0.62	**E**
	Northbound	L	12.2	0.16	B	11.1	0.23	B

Table 8: Existing (2014) Signalized Intersection Level of Service

Signalized Intersection		AM			PM		
Approach	**Movement**	**Delay (s/veh)**	**v/c**	**LOS**	**Delay (s/veh)**	**v/c**	**LOS**
Kapi'olani Boulevard and Kaheka Street/Mahukona Street		19.7	0.54	B	22.0	0.63	C
Eastbound	T/TR (AM)	15.2	0.42	B	-		
	LT/T/T/TR (PM)	-			23.6	0.72	C
Westbound	LT/T/T/TR (AM)	18.8	0.68	B			
	T/TR (PM)	-			12.8	0.62	B
Northbound	LT/TR (AM)	29.2	0.32	C	-		
	T/TR (PM)	-			26.8	0.43	C
Southbound	LT/T	27.8	0.22	C	28.8	0.51	C
	R	27.0	0.14	C	23.6	0.17	C
Kapi'olani Boulevard and Atkinson Drive		4.8	0.73	A	11.6	0.54	B
Eastbound	T/TR (AM)	18.6	0.49	B	-		
	T/T/T/TR (PM)	-			9.7	0.65	A
Westbound	L (AM)	9.3	0.64	A	-		
	LT/T/T (AM)	0.8	0.67	A	-		
	T/T (PM)	-			22.8	0.58	C
Northbound	R/R/R (AM)	1.5	0.10	A	-		
	R/R/R/R (PM)	-			1.9	0.41	A
Atkinson Drive and Kahakai Drive		23.7	0.41	C	37.5	0.23	D
Westbound	L/LR	19.5	0.05	B	9.2	0.05	A
Northbound	T/TR (AM)	25.4	0.28	C	-		
	T/T/TR (PM)	-			43.7	0.70	D
Southbound	L	16.1	0.11	B	30.6	0.15	C
	T/T	23.8	0.70	C	29.7	0.25	C
Note: Lane configurations vary during AM and PM peak hours due to contraflow along Kapi'olani Boulevard. Movements are shown for AM and PM contraflow configurations. L = Left, T = Through, R = Right, (AM) = AM Contraflow, (PM) = PM Contraflow, / = lane separation, LT = shared lane for left-through movements, TR = shared lane for through-right movements, LR = shared lane for left-right movements.							

E. Areas of Concern and Proposed Mitigation

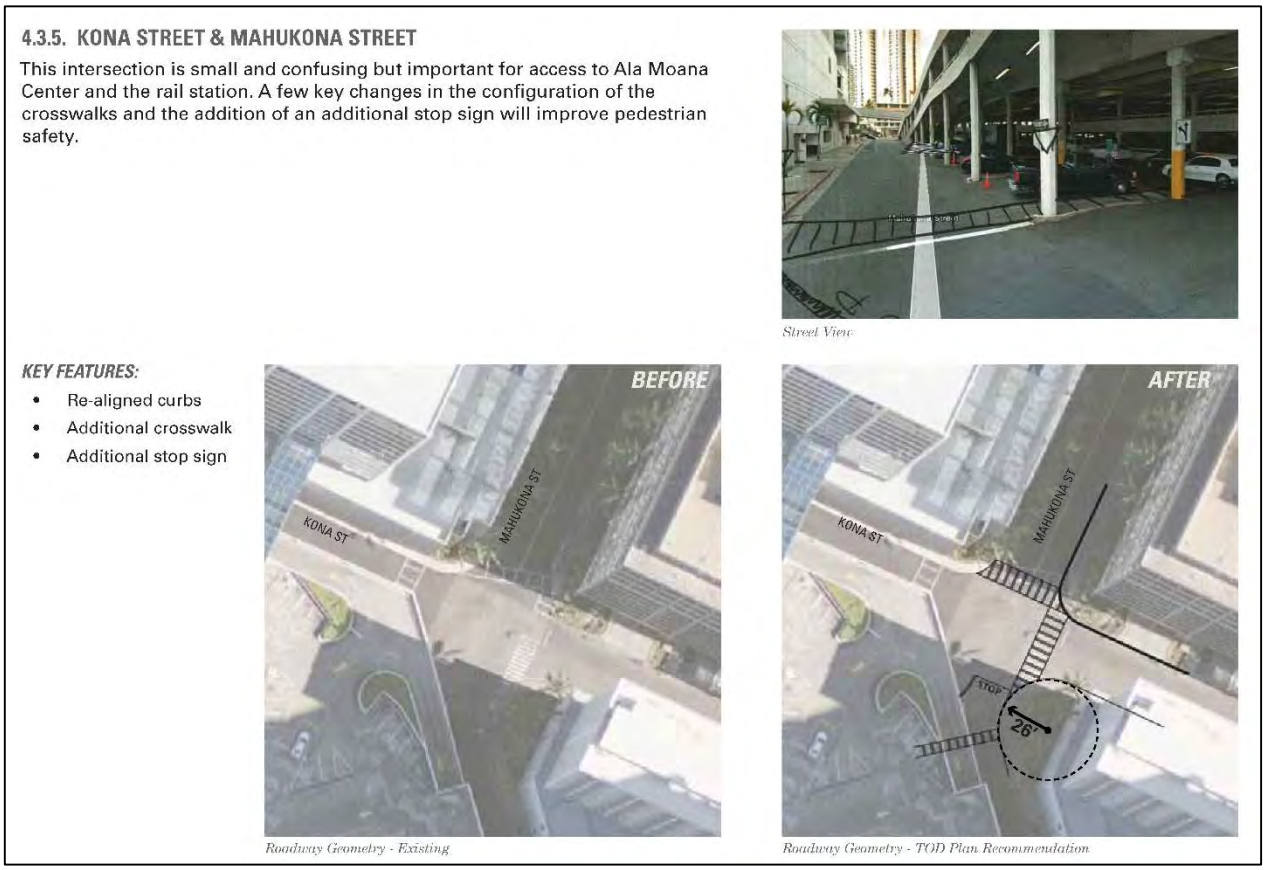
Existing project area conditions had some areas of concern noted through field observations and operational analysis. Mitigations are proposed for each area of concern.

1. Intersection Conditions

a) Mahukona Street and Kona Street

The unsignalized intersection of Mahukona Street and Kona Street resulted in LOS F for the southbound movement during the PM peak hour. Traffic signal warrants did not pass for the Peak Hour Warrant and the Four-Hour Warrant using existing traffic volumes. Therefore, with v/c less than 1.0, no a dditional

mitigation is recommended to improve operations. A second concern is the intersection geometry which is confusing due to a lack of defined travelway. There is a wide median though Kona Street, on the 'Ewa side, and through Mahukona Street, on the makai side. Ala Moana TOD notes that this intersection is of concern. Figure 13 below shows proposed mitigation to this intersection, including marked crosswalks on all legs.



Source: *Ala Moana Neighborhood Transit-Oriented Development Plan, Public Review Draft* (RTKL, July 2014)

Figure 13: Ala Moana TOD Kona Street and Mahukona Street Mitigation

b) Atkinson Drive and Kona Street

The eastbound approach at the intersection of Atkinson Drive and Kona Street results in LOS E. But a v/c less than 1.0 suggests sufficient capacity. The poor LOS could be due to the delay for a gap from the makai-bound through volumes during the PM peak period. The adjacent traffic signal at Atkinson Drive and Kahakai Drive should provide a gap during the side-street movement and the clearance interval.

There is a wide receiving lane and crosswalk across Kona Street. This results in some vehicles making an illegal left turn as well as resulting in pedestrians having a long crossing distance. It is recommended to consider enlarging the raised island to shorten the crosswalk and delineate turn movements.

c) Kapi‘olani Boulevard and Kaheka Street/Mahukona Street

This intersection operates appropriately and has marked crosswalks on all legs of the intersection. Existing wide travelways could be marked to reflect how vehicles are treating the mauka-bound approach, or bulb outs could be included to shorten the pedestrian crossing and narrow the travel lanes to what is needed by the design vehicle.

d) Atkinson Drive and Kapi‘olani Boulevard

The intersection of Atkinson Drive and Kapi‘olani Boulevard has marked crosswalks on two legs of the intersection but is missing one across the Diamond Head leg, adjacent to the Convention Center. In the current configuration, with four lanes of right-turning traffic, an adjacent crosswalk that was permitted at the same time would be hazardous. Therefore, the only options would be to have a pedestrian signal on a separate phase or to provide a grade-separated crossing.

e) Atkinson Drive and Kahakai Drive

A marked crosswalk exists across the mauka leg of Atkinson Drive at the intersection with Kahakai Drive. This is approximately 200 feet from the crosswalk at the intersection with Kapi‘olani Boulevard. A crosswalk on the makai leg of the intersection with Kahakai Drive would align with Kona Street and provide a 300-foot spacing from the intersection with Atkinson Drive. It is recommended to consider installing an additional crosswalk here or relocating the existing mauka-leg crosswalk to this side with a pedestrian signal and push-button activation.

IV. FUTURE (2017) CONDITIONS

Full build-out and occupancy of Kapi‘olani Residence is planned for 2017 and therefore the Future Without Project (no-action) and Future With Project (full-build) conditions were evaluated for that year. Roadway changes and additional traffic as a result of surrounding area development and construction anticipated to be completed were considered for Future (2017) Without Project analysis. Project related volumes and proposed transportation network changes as a result of Kapi‘olani Residence were included in Future (2017) With Project conditions.

A. Surrounding Area Conditions

Research through the State of Hawaii Office of Environmental Quality Control (OEQC) library showed no adjacent projects planned for construction by 2017. City and County of Honolulu Planning and Traffic personnel reported there are six development projects in the early planning stages for sites in the surrounding area with potential construction planned by 2017. The Ala Moana ‘Ewa wing expansion is currently under construction and has a final traffic impact analysis report. There were projects being constructed during the time of writing this report including Kalakaua Gardens, located at 1723 Kalakaua Avenue, and The Plaza Assisted Living, located at 1812 across from the Hawaii Convention Center. Both of these projects are senior housing. At the mauka-east intersection corner of Kapi‘olani Boulevard and Ke’eaumoku Street the existing Walgreens is being reconstructed. General background growth was used to estimate anticipated growth in the area by these and other unspecified developments. Plans for final construction of the Honolulu Rail Transit guideway and rail station estimate full-build out and operation by 2019 and therefore were not included in Future (2017) conditions analysis.

B. Transportation Network

1. Vehicular Facilities

a) Passenger Vehicles

Primary vehicular access to Kapi‘olani Residence is being proposed through a single right-in/right-out driveway off Kapi‘olani Boulevard. This condition is consistent with similar condominium developments in the area. Secondary full-access is being proposed off of Kona Street; this access is proposed for delivery vehicles and access to the first floor parking lot.

b) Bus and Heavy Vehicles

Changes are expected at the Ala Moana transit center, which are considered to be completed in advance of the Honolulu Rail Transit system opening. Such changes may include alterations of available routes, the location of the bus stops, and queuing. It is not expected that this will have a significant effect on this project.

2. Pedestrian Facilities

The latest ground level site plan for Kapi‘olani Residence proposes to install sidewalks adjacent to the project site fronting Kona Street and Kapi‘olani Boulevard.

3. Bicycle Facilities

Future bikeways included in the *Oahu Bike Plan, A Bicycle Master Plan* (HH&F, August 2012) are shown on Figure 9. Priority 1 projects in the project area anticipated to be built in the next five to ten years include a bike route along Pi'ikoi Street as well as transformation of the cycle track along South King Street to allow two-way movement.

C. Geometric Configuration

With limited right-of-way in this urban transportation network, no changes in roadway configuration are expected. Future (2017) conditions are evaluated using existing lane configurations which are shown in Figure 10.

D. Traffic Volumes

1. Background Growth

Changes in traffic volume along roadways in the surrounding area over the past ten years have been mixed. Despite large scale development and increased density from high-rise condominiums, vehicular traffic volumes have not grown at a steady rate. A decrease in ADT is noted for some roadways but large increases for others. This may be due to a change in motorist travel habits as a result of certain roadways operating at capacity or due to roadway construction projects on Kapi'olani Boulevard and on Ala Moana Boulevard. The *Ala Moana Neighborhood Transit-Development Plan, Existing Conditions Report, Supplement – Market Opportunities Study* (KMA, October 2012) forecasts a 1.75% cumulative growth in population for the area between the years 2013 and 2018. Although population growth is not directly related to traffic growth, a conservative 2.0% was assumed for traffic growth which is in line with prior studies in the area. This reflects current and future development planned for the area. Known project related trips generated from the Ala Moana 'Ewa wing expansion were included. Future (2017) Without Project Volumes are shown in Figure 14 which includes the anticipated growth.

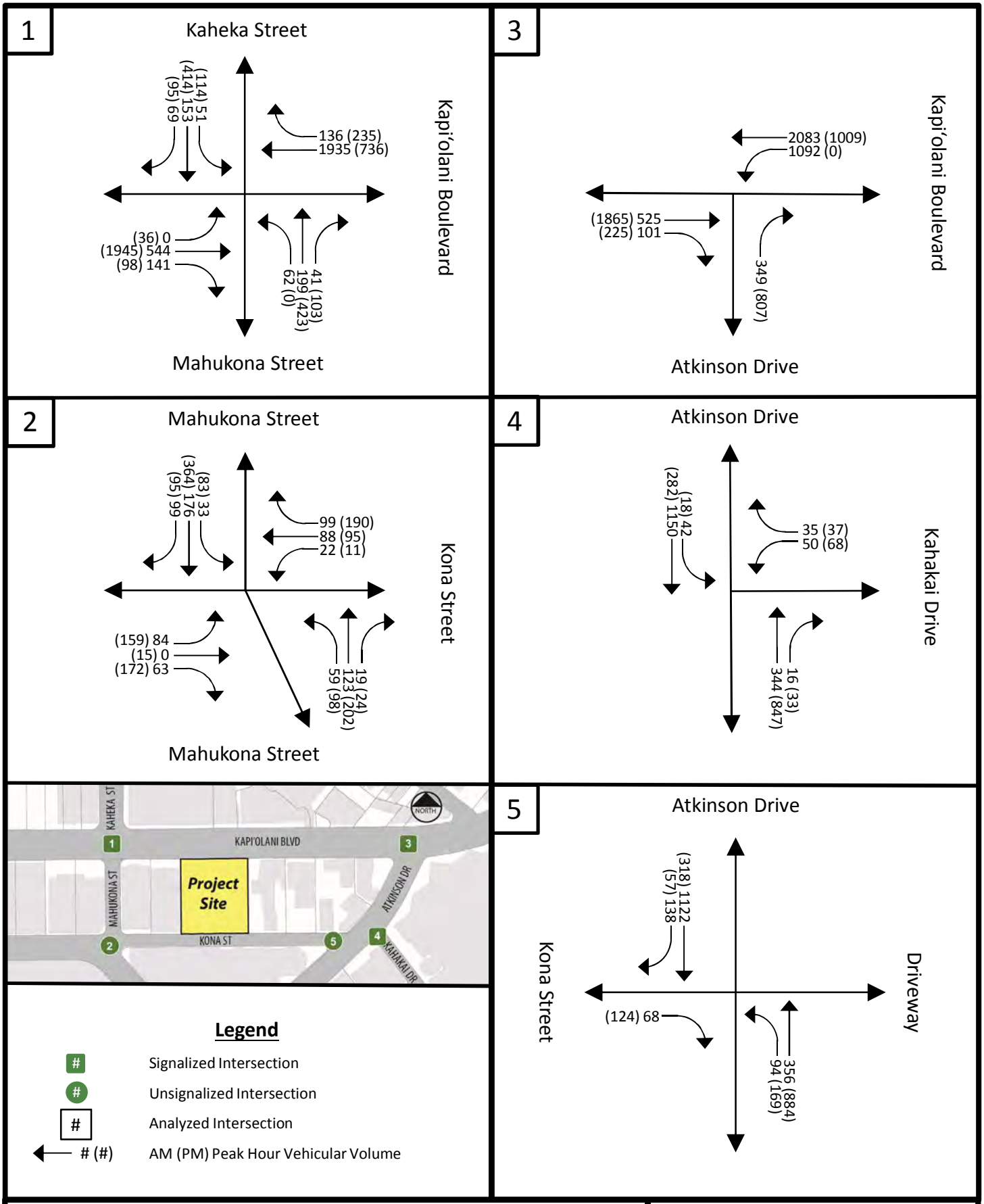


Figure 14: Future (2017) Without Project Peak Hour Volumes

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2. Project Related Volumes

The addition of trips resulting from Kapi'olani Residence was calculated using the four step trip generation methodology: trip generation, trip distribution, modal choice, route assignment.

a) Trip Generation

The proposed Kapi'olani Residence is planning to include affordable condominium units and a small commercial area. Resulting trip generation for the proposed development was calculated using *Trip Generation, 8th Edition* (ITE, 2008) and related trip generation rates are shown in Table 9. The commercial area was assumed to be similar to the "specialty retail" land use which includes a variety of retail shops and specialized services. "Specialty retail" land use typically opens after the morning peak hour of traffic, which results in no project related trips calculated for the AM peak hour. Resulting trip generation volumes for the AM and PM peak hours are shown in Table 10.

Table 9: Development Trip Generation Rates

Land Use [ITE Code]	Qty	Units	Trip Generation Average Rate	
			AM	PM
High Rise Residential Condominiums [232]	485	Dwelling Units	0.34	0.38
Specialty Retail [814]	3,427	Square Feet	0.00	2.71

Table 10: Development Trip Generation Volumes

Land Use [ITE Code]	Project Related Trips					
	AM			PM		
	In	Out	Total	In	Out	Total
High Rise Residential Condominiums [232]	31	134	165	114	70	184
Specialty Retail [814]	0	0	0	4	5	9

Methodologies described in *Trip Generation Handbook, 2nd Edition* (ITE, June 2004) state that although total project trips are calculated for a specified development, the total trips will not necessarily be new vehicles added to the adjacent roadways. The three types of project related trips considered are pass-by trips, diverted trips and primary trips. The definition of each type of trip is shown in Table 11.

Table 11: Project Related Trip Definitions

Type	Definition
Pass-by	Traffic currently passing the site on an adjacent street or roadway that offers direct access to the generator.
Diverted	Trips that are attracted from the traffic volume on roadways within the vicinity of the generator but require a diversion from that roadway to another roadway to gain access to the site.
Primary	Trips made for the specific purpose of visiting the generator. The stop at the generator is the primary reason for the trip.

Source: *Trip Generation Handbook, 2nd Edition* (ITE, June 2004)

The developer's intent for the commercial area of the condominium is to serve the pedestrian passer-by traffic including the internal condominium residents, be consistent with TOD, and provide for users of the rail system. No separate parking will be provided for patrons of the commercial space. Therefore, all external commercial trips, including customer and employee based trips, will be considered pass-by or diverted pedestrian trips. Therefore the only trips considered for distribution are those generated by the residential units.

b) Trip Distribution

Existing and future tripmakers' origin and destination were considered when evaluating future travel in the area. The *Kakaako Mauka Area Plan Transportation Analysis* (AECOM, April 2009) identified the future trip distribution trends (see Figure 15) using the *OahuMPO Travel Demand Forecast Model*. This future trip distribution is considered applicable for the Kapi'olani Residence development because the study area is directly adjacent to the project site.

The following trip distribution was assumed for the project related trips:

- 'Ewa bound (via surface streets): 25%
- Diamond Head bound (via surface streets): 22%
- 'Ewa bound (via H-1): 19%
- Diamond Head bound (via H-1): 24%
- Mauka bound: 3%; and,
- Within the project area: 7%.

Figure 15: Future Trip Distribution

c) Modal Choice

Because Kapi'olani Residence is in an urban setting with high proximity to existing transit and rail options, a high degree of alternative travel modes exist. The *Kakaako Mauka Area Plan Transportation Analysis* (AECOM, April 2009) states that because of the difficulty in estimating ongoing redevelopment and TOD elements on travel behavior, existing modal split is still deemed appropriate for use in the near term. Kapi'olani Residence is being proposed for affordable housing and therefore it can be assumed that there will be a lower use of personal vehicles and higher use of other transportation modes as compared to an similar sized market-priced development. However, as a "worst case" scenario (highest volume of vehicle trips) the existing modal split percentage was used to calculate project related trips (see Table 12).

Table 12: Project Related Transportation Mode

Transportation Mode	Percentage *	Residential	
		AM Peak Hour	PM Peak Hour
Private Vehicle	76.9%	127	142
Transit	12.8%	21	24
Bike	2.3%	4	3
Walk	8.0%	13	15

* Source: *Kakaako Mauka Area Plan Transportation Analysis* (AECOM, April 2009)

d) Route Assignment

Project related trips associated with the proposed condominium development during the AM and PM peak hours were distributed along the adjacent roadways using existing intersection distribution and future travel patterns. Project related vehicular volumes (see Figure 16) were distributed through the study intersections. Project related transit use will increase the demand for and volume from transit riders.

3. Future Peak Hour Volumes

Project related vehicular volumes were added to the Future (2017) Without Project traffic volumes for the resulting Future (2017) With Project traffic volumes shown in Figure 17. This is reflective of future traffic conditions after the build out of the condominium project.

4. Future 24-Hour Volumes

Considering the anticipated growth in the area, projected Future (2017) ADT in the project area is shown in Table 13. The difference between Future (2017) Without Project and Future (2017) With Project roadway ADT is anticipated to be negligible.

Table 13: Future (2017) Roadway ADT

Roadway	Location	ADT
Kapi'olani Boulevard	Between Sheridan Street and Ke'eaumoku Street	52,900
	Between Atkinson Drive and Kalauokalani Way	75,100

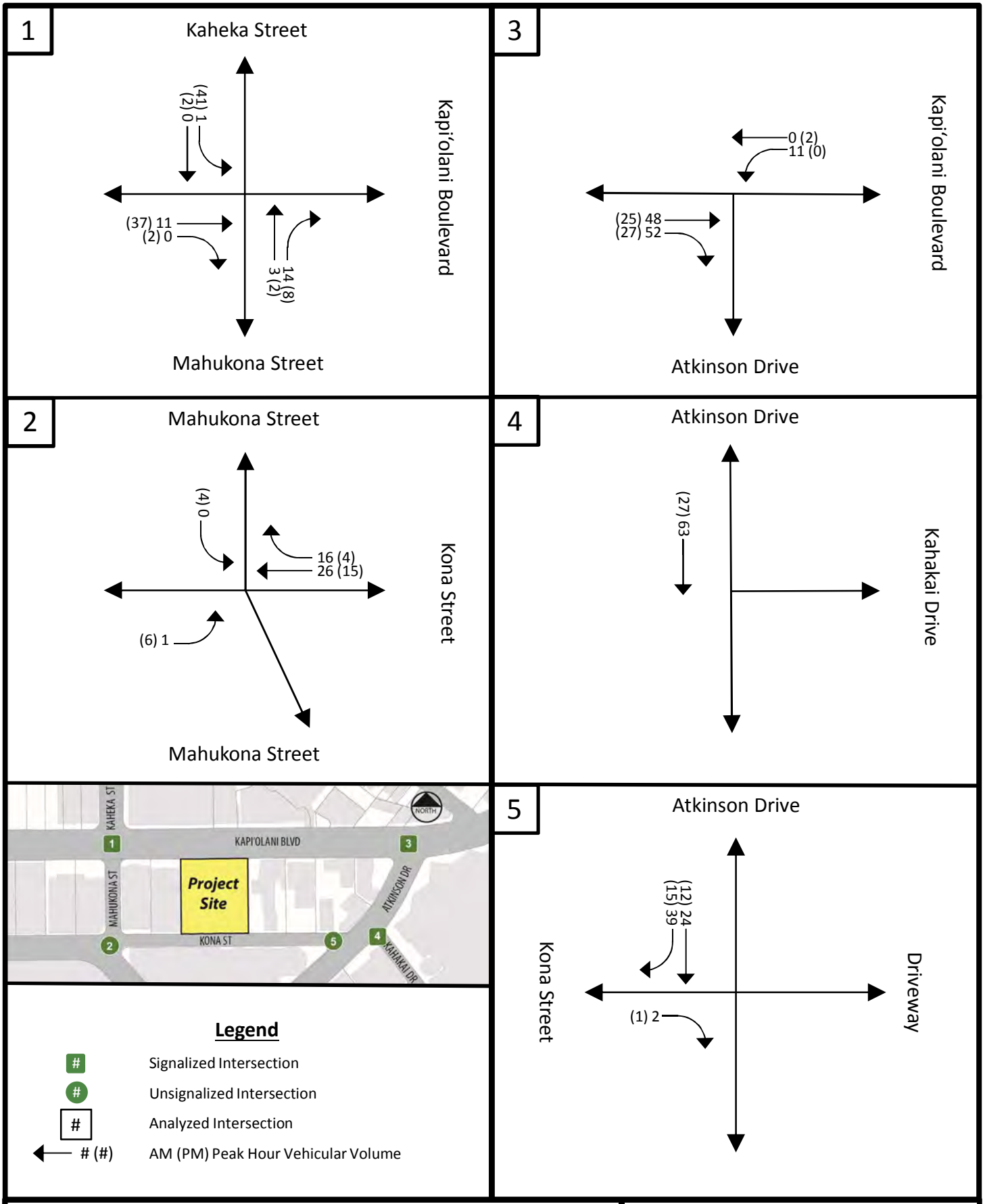

Figure 16: Project Related Peak Hour Volumes

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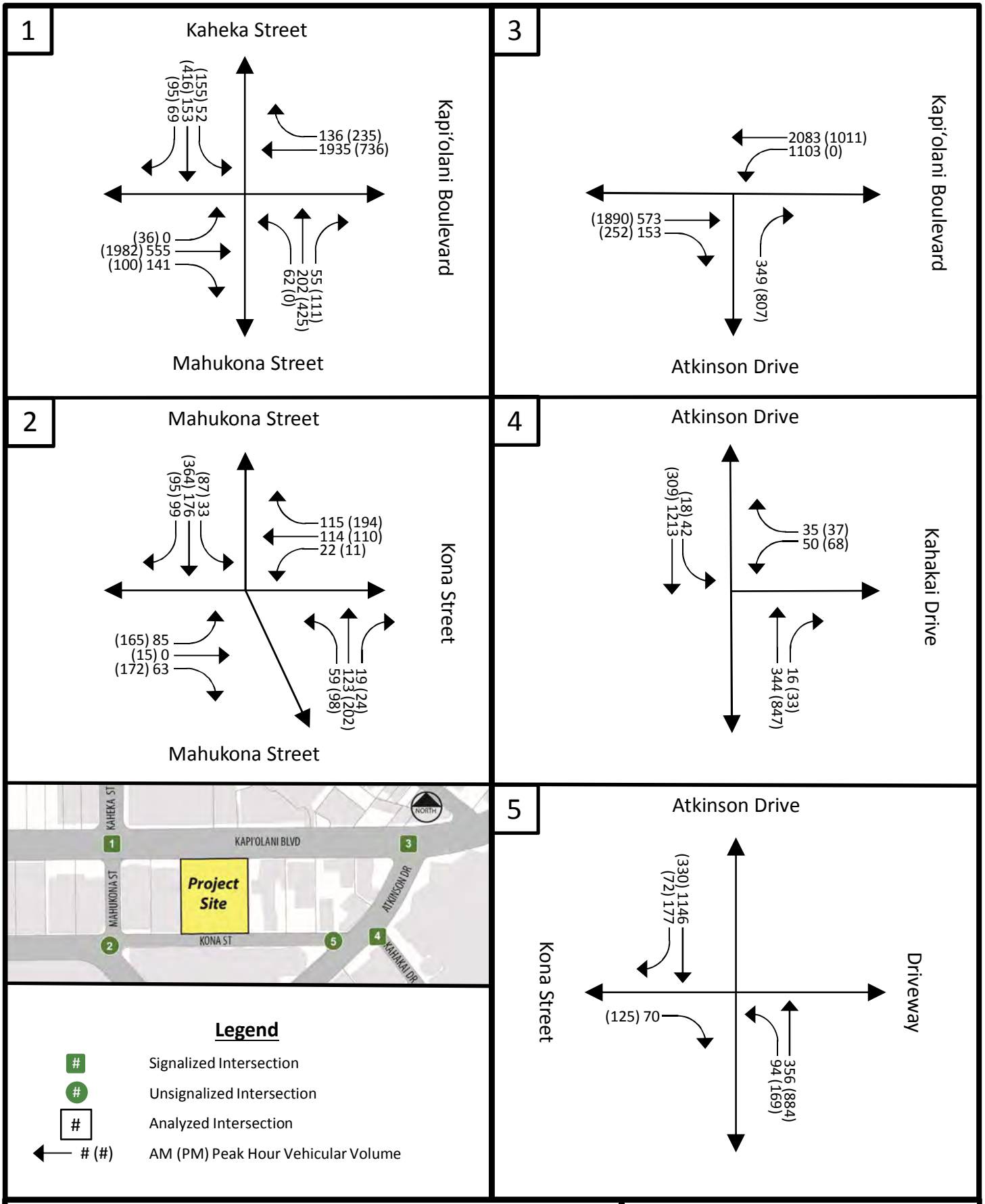

Figure 17: Future (2017) With Project Peak Hour Volumes

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5. Multi-Modal Volumes

a) Buses and Heavy Vehicles

It is anticipated that for Future (2017) conditions, Ala Moana will remain the primary transfer point for TheBus system. It is expected that transit service will adjust to Future (2017) conditions and accommodate the changes in transit demand.

b) Pedestrians

It is anticipated that with additional TOD development in the area, pedestrian volumes will increase, as will the facilities and infrastructure to accommodate them.

c) Bicycles

As with pedestrian increase, the TOD development in the area, as well as the additional dedicated bicycle facilities will increase volumes in the area. Although, without dedicated bicycle facilities along Kapi'olani Boulevard, and cyclists prohibited on the sidewalk, this increase will likely be to adjacent facilities.

E. Level of Service

1. Intersection Conditions

a) Future (2017) Without Project

For Future (2017) Without Project traffic volumes, signal timing were optimized for the network using the *Synchro* model. The greater intersection and approach delay for Future (2017) Without Project conditions is reflective of the anticipated traffic volume growth in the surrounding area (see Table 14 and 15). Table 15 shows that during the PM peak hour, the eastbound and northbound approaches at the intersection of Mahukona Street and Kona Street resulted in LOS E, while the southbound approach continues to operate at LOS F and had a v/c = 1.0. At the intersection of Atkinson Drive and Kona Street, the eastbound right turn continues to operate at LOS E during the PM peak hour but has a low v/c. All signalized intersections resulted in appropriate LOS D or better. Appendix D provides detailed analysis reports for the Future (2017) Without Project conditions.

Table 14: Future (2017) Without Project Unsignalized Intersection Level of Service

Unsignalized Intersection	Approach	Movement	AM			PM		
			Delay (s/veh)	v/c	LOS	Delay (s/veh)	v/c	LOS
Mahukona Street and Kona Street	Eastbound	LTR	10.6	0.25	B	**47.1**	0.87	**E**
	Westbound	LTR	11.3	0.34	B	33.6	0.76	D
	Northbound	LTR	11.4	0.33	B	**44.1**	0.84	**E**
	Southbound	LTR	13.0	0.48	B	**73.1**	1.00	**F**
Atkinson Drive and Kona Street	Eastbound	R	11.4	0.11	B	**36.1**	0.55	**E**
	Northbound	L	13.2	0.18	B	11.4	0.25	B

Table 15: Future (2017) Without Project Signalized Intersection Level of Service

Signalized Intersection		AM			PM		
Approach	**Movement**	**Delay (s/veh)**	**v/c**	**LOS**	**Delay (s/veh)**	**v/c**	**LOS**
Kapi'olani Boulevard and Kaheka Street/Mahukona Street		20.0	0.55	C	23.1	0.71	C
Eastbound	T/TR (AM)	15.8	0.44	B	-		
	LT/T/T/TR (PM)	-			24.8	0.78	C
Westbound	LT/T/T/TR (AM)	19.2	0.68	B			
	T/TR (PM)	-			12.4	0.62	B
Northbound	LT/TR (AM)	29.0	0.34	C	-		
	T/TR (PM)	-			27.2	0.43	C
Southbound	LT/T	27.4	0.24	C	32.1	0.62	C
	R	26.5	0.14	C	24.5	0.20	C
Kapi'olani Boulevard and Atkinson Drive		5.0	0.80	A	10.5	0.59	B
Eastbound	T/TR (AM)	15.5	0.46	B	-		
	T/T/T/TR (PM)	-			8.6	0.66	A
Westbound	L (AM)	12.7	0.71	B	-		
	LT/T/T (AM)	1.1	0.73	A	-		
	T/T (PM)	-			20.5	0.57	C
Northbound	R/R/R (AM)	1.3	0.11	A	-		
	R/R/R/R (PM)	-			2.9	0.50	A
Atkinson Drive and Kahakai Drive		21.2	0.44	C	37.1	0.26	D
Westbound	L/LR	22.1	0.06	C	10.4	0.05	B
Northbound	T/TR (AM)	22.4	0.27	C	-		
	T/T/TR (PM)	-			41.4	0.70	D
Southbound	L	14.0	0.11	B	51.4	0.15	D
	T/T	21.0	0.70	C	32.6	0.26	C
Note: Lane configurations vary during AM and PM peak hours due to contraflow along Kapi'olani Boulevard. Movements are shown for AM and PM contraflow configurations. L = Left, T = Through, R = Right, (AM) = AM Contraflow, (PM) = PM Contraflow, / = lane separation, LT = shared lane for left-through movements, TR = shared lane for through-right movements, LR = shared lane for left-right movements.							

b) Future (2017) With Project

Future (2017) With Project LOS and v/c ratios for the study intersections are shown in Tables 16 and 17. Detailed analysis reports for Future (2017) With Project conditions are provided in Appendix E. For Future (2017) With Project conditions, during the PM peak hour, all approaches of the Mahukona Street and Kona Street intersection operate at LOS E and LOS F. The eastbound approach at the intersection of Atkinson Drive and Kona Street operates at LOS E but has a low v/c. The signalized intersections continue to operate at appropriate LOS D or better.

Table 16: Future (2017) With Project Unsignalized Intersection Level of Service

Unsignalized Intersection	Approach	Movement	AM			PM		
			Delay (s/veh)	v/c	LOS	Delay (s/veh)	v/c	LOS
Mahukona Street and Kona Street	Eastbound	LTR	10.9	0.26	B	**54.4**	0.91	**F**
	Westbound	LTR	12.4	0.41	B	**40.9**	0.82	**E**
	Northbound	LTR	11.8	0.34	B	**48.7**	0.87	**E**
	Southbound	LTR	13.6	0.49	B	**74.5**	**1.00**	**F**
Atkinson Drive and Kona Street	Eastbound	R	11.7	0.12	B	**36.7**	0.56	**E**
	Northbound	L	13.9	0.20	B	11.6	0.25	B

Table 17: Future (2017) With Project Signalized Intersection Level of Service

Signalized Intersection		AM			PM		
Approach	Movement	Delay (s/veh)	v/c	LOS	Delay (s/veh)	v/c	LOS
Kapi'olani Boulevard and Kaheka Street/Mahukona Street		20.2	0.56	C	24.4	0.76	C
Eastbound	T/TR (AM)	15.9	0.44	B	-		
	LT/T/T/TR (PM)	-			27.0	0.82	C
Westbound	LT/T/T/TR (AM)	19.2	0.68	B			
	T/TR (PM)	-			12.9	0.64	B
Northbound	LT/TR (AM)	29.3	0.36	C	-		
	T/TR (PM)	-			26.2	0.43	C
Southbound	LT/T	27.5	0.24	C	33.2	0.68	C
	R	26.5	0.14	C	23.6	0.19	C
Kapi'olani Boulevard and Atkinson Drive		6.0	0.82	A	10.4	0.60	B
Eastbound	T/TR (AM)	16.8	0.53	B	-		
	T/T/T/TR (PM)	-			8.7	0.67	A
Westbound	L (AM)	15.6	0.72	B	-		
	LT/T/T (AM)	1.2	0.75	A	-		
	T/T (PM)	-			19.7	0.56	B
Northbound	R/R/R (AM)	2.0	0.12	A	-		
	R/R/R/R (PM)	-			3.0	0.52	A
Atkinson Drive and Kahakai Drive		19.7	0.46	B	36.8	0.26	D
Westbound	L/LR	24.2	0.06	C	10.4	0.05	B
Northbound	T/TR (AM)	20.1	0.25	C	-		
	T/T/TR (PM)	-			41.4	0.70	D
Southbound	L	12.8	0.10	B	50.0	0.15	D
	T/T	19.5	0.70	B	32.0	0.29	C

Note: Lane configurations vary during AM and PM peak hours due to contraflow along Kapi'olani Boulevard. Movements are shown for AM and PM contraflow configurations. L = Left, T = Through, R = Right, (AM) = AM Contraflow, (PM) = PM Contraflow, / = lane separation, LT = shared lane for left-through movements, TR = shared lane for through-right movements, LR = shared lane for left-right movements.

F. Mitigation

The proposed Kapi‘olani Residence proposes to develop a site that previously generated minimal trips. This new project for affordable housing is projected to add vehicular and multi-modal traffic to the immediate area. The City and County of Honolulu, DTS has requested limited driveway access to the project site along Kapi‘olani Boulevard with a single right-in/right-out driveway to reduce delay to vehicles traveling straight through along Kapi‘olani Boulevard. A secondary, full-access, driveway off of Kona Street is proposed to serve delivery and residential vehicular access and is not expected to have a significant impact on delay. The secondary access will be located at the same location of the existing driveway off of the privately owned Kona Street; this will likely need to be coordinated with the owner, General Growth Properties.

1. Intersection Conditions

a) Mahukona Street and Kona Street

The intersection of Mahukona Street and Kona Street passed the Peak Hour signal warrant for Future (2017) Without Project using the PM peak hour volumes. Resulting intersection operations would be acceptable as a signalized intersection during the Future (2017) Without and With Project conditions (see Tables 18 19).

Table 18: Mahukona Street and Kona Street Future (2017) Without Project Signalized Mitigation

Signalized Intersection		AM			PM		
Approach	Movement	Delay (s/veh)	v/c	LOS	Delay (s/veh)	v/c	LOS
Mahukona Street and Kona Street		8.1	0.41	A	19.7	0.85	B
Eastbound	LTR	11.1	0.36	B	27.5	0.82	C
Westbound	LTR	11.2	0.41	B	11.9	0.38	B
Northbound	LTR	5.7	0.31	A	11.9	0.61	B
Southbound	LTR	6.1	0.41	A	23.7	0.87	C

Table 19: Mahukona Street and Kona Street Future (2017) With Project Signalized Mitigation

Signalized Intersection		AM			PM		
Approach	Movement	Delay (s/veh)	v/c	LOS	Delay (s/veh)	v/c	LOS
Mahukona Street and Kona Street		8.6	0.45	A	21.8	0.87	C
Eastbound	LTR	9.6	0.31	A	31.6	0.85	C
Westbound	LTR	10.1	0.43	B	12.2	0.43	B
Northbound	LTR	7.3	0.35	A	12.5	0.62	B
Southbound	LTR	7.9	0.47	A	26.4	0.89	C

V. FUTURE (2030) CONDITIONS

The Honolulu Rail Transit system has a projected full build-out and operation year of 2019. Utilizing forecasts and results from the *Honolulu High-Capacity Transit Corridor Project, Final Environmental Impact Statement* (PB, June 2010), *Honolulu High-Capacity Transit Corridor Project, Transportation Technical Report* (PB, August 2008), and subsequent addendums, Future (2030) conditions in the study area were reviewed as they relate to the proposed development of Kapi‘olani Residence and the surrounding area.

A. Transportation Network

1. Vehicular Facilities

a) Passenger Vehicles

As the Ala Moana area progresses with TOD development, changes will be implemented that favor multi-modal travel. This may have a negative impact on passenger vehicle operations which is expected and acceptable in order to increase mobility and safety for all transportation modes.

b) Bus and Heavy Vehicles

The *HHCTC, Transportation Technical Report* (PB, August 2008) states that even though bus operations at Ala Moana Center would transition from being the primary transfer point for TheBus system to one of many throughout Oahu, it would continue to be a dominant transfer location on the island for buses and fixed guideway activity.

The *HHCTC, Transportation Technical Report, Addendum 2* (PB, October 2009) states that with the railway system in place, the Ala Moana transit center would need a substantial increase in volume of buses. The study predicts the station will be served by the following routes: 5, 6, 7, 8, 9, 17, 18, 23, 40, 40A, 52, and 88A with Routes A and 3 continuing to operate on Kapi‘olani Boulevard.

2. Pedestrian Facilities

The *HHCTC, Transportation Technical Report* (PB, August 2008) states that escalators and elevators will be available at each station for pedestrian access.

3. Bicycle Facilities

The *HHCTC, Transportation Technical Report* (PB, August 2008) states that bicyclists will be encouraged and accommodated at each rail station. Each station will have facilities for parking bikes, and each rail car will be designed to accommodate bikes during the off peak hours.

Future bikeways included in the *Oahu Bike Plan, A Bicycle Master Plan* (HH&F, August 2012) are shown on Figure 9. All future projects noted on the plan are expected to be completed by Future (2030) conditions.

B. Geometric Configuration

1. Honolulu Rail Transit

The Ala Moana Rail Station is being proposed for construction along Kona Street, near the intersection with Kona Iki Street, approximately 0.4-miles from the proposed Kapi‘olani Residence project site. The Ala Moana Rail Station will consist of a platform and a concourse level with total height approximately 60-feet above the ground level.

The *HHCTC, Transportation Technical Report, Addendum 2* (PB, October 2009) notes that along Kona Street, through lanes will be reduced to a minimum of 11 feet and turn lanes to a minimum of 10 feet to accommodate proposed guideway columns.

C. Traffic Volumes

1. Background Growth

The *HHCTC, Transportation Technical Report, Addendum 2* (PB, October 2009) forecasts that a total of 22,610 riders will board and 22,610 riders will depart the train daily at the Ala Moana Rail Station in 2030 conditions.

The existence of the rail station provides a more comprehensive transit network and additional transit alternative. The *HHCTC, Transportation Technical Report, Addendum 2* (PB, October 2009) predicts that the build-out of the rail will attract substantial ridership from local bus access and from people walking to stations. The forecasted daily volume of riders per each travel mode accessing the Ala Moana Rail Station is shown in Table 20.

