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GOVERNOR

CRAIG K. HIRAI
EXECUTIVE DIRECTOR

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/04

February 3, 2015

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OFC. OF ENVIRONMENTAL QUALITY CONTROL

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

Dear Director Wooley:

With this letter, the Hawaii Housing Finance and Development Corporation ("HHFDC") hereby transmits the Final Environmental Assessment and Finding of No Significant Impact (FEA-FONSI) for the Ohana Hale situated at TMK (1) 2-3-028: 004, in the Honolulu District on the island of Oahu for publication in the next available edition of the Environmental Notice.

The HHFDC has included copies of public comments and the corresponding responses from the applicant that were received during the 30-day public comment period on the Draft Environmental Assessment and Anticipated Finding of No Significant Impact (DEA-AFONSI).

Enclosed is a completed OEQC Publication Form, two copies of the FEA-FONSI, 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 at 587-0639.

Sincerely,

Craig K. Hirai
Executive Director

Enclosures

c: MJF Development Corp.
Hawaii Planning LLC

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

Project Name: 'Ohana Hale
Island: Oahu
District: Honolulu
TMK: (1) 2-3-028: 004
Permits: Chapter 201H, HRS; Dwelling Unit Revolving Fund (DURF) application; Chapter 343, HRS; ADA Accessibility Requirements; Building permits; Grubbing, Grading/Trenching, Street Usage, and Stockpiling; Sewer Connection; Water Connection; and Water Quality.

Approving Agency:
Hawaii Housing Finance & Development Corporation
677 Queen Street
Honolulu, HI 96813
Contact: Janice Takahashi, (808) 587-0639

Applicant:
MJF Development Corporation
1541 S. Beretania Street, 4th Floor
Honolulu, HI 96818
Contact: Franco Mola, (808) 744-8072

Consultant:
Hawaii Planning, LLC
1001 Bishop Street
American Savings Bank Tower, Suite 2755
Honolulu, HI 96813
Contact: Dennis Silva, Jr., AICP, 808-521-9418, ext. 1005

Status (check one only):

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

‘Ohana Hale is an in-fill development located within the McCully neighborhood of Honolulu, Oahu. The proposed residential condominium will offer 180 studio, one- and two-bedroom units. At least 60 percent of the units (108 units), will be affordable to households earning between 100% and 120% of the HUD area median income. The affordable units will range in price from an estimated $236,250 to $378,113 (in 2014 dollars) and will be subject to statutory resale restrictions.

The project is located at 929 Pumehana Street, Honolulu; TMK: (1) 2-3-028: 004. As an urban in-fill project, it is in close proximity to schools, bus stops, shopping, and services.

‘Ohana Hale
Final Environmental Assessment

929 Pumehana St, Honolulu, Hawai‘i

Chapter 201H Hawai`i Revised Statutes Application

Hawai‘i Housing Finance and Development Corporation
January 2015

MJF Development Corporation

Prepared By:

Hawaii Planning LLC

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ACRONYMS AND ABBREVIATIONS

ADA	Americans with Disability Act
ACM	Asbestos Containing Materials
AMI	Area Median Income - HUD
BWS	City & County of Honolulu, Board of Water Supply
CWB	State of Hawaii, Department of Health, Clean Water Branch
DLNR	State of Hawaii, Department of Land & Natural Resources
DOE	State of Hawaii, Department of Education
DOH	State of Hawaii, Department of Health
DPP	City & County of Honolulu, Department of Planning & Permitting
DTS	City & County of Honolulu, Department of Transportation Services
DURF	Dwelling Unit Revolving Fund
EA	Environmental Assessment
FAR	Floor Area Ratio
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FONSI	Finding of No Significant Impact
HAR	Hawaii Administrative Rules
HECO	Hawaiian Electric Company
HFD	Honolulu Fire Department
HHFDC	Hawaii Housing Finance & Development Corporation
HPD	Honolulu Police Department
HRS	Hawaii Revised Statutes
HUD	United States Department of Housing & Urban Development
LUO	City & County of Honolulu, Land Use Ordinance
MUTCD	The Manual on Uniform Traffic Control Devices
NFIP	National Flood Insurance Program
NRCS	Natural Resource Conservation Service
PMA	Primary Market Area

ACRONYMS AND ABBREVIATIONS (CONTINUED)