Table 20: Ala Moana Rail Station Rider Modal Use

Transportation Mode	Percentage	Daily Riders
Vehicle (Parking)	1%	250
Vehicle (Kiss & Ride)	4%	890
Transit (Bus)	79%	17,790
Bike/Walk	16%	3,860
Total		22,610

Source: *HHCTC, Transportation Technical Report, Addendum 2* (PB, October 2009)

2. Project Related Volumes

The addition of the Honolulu Rail Transit system will likely increase the percentage of Kapi'olani Residence trips that use a transportation mode other than passenger vehicle. However, those who are likely to use rail transit as their primary transportation in the AM and PM peaks in future conditions, will likely use bus transit, accessed through the Ala Moana transit center, in the interim. Therefore the project related volume distribution reflects a "worst case" condition (highest volume of vehicle trips) and is still applicable for Future (2030) conditions.

3. Future Peak Hour Volumes

The *HHCTC, Transportation Technical Report, Addendum 2* (PB, October 2009) forecasts that during the AM two-hour peak period, 1,830 riders will board and 7,700 riders will depart the train at the Ala Moana Rail Station for 2030 conditions. The *HHCTC, Transportation Technical Report, Addendum 2* (PB, October 2009) provides the total peak hour vehicle trips generated at the Ala Moana Rail Station for 2030 conditions as a result of the rail system (see Table 21).

Table 21: Ala Moana Rail Station Peak Hour Vehicle Trip Generation

Mode	AM Peak		PM Peak	
	In	Out	In	Out
Bus Transit Vehicle Trips	74	74	74	74
Spillover Parking	87	0	0	87
Kiss-and-Ride	354	354	354	354
Total	515	428	428	515

Source: *HHCTC, Transportation Technical Report, Addendum 2* (PB, October 2009)

D. Level of Service

The *HHCTC, Transportation Technical Report, Addendum 2* (PB, October 2009) states that four intersections in the vicinity of the Ala Moana Rail Station are expected to experience large increases in bus activity, spillover parking, and kiss and ride activities. These intersections are adjacent to the study intersections for the Kapi'olani Residence and can be considered to have a similar resulting delay and LOS as the study intersections. Resulting Future (2030) LOS conditions are shown in Table 22.

Table 22: Future (2030) With Project Intersection Level of Service

Intersection	Traffic Control	AM		PM	
		Delay	LOS	Delay	LOS
Ala Moana Boulevard at Atkinson Drive	Signalized	49	D	46	D
Kona Street at Ke'eaumoku Street	AWSC	317	F	487	F
Kona Street at Pi'ikoi Street	Signalized	43	D	50	D
Kapi'olani Boulevard at Ke'eaumoku Street	Signalized	25	C	142	F

Source: *HHCTC, Transportation Technical Report, Addendum 2* (PB, October 2009)

E. Mitigation

The *HHCTC, Transportation Technical Report* (PB, August 2009) estimates that for the Ala Moana Center Station area, traffic conditions would experience added delay and would require consideration of mitigation measures. The *HHCTC, Transportation Technical Report, Addendum 2* (PB, October 2009) states that the signalization of Kona Street at Ke'eaumoku Street will reduce delay but not alleviate the poor LOS at the intersection in the AM peak hour. Depending on the mitigation measures used and transit routes proposed, the intersection of Kona Street and Mahukona Street may need additional mitigation to handle the increased volume of bus transit.

VI. SUMMARY

Existing (2014) conditions resulted in appropriate LOS conditions for all signalized intersections. The unsignalized southbound approach Mahukona Street and Kona Street and the eastbound right movement at Atkinson Drive and Kona Street resulted in poor LOS although a low v/c which suggests that capacity exists. Existing conditions could be changed to improve multi-modal operations and access.

- The unsignalized intersection of Mahukona Street and Kona Street resulted in poor LOS for the southbound movement during the PM peak hour. Additionally, the intersection has confusing geometry due to a lack of defined travelway. The Ala Moana TOD plan proposes potential mitigation options to help delineate traffic and pedestrian movements for consideration at this intersection of two privately owned streets.
- The unsignalized intersection of Atkinson Drive and Kona Street has a wide receiving lane and crosswalk across Kona Street. This results in some vehicles making an illegal left turn as well as resulting in pedestrians having a long crossing distance. It is recommended to consider enlarging the raised island to shorten the crosswalk and delineate turn movements. Adjacent developments in the area will likely be using this as their primary access and thus should coordinate improvements here with the City.
- The signalized intersection of Kapi‘olani Boulevard and Kaheka Street/Mahukona Street operates appropriately and has marked crosswalks on all legs of the intersection. Existing wide travelways could be marked to reflect how vehicles are treating the mauka-bound approach, or bulb outs could be included to shorten the pedestrian crossing and narrow the travel lanes to what is needed by the design vehicle.
- The signalized intersection of Atkinson Drive and Kapi‘olani Boulevard has marked crosswalks on two legs of the intersection but is missing one across the Diamond Head leg, adjacent to the Convention Center. In the current configuration, with four lanes of right-turning traffic, an adjacent crosswalk that was permitted at the same time would be hazardous. Therefore, the only options would be to have a pedestrian signal on a separate phase or to provide a grade-separated crossing.
- A marked crosswalk exists across the mauka leg of Atkinson Drive at the signalized intersection with Kahakai Drive. This is approximately 200 feet from the crosswalk at the intersection with Kapi‘olani Boulevard. A crosswalk on the makai leg of the intersection with Kahakai Drive would align with Kona Street and provide a 300-foot spacing from the intersection with Atkinson Drive. It is recommended to consider installing an additional crosswalk here or relocating the existing mauka-leg crosswalk to this side with a pedestrian signal and push-button activation.

Future (2017) Without Project conditions resulted in appropriate signalized intersection operations although worsened operations at the unsignalized intersection approaches in the PM peak hour. The intersection of Mahukona Street and Kona Street warranted a traffic signal using the PM peak hour volumes. The intersection operated appropriately as a signalized intersection for Future (2017) Without Project and Future (2017) With Project conditions.

Kapi‘olani Residence proposes primary vehicular access to the project site through a right-in/right-out driveway off of Kapi‘olani Boulevard. Future (2017) With Project conditions maintained appropriate LOS conditions for all signalized intersections with poor operations for some unsignalized intersection approaches. The development should include the following mitigation to address projected impact:

- Include wide, tree-lined sidewalks along Kapi'olani Boulevard with convenient access to the project entrance. Serving a different purpose, Kona Street should include adequate sidewalks as well.
- It is also suggested that bicycle access and storage be considered within the development.

Future (2030) With Project conditions consider the effect of the build-out and operation of the Honolulu Rail Transit and Ala Moana Rail Station. As a result of the increased activity around the project area from the rail system, the intersections of Kona Street at Ke'eaumoku Street, Kona Street at Pi'ikoi Street, and Kapi'olani Boulevard at Ke'eaumoku Street will experience added delay. It is assumed that the Kapi'olani Residence study intersections will also experience additional delay as a result.

In conclusion, the proposed Kapi'olani Residence complies with TOD guidelines by providing a mix of high density residential and commercial 0.4-miles from the Ala Moana Rail Station, within the ½-mile TOD radius. This project is further beneficial in that it is providing much-needed affordable housing in the area. Existing conditions could be improved with the addition of pedestrian facilities in the form of sidewalks fronting the building along Kapi'olani Boulevard and Kona Street. The addition of project related traffic will have a negligible impact on the surrounding area.

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APPENDIX A

Kapi‘olani Residence Proposed Project Profile

KAPIOLANI RESIDENCE
1631 Kapiolani Boulevard
Honolulu, Hawaii

Proposed Project Profile

SamKoo Pacific, LLC
1631 Kapiolani Boulevard
Suite 200
Honolulu, Hawaii 96814

October 22, 2014

INTRODUCTION

SamKoo Pacific, LLC (**"SamKoo"**) proposes to develop a high-rise affordable housing project at 1631 Kapiolani Boulevard (**the "Project"**) in the Ala Moana District of Central Honolulu. The Project site is located along the makai side of Kapiolani Boulevard adjacent and across Kona Street from Ala Moana Center. The Ala Moana Hotel is located nearby, adjacent to and Diamond Head of Ala Moana Center. Provisionally named "Kapiolani Residence ", the Project's intent is to provide attractive, desirable, and conveniently located affordable housing opportunities in a location and manner that supports public directed growth policies, State of Hawaii (**"State"**) and City and County of Honolulu (**"City"**) affordable housing objectives, and the Project's economic requirements.

Project Objectives

The Project seeks to provide centrally located and affordable opportunities for urban living in convenient proximity to shopping, dining, business, employment, health, transportation, and other vital urban lifestyle support facilities and services. Many of these types of facilities are conveniently located in the immediate vicinity or within ¼ to ½ mile of the Project site. They include nearby grocery retailers Don Quixote and Palama Market located mauka of the Project and the Foodland Supermarket in Ala Moana Center, an abundance of retail shopping and dining establishments as well as family and professional services located at Ala Moana Center, along Kapiolani Boulevard, and on Keeaumoku Street, and nearby banking services at First Hawaiian Bank, Bank of Hawaii, Territorial Savings and Loan, and American Savings Bank. In addition, potential employment opportunities are located in the immediate vicinity or are reachable through nearby public transportation access points located in Ala Moana Center.

With its location along Kapiolani Boulevard within one-half mile of the City's proposed rail transit project **("Rail Project")** in the City-designated Convention Center Subdistrict of the Ala Moana Transit-Oriented Development **("TOD")** Precinct, the Project also intends to provide Honolulu's TOD initiative with a vital residential component, to support the future Rail Project with a substantial ridership component, and to provide the Project's future residents with multiple public as well as private transportation alternatives.

Finally, 60% of all Project residential units are intended to be affordable in accordance with Hawaii Housing Finance and Development Corporation **("HHFDC")** definitions and in compliance with HHFDC Development Unit Revolving Fund **("DURF")** requirements. By targeting a portion of the affordable housing market in this way, the Project seeks to provide, within a central urban setting, significant opportunities to meet a large and persistent housing need in those market segments.

Selection of the 201H Approach to Development

Given existing market conditions and the Project's significant economic constraints, SamKoo has found development in accordance with Chapter 201H of the Hawaii Revised Statutes ("**201H**") the most feasible way to meet both public need and Project economic requirements. SamKoo purchased the 1631 Kapiolani Boulevard site at the "peak of the market" in 2007, paying a significant premium to acquire it. After this purchase, SamKoo also contributed significantly toward the expansion of sewer line capacity in the area.

Since that time, SamKoo has experienced Hawaii's economic downturns, the State's partial economic recovery, and the ongoing emergence of new City development parameters, known generically as TOD, intended to complement its proposed Rail Project and to shape the neighborhoods envisioned to support it.

The City's Ala Moana Transit-Oriented Neighborhood (the **"TOD Plan"**), now in public review draft form, would allow variations from the BMX-3-prescribed development standards applicable to the Project site in exchange for "Community Benefits". Such variations could include greater building heights and onsite densities as well as waivers from existing setback requirements.

However, an observation of agency review times and the cumulative magnitude of City-proposed discretionary requirements in exchange for such variations imposed on a TOD-oriented project proposal located nearby suggested that a TOD approach would very likely impose too great a development and construction cost burden to enable this Project, the majority of which is intended for affordable housing, to be economically feasible.

The 201H approach, on the other hand, with its defined requirements, incentives, and increased degree of processing certainty presented a more certain path to development and a procedure which would support the feasibility of the predominantly affordable housing development this Project intends to be. It is for these reasons that the 201H approach has been selected as the logical approach to development. It presents the more feasible and possibly the only feasible method for providing affordable housing at this very premium location in Central Honolulu.

PROJECT DESCRIPTION

Location

The Project site is located in the Ala Moana area of Central Honolulu along the makai side of Kapiolani Boulevard. Its location is just east of the Diamond Head end of Ala Moana Center and immediately mauka of the Ala Moana Hotel. Kona Street forms its makai boundary. Kaheka Street runs mauka-makai two parcels west of the Project site. Further west, the future Ala Moana Rail Project Station is located a little over ¼ mile away, well within comfortable walking distance from the Project.

Several low-rise commercial buildings separate the site from Atkinson Drive to the east. Other major buildings in the vicinity include The Hawaii Convention Center at the Diamond Head-Makai corner of the Atkinson Drive/Kalakaua Avenue intersection, the "Pan Am" building immediately across Kapiolani Boulevard, and the First Hawaiian Bank building at the mauka-ewa corner of the Kaheka Street-Kapiolani Boulevard intersection.

High-rise residential towers and a variety of low-rise commercial buildings and grocery stores such as Quixote and Palama Market typify the area mauka of Kapiolani Boulevard. Just beyond these structures, the tree-lined mauka portion of Kalakaua Avenue connects the area to Waikiki. High-rise residential towers dominate the area Diamond Head of Atkinson Drive. The Central YMCA is also located along the east side of Atkinson Drive.

Site Description

The nearly square Project site consists of two parcels, TMK's: (1) 2-3-041:009 and (1) 2-3-041:006, totaling 1.291 acres or 56,250 square feet in area. The parcels are currently occupied by several one and two-story commercial buildings which house offices and commercial enterprises. The site is essentially flat. Monkeypod Trees line the site's Kapiolani Boulevard edge. Kona Street, which forms the site's makai boundary, is treeless.

The Institutional Context

As part of the area encompassed by the Convention Center Subdistrict of the Ala Moana TOD Precinct, the site is part of an area intended for transition to higher intensity development. One set of State Land Use regulations and three sets of City regulatory or policy parameters are currently in play. City regulatory and policy parameters are:

- The existing, "underlying" zoning (BMX-3: "Community Business Mixed Use") under the Land Use Ordinance of the City (the "**LUO**").

- The TOD Plan *"Public Review Draft",* currently undergoing public review and requiring the development of enabling regulations after its approval. While this effort is not complete and may be modified in response to public comment, it nevertheless represents the City's current intent for the area.

- The recently enacted Ordinance 14-10, which provides an interim process for City review and processing of TOD projects in City-designated TOD areas.

The State Land Use District and the City's underlying BMX-3 zoning development standards are the regulatory parameters currently in force at the Project site. The Public Review Draft version of the TOD Plan is in effect a "statement of intent" currently without the force of law. As cited above, it is subject to public scrutiny and possible modifications and refinements, and will require an enabling ordinance for implementation. Finally, Ordinance 14-10, which provides a process for reviewing TOD proposals is only applicable to projects intended and framed as TOD projects.

As previously cited, the Project is not intended as a TOD project, but rather, as a predominantly affordable housing project to be reviewed and processed under the 201H Affordable Housing program under the auspices of the HHFDC.

Therefore, the existing City ordinance with which the Project is appropriately compared is the BMX-3 zoning district. However, as the Project also intends, in part, to support the Rail Project as a source of potential ridership, it is also useful and appropriate to compare it with the proposed building envelope aspects of the TOD Plan as it currently exists, since it represents, at least in draft form, an approximation of future policy for the area in which the Project will be located. Finally, to complete the survey of the Project's institutional context, parameters of Ordinance 14-10 have also been included in the following survey of institutional parameters for development.

Project Development Parameters

State Land Use Designation: Urban

City Development Parameters:

Zoning: BMX-3: Community Business Mixed Use

Height Limit:	350 feet
Height Setbacks:	No portion of a structure shall exceed a height equal to twice the distance from the structure to the vertical projection of the centerline of any street.
Yard Setbacks:	
Front (Street):	10 feet for dwellings; 5 feet for other uses
Side & Rear:	10 feet for multi-family dwellings; 0 feet for other uses
Maximum Site Coverage:	Not regulated
Maximum Density:	
Base FAR:	2.5
w/Bonuses:	3.5 maximum (based on provision of public open space or arcades)
Offstreet Parking:	Varies by Usage
Offstreet Loading:	Varies by Usage

TOD Plan (in progress)

Height Limit:	400 feet
Height Setback:	15 feet above a height of 60 feet
Maximum Density:	7.0, with community benefits
Street Frontage Setback:	
Kapiolani:	12 feet

City Ordinance 14-10:" Interim Planned Development Permits for Transit-Oriented Development Within Close Proximity to Future Rail Stations"

Ordinance 14-10 states that "catalytic TOD projects" (TOD project proposals) shall be *generally* consistent with the neighborhood TOD plan for the affected area, if such plan has been released by the director as a public review draft to the community for its review and comment".

According to its own parameters, Ordinance 14-10 would have assigned the Project site with the following guidance for height and density:

Height Limit: 450 feet ("twice that allowed by the underlying zoning or 450 feet, whichever is lower"; existing BMX-3 height limit at the site is 250 feet)

Max. Density: 7.0 ("twice that allowed by the underlying zoning district [plus underlying district density bonuses] or 7.5, whichever is lower"; therefore, allowable density is twice the maximum density allowed in BMX-3; therefore: FAR 3.5 x 2 = FAR 7.0)

Other Development Considerations:

Other conditions with possible influence on the shaping of any project were also examined. They are presented below. At this location, they do not affect the configuration or program of this project.

Flood Zone:	AE & X
Historic Designations:	None
Lot Restrictions:	None
SMA/Shoreline Zone:	Not Applicable
Special District:	Convention Center Subdistrict of the Ala Moana TOD Precinct, pending the adoption of the TOD Plan and the adoption of Special District Overlay Regulations.

Project Proposed Configuration and Program

The proposed Project will consist of a single 45-floor high-rise residential tower and a free-standing 11- floor parking garage. To adequately accommodate all programmed facilities, the Project proposes to occupy the entire site.

Major proposed project elements include:

- Residential units
- Resident Support Spaces and Amenities
- Staff Support Spaces
- Commercial Spaces
- Parking Facilities
- Loading Stalls

The Residential Tower first floor will consist of resident and staff support facilities and commercial spaces. The Parking Garage first floor will consist of parking and loading stalls, project mechanical and utility support spaces, and a resident "party room" which can be used by

Project residents in conjunction with the immediately adjacent outdoor open spaces for functions and social events.

Garage upper levels will hold parking stalls. Maximum height of the tower is estimated at 396.5 feet, with an additional projection of rooftop mechanical equipment rising an additional 18 feet to a cumulative height of 414.5 feet. The Project proposes a density or FAR of 8.34.

Project Program

The Project will house 485 residential units, as follows:

Unit Type	# Units	% Total
Resident Mgr.	1	2%
Studio	88	18%
1-Bedroom	132	27%
2-Bedroom	264	55%
Total:	**485**	**100%**

Intended Target Markets:

Sixty percent or 291 of total Project residential units will be affordable units targeting prospective buyers earning 80% - 120% of Area Median Income (AMI). At this time, affordable unit types are projected as follows:

Unit Type	# Units	% of Total Units
Studio	51	11%
1- Bedroom	81	17%
2 - Bedroom	156	32%
Total Affordable Units	**291**	**60%**

Support Facilities:

Onsite Parking

The Project proposes assignment of one parking space per unit regardless of size, in recognition of

- The Project's urban location,
- Anticipated proximity to employment and lifestyle support services and amenities, and
- The availability of multiple transportation modes, including a public bus system, the Rail Project, and provisions for pedestrian and bicycle travel.

The Project proposes to provide guest parking equivalent to 5% of total residential units. It proposes the provision of stalls equipped for charging electric cars in accordance with current LUO standards.

In addition, the Project proposes to make additional parking stalls available to Project unit owners who may wish to purchase an additional stall. Depending on the actual demand for

these additional stalls, there may additional stalls available for other uses located in nearby facilities. Decision for disposition of those stalls shall be by discretion of SamKoo, should such surplus result.

Onsite Loading

The Project proposes two loading spaces within the proposed parking structure, accessed from Kona Street, to accommodate resident needs.

Summary of Project Contributions

- **Provision of Affordable Housing:** As a primarily affordable housing project located in a uniquely central location in the heart of Central Honolulu, the Project proposes several significant community-oriented contributions:

  - It will help meet a strong, longstanding, and pervasive need for affordable housing in Central Honolulu

  - It will contribute to the City and State's directed growth policy

  - It will contribute to the City's intent to provide affordable housing on Oahu, and will also contribute significantly to the affordable housing component of the City's TOD Plan

  - It can help provide potentially significant ridership for the future Rail Project;

    In addition,

  - It proposes affordable housing at a uniquely premium urban location in direct proximity to urban lifestyle support facilities and services, with convenient access to multiple transportation choices to optimize resident mobility

- **Generous Provisions for the Public Domain within the Street-Level Environment:** The Project is set back 30 feet from Kapiolani Boulevard, providing generous accommodation for street-side pedestrian amenities and opportunities for landscaping to "soften" or counterbalance urban hardscape and vertical aspects of the proposed Project. This setback is also a functional necessity. The proposed distance from the street will help to mitigate Kapiolani Boulevard traffic noise impacts on mauka-facing residential units and will help the residential tower avoid potential conflicts with the shallow but far-ranging root systems of the Monkeypod Trees lining the street.

- **Participation in the Sewer Line Improvement Project:** SamKoo was one of six participants and the second largest contributor to the cost of expansion of sewer line capacity in the area from the east end of Waikiki to the Ala Moana area. This capacity expansion helps meet current neighborhood demand and facilitates the redevelopment of properties to meet future sewer demands as this and adjacent areas evolve into or support the Transit-Oriented Neighborhood envisioned by the City.

SamKoo believes that these project-generated community benefits eminently qualify the Project for its proposed departures from existing and proposed City development parameters at the Project site.

Comparison with Existing and Proposed City Development Parameters

As previously stated, land costs and the configuration of the Project for an adequately provisioned, affordable housing facility requires a certain magnitude to achieve economic feasibility. Project economic analyses have indicated the number of units and Area Median Income ("**AMI**") targets needed to achieve Project feasibility.

Fulfilling these requirements will require a certain building volume or "envelope" to house these units. To achieve this, SamKoo finds it necessary to depart from some of the City's existing and proposed development standards. For instance, in order to house the proposed Project unit count, the tower component is proposed as a simple prismatic volume rather than the "stepped" form that existing and proposed transitional height setbacks would require.

The Project proposes a maximum height of 396.5 feet, with an additional allowance of 18 feet for the vertical projection of mechanical equipment, and an FAR of 8.43. As an affordable housing project, it proposes to provide one parking stall per residential unit as well as additional parking stalls for resident and other uses.

The following table compares proposed Project building envelope, density, and resident support facilities with existing and proposed City development standards and policies.

Type of Standard	Proposed by Project	Existing Zoning (LUO)	Ordinance 14-10 (IPD-T)	TOD Plan
Building Ht. (ft.)	**396.5**	350'	450'	400'
Transitional Height Setbacks	**None**	>2x dist. to c/l of street	Modifiable if exist. uses & street character not affected	15' above 60'
Density (FAR)	**8.43**	2.5 – 3.5	7.0	7.0
Kapiolani Blvd. Setback	**30'**	10.0'	As approved for project	12'
Parking	• Res.:1 stall/ unit: 485 stalls • Guest: 5% of total units: 24 stalls • Electric: per LUO: 8 stalls • Total: **517 stalls**	Res.: 770st. Guest: 49st. (10% of total units) Electric: 8 st. Comm.: 3 st. Total: **830 stalls**	As specified in approved project plans	• Res.: 0.5 stall/ unit: 243 stalls • Comm.: 1.75 stall/ 1,000sf: 2 stalls. • Total: **245 stalls**
Loading	**2 stalls**	4 stalls		N/A

In summary, the Project relates to the foregoing parameters as follows:

- **Height:** The Project exceeds existing BMX-3 height limitations by 46.5 feet, but is within the intended future height parameters for the TOD Plan (Project height: 396.5 feet; proposed TOD Plan height: 400 feet);

- **Transitional Height Setbacks:** To adequately host its programmed building volume, the Project proposes no transitioal height setbacks, in contrast to existing BMX-3 and proposed Ala Moana TOD Plan standards;

- **Density:** To accommodate its required building program, the Project proposes an FAR exceeding BMX-3 and proposed TOD Plan density parameters;

- **Street Setbacks:** As previously discussed and as displayed on the above table, the Project's proposed Kapiolani Boulevard setback, which is intended to provide liberal accommodation for pedestrian traffic and streetscape amenities and to mitigate the impacts of traffic noise on mauka-facing residential units, are substantially more generous than prescribed by BMX-3 or the TOD Plan.

- **Parking:** Proposed resident and guest parking accommodations are below BMX-3 requirements but exceed proposed TOD Plan requirements.

- **Loading:** Proposed loading stall accommodations are below BMX-3 requirements.

Requested Exemptions from the BMX-3 Underlying Zoning

The Project requests a number of exemptions to existing zoning standards, stated TOD policy intent, and other project requirements and fees to adequately accommodate all project elements in a way that simultaneously provides resident and community amenities while meeting Project economic requirements. The requested exemptions will facilitate project economic feasibility and the optimization of architectural design quality. These requests are presented in conceptual form to make their intent clear. It is anticipated that they will be refined to a more technical level of expression when composed as language for a City Council Resolution. These requests are as follows:

- **Building Height:** The Project proposes a building height of 396.5 feet. This proposed height is in excess of the BMX-3 building height limitation of 350 feet but within the 400-foot height limitations proposed by the TOD Plan, which outlines future policy and regulatory intent for the Project and its immediate vicinity.

  In view of this, SamKoo requests an exemption from the 350-foot BMX-3 building height limit, since its proposed building height is consistent with the City's TOD Plan stated intent for the location encompassing the Project site. SamKoo requests an exemption to allow a building height of up to 400 feet plus an additional 18-foot projection above that height to allow for the height of necessary mechanical equipment.

- **Transitional Height Setback:** SamKoo requests an exemption from existing BMX-3 transitional height setback requirements to allow the residential tower to achieve the volume needed to house the number of residential units required to achieve project economic feasibility.

- **Density:** With its proposed FAR of 8.43, SamKoo requests an exemption from the maximum BMX-3 density limitation of 3.5 to achieve the floor area needed to provide the number, type, and size of units needed to achieve Project economic feasibility.

  In considering this request, it is useful to note that while the BMX-3 maximum density limitation of 3.5 represents current policy and regulatory conditions, the draft TOD Plan proposed density would be higher at 7.0, proposing a policy promoting intensification of land uses to create the concentration of lifestyle accommodations associated with vital, successful urban neighborhoods. The Project also proposes an intensification of land uses that would focus on attracting the vital residential component of a mixed use urban neighborhood needed to activate and support commercial establishments, businesses, professional services, and, in this context, the future Rail Project.

- **Parking:** The Project requests an exemption from LUO residential, commercial, and guest parking requirements.

  In contrast to LUO requirements, the Project proposes to provide 1 parking stall per residential unit and guest parking equivalent to 5% of residential units. It proposes to provide no parking stalls for commercial uses, in keeping with the City's TOD neighborhood intent to develop a pedestrian-oriented neighborhood at Ala Moana.

  The Project proposes to maintain conformity with current LUO parking requirements for electric charging stations.

  It is useful to note that the Project's proposed 1 stall per residential unit exceeds the TOD Plan's proposed residential parking requirement of 0.5 stall per residential unit, and that total parking proposed exceeds TOD Plan parking provisions.

- **Loading:** In contrast to existing BMX-3 requirements for 4 loading stalls, SamKoo proposes two loading stalls for the Project. SamKoo requests an exemption from BMX-3 loading requirements.

- **Park Dedication Requirements:** To meet Project economic requirements, SamKoo requests an exemption of all residential units from City Park Dedication requirements.

- **Project Fees:** To facilitate project economic feasibility, SamKoo requests waivers from all City application, permit and water and sewer service fees.

Requested Participation in HHFDC Financial Programs

SamKoo intends to configure the project to comply with HHDFC DURF and General Excise Tax ("GET") Exemption programs. It will configure the Project and develop the documentation for application to those programs.

CONCLUSION

The preceding information and the conceptual graphic representations which follow summarize the Project Profile proposed by SamKoo for Kapiolani Residence. The Project as proposed is based both on the requirements of economic feasibility and the desire to provide a sound, attractive addition to the urban environment of Central Honolulu. Therefore, while its formation has been guided by economic necessity, aesthetic considerations and the lifestyle needs of its residents have also been major factors in guiding its proposed configuration.

We hope that HHFDC finds that this is not only a desirable as well as needed Project, but one whose development parameters are reasonable and meriting of the agency's support and approval.

Thank you, in advance, for your time, attention, and favorable consideration of this proposed Project Profile. If you need further information, please feel free to contact:

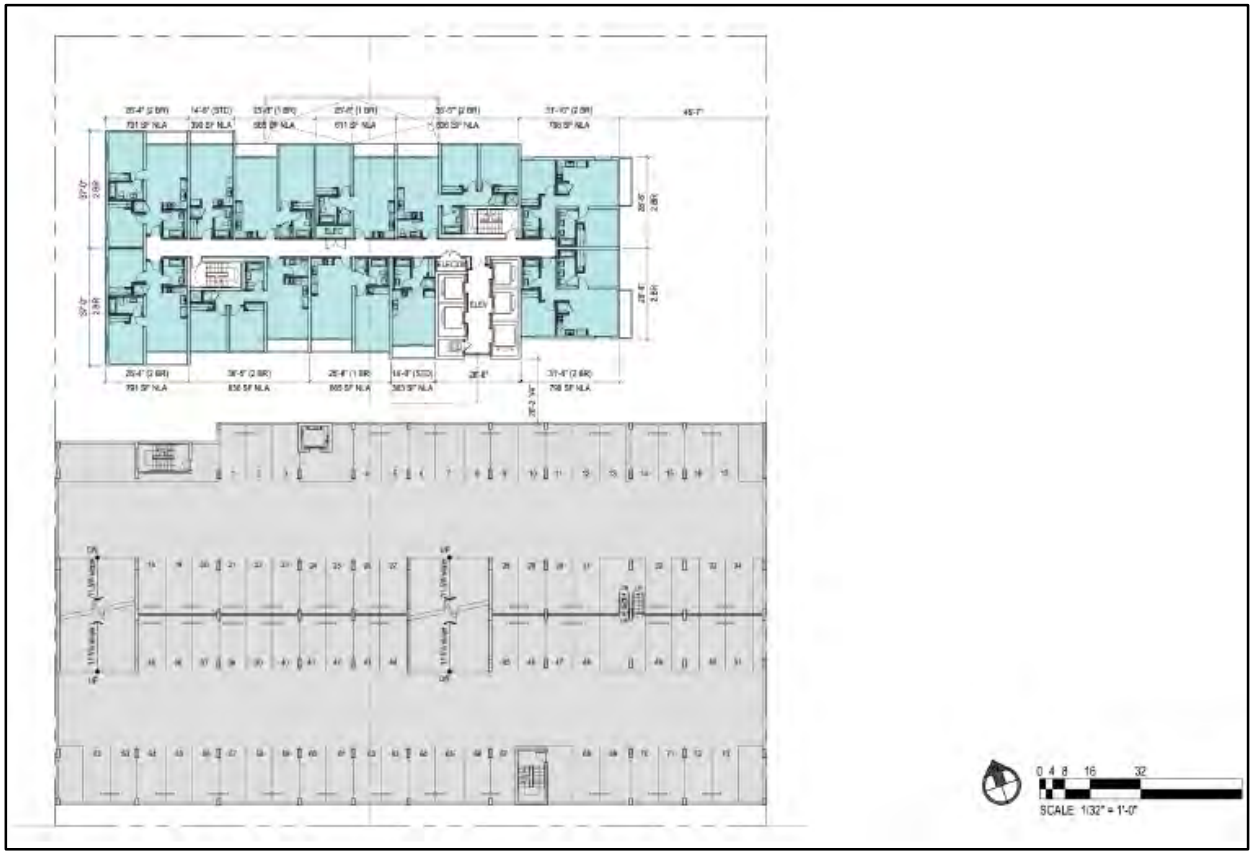
Lowell Chun
Phone: 808.386.9596 (mobile)
808.593.9596 (office)
Email: pacificcatalyst@gmail.com

KAPIOLANI RESIDENCE GRAPHIC ILLUSTRATIONS

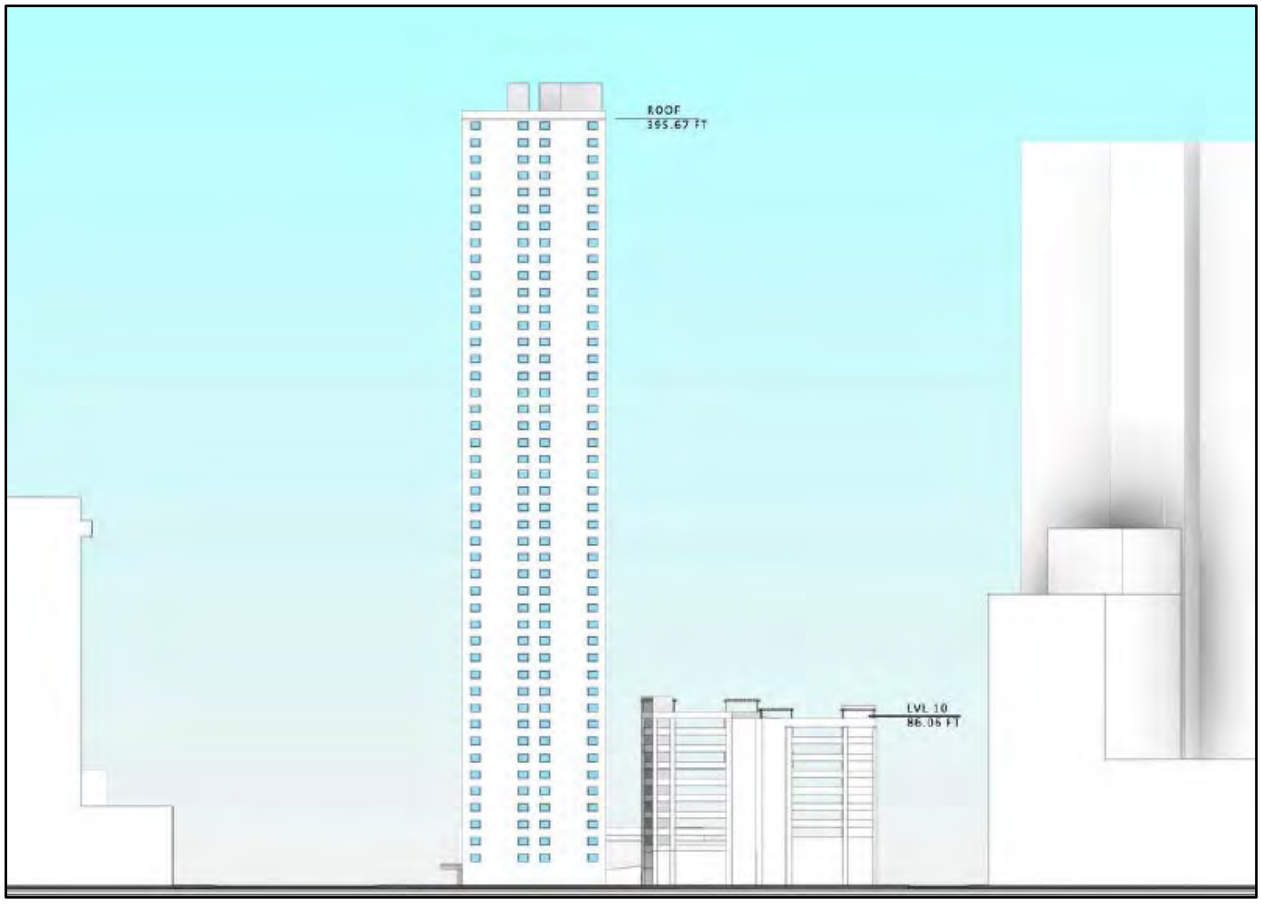
The 1631 Kapiolani Frontage

KAPIOLANI BLVD
GUEST/ LOADING
GUEST/ LOADING
GUEST/ LOADING
162'-0"
48'-7"
30'-0"
18'-4"
COMMERCIAL
COMMERCIAL
LOBBY
SEC / FIRE
MGR
ADMIN. OFFICE
STOR
20'-0"
UP
74'-0"
EMP LOUNGE
WATER PUMP
FIRE PUMP
MAIL
11.5% slope
TRASH
24'-3"
LAWN
EXISTING BLDG. ALA MOANA TOWER
LOADING
LOADING
STOR
LOADING
LOADING
PARTY ROOM 1260 SF NLA
42 STALLS @ GRND FLR
24'-0"
TELCOM
ELEC
HECO
GENERATOR
KONA ST
0 4 8 16 32
SCALE: 1/32" = 1'-0"

Site Plan



Floors 2 – 10 (Upper Level Garage Floors and Typical Residential Floor)



View Looking East

APPENDIX B

Intersection Peak Period Traffic Counts and 24-Hour Traffic Data

SSFM International, Inc

501 Sumner Street, Suite 620
Honolulu, Hawaii 96817
(808) 531-1308

File Name : 141002 AM Kapiolani_Mahukona rev2
Site Code : 00000000
Start Date : 10/2/2014
Page No : 1

Groups Printed- Passenger - Bus - Truck

	Kaheka Street Southbound					Kapiolani Boulevard Westbound					Mahukona Street Northbound					Kapiolani Boulevard 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
06:45 AM	10	21	8	26	65	2	329	29	40	400	11	36	4	31	82	0	92	28	23	143	690
Total	10	21	8	26	65	2	329	29	40	400	11	36	4	31	82	0	92	28	23	143	690
07:00 AM	11	25	15	37	88	0	441	32	34	507	8	34	3	16	61	0	120	25	16	161	817
07:15 AM	8	20	13	25	66	1	428	22	40	491	17	45	11	42	115	0	130	30	25	185	857
07:30 AM	12	41	18	46	117	0	530	29	51	610	15	45	5	61	126	0	128	35	48	211	1064
07:45 AM	12	44	17	36	109	2	449	34	60	545	14	44	8	51	117	1	110	43	41	195	966
Total	43	130	63	144	380	3	1848	117	185	2153	54	168	27	170	419	1	488	133	130	752	3704
08:00 AM	16	31	17	30	94	3	417	43	46	509	11	45	15	43	114	1	145	21	40	207	924
08:15 AM	18	38	26	52	134	0	318	48	40	406	15	51	7	38	111	0	140	27	35	202	853
08:30 AM	27	53	22	51	153	4	242	22	45	313	12	57	10	37	116	10	135	25	34	204	786
Grand Total	114	273	136	303	826	12	3154	259	356	3781	103	357	63	319	842	12	1000	234	262	1508	6957
Apprch %	13.8	33.1	16.5	36.7		0.3	83.4	6.9	9.4		12.2	42.4	7.5	37.9		0.8	66.3	15.5	17.4		
Total %	1.6	3.9	2	4.4	11.9	0.2	45.3	3.7	5.1	54.3	1.5	5.1	0.9	4.6	12.1	0.2	14.4	3.4	3.8	21.7	
Passenger	114	269	134	303	820	12	3083	253	356	3704	93	314	47	319	773	11	938	231	262	1442	6739
% Passenger	100	98.5	98.5	100	99.3	100	97.7	97.7	100	98	90.3	88	74.6	100	91.8	91.7	93.8	98.7	100	95.6	96.9
Bus	0	1	0	0	1	0	40	0	0	40	2	15	2	0	19	0	55	0	0	55	115
% Bus	0	0.4	0	0	0.1	0	1.3	0	0	1.1	1.9	4.2	3.2	0	2.3	0	5.5	0	0	3.6	1.7
Truck	0	3	2	0	5	0	31	6	0	37	8	28	14	0	50	1	7	3	0	11	103
% Truck	0	1.1	1.5	0	0.6	0	1	2.3	0	1	7.8	7.8	22.2	0	5.9	8.3	0.7	1.3	0	0.7	1.5

* - Pedestrian counts for WB crosswalk was taken from *TIAR for Ala Moana Center Ewa Expansion* (WOC, 2013)

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	Kaheka Street Southbound					Kapiolani Boulevard Westbound					Mahukona Street Northbound					Kapiolani Boulevard Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 06:45 AM to 08:30 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	8	20	13	25	66	1	428	22	40	491	17	45	11	42	115	0	130	30	25	185	857
07:30 AM	12	41	18	46	117	0	530	29	51	610	15	45	5	61	126	0	128	35	48	211	1064
07:45 AM	12	44	17	36	109	2	449	34	60	545	14	44	8	51	117	1	110	43	41	195	966
08:00 AM	16	31	17	30	94	3	417	43	46	509	11	45	15	43	114	1	145	21	40	207	924
Total Volume	48	136	65	137	386	6	1824	128	197	2155	57	179	39	197	472	2	513	129	154	798	3811
% App. Total	12.4	35.2	16.8	35.5		0.3	84.6	5.9	9.1		12.1	37.9	8.3	41.7		0.3	64.3	16.2	19.3		
PHF	.750	.773	.903	.745	.825	.500	.860	.744	.821	.883	.838	.994	.650	.807	.937	.500	.884	.750	.802	.945	.895

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File Name : 141002 PM Kapiolani_Mahukona rev2
Site Code : 00000000
Start Date : 10/2/2014
Page No : 1

Groups Printed- Passenger - Bus - Truck

	Kaheka Street Southbound					Kapiolani Boulevard Westbound					Mahukona Street Northbound					Kapiolani Boulevard 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
04:00 PM	49	70	17	62	198	0	162	40	72	274	6	77	18	82	183	18	392	33	78	521	1176
04:15 PM	31	78	27	68	204	6	180	60	93	339	3	71	15	68	157	17	405	40	62	524	1224
04:30 PM	38	65	29	127	259	0	148	49	84	281	8	93	19	99	219	8	471	35	79	593	1352
04:45 PM	19	97	23	71	210	0	198	67	80	345	7	81	24	89	201	15	389	39	60	503	1259
Total	137	310	96	328	871	6	688	216	329	1239	24	322	76	338	760	58	1657	147	279	2141	5011
05:00 PM	23	84	14	62	183	0	153	45	74	272	4	95	28	91	218	3	431	32	73	539	1212
05:15 PM	28	91	24	81	224	1	195	61	82	339	12	88	14	58	172	8	463	30	87	588	1323
05:30 PM	42	92	26	66	226	0	142	51	47	240	11	73	32	73	189	2	428	38	85	553	1208
05:45 PM	40	88	20	77	225	0	161	59	66	286	10	53	33	62	158	7	403	42	63	515	1184
Total	133	355	84	286	858	1	651	216	269	1137	37	309	107	284	737	20	1725	142	308	2195	4927
Grand Total	270	665	180	614	1729	7	1339	432	598	2376	61	631	183	622	1497	78	3382	289	587	4336	9938
Apprch %	15.6	38.5	10.4	35.5		0.3	56.4	18.2	25.2		4.1	42.2	12.2	41.5		1.8	78	6.7	13.5		
Total %	2.7	6.7	1.8	6.2	17.4	0.1	13.5	4.3	6	23.9	0.6	6.3	1.8	6.3	15.1	0.8	34	2.9	5.9	43.6	
Passenger	268	662	180	614	1724	7	1288	429	598	2322	58	587	177	622	1444	78	3299	286	587	4250	9740
% Passenger	99.3	99.5	100	100	99.7	100	96.2	99.3	100	97.7	95.1	93	96.7	100	96.5	100	97.5	99	100	98	98
Bus	2	3	0	0	5	0	31	0	0	31	1	20	0	0	21	0	81	3	0	84	141
% Bus	0.7	0.5	0	0	0.3	0	2.3	0	0	1.3	1.6	3.2	0	0	1.4	0	2.4	1	0	1.9	1.4
Truck	0	0	0	0	0	0	20	3	0	23	2	24	6	0	32	0	2	0	0	2	57
% Truck	0	0	0	0	0	0	1.5	0.7	0	1	3.3	3.8	3.3	0	2.1	0	0.1	0	0	0	0.6

* - Pedestrian counts for WB crosswalk was taken from *TIAR for Ala Moana Center Ewa Expansion* (WOC, 2013)

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File Name : 141002 PM Kapiolani_Mahukona rev2
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	Kaheka Street Southbound					Kapiolani Boulevard Westbound					Mahukona Street Northbound					Kapiolani Boulevard Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	38	65	29	127	259	0	148	49	84	281	8	93	19	99	219	8	471	35	79	593	1352
04:45 PM	19	97	23	71	210	0	198	67	80	345	7	81	24	89	201	15	389	39	60	503	1259
05:00 PM	23	84	14	62	183	0	153	45	74	272	4	95	28	91	218	3	431	32	73	539	1212
05:15 PM	28	91	24	81	224	1	195	61	82	339	12	88	14	58	172	8	463	30	87	588	1323
Total Volume	108	337	90	341	876	1	694	222	320	1237	31	357	85	337	810	34	1754	136	299	2223	5146
% App. Total	12.3	38.5	10.3	38.9		0.1	56.1	17.9	25.9		3.8	44.1	10.5	41.6		1.5	78.9	6.1	13.5		
PHF	.711	.869	.776	.671	.846	.250	.876	.828	.952	.896	.646	.939	.759	.851	.925	.567	.931	.872	.859	.937	.952

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File Name : 141002 AM Kona_Mahukona rev2
Site Code : 00000000
Start Date : 10/2/2014
Page No : 1

Groups Printed- Passenger - Bus - Truck

	Mahukona Street Southbound					Kona Street Westbound					Mahukona Street Northbound					Kona Street Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:45 AM	6	25	17	7	55	2	10	27	13	52	11	16	4	18	49	12	0	6	0	18	174
Total	6	25	17	7	55	2	10	27	13	52	11	16	4	18	49	12	0	6	0	18	174
07:00 AM	9	23	12	12	56	2	13	13	9	37	11	16	3	14	44	13	1	5	3	22	159
07:15 AM	14	23	16	9	62	2	17	32	18	69	14	22	3	29	68	15	0	8	3	26	225
07:30 AM	8	43	18	13	82	4	19	22	12	57	15	29	11	17	72	9	0	22	2	33	244
07:45 AM	12	39	28	17	96	4	26	17	14	61	6	27	7	17	57	21	0	8	1	30	244
Total	43	128	74	51	296	12	75	84	53	224	46	94	24	77	241	58	1	43	9	111	872
08:00 AM	4	28	24	15	71	0	18	25	18	61	16	31	7	26	80	19	0	9	3	31	243
08:15 AM	6	40	15	17	78	10	25	23	9	67	24	26	3	16	69	17	0	18	0	35	249
08:30 AM	9	47	26	31	113	7	14	28	15	64	10	32	1	7	50	12	0	24	3	39	266
Grand Total	68	268	156	121	613	31	142	187	108	468	107	199	39	144	489	118	1	100	15	234	1804
Apprch %	11.1	43.7	25.4	19.7		6.6	30.3	40	23.1		21.9	40.7	8	29.4		50.4	0.4	42.7	6.4		
Total %	3.8	14.9	8.6	6.7	34	1.7	7.9	10.4	6	25.9	5.9	11	2.2	8	27.1	6.5	0.1	5.5	0.8	13	
Passenger	64	264	153	121	602	31	136	184	107	458	92	184	21	144	441	94	1	86	15	196	1697
% Passenger	94.1	98.5	98.1	100	98.2	100	95.8	98.4	99.1	97.9	86	92.5	53.8	100	90.2	79.7	100	86	100	83.8	94.1
Bus	2	1	1	0	4	0	1	2	0	3	12	12	18	0	42	18	0	12	0	30	79
% Bus	2.9	0.4	0.6	0	0.7	0	0.7	1.1	0	0.6	11.2	6	46.2	0	8.6	15.3	0	12	0	12.8	4.4
Truck	2	3	2	0	7	0	5	1	1	7	3	3	0	0	6	6	0	2	0	8	28
% Truck	2.9	1.1	1.3	0	1.1	0	3.5	0.5	0.9	1.5	2.8	1.5	0	0	1.2	5.1	0	2	0	3.4	1.6

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	Mahukona Street Southbound					Kona Street Westbound					Mahukona Street Northbound					Kona Street Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 06:45 AM to 08:30 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	12	39	28	17	96	4	26	17	14	61	6	27	7	17	57	21	0	8	1	30	244
08:00 AM	4	28	24	15	71	0	18	25	18	61	16	31	7	26	80	19	0	9	3	31	243
08:15 AM	6	40	15	17	78	10	25	23	9	67	24	26	3	16	69	17	0	18	0	35	249
08:30 AM	9	47	26	31	113	7	14	28	15	64	10	32	1	7	50	12	0	24	3	39	266
Total Volume	31	154	93	80	358	21	83	93	56	253	56	116	18	66	256	69	0	59	7	135	1002
% App. Total	8.7	43	26	22.3		8.3	32.8	36.8	22.1		21.9	45.3	7	25.8		51.1	0	43.7	5.2		
PHF	.646	.819	.830	.645	.792	.525	.798	.830	.778	.944	.583	.906	.643	.635	.800	.821	.000	.615	.583	.865	.942

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Groups Printed- Passenger - Bus - Truck

	Mahukona Street Southbound					Kona Street Westbound					Mahukona Street Northbound					Kona Street Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
04:00 PM	23	61	19	22	125	2	12	35	23	72	22	30	6	30	88	0	3	24	10	37	322
04:15 PM	14	60	22	26	122	2	16	36	29	83	18	21	4	34	77	1	2	42	2	47	329
04:30 PM	24	61	21	15	121	2	29	47	15	93	26	27	11	41	105	1	2	36	3	42	361
04:45 PM	15	75	22	29	141	1	24	46	36	107	25	23	8	42	98	3	1	38	5	47	393
Total	76	257	84	92	509	7	81	164	103	355	91	101	29	147	368	5	8	140	20	173	1405
05:00 PM	20	65	23	16	124	4	21	45	26	96	17	36	3	43	99	0	7	43	8	58	377
05:15 PM	19	76	24	26	145	3	16	41	15	75	24	25	1	12	62	3	4	45	1	53	335
05:30 PM	17	65	17	29	128	5	21	40	13	79	25	30	3	35	93	0	6	47	0	53	353
05:45 PM	23	53	24	26	126	6	15	36	27	84	16	25	1	37	79	1	8	42	1	52	341
Total	79	259	88	97	523	18	73	162	81	334	82	116	8	127	333	4	25	177	10	216	1406
Grand Total	155	516	172	189	1032	25	154	326	184	689	173	217	37	274	701	9	33	317	30	389	2811
Apprch %	15	50	16.7	18.3		3.6	22.4	47.3	26.7		24.7	31	5.3	39.1		2.3	8.5	81.5	7.7		
Total %	5.5	18.4	6.1	6.7	36.7	0.9	5.5	11.6	6.5	24.5	6.2	7.7	1.3	9.7	24.9	0.3	1.2	11.3	1.1	13.8	
Passenger	152	515	169	189	1025	25	149	320	184	678	126	192	28	274	620	8	32	307	30	377	2700
% Passenger	98.1	99.8	98.3	100	99.3	100	96.8	98.2	100	98.4	72.8	88.5	75.7	100	88.4	88.9	97	96.8	100	96.9	96.1
Bus	1	1	1	0	3	0	1	0	0	1	42	22	7	0	71	0	1	6	0	7	82
% Bus	0.6	0.2	0.6	0	0.3	0	0.6	0	0	0.1	24.3	10.1	18.9	0	10.1	0	3	1.9	0	1.8	2.9
Truck	2	0	2	0	4	0	4	6	0	10	5	3	2	0	10	1	0	4	0	5	29
% Truck	1.3	0	1.2	0	0.4	0	2.6	1.8	0	1.5	2.9	1.4	5.4	0	1.4	11.1	0	1.3	0	1.3	1

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	Mahukona Street Southbound					Kona Street Westbound					Mahukona Street Northbound					Kona Street Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	24	61	21	15	121	2	29	47	15	93	26	27	11	41	105	1	2	36	3	42	361
04:45 PM	15	75	22	29	141	1	24	46	36	107	25	23	8	42	98	3	1	38	5	47	393
05:00 PM	20	65	23	16	124	4	21	45	26	96	17	36	3	43	99	0	7	43	8	58	377
05:15 PM	19	76	24	26	145	3	16	41	15	75	24	25	1	12	62	3	4	45	1	53	335
Total Volume	78	277	90	86	531	10	90	179	92	371	92	111	23	138	364	7	14	162	17	200	1466
% App. Total	14.7	52.2	16.9	16.2		2.7	24.3	48.2	24.8		25.3	30.5	6.3	37.9		3.5	7	81	8.5		
PHF	.813	.911	.938	.741	.916	.625	.776	.952	.639	.867	.885	.771	.523	.802	.867	.583	.500	.900	.531	.862	.933

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Groups Printed- Passenger - Bus - Truck

	Southbound					Kapiolani Boulevard Westbound					Atkinson Drive Northbound					Kapiolani Boulevard 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
06:45 AM	0	0	0	16	16	210	476	0	0	686	0	2	77	0	79	0	64	7	7	78	859
Total	0	0	0	16	16	210	476	0	0	686	0	2	77	0	79	0	64	7	7	78	859
07:00 AM	0	0	0	23	23	211	435	0	0	646	0	1	75	0	76	0	93	12	7	112	857
07:15 AM	0	0	0	13	13	207	486	0	0	693	0	0	48	0	48	0	111	13	4	128	882
07:30 AM	0	0	0	44	44	257	544	0	0	801	0	0	58	0	58	0	136	20	15	171	1074
07:45 AM	0	0	0	20	20	248	521	0	0	769	0	0	41	0	41	0	124	14	11	149	979
Total	0	0	0	100	100	923	1986	0	0	2909	0	1	222	0	223	0	464	59	37	560	3792
08:00 AM	0	0	0	29	29	258	461	0	0	719	0	0	71	0	71	0	128	25	10	163	982
08:15 AM	0	0	0	19	19	249	437	0	0	686	0	0	49	0	49	0	107	36	15	158	912
08:30 AM	0	0	0	27	27	170	259	0	0	429	0	0	73	0	73	0	143	23	8	174	703
Grand Total	0	0	0	191	191	1810	3619	0	0	5429	0	3	492	0	495	0	906	150	77	1133	7248
Apprch %	0	0	0	100		33.3	66.7	0	0		0	0.6	99.4	0		0	80	13.2	6.8		
Total %	0	0	0	2.6	2.6	25	49.9	0	0	74.9	0	0	6.8	0	6.8	0	12.5	2.1	1.1	15.6	
Passenger	0	0	0	191	191	1786	3576	0	0	5362	0	0	455	0	455	0	821	132	77	1030	7038
% Passenger	0	0	0	100	100	98.7	98.8	0	0	98.8	0	0	92.5	0	91.9	0	90.6	88	100	90.9	97.1
Bus	0	0	0	0	0	7	28	0	0	35	0	2	6	0	8	0	43	12	0	55	98
% Bus	0	0	0	0	0	0.4	0.8	0	0	0.6	0	66.7	1.2	0	1.6	0	4.7	8	0	4.9	1.4
Truck	0	0	0	0	0	17	15	0	0	32	0	1	31	0	32	0	42	6	0	48	112
% Truck	0	0	0	0	0	0.9	0.4	0	0	0.6	0	33.3	6.3	0	6.5	0	4.6	4	0	4.2	1.5

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	Southbound					Kapiolani Boulevard Westbound					Atkinson Drive Northbound					Kapiolani Boulevard Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 06:45 AM to 08:30 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	0	0	44	44	257	544	0	0	801	0	0	58	0	58	0	136	20	15	171	1074
07:45 AM	0	0	0	20	20	248	521	0	0	769	0	0	41	0	41	0	124	14	11	149	979
08:00 AM	0	0	0	29	29	258	461	0	0	719	0	0	71	0	71	0	128	25	10	163	982
08:15 AM	0	0	0	19	19	249	437	0	0	686	0	0	49	0	49	0	107	36	15	158	912
Total Volume	0	0	0	112	112	1012	1963	0	0	2975	0	0	219	0	219	0	495	95	51	641	3947
% App. Total	0	0	0	100		34	66	0	0		0	0	100	0		0	77.2	14.8	8		
PHF	.000	.000	.000	.636	.636	.981	.902	.000	.000	.929	.000	.000	.771	.000	.771	.000	.910	.660	.850	.937	.919

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Groups Printed- Passenger - Bus - Truck

	Southbound					Kapiolani Boulevard Westbound					Atkinson Drive Northbound					Kapiolani Boulevard 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
04:00 PM	0	0	0	25	25	0	242	0	0	242	0	0	148	0	148	0	359	47	17	423	838
04:15 PM	0	0	0	46	46	0	214	0	0	214	0	0	196	0	196	0	380	45	25	450	906
04:30 PM	0	0	0	33	33	0	252	0	0	252	0	0	175	0	175	0	446	59	17	522	982
04:45 PM	0	0	0	44	44	0	218	0	0	218	0	0	194	0	194	0	419	48	10	477	933
Total	0	0	0	148	148	0	926	0	0	926	0	0	713	0	713	0	1604	199	69	1872	3659
05:00 PM	0	0	0	40	40	0	221	0	0	221	0	0	170	0	170	0	441	42	19	502	933
05:15 PM	0	0	0	50	50	0	261	0	0	261	0	0	174	0	174	0	417	46	21	484	969
05:30 PM	0	0	0	55	55	0	226	0	0	226	0	0	185	0	185	0	367	56	21	444	910
05:45 PM	0	0	0	56	56	0	242	0	0	242	0	0	154	0	154	0	309	46	22	377	829
Total	0	0	0	201	201	0	950	0	0	950	0	0	683	0	683	0	1534	190	83	1807	3641
Grand Total	0	0	0	349	349	0	1876	0	0	1876	0	0	1396	0	1396	0	3138	389	152	3679	7300
Apprch %	0	0	0	100		0	100	0	0		0	0	100	0		0	85.3	10.6	4.1		
Total %	0	0	0	4.8	4.8	0	25.7	0	0	25.7	0	0	19.1	0	19.1	0	43	5.3	2.1	50.4	
Passenger	0	0	0	349	349	0	1832	0	0	1832	0	0	1386	0	1386	0	3071	354	152	3577	7144
% Passenger	0	0	0	100	100	0	97.7	0	0	97.7	0	0	99.3	0	99.3	0	97.9	91	100	97.2	97.9
Bus	0	0	0	0	0	0	30	0	0	30	0	0	4	0	4	0	48	28	0	76	110
% Bus	0	0	0	0	0	0	1.6	0	0	1.6	0	0	0.3	0	0.3	0	1.5	7.2	0	2.1	1.5
Truck	0	0	0	0	0	0	14	0	0	14	0	0	6	0	6	0	19	7	0	26	46
% Truck	0	0	0	0	0	0	0.7	0	0	0.7	0	0	0.4	0	0.4	0	0.6	1.8	0	0.7	0.6

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	Southbound					Kapiolani Boulevard Westbound					Atkinson Drive Northbound					Kapiolani Boulevard Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 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	33	33	0	252	0	0	252	0	0	175	0	175	0	446	59	17	522	982
04:45 PM	0	0	0	44	44	0	218	0	0	218	0	0	194	0	194	0	419	48	10	477	933
05:00 PM	0	0	0	40	40	0	221	0	0	221	0	0	170	0	170	0	441	42	19	502	933
05:15 PM	0	0	0	50	50	0	261	0	0	261	0	0	174	0	174	0	417	46	21	484	969
Total Volume	0	0	0	167	167	0	952	0	0	952	0	0	713	0	713	0	1723	195	67	1985	3817
% App. Total	0	0	0	100		0	100	0	0		0	0	100	0		0	86.8	9.8	3.4		
PHF	.000	.000	.000	.835	.835	.000	.912	.000	.000	.912	.000	.000	.919	.000	.919	.000	.966	.826	.798	.951	.972

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Groups Printed- Passenger - Bus - Trucks

	Southbound					Atkinson Drive Westbound					Kahakai Drive Northbound					Atkinson 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
06:45 AM	0	0	0	0	0	4	145	0	0	149	6	0	4	0	10	0	41	2	2	45	204
Total	0	0	0	0	0	4	145	0	0	149	6	0	4	0	10	0	41	2	2	45	204
07:00 AM	0	0	0	0	0	6	208	0	0	214	21	0	6	0	27	0	62	5	0	67	308
07:15 AM	0	0	0	0	0	3	194	0	0	197	10	0	5	5	20	0	48	4	15	67	284
07:30 AM	0	0	0	0	0	5	220	0	0	225	12	0	7	24	43	0	52	5	26	83	351
07:45 AM	0	0	0	0	0	9	249	0	0	258	16	0	11	20	47	0	45	5	17	67	372
Total	0	0	0	0	0	23	871	0	0	894	59	0	29	49	137	0	207	19	58	284	1315
08:00 AM	0	0	0	0	0	10	262	0	0	272	12	0	9	13	34	0	62	4	14	80	386
08:15 AM	0	0	0	0	0	11	264	0	0	275	5	0	5	20	30	0	48	2	17	67	372
08:30 AM	0	0	0	0	0	10	210	0	0	220	14	0	8	19	41	0	60	4	103	167	428
Grand Total	0	0	0	0	0	58	1752	0	0	1810	96	0	55	101	252	0	418	31	194	643	2705
Apprch %	0	0	0	0		3.2	96.8	0	0		38.1	0	21.8	40.1		0	65	4.8	30.2		
Total %	0	0	0	0	0	2.1	64.8	0	0	66.9	3.5	0	2	3.7	9.3	0	15.5	1.1	7.2	23.8	
Passenger	0	0	0	0	0	57	1700	0	0	1757	96	0	55	101	252	0	392	30	194	616	2625
% Passenger	0	0	0	0	0	98.3	97	0	0	97.1	100	0	100	100	100	0	93.8	96.8	100	95.8	97
Bus	0	0	0	0	0	0	14	0	0	14	0	0	0	0	0	0	2	0	0	2	16
% Bus	0	0	0	0	0	0	0.8	0	0	0.8	0	0	0	0	0	0	0.5	0	0	0.3	0.6
Trucks	0	0	0	0	0	1	38	0	0	39	0	0	0	0	0	0	24	1	0	25	64
% Trucks	0	0	0	0	0	1.7	2.2	0	0	2.2	0	0	0	0	0	0	5.7	3.2	0	3.9	2.4

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	Southbound					Atkinson Drive Westbound					Kahakai Drive Northbound					Atkinson 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
Peak Hour Analysis From 06:45 AM to 08:30 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	0	0	0	0	0	9	249	0	0	258	16	0	11	20	47	0	45	5	17	67	372
08:00 AM	0	0	0	0	0	10	262	0	0	272	12	0	9	13	34	0	62	4	14	80	386
08:15 AM	0	0	0	0	0	11	264	0	0	275	5	0	5	20	30	0	48	2	17	67	372
08:30 AM	0	0	0	0	0	10	210	0	0	220	14	0	8	19	41	0	60	4	103	167	428
Total Volume	0	0	0	0	0	40	985	0	0	1025	47	0	33	72	152	0	215	15	151	381	1558
% App. Total	0	0	0	0		3.9	96.1	0	0		30.9	0	21.7	47.4		0	56.4	3.9	39.6		
PHF	.000	.000	.000	.000	.000	.909	.933	.000	.000	.932	.734	.000	.750	.900	.809	.000	.867	.750	.367	.570	.910

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Groups Printed- Passenger - Bus - Truck

	Southbound					Atkinson Drive Westbound					Kahakai Drive Northbound					Atkinson 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
04:00 PM	0	0	0	0	0	5	50	0	0	55	24	0	12	17	53	0	150	11	9	170	278
04:15 PM	0	0	0	0	0	3	66	0	0	69	19	0	5	11	35	0	200	3	23	226	330
04:30 PM	0	0	0	0	0	1	68	0	0	69	11	0	13	30	54	0	179	9	11	199	322
04:45 PM	0	0	0	0	0	6	56	0	0	62	21	0	10	32	63	0	204	7	12	223	348
Total	0	0	0	0	0	15	240	0	0	255	75	0	40	90	205	0	733	30	55	818	1278
05:00 PM	0	0	0	0	0	7	59	0	0	66	13	0	7	33	53	0	168	12	21	201	320
05:15 PM	0	0	0	0	0	9	46	0	0	55	13	0	8	15	36	0	187	1	3	191	282
05:30 PM	0	0	0	0	0	11	81	0	0	92	8	0	7	81	96	0	163	5	10	178	366
05:45 PM	0	0	0	0	0	8	52	0	0	60	9	0	3	29	41	0	101	2	6	109	210
Total	0	0	0	0	0	35	238	0	0	273	43	0	25	158	226	0	619	20	40	679	1178
Grand Total	0	0	0	0	0	50	478	0	0	528	118	0	65	248	431	0	1352	50	95	1497	2456
Apprch %	0	0	0	0		9.5	90.5	0	0		27.4	0	15.1	57.5		0	90.3	3.3	6.3		
Total %	0	0	0	0	0	2	19.5	0	0	21.5	4.8	0	2.6	10.1	17.5	0	55	2	3.9	61	
Passenger	0	0	0	0	0	50	438	0	0	488	116	0	64	248	428	0	1337	46	95	1478	2394
% Passenger	0	0	0	0	0	100	91.6	0	0	92.4	98.3	0	98.5	100	99.3	0	98.9	92	100	98.7	97.5
Bus	0	0	0	0	0	0	12	0	0	12	0	0	0	0	0	0	0	0	0	0	12
% Bus	0	0	0	0	0	0	2.5	0	0	2.3	0	0	0	0	0	0	0	0	0	0	0.5
Truck	0	0	0	0	0	0	28	0	0	28	2	0	1	0	3	0	15	4	0	19	50
% Truck	0	0	0	0	0	0	5.9	0	0	5.3	1.7	0	1.5	0	0.7	0	1.1	8	0	1.3	2

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File Name : 141001 PM Atkinson_Kahakai rev
Site Code : 00000000
Start Date : 10/1/2014
Page No : 2

	Southbound					Atkinson Drive Westbound					Kahakai Drive Northbound					Atkinson 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
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
04:15 PM	0	0	0	0	0	3	66	0	0	69	19	0	5	11	35	0	200	3	23	226	330
04:30 PM	0	0	0	0	0	1	68	0	0	69	11	0	13	30	54	0	179	9	11	199	322
04:45 PM	0	0	0	0	0	6	56	0	0	62	21	0	10	32	63	0	204	7	12	223	348
05:00 PM	0	0	0	0	0	7	59	0	0	66	13	0	7	33	53	0	168	12	21	201	320
Total Volume	0	0	0	0	0	17	249	0	0	266	64	0	35	106	205	0	751	31	67	849	1320
% App. Total	0	0	0	0		6.4	93.6	0	0		31.2	0	17.1	51.7		0	88.5	3.7	7.9		
PHF	.000	.000	.000	.000	.000	.607	.915	.000	.000	.964	.762	.000	.673	.803	.813	.000	.920	.646	.728	.939	.948

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File Name : 141001 AM Kona_Atkinson rev
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Groups Printed- Passenger - Bus - Truck

	Kona Street Southbound					Atkinson Drive Westbound					Driveway Northbound					Atkinson 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
06:45 AM	0	0	17	0	17	2	203	24	9	238	2	4	1	0	7	18	66	0	0	84	346
Total	0	0	17	0	17	2	203	24	9	238	2	4	1	0	7	18	66	0	0	84	346
07:00 AM	0	0	15	0	15	1	225	20	14	260	0	2	1	0	3	23	78	0	0	101	379
07:15 AM	0	0	19	0	19	0	211	28	27	266	1	1	2	0	4	21	76	1	0	98	387
07:30 AM	0	0	23	0	23	0	233	43	28	304	1	2	1	0	4	17	79	1	0	97	428
07:45 AM	0	0	14	0	14	0	269	31	25	325	1	1	1	0	3	28	63	0	0	91	433
Total	0	0	71	0	71	1	938	122	94	1155	3	6	5	0	14	89	296	2	0	387	1627
08:00 AM	0	0	15	0	15	1	259	23	23	306	4	2	1	0	7	27	112	0	0	139	467
08:15 AM	0	0	12	1	13	0	280	33	15	328	1	0	1	0	2	17	78	0	0	95	438
08:30 AM	0	0	13	0	13	0	182	30	12	224	0	0	1	0	1	26	87	0	0	113	351
Grand Total	0	0	128	1	129	4	1862	232	153	2251	10	12	9	0	31	177	639	2	0	818	3229
Apprch %	0	0	99.2	0.8		0.2	82.7	10.3	6.8		32.3	38.7	29	0		21.6	78.1	0.2	0		
Total %	0	0	4	0	4	0.1	57.7	7.2	4.7	69.7	0.3	0.4	0.3	0	1	5.5	19.8	0.1	0	25.3	
Passenger	0	0	128	1	129	4	1858	232	153	2247	10	12	9	0	31	177	638	2	0	817	3224
% Passenger	0	0	100	100	100	100	99.8	100	100	99.8	100	100	100	0	100	100	99.8	100	0	99.9	99.8
Bus	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2
% Bus	0	0	0	0	0	0	0.1	0	0	0.1	0	0	0	0	0	0	0	0	0	0	0.1
Truck	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	3
% Truck	0	0	0	0	0	0	0.1	0	0	0.1	0	0	0	0	0	0	0.2	0	0	0.1	0.1

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	Kona Street Southbound					Atkinson Drive Westbound					Driveway Northbound					Atkinson 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
Peak Hour Analysis From 06:45 AM to 08:30 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	0	23	0	23	0	233	43	28	304	1	2	1	0	4	17	79	1	0	97	428
07:45 AM	0	0	14	0	14	0	269	31	25	325	1	1	1	0	3	28	63	0	0	91	433
08:00 AM	0	0	15	0	15	1	259	23	23	306	4	2	1	0	7	27	112	0	0	139	467
08:15 AM	0	0	12	1	13	0	280	33	15	328	1	0	1	0	2	17	78	0	0	95	438
Total Volume	0	0	64	1	65	1	1041	130	91	1263	7	5	4	0	16	89	332	1	0	422	1766
% App. Total	0	0	98.5	1.5		0.1	82.4	10.3	7.2		43.8	31.2	25	0		21.1	78.7	0.2	0		
PHF	.000	.000	.696	.250	.707	.250	.929	.756	.813	.963	.438	.625	1.00	.000	.571	.795	.741	.250	.000	.759	.945

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Groups Printed- Passenger - Bus - Truck

	Kona Street Southbound					Atkinson Drive Westbound					Driveway Northbound					Atkinson 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
04:00 PM	1	0	26	0	27	0	69	13	25	107	0	1	1	0	2	52	160	2	0	214	350
04:15 PM	1	0	32	0	33	5	72	16	32	125	1	0	1	0	2	45	212	1	0	258	418
04:30 PM	0	0	31	0	31	2	72	10	33	117	0	0	0	0	0	49	188	2	0	239	387
04:45 PM	2	0	20	0	22	1	68	14	28	111	0	2	1	0	3	47	209	1	0	257	393
Total	4	0	109	0	113	8	281	53	118	460	1	3	3	0	7	193	769	6	0	968	1548
05:00 PM	6	0	32	0	38	1	74	11	31	117	1	0	1	0	2	47	194	0	0	241	398
05:15 PM	4	0	37	0	41	1	68	8	22	99	1	0	0	0	1	27	201	0	0	228	369
05:30 PM	1	0	24	0	25	1	68	14	103	186	0	0	0	0	0	34	213	0	0	247	458
05:45 PM	0	0	24	0	24	1	73	21	104	199	1	1	0	0	2	51	178	0	0	229	454
Total	11	0	117	0	128	4	283	54	260	601	3	1	1	0	5	159	786	0	0	945	1679
Grand Total	15	0	226	0	241	12	564	107	378	1061	4	4	4	0	12	352	1555	6	0	1913	3227
Apprch %	6.2	0	93.8	0		1.1	53.2	10.1	35.6		33.3	33.3	33.3	0		18.4	81.3	0.3	0		
Total %	0.5	0	7	0	7.5	0.4	17.5	3.3	11.7	32.9	0.1	0.1	0.1	0	0.4	10.9	48.2	0.2	0	59.3	
Passenger	15	0	225	0	240	12	542	106	378	1038	4	4	4	0	12	347	1548	6	0	1901	3191
% Passenger	100	0	99.6	0	99.6	100	96.1	99.1	100	97.8	100	100	100	0	100	98.6	99.5	100	0	99.4	98.9
Bus	0	0	1	0	1	0	20	1	0	21	0	0	0	0	0	4	5	0	0	9	31
% Bus	0	0	0.4	0	0.4	0	3.5	0.9	0	2	0	0	0	0	0	1.1	0.3	0	0	0.5	1
Truck	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	1	2	0	0	3	5
% Truck	0	0	0	0	0	0	0.4	0	0	0.2	0	0	0	0	0	0.3	0.1	0	0	0.2	0.2

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File Name : 141001 PM Kona_Atkinson rev
Site Code : 00000000
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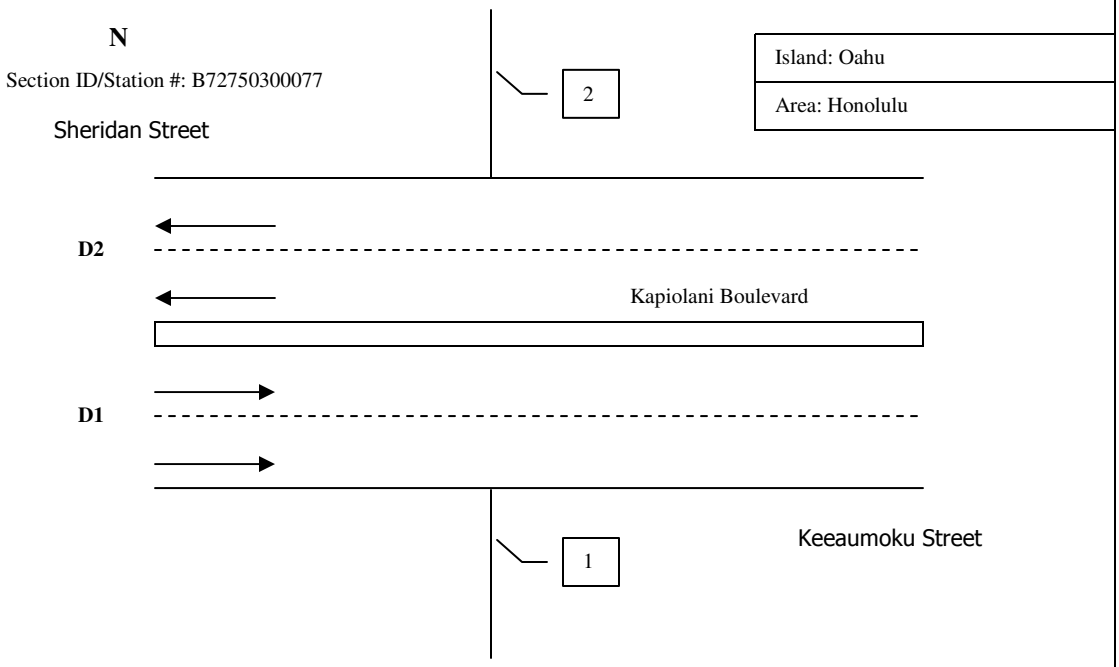
	Kona Street Southbound					Atkinson Drive Westbound					Driveway Northbound					Atkinson Drive Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	6	0	32	0	38	1	74	11	31	117	1	0	1	0	2	47	194	0	0	241	398
05:15 PM	4	0	37	0	41	1	68	8	22	99	1	0	0	0	1	27	201	0	0	228	369
05:30 PM	1	0	24	0	25	1	68	14	103	186	0	0	0	0	0	34	213	0	0	247	458
05:45 PM	0	0	24	0	24	1	73	21	104	199	1	1	0	0	2	51	178	0	0	229	454
Total Volume	11	0	117	0	128	4	283	54	260	601	3	1	1	0	5	159	786	0	0	945	1679
% App. Total	8.6	0	91.4	0		0.7	47.1	9	43.3		60	20	20	0		16.8	83.2	0	0		
PHF	.458	.000	.791	.000	.780	1.00	.956	.643	.625	.755	.750	.250	.250	.000	.625	.779	.923	.000	.000	.956	.916

Traffic Data Service

Traffic Station Sketch



Meter #	File Name	GPS
1. wave	D0421005_B72750300077	21.29416, -157.84528
2. wave	D0421006_B72750300077	21.29416, -157.84528

Station Description: Kapiolani Boulevard: Sheridan Street to Keeaumoku Street			
Survey Beginning Date/Time: 4/21/2010 @ 0000		Survey Ending Date/Time: 4/22/2010 @ 2400	
Survey Method:	Radar	Data Type:	Volume
Survey Crew:	LM		Wavetronix
Sketch Updated:		By:	SR
Remarks:			

FACILITY NAME	JURI	FUNC CLASS	AREA TYPE	ROUTE NO.	ROUTE MILE
Kapiolani Boulevard		14		7503	

D1= Direction to End
D2= Direction to Begin

D1: Keeaumoku Street / Waialae Avenue
D2: Sheridan Street / South Street

Run Date: 2011/01/21

Hawaii Department of Transportation
Highways Division — Highways Planning Survey Section
2010 Program Count - Summary

Site ID: B72750300077 **Town:** Oahu **DIR 1:** +MP **DIR 2:** -MP **Final AADT:** 0
Functional Class: URBAN:PRINCIPAL ARTERIAL - OTHER **Count Type:** VOLUME **Counter Type:** Tube **Route No:** 7503
Location: Kapiolani Blvd b/t Kona Iki St and Kee

TIME-AM	DIR 1	DIR 2	TOTAL	TIME-AM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL
DATE : 04/21/2010															
12:00-12:15	85	91	176	06:00-06:15	99	80	179	12:00-12:15	312	333	645	06:00-06:15	450	372	822
12:15-12:30	79	89	168	06:15-06:30	132	82	214	12:15-12:30	302	361	663	06:15-06:30	457	316	773
12:30-12:45	80	69	149	06:30-06:45	137	121	258	12:30-12:45	296	313	609	06:30-06:45	364	305	669
12:45-01:00	54	76	130	06:45-07:00	224	216	440	12:45-01:00	278	317	595	06:45-07:00	385	242	627
01:00-01:15	33	49	82	07:00-07:15	291	259	550	01:00-01:15	352	321	673	07:00-07:15	353	259	612
01:15-01:30	43	50	93	07:15-07:30	312	309	621	01:15-01:30	325	315	640	07:15-07:30	313	351	664
01:30-01:45	30	55	85	07:30-07:45	379	360	739	01:30-01:45	295	339	634	07:30-07:45	298	387	685
01:45-02:00	33	44	77	07:45-08:00	456	376	832	01:45-02:00	337	349	686	07:45-08:00	243	333	576
02:00-02:15	49	64	113	08:00-08:15	463	327	790	02:00-02:15	337	350	687	08:00-08:15	237	365	602
02:15-02:30	39	79	118	08:15-08:30	381	304	685	02:15-02:30	336	313	649	08:15-08:30	240	307	547
02:30-02:45	47	48	95	08:30-08:45	399	265	664	02:30-02:45	334	368	702	08:30-08:45	227	304	531
02:45-03:00	28	37	65	08:45-09:00	329	234	563	02:45-03:00	354	319	673	08:45-09:00	214	274	488
03:00-03:15	31	27	58	09:00-09:15	347	233	580	03:00-03:15	340	347	687	09:00-09:15	286	299	585
03:15-03:30	34	33	67	09:15-09:30	331	175	506	03:15-03:30	352	259	611	09:15-09:30	245	269	514
03:30-03:45	24	23	47	09:30-09:45	352	199	551	03:30-03:45	315	369	684	09:30-09:45	205	254	459
03:45-04:00	25	26	51	09:45-10:00	364	241	605	03:45-04:00	330	415	745	09:45-10:00	219	201	420
04:00-04:15	12	16	28	10:00-10:15	228	320	548	04:00-04:15	323	422	745	10:00-10:15	182	248	430
04:15-04:30	22	32	54	10:15-10:30	199	272	471	04:15-04:30	389	497	886	10:15-10:30	206	213	419
04:30-04:45	24	28	52	10:30-10:45	218	291	509	04:30-04:45	445	436	881	10:30-10:45	193	193	386
04:45-05:00	18	36	54	10:45-11:00	230	259	489	04:45-05:00	517	504	1021	10:45-11:00	129	128	257
05:00-05:15	70	29	99	11:00-11:15	236	308	544	05:00-05:15	448	438	886	11:00-11:15	120	124	244
05:15-05:30	75	29	104	11:15-11:30	240	311	551	05:15-05:30	526	397	923	11:15-11:30	113	110	223
05:30-05:45	73	40	113	11:30-11:45	296	318	614	05:30-05:45	509	390	899	11:30-11:45	103	113	216
05:45-06:00	109	38	147	11:45-12:00	291	292	583	05:45-06:00	423	350	773	11:45-12:00	76	111	187

AM COMMUTER PERIOD (05:00-09:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
AM - PEAK HR TIME	07:30 AM to 08:30 AM		
AM - PEAK HR VOLUME	1679	1367	3046
AM - K FACTOR (%)			6.79
AM - D (%)	55.12	44.88	100.00
DIRECTIONAL PEAK			
AM - PEAK HR TIME	07:45 AM to 08:45 AM	07:15 AM to 08:15 AM	
AM - PEAK HR VOLUME	1699	1372	

PM COMMUTER PERIOD (15:00-19:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
PM - PEAK HR TIME	04:45 PM to 05:45 PM		
PM - PEAK HR VOLUME	2000	1729	3729
PM - K FACTOR (%)			8.32
PM - D (%)	53.63	46.37	100.00
DIRECTIONAL PEAK			
PM - PEAK HR TIME	04:45 PM to 05:45 PM	04:15 PM to 05:15 PM	
PM - PEAK HR VOLUME	2000	1875	

AM PERIOD (00:00-12:00)			
TWO DIRECTIONAL PEAK			
AM - PEAK HR TIME	07:30 AM to 08:30 AM		
AM - PEAK HR VOLUME	1679	1367	3046
AM - K FACTOR (%)			6.79
AM - D (%)	55.12	44.88	100.00

PM PERIOD (12:00-24:00)			
TWO DIRECTIONAL PEAK			
PM - PEAK HR TIME	04:45 PM to 05:45 PM		
PM - PEAK HR VOLUME	2000	1729	3729
PM - K FACTOR (%)			8.32
PM - D (%)	53.63	46.37	100.00

NON-COMMUTER PERIOD (09:00-15:00)			
TWO DIRECTIONAL PEAK			
PEAK HR TIME	01:45 PM to 02:45 PM		
PEAK HR VOLUME	1344	1380	2724
DIRECTIONAL PEAK			
PEAK HR TIME	09:00 AM to 10:00 AM	01:45 PM to 02:45 PM	
PEAK HR VOLUME	1394	1380	

6-HR, 12-HR, 24-HR PERIODS	DIR 1	DIR 2	Total
AM 6-HR PERIOD (06:00-12:00)	6,934	6,152	13,086
AM 12-HR PERIOD (00:00-12:00)	8,051	7,260	15,311
PM 6-HR PERIOD (12:00-18:00)	8,775	8,822	17,597
PM 12-HR PERIOD (12:00-24:00)	14,633	14,900	29,533
24 HOUR PERIOD	22,684	22,160	44,844
D (%)	50.58	49.42	100.00

Run Date: 2011/01/21

Hawaii Department of Transportation
Highways Division — Highways Planning Survey Section
2010 Program Count - Summary

Site ID: B72750300077 **Town:** Oahu **DIR 1:** +MP **DIR 2:** -MP **Final AADT:** 0
Functional Class: URBAN:PRINCIPAL ARTERIAL - OTHER **Count Type:** VOLUME **Counter Type:** Tube **Route No:** 7503
Location: Kapiolani Blvd b/t Kona Iki St and Kee