PUC	Primary Urban Center
RCRA	Resource Conservation & Recovery Act
REC	Recognized Environmental Condition
SDWB	State of Hawaii, Department of Health, Safe Drinking Water Branch
SHPD	DLNR, State Historic Preservation Division
SMA	Special Management Area
TMK	Tax Map Key
USGS	United States Department of the Interior, Geological Survey

OVERVIEW

MJF Development Corporation is proposing to design and build a 180-unit residential condominium named "`Ohana Hale" on a 14,400 parcel located at 929 Pumehana Street, Honolulu, with the Tax Map Key: 2-3-028: 004. The vision for `Ohana Hale is to provide affordable housing in the urban Honolulu area. This project has the potential to be a good example of urban infill development and mixed-income housing, and will be located in walking distance to grocery stores, banks, activity centers, public transportation, schools, and recreation. Figure 1 illustrates the `Ohana Hale site plan and Figure 2 illustrates a rendering of `Ohana Hale.

Most of the recent residential condominium developments in urban Honolulu are in the "luxury" price-range. `Ohana Hale provides more affordable and modest-sized market rate units to fill the void that is ever-increasing in the urban Honolulu housing market.

MJF Development Corporation intends to process approvals and entitlements for `Ohana Hale under Chapter 201H, Hawaii Revised Statutes (HRS), which allows for greater flexibility in design to lower- and moderate-income housing developments. A minimum of 60%, equal to 108 units will be priced to be affordable to households earning 100% to 120% of the Housing and Urban Development (HUD) Area Median Income (AMI). Twenty-two (22) units will be priced in the 100% AMI range and eighty-six (86) units will be priced in the 120% AMI range. Therefore, `Ohana Hale can be characterized as a mixed-income housing project. Mixed-income housing can be defined as development that is comprised of housing units with differing levels of affordability, typically with some market-rate housing and some housing that is available to lower-income occupants below the market rate.

In addition to meeting the content and submittal requirements for an environmental assessment (EA), under Chapter 343, HRS, and Chapter 11-200, Hawai`i Administrative Rules (HAR), this EA also serves as the Chapter 201H, HRS application (201H application) agency/public comment document. Relevant information relating to the 201H application has been included. The complete 201H application is on file with the Hawaii Housing Finance and Development Corporation (HHFDC).