TIME-AM	DIR 1	DIR 2	TOTAL	TIME-AM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL
DATE : 04/22/2010															
12:00-12:15	91	99	190	06:00-06:15	109	68	177	12:00-12:15	300	334	634	06:00-06:15	478	416	894
12:15-12:30	58	82	140	06:15-06:30	120	77	197	12:15-12:30	332	353	685	06:15-06:30	471	387	858
12:30-12:45	79	66	145	06:30-06:45	177	145	322	12:30-12:45	335	402	737	06:30-06:45	476	283	759
12:45-01:00	69	56	125	06:45-07:00	225	214	439	12:45-01:00	272	351	623	06:45-07:00	381	286	667
01:00-01:15	72	82	154	07:00-07:15	292	265	557	01:00-01:15	257	324	581	07:00-07:15	361	358	719
01:15-01:30	42	59	101	07:15-07:30	361	314	675	01:15-01:30	335	362	697	07:15-07:30	326	382	708
01:30-01:45	49	64	113	07:30-07:45	402	340	742	01:30-01:45	317	358	675	07:30-07:45	322	342	664
01:45-02:00	52	57	109	07:45-08:00	459	382	841	01:45-02:00	291	333	624	07:45-08:00	276	370	646
02:00-02:15	63	78	141	08:00-08:15	411	362	773	02:00-02:15	320	323	643	08:00-08:15	291	315	606
02:15-02:30	67	92	159	08:15-08:30	389	282	671	02:15-02:30	330	335	665	08:15-08:30	251	350	601
02:30-02:45	37	59	96	08:30-08:45	369	273	642	02:30-02:45	325	375	700	08:30-08:45	248	289	537
02:45-03:00	31	43	74	08:45-09:00	327	184	511	02:45-03:00	334	416	750	08:45-09:00	252	295	547
03:00-03:15	26	44	70	09:00-09:15	377	244	621	03:00-03:15	348	370	718	09:00-09:15	238	247	485
03:15-03:30	36	35	71	09:15-09:30	281	206	487	03:15-03:30	359	319	678	09:15-09:30	255	241	496
03:30-03:45	32	25	57	09:30-09:45	352	186	538	03:30-03:45	328	431	759	09:30-09:45	203	295	498
03:45-04:00	37	41	78	09:45-10:00	382	209	591	03:45-04:00	380	431	811	09:45-10:00	228	221	449
04:00-04:15	26	26	52	10:00-10:15	197	333	530	04:00-04:15	375	443	818	10:00-10:15	197	316	513
04:15-04:30	35	31	66	10:15-10:30	245	375	620	04:15-04:30	430	401	831	10:15-10:30	215	273	488
04:30-04:45	26	33	59	10:30-10:45	242	348	590	04:30-04:45	417	438	855	10:30-10:45	156	205	361
04:45-05:00	27	38	65	10:45-11:00	278	326	604	04:45-05:00	501	431	932	10:45-11:00	130	149	279
05:00-05:15	53	29	82	11:00-11:15	282	325	607	05:00-05:15	509	471	980	11:00-11:15	151	149	300
05:15-05:30	65	31	96	11:15-11:30	305	292	597	05:15-05:30	580	524	1104	11:15-11:30	134	139	273
05:30-05:45	89	38	127	11:30-11:45	299	300	599	05:30-05:45	581	464	1045	11:30-11:45	100	141	241
05:45-06:00	70	36	106	11:45-12:00	273	327	600	05:45-06:00	452	432	884	11:45-12:00	102	107	209

AM COMMUTER PERIOD (05:00-09:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
AM - PEAK HR TIME	07:15 AM to 08:15 AM		
AM - PEAK HR VOLUME	1633	1398	3031
AM - K FACTOR (%)			6.42
AM - D (%)	53.88	46.12	100.00
DIRECTIONAL PEAK			
AM - PEAK HR TIME	07:30 AM to 08:30 AM	07:15 AM to 08:15 AM	
AM - PEAK HR VOLUME	1661	1398	

PM COMMUTER PERIOD (15:00-19:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
PM - PEAK HR TIME	04:45 PM to 05:45 PM		
PM - PEAK HR VOLUME	2171	1890	4061
PM - K FACTOR (%)			8.60
PM - D (%)	53.46	46.54	100.00
DIRECTIONAL PEAK			
PM - PEAK HR TIME	04:45 PM to 05:45 PM	05:00 PM to 06:00 PM	
PM - PEAK HR VOLUME	2171	1891	

AM PERIOD (00:00-12:00)			
TWO DIRECTIONAL PEAK			
AM - PEAK HR TIME	07:15 AM to 08:15 AM		
AM - PEAK HR VOLUME	1633	1398	3031
AM - K FACTOR (%)			6.42
AM - D (%)	53.88	46.12	100.00

PM PERIOD (12:00-24:00)			
TWO DIRECTIONAL PEAK			
PM - PEAK HR TIME	04:45 PM to 05:45 PM		
PM - PEAK HR VOLUME	2171	1890	4061
PM - K FACTOR (%)			8.60
PM - D (%)	53.46	46.54	100.00

NON-COMMUTER PERIOD (09:00-15:00)			
TWO DIRECTIONAL PEAK			
PEAK HR TIME	02:00 PM to 03:00 PM		
PEAK HR VOLUME	1309	1449	2758
DIRECTIONAL PEAK			
PEAK HR TIME	09:00 AM to 10:00 AM	02:00 PM to 03:00 PM	
PEAK HR VOLUME	1392	1449	

6-HR, 12-HR, 24-HR PERIODS	DIR 1	DIR 2	Total
AM 6-HR PERIOD (06:00-12:00)	7,154	6,377	13,531
AM 12-HR PERIOD (00:00-12:00)	8,386	7,621	16,007
PM 6-HR PERIOD (12:00-18:00)	9,008	9,421	18,429
PM 12-HR PERIOD (12:00-24:00)	15,250	15,977	31,227
24 HOUR PERIOD	23,636	23,598	47,234
D (%)	50.04	49.96	100.00

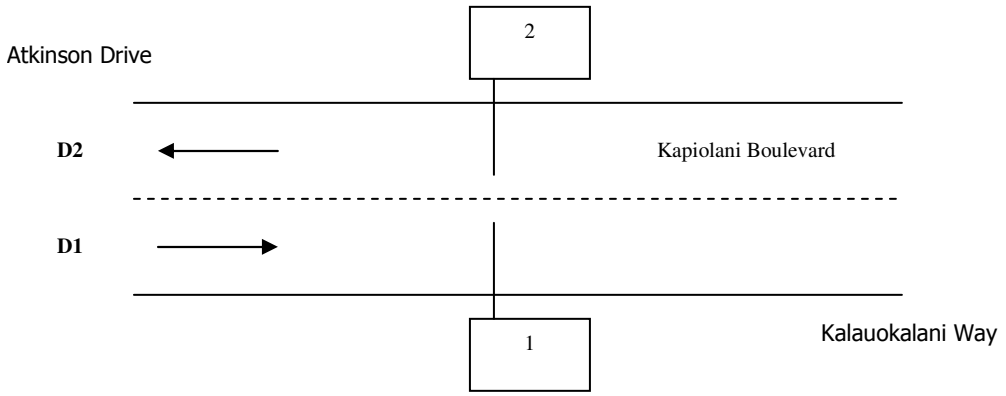
Traffic Data Service

Traffic Station Sketch

N

Section ID/Station #: B72750300153

Island: Oahu	
Area: Honolulu	



Meter #	File Name	GPS
1. bw82	D1207011_B72750300153	21.29055, -157.83694
2. bz84	D1207012_B72750300153	21.29055, -157.83694

Station Description: Kapiolani Boulevard: Atkinson Drive to Kalauokalani Way			
Survey Beginning Date/Time: 12/7/2010 @ 0000		Survey Ending Date/Time: 12/8/2010 @ 2400	
Survey Method:	Road Tube	Data Type:	Volume
Survey Crew:	LM		V5
Sketch Updated:		By:	SR
Remarks:			

FACILITY NAME	JURI	FUNC CLASS	AREA TYPE	ROUTE NO.	ROUTE MILE
Kapiolani Boulevard		14		7503	

D1= Direction to End	D1: Kalauokalani Way / Waialae Avenue
D2= Direction to Begin	D2: Atkinson Drive / South Street

Run Date: 2011/03/21

Hawaii Department of Transportation
Highways Division — Highways Planning Survey Section
2010 Program Count - Summary

Site ID: B72750300153 **Town:** Oahu **DIR 1:** +MP **DIR 2:** -MP **Final AADT:** 0
Functional Class: URBAN:PRINCIPAL ARTERIAL - OTHER **Count Type:** VOLUME **Counter Type:** Tube **Route No:** 7503
Location:

TIME-AM	DIR 1	DIR 2	TOTAL	TIME-AM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL
DATE : 12/07/2010															
12:00-12:15	103	91	194	06:00-06:15	104	211	315	12:00-12:15	439	518	957	06:00-06:15	676	446	1122
12:15-12:30	60	83	143	06:15-06:30	144	303	447	12:15-12:30	437	609	1046	06:15-06:30	573	419	992
12:30-12:45	68	63	131	06:30-06:45	228	487	715	12:30-12:45	416	600	1016	06:30-06:45	522	474	996
12:45-01:00	75	51	126	06:45-07:00	313	607	920	12:45-01:00	456	597	1053	06:45-07:00	420	422	842
01:00-01:15	43	47	90	07:00-07:15	397	689	1086	01:00-01:15	422	527	949	07:00-07:15	471	428	899
01:15-01:30	49	51	100	07:15-07:30	408	865	1273	01:15-01:30	424	546	970	07:15-07:30	434	421	855
01:30-01:45	46	40	86	07:30-07:45	461	769	1230	01:30-01:45	498	532	1030	07:30-07:45	379	414	793
01:45-02:00	56	35	91	07:45-08:00	458	898	1356	01:45-02:00	550	569	1119	07:45-08:00	392	359	751
02:00-02:15	39	62	101	08:00-08:15	423	847	1270	02:00-02:15	427	505	932	08:00-08:15	376	335	711
02:15-02:30	30	31	61	08:15-08:30	414	872	1286	02:15-02:30	469	493	962	08:15-08:30	368	243	611
02:30-02:45	24	49	73	08:30-08:45	236	728	964	02:30-02:45	511	576	1087	08:30-08:45	362	265	627
02:45-03:00	35	22	57	08:45-09:00	262	664	926	02:45-03:00	504	562	1066	08:45-09:00	399	266	665
03:00-03:15	27	32	59	09:00-09:15	245	537	782	03:00-03:15	572	403	975	09:00-09:15	396	271	667
03:15-03:30	21	36	57	09:15-09:30	288	618	906	03:15-03:30	585	366	951	09:15-09:30	422	260	682
03:30-03:45	11	33	44	09:30-09:45	290	537	827	03:30-03:45	549	455	1004	09:30-09:45	366	216	582
03:45-04:00	24	41	65	09:45-10:00	294	622	916	03:45-04:00	549	428	977	09:45-10:00	299	228	527
04:00-04:15	31	63	94	10:00-10:15	291	526	817	04:00-04:15	652	397	1049	10:00-10:15	274	233	507
04:15-04:30	18	81	99	10:15-10:30	295	574	869	04:15-04:30	616	421	1037	10:15-10:30	235	210	445
04:30-04:45	29	55	84	10:30-10:45	339	640	979	04:30-04:45	621	428	1049	10:30-10:45	166	193	359
04:45-05:00	30	83	113	10:45-11:00	324	577	901	04:45-05:00	770	483	1253	10:45-11:00	164	175	339
05:00-05:15	40	107	147	11:00-11:15	340	552	892	05:00-05:15	717	404	1121	11:00-11:15	119	179	298
05:15-05:30	44	88	132	11:15-11:30	350	563	913	05:15-05:30	729	455	1184	11:15-11:30	99	137	236
05:30-05:45	72	172	244	11:30-11:45	394	601	995	05:30-05:45	624	401	1025	11:30-11:45	107	132	239
05:45-06:00	99	226	325	11:45-12:00	433	597	1030	05:45-06:00	698	413	1111	11:45-12:00	99	92	191

AM COMMUTER PERIOD (05:00-09:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
AM - PEAK HR TIME	07:30 AM to 08:30 AM		
AM - PEAK HR VOLUME	1756	3386	5142
AM - K FACTOR (%)			7.89
AM - D (%)	34.15	65.85	100.00
DIRECTIONAL PEAK			
AM - PEAK HR TIME	07:30 AM to 08:30 AM	07:30 AM to 08:30 AM	
AM - PEAK HR VOLUME	1756	3386	

PM COMMUTER PERIOD (15:00-19:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
PM - PEAK HR TIME	04:30 PM to 05:30 PM		
PM - PEAK HR VOLUME	2837	1770	4607
PM - K FACTOR (%)			7.07
PM - D (%)	61.58	38.42	100.00
DIRECTIONAL PEAK			
PM - PEAK HR TIME	04:45 PM to 05:45 PM	04:30 PM to 05:30 PM	
PM - PEAK HR VOLUME	2840	1770	

AM PERIOD (00:00-12:00)			
TWO DIRECTIONAL PEAK			
AM - PEAK HR TIME	07:30 AM to 08:30 AM		
AM - PEAK HR VOLUME	1756	3386	5142
AM - K FACTOR (%)			7.89
AM - D (%)	34.15	65.85	100.00

PM PERIOD (12:00-24:00)			
TWO DIRECTIONAL PEAK			
PM - PEAK HR TIME	04:30 PM to 05:30 PM		
PM - PEAK HR VOLUME	2837	1770	4607
PM - K FACTOR (%)			7.07
PM - D (%)	61.58	38.42	100.00

NON-COMMUTER PERIOD (09:00-15:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
PEAK HR TIME	01:45 PM to 02:45 PM		
PEAK HR VOLUME	1957	2143	4100
DIRECTIONAL PEAK			
PEAK HR TIME	01:45 PM to 02:45 PM	09:45 AM to 10:45 AM	
PEAK HR VOLUME	1957	2362	

6-HR, 12-HR, 24-HR PERIODS	DIR 1	DIR 2	Total
AM 6-HR PERIOD (06:00-12:00)	7,731	14,884	22,615
AM 12-HR PERIOD (00:00-12:00)	8,805	16,526	25,331
PM 6-HR PERIOD (12:00-18:00)	13,235	11,688	24,923
PM 12-HR PERIOD (12:00-24:00)	21,353	18,506	39,859
24 HOUR PERIOD	30,158	35,032	65,190
D (%)	46.26	53.74	100.00

Run Date: 2011/03/21

Hawaii Department of Transportation
Highways Division — Highways Planning Survey Section
2010 Program Count - Summary

Site ID: B72750300153 **Town:** Oahu **DIR 1:** +MP **DIR 2:** -MP **Final AADT:** 0
Functional Class: URBAN:PRINCIPAL ARTERIAL - OTHER **Count Type:** VOLUME **Counter Type:** Tube **Route No:** 7503
Location:

TIME-AM	DIR 1	DIR 2	TOTAL	TIME-AM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL	TIME-PM	DIR 1	DIR 2	TOTAL
DATE : 12/08/2010															
12:00-12:15	94	98	192	06:00-06:15	119	212	331	12:00-12:15	443	537	980	06:00-06:15	659	358	1017
12:15-12:30	66	82	148	06:15-06:30	145	286	431	12:15-12:30	505	551	1056	06:15-06:30	647	389	1036
12:30-12:45	85	77	162	06:30-06:45	245	454	699	12:30-12:45	436	562	998	06:30-06:45	564	457	1021
12:45-01:00	82	67	149	06:45-07:00	286	634	920	12:45-01:00	430	557	987	06:45-07:00	531	410	941
01:00-01:15	46	64	110	07:00-07:15	385	673	1058	01:00-01:15	453	510	963	07:00-07:15	482	417	899
01:15-01:30	55	54	109	07:15-07:30	447	753	1200	01:15-01:30	514	524	1038	07:15-07:30	412	423	835
01:30-01:45	43	41	84	07:30-07:45	433	802	1235	01:30-01:45	488	560	1048	07:30-07:45	377	381	758
01:45-02:00	59	64	123	07:45-08:00	469	851	1320	01:45-02:00	520	586	1106	07:45-08:00	403	368	771
02:00-02:15	49	56	105	08:00-08:15	400	841	1241	02:00-02:15	478	513	991	08:00-08:15	396	295	691
02:15-02:30	47	33	80	08:15-08:30	445	836	1281	02:15-02:30	474	468	942	08:15-08:30	382	293	675
02:30-02:45	39	38	77	08:30-08:45	300	656	956	02:30-02:45	544	512	1056	08:30-08:45	362	305	667
02:45-03:00	25	33	58	08:45-09:00	292	675	967	02:45-03:00	564	561	1125	08:45-09:00	370	238	608
03:00-03:15	17	22	39	09:00-09:15	264	526	790	03:00-03:15	660	449	1109	09:00-09:15	367	269	636
03:15-03:30	26	28	54	09:15-09:30	233	552	785	03:15-03:30	566	389	955	09:15-09:30	361	288	649
03:30-03:45	20	27	47	09:30-09:45	227	537	764	03:30-03:45	573	515	1088	09:30-09:45	366	253	619
03:45-04:00	21	30	51	09:45-10:00	299	591	890	03:45-04:00	560	408	968	09:45-10:00	261	213	474
04:00-04:15	21	38	59	10:00-10:15	289	565	854	04:00-04:15	624	409	1033	10:00-10:15	266	209	475
04:15-04:30	26	84	110	10:15-10:30	288	586	874	04:15-04:30	611	450	1061	10:15-10:30	235	262	497
04:30-04:45	17	61	78	10:30-10:45	319	559	878	04:30-04:45	678	455	1133	10:30-10:45	206	194	400
04:45-05:00	19	53	72	10:45-11:00	376	595	971	04:45-05:00	770	425	1195	10:45-11:00	168	173	341
05:00-05:15	44	110	154	11:00-11:15	340	575	915	05:00-05:15	693	403	1096	11:00-11:15	158	169	327
05:15-05:30	35	106	141	11:15-11:30	390	620	1010	05:15-05:30	752	438	1190	11:15-11:30	119	149	268
05:30-05:45	52	156	208	11:30-11:45	422	535	957	05:30-05:45	653	365	1018	11:30-11:45	105	132	237
05:45-06:00	96	190	286	11:45-12:00	431	639	1070	05:45-06:00	696	419	1115	11:45-12:00	102	118	220

AM COMMUTER PERIOD (05:00-09:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
AM - PEAK HR TIME	07:30 AM to 08:30 AM		
AM - PEAK HR VOLUME	1747	3330	5077
AM - K FACTOR (%)			7.76
AM - D (%)	34.41	65.59	100.00
DIRECTIONAL PEAK			
AM - PEAK HR TIME	07:15 AM to 08:15 AM	07:30 AM to 08:30 AM	
AM - PEAK HR VOLUME	1749	3330	

PM COMMUTER PERIOD (15:00-19:00)	DIR 1	DIR 2	
TWO DIRECTIONAL PEAK			
PM - PEAK HR TIME	04:30 PM to 05:30 PM		
PM - PEAK HR VOLUME	2893	1721	4614
PM - K FACTOR (%)			7.05
PM - D (%)	62.70	37.30	100.00
DIRECTIONAL PEAK			
PM - PEAK HR TIME	04:30 PM to 05:30 PM	03:30 PM to 04:30 PM	
PM - PEAK HR VOLUME	2893	1782	

AM PERIOD (00:00-12:00)			
TWO DIRECTIONAL PEAK			
AM - PEAK HR TIME	07:30 AM to 08:30 AM		
AM - PEAK HR VOLUME	1747	3330	5077
AM - K FACTOR (%)			7.76
AM - D (%)	34.41	65.59	100.00

PM PERIOD (12:00-24:00)			
TWO DIRECTIONAL PEAK			
PM - PEAK HR TIME	04:30 PM to 05:30 PM		
PM - PEAK HR VOLUME	2893	1721	4614
PM - K FACTOR (%)			7.05
PM - D (%)	62.70	37.30	100.00

NON-COMMUTER PERIOD (09:00-15:00)			
TWO DIRECTIONAL PEAK			
PEAK HR TIME	01:15 PM to 02:15 PM		
PEAK HR VOLUME	2000	2183	4183
DIRECTIONAL PEAK			
PEAK HR TIME	02:00 PM to 03:00 PM	11:00 AM to 12:00 PM	
PEAK HR VOLUME	2060	2369	

6-HR, 12-HR, 24-HR PERIODS	DIR 1	DIR 2	Total
AM 6-HR PERIOD (06:00-12:00)	7,844	14,553	22,397
AM 12-HR PERIOD (00:00-12:00)	8,928	16,165	25,093
PM 6-HR PERIOD (12:00-18:00)	13,685	11,566	25,251
PM 12-HR PERIOD (12:00-24:00)	21,984	18,329	40,313
24 HOUR PERIOD	30,912	34,494	65,406
D (%)	47.26	52.74	100.00

APPENDIX C

Analysis Reports

Existing (2014) Conditions

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	513	129	6	1824	128	57	179	39	48	136	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0			5.0	5.0
Lane Util. Factor		0.95			0.86			0.95			0.95	1.00
Frpb, ped/bikes		0.92			0.98			0.97			1.00	0.83
Flpb, ped/bikes		1.00			1.00			0.97			0.97	1.00
Frt		0.97			0.99			0.98			1.00	0.85
Flt Protected		1.00			1.00			0.99			0.99	1.00
Satd. Flow (prot)		3098			6110			3172			3307	1284
Flt Permitted		0.95			0.93			0.84			0.79	1.00
Satd. Flow (perm)		2934			5684			2679			2663	1284
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	2	576	145	7	2049	144	64	201	44	54	153	73
RTOR Reduction (vph)	0	20	0	0	10	0	0	10	0	0	0	12
Lane Group Flow (vph)	0	703	0	0	2190	0	0	299	0	0	207	61
Confl. Peds. (#/hr)	197		154	154		197	137		197	197		137
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		67.7			67.7			42.3			42.3	42.3
Effective Green, g (s)		67.7			67.7			42.3			42.3	42.3
Actuated g/C Ratio		0.56			0.56			0.35			0.35	0.35
Clearance Time (s)		5.0			5.0			5.0			5.0	5.0
Vehicle Extension (s)		3.0			3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		1655			3206			944			938	452
v/s Ratio Prot												
v/s Ratio Perm		0.24			c0.39			c0.11			0.08	0.05
v/c Ratio		0.42			0.68			0.32			0.22	0.14
Uniform Delay, d1		15.0			18.5			28.3			27.3	26.4
Progression Factor		1.00			0.99			1.00			1.00	1.00
Incremental Delay, d2		0.2			0.5			0.9			0.5	0.6
Delay (s)		15.2			18.8			29.2			27.8	27.0
Level of Service		B			B			C			C	C
Approach Delay (s)		15.2			18.8			29.2			27.6	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	19.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	94.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Yield			Stop			Stop			Stop	
Volume (vph)	69	0	59	21	83	93	56	116	18	31	154	93
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	73	0	62	22	87	98	59	122	19	33	162	98

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	135	207	200	293
Volume Left (vph)	73	22	59	33
Volume Right (vph)	62	98	19	98
Hadj (s)	-0.07	-0.16	0.10	-0.08
Departure Headway (s)	5.5	5.3	5.4	5.1
Degree Utilization, x	0.21	0.30	0.30	0.41
Capacity (veh/h)	581	619	607	662
Control Delay (s)	9.9	10.6	10.7	11.7
Approach Delay (s)	9.9	10.6	10.7	11.7
Approach LOS	A	B	B	B

Intersection Summary			
Delay	10.9		
Level of Service	B		
Intersection Capacity Utilization	55.9%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	495	95	1012	1963	0	325
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0	5.0		5.0
Lane Util. Factor	0.95		0.86	0.86		0.76
Frpb, ped/bikes	0.99		1.00	1.00		1.00
Flpb, ped/bikes	1.00		1.00	1.00		1.00
Frt	0.98		1.00	1.00		0.85
Flt Protected	1.00		0.95	0.99		1.00
Satd. Flow (prot)	3387		1502	4708		3575
Flt Permitted	1.00		0.27	0.67		1.00
Satd. Flow (perm)	3387		427	3205		3575
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	538	103	1100	2134	0	353
RTOR Reduction (vph)	16	0	0	0	0	164
Lane Group Flow (vph)	625	0	627	2607	0	189
Confl. Peds. (#/hr)		51	51			
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	NA		pm+pt	NA		pt+ov
Protected Phases	4		2 3	8		2 3
Permitted Phases			8			
Actuated Green, G (s)	45.6		115.0	115.0		64.4
Effective Green, g (s)	45.6		115.0	115.0		64.4
Actuated g/C Ratio	0.38		0.96	0.96		0.54
Clearance Time (s)	5.0			5.0		
Vehicle Extension (s)	3.0			3.0		
Lane Grp Cap (vph)	1287		986	3878		1918
v/s Ratio Prot	0.18		0.34	c0.36		0.05
v/s Ratio Perm			0.27	c0.28		
v/c Ratio	0.49		0.64	0.67		0.10
Uniform Delay, d1	28.3		8.0	0.3		13.6
Progression Factor	0.65		1.00	1.00		0.11
Incremental Delay, d2	0.3		1.4	0.5		0.0
Delay (s)	18.6		9.3	0.8		1.5
Level of Service	B		A	A		A
Approach Delay (s)	18.6			2.4	1.5	
Approach LOS	B			A	A	

Intersection Summary			
HCM 2000 Control Delay	4.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	80.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	47	33	321	15	40	1067
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0		5.0	5.0
Lane Util. Factor	0.97		0.95		1.00	0.95
Frpb, ped/bikes	0.96		0.99		1.00	1.00
Flpb, ped/bikes	1.00		1.00		0.94	1.00
Frt	0.94		0.99		1.00	1.00
Flt Protected	0.97		1.00		0.95	1.00
Satd. Flow (prot)	3126		3434		1642	3505
Flt Permitted	0.97		1.00		0.44	1.00
Satd. Flow (perm)	3126		3434		760	3505
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	52	36	353	16	44	1173
RTOR Reduction (vph)	20	0	4	0	0	0
Lane Group Flow (vph)	68	0	365	0	44	1173
Confl. Peds. (#/hr)		72		151	151	
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Prot		NA		pm+pt	NA
Protected Phases	2		4		3	8
Permitted Phases					8	
Actuated Green, G (s)	52.5		46.4		57.5	57.5
Effective Green, g (s)	52.5		46.4		57.5	57.5
Actuated g/C Ratio	0.44		0.39		0.48	0.48
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)	1367		1327		409	1679
v/s Ratio Prot	c0.02		0.11		0.01	c0.33
v/s Ratio Perm					0.05	
v/c Ratio	0.05		0.28		0.11	0.70
Uniform Delay, d1	19.4		25.3		17.1	24.5
Progression Factor	1.00		1.00		0.93	0.93
Incremental Delay, d2	0.1		0.1		0.1	1.0
Delay (s)	19.5		25.4		16.1	23.8
Level of Service	B		C		B	C
Approach Delay (s)	19.5		25.4			23.5
Approach LOS	B		C			C

Intersection Summary			
HCM 2000 Control Delay	23.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	64.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	64	89	332	1041	130
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	67	94	349	1096	137
Pedestrians	91			91		
Lane Width (ft)	12.0			12.0		
Walking Speed (ft/s)	3.5			3.5		
Percent Blockage	9			9		
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					114	
pX, platoon unblocked	0.74	0.74	0.74			
vC, conflicting volume	1559	798	1324			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1043	10	723			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	90	84			
cM capacity (veh/h)	128	659	593			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2
Volume Total	67	94	116	116	116	731	502
Volume Left	0	94	0	0	0	0	0
Volume Right	67	0	0	0	0	0	137
cSH	659	593	1700	1700	1700	1700	1700
Volume to Capacity	0.10	0.16	0.07	0.07	0.07	0.43	0.30
Queue Length 95th (ft)	9	14	0	0	0	0	0
Control Delay (s)	11.1	12.2	0.0	0.0	0.0	0.0	0.0
Lane LOS	B	B					
Approach Delay (s)	11.1	2.6				0.0	
Approach LOS	B						

Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	61.3%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	34	1810	80	1	694	222	31	357	85	108	337	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0			5.0	5.0
Lane Util. Factor		0.86			0.95			0.95			0.95	1.00
Frpb, ped/bikes		0.98			0.92			0.94			1.00	0.67
Flpb, ped/bikes		1.00			1.00			0.99			0.97	1.00
Frt		0.99			0.96			0.97			1.00	0.85
Flt Protected		1.00			1.00			1.00			0.99	1.00
Satd. Flow (prot)		6209			3137			3205			3378	1065
Flt Permitted		0.89			0.95			0.89			0.66	1.00
Satd. Flow (perm)		5509			2990			2872			2263	1065
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	36	1905	84	1	731	234	33	376	89	114	355	95
RTOR Reduction (vph)	0	5	0	0	12	0	0	1	0	0	0	21
Lane Group Flow (vph)	0	2020	0	0	954	0	0	497	0	0	469	74
Confl. Peds. (#/hr)	320		299	299		320	341		337	337		341
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		61.3			61.3			48.7			48.7	48.7
Effective Green, g (s)		61.3			61.3			48.7			48.7	48.7
Actuated g/C Ratio		0.51			0.51			0.41			0.41	0.41
Clearance Time (s)		5.0			5.0			5.0			5.0	5.0
Vehicle Extension (s)		3.0			3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		2814			1527			1165			918	432
v/s Ratio Prot												
v/s Ratio Perm		c0.37			0.32			0.17			c0.21	0.07
v/c Ratio		0.72			0.62			0.43			0.51	0.17
Uniform Delay, d1		22.7			21.1			25.6			26.7	22.8
Progression Factor		1.00			0.57			1.00			1.00	1.00
Incremental Delay, d2		0.9			0.7			1.1			2.0	0.9
Delay (s)		23.6			12.8			26.8			28.8	23.6
Level of Service		C			B			C			C	C
Approach Delay (s)		23.6			12.8			26.8			27.9	
Approach LOS		C			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	22.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	116.6%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Yield			Stop			Stop			Stop	
Volume (vph)	95	14	162	10	90	179	92	191	23	78	277	90
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	102	15	174	11	97	192	99	205	25	84	298	97

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	291	300	329	478
Volume Left (vph)	102	11	99	84
Volume Right (vph)	174	192	25	97
Hadj (s)	-0.22	-0.31	0.08	-0.02
Departure Headway (s)	8.0	7.8	8.0	7.4
Degree Utilization, x	0.64	0.65	0.73	0.98
Capacity (veh/h)	430	436	439	478
Control Delay (s)	24.2	24.4	29.4	63.8
Approach Delay (s)	24.2	24.4	29.4	63.8
Approach LOS	C	C	D	F

Intersection Summary			
Delay	39.0		
Level of Service	E		
Intersection Capacity Utilization	80.6%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1723	195	0	952	0	713
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0			5.0		5.0
Lane Util. Factor	0.86			0.95		0.64
Frpb, ped/bikes	0.99			1.00		1.00
Flpb, ped/bikes	1.00			1.00		1.00
Frt	0.98			1.00		0.85
Flt Protected	1.00			1.00		1.00
Satd. Flow (prot)	6261			3539		4053
Flt Permitted	1.00			1.00		1.00
Satd. Flow (perm)	6261			3539		4053
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	1776	201	0	981	0	735
RTOR Reduction (vph)	19	0	0	0	0	13
Lane Group Flow (vph)	1958	0	0	981	0	722
Confl. Peds. (#/hr)		67	67			
Turn Type	NA			NA		Prot
Protected Phases	4			8		2
Permitted Phases						
Actuated Green, G (s)	57.8			57.8		52.2
Effective Green, g (s)	57.8			57.8		52.2
Actuated g/C Ratio	0.48			0.48		0.44
Clearance Time (s)	5.0			5.0		5.0
Vehicle Extension (s)	3.0			3.0		3.0
Lane Grp Cap (vph)	3015			1704		1763
v/s Ratio Prot	c0.31			0.28		c0.18
v/s Ratio Perm						
v/c Ratio	0.65			0.58		0.41
Uniform Delay, d1	23.5			22.3		23.3
Progression Factor	0.40			1.00		0.05
Incremental Delay, d2	0.4			0.5		0.7
Delay (s)	9.7			22.8		1.9
Level of Service	A			C		A
Approach Delay (s)	9.7			22.8	1.9	
Approach LOS	A			C	A	

Intersection Summary			
HCM 2000 Control Delay	11.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	51.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	64	35	751	31	17	249
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0		5.0	5.0
Lane Util. Factor	0.97		0.91		1.00	0.95
Frpb, ped/bikes	0.95		0.99		1.00	1.00
Flpb, ped/bikes	1.00		1.00		1.00	1.00
Frt	0.95		0.99		1.00	1.00
Flt Protected	0.97		1.00		0.95	1.00
Satd. Flow (prot)	3112		4975		1747	3505
Flt Permitted	0.97		1.00		0.15	1.00
Satd. Flow (perm)	3112		4975		271	3505
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	67	37	791	33	18	262
RTOR Reduction (vph)	14	0	5	0	0	0
Lane Group Flow (vph)	90	0	819	0	18	262
Confl. Peds. (#/hr)		106		67	67	
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Prot		NA		pm+pt	NA
Protected Phases	2		4		3	8
Permitted Phases					8	
Actuated Green, G (s)	73.7		28.4		36.3	36.3
Effective Green, g (s)	73.7		28.4		36.3	36.3
Actuated g/C Ratio	0.61		0.24		0.30	0.30
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)	1911		1177		117	1060
v/s Ratio Prot	c0.03		c0.16		0.00	c0.07
v/s Ratio Perm					0.04	
v/c Ratio	0.05		0.70		0.15	0.25
Uniform Delay, d1	9.2		41.8		31.0	31.5
Progression Factor	1.00		1.00		0.97	0.94
Incremental Delay, d2	0.0		1.8		0.6	0.1
Delay (s)	9.2		43.7		30.6	29.7
Level of Service	A		D		C	C
Approach Delay (s)	9.2		43.7			29.8
Approach LOS	A		D			C

Intersection Summary			
HCM 2000 Control Delay	37.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	55.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	11	117	159	786	283	54
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	12	127	173	854	308	59
Pedestrians	260			260		
Lane Width (ft)	12.0			12.0		
Walking Speed (ft/s)	3.5			3.5		
Percent Blockage	25			25		
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					114	
pX, platoon unblocked	0.95	0.95	0.95			
vC, conflicting volume	1227	703	626			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1126	571	490			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	89	49	77			
cM capacity (veh/h)	110	250	766			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2
Volume Total	139	173	285	285	285	205	161
Volume Left	12	173	0	0	0	0	0
Volume Right	127	0	0	0	0	0	59
cSH	225	766	1700	1700	1700	1700	1700
Volume to Capacity	0.62	0.23	0.17	0.17	0.17	0.12	0.09
Queue Length 95th (ft)	91	22	0	0	0	0	0
Control Delay (s)	43.8	11.1	0.0	0.0	0.0	0.0	0.0
Lane LOS	E	B					
Approach Delay (s)	43.8	1.9				0.0	
Approach LOS	E						

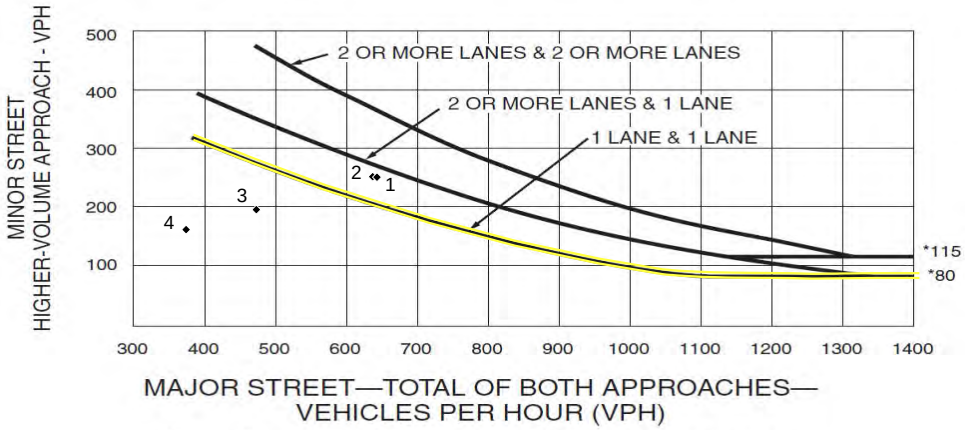
Intersection Summary			
Average Delay	5.2		
Intersection Capacity Utilization	Err%	ICU Level of Service	H
Analysis Period (min)	15		

Traffic Signal Warrants - Existing (2014)
Mahukona St. and Kona St.

4-Hour Warrant - Figure 4C-2

Major/Minor Roads	Approach Type	# of Lanes	1		2		3		4		Pass?
Mahukona St. /	Major	1	632	Yes	638	Yes	468	No	369	No	No
Kona St.	Minor	1	253		252		197		163		

Figure 4C-1. Warrant 2, Four-Hour Vehicular Volume

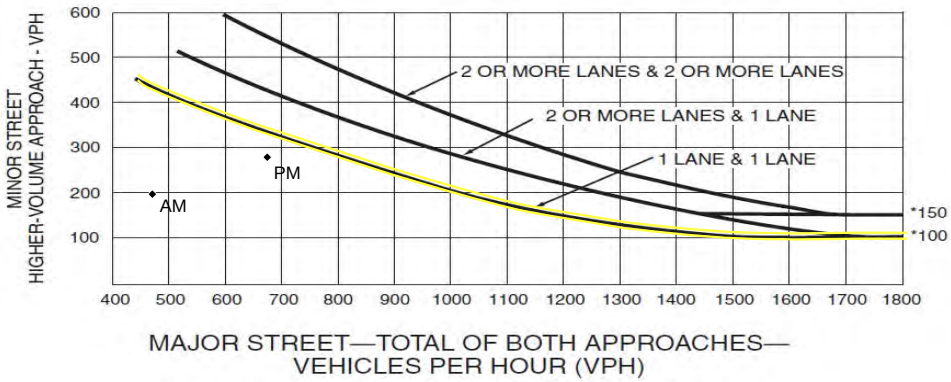


*Note: 115 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 80 vph applies as the lower threshold volume for a minor-street approach with one lane.

Peak Hour Warrant - Figure 4C-3

Major/Minor Roads	Approach Type	# of Lanes	AM Volume	Pass?	Mid Volume	Pass?	PM Volume	Pass?	Pass?
Mahukona St. /	Major	1	468	No		N/A	671	No	No
Kona St.	Minor	1	197				279		

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *MUTCD, 2009.*

APPENDIX D

Analysis Reports

Future (2017) Without Project Conditions

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	544	141	0	1935	136	62	199	41	51	153	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0			5.0	5.0
Lane Util. Factor		0.95			0.86			0.95			0.95	1.00
Frpb, ped/bikes		0.92			0.98			0.97			1.00	0.83
Flpb, ped/bikes		1.00			1.00			0.98			0.97	1.00
Frt		0.97			0.99			0.98			1.00	0.85
Flt Protected		1.00			1.00			0.99			0.99	1.00
Satd. Flow (prot)		3090			6112			3185			3320	1284
Flt Permitted		1.00			1.00			0.83			0.79	1.00
Satd. Flow (perm)		3090			6112			2662			2652	1284
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	0	611	158	0	2174	153	70	224	46	57	172	78
RTOR Reduction (vph)	0	20	0	0	9	0	0	10	0	0	0	12
Lane Group Flow (vph)	0	749	0	0	2318	0	0	330	0	0	229	66
Confl. Peds. (#/hr)	197		154	154		197	137		197	197		137
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type		NA			NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases				8			2			6		6
Actuated Green, G (s)		66.7			66.7			43.3			43.3	43.3
Effective Green, g (s)		66.7			66.7			43.3			43.3	43.3
Actuated g/C Ratio		0.56			0.56			0.36			0.36	0.36
Clearance Time (s)		5.0			5.0			5.0			5.0	5.0
Vehicle Extension (s)		3.0			3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		1717			3397			960			956	463
v/s Ratio Prot		0.24			c0.38							
v/s Ratio Perm								c0.12			0.09	0.05
v/c Ratio		0.44			0.68			0.34			0.24	0.14
Uniform Delay, d1		15.6			19.1			28.0			26.8	25.9
Progression Factor		1.00			0.99			1.00			1.00	1.00
Incremental Delay, d2		0.2			0.4			1.0			0.6	0.7
Delay (s)		15.8			19.2			29.0			27.4	26.5
Level of Service		B			B			C			C	C
Approach Delay (s)		15.8			19.2			29.0			27.2	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	20.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	95.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Yield			Stop			Stop			Stop	
Volume (vph)	84	0	63	22	88	99	59	123	19	33	176	99
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	88	0	66	23	93	104	62	129	20	35	185	104

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	155	220	212	324
Volume Left (vph)	88	23	62	35
Volume Right (vph)	66	104	20	104
Hadj (s)	-0.04	-0.16	0.10	-0.07
Departure Headway (s)	5.8	5.5	5.6	5.3
Degree Utilization, x	0.25	0.34	0.33	0.48
Capacity (veh/h)	554	590	582	640
Control Delay (s)	10.6	11.3	11.4	13.0
Approach Delay (s)	10.6	11.3	11.4	13.0
Approach LOS	B	B	B	B

Intersection Summary			
Delay	11.8		
Level of Service	B		
Intersection Capacity Utilization	61.5%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	525	101	1092	2083	0	349
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0	5.0		5.0
Lane Util. Factor	0.95		0.86	0.86		0.76
Frpb, ped/bikes	0.99		1.00	1.00		1.00
Flpb, ped/bikes	1.00		1.00	1.00		1.00
Frt	0.98		1.00	1.00		0.85
Flt Protected	1.00		0.95	0.99		1.00
Satd. Flow (prot)	3386		1502	4706		3575
Flt Permitted	1.00		0.27	0.67		1.00
Satd. Flow (perm)	3386		433	3198		3575
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	571	110	1187	2264	0	379
RTOR Reduction (vph)	15	0	0	0	0	194
Lane Group Flow (vph)	666	0	665	2786	0	185
Confl. Peds. (#/hr)		51	51			
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	NA		pm+pt	NA		pt+ov
Protected Phases	4		2 3	8		2 3
Permitted Phases			8			
Actuated Green, G (s)	51.4		115.0	115.0		58.6
Effective Green, g (s)	51.4		115.0	115.0		58.6
Actuated g/C Ratio	0.43		0.96	0.96		0.49
Clearance Time (s)	5.0			5.0		
Vehicle Extension (s)	3.0			3.0		
Lane Grp Cap (vph)	1450		936	3801		1745
v/s Ratio Prot	0.20		0.35	c0.36		0.05
v/s Ratio Perm			0.33	c0.34		
v/c Ratio	0.46		0.71	0.73		0.11
Uniform Delay, d1	24.4		10.2	0.4		16.6
Progression Factor	0.63		1.00	1.00		0.08
Incremental Delay, d2	0.2		2.6	0.8		0.0
Delay (s)	15.5		12.7	1.1		1.3
Level of Service	B		B	A		A
Approach Delay (s)	15.5			3.3	1.3	
Approach LOS	B			A	A	

Intersection Summary			
HCM 2000 Control Delay	5.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	83.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	50	35	344	16	42	1150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0		5.0	5.0
Lane Util. Factor	0.97		0.95		1.00	0.95
Frpb, ped/bikes	0.96		0.99		1.00	1.00
Flpb, ped/bikes	1.00		1.00		0.94	1.00
Frt	0.94		0.99		1.00	1.00
Flt Protected	0.97		1.00		0.95	1.00
Satd. Flow (prot)	3126		3431		1647	3505
Flt Permitted	0.97		1.00		0.44	1.00
Satd. Flow (perm)	3126		3431		755	3505
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	55	38	378	18	46	1264
RTOR Reduction (vph)	23	0	3	0	0	0
Lane Group Flow (vph)	70	0	393	0	46	1264
Confl. Peds. (#/hr)		72		151	151	
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Prot		NA		pm+pt	NA
Protected Phases	2		4		3	8
Permitted Phases					8	
Actuated Green, G (s)	48.2		51.2		61.8	61.8
Effective Green, g (s)	48.2		51.2		61.8	61.8
Actuated g/C Ratio	0.40		0.43		0.51	0.51
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)	1255		1463		430	1805
v/s Ratio Prot	c0.02		0.11		0.00	c0.36
v/s Ratio Perm					0.05	
v/c Ratio	0.06		0.27		0.11	0.70
Uniform Delay, d1	22.0		22.3		14.9	22.1
Progression Factor	1.00		1.00		0.94	0.91
Incremental Delay, d2	0.1		0.1		0.1	0.9
Delay (s)	22.1		22.4		14.0	21.0
Level of Service	C		C		B	C
Approach Delay (s)	22.1		22.4			20.8
Approach LOS	C		C			C

Intersection Summary			
HCM 2000 Control Delay	21.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	64.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	68	94	356	1122	138
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	72	99	375	1181	145
Pedestrians	91			91		
Lane Width (ft)	12.0			12.0		
Walking Speed (ft/s)	3.5			3.5		
Percent Blockage	9			9		
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					114	
pX, platoon unblocked	0.72	0.72	0.72			
vC, conflicting volume	1667	845	1417			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1159	24	814			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	89	82			
cM capacity (veh/h)	103	634	539			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2
Volume Total	72	99	125	125	125	787	539
Volume Left	0	99	0	0	0	0	0
Volume Right	72	0	0	0	0	0	145
cSH	634	539	1700	1700	1700	1700	1700
Volume to Capacity	0.11	0.18	0.07	0.07	0.07	0.46	0.32
Queue Length 95th (ft)	9	17	0	0	0	0	0
Control Delay (s)	11.4	13.2	0.0	0.0	0.0	0.0	0.0
Lane LOS	B	B					
Approach Delay (s)	11.4	2.8				0.0	
Approach LOS	B						

Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	64.1%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	36	1945	98	0	736	235	0	423	103	114	414	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0			5.0	5.0
Lane Util. Factor		0.86			0.95			0.95			0.95	1.00
Frpb, ped/bikes		0.97			0.92			0.94			1.00	0.67
Flpb, ped/bikes		1.00			1.00			1.00			0.97	1.00
Frt		0.99			0.96			0.97			1.00	0.85
Flt Protected		1.00			1.00			1.00			0.99	1.00
Satd. Flow (prot)		6185			3138			3221			3406	1065
Flt Permitted		0.88			1.00			1.00			0.65	1.00
Satd. Flow (perm)		5422			3138			3221			2234	1065
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	38	2047	103	0	775	247	0	445	108	120	436	100
RTOR Reduction (vph)	0	6	0	0	11	0	0	1	0	0	0	17
Lane Group Flow (vph)	0	2182	0	0	1011	0	0	552	0	0	556	83
Confl. Peds. (#/hr)	320		299	299		320	341		337	337		341
Turn Type	Perm	NA			NA			NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4									6		6
Actuated Green, G (s)		62.1			62.1			47.9			47.9	47.9
Effective Green, g (s)		62.1			62.1			47.9			47.9	47.9
Actuated g/C Ratio		0.52			0.52			0.40			0.40	0.40
Clearance Time (s)		5.0			5.0			5.0			5.0	5.0
Vehicle Extension (s)		3.0			3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		2805			1623			1285			891	425
v/s Ratio Prot					0.32			0.17				
v/s Ratio Perm		c0.40									c0.25	0.08
v/c Ratio		0.78			0.62			0.43			0.62	0.20
Uniform Delay, d1		23.4			20.6			26.1			28.8	23.5
Progression Factor		1.00			0.57			1.00			1.00	1.00
Incremental Delay, d2		1.4			0.6			1.1			3.3	1.0
Delay (s)		24.8			12.4			27.2			32.1	24.5
Level of Service		C			B			C			C	C
Approach Delay (s)		24.8			12.4			27.2			31.0	
Approach LOS		C			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	23.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	120.3%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Yield			Stop			Stop			Stop	
Volume (vph)	159	15	172	11	95	190	98	202	24	83	364	95
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	171	16	185	12	102	204	105	217	26	89	391	102

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	372	318	348	583
Volume Left (vph)	171	12	105	89
Volume Right (vph)	185	204	26	102
Hadj (s)	-0.14	-0.31	0.08	-0.01
Departure Headway (s)	8.4	8.6	8.7	8.5
Degree Utilization, x	0.87	0.76	0.84	1.00
Capacity (veh/h)	416	401	397	583
Control Delay (s)	47.1	33.6	44.1	73.1
Approach Delay (s)	47.1	33.6	44.1	73.1
Approach LOS	E	D	E	F

Intersection Summary			
Delay	53.2		
Level of Service	F		
Intersection Capacity Utilization	90.1%	ICU Level of Service	E
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1865	225	0	1009	0	807
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0			5.0		5.0
Lane Util. Factor	0.86			0.95		0.64
Frpb, ped/bikes	0.99			1.00		1.00
Flpb, ped/bikes	1.00			1.00		1.00
Frt	0.98			1.00		0.85
Flt Protected	1.00			1.00		1.00
Satd. Flow (prot)	6253			3539		4053
Flt Permitted	1.00			1.00		1.00
Satd. Flow (perm)	6253			3539		4053
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	1923	232	0	1040	0	832
RTOR Reduction (vph)	19	0	0	0	0	10
Lane Group Flow (vph)	2136	0	0	1040	0	822
Confl. Peds. (#/hr)		67	67			
Turn Type	NA			NA		Prot
Protected Phases	4			8		2
Permitted Phases						
Actuated Green, G (s)	61.7			61.7		48.3
Effective Green, g (s)	61.7			61.7		48.3
Actuated g/C Ratio	0.51			0.51		0.40
Clearance Time (s)	5.0			5.0		5.0
Vehicle Extension (s)	3.0			3.0		3.0
Lane Grp Cap (vph)	3215			1819		1631
v/s Ratio Prot	c0.34			0.29		c0.20
v/s Ratio Perm						
v/c Ratio	0.66			0.57		0.50
Uniform Delay, d1	21.5			20.1		26.9
Progression Factor	0.38			1.00		0.07
Incremental Delay, d2	0.3			0.4		1.1
Delay (s)	8.6			20.5		2.9
Level of Service	A			C		A
Approach Delay (s)	8.6			20.5	2.9	
Approach LOS	A			C	A	

Intersection Summary			
HCM 2000 Control Delay	10.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	53.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	68	37	847	33	18	282
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0		5.0	5.0
Lane Util. Factor	0.97		0.91		1.00	0.95
Frpb, ped/bikes	0.95		0.99		1.00	1.00
Flpb, ped/bikes	1.00		1.00		1.00	1.00
Frt	0.95		0.99		1.00	1.00
Flt Protected	0.97		1.00		0.95	1.00
Satd. Flow (prot)	3116		4979		1746	3505
Flt Permitted	0.97		1.00		0.17	1.00
Satd. Flow (perm)	3116		4979		315	3505
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	72	39	892	35	19	297
RTOR Reduction (vph)	16	0	5	0	0	0
Lane Group Flow (vph)	95	0	922	0	19	297
Confl. Peds. (#/hr)		106		67	67	
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Prot		NA		pm+pt	NA
Protected Phases	2		4		3	8
Permitted Phases					8	
Actuated Green, G (s)	71.0		31.8		39.0	39.0
Effective Green, g (s)	71.0		31.8		39.0	39.0
Actuated g/C Ratio	0.59		0.27		0.32	0.32
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)	1843		1319		128	1139
v/s Ratio Prot	c0.03		c0.19		0.00	c0.08
v/s Ratio Perm					0.05	
v/c Ratio	0.05		0.70		0.15	0.26
Uniform Delay, d1	10.3		39.8		40.2	29.9
Progression Factor	1.00		1.00		1.26	1.09
Incremental Delay, d2	0.1		1.6		0.5	0.1
Delay (s)	10.4		41.4		51.4	32.6
Level of Service	B		D		D	C
Approach Delay (s)	10.4		41.4			33.8
Approach LOS	B		D			C

Intersection Summary			
HCM 2000 Control Delay	37.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	55.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	124	169	884	318	57
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	135	184	961	346	62
Pedestrians	260			260		
Lane Width (ft)	12.0			12.0		
Walking Speed (ft/s)	3.5			3.5		
Percent Blockage	25			25		
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					114	
pX, platoon unblocked	0.94	0.94	0.94			
vC, conflicting volume	1324	724	668			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1216	577	517			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	45	75			
cM capacity (veh/h)	93	246	743			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2
Volume Total	135	184	320	320	320	230	177
Volume Left	0	184	0	0	0	0	0
Volume Right	135	0	0	0	0	0	62
cSH	246	743	1700	1700	1700	1700	1700
Volume to Capacity	0.55	0.25	0.19	0.19	0.19	0.14	0.10
Queue Length 95th (ft)	75	24	0	0	0	0	0
Control Delay (s)	36.1	11.4	0.0	0.0	0.0	0.0	0.0
Lane LOS	E	B					
Approach Delay (s)	36.1	1.8				0.0	
Approach LOS	E						

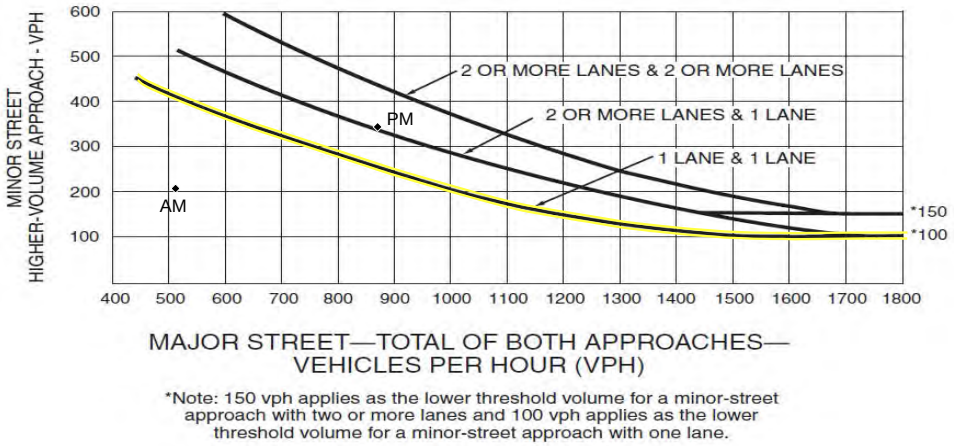
Intersection Summary			
Average Delay	4.1		
Intersection Capacity Utilization	46.0%	ICU Level of Service	A
Analysis Period (min)	15		

Traffic Signal Warrants - Future (2017) Without Project
Mahukona St. and Kona St.

Peak Hour Warrant - Figure 4C-3

Major/Minor Roads	Approach Type	# of Lanes	AM Volume	Pass?	Mid Volume	Pass?	PM Volume	Pass?	Pass?
Mahukona St. /	Major	1	509	No		N/A	866	Yes	No
Kona St.	Minor	1	209				346		

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *MUTCD, 2009.*

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	84	0	63	22	88	99	59	123	19	33	176	99
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			1.00			1.00			1.00	
Frpb, ped/bikes		0.96			0.96			0.99			0.96	
Flpb, ped/bikes		0.97			0.99			0.99			0.99	
Frt		0.94			0.94			0.99			0.96	
Flt Protected		0.97			0.99			0.99			0.99	
Satd. Flow (prot)		1525			1601			1706			1616	
Flt Permitted		0.80			0.94			0.83			0.95	
Satd. Flow (perm)		1257			1515			1438			1545	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	88	0	66	23	93	104	62	129	20	35	185	104
RTOR Reduction (vph)	0	51	0	0	80	0	0	7	0	0	32	0
Lane Group Flow (vph)	0	103	0	0	140	0	0	204	0	0	292	0
Confl. Peds. (#/hr)	136		93	73		122	87		73	122		136
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		7.2			7.2			14.5			14.5	
Effective Green, g (s)		7.2			7.2			14.5			14.5	
Actuated g/C Ratio		0.23			0.23			0.46			0.46	
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)		285			344			657			706	
v/s Ratio Prot												
v/s Ratio Perm		0.08			c0.09			0.14			c0.19	
v/c Ratio		0.36			0.41			0.31			0.41	
Uniform Delay, d1		10.3			10.4			5.4			5.8	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.8			0.8			0.3			0.4	
Delay (s)		11.1			11.2			5.7			6.1	
Level of Service		B			B			A			A	
Approach Delay (s)		11.1			11.2			5.7			6.1	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	31.7	Sum of lost time (s)	10.0
Intersection Capacity Utilization	64.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	159	15	172	11	95	190	98	202	24	83	364	95
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			1.00			1.00			1.00	
Frpb, ped/bikes		0.93			0.88			0.98			0.96	
Flpb, ped/bikes		0.96			1.00			0.99			0.97	
Frt		0.93			0.91			0.99			0.98	
Flt Protected		0.98			1.00			0.99			0.99	
Satd. Flow (prot)		1487			1461			1728			1652	
Flt Permitted		0.70			0.98			0.73			0.89	
Satd. Flow (perm)		1057			1434			1281			1489	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	171	16	185	12	102	204	105	217	26	89	391	102
RTOR Reduction (vph)	0	73	0	0	132	0	0	6	0	0	15	0
Lane Group Flow (vph)	0	299	0	0	186	0	0	342	0	0	567	0
Confl. Peds. (#/hr)	178		103	155		230	103		155	230		178
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		16.0			16.0			20.3			20.3	
Effective Green, g (s)		16.0			16.0			20.3			20.3	
Actuated g/C Ratio		0.35			0.35			0.44			0.44	
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)		365			495			561			652	
v/s Ratio Prot												
v/s Ratio Perm		c0.28			0.13			0.27			c0.38	
v/c Ratio		0.82			0.38			0.61			0.87	
Uniform Delay, d1		13.8			11.4			10.0			11.8	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		13.7			0.5			2.0			11.9	
Delay (s)		27.5			11.9			11.9			23.7	
Level of Service		C			B			B			C	
Approach Delay (s)		27.5			11.9			11.9			23.7	
Approach LOS		C			B			B			C	

Intersection Summary			
HCM 2000 Control Delay	19.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	46.3	Sum of lost time (s)	10.0
Intersection Capacity Utilization	92.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

APPENDIX E

Analysis Report

Future (2017) With Project Conditions

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	555	141	0	1935	136	62	202	55	52	153	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0			5.0	5.0
Lane Util. Factor		0.95			0.86			0.95			0.95	1.00
Frpb, ped/bikes		0.92			0.98			0.96			1.00	0.83
Flpb, ped/bikes		1.00			1.00			0.98			0.97	1.00
Frt		0.97			0.99			0.97			1.00	0.85
Flt Protected		1.00			1.00			0.99			0.99	1.00
Satd. Flow (prot)		3096			6112			3146			3322	1284
Flt Permitted		1.00			1.00			0.83			0.78	1.00
Satd. Flow (perm)		3096			6112			2642			2629	1284
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	0	624	158	0	2174	153	70	227	62	58	172	78
RTOR Reduction (vph)	0	20	0	0	9	0	0	14	0	0	0	12
Lane Group Flow (vph)	0	762	0	0	2318	0	0	345	0	0	230	66
Confl. Peds. (#/hr)	197		154	154		197	137		197	197		137
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type		NA			NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases				8			2			6		6
Actuated Green, G (s)		66.7			66.7			43.3			43.3	43.3
Effective Green, g (s)		66.7			66.7			43.3			43.3	43.3
Actuated g/C Ratio		0.56			0.56			0.36			0.36	0.36
Clearance Time (s)		5.0			5.0			5.0			5.0	5.0
Vehicle Extension (s)		3.0			3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		1720			3397			953			948	463
v/s Ratio Prot		0.25			c0.38							
v/s Ratio Perm								c0.13			0.09	0.05
v/c Ratio		0.44			0.68			0.36			0.24	0.14
Uniform Delay, d1		15.7			19.1			28.2			26.9	25.9
Progression Factor		1.00			0.99			1.00			1.00	1.00
Incremental Delay, d2		0.2			0.4			1.1			0.6	0.7
Delay (s)		15.9			19.2			29.3			27.5	26.5
Level of Service		B			B			C			C	C
Approach Delay (s)		15.9			19.2			29.3			27.2	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	20.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	95.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Yield			Stop			Stop			Stop	
Volume (vph)	85	0	63	22	114	115	59	123	19	33	176	99
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	89	0	66	23	120	121	62	129	20	35	185	104

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	156	264	212	324
Volume Left (vph)	89	23	62	35
Volume Right (vph)	66	121	20	104
Hadj (s)	-0.04	-0.16	0.10	-0.07
Departure Headway (s)	5.9	5.6	5.8	5.4
Degree Utilization, x	0.26	0.41	0.34	0.49
Capacity (veh/h)	528	589	559	618
Control Delay (s)	10.9	12.4	11.8	13.6
Approach Delay (s)	10.9	12.4	11.8	13.6
Approach LOS	B	B	B	B

Intersection Summary			
Delay	12.4		
Level of Service	B		
Intersection Capacity Utilization	63.7%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	573	153	1103	2083	0	349
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0	5.0		5.0
Lane Util. Factor	0.95		0.86	0.86		0.76
Frpb, ped/bikes	0.99		1.00	1.00		1.00
Flpb, ped/bikes	1.00		1.00	1.00		1.00
Frt	0.97		1.00	1.00		0.85
Flt Protected	1.00		0.95	0.99		1.00
Satd. Flow (prot)	3351		1504	4706		3575
Flt Permitted	1.00		0.23	0.65		1.00
Satd. Flow (perm)	3351		358	3108		3575
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	623	166	1199	2264	0	379
RTOR Reduction (vph)	22	0	0	0	0	172
Lane Group Flow (vph)	767	0	647	2816	0	207
Confl. Peds. (#/hr)		51	51			
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	NA		pm+pt	NA		pt+ov
Protected Phases	4		2 3	8		2 3
Permitted Phases			8			
Actuated Green, G (s)	51.8		115.0	115.0		58.2
Effective Green, g (s)	51.8		115.0	115.0		58.2
Actuated g/C Ratio	0.43		0.96	0.96		0.49
Clearance Time (s)	5.0			5.0		
Vehicle Extension (s)	3.0			3.0		
Lane Grp Cap (vph)	1446		898	3753		1733
v/s Ratio Prot	0.23		0.35	c0.36		0.06
v/s Ratio Perm			0.34	c0.36		
v/c Ratio	0.53		0.72	0.75		0.12
Uniform Delay, d1	25.1		12.8	0.4		16.9
Progression Factor	0.66		1.00	1.00		0.12
Incremental Delay, d2	0.4		2.9	0.9		0.0
Delay (s)	16.8		15.6	1.2		2.0
Level of Service	B		B	A		A
Approach Delay (s)	16.8			3.9	2.0	
Approach LOS	B			A	A	

Intersection Summary			
HCM 2000 Control Delay	6.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	84.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	50	35	344	16	42	1213
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0		5.0	5.0
Lane Util. Factor	0.97		0.95		1.00	0.95
Frpb, ped/bikes	0.96		0.99		1.00	1.00
Flpb, ped/bikes	1.00		1.00		0.94	1.00
Frt	0.94		0.99		1.00	1.00
Flt Protected	0.97		1.00		0.95	1.00
Satd. Flow (prot)	3126		3431		1644	3505
Flt Permitted	0.97		1.00		0.44	1.00
Satd. Flow (perm)	3126		3431		769	3505
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	55	38	378	18	46	1333
RTOR Reduction (vph)	24	0	4	0	0	0
Lane Group Flow (vph)	69	0	392	0	46	1333
Confl. Peds. (#/hr)		72		151	151	
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Prot		NA		pm+pt	NA
Protected Phases	2		4		3	8
Permitted Phases					8	
Actuated Green, G (s)	44.8		54.7		65.2	65.2
Effective Green, g (s)	44.8		54.7		65.2	65.2
Actuated g/C Ratio	0.37		0.46		0.54	0.54
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)	1167		1563		457	1904
v/s Ratio Prot	c0.02		0.11		0.00	c0.38
v/s Ratio Perm					0.05	
v/c Ratio	0.06		0.25		0.10	0.70
Uniform Delay, d1	24.1		20.1		13.2	20.2
Progression Factor	1.00		1.00		0.97	0.93
Incremental Delay, d2	0.1		0.1		0.1	0.8
Delay (s)	24.2		20.1		12.8	19.5
Level of Service	C		C		B	B
Approach Delay (s)	24.2		20.1			19.3
Approach LOS	C		C			B

Intersection Summary			
HCM 2000 Control Delay	19.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	65.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	70	94	356	1146	177
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	74	99	375	1206	186
Pedestrians	91			91		
Lane Width (ft)	12.0			12.0		
Walking Speed (ft/s)	3.5			3.5		
Percent Blockage	9			9		
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					114	
pX, platoon unblocked	0.72	0.72	0.72			
vC, conflicting volume	1713	878	1484			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1205	40	884			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	88	80			
cM capacity (veh/h)	94	614	502			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2
Volume Total	74	99	125	125	125	804	588
Volume Left	0	99	0	0	0	0	0
Volume Right	74	0	0	0	0	0	186
cSH	614	502	1700	1700	1700	1700	1700
Volume to Capacity	0.12	0.20	0.07	0.07	0.07	0.47	0.35
Queue Length 95th (ft)	10	18	0	0	0	0	0
Control Delay (s)	11.7	13.9	0.0	0.0	0.0	0.0	0.0
Lane LOS	B	B					
Approach Delay (s)	11.7	2.9				0.0	
Approach LOS	B						

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	66.1%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	36	1982	100	0	736	235	0	425	111	155	416	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0			5.0	5.0
Lane Util. Factor		0.86			0.95			0.95			0.95	1.00
Frpb, ped/bikes		0.97			0.92			0.93			1.00	0.67
Flpb, ped/bikes		1.00			1.00			1.00			0.97	1.00
Frt		0.99			0.96			0.97			1.00	0.85
Flt Protected		1.00			1.00			1.00			0.99	1.00
Satd. Flow (prot)		6185			3138			3202			3375	1065
Flt Permitted		0.87			1.00			1.00			0.62	1.00
Satd. Flow (perm)		5400			3138			3202			2136	1065
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	38	2086	105	0	775	247	0	447	117	163	438	100
RTOR Reduction (vph)	0	6	0	0	13	0	0	1	0	0	0	15
Lane Group Flow (vph)	0	2223	0	0	1009	0	0	563	0	0	601	85
Confl. Peds. (#/hr)	320		299	299		320	341		337	337		341
Turn Type	Perm	NA			NA			NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4									6		6
Actuated Green, G (s)		60.6			60.6			49.4			49.4	49.4
Effective Green, g (s)		60.6			60.6			49.4			49.4	49.4
Actuated g/C Ratio		0.51			0.51			0.41			0.41	0.41
Clearance Time (s)		5.0			5.0			5.0			5.0	5.0
Vehicle Extension (s)		3.0			3.0			3.0			3.0	3.0
Lane Grp Cap (vph)		2727			1584			1318			879	438
v/s Ratio Prot					0.32			0.18				
v/s Ratio Perm		c0.41									c0.28	0.08
v/c Ratio		0.82			0.64			0.43			0.68	0.19
Uniform Delay, d1		25.0			21.7			25.2			28.9	22.6
Progression Factor		1.00			0.56			1.00			1.00	1.00
Incremental Delay, d2		2.0			0.7			1.0			4.3	1.0
Delay (s)		27.0			12.9			26.2			33.2	23.6
Level of Service		C			B			C			C	C
Approach Delay (s)		27.0			12.9			26.2			31.8	
Approach LOS		C			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	24.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	120.8%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Yield			Stop			Stop			Stop	
Volume (vph)	165	15	172	11	110	194	98	202	24	87	364	95
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	177	16	185	12	118	209	105	217	26	94	391	102

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	378	339	348	587
Volume Left (vph)	177	12	105	94
Volume Right (vph)	185	209	26	102
Hadj (s)	-0.13	-0.29	0.08	0.00
Departure Headway (s)	8.7	8.7	9.0	8.8
Degree Utilization, x	0.91	0.82	0.87	1.00
Capacity (veh/h)	408	399	388	587
Control Delay (s)	54.4	40.9	48.7	74.5
Approach Delay (s)	54.4	40.9	48.7	74.5
Approach LOS	F	E	E	F

Intersection Summary			
Delay	57.6		
Level of Service	F		
Intersection Capacity Utilization	91.6%	ICU Level of Service	F
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1890	252	0	1011	0	807
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0			5.0		5.0
Lane Util. Factor	0.86			0.95		0.64
Frpb, ped/bikes	0.99			1.00		1.00
Flpb, ped/bikes	1.00			1.00		1.00
Frt	0.98			1.00		0.85
Flt Protected	1.00			1.00		1.00
Satd. Flow (prot)	6238			3539		4053
Flt Permitted	1.00			1.00		1.00
Satd. Flow (perm)	6238			3539		4053
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	1948	260	0	1042	0	832
RTOR Reduction (vph)	21	0	0	0	0	9
Lane Group Flow (vph)	2187	0	0	1042	0	823
Confl. Peds. (#/hr)		67	67			
Turn Type	NA			NA		Prot
Protected Phases	4			8		2
Permitted Phases						
Actuated Green, G (s)	62.8			62.8		47.2
Effective Green, g (s)	62.8			62.8		47.2
Actuated g/C Ratio	0.52			0.52		0.39
Clearance Time (s)	5.0			5.0		5.0
Vehicle Extension (s)	3.0			3.0		3.0
Lane Grp Cap (vph)	3264			1852		1594
v/s Ratio Prot	c0.35			0.29		c0.20
v/s Ratio Perm						
v/c Ratio	0.67			0.56		0.52
Uniform Delay, d1	21.0			19.3		27.7
Progression Factor	0.40			1.00		0.07
Incremental Delay, d2	0.3			0.4		1.1
Delay (s)	8.7			19.7		3.0
Level of Service	A			B		A
Approach Delay (s)	8.7			19.7	3.0	
Approach LOS	A			B	A	

Intersection Summary			
HCM 2000 Control Delay	10.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	54.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	68	37	847	33	18	309
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0		5.0	5.0
Lane Util. Factor	0.97		0.91		1.00	0.95
Frpb, ped/bikes	0.95		0.99		1.00	1.00
Flpb, ped/bikes	1.00		1.00		1.00	1.00
Frt	0.95		0.99		1.00	1.00
Flt Protected	0.97		1.00		0.95	1.00
Satd. Flow (prot)	3116		4979		1746	3505
Flt Permitted	0.97		1.00		0.17	1.00
Satd. Flow (perm)	3116		4979		315	3505
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	72	39	892	35	19	325
RTOR Reduction (vph)	16	0	5	0	0	0
Lane Group Flow (vph)	95	0	922	0	19	325
Confl. Peds. (#/hr)		106		67	67	
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%
Turn Type	Prot		NA		pm+pt	NA
Protected Phases	2		4		3	8
Permitted Phases					8	
Actuated Green, G (s)	71.0		31.8		39.0	39.0
Effective Green, g (s)	71.0		31.8		39.0	39.0
Actuated g/C Ratio	0.59		0.27		0.32	0.32
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)	1843		1319		128	1139
v/s Ratio Prot	c0.03		c0.19		0.00	c0.09
v/s Ratio Perm					0.05	
v/c Ratio	0.05		0.70		0.15	0.29
Uniform Delay, d1	10.3		39.8		40.2	30.1
Progression Factor	1.00		1.00		1.23	1.06
Incremental Delay, d2	0.1		1.6		0.5	0.1
Delay (s)	10.4		41.4		50.0	32.0
Level of Service	B		D		D	C
Approach Delay (s)	10.4		41.4			33.0
Approach LOS	B		D			C

Intersection Summary			
HCM 2000 Control Delay	36.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	55.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	125	169	884	330	72
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	136	184	961	359	78
Pedestrians	260			260		
Lane Width (ft)	12.0			12.0		
Walking Speed (ft/s)	3.5			3.5		
Percent Blockage	25			25		
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					114	
pX, platoon unblocked	0.93	0.93	0.93			
vC, conflicting volume	1346	738	697			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1226	576	531			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	44	75			
cM capacity (veh/h)	90	245	729			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2
Volume Total	136	184	320	320	320	239	198
Volume Left	0	184	0	0	0	0	0
Volume Right	136	0	0	0	0	0	78
cSH	245	729	1700	1700	1700	1700	1700
Volume to Capacity	0.56	0.25	0.19	0.19	0.19	0.14	0.12
Queue Length 95th (ft)	77	25	0	0	0	0	0
Control Delay (s)	36.7	11.6	0.0	0.0	0.0	0.0	0.0
Lane LOS	E	B					
Approach Delay (s)	36.7	1.9				0.0	
Approach LOS	E						

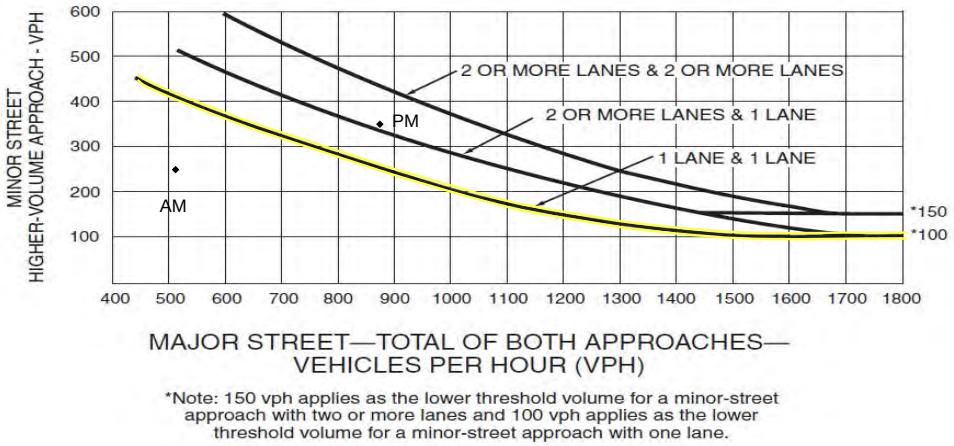
Intersection Summary			
Average Delay	4.1		
Intersection Capacity Utilization	46.0%	ICU Level of Service	A
Analysis Period (min)	15		

Traffic Signal Warrants - Future (2017) With Project
Mahukona St. and Kona St.

Peak Hour Warrant - Figure 4C-3

Major/Minor Roads	Approach Type	# of Lanes	AM Volume	Pass?	Mid Volume	Pass?	PM Volume	Pass?	Pass?
Mahukona St. /	Major	1	509	No		N/A	870	Yes	No
Kona St.	Minor	1	251				352		

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *MUTCD, 2009.*

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	85	0	63	22	114	115	59	123	19	33	176	99
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			1.00			1.00			1.00	
Frpb, ped/bikes		0.96			0.96			0.99			0.95	
Flpb, ped/bikes		0.97			1.00			0.99			0.99	
Frt		0.94			0.94			0.99			0.96	
Flt Protected		0.97			1.00			0.99			0.99	
Satd. Flow (prot)		1524			1606			1705			1612	
Flt Permitted		0.75			0.96			0.82			0.95	
Satd. Flow (perm)		1178			1548			1424			1537	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	89	0	66	23	120	121	62	129	20	35	185	104
RTOR Reduction (vph)	0	46	0	0	69	0	0	8	0	0	35	0
Lane Group Flow (vph)	0	109	0	0	195	0	0	203	0	0	289	0
Confl. Peds. (#/hr)	136		93	73		122	87		73	122		136
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		9.9			9.9			13.5			13.5	
Effective Green, g (s)		9.9			9.9			13.5			13.5	
Actuated g/C Ratio		0.30			0.30			0.40			0.40	
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)		349			458			575			621	
v/s Ratio Prot												
v/s Ratio Perm		0.09			c0.13			0.14			c0.19	
v/c Ratio		0.31			0.43			0.35			0.47	
Uniform Delay, d1		9.1			9.5			6.9			7.3	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.5			0.6			0.4			0.6	
Delay (s)		9.6			10.1			7.3			7.9	
Level of Service		A			B			A			A	
Approach Delay (s)		9.6			10.1			7.3			7.9	
Approach LOS		A			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	33.4	Sum of lost time (s)	10.0
Intersection Capacity Utilization	67.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	165	15	172	11	110	194	98	202	24	87	364	95
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			1.00			1.00			1.00	
Frpb, ped/bikes		0.93			0.88			0.98			0.96	
Flpb, ped/bikes		0.96			1.00			0.99			0.97	
Frt		0.93			0.92			0.99			0.98	
Flt Protected		0.98			1.00			0.99			0.99	
Satd. Flow (prot)		1488			1471			1728			1648	
Flt Permitted		0.67			0.98			0.72			0.89	
Satd. Flow (perm)		1023			1446			1270			1482	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	177	16	185	12	118	209	105	217	26	94	391	102
RTOR Reduction (vph)	0	70	0	0	117	0	0	6	0	0	15	0
Lane Group Flow (vph)	0	308	0	0	222	0	0	342	0	0	572	0
Confl. Peds. (#/hr)	178		103	155		230	103		155	230		178
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		16.7			16.7			20.5			20.5	
Effective Green, g (s)		16.7			16.7			20.5			20.5	
Actuated g/C Ratio		0.35			0.35			0.43			0.43	
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)		361			511			551			643	
v/s Ratio Prot												
v/s Ratio Perm		c0.30			0.15			0.27			c0.39	
v/c Ratio		0.85			0.43			0.62			0.89	
Uniform Delay, d1		14.1			11.6			10.3			12.3	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		17.5			0.6			2.2			14.1	
Delay (s)		31.6			12.2			12.5			26.4	
Level of Service		C			B			B			C	
Approach Delay (s)		31.6			12.2			12.5			26.4	
Approach LOS		C			B			B			C	

Intersection Summary			
HCM 2000 Control Delay	21.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	47.2	Sum of lost time (s)	10.0
Intersection Capacity Utilization	94.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

H. PRELIMINARY ENGINEERING REPORT

PRELIMINARY ENGINEERING REPORT

for

SAMKOO PACIFIC CONDOMINIUM

HONOLULU, OAHU, HAWAII 96814

TMK: 2-3-041:006 and TMK: 2-3-041:009

Submitted By

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Statement of SSFM International, Inc.'s Quality Process

It is the policy of SSFM to have a consistent and systematic approach to the development and review of its reports and other project deliverables.

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- Clarity, completeness, coordination, and accuracy of documents.
- That the project, study or investigation meets the Client's objectives.
- That the requirements of our Agreement with the Client have been met, and the Client has received the value of the fee to be paid.

The Preparation of This Report Was The Responsibility Of and Completed By:

Signature

January 27, 2015
Date

The Quality Review of This Report Was The Responsibility Of and Completed By:

Signature

January 27, 2015
Date

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INTRODUCTION

SamKoo Pacific, LLC is proposing a residential and commercial condominium development in Honolulu, Oahu. The development, known as SamKoo Pacific Condominium ("Kapiolani residence"), will occupy approximately 1.3 acres (56,250 sq. ft.) on TMK: 2-3-041:006 and TMK: 2-3-041:009 (1637 Kapiolani Boulevard and 1631 Kapiolani Boulevard, respectively). The Kapiolani residence site is bordered to the north by Kapiolani Boulevard, to the south by Kona Street and Ala Moana Shopping Center, and by the adjacent property TMK: 2-3-041:011 to the west of the TMK: 2-3-041:009 property and TMK: 2-3-041:004 to east of the TMK: 2-3-041:006 property (see Figure 1).

The objectives of this preliminary engineering investigation are to present information on infrastructure requirements for the proposed SamKoo Pacific Condominium development. Specifically, this report will address:

1. Background information on the proposed project;
2. Existing conditions;
3. Modifications after development; and
4. Potential impacts due to development and proposed mitigated measures

I. BACKGROUND

LAND USE AND ZONING

The proposed project site is currently designated as BMX-3 for both properties, Floor Area Ratio (FAR) 3.5 Community Business Mixed Use under the City and County of Honolulu's Land Use Ordinance (LUO) zoning code with a maximum building height of 350 ft. The project adjacent lots will proceed with a Joint Development Agreement (JDA).

FLOOD ZONE

The project's site location has been designated to be within flood zones X under the Federal Emergency Management Agency (FEMA). The FEMA Flood Insurance Rate Map (FIRM) for the site is shown in Figure 2, release date January 19, 2011, Map 15003C0310G. Development of the project site must meet floodplain regulations of the City and County of Honolulu as those regulations were approved by FEMA for the National Flood Insurance Program.

Zone X corresponds to the flood to areas outside the 1% annual chance floodplain, areas of 1% annual chance sheet flow flooding where average depths are less than 1 ft., areas of 1% annual chance stream flooding where the contributing drainage area is less than 1 square mile, or areas protected from the 1% annual chance flood by levees. No Base Flood Elevations or depths are shown within this zone.

EXISTING USES

TMK: 2-3-041:006 (1637 Kapiolani Boulevard)
The project site is presently developed and is composed of a two story Commercial Building which tenants include SamKoo LLC office, Hime Restaurant, Kiki After Hours Bar, Waikiki Auto, Beautiful Days, Yakikniku Korea House restaurant, and an asphalt pavement parking lot. These establishments are currently under lease. A map showing the establishments described above are shown in Figure 3.

There are two (2) existing driveways to property; a one-way entrance on Kapiolani Boulevard and a one-way exit Kona Street.

TMK: 2-3-041:009 (1631 Kapiolani Boulevard)
The project site is presently an asphalt paved parking lot, with a Pro Wash car wash business. A map showing the establishments described above are shown in Figure 3.

Food/Lunch wagons (privately operated) are also located on leased property of the project site.

There are three (3) existing driveways to the parking lot; one (1) along Kapiolani Boulevard and two (2) along Kona Street.

CLIMATE

The project site is located in the Metro Oahu region. The climate is relatively warm and dry. Trade winds from the northeast occur much of the time, with occasional Kona winds. The normal temperature range for the region varies from the high 60's (degrees Fahrenheit) to the low 90's. Rainfall is light, with mean annual rainfall of about 28 inches in Honolulu.

TOPOGRAPHIC FEATURES

The project site ranges from about 5.1 to 7.1 feet mean sea level (MSL) elevation per the Hawaii state plane coordinate grid system, Zone III with the North American Datum of 83 high accuracy reference network.

SOILS

The soil type within the project site is identified in the U.S. Department of Agriculture, Soil Conservation Service Survey as Fill Land, mixed (FL) and is depicted on Figure 4. This type of soil occurs mostly near Pearl Harbor and the Honolulu areas adjacent to the ocean. It consists of areas filled with material dredged from the ocean or hauled from nearby areas and general materials from several other sources. This type of land type is used for urban development including airports, housing areas, and industrial facilities.

II. DRAINAGE

EXISTING CONDITIONS

The project site occupies approximately 1.3 acres (56,250 sq. ft.). In the existing condition of the project site, the storm water runoff sheet flows across the asphalt pavement towards Kapiolani Boulevard and Kona Street and is intercepted by an existing catch basin east of the property, entering the existing storm drainage system. Storm water runoff from the property also flows towards Kona Street where it flows into a catch basin across Kona Street and enters the storm drainage system. There are no drainage structures, such as drain inlets or manholes, on the subject properties. Preliminary as-built research indicates all runoff from the site is conveyed via a network of existing concrete box drains along Kapiolani Avenue and Kona Street, to an existing 36-in drain line along Atkinson Drive, going to an underground line at Kahakai Drive to the final discharge point at Ala Wai Canal.

Ultimately the storm water drains into the Ala Wai Canal which is a 2-mile-long man-made waterway constructed in the 1920's to drain extensive wetlands in order to allow development of the Waikiki area on the island of Oahu.

MODIFICATIONS AFTER DEVELOPMENT

There will be drainage improvements within the project site to accommodate the proposed development. However, storm water runoff is not expected to increase due to construction of the SamKoo Pacific Condominium structure. The project is anticipated to reduce the amount of impervious surface at the project site with the planned landscaped areas. Where possible, there will be mitigation measures considered using natural runoff control such as bio-infiltration areas along with the landscaping treatments. Storm water quality features will be finalized as necessary during the design phase to satisfy agency requirements.

It is anticipated that wherever possible the project will continue to sheet flow into the Kapiolani Boulevard and Kona Street existing catch basins. There is an existing 10’ wide storm drain easement adjacent to property TMK: 3-2-41:06 on the east side, where a 60” storm drain line is located. Drainage structures, such as drain inlets will be placed in areas within the property where runoff flows will not be able to sheet flow following existing patterns. These inlets will be a network that will connect and discharge to the existing storm drainage system, with proper provisions to satisfy storm water quality requirements. Storm water from roof will be conveyed to the inlet network.

There will not be any drainage improvements outside of the project site as the proposed improvements should not alter nor impact the downstream system flows. A drainage analysis based on City and County of Honolulu standards will be developed during the design phase of this project.

IMPACTS AND MITIGATION

Impacts related to construction will be short term (approximately 1-2 years) and may include traffic disturbances, and inconveniences to motorists along Kapiolani Boulevard and Kona Street. These

short term impacts can be mitigated by limiting construction to off-peak traffic hours, implementing an approved traffic control plan, and coordinating construction with any other construction or events in the area. Generation of erosion, dust and noise due to construction operations will be mitigated by required compliance with the applicable Administrative Rules of the State Department of Health and further identified during the design and construction phases.

III. GRADING AND SOIL EROSION

GRADING

It is anticipated that the grading within the project site should be limited within the property boundary. The grading concept will be coordinated during the design phase of the project.