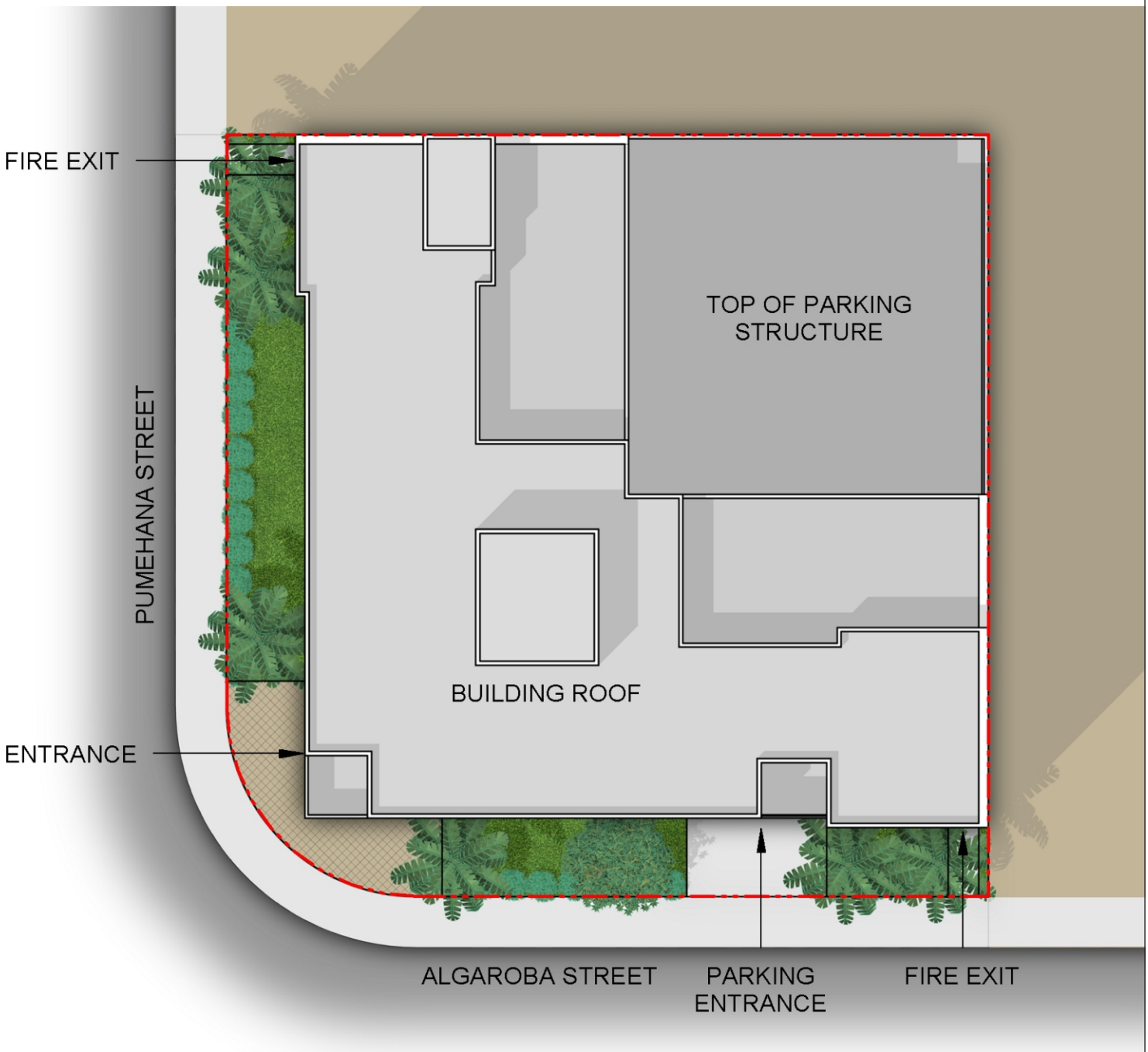


Figure 1: Ohana Hale Site Plan

Figure 2: Ohana Hale Rendering

1.0 INTRODUCTION

This ~~draft~~ final environmental assessment (EA) is prepared in accordance with Chapter 343,HRS for `Ohana Hale, a proposed affordable and workforce housing condominium building in Honolulu, O`ahu, Hawai`i. This Introduction chapter is a synopsis of the background and nature of the proposed project, relevant statutory requirements, and the various sources consulted to develop the report and assessment.

1.1 PROJECT PROFILE

Project Name:	`Ohana Hale
Location:	929 Pumehana Street
Judicial District:	Honolulu
Tax Map Key:	(1) 2-3-028: 004
Project Area:	14,400 square feet
Existing Use:	Single-Family / Multi-Family Housing
Recorded Fee Owner:	Pumehana Hui LP 1541 S. Beretania Street, Suite 101 Honolulu, HI 96826
Developer/Applicant:	MJF Development Corporation 1541 S. Beretania Street, Suite 101 Honolulu, HI 96826
Approving Agency:	Hawai`i Housing Finance & Development Corporation 677 Queen Street, Suite 300 Honolulu, Hawai`i 96813
Agent:	Hawai`i Planning LLC 1001 Bishop Street ASB Tower, Suite 2755 Honolulu, HI 96813 Contact: Dennis Silva, Jr., AICP

Zoning:

- State Land Use: Urban
- Development Plan: Medium and Higher-Density Residential / Mixed-Use and District Commercial
- County Zoning: BMX-3 - Community Business Mixed Use
- Special District: not in Special District
- Special Management Area (SMA): not in SMA

1.2 COMPLIANCE WITH STATE OF HAWAII ENVIRONMENTAL LAWS

Section 343-5, HRS establishes nine "triggers" that require the preparation of an environmental assessment or environmental impact statement. Use of State lands or funds is one of the "triggers" that require an environmental assessment. 'Ohana Hale 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 Chapter 343, HRS, and in accordance with the provisions of Hawaii Administrative Rules (HAR), Title 11, Department of Health, Chapter 200, Environmental Impact Statement Rules.

In addition, design and construction of 'Ohana Hale may involve or impact State and/or County lands or funds relating to infrastructure improvements for public facilities, roadways, water, sewer, utility, drainage, or other 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 County lands and funds relating to 'Ohana Hale.

2.0 'OHANA HALE DESCRIPTION

2.1 BACKGROUND INFORMATION

2.1.1 Location and Surrounding Area

The `Ohana Hale site, identified as TMK (1) 2-3-028: 004, is located on a 14,400 square foot parcel that consists of one (1) single-family residence, one (1) triplex, and a two-story apartment building; all totaling 17 units. The Subject site is located in the McCully neighborhood of the urban Honolulu area and is surrounded by predominately commercial office and residential uses with scattered retail uses. A multifamily building in generally fair condition, is adjacent to the north with a retail building in good condition beyond. An automotive repair shop in fair condition is located to the east of the `Ohana Hale site. Farther east is a restaurant and commercial office/retail building. Immediately south of the Subject are single-family residential uses. West of the `Ohana Hale site are several multifamily uses in good condition. According to www.walkscore.com, the `Ohana Hale site has a walk score of 83, which equates to Very Walkable, meaning that most errands can be accomplished on foot. The Walk Score website also includes a Transit Score and a Bike Score. `Ohana Hale's Transit Score is 70, which equates to Excellent Transit, meaning that transit is convenient for most trips. The project's Bike Score is 66, which equates to Bikeable, meaning that there is some bike infrastructure.

The nearest retail to `Ohana Hale is concentrated along South King Street, approximately 0.1 miles to the southwest. This retail district is characterized by small business retail, with the exception of a CarQuest Auto Parts store north of the `Ohana Hale. Retail in the neighborhood is generally average overall condition and appears to be 90 percent occupied. Figure 3 provides an aerial photo of the site and surrounding area; Figure 4 provides a regional location map; Figure 5 provides a TMK map. Figures