An effort to balance the earthwork quantities of cut and fill is expected to minimize the cost of purchasing offsite borrow material and disposing excess excavated material at an off-site location. Grading operations will be in conformance with the applicable ordinances of the City and County of Honolulu.

A detailed soil analysis will be performed as planning of the project proceeds. Mitigative measures, if required, will be recommended by the project's soils engineers as building design and final locations are further defined. Mitigative measures may include removal of unsuitable soils under foundations and/or special foundation design.

SOIL EROSION

The U.S. Department of Agriculture, Soil Conservation Service, uses the Universal Soil Loss Equation (USLE) to estimate long term average annual soil erosion losses from sheet and rill erosion. It is used to estimate erosion on forest land, farm fields, construction/development sites, and other areas. An assessment on the project site soil losses will be determined during the design and construction phases, however it is anticipated that it should not have a significant impact to surrounding areas.

IV. ROADS

EXISTING CONDITIONS

The project site is located along Kapiolani Boulevard and Kona Street. Kapiolani Boulevard, which is under the city's jurisdiction, borders the north side of the project and has the highest traffic volume of both aforementioned roadways. The existing (and original) Honolulu Authority for Rapid Transporation (HART) EIS had designated Kona Street on the Diamond Head (east) side of Nordstom as the alignment for the HART phase 2 rail project to the University of Hawaii. The privately owned Kona Street runs along the south side of the project and is adjacent to the Ala Moana shopping center. It is heavily traveled by City Buses between Pi'ikoi Street on the east and

Atkinson Drive on the west, it serves as the transfer location (beginning/end point) for many City Bus routes.

MODIFICATIONS AFTER DEVELOPMENT

Access to the project site is currently proposed from Kapiolani Boulevard and from Kona Street. It is anticipated that there will be no widening to any of any existing surrounding roadways. Entry location of driveway entry will be adjusted to new Kapiolani residence layout.

V. WATER

EXISTING CONDITIONS

The Board of Water Supply (BWS) system provides water service to the existing project sites; TMK: 2-3-041:006 and TMK: 2-3-041:009. Based on BWS system as-built plans, potable water service is currently provided by a 1-1/2-inch lateral (meter no. 06040357 and 01600528) connected to an existing 12-inch water main along Kapiolani Blvd for TMK: 2-3-041:009. Also, based on BWS system as-built plans, potable water service is currently provided by a 1-inch lateral (meter no. 98022298) connected to an existing 12-inch water main along Kapiolani Blvd for TMK: 2-3-041:009.

PROJECTED WATER DEMAND

The proposed project development will create additional water demands on the BWS system. Potable water demands will include service to the proposed residential/commercial development, fire protection and landscaping irrigation. A preliminary review of the existing system to adequately accommodate the proposed development has been coordinated with BWS based on the following water demand and consumption estimates.

Water demand estimates for this project are based upon BWS Water System Standards 2002 (BWS Standards) guidelines and should provide an adequate water consumption system. A domestic water connection for the proposed building, including landscape irrigation will be provided. The projected potable water average daily demand for the project based on BWS Domestic Consumption Guidelines is summarized below:

Land Use	*Sq. ft*	*GDP/sq.ft.*	*Average Daily Demand (GDP)*
Commercial/Residential Mix	728,884	120/1000 (0.12)	87,466.08
		Assume:	**0.1 MGD**

A fire service connection will also be provided for the building fire sprinklers. The projected fire flow, duration and hydrant spacing for the project based on BWS Fire Flow Requirements are summarized below:

Land Use	*Flow (gpm)/Duration (hrs.)/Fire Hydrant Spacing (ft.)*
High Rise Apartments	2000/2/250

Based on the average daily demand of 0.1 MGD on the island of Oahu, using BWS demand factor of 1.5, a maximum daily demand of 0.15 MGD is expected. The corresponding peak hour demand using BWS demand factor of 3 will be 0.3 MGD. The factors for maximum daily demand and peak hour demand are from Table 100-20 of the BWS Standard, and is directly applied to the calculated average daily demand. Per BWS guidelines, the capacity of the system shall deliver the maximum daily demand simultaneously with the required fire flow.

Note that these water system requirements were based on initial planning efforts and further coordination with BWS will be required during the design phase. Per BWS the existing water system is adequate to accommodate the proposed development. BWS has advised that the preliminary capacity analysis is based upon current data and therefore, BWS reserves the right to change any position or information provided during the preliminary design coordination until final approval of the building permit application. The final decision on the availability of water for domestic, fire, and irrigation demand will be confirmed when the building permit application is submitted for approval.

LANDSCAPING IRRIGATION

There will be landscaping in areas throughout the development. Approximate area of landscaping is 11,000 square feet mostly on the ground floor of the development. Irrigation for the development will practice water conservation measures. Other possible measures that may be considered are drought tolerant plants, xeriscape landscaping, efficient irrigations systems. The landscaping provided on the project site will require a permanent irrigation system which will be confirmed and coordinated with the landscape architect. A sub-meter to measure the actual volume of irrigation water will be placed on the property.

FIRE PROTECTION

The on-site fire protection requirements will be coordinated with the Fire Prevent Bureau of the Honolulu Fire Department. Fire requirements related to water consumption will include the construction of a connection lateral to the proposed building and associated occupied structures and includes the installation of a building fire sprinkler system to meet National Fire Protection Association (NFPA) requirements. There is an existing fire hydrant at the frontage of the two properties along Kapiolani Boulevard and an existing fire hydrant on Kona Street. These two fire hydrants will be able to serve the proposed development and meet fire hydrant location and servicing requirements per NFPA. Also, based on letter received from the Board of Water Supply dated October 9, 2014 it has been assessed that the existing system is adequate to accommodate the proposed development.

IMPACTS AND MITIGATION

The final decision on the availability of water will be confirmed when the building permit application is submitted for approval. When water is made available, the project development will be required to pay BWS water system facilities charges for resource development, transmission and daily storage.

VI. WASTEWATER

EXISTING CONDITIONS

An existing 6-inch gravity system lateral currently services the project site on TMK: 2-3-041: 006. The gravity system then connects to the existing 36-inch trunk sewer running parallel along Kapiolani Blvd. Similarly, an existing 6-inch gravity system lateral currently services the project site on TMK: 2-3-041: 009. The gravity system then connects to the existing 36-inch trunk sewer running parallel along Kapiolani Blvd, same as the TMK: 2-3-041: 006 property.
The system sewer lines ultimately transfer wastewater to the Sand Island Wastewater Treatment Facility where it is processed and discharged.

PROJECTED WASTEWATER FLOWS

Wastewater will be generated from the various facilities within the proposed development. Design and construction of the system will be in accordance with the City and County of Honolulu standards. Implementation of the proposed improvements is subject to approval from the City and County of Honolulu Department of Planning and Permitting (DPP). A sewer application for sewer connection (No. 2012/SCA-0658) has been submitted to DPP-Wastewater Branch and has been preliminary approved partially with the condition that all applicable WSFC credits shall be collected at the prevailing rate in accordance with Honolulu's revised ordinances (sewer connection pre-approval is under review by DPP-Wastewater). It is anticipated that DPP-Wastewater will revisit and reevaluate the capacity of the municipal sewerage system and treatment facility to handle the expected wastewater flow from the project site at the permit and construction phase of the project.

The estimated average wastewater design flow is based on estimated water use calculations and the City and County Sewer Standards. Preliminary contributions expected from the proposed facilities within the project are listed below.

Category	*Average Waste Water Flow Rate (GDP)*
Residential (485 units)	108,640
Commercial floors (1st)	489
Total:	108,905
Assume:	**0.11MGD**

For planning purposes, based on the information provided above and per City & County of Honolulu wastewater standards:

- Design Average Flow: 0.116 MGD
- Design Maximum Flow: 0.633 MGD
- Design Peak Flow: 0.633 MGD

These wastewater flow calculations are used in determining the required capacities for the development and to check if the existing system is adequate to accommodate the additional flows generated by the proposed project.
Additional information regarding methodology and terminology of the sewer design information provided above can be found in the *Design Standards of the Department of Wastewater Management Vol. I, City and County of Honolulu, July 1993 – Chapter 20, Design of Sewers.*

CONNECTION TO THE CITY WASTEWATER SYSTEM

SamKoo Pacific, LLC and SamKoo Hawaii, LLC (formerly Sam House Development, LLC) are part of a group of developers defined as "Kalakaua Relief Line, LLC" (also known as "HUI"), that had partnered together to build a 2000 foot long sewer line along Kalakaua Avenue to relieve the strain on the City's main on Kapiolani Blvd that was threatening to delay contemplated projects in the Ala Moana and Waikiki area. A Memorandum of Understanding and Agreement (MOUA) dated December 19, 2007, and amended September 22, 2011 was signed between Kalakaua Relief Line, LLC members and the City and County of Honolulu (C&CH) Department of Environmental Services (ENV) and Department of Permitting and Planning (DPP), Wastewater Branch. Under this agreement, Kalakaua Relief Line, LLC members' responsibility was to design and construct the sewer line based on plans and specifications approved by the City. And in return, the City has awarded the Kalakaua Relief Line, LLC members' sewer credits in the amount of the actual total construction costs of the sewer line under the MOUA, based upon the City's 2010-2011 Wastewater System Facility Charges. In October 2011, the City issued letters to each of the members confirming the number of sewer credits to be allocated and assigned to each member under MOUA. The following are the Wastewater System Facility Charge (WSFC) Credits allocations made to SamKoo members per the MOUA:

Member	*Total WSFC Credits or ESDU issued by C&CH (10/18/11)*
Sam House Development, LLC (TMK 2-3-039:011)	167.79
SamKoo Pacific, LLC (TMK 2-3-041:009)	128.13

All relevant information regarding the WSFC credits allocation and the actual signed MUOA memorandum and asscociated amendments has been provided in the appendix. Continuing coordination on the possibility of sharing WSFC credits between both properties is ongoing between the proposed development and DPP-Wastewater Branch.

Continuing coordination with DPP-Wastewater is currently ongoing regarding the MOUA and its allocation and use of WSFC credits. In discussions with DPP – Wastewater Branch, the sharing of sewer credits will be allowed being that SamKoo owns the credits and both projects and project parcels (SamKoo Hawaii TMK: 2-3- TMK: 2-3-041: 006 & TMK: 2-3-041: 009) discharge to the same treatment facility. Per DPP, they would like to have a letter from SamKoo to indicate specifically the designation of the ESDU (Equivalent single-family dwelling unit) credits between the parcels. It was also indicated that a minimum of one (1) ESDU credit would need to remain with either of the parcels and not all of the credits can be applied to either developments. Per MUOA it is stated that the credits cover both capacity (ESDU) and monetary credits (WSFC) in the amount contributed to the Kalakaua Avenue transmission line relief project. Coordination with DPP will be made during design to confirm that the proposed development will have necessary capacity per city to connect in regards to available credits owned by the developer, city and or by purchasing from other developers as needed. Coordination also will be made with DPP prior to the time of connection the amount of the connection WSFC charge minus the monetary credits allocated per the MUOA. Per the MUOA and the supplemental letters showing the allocated credits and monetary contributions for the "HUI" project, these monetary and capacity credits can be allocated to the SamKoo Pacific Condo project. There may be a remaining balanced owed to the City for connection. The project will need to submit a letter to the City from the "HUI" authorizing the transfer of the sewer capacity and credits to the project.

IMPACTS AND MITIGATION

The final decision and approval on the availability of sewer capacity will be confirmed when the building permit application is submitted for approval.

VII. SOLID WASTE

EXISTING CONDITIONS

A refuse service currently serves the present project site. The establishments currently under lease on the property generate solid wastes.

PROJECTED SOLID WASTE GENERATION

Solid waste will be generated by the project site during construction and post-construction.

During Construction
The construction wastes will primarily be made up of construction packing and materials, vegetation, pavement, rocks, and debris resulting from clearing the site prior to construction.

Post-Construction
It is anticipated that refuse generated by the proposed residential and commercial development will be collected by the City and County refuse collection service. Solid waste generation from the proposed development is estimated to be 2.92 tons/day based on an average per capita generation rate of 12 pounds/dwelling unit/day and 13 pounds/per 1000 square foot commercial/day from the residential and commercial areas within the site, this equates to approximately twenty-six (26) cubic yards per day. It is anticipated that garbage collection will be collected by the City and County of Honolulu.

IMPACTS AND MITIGATION

The proposed development will be an additional generator of solid waste. Generation of construction wastes due to clearing and construction activities of the site will be a short term impact and should not cause major impact to the existing landfills.

The City and County is currently operating a landfill site in Waimanalo Gulch and the H-POWER waste energy recovery facility on the leeward side of Oahu. It is understood that the City is currently exploring alternative means of handling solid waste as an ongoing city-wide concern.

VIII. ELECTRICAL AND TELECOM UTILITIES

PROJECT CONDITIONS

Electrical
National Electrical Code (NEC) load calculations for this project yields approximately 2500kVA, at 480Y/277 volts, 3-phase, 4-wire. The first floor will contain a Hawaiian Electric Company (HECo) vault sized for a new HECo primary padmount switchgear and a padmount transformer. Service location for connection to HECO's existing 25kV system will be determined by HECo. Empty primary concrete encased ductlines will be provided from the HECo service location to the HECo vault by the contractor. The 25kV primary cables will be provided by HECO. The ducts will terminate in a corner of the vault with cables pulled and laid on the floor terminating in the padmount switchgear. HECo will provide the 25kV primary padmount switchgear and pad mounted transformer. Primary conductors will be laid on the vault floor from the switchgear to the transformer. Secondary service conductors will be laid on the floor and will run from the transformer to the main switchboard. The HECo Vault will require a roll up door directly fronting the primary electrical equipment. The vault will also be provided with a personnel door. The main electrical room will be located adjacent to the HECo Vault and will contain the building's main service switchboard.

Telecom

The project will include telecommunication services for Telephone and CATV for both Residential and Common Areas. Service location for connection to Telecommunication service providers (Hawaiian Tel Com and Time Warner Oceanic) existing system will be determined by the service provider. Empty primary concrete encased ductlines will be provided from the service provider location to the Telcom room MDF by the contractor. Infrastructure such as conduit, raceways and pathways will be provided by the contractor to enable the support of the following services to both the residents and the operation of the building:

- Residential Services
  - Telephone service (traditionally from Hawaiian Telcom)
  - Cable TV access (CATV) (traditionally from Oceanic Time Warner, Dish or DirectTV).
  - Internet Access
- AOAO Services
  - Internal Telephone network and access to telephone service
  - Internal Data network
  - Internet Access
  - CATV Service
  - Security
    - CCTV
    - Access Control
  - Entry Phone
  - Parking Garage Access

IX. REFERENCES

1. Design Standards of the Department of Wastewater Management, Volume I, Department of Wastewater Management, City and County of Honolulu, Hawaii, July 1993

2. Water System Standards, Board of Water Supply, City and County of Honolulu, Hawaii 2002.

3. Rules Relating to Soil Erosion Standards and Guidelines, Department of Planning and Permitting, City and County of Honolulu, Honolulu, Hawaii, April 1999.

4. Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii. U.S. Department of Agriculture, Soil Conservation Service, August 1972.

TABLE OF FIGURES

FIGURE 1: Project Location Map

PROJECT LOCATION MAP

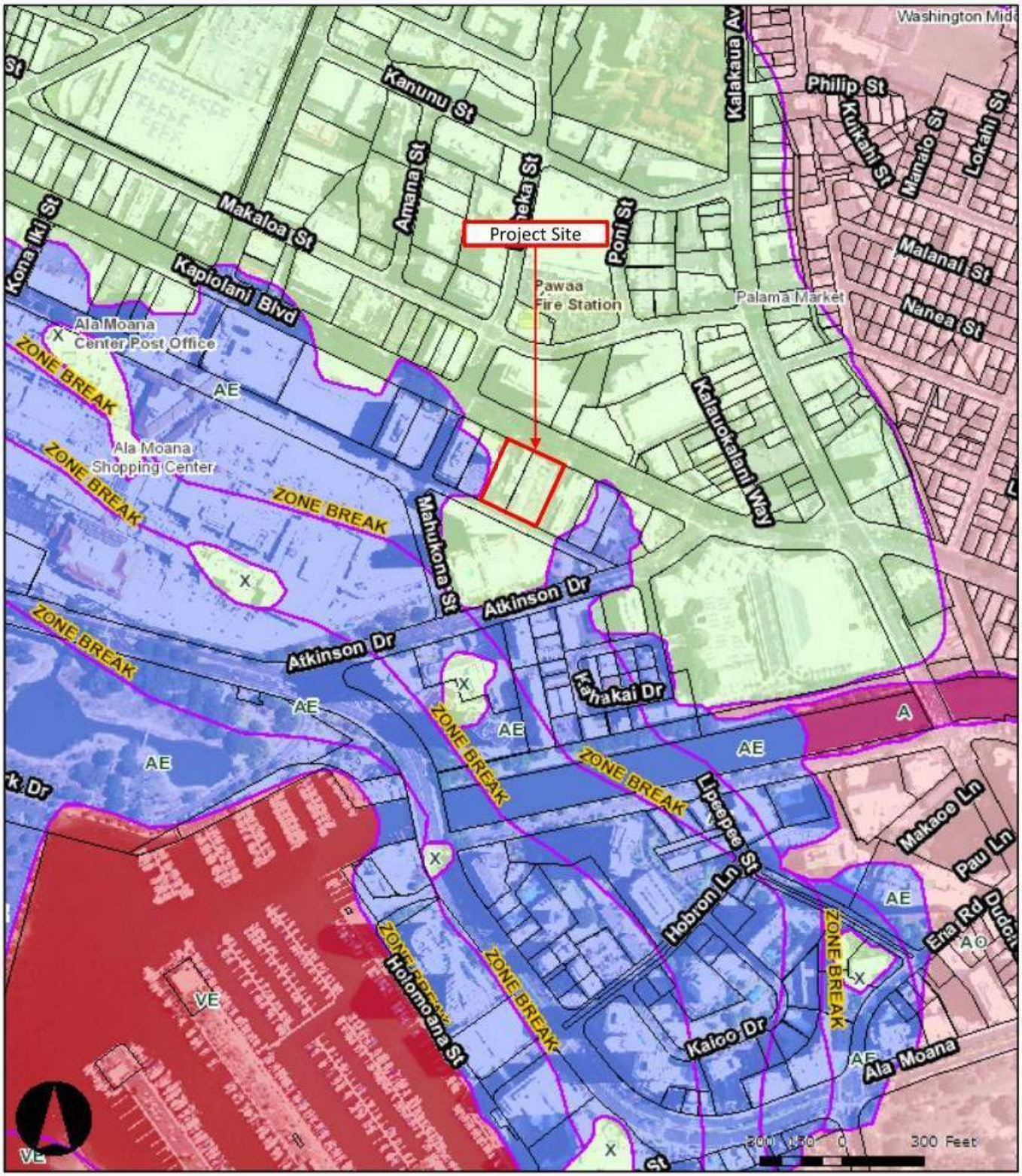
FIGURE 1

Preliminary Engineering Report For Samkoo Pacific Condominium
Samkoo Pacific, LLC.

Map Sources:
ESRI (Street Map)

SSFM INTERNATIONAL

FIGURE 2: Flood Insurance Rate Map

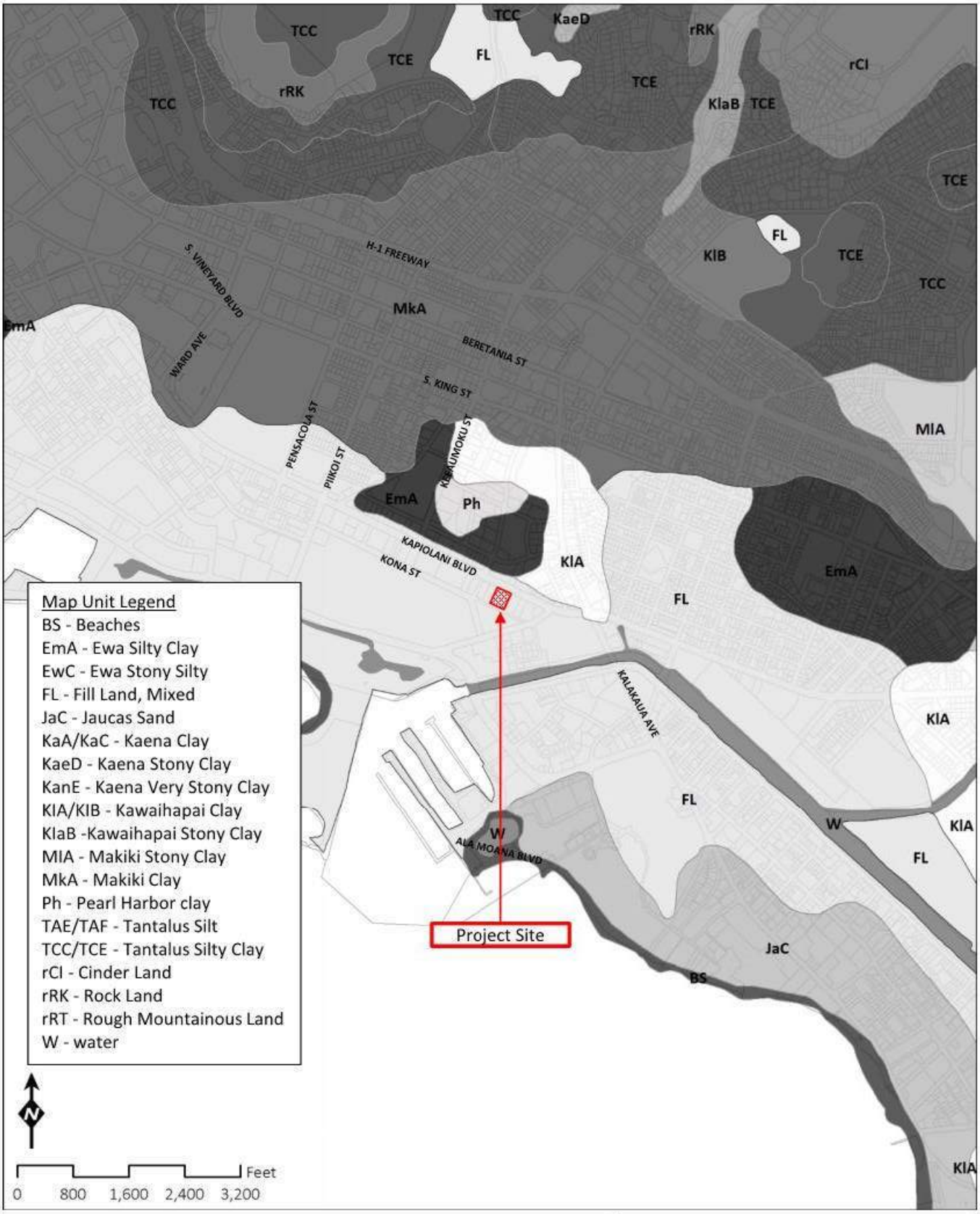


FLOOD INSURANCE RATE MAP	FIGURE 2
Preliminary Engineering Report For Samkoo Pacific Condominium Samkoo Pacific, LLC.	Map Sources: C&C HOLIS SSFM INTERNATIONAL

FIGURE 3: Site Lease Establishments

SITE LEASE ESTABLISHMENTS	FIGURE 3
Preliminary Engineering Report For Samkoo Pacific Condominium Samkoo Pacific, LLC.	Map Sources: Google Earth (aerial) SSFM INTERNATIONAL

FIGURE 4: Soils Map



SOILS MAP	FIGURE 4
Preliminary Engineering Report For Samkoo Pacific Condominium Samkoo Pacific, LLC.	Map Sources: Office of Planning Soil Survey SSFM INTERNATIONAL

APPENDIX

Board of Water Supply: Water Capacity Pre-Approval Letter

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843

SSFM INTERNATIONAL, INC.
RECEIVED
OCT 16 2014
BY
FILE

KIRK CALDWELL, MAYOR

DUANE R. MIYASHIRO, Chair
ADAM C. WONG, Vice Chair
MAHEALANI CYPHER
THERESIA C. McMURDO
DAVID C. HULIHEE

ROSS S. SASAMURA, Ex-Officio
FORD N. FUCHIGAMI, Ex-Officio

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

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

October 9, 2014

FILE COPY

Mr. Benjamin Rasa
SSFM International, Inc.
501 Sumner Street, Suite 620
Honolulu, Hawaii 96817

Dear Mr. Rasa:

Subject: Your Email Dated October 2, 2014 Requesting the Availability of Water to the Proposed Samkoo Pacific Condominium and Samkoo Hawaii Condominium – Tax Map Key: 2-3-041: 006, 009; 2-3-039: 011

Thank you for your letter on the two proposed commercial/high rise condominium developments.

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

When water is made available, the applicant will be required to pay our Water System Facilities Charges for resource development, transmission and daily storage.

Water conservation measures are 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.

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

The on-site fire protection requirements should be coordinated with the Fire Prevention Bureau of the Honolulu Fire Department.

The BWS has suspended fire flow tests on fire hydrants as a water conservation measure. However, you may use the following calculated flow data for Fire Hydrant No. M-07859 and M-07888:

Static Pressure.....	76 psi
Residual Pressure.....	56 psi
Flow.....	4000 gpm

The data are based on the existing water system, and the static pressure represents the theoretical pressure at the point of calculation with the reservoir full and no demands on the water system. The static pressure is not indicative of the actual pressure in the field. Therefore, in order to determine the flows that are available to the site, you will have to determine the actual field pressure by taking on-site pressure readings at various times of the day and correlating that field data with the above hydraulic design data.

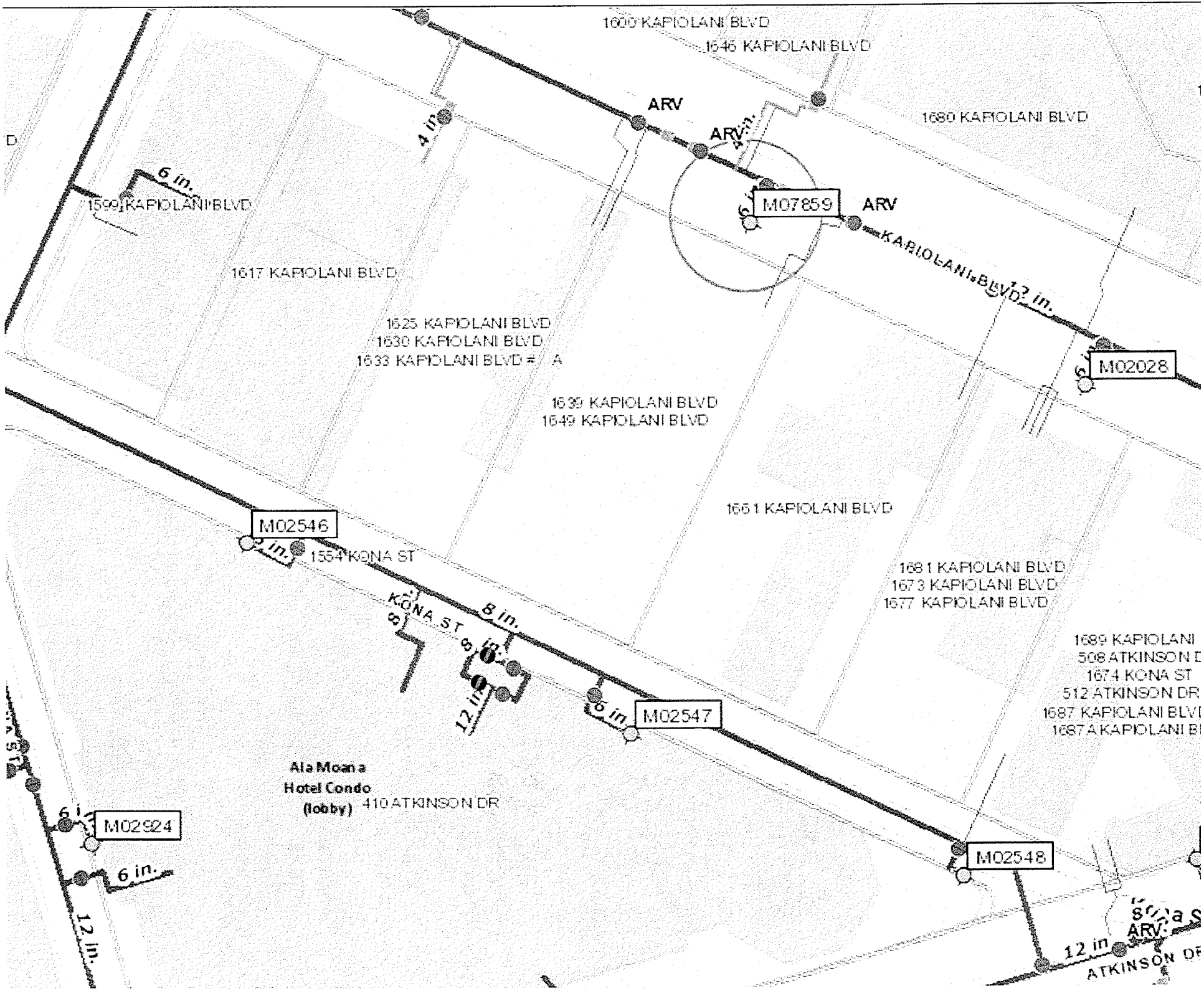
The map showing the locations of the fire hydrants is attached.

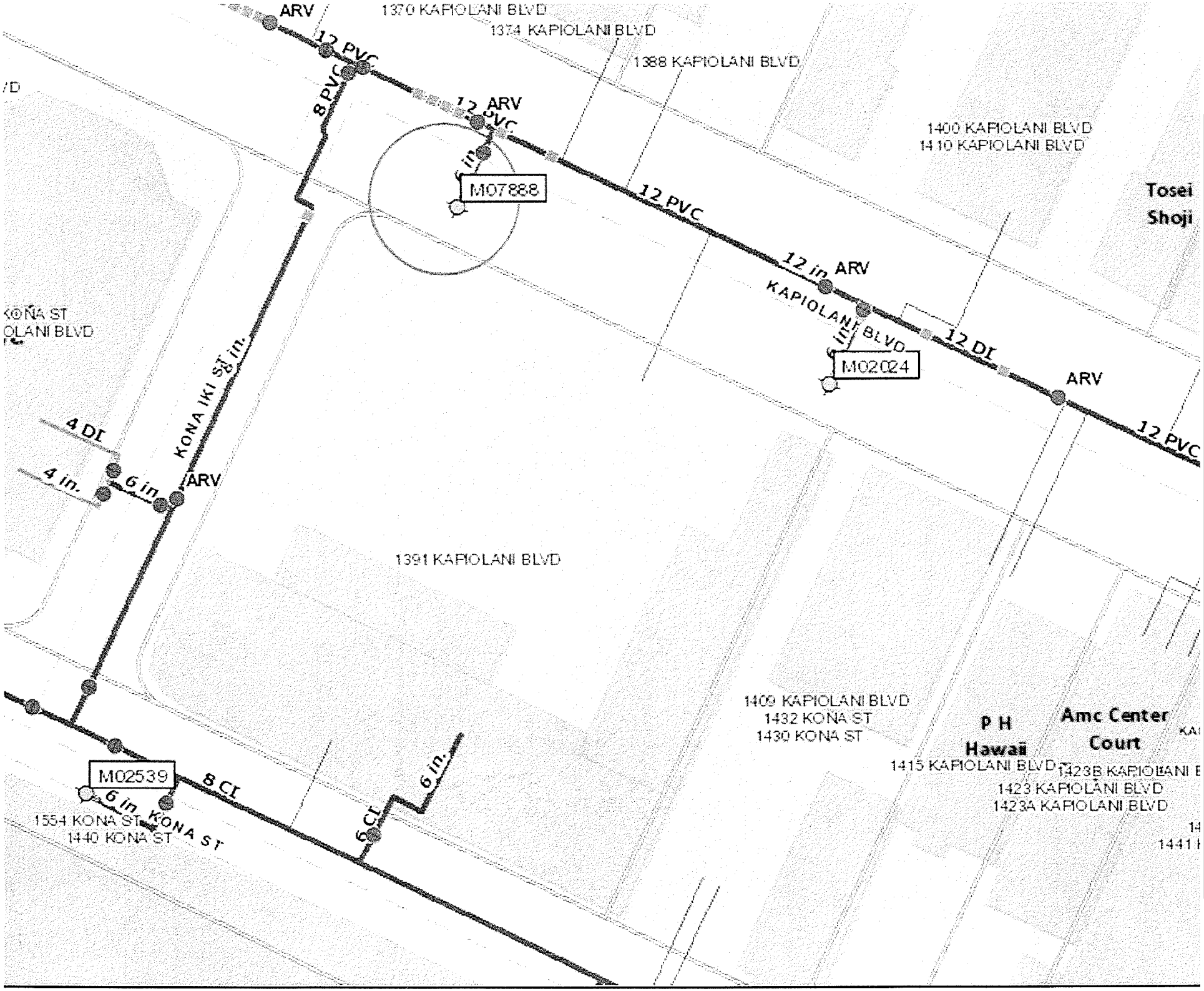
If you have any questions, please contact Robert Chun, Project Review Branch of our Water Resources Division at 748-5443.

Very truly yours,

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

Attachment


1600 KAPIOLANI BLVD
1646 KAPIOLANI BLVD
1680 KAPIOLANI BLVD
ARV
ARV
ARV
4 in.
4 in.
6 in.
1599 KAPIOLANI BLVD
M07859
KAPIOLANI BLVD
12 in.
1617 KAPIOLANI BLVD
1625 KAPIOLANI BLVD
1630 KAPIOLANI BLVD
1633 KAPIOLANI BLVD # A
M02028
1639 KAPIOLANI BLVD
1649 KAPIOLANI BLVD
1651 KAPIOLANI BLVD
M02546
1554 KONA ST
KONA ST
8 in.
8 in.
8 in.
12 in.
6 in.
M02547
1681 KAPIOLANI BLVD
1673 KAPIOLANI BLVD
1677 KAPIOLANI BLVD
1689 KAPIOLANI
508 ATKINSON D
1674 KONA ST
512 ATKINSON DR
1687 KAPIOLANI BLVD
1687A KAPIOLANI BL
Ala Moana
Hotel Condo
(lobby)
410 ATKINSON DR
M02924
6 in.
6 in.
12 in.
M02548
12 in.
ARV
ATKINSON DR


ARV
1370 KAPIOLANI BLVD
1374 KAPIOLANI BLVD
1388 KAPIOLANI BLVD
12 PVC
8 PVC
12 PVC
ARV
M07888
12 PVC
1400 KAPIOLANI BLVD
1410 KAPIOLANI BLVD
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12 PVC
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4 DI
4 in.
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ARV
1391 KAPIOLANI BLVD
1409 KAPIOLANI BLVD
1432 KONA ST
1430 KONA ST
P H
Hawaii
Amc Center
Court
1415 KAPIOLANI BLVD
1423B KAPIOLANI B
1423 KAPIOLANI BLVD
1423A KAPIOLANI BLVD
M02539
8 CI
6 in.
6 in
KONA ST
1554 KONA ST
1440 KONA ST
6 CI

DPP Waste Water Branch: Sewer Capacity Pre-Approval Letter

DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET * HONOLULU, HAWAII 96813
Phone: (808) 768-8209 * Fax: (808) 768-4210

SEWER CONNECTION APPLICATION

APPLICATION NO.: **2014/SCA-0720** STATUS: **Approved with conditions**

DATE RECEIVED: **09/26/2014** IWDP APP. NO.:

PROJECT NAME: **2014/SCA-0720 Samkoo Pacific Condominium at 1631 Kapiolani Blvd.**

$2,112,756.80
Estimated Wastewater System Facility Charge*

LOCATION:

Zone	Section	Plat	Parcel		
2	3	041	006	1637 KAPIOLANI BLVD Honolulu / I	31,250 Sq. Ft.
2	3	041	009	1625 KAPIOLANI BLVD Honolulu / I	25,000 Sq. Ft.

SPECIFIC LOCATION: **1631 Kapiolani Blvd.**

APPLICANT: **SSFM INTERNATIONAL INC.**
ATTN: Benjamin Rasa
501 SUMNER STREET SUITE 620
HONOLULU, HAWAII 96817

DEVELOPMENT TYPE: **Dwelling, Multi-family** SEWER CONNECTION WORK DESIRED:

OTHER USES:

NON-RESIDENTIAL AREA: s.f. APPROXIMATE DATE OF CONNECTION: **12/14/2015**

PROPOSED UNITS		EXISTING UNITS		UNITS TO BE DEMOLISHED	
No. of New Units:	**484**	No. of Existing Units:	**0**	No. of Units to be Demolished:	**0**
Studios:	**88**	Studios:		Studios:	
1-Bedroom:	**132**	1-Bedroom:		1-Bedroom:	
2-Bedroom:	**264**	2-Bedroom:		2-Bedroom:	
3-Bedroom:		3-Bedroom:		3-Bedroom:	
4-Bedroom:		4-Bedroom:		4-Bedroom:	
5-Bedroom:		5-Bedroom:		5-Bedroom:	
6-Bedroom:		6-Bedroom:		6-Bedroom:	

REMARKS **Submit letter from the HUI authorizing transfer of sewer capacity (108,416 gpd) and credits ($2,112,756.80 at the current rate). Sewer lateral should be sized according to the mechanical engineer's flow calculations.**

APPROVAL DATE: **12/08/2014**

EXPIRATION DATE: **12/03/2016**

Valid 2-years after approval date. Construction plans shall be completed and approved within this 2-year period. Construction shall commence within 1-year after approval of plans.
** Applicable WSFC shall be collected at the prevailing rate in accordance with ROH 1990, Chapter 14, Sections 14-10.3, 14-10.4, 14-10.5 and Appendix 14-D.*

REVIEWED BY: ***Tessa Ching***

Site Development Division, Wastewater Branch

SamKoo C&C Sewer Credit Confirmation Letter 1

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

PETER B. CARLISLE
MAYOR

DAVID K. TANOUE
DIRECTOR

JIRO A. SUMADA
DEPUTY DIRECTOR

11WWB053 (DMN)

October 27, 2011

Sam House Development, LLC
c/o David Shibata, Esq.
Rush Moore LLP
737 Bishop Street, Suite 2400
Honolulu, Hawaii 96813

Dear Mr. Shibata:

Subject: Request for Wastewater System Facility Charge Credits Under Memorandum of Understanding and Agreement dated December 19, 2007, as amended September 22, 2011 (as amended, the "MOUA", by and between Kalakaua Relief Line, LLC ("Company") and the City and County of Honolulu (the "City")

In response to the Company's November 18, 2010 request, as amended by letter dated June 28, 2011, for issuance of Wastewater System Facility Charge ("WSFC") Credits or ESDU under the MOUA, and in accordance with the provisions of Section 7.2 (Issuance of Credits) of the MOUA, the Department confirms that Sam House Development, LLC (1391 Kapiolani Project) is allocated the following Wastewater System Facility Charge Credits or ESDU as of the date hereof:

WSFC Credits or ESDU to be issued to Sam House Development, LLC pursuant to Exhibit 3 of the MOUA	*Less* Total WSFC Credits Or ESDU Used to Date	**Total WSFC Credits or ESDU Issued to Sam House Development, LLC as of October 18, 2011**
167.79	0.00	**167.79**

Should you have any questions, please contact Dennis Nishimura of our Wastewater Branch at 768-8197.

Very truly yours,

David K. Tanoue, Director
Department of Planning and Permitting

CONCUR:

Timothy E. Steinberger, Director
Department of Environmental Services

DKT:dl
cc: Esther Roberts, Esq. (Case Lombardi & Pettit)

SamKoo C&C Sewer Credit Confirmation Letter 2

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

PETER B. CARLISLE
MAYOR

DAVID K. TANOUE
DIRECTOR

JIRO A. SUMADA
DEPUTY DIRECTOR

11WWB054 (DMN)

October 27, 2011

Samkoo Pacific, LLc
c/o David Shibata, Esq.
Rush Moore LLP
737 Bishop Street, Suite 2400
Honolulu, Hawaii 96813

Dear Mr. Shibata:

Subject: Request for Wastewater System Facility Charge Credits Under Memorandum of Understanding and Agreement dated December 19, 2007, as amended September 22, 2011 (as amended, the "MOUA", by and between Kalakaua Relief Line, LLC ("Company") and the City and County of Honolulu (the "City")

In response to the Company's November 18, 2010 request, as amended by letter dated June 28, 2011, for issuance of Wastewater System Facility Charge ("WSFC") Credits or ESDU under the MOUA, and in accordance with the provisions of Section 7.2 (Issuance of Credits) of the MOUA, the Department confirms that Samkoo Pacific, LLC (1625 Kapiolani Project) is allocated the following Wastewater System Facility Charge Credits or ESDU as of the date hereof:

WSFC Credits or ESDU to be issued to Samkoo Pacific, LLC pursuant to Exhibit 3 of the MOUA	*Less* Total WSFC Credits Or ESDU Used to Date	**Total WSFC Credits or ESDU Issued to Samkoo Pacific, LLC as of October 18, 2011**
128.13	0.00	**128.13**

Should you have any questions, please contact Dennis Nishimura of our Wastewater Branch at 768-8197.

Very truly yours,

David K. Tanoue, Director
Department of Planning and Permitting

CONCUR:

FOR Timothy E. Steinberger, Director
Department of Environmental Services

DKT:dl
cc: Esther Roberts, Esq. (Case Lombardi & Pettit)

SamKoo Memorandum of Understanding and Agreement

DEPARTMENT OF ENVIRONMENTAL SERVICES
CITY AND COUNTY OF HONOLULU
1000 ULUOHIA STREET, SUITE 308, KAPOLEI, HAWAII 96707
TELELPHONE: (808) 768-3486 ● FAX: (808) 768-3487 ● WEBSITE: http://www.co.honolulu.gov

MUFI HANNEMANN
MAYOR

ERIC S. TAKAMURA, Ph.D., P.E.
DIRECTOR

KENNETH A. SHIMIZU
DEPUTY DIRECTOR

ROSS S. TANIMOTO, P.E.
DEPUTY DIRECTOR

IN REPLY REFER TO:
WAS 07-369

December 21, 2007

Case Lombardi & Pettit
Attn: Esther S. Han, Esq.
Pacific Guardian Center, Mauka Tower
737 Bishop Street, Suite 2600
Honolulu, Hawaii 96813-3283

Dear Ms. Han:

Re: Memorandum of Understanding and Agreement – Kalakaua Avenue Relief Sewer Line

Enclosed find an original fully executed original copy of the Memorandum of Understanding and Agreement – Kalakaua Avenue Relief Sewer Line.

Sincerely,

Timothy A. Houghton
Executive Assistant to the Director

Enclosure

MEMORANDUM OF UNDERSTANDING AND AGREEMENT
KALAKAUA AVENUE RELIEF SEWER LINE

THIS MEMORANDUM OF UNDERSTANDING AND AGREEMENT (this "Agreement") is made this 14th day of December, 2007, by and among KALAKAUA RELIEF LINE, LLC (the "Company"), a Hawaii limited liability company, and the CITY AND COUNTY OF HONOLULU (the "City").

RECITALS:

A. The Company is a Hawaii limited liability company whose initial member is FRC Waikiki, LLC, a Delaware limited liability company and owner of that certain parcel of land located at 1837 Kalakaua Avenue, Honolulu, Hawaii 96813 ("FRC Waikiki"). The Company will be comprised of FRC Waikiki and additional members who are owners or representatives of owners of certain lands located within the City and County of Honolulu, Oahu, Hawaii (each a "Member", and, collectively, the "Members"). The planned and continuing development of the lands owned by the Members of the Company or their representatives requires sewer transmission capacity to accommodate the projects planned for these lands (each, a "Designated Project").

B. The existing Kapiolani Trunk Sewer System lacks the capacity to accommodate the increase in sewer transmission demand anticipated for the Designated Projects. The Company recognizes the immediate need for additional sewer capacity to accommodate new development and proposes to design and construct a new sewer line within the City and County of Honolulu, Oahu, Hawaii (the "Kalakaua Avenue Relief Sewer Line" or the "Line") to benefit the planned development for the area and, upon completion of the Kalakaua Avenue Relief Sewer Line to transfer the Line to the City.

C. The lands to be benefited by the Line are shown on the map attached hereto as Exhibit 1 and incorporated herein by reference, designated as the "Tributary Area". The lands owned by the Members of the Company or their representatives to be specifically benefited by the Kalakaua Avenue Relief Sewer Line are shown on the map attached hereto as Exhibit 2 and incorporated herein by reference. The Designated Projects of the Members will connect within the Tributary Area to either the Kapiolani Trunk Sewer System or the Fort DeRussy Pump Station service area as specified on Exhibit 3 attached hereto and incorporated herein by reference.

D. The Company is entering into this Agreement for the benefit of the Members and their Designated Projects within the Tributary Area.

AGREEMENT:

NOW THEREFORE, the parties agree as follows:

1. Construction of Kalakaua Avenue Relief Sewer Line. The Company, at its expense, shall be responsible for the design, planning and permits, management and construction of the Line. The Line shall be designed and constructed based on the plans and specifications approved by the City. The City agrees to undertake to turnover to the Company those certain construction plans prepared by R.M. Towill Corporation ("RMTC") for the Line (the "Existing Plans"). The Company agrees to indemnify, defend and hold the City harmless against any loss, liability, damage, cost, claim or expense (including reasonable attorneys' fees) incurred by reason of the Company's use of the Existing Plans.

2. Completion of Kalakaua Avenue Relief Sewer Line. The Kalakaua Avenue Relief Sewer Line shall be completed in a timely manner and made available for transfer to the City not later than twelve months following issuance ofthe last required permit for the Line, subject to reasonable extensions due to force majeure, including, without limitation, shipping strikes and acts of God. The City will provide assistance in the design review and approval and permits needed for the Line.

3. Acceptance of Line. Upon the completion of the Kalakaua Avenue Relief Sewer Line, the Company will transfer the Line to the City, which transfer shall be completed pursuant to Chapter 14 of the Revised Ordinances of Honolulu 1990, as amended. The City agrees that, upon satisfactory completion of the Line and acceptable completion of all inspections of the Line as evidenced by a certificate(s) of completion of improvements from the City, the City shall grant approval and accept the Line.

4. Maintenance of Kalakaua Avenue Relief Sewer Line. Upon transfer to and acceptance of the Kalakaua Avenue Relief Sewer Line by the City, the City shall be responsible for the operation and maintenance of the Kalakaua Avenue Relief Sewer Line.

5. Allocation and Assignment of Sewer Capacities.

5.1 Allocation of Sewer Capacities. The City agrees to honor the Member capacity allocations attributable to the Credits (as defined below) and the assignment of capacity permitted by Section 5.2 as set forth herein. The Member capacity allocations, as provided by the Company and expressed in Exhibit 3 (the preliminary estimate of which appears on Exhibit 3 under column 10 labeled "Total E.S.D.U. (Credits)"), will not change except as provided for in Section 5.2, Assignment of Sewer Capacities, and Section 7.2.1, Issuance of Credits, below. The City agrees to process and conditionally approve (to the extent not previously approved by the City) sewer connection applications for each Member's Designated Project provided such sewer connection applications are within the capacity allocated to the Member as allocated or assigned pursuant to this Agreement and conform to all standard requirements. The City further agrees to allow issuance of building permits without levy of sewer connection fees provided conditional approval of a Member's sewer connection application has been provided together with certification of membership in the Company and payment of required capital contributions to the Company.

5.2 Assignment of Sewer Capacities. The Members of the Company shall be permitted to assign all or part of their allocated sewer capacity to other Designated Projects or any other project within the Tributary Area as identified in Exhibit 1, provided that any assignment of sewer capacity shall not exceed the total capacity required for such Project. The City shall require that any Member's assignee applying for a sewer connection, a building permit or a subdivision permit deliver to the City a letter of authorization from a Member reflecting such assignment at the time said application is submitted. Any assignment of sewer capacity by a Member pursuant to this Section shall also include an assignment of the total number of ESDU required for the amount of sewer capacity being assigned, provided that, in no event, shall any assignment exceed a Member's allocated capacity or associated ESDU. For example, if a Member seeks to assign sewer capacity for 60 multi-family dwelling units, such Member shall also assign 42 (60 multiplied by a factor of 0.7 pursuant to Section 14-10.3 of the Revised Ordinances of Honolulu) total number of ESDU.

6. Reservation of Sewer Capacities. Upon completion of the Line, the City agrees to provide the Company and its Members, whether utilizing the Line or by any other suitable alternative means, with sewer transmission capacity up to the aggregate amount allocated herein, as and when required by the Members of the Company for their respective Designated Projects.

7. Wastewater System Facility Charge Credits. In consideration of the Company's construction and delivery of the Line, the City agrees to make available to the Company Wastewater System Facility Charge Credits in the amount of the actual total construction (not including planning, design, and permitting) costs of the Line, as allowed under Sections 14-10.3 and 14-10.4, and Appendix 14-D of the Revised Ordinances of Honolulu 1990, as amended and further clarified under Wastewater Policy No. 2001/WWPOL-11 of the Department of Planning and Permitting (the "Credits" or "Total ESDU"), which are equal to the Members' allocated capacity, as shown in Exhibit 3. The computation of the Credits equal to the allocated capacity shall be based upon the wastewater system facility charge assessable with respect to such capacity as of the date the Line is transferred to and accepted by the City or the date the actual total costs of the Line are approved by the City, whichever is earlier.

By way of illustration only, the Company estimates the total costs of the Line to be $5,773,320.00. Assuming the Line is completed and transferred to the City in December 2008, at a total cost of $5,773,320.00, which costs are approved by the City, the City would make available to the Company Credits in the amount of $5,773,320.00, which are equal to 1105.36 Total ESDU, as reflected in, and as indicated in the capacity allocation set forth in, Exhibit 3. The computation of the Credits in this example is based upon the Wastewater System Facility Charge assessable with respect to the Allocated ESDU at the current Wastewater System Facility Charge for fiscal year 2008/09, which rates are subject to change.

7.1 No Further Assessment in Use of Credits Once Allocated and Assigned. The parties agree that once credits are allocated and assigned no further assessment or charge will be made by the City on any Member in the use of its Credits for any Designated Project or assigned Project~~,~~ (including, without limitation, in the event of a change in the Wastewater System Facility Charge attributable to the ESDU standard), unless the allocated capacity as reflected on Exhibit 3 is exceeded, in which event an additional assessment or charge may be applied to the increased capacity and related required ESDU. The Credits, as and when

earned, will be allocated and assigned by the City to the Members of the Company as set forth in Exhibit 3. The City agrees, without limitation as to the time period within which such Credits are used, and notwithstanding any early termination or expiration of this Agreement, to honor the allocation and assignment set forth on Exhibit 3 and any transfers of such Credits allocated.

7.2 Issuance of Credits. The parties agree that as soon as reasonably practicable upon (A) transfer to and acceptance by the City of the Line and (B) approval by the City of the actual total costs of the Line:

7.2.1 Exhibit 3 shall be amended to reflect the final allocation of Credits to the Members of the Company without prejudice to the rights of Members under Section 5 of this Agreement; and

7.2.2 Such final allocation of Credits shall be transmitted by the Department of Planning and Permitting of the City and County of Honolulu (DPP) to the Company confirming the number of Credits to be allocated and assigned to each Member and such Member's Designated Project under this Agreement.

8. Future Development Along Kapiolani Trunk Sewer System. Subsequent to the execution of this Agreement by the City and the Company, future development serviced in the Tributary Area shall be reviewed by DPP on a project by project basis

9. Term. This Agreement, including, without limitation, the reservation of sewer capacity in favor of each Member given hereunder, shall expire twenty (20) years from the date the Line is accepted by the City, provided that the Credits shall survive any termination of this Agreement.

10. Remedies. If any party to this Agreement fails to fulfill or perform any of its obligations hereunder, non-defaulting parties shall be entitled to all remedies available at law or in equity, including damages, specific performance and injunctive relief. In any dispute or litigation arising out of or in connection with this Agreement, the prevailing party shall be entitled to receive and recover its costs and expenses, including reasonable attorneys' fees, from the other party.

11. Notices. Any notice to be given to or served upon any of the parties hereto shall be deemed to have been sufficiently given or served for all purposes when actually delivered by messenger or by certified mail, return receipt requested, as follows:

In the case of the City:

Department of Environmental Services
City and County of Honolulu
1000 Uluohia Street, Suite 308
Kapolei, Hawaii 96707
Attention: Eric S. Takamura, Director

Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 7th Floor

Honolulu, Hawaii 96813
Attention: Henry Eng, Director

If to the Company:

Kalakaua Relief Line, LLC
c/o FRC Waikiki, LLC, Manager
19900 MacArthur Boulevard, Suite 655
Irvine, California, 92612
Attention: Benjamin L. Ortega

With a copy to Case Lombardi & Pettit:

Case Lombardi & Pettit
737 Bishop Street, Suite 2600
Honolulu, Hawaii 96813
Attention: Dennis Lombardi, Esq.
Esther Han, Esq.

12. No Party Deemed Drafter. The parties agree that no party shall be deemed to be the drafter of this Agreement and further that in the event that this Agreement is ever construed by a court of law, such court shall not construe this Agreement or any provision of this Agreement against any party as the drafter of the Agreement.

13. Successors and Assigns. All of the terms, provisions, conditions and agreements contained herein shall inure to the benefit of and be binding upon each of the parties hereto, and their respective successors and permitted assigns, to the same extent as said terms, provisions, conditions and agreements inure to the benefit of and are binding upon each of the respective parties.

14. Governing Law. This Agreement shall be governed and construed in accordance with the laws of the State of Hawaii.

15. Recitals: Exhibits. All recitals set forth at the beginning of this Agreement shall be deemed to be incorporated as agreements of the parties in this Agreement. All Exhibits referred to in this Agreement shall be deemed to be incorporated herein by the reference made to them as fully as though the entire Exhibit were set forth within the body of this Agreement itself.

16. Survival. All agreements, representations, warranties, covenants, and undertakings of the parties contained herein shall survive the consummation of the transactions contemplated hereby and shall not be merged therein.

17. Amendments. This Agreement shall not be modified except by an instrument in writing signed by all of the parties.

18. Counterparts. This Agreement may be executed in counterparts, each of which so executed shall, irrespective of the date of its execution and delivery, be deemed an original and said counterparts together shall constitute one and the same instrument.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement effective on the day and year first above written.

CITY AND COUNTY OF HONOLULU

By _____
Eric S. Takamura
Director, Department of Environmental Services,
City and County of Honolulu

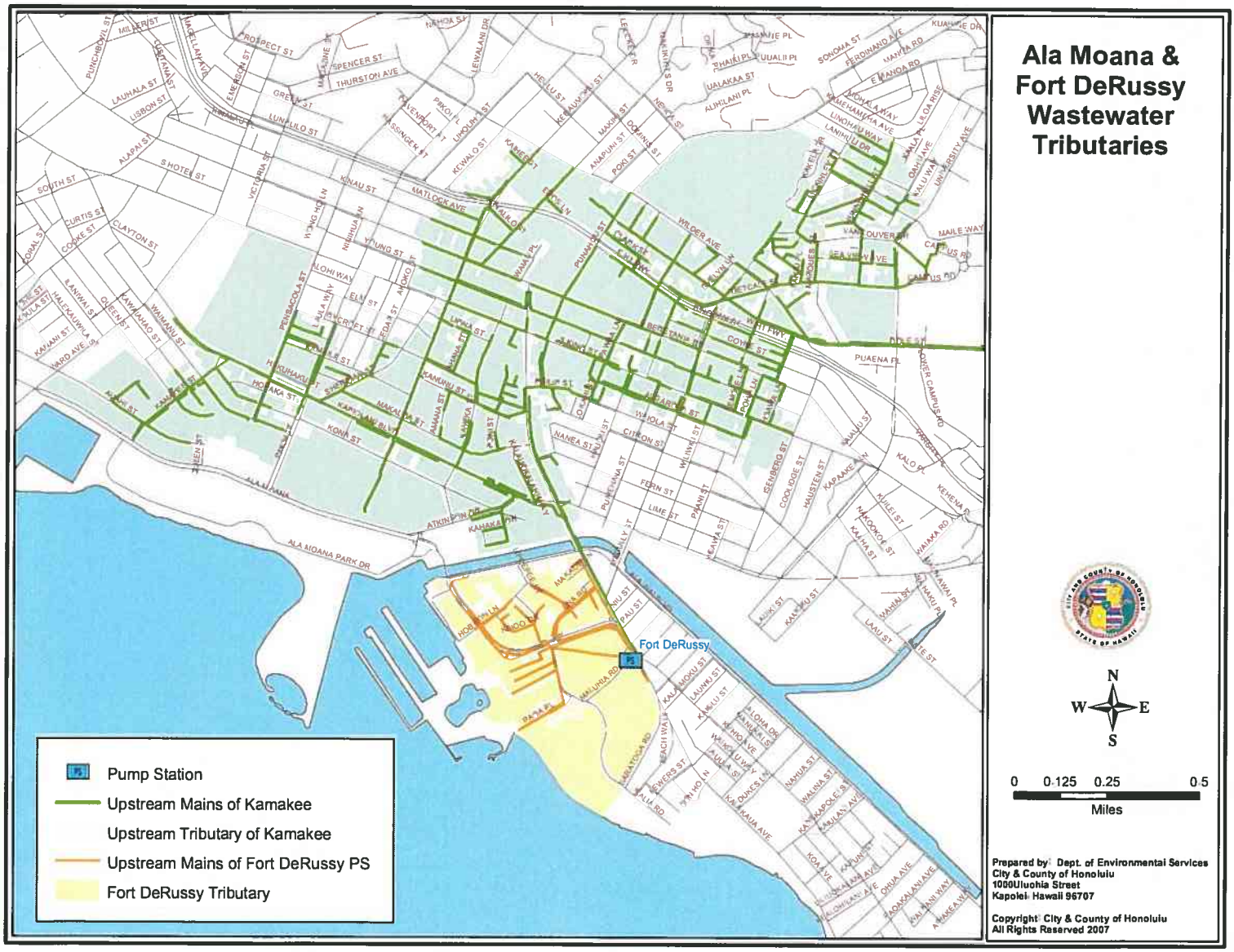
APPROVED AS TO FORM
AND LEGALITY

_____
Deputy Corporation Counsel

KALAKAUA RELIEF LINE, LLC

By FRC WAIKIKI, LLC, a Delaware limited
liability company
Its Manager

By _____
Steven D. Fifield
Its Manager


Ala Moana & Fort DeRussy Wastewater Tributaries
Fort DeRussy
Pump Station
Upstream Mains of Kamakee
Upstream Tributary of Kamakee
Upstream Mains of Fort DeRussy PS
Fort DeRussy Tributary
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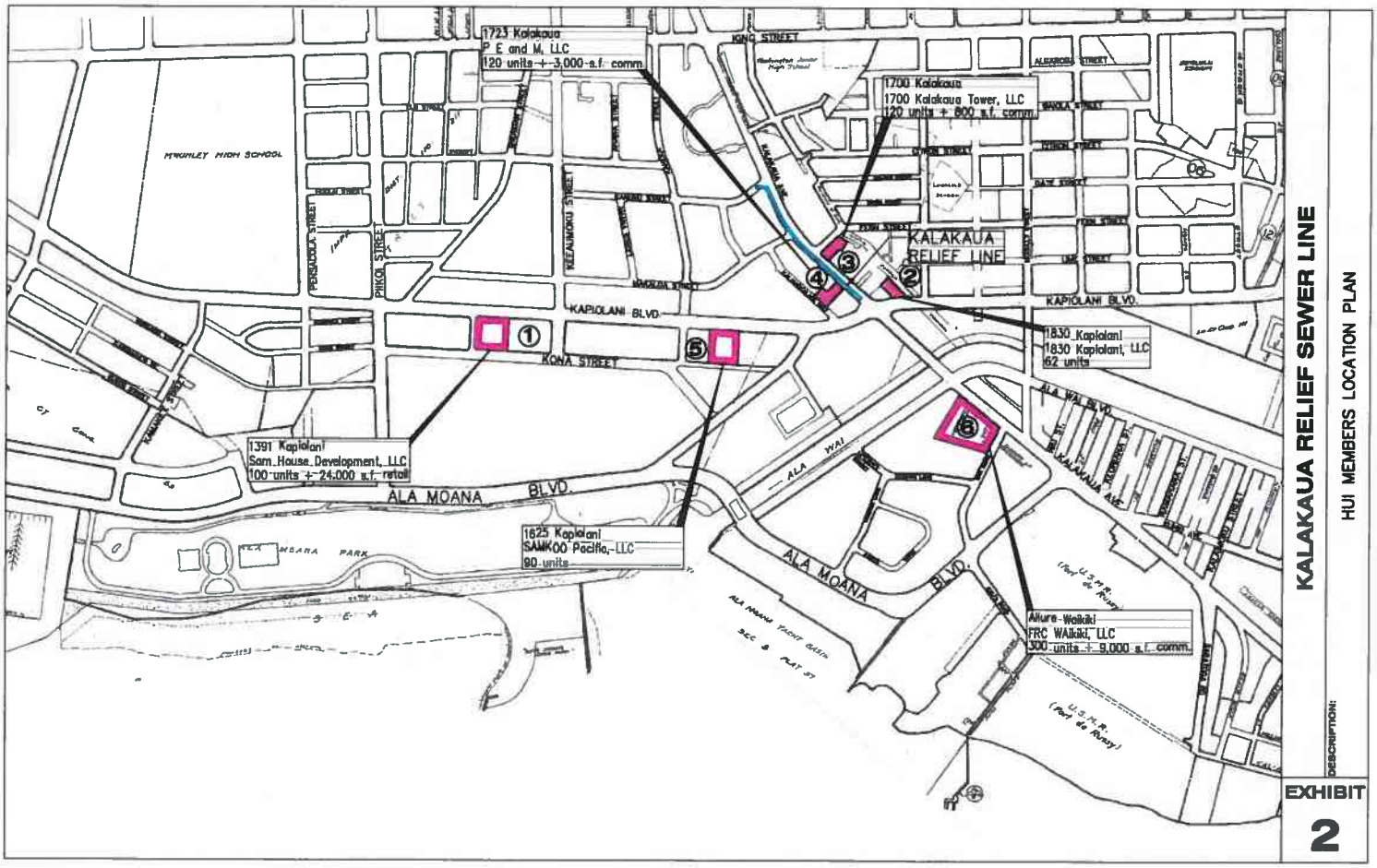
Miles
Prepared by: Dept. of Environmental Services
City & County of Honolulu
1000Uluohia Street
Kapolei Hawaii 96707
Copyright: City & County of Honolulu
All Rights Reserved 2007


1723 Kalakaua
P E and M, LLC
120 units + 3,000 s.f. comm.
1700 Kalakaua
1700 Kalakaua Tower, LLC
120 units + 800 s.f. comm.
KALAKAUA RELIEF LINE
1830 Kapiolani
1830 Kapiolani, LLC
62 units
1391 Kapiolani
Sam House Development, LLC
100 units + 24,000 s.f. retail
1625 Kapiolani
SAMKOO Pacific, LLC
90 units
Allure Waikiki
FRC Waikiki, LLC
300 units + 9,000 s.f. comm.
KING STREET
KAPIOLANI BLVD.
KONA STREET
ALA MOANA BLVD.
ALA WAI
KALAKAUA AVE.
PIIKOI STREET
KEEAUMOKU STREET
PENSACOLA STREET
MCKINLEY HIGH SCHOOL
ALA MOANA PARK
ALA MOANA YACHT BASIN
U.S.N.R. (Port de Plaisance)
KALAKAUA RELIEF SEWER LINE
HUI MEMBERS LOCATION PLAN
DESCRIPTION:
EXHIBIT
2

KALAKAUA RELIEF LINE, LLC

MEMBERS

As of December 4, 2007

	1	2	3	4	5	6	7	8	9	10	11	12
	Tax Map Kay	Project Name	Connection	Owner (Mamber)	Consultant/ Applicant	No of Units	Demo Cradits	No. Sawar Assased Units	Required E.S.D.U.	Total E.S.D.U. (Credits)	Prorata Shara Percentaga	Total Capital Contributions
1	2-3-039: 011	1391 Kepi'olani	Kapiolani Trunk Sewer System	Sam House Development, LLC	Seto & Assoc., Inc.	100 + 24,000 s.f. retail		100 + 24,000 s.f. retail	82.50	169.77	15.36%	$886,687.37
2	2-3-032: 006	1830 Kapiolani	Kapiolani Trunk Sewer System	1830 Kapioleni LLC	Jim Hutchinson	62		62	43.40	89.31	8.08%	$466,451.30
3	2-3-032: 052	1700 Kalakaue	Kapiolani Trunk Sewer System	1700 Kalakaua Tower, LLC	Pankow-Al Fink	120 + 800 s.f. commerciel		120 + 800 s.f. commarcial	84.42	173.71	15.72%	$907,287.18
4	2-3-022: 009, 010, 025	1723 Kalakaua	Kapiolani Trunk Sewer System	P E end M, LLC	R.M. Towill Corp.	120 + 3,000 s.f. commercial		120 + 3,000 s.f. commercial	85.56	176.07	15.93%	$919,602.28
5	2-3-041: 006, 009	1625 Kapi'olani	Kapioleni Trunk Sewer System	SAMKOO Pecific, LLC	Sato & Assoc., Inc.	90		90	63.00	129.64	11.73%	$677,106.72
6	2-6-013: 001, 003, 004, 007, 008, 009, 011, 012	Allure Waikiki	Fort DeRussy Sewer Pump Station System	FRC Waikiki, LLC	Hida, Okamoto & Assoc., Inc.	300 + 9000 s.f. commercial	52	248 + 9000 s.f. commercial	178.29	366.87	33.19%	$1,916,185.15
									537.17	1105.36	100%	$5,773,320.00

$5,773,320.00

Notes:

1. $5,223.00 / ESDU

2. ESDU Calculation:

a. Multi Family Dwellings (5 or more units): ESDU = # of Units X 0.7 (Wastewater Factor)

b. Business/Commercial: ESDU = Area (s.f.) / 1920 (Wastewater Factor)

EXHIBIT 3

DEPARTMENT OF ENVIRONMENTAL SERVICES
CITY AND COUNTY OF HONOLULU
1000 ULUOHIA STREET, SUITE 308, KAPOLEI, HAWAII 96707
TELEPHONE: (808) 768-3486 • FAX: (808) 788-3487 • WEBSITE: http://envhonolulu.org

RECEIVED 9/28/11

PETER B. CARLISLE
MAYOR

TIMOTHY E. STEINBERGER, P.E.
DIRECTOR

MANUEL S. LANUEVO, P.E., LEED AP
DEPUTY DIRECTOR

ROSS S. TANIMOTO, P.E.
DEPUTY DIRECTOR

IN REPLY REFER TO:
PRO 11-106

September 22, 2011

Via Certified Mail

Mr. James Dow, Manager
Kalakaua Relief Line, LLC
c/o Allure Waikiki Marketing LLC
175 West Jackson Boulevard, Suite 540
Chicago, Illinois 60604

Dear Mr. Dow:

Subject: Amendment to Memorandum of Understanding and Agreement (MOUA) Kalakaua Avenue Relief Sewer Line Executed by Kalakaua Relief Line, LLC

We have reviewed your amendment request as transmitted by your letter dated, June 28, 2011. We have enclosed the Amendment to the MOUA – Kalakaua Avenue Relief Sewer Line with our approval signatures.

Should you have any questions, please call Tim Houghton, Executive Assistant, at 768-3475, or Jack Pobuk, CIP Program Coordinator, at 768-3464.

Sincerely,

Timothy E. Steinberger, P.E.
For Director

Enclosure

cc: Case Lombardi & Pettit

AMENDMENT TO MEMORANDUM OF UNDERSTANDING AND AGREEMENT
KALAKAUA AVENUE RELIEF SEWER LINE

THIS AMENDMENT TO MEMORANDUM OF UNDERSTANDING AND AGREEMENT (this "Amendment") is made this 22nd day of September, 2011, by and among KALAKAUA RELIEF LINE, LLC (the "Company"), a Hawaii limited liability company, and the CITY AND COUNTY OF HONOLULU (the "City").

RECITALS:

A. The Company and the City entered into that certain Memorandum of Understanding and Agreement dated December 19, 2007 (the "Agreement"). Capitalized terms used herein without definition shall have the meanings ascribed to such terms on the Agreement.

B. The Company has completed construction of the Line and has requested that the City issue Credits to the Company in the amount of the actual total construction costs of the Line in accordance with the terms of the Agreement. In connection with the issuance of Credits to the Company, the Agreement contemplates that Exhibit 3 thereto shall be amended to reflect the final allocations of Credits to the Members of the Company without prejudice to the rights of Members under Section 5 of the Agreement.

NOW, THEREFORE, in consideration of the premises and the mutual covenants contained herein, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereby covenant and agree to amend the Agreement as follows:

1. Amendment to Section 11. Section 11 of the Agreement shall be amended and restated in its entirety as follows (solely for convenience, modified language appears in italics, deleted language is not shown):

> 11. Notices. Any notice to be given to or served upon any of the parties hereto shall be deemed to have been sufficiently given or served for all purposes when actually delivered by messenger or by certified mail, return receipt requested, as follows:
>
> In the case of the City:
>
> Department of Environmental Services
> City and County of Honolulu
> 1000 Uluohia Street, Suite 308
> Kapolei, Hawaii 96707
> Attention: *Tim Steinberger*, Director
>
> Department of Planning and Permitting
> City and County of Honolulu

650 South King Street, 7th Floor
Honolulu, Hawaii 96813
Attention: *David K. Tanoue*, Director

If to the Company:

Kalakaua Relief Line, LLC
c/o *Allure Waikiki Marketing, LLC*, Manager
175 W. Jackson Blvd., Suite 540
Chicago, IL 60604
Attention: *James J. Dow*

With a copy to Case Lombardi & Pettit:

Case Lombardi & Pettit
737 Bishop Street, Suite 2600
Honolulu, Hawaii 96813
Attention: Dennis Lombardi, Esq.
Esther Han *Roberts*, Esq.

2. Amendment to Exhibit 3 to Agreement. Exhibit 3 of the Agreement is hereby amended and replaced in its entirety with the Exhibit 3 attached hereto and incorporated herein by this reference.

3. No Other Amendments. In all other respects, the Agreement, except as amended by this Amendment, is unamended and unmodified and is in full force and effect.

4. Counterparts. The parties hereto agree that this Amendment may be executed in counterparts, each of which shall be deemed an original, and said counterparts shall together constitute one and the same instrument, binding all of the parties hereto, notwithstanding that all of the parties are not signatories to the original or the same counterparts. For all purposes, including, without limitation, the delivery of this Amendment, duplicate, unexecuted and unacknowledged pages of the counterparts may be discarded and the remaining pages assembled as one document.

[Signature Page Follows]

IN WITNESS WHEREOF, the parties hereto have executed this Agreement effective on the day and year first above written.

CITY AND COUNTY OF HONOLULU

By _____
Tim Steinberger
For Director, Department of Environmental Services,
City and County of Honolulu

APPROVED AS TO FORM
AND LEGALITY

_____
Deputy Corporation Counsel

KALAKAUA RELIEF LINE, LLC, a Hawaii limited liability company

By ALLURE WAIKIKI MARKETING, LLC, a Delaware limited liability company
Its Manager

By _____
James J. Dow
Its Vice President

Exhibit 3

See attached.

Exhibit "A"

	Members	Total Capital Contributions	Membership Interest	E.S.D.U. to be Issued per Member Based on Total Qualified Construction Costs
1.	Allure Waikiki Marketing, LLC (formerly FRC Waikiki, LLC) (Allure Waikiki Project)	$2,412,196.93	41.22%	400.98
2.	Sam House Development, LLC (1391 Kapiolani Project)	$929,724.14	15.89%	167.79
3.	Samkoo Pacific, LLC (1625 Kapiolani Project)	$709,971.16	12.13%	128.13
4.	1830 Kapiolani, LLC (1830 Kapiolani Project)	$587,193.98	10.03%	97.61
5.	1617 Fern LLC (1700 Kalakaua Project)	$1,142,141.80	19.52%	189.86
6.	Island Paradise Investments Limited Partnership (1723 Kalakaua Project)	$70,997.23	1.21%	12.81
TOTAL		$5,852,225.24	100%	997.18

I. PRECONSULTATION LETTERS

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Pacific Islands Fish and Wildlife Office
300 Ala Moana Boulevard, Room 3-122
Honolulu, Hawai'i 96850

In Reply Refer To:
2015-TA-0075

DEC 22 2014

Mr. Lowell K. W. Chun
President, Pacific Catalyst, LLC
1296 Kapi'olani Blvd., Ste. 1907
Honolulu, Hawai'i 96814

Subject: Technical Assistance for the 1631 Kapi'olani Boulevard Multifamily Housing Project, Honolulu, O'ahu

Dear Mr. Chun:

The U.S. Fish and Wildlife Service (Service) received your letter on November 26, 2014, requesting our comments on the proposed 1631 Kapi'olani Boulevard multifamily housing project, located in Honolulu, O'ahu [TMKs: 2-3-041:009 and 2-3-041:006]. We understand Pacific Catalyst LLC, is in collaboration with Hawai'i Planning, LLC, on behalf of SamKoo Pacific, LLC, for the preparation of a Chapter 343, Hawai'i Revised Statutes (HRS), Draft Environmental Assessment for the proposed project. A total of 485 units are expected to be built on the subject parcels, including 88 studios, 176 one-bedroom, 177 two-bedroom, and 44 three-bedroom units.

We have reviewed the information you provided and pertinent information in our files, including data compiled by the Hawai'i Biodiversity and Mapping Program as it pertains to listed species and designated critical habitat. There are no federally listed species or designated critical habitat within the immediate vicinity of the proposed project. However, our records indicate there is a probability that white terns (*Gygis alba*), protected by the Migratory Bird Treaty Act (MBTA) (16 U.S.C. §§ 703–712), may nest or transit through the area. We offer you the following recommendations to assist you with your project.

White terns often nest in urban parks and residential areas from Hawai'i Kai to Hickam Air Force Base. White terns do not build nests, instead they lay a single egg directly on a ledge, tree branch, or other suitable location. The egg will hatch after approximately 35 days, after which it takes 45 days for the chick to be mature enough to leave the nest on its own. If tree trimming becomes part of your project, please examine all trees slated to be cut to determine if there are white terns nesting in them. Similarly, we recommend examining any structures slated for demolition. Signs that white fairy terns are present include accumulation of white feathers or white droppings underneath the tree or structure. If you observe presence of nesting white terns, please contact our office for further guidance.

TAKE PRIDE® IN AMERICA

Hawai'i's native ecosystems are heavily impacted by exotic invasive plants. Whenever possible we recommend using native plants for landscaping purposes. If native plants do not meet the landscaping objectives, we recommend choosing species that are thought to have a low risk of becoming invasive. The following websites are good resources to use when choosing landscaping plants: Pacific Island Ecosystems at Risk (http://www.hear.org/Pier/), Hawai'i-Pacific Weed Risk Assessment (http://www.botany.hawaii.edu/faculty/daehler/wra/full_table.asp) and Global Compendium of Weeds (www.hear.org/gcw).

We hope this information assists you in developing a comprehensive and thorough Environmental Assessment. We appreciate your efforts to conserve Hawai'i's native species. If you have questions regarding these comments, please contact Jiny Kim, Fish and Wildlife Biologist (phone: 808-792-9400, email: jiny_kim@fws.gov).

Sincerely,

Sy Browning, Acting

for Aaron Nadig
Island Team Manager
O'ahu, Kaua'i, North Western Hawaiian Islands,
and American Samoa

Best Management Practices (BMPs) for In-Water Work

April 7, 2010

NMFS Protected Resources Division recommends implementation of the following BMPs to reduce potential adverse affects on protected marine species. These BMPs are in no way intended to supersede or replace measures required by any other agency including, but not limited to the ACOE, USFWS, USEPA, or NMFS Habitat Conservation Division.

A. Constant vigilance shall be kept for the presence of ESA-listed marine species during all aspects of the proposed action, particularly in-water activities such as deploying the buoys' anchors and mooring lines, boat operations, or diving.

1. The project manager shall designate a competent observer to survey the marine areas adjacent to the proposed action for ESA-listed marine species.
2. Surveys shall be made prior to the start of work each day, and periodically during the day, including prior to resumption of work following any break of more than one half hour.
3. All in-water work will be postponed or halted when ESA-listed marine species are within 50 feet of the proposed work, and will only begin/resume after the animals have voluntarily departed the area. If ESA-listed marine species are noticed after work has already begun, that work may continue only if there is no way for the activity to adversely affect the animal(s).
4. When piloting vessels, vessel operators shall alter course to remain at least 100 yards from whales, and at least 50 yards from other marine mammals and sea turtles.
5. Reduce vessel speed to 10 knots or less when piloting vessels in the proximity of marine mammals and turtles. If practicable, reduce vessel speed to 5 knots or less when piloting vessels in areas of known or suspected turtle activity.
6. If approached by a marine mammal or turtle, put the engine in neutral and allow the animal to pass.
7. Marine mammals and sea turtles should not be encircled or trapped between multiple vessels or between vessels and the shore.
8. Do not attempt to feed, touch, ride, or otherwise intentionally interact with any ESA-listed marine species.

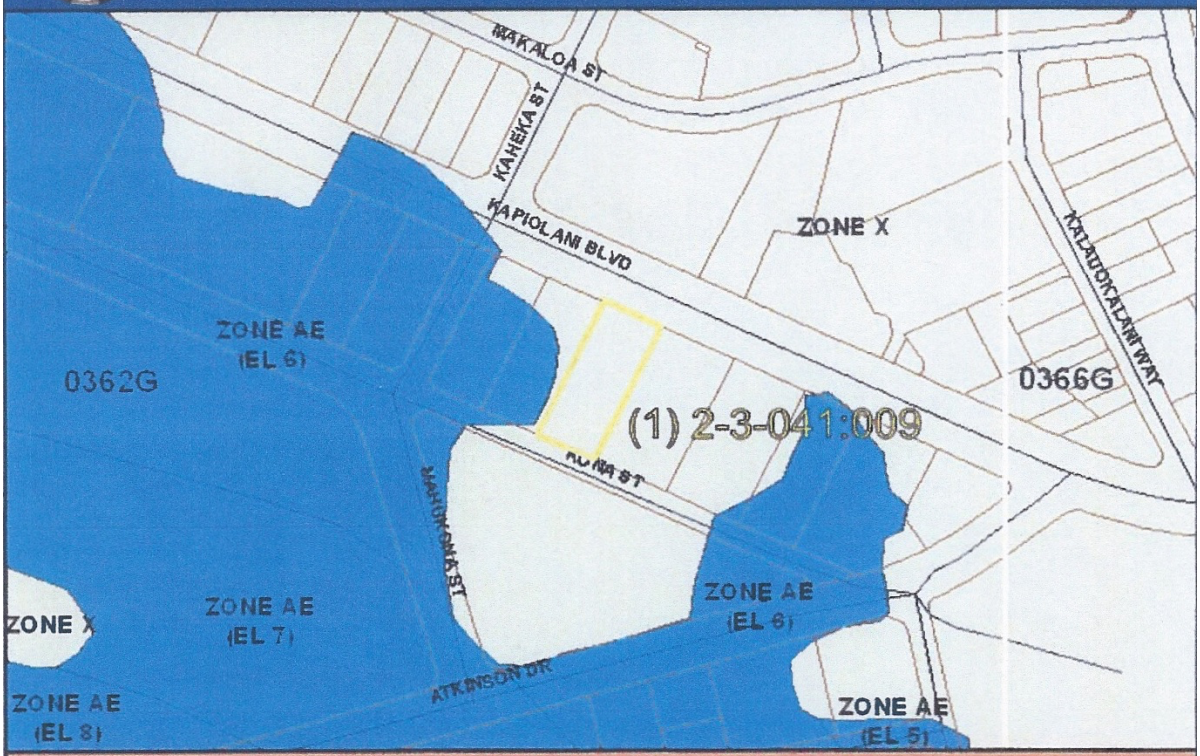
B. No contamination of the marine environment will result from project-related activities.

9. A contingency plan to control petroleum products accidentally spilled during the project will be developed. Appropriate materials to contain and clean potential spills will be stored at the work site, and be readily available.
10. All project-related materials and equipment placed in the water will be free of pollutants. The project manager and heavy equipment operators will perform daily pre-work equipment inspections for cleanliness and leaks. All heavy equipment operations will be postponed or halted should a leak be detected, and will not proceed until the leak is repaired and equipment cleaned.
11. A plan will be developed to prevent debris and other wastes from entering or remaining in the marine environment during the project.

TAKE PRIDE® IN AMERICA

State of Hawaii

FLOOD HAZARD ASSESSMENT REPORT



NATIONAL FLOOD INSURANCE PROGRAM

FLOOD ZONE DEFINITIONS

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD – The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zone A, AE, AH, AO, V, and VE. The Base Flood Elevation (BFE) is the water-surface elevation of the 1% annual chance flood. Mandatory flood insurance purchase applies in these zones:

- **Zone A:** No BFE determined.
- **Zone AE:** BFE determined.
- **Zone AH:** Flood depths of 1 to 3 feet (usually areas of ponding); BFE determined.
- **Zone AO:** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined.
- **Zone V:** Coastal flood zone with velocity hazard (wave action); no BFE determined.
- **Zone VE:** Coastal flood zone with velocity hazard (wave action); BFE determined.
- **Zone AEF:** Floodway areas in Zone AE. The floodway is the channel of stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without increasing the BFE.

NON-SPECIAL FLOOD HAZARD AREA – An area in a low-to-moderate risk flood zone. No mandatory flood insurance purchase requirements apply, but coverage is available in participating communities.

- **Zone XS (X shaded):** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.
- **Zone X:** Areas determined to be outside the 0.2% annual chance floodplain.

OTHER FLOOD AREAS

- **Zone D:** Unstudied areas where flood hazards are undetermined, but flooding is possible. No mandatory flood insurance purchase requirements apply, but coverage is available in participating communities.

PROPERTY INFORMATION

COUNTY:	HONOLULU
TMK NO:	(1) 2-3-041-009
PARCEL ADDRESS:	1630 KONA ST HONOLULU, HI 96814
FIRM INDEX DATE:	NOVEMBER 05, 2014
LETTER OF MAP CHANGE(S):	NONE
FEMA FIRM PANEL(S):	15003C0362G
PANEL EFFECTIVE DATE:	JANUARY 19, 2011

PARCEL DATA FROM:	APRIL 2014
IMAGERY DATA FROM:	MAY 2006

IMPORTANT PHONE NUMBERS

County NFIP Coordinator	
City and County of Honolulu	
Mario Siu-Li, CFM	(808) 768-8098
State NFIP Coordinator	
Carol Tyau-Beam, P.E., CFM	(808) 587-0267

Disclaimer: The Department of Land and Natural Resources (DLNR) assumes no responsibility arising from the use of the information contained in this report. Viewers/Users are responsible for verifying the accuracy of the information and agree to indemnify the DLNR from any liability, which may arise from its use.

If this map has been identified as 'PRELIMINARY' or 'UNOFFICIAL', please note that it is being provided for informational purposes and is not to be used for official/legal decisions, regulatory compliance, or flood insurance rating. Contact your county NFIP coordinator for flood zone determinations to be used for compliance with local floodplain management regulations.

January 16, 2015

Mr. Aaron Nadig
Island Team Manager
Oahu, Kauai, North Western Hawaiian Islands,
and American Samoa
Fish and Wildlife Service
Pacific Islands Fish and Wildlife Office
300 Ala Moana Boulevard, Room 3-122
Honolulu, Hawaii 96850

Subject: Pre-Consultation – Draft Environmental Assessment (EA)
Kapiolani Residence – 1631 Kapiolani Boulevard, Honolulu, Hawaii
TMK: 2-3-041:009 & 2-3-041:006

Dear Mr. Nadig:

Thank you for your letter dated December 22, 2014 commenting on the proposed Kapiolani Residence project. Pursuant to your recommendations, we will be careful to inspect the existing trees and structures at the project site for signs of white terns, their eggs, or young prior to conducting onsite demolition and construction activities. We will also take care to use native plant material or plants with low risk of becoming invasive in landscaping at the site, and thank you for referring us to the plant material resources cited in your letter.

A copy of the Draft Environmental Assessment will be provided to your office.

Thank you, again. We appreciate your participation in the EA process.

Sincerely,

Lowell K.W. Chun
Pacific Catalyst LLC
Phone: 808.386.9596
Email: pacificcatalyst@gmail.com

DAVID Y. IGE
GOVERNOR OF HAWAII

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

JESSE K. SOUKI
FIRST DEPUTY

WILLIAM M. TAM
DEPUTY DIRECTOR - WATER

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

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

December 22, 2014

Mr. Lowell K. W. Chun
1296 Kapiolani Blvd., Ste. 1907
Honolulu, HI 96814

via email to: pacificcatalyst@gmail.com

Dear Mr. Chun,

SUBJECT: Pre-Assessment Consultation for Draft Environmental Assessment, Kapiolani Residence – 1631 Kapiolani Boulevard, Honolulu, Hawaii 96814

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 & 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 (808) 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

RECEIVED
LAND DIVISION
2014 DEC -9 AM 9:46
DEPT. OF LAND & NATURAL RESOURCES
STATE OF HAWAII

December 2, 2014

MEMORANDUM

TO: From:

DLNR Agencies:
__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:~~ To: Russell Y. Tsuji, Land Administrator
SUBJECT: Pre-Assessment Consultation for Draft Environmental Assessment, Kapiolani Residence – 1631 Kapiolani Boulevard, Honolulu
LOCATION: 1631 Kapiolani Boulevard, Honolulu, Hawaii 96814; Tax Map Keys: 2-3-041:009 & 2-3-041:006; Honolulu, Oahu, Hawaii
APPLICANT: Pacific Catalyst LLC, in collaboration with Hawaii Planning, LLC, on behalf of SamKoo Pacific, LLC

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

Please submit any comments by December 22, 2014. 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: [signature]
Print Name: LISA HADWA
Date: 12-4-12

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

'14 DEC 03 AM 10:05 ENGINEERING

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

December 2, 2014

2014 DEC 19 PM 2:49

MEMORANDUM

~~TO~~: FR:

DLNR Agencies:
__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 Draft Environmental Assessment, Kapiolani Residence – 1631 Kapiolani Boulevard, Honolulu
LOCATION: 1631 Kapiolani Boulevard, Honolulu, Hawaii 96814; Tax Map Keys: 2-3-041:009 & 2-3-041:006; Honolulu, Oahu, Hawaii
APPLICANT: Pacific Catalyst LLC, in collaboration with Hawaii Planning, LLC, on behalf of SamKoo Pacific, LLC

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

Please submit any comments by December 22, 2014. 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: 12/12/14

DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION

LD/ Russell Y. Tsuji
REF: Pre-Assessment Consultation for DEA for Kapiolani Residence – 1631 Kapiolani Blvd. Oahu.080

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 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) 270-7253 of the County of Maui, Department of Planning.

( ) Mr. Stanford Iwamoto at (808) 241-4896 of the County of Kauai, Department of Public Works.

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

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

( ) Additional Comments: _____

( ) Other: _____

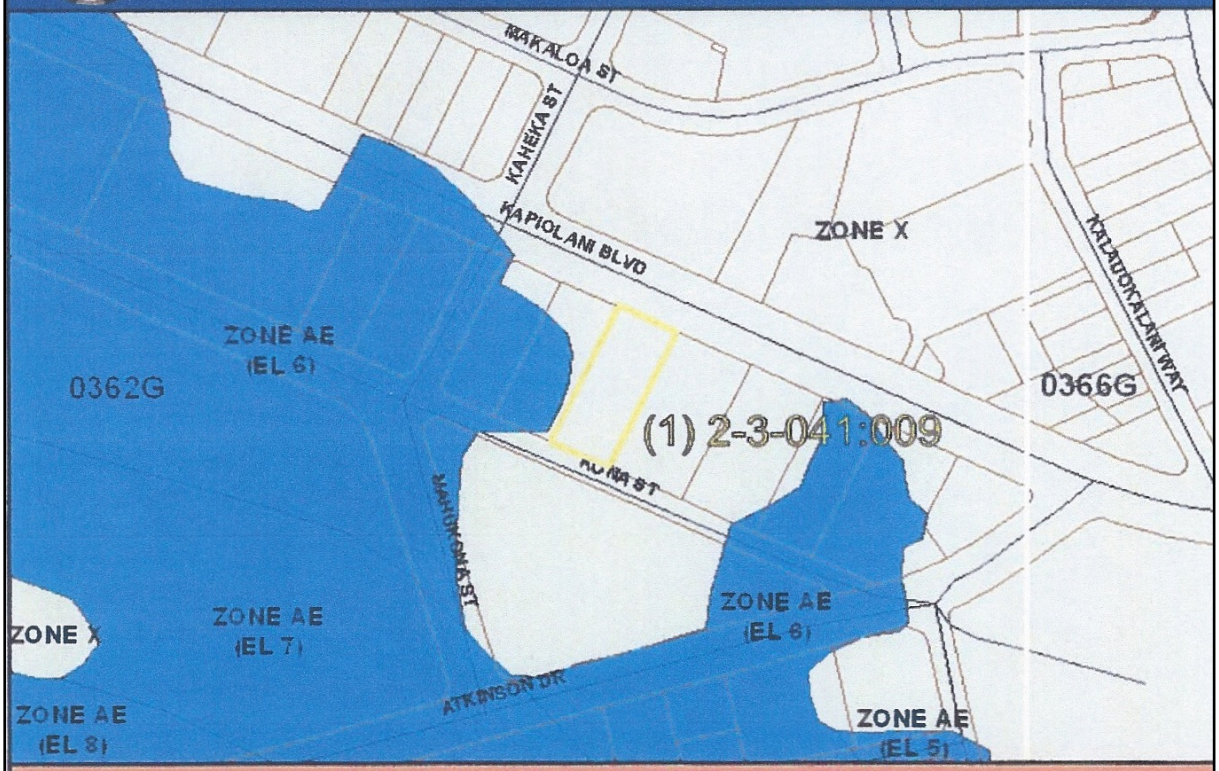
Should you have any questions, please call Mr. Dennis Imada of the Planning Branch at 587-0257.

Signed: _____
CARTY S. CHANG, CHIEF ENGINEER

Date: 12/18/14

State of Hawaii

FLOOD HAZARD ASSESSMENT REPORT



NATIONAL FLOOD INSURANCE PROGRAM

FLOOD ZONE DEFINITIONS

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD – The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zone A, AE, AH, AO, V, and VE. The Base Flood Elevation (BFE) is the water-surface elevation of the 1% annual chance flood. Mandatory flood insurance purchase applies in these zones:

- **Zone A:** No BFE determined.
- **Zone AE:** BFE determined.
- **Zone AH:** Flood depths of 1 to 3 feet (usually areas of ponding); BFE determined.
- **Zone AO:** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined.
- **Zone V:** Coastal flood zone with velocity hazard (wave action); no BFE determined.
- **Zone VE:** Coastal flood zone with velocity hazard (wave action); BFE determined.
- **Zone AEF:** Floodway areas in Zone AE. The floodway is the channel of stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without increasing the BFE.

NON-SPECIAL FLOOD HAZARD AREA – An area in a low-to-moderate risk flood zone. No mandatory flood insurance purchase requirements apply, but coverage is available in participating communities.

- **Zone XS (X shaded):** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.
- **Zone X:** Areas determined to be outside the 0.2% annual chance floodplain.

OTHER FLOOD AREAS

- **Zone D:** Unstudied areas where flood hazards are undetermined, but flooding is possible. No mandatory flood insurance purchase requirements apply, but coverage is available in participating communities.

PROPERTY INFORMATION

COUNTY:	HONOLULU
TMK NO:	(1) 2-3-041-009
PARCEL ADDRESS:	1630 KONA ST HONOLULU, HI 96814
FIRM INDEX DATE:	NOVEMBER 05, 2014
LETTER OF MAP CHANGE(S):	NONE
FEMA FIRM PANEL(S):	15003C0362G
PANEL EFFECTIVE DATE:	JANUARY 19, 2011

PARCEL DATA FROM:	APRIL 2014
IMAGERY DATA FROM:	MAY 2006

IMPORTANT PHONE NUMBERS

County NFIP Coordinator	
City and County of Honolulu	
Mario Siu-Li, CFM	(808) 768-8098
State NFIP Coordinator	
Carol Tyau-Beam, P.E., CFM	(808) 587-0267

Disclaimer: The Department of Land and Natural Resources (DLNR) assumes no responsibility arising from the use of the information contained in this report. Viewers/Users are responsible for verifying the accuracy of the information and agree to indemnify the DLNR from any liability, which may arise from its use.

If this map has been identified as 'PRELIMINARY' or 'UNOFFICIAL', please note that it is being provided for informational purposes and is not to be used for official/legal decisions, regulatory compliance, or flood insurance rating. Contact your county NFIP coordinator for flood zone determinations to be used for compliance with local floodplain management regulations.

January 16, 2015

Mr. Russell Y. Tsuji
Land Administrator
State of Hawaii
Department of Land and Natural Resources
Land Division
Post Office Box 621
Honolulu, Hawaii 96809

Subject: Pre-Consultation – Draft Environmental Assessment (EA)
Kapiolani Residence – 1631 Kapiolani Boulevard, Honolulu, Hawaii
TMK: 2-3-041:009 & 2-3-041:006

Dear Mr. Tsuji:

Thank you for your letter dated December 22, 2014 commenting on the proposed Kapiolani Residence project. We have noted your comment that the project site is in Flood Insurance Rate Map (FIRM) Zone X.

A copy of the Draft Environmental Assessment will be provided to your office.

Thank you, again. We appreciate your participation in the EA process.

Sincerely,

Lowell K.W. Chun
Pacific Catalyst LLC
Phone: 808.386.9596
Email: pacificcatalyst@gmail.com

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843

December 19, 2014

KIRK CALDWELL, MAYOR

DUANE R. MIYASHIRO, Chair
ADAM C. WONG, Vice Chair
MAHEALANI CYPHER
THERESIA C. McMURDO
DAVID C. HULIHEE

ROSS S. SASAMURA, Ex-Officio
FORD N. FUCHIGAMI, Ex-Officio

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

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

Mr. Lowell K.W. Chun
1296 Kapiolani Boulevard, Suite 1907
Honolulu, Hawaii 96817

Dear Mr. Chun:

Subject: Your Letter Dated November 25, 2014 Requesting Comments on the Draft Environmental Assessment Pre-Consultation for Kapiolani Residence
1631 Kapiolani Boulevard - Tax Map Key: 2-3-041: 009, 006

Thank you for your letter regarding the proposed 485-unit residential high-rise development.

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

When water is made available, the applicant will be required to pay our Water System Facilities Charges for resource development, transmission and daily storage.

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.

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

The on-site fire protection requirements should be coordinated with the Fire Prevention Bureau of the Honolulu Fire Department.

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

Very truly yours,

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

Water for Life . . . Ka Wai Ola

January 16, 2015

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

Subject: Pre-Consultation – Draft Environmental Assessment (EA)
Kapiolani Residence – 1631 Kapiolani Boulevard, Honolulu, Hawaii
TMK: 2-3-041:009 & 2-3-041:006

Dear Mr. Lau:

Thank you for your letter dated December 19, 2014 commenting on the proposed Kapiolani Residence project. We have noted your assessment of adequacy of the water system in relation to our project and will continue to work with your staff through actual connection and service. The project will employ water conservation measures as you have recommended in the design and installation of improvements within our buildings and grounds, will employ equipment to reduce water pressure spikes. We have begun coordination with the Fire Department as well.

A copy of the Draft Environmental Assessment will be provided to your office.

Thank you, again. We appreciate your participation in the EA process.

Sincerely,

Lowell K.W. Chun
Pacific Catalyst LLC
Phone: 808.386.9596
Email: pacificcatalyst@gmail.com

DEPARTMENT OF COMMUNITY SERVICES
CITY AND COUNTY OF HONOLULU
715 SOUTH KING STREET, SUITE 311 ● HONOLULU, HAWAII 96813 ● AREA CODE 808 ● PHONE: 768-7762 ● FAX: 768-7792

KIRK CALDWELL
MAYOR

GARY K. NAKATA
ACTING DIRECTOR

December 12, 2014

Mr. Lowell K.W. Chun
President
Pacific Catalyst LLC
1296 Kapiolani Boulevard, Suite 1907
Honolulu, Hawaii 96814

Dear Mr. Chun:

SUBJECT: Pre-Assessment Consultation for Draft Environmental Assessment
Kapiolani Residence – 1631 Kapiolani Boulevard, Honolulu, Hawaii
Tax Map Keys: 2-3-041:009 and 2-3-041:006, Oahu, Hawaii

We have reviewed your letter dated November 25, 2014, and the enclosed documents regarding this Pre-Assessment Consultation for Draft Environmental Assessment for the Kapiolani Residence – 1631 Kapiolani Boulevard, Honolulu, Hawaii.

Our review of the documents indicates that the proposed project will have no adverse impacts on any Department of Community Services' activities or projects at this time.

Thank you for providing us with the opportunity to comment on this matter.

Sincerely,

Gary K. Nakata
Acting Director

GKN:sgk

January 16, 2015

Mr. Gary K. Nakata
Acting Director
Department of Community Services
City and County of Honolulu
715 South King Street
Suite 311
Honolulu, Hawaii 96813

Subject: Pre-Consultation – Draft Environmental Assessment (EA)
Kapiolani Residence – 1631 Kapiolani Boulevard, Honolulu, Hawaii
TMK: 2-3-041:009 & 2-3-041:006

Dear Mr. Nakata:

Thank you for your letter dated December 12, 2014 commenting on the proposed Kapiolani Residence project. We have noted your assessment that the proposed project will not adversely impact your activities or services.

A copy of the Draft Environmental Assessment will be provided to your office.

Thank you, again. We appreciate your participation in the EA process.

Sincerely,

Lowell K.W. Chun
Pacific Catalyst LLC
Phone: 808.386.9596
Email: pacificcatalyst@gmail.com

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

KIRK CALDWELL
MAYOR

ROBERT J. KRONING, P.E.
DIRECTOR

MARK YONAMINE, P.E.
DEPUTY DIRECTOR

December 15, 2014

Pacific Catalyst, LLC/Hawaii Planning, LLC
1296 Kapiolani Boulevard, Suite 1907
Honolulu, Hawaii 96814

Attn: Lowell K.W. Chun

Dear Mr. Chun:

Subject: Pre-Assessment Consultation for Draft Environmental Assessment
Kapiolani Residence – 1631 Kapiolani Boulevard, Honolulu, Hawaii 96814
Tax Map Keys: 2-3-041:009 & 2-3-041:006
Honolulu, Oahu, Hawaii

The Department of Design and Construction does not have comments to offer on the pre-assessment consultation.

Thank you for the opportunity to review and comment. Should there be any questions, please contact me at 768-8480.

Sincerely,

for M. Yonamine

Robert J. Kroning, P.E.
Director

RJK: cf (589781)

January 16, 2015

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

Subject: Pre-Consultation – Draft Environmental Assessment (EA)
Kapiolani Residence – 1631 Kapiolani Boulevard, Honolulu, Hawaii
TMK: 2-3-041:009 & 2-3-041:006

Dear Mr. Kroning:

Thank you for your letter dated December 15, 2014 commenting on the proposed Kapiolani Residence project. We have noted that your department has no comments at this time.

A copy of the Draft Environmental Assessment will be provided to your office.

Thank you, again. We appreciate your participation in the EA process.

Sincerely,

Lowell K.W. Chun
Pacific Catalyst LLC
Phone: 808.386.9596
Email: pacificcatalyst@gmail.com

PARTMENT OF FACILITY MAINTENANCE

CITY AND COUNTY OF HONOLULU

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

KIRK CALDWELL
MAYOR

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

EDUARDO P. MANGLALLAN
DEPUTY DIRECTOR

IN REPLY REFER TO:
DRM 14-1075

December 17, 2014

Mr. Lowell K.W. Chun
President
Pacific Catalyst, LLC
1296 Kapiolani Boulevard, Suite 1907
Honolulu, Hawaii 96814

Dear Mr. Chun:

SUBJECT: Pre-Assessment Consultation for Draft Environmental Assessment
Kapiolani Residence–1631 Kapiolani Boulevard, Honolulu, HI 96814
Tax Map Keys: 2-3-041:009 &
2-3-041:006, Honolulu, Oahu, Hawaii

Thank you for the opportunity to review and provide our input regarding your letter dated November 25, 2014, on the above subject project.

The following are our comments and concerns:

- In paragraph one, verify the address of the project location -- 803 Waimanu Street? Should it be 1631 Kapiolani Boulevard?

- The subject project abuts Kapiolani Boulevard, which is City-owned and maintained by the City, while Kona Street is private, and is maintained by the owners of Ala Moana Shopping Center.

- The City has two (2) Drainage Easements in the vicinity of 1631 Kapiolani Boulevard. (See attached Tax Map Key: 2-3-041 -- Drainage Easements are highlighted in green):

- Kapiolani Boulevard Relief Drain, Parcel 1 (Civil No. 10563, dated 10/27/69) -- this underground drainage feature runs underground from Kapiolani Boulevard to Kona Street, abutting TMK: 2-3-041: 006).

- Kapiolani Boulevard Relief Drain, Parcel 2 & 3 (Doc. No. 312966, dated 8/1/63) -- this underground drainage feature runs longitudinal down Kona Street fronting TMK: 2-3-041:006 and 009.

- Provide necessary Best Management Practices for the project site including the catch basin located along Kapiolani Boulevard.

- All work to be performed within the City's Kapiolani Boulevard right-of-way, which abuts the subject project, shall require the proper City permits (Street Usage Permit, Grading/Trenching Permit, etc.).

- All work within the City road's right-of-way shall be to City Standards.

- All damages to existing City's infrastructure shall be repaired or replaced in-kind using the same or alternate City approved material(s), with all work to be accepted by the City at the developer/owner's expense.

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

Sincerely,

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

Attachments

January 10, 2015

Mr. Ross Sasamura, P.E.
Director
Department of Facilities Maintenance
City and County of Honolulu
1000 Uluohia Street
Suite 215
Kapolei, Hawaii 96707

Subject: Pre-Consultation – Draft Environmental Assessment (EA)
Kapiolani Residence – 1631 Kapiolani Boulevard, Honolulu, Hawaii
TMK: 2-3-041:009 & 2-3-041:006

Dear Mr. Sasamura:

Thank you for your letter dated December 17, 2014 commenting on the proposed Kapiolani Residence project. We have noted your comments in reference to the drainage easements and drain lines. Be assured that we will employ Best Management Practices during site development, construction, and cleanup, will secure all required permits pertinent to these activities, and work with your department wherever coordination or cooperative effort is required. Finally, the project address is 1631 Kapiolani Boulevard. We apologize for the misreference in the original preconsultaion request letter,

A copy of the Draft Environmental Assessment will be provided to your office.

Thank you, again. We appreciate your participation in the EA process.

Sincerely,

Lowell K.W. Chun
Pacific Catalyst LLC
Phone: 808.386.9596
Email: pacificcatalyst@gmail.com

DEPARTMENT OF PARKS & RECREATION

CITY AND COUNTY OF HONOLULU

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

KIRK CALDWELL
MAYOR

MICHELE K. NEKOTA
DIRECTOR

JEANNE C. ISHIKAWA
DEPUTY DIRECTOR

December 15, 2014

Mr. Lowell K. W. Chun, President
Pacific Catalyst, LLC
1296 Kapiolani Blvd., Suite 1907
Honolulu, Hawaii 96814

Dear Mr. Chun:

SUBJECT: Pre-Assessment Consultation- Draft Environmental Assessment
Proposed Multi-Family Project Located at 803 Waimano Street
Tax Map Keys: 2-3-04:009 and 2-3-041:006

Thank you for the opportunity to review and comment at the pre-consultation stage of a Draft Environmental Assessment for the subject 485 unit multi-family residential project.

The Department of Parks and Recreation requests that the Draft Environmental Assessment include as much detail as possible as to how the developer Sam Koo Pacific, LLC will be addressing the requirements of the City's Park Dedication Ordinance.

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

Sincerely,

Michele K Nekota

Michele K. Nekota
Director

MKN:jr
(589809)

cc: Dennis Silva, Jr., Hawaii Planning, LLC

January 16, 2015

Ms. Michele K. Nekota
Director
Department of Parks and Recreation
City and County of Honolulu
650 South King Street
11th Floor
Honolulu, Hawaii 96813

Subject: Pre-Consultation – Draft Environmental Assessment (EA)
Kapiolani Residence – 1631 Kapiolani Boulevard, Honolulu, Hawaii
TMK: 2-3-041:009 & 2-3-041:006

Dear Ms. Nekota:

Thank you for your letter dated December 15, 2014 commenting on the proposed Kapiolani Residence project. We have noted your request and are happy to reply that the Environmental Assessment outlines how Kapiolani Residence, a project configured to heavily emphasize the provision of affordable housing in a Central Honolulu location, proposes to meet recreation needs of its future occupants.

A copy of the Draft Environmental Assessment will be provided to your office.

Thank you, again. We appreciate your participation in the EA process.

Sincerely,

Lowell K.W. Chun
Pacific Catalyst LLC
Phone: 808.386.9596
Email: pacificcatalyst@gmail.com

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

TP11/14-590343R

December 26, 2014

Mr. Lowell K.W. Chun
President
Pacific Catalyst LLC
1296 Kapiolani Boulevard, Suite 1907
Honolulu, Hawaii 96814

Dear Mr. Chun:

SUBJECT: Pre-Assessment Consultation for Draft Environmental Assessment (DEA) for Kapiolani Residence, Honolulu, Oahu, Hawaii

In response to your letter dated November 25, 2014, we have the following comments:

1. The DEA should include a multi-modal Transportation Demand Management plan for the project that encourages walking, bicycling and use of transit.

2. The design of the project should be consistent with the City's Complete Streets ordinance. Consideration should be given to the connectivity between modes such as the availability and quality of pedestrian and cycling access to transit facilities.

3. On-site bicycle facilities, including guest bicycle parking and secure bicycle parking for residents, should be anticipated and accommodated.

4. All access driveways to the project site should be designed for the safety of pedestrians and bicyclists to traverse. For safety and accessibility, drop driveways are recommended.

5. All parking needs for the proposed facility (residents and visitors) should be handled off-street (on-site).

6. All loading and unloading needs should be handled on-site, rather than on City roadways.

7. The area Neighborhood Board, as well as the area residents, businesses, emergency personnel, Oahu Transit Services, Inc. (TheBus), 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.

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

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

For your information, this project is located adjacent to the rail extension route to the University of Hawaii. We have forwarded your letter to the Honolulu Authority for Rapid Transportation. They will review your documents and respond to you directly.

Thank you for the opportunity to review this matter. Should you have any questions, please contact Renee Yamasaki of my staff at 768-8383.

Very truly yours,

for Michael D. Formby
Director

January 16, 2015

Mr. Michael Formby
Director
Department of Transportation Services
City and County of Honolulu
650 South King Street
11th Floor
Honolulu, Hawaii 96813

Subject: Pre-Consultation – Draft Environmental Assessment (EA)
Kapiolani Residence – 1631 Kapiolani Boulevard, Honolulu, Hawaii
TMK: 2-3-041:009 & 2-3-041:006

Dear Mr. Formby:

Thank you for your letter dated December 26, 2014 commenting on the proposed Kapiolani Residence project. We have noted your suggestions and believe that you'll find many of your areas of interest addressed in the Draft Environmental Assessment. For instance, our traffic analysis, which guided several of the project's design decisions, was a multi-modal analysis, the findings of which influenced project circulation elements.

The project includes generous allowances for pedestrian and bicycle circulation. Pedestrian accommodations and bicycle storage facilities are also integrated into the fabric of design at the street level. The project's primary vehicular accessway has been designed and configured to promote safety for both vehicular and non-vehicular traffic, and all required parking and loading spaces are accommodated onsite.

While it is not possible to ensure access to transit facilities that may be located some distance from the site, project design has created safe and unimpeded access for pedestrians and bicycles within the boundaries of its site. We anticipate that if other projects provide similar accommodations, safe, pleasant, and seamless access to transit facilities can be accomplished along the lengths of Kapiolani Boulevard and Kona Street.

Finally, we have introduced this project to the Ala Moana/Kakaako Neighborhood Board and will initiate and maintain communications with affected parties and pertinent agencies as we move forward, will secure all needed permits, and schedule construction activity to emphasize off-peak traffic hours to minimize traffic inconveniences and optimize the efficiency and safety of onsite construction activity.

A copy of the Draft Environmental Assessment will be provided to your office.

Thank you, again. We appreciate your participation in the EA process.

Sincerely,

Lowell K.W. Chun
Pacific Catalyst LLC

HART

HONOLULU AUTHORITY for RAPID TRANSPORTATION

IN REPLY REFER TO:
CMS-AP00ENV-00474

Daniel A. Grabauskas
EXECUTIVE DIRECTOR AND CEO

BOARD OF DIRECTORS

Ivan M. Lui-Kwan, Esq.
CHAIR

Donald G. Horner
VICE CHAIR

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Robert Bunda
Michael D. Formby
Ford N. Fuchigami
William "Buzz" Hong
Keslie W.K. Hui
Damien T.K. Kim
Carrie K.S. Okinaga, Esq.

January 9, 2015

Mr. Lowell K. W. Chun, President
Pacific Catalyst LLC
1296 Kapiolani Boulevard
Suite 1907
Honolulu, Hawaii 96814

Dear Mr. Chun:

Subject: Pre-Assessment Consultation for Draft Environmental Assessment
Kapiolani Residence – 1631 Kapiolani Boulevard
Honolulu, Hawaii 96814
Tax Map Keys: 2-3-041: 009 Por. and 2-3-041: 006 Por.
Honolulu, Oahu, Hawaii

Thank you for providing the Honolulu Authority for Rapid Transportation (HART) with the opportunity to comment on the proposed 485-unit multi-family housing project at the above-stated location.

Please note that the Honolulu Rail Transit Project (HRTP) extension as documented in the Final Environmental Impact Statement (FEIS) runs through the above-stated property. The Locally Preferred Alternative identified in HART's FEIS includes an extension that "would connect to the current Project at Ala Moana Center and then veer mauka to follow Kapiolani Boulevard to University Avenue" (FEIS 2-49). HART has not conducted planning or environmental assessments of the rail extensions, so the exact location of the future guideway is subject to change. HART has also not yet determined a schedule for rail extensions.

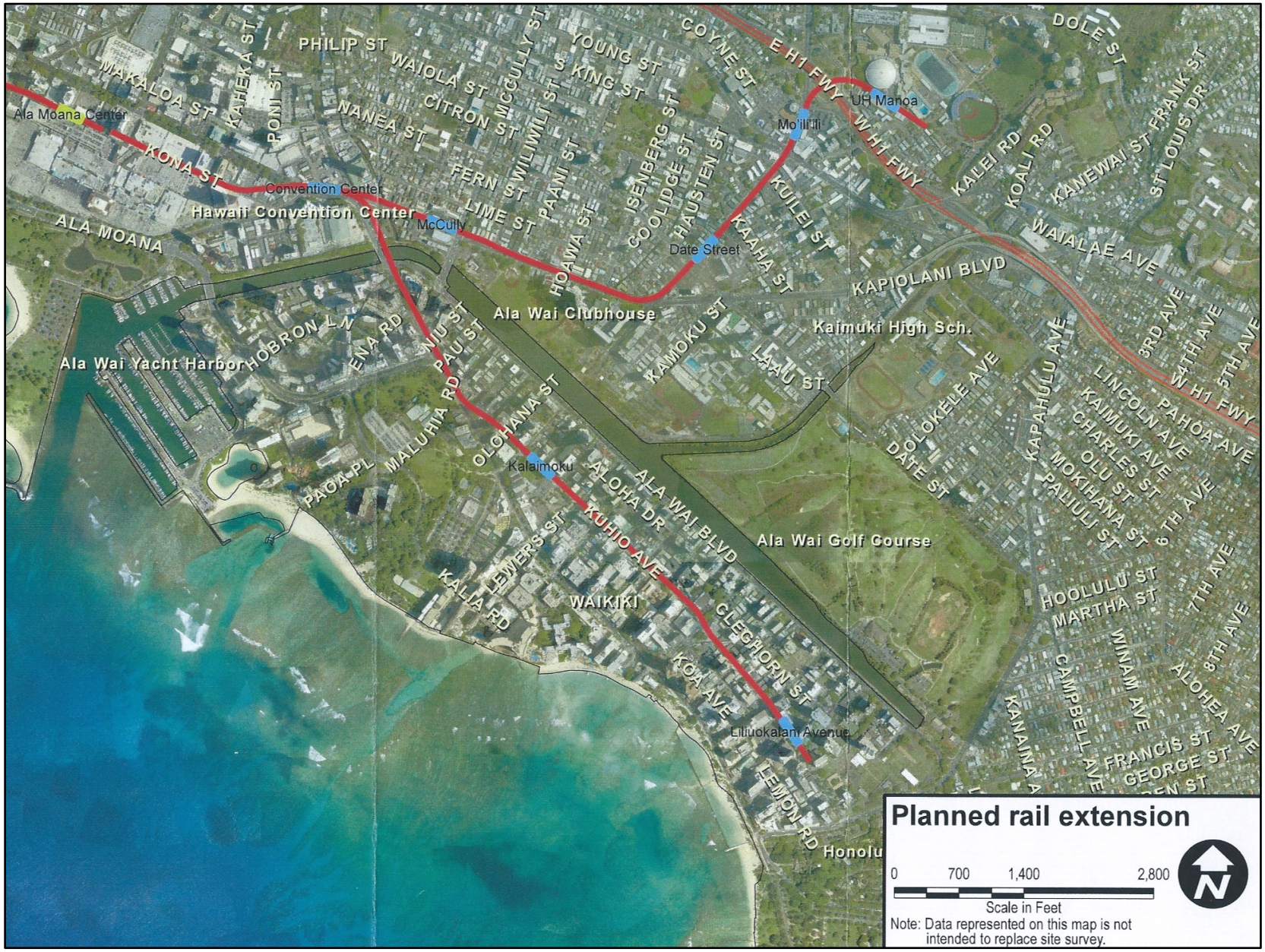
Please contact Ms. Aki Marceau, Land Use and Sustainability Manager, at amarceau@honolulu.gov or 768-6177, for any questions or concerns.

Sincerely,

Daniel A. Grabauskas
Executive Director and CEO

Attachment: HART Planned Rail Extension FEIS

CITY AND COUNTY OF HONOLULU, Alii Place, Suite 1700, 1099 Alakea Street, Honolulu, Hawaii 96813
Phone: (808)768-6159 Fax: (808)768-5110 www.honolulutransit.org


Planned rail extension
0
700
1,400
2,800
Scale in Feet
Note: Data represented on this map is not intended to replace site survey.
Ala Moana Center
KONA ST
MAKALOA ST
KAHEKA ST
PONI ST
PHILIP ST
WAIOLA ST
NANEA ST
CITRON ST
McCULLY ST
S KING ST
YOUNG ST
COYNE ST
E H1 FWY
W H1 FWY
DOLE ST
UH Manoa
Mo'ili'ili
KALEI RD
KOALI RD
KANEWAI ST
FRANK ST
ST LOUIS DR
WAIALAE AVE
Convention Center
Hawaii Convention Center
ALA MOANA
FERN ST
LIME ST
PAANI ST
WILIWILI ST
HOAWA ST
ISENBERG ST
COOLIDGE ST
HAUSTEN ST
McCully
Date Street
KUILEI ST
KAAHA ST
KAPIOLANI BLVD
Ala Wai Clubhouse
Kaimuki High Sch.
KAMOKU ST
LAAU ST
Ala Wai Yacht Harbor
HOBRON LN
ENA RD
NIU ST
PAU ST
MALUHIA RD
PAOA PL
OLOHANA ST
Kalaimoku
ALOHA DR
ALA WAI BLVD
KUHIO AVE
Ala Wai Golf Course
DOLOKEHE AVE
DATE ST
KAPAHULU AVE
LINCOLN AVE
KAIMUKI AVE
CHARLES ST
OLU ST
MOKIHANA ST
PALIULI ST
PAHOA AVE
3RD AVE
4TH AVE
5TH AVE
6TH AVE
7TH AVE
8TH AVE
W H1 FWY
KALIA RD
LEWERS ST
WAIKIKI
CLEGHORN ST
KOA AVE
Liliuokalani Avenue
LEMON RD
HOOLULU ST
MARTHA ST
WINAM AVE
CAMPBELL AVE
ALOHEA AVE
FRANCIS ST
GEORGE ST
KANAINA A
Honolu

January 16, 2015

Mr. Daniel Grabauskas
Executive Director and CEO
Honolulu Authority for Rapid Transit
City and County of Honolulu
Alii Place
Suite 1700
1099 Alakea Street
Honolulu, Hawaii 96813

Subject: Pre-Consultation – Draft Environmental Assessment (EA)
Kapiolani Residence – 1631 Kapiolani Boulevard, Honolulu, Hawaii
TMK: 2-3-041:009 & 2-3-041:006

Dear Mr. Grabauskas:

Thank you for your letter dated January 9, 2015 commenting on the proposed Kapiolani Residence project. We have noted your comment that the Honolulu Rail Transit Project extension as documented in the Final Environmental Impact Statement runs through a portion of the project site. We acknowledge that HART has not conducted planning or environmental assessments of the rail extensions, and that the exact location of the future guideway is subject to change.

A copy of the Draft Environmental Assessment will be provided to your office.

Thank you, again. We appreciate your participation in the EA process.

Sincerely,

Lowell K.W. Chun
Pacific Catalyst LLC
Phone: 808.386.9596
Email: pacificcatalyst@gmail.com

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

KIRK CALDWELL
MAYOR

GEORGE I. ATTA, FAICP
DIRECTOR

ARTHUR D. CHALLACOMBE
DEPUTY DIRECTOR

2014/ELOG-2275(JP)

December 22, 2014

Mr. Lowell Chun, President
Pacific Catalyst LLC
1296 Kapiolani Boulevard, Suite 1907
Honolulu, HI 96814

Dear Mr. Chun:

SUBJECT: Pre-Assessment Consultation for Draft Environmental Assessment
SamKoo Pacific, LLC
1631 Kapiolani Boulevard ("Kapiolani Residence") – Honolulu
Tax Map Key 2-3-41: 6 and 9

This responds to your request, received on November 26, 2014, to evaluate and document possible environmental, social and economic impacts associated with the subject multi-family dwelling project. We understand that the preparation of a Draft Environmental Assessment (DEA) is necessary due to the proposed application of government funds for project financing.

We further understand that the project will involve a total of 485 units, including 88 studios, 176 one-bedroom units, 177 two-bedroom units, and 44 three-bedroom units. The target market will be families earning between 80-120 percent of the average median income for Honolulu.

The site is in the BMX-3 Community Business Mixed Use District, with a maximum zoning height limit of 350 feet. The development of two separate subdivision lots as a unified project normally requires either a lot consolidation or a conditional use permit (minor) for the "joint development" of the lots. We will reserve further comment until we have had an opportunity to review the DEA.

Please contact Mr. Jamie Peirson of our Land Use Permits Division at 768-8011 if you have any questions.

Very truly yours,

George I. Atta, FAICP
Director

cc: Hawaii Planning, LLC
Attn.: Dennis Silva, Jr., AICP

January 16, 2015

Mr. George I. Atta, FAICP
Director
Department of Planning and Permitting
City and County of Honolulu
650 South King Street
7th Floor
Honolulu, Hawaii 96813

Subject: Pre-Consultation – Draft Environmental Assessment (EA)
Kapiolani Residence – 1631 Kapiolani Boulevard, Honolulu, Hawaii
TMK: 2-3-041:009 & 2-3-041:006

Dear Mr. Atta:

Thank you for your letter dated December 22, 2014 commenting on the proposed Kapiolani Residence project. We have noted your observation that the proposed project will occupy what are now two discrete parcels. We intend to consolidated these parcels into a single parcel for the purposes of development.

A copy of the Draft Environmental Assessment will be provided to your office.

Thank you, again. We appreciate your participation in the EA process.

Sincerely,

Lowell K.W. Chun
Pacific Catalyst LLC
Phone: 808.386.9596
Email: pacificcatalyst@gmail.com

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

December 11, 2014

Mr. Lowell Chun, President
Pacific Catalyst, LLC
1296 Kapiolani Boulevard, Suite 1907
Honolulu, Hawaii 96814

Dear Mr. Chun:

Subject: Preassessment Consultation for a Draft Environmental Assessment
Kapiolani Residence
1631 Kapiolani Boulevard
Honolulu, Hawaii 96814
Tax Map Keys: 2-3-041: 006 and 009

In response to your letter dated November 25, 2014, regarding the above-mentioned subject, the Honolulu Fire Department (HFD) requires that the following be complied with:

1. Fire department access roads shall be provided such that any portion of the facility or any portion of an exterior wall of the first story of the building is located not more than 150 feet from fire department access roads as measured by an approved route around the exterior of the building or facility. (National Fire Protection Association [NFPA] 1, Uniform Fire Code [UFC]™, 2006 Edition, Section 18.2.3.2.2.)

   A fire department access road shall extend to within 50 feet of at least one exterior door that can be opened from the outside and that provides access to the interior of the building. (NFPA 1, UFC™, 2006 Edition, Section 18.2.3.2.1.)

2. A water supply approved by the county, capable of supplying the required fire flow for fire protection, shall be provided to all premises upon which facilities or buildings, or portions thereof, are hereafter

constructed, or moved into or within the county. When any portion of the facility or building is in excess of 150 feet from a water supply on a fire apparatus access road, as measured by an approved route around the exterior of the facility or building, on-site fire hydrants and mains capable of supplying the required fire flow shall be provided when required by the AHJ [Authority Having Jurisdiction]. (NFPA 1, UFC™, 2006 Edition, Section 18.3.1, as amended.)

3. The unobstructed width and unobstructed vertical clearance of a fire apparatus access road shall meet county requirements. (NFPA 1, UFC™, 2006 Edition, Section 18.2.3.4.1.1, as amended.)

4. Submit civil drawings to the HFD for review and approval.

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

Sincerely,

Socrates D. Bratakos

SOCRATES D. BRATAKOS
Assistant Chief

SDB/SY:bh

January 16, 2015

Mr. Socrates D. Bratakos
Assistant Chief
Honolulu Fire Department
636 South Street
Honolulu, Hawaii 96813

Subject: Pre-Consultation – Draft Environmental Assessment (EA)
Kapiolani Residence – 1631 Kapiolani Boulevard, Honolulu, Hawaii
TMK: 2-3-041:009 & 2-3-041:006

Dear Mr. Bratakos:

Thank you for your letter dated December 11, 2014 commenting on the proposed Kapiolani Residence project. We have noted your comments. We have consulted with your staff during the planning and design of the project. The project design currently provides the required fire access with the necessary clearances. In addition, it will also provide for the required water access and water pressures. Our drawings will be submitted to the Honolulu Fire Department during the review and approval process.

A copy of the Draft Environmental Assessment will be provided to your office.

Thank you, again. We appreciate your participation in the EA process.

Sincerely,

Lowell K.W. Chun
Pacific Catalyst LLC
Phone: 808.386.9596
Email: pacificcatalyst@gmail.com

POLICE DEPARTMENT

CITY AND COUNTY OF HONOLULU

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

KIRK CALDWELL
MAYOR

LOUIS M. KEALOHA
CHIEF

DAVE M. KAJIHIRO
MARIE A. McCAULEY
DEPUTY CHIEFS

OUR REFERENCE MT-DK

December 17, 2014

Mr. Lowell K. W. Chun, President
Pacific Catalyst, LLC
1296 Kapiolani Boulevard, Suite 1907
Honolulu, Hawaii 96814

Dear Mr. Chun:

This is in response to your letter dated November 25, 2014, requesting comments on a Pre-Assessment Consultation, Draft Environmental Assessment, for the proposed multifamily housing project at 1631 Kapiolani Boulevard.

The Honolulu Police Department has reviewed this project and has concerns regarding the safe flow of vehicular traffic, parking in the project area, and the security of the building.

The limited width and tight turns and curves on Kona Street will not accommodate large construction vehicles to access this thoroughfare. Another concern is the use of Kapiolani Boulevard for large construction vehicles moving material to and from the construction site. Kapiolani Boulevard is a major thoroughfare and traffic remains heavy during both the day and night hours. The use of Kapiolani Boulevard will require a sufficient amount of traffic control devices (e.g., cones, flag persons, special duty officers, etc.) to accommodate the large construction vehicles driving east to west when leaving the construction site and for the delivery of material that will take place during the hours of 8 a.m. and 3 p.m. to avoid peak-hour traffic. These traffic control devices will ensure a safe means of ingress/egress for the large construction vehicles, motorists, and pedestrians in the vicinity.

The developer should also consider providing parking for the tenants who are expected to reside in the project area and also allow for an accessible area designated for large delivery trucks and emergency responders' oversized vehicles (e.g., ambulance and Honolulu Fire Department trucks). Additionally, the property should include safety measures, such as a private security service and a surveillance system, to monitor the site.

If there are any questions, please call Major Roy Sugimoto of District 1 (Central Honolulu) at 723-3327.

Thank you for the opportunity to review this project.

Sincerely,

LOUIS M. KEALOHA
Chief of Police

By Mark Tsuyemura
MARK TSUYEMURA
Management Analyst VI
Office of the Chief

Serving and Protecting With Aloha

January 5, 2015

Chief Louis M. Kealoha
Chief
Honolulu Police Department
801 South Beretania Street
Honolulu, Hawaii 96813

Subject: Pre-Consultation – Draft Environmental Assessment (EA)
Kapiolani Residence – 1631 Kapiolani Boulevard, Honolulu, Hawaii
TMK: 2-3-041:009 & 2-3-041:006

Dear Chief Kealoha:

Thank you for your letter dated December 17, 2014 commenting on the proposed Kapiolani Residence project. We share your concerns for safe traffic flow during the construction period, and agree with the need for effective traffic control measures to ensure the safe ingress and egress of large construction vehicles during the construction period. Construction managers will employ such measures and monitor the safety of both the construction crews and the general public during the entire period, notify your department of special situations needing consultation or coordinated activities, and conduct such coordination whenever needed.

The project will include parking for its future occupants as well as accommodations for large delivery truck and emergency vehicles.

A copy of the Draft Environmental Assessment will be provided to your office.

Thank you, again. We appreciate your participation in the EA process.

Sincerely,

Lowell K.W. Chun
Pacific Catalyst LLC
Phone: 808.386.9596
Email: pacificcatalyst@gmail.com