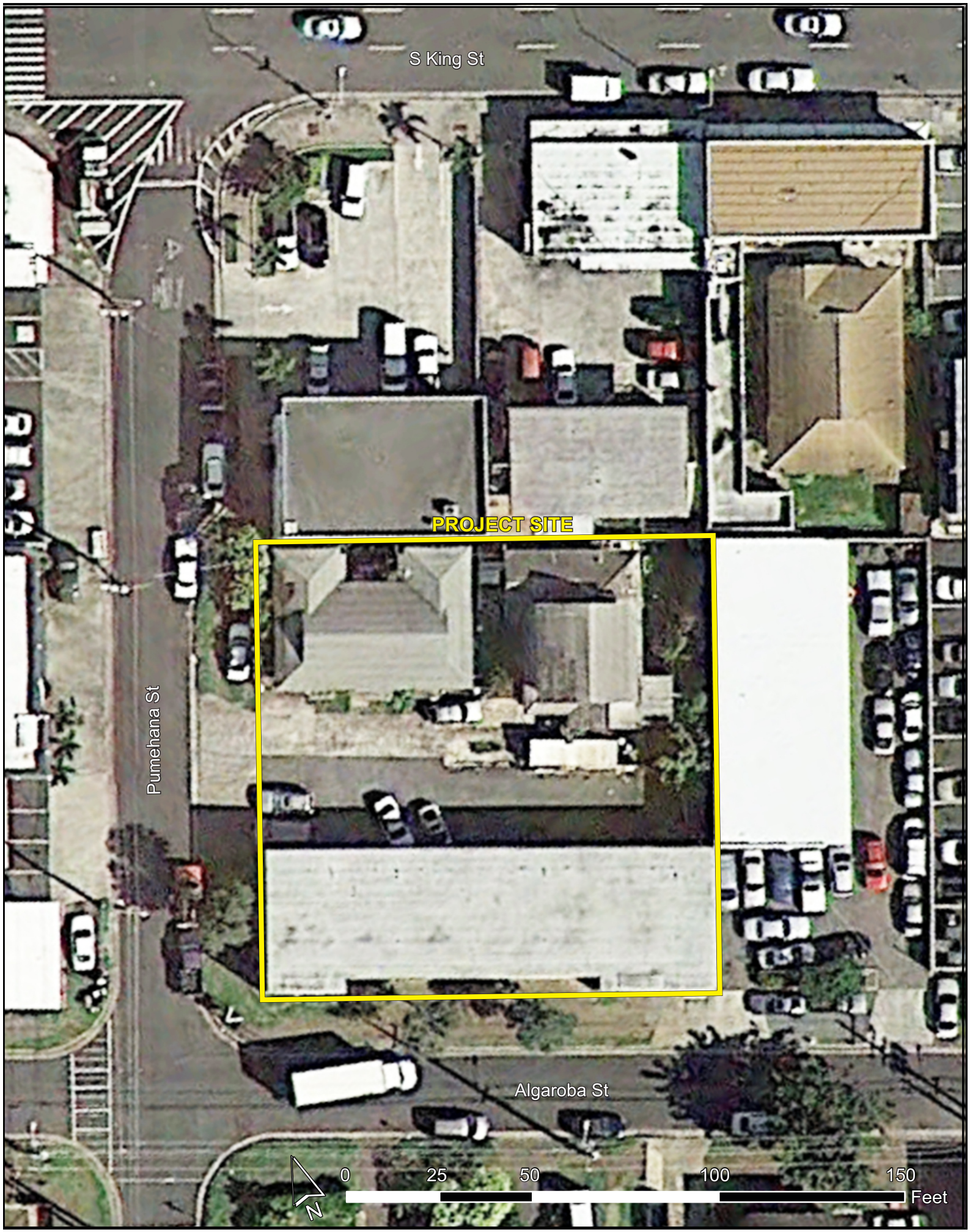


Figure 3: Aerial Photo

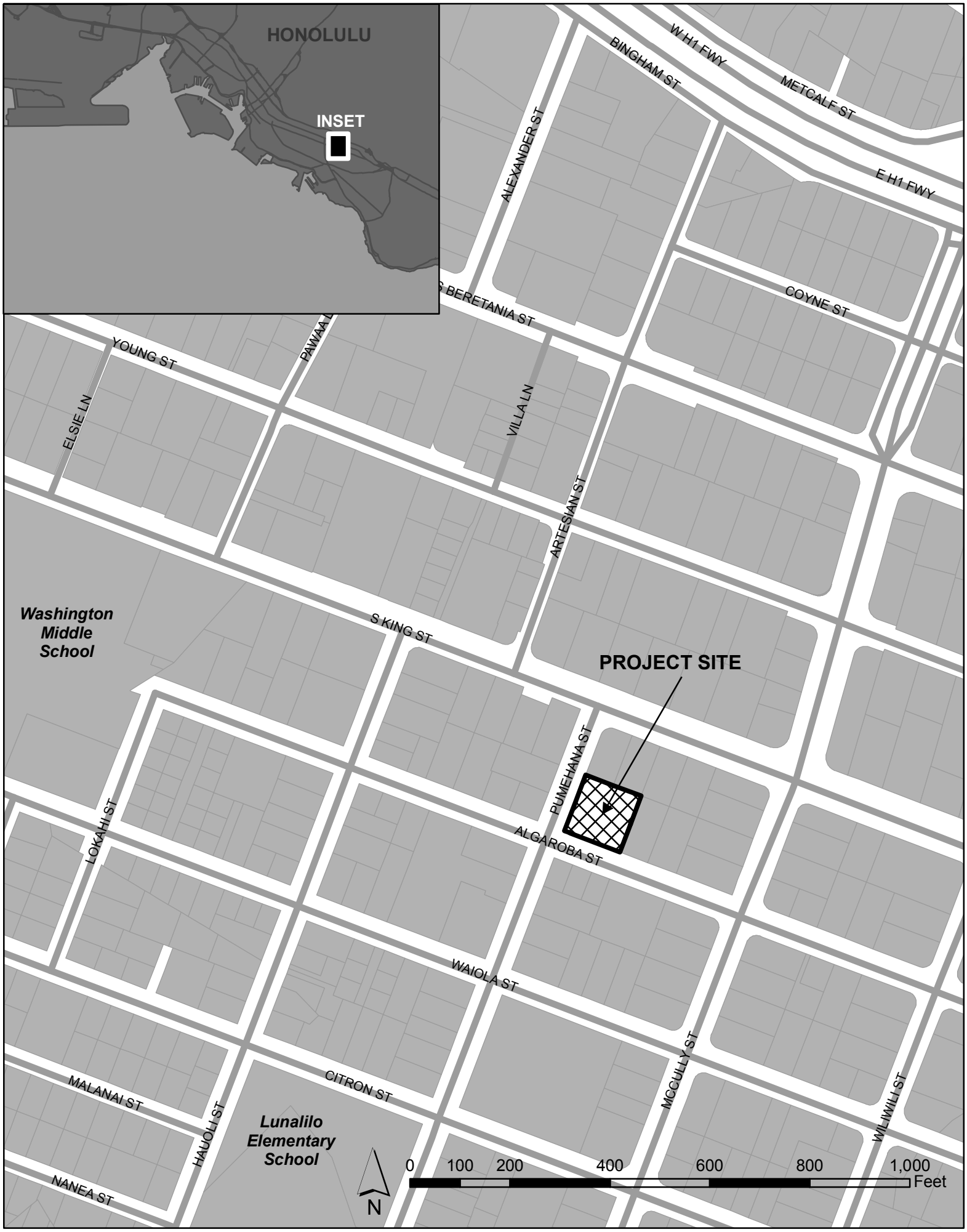


Figure 4: Regional Location Map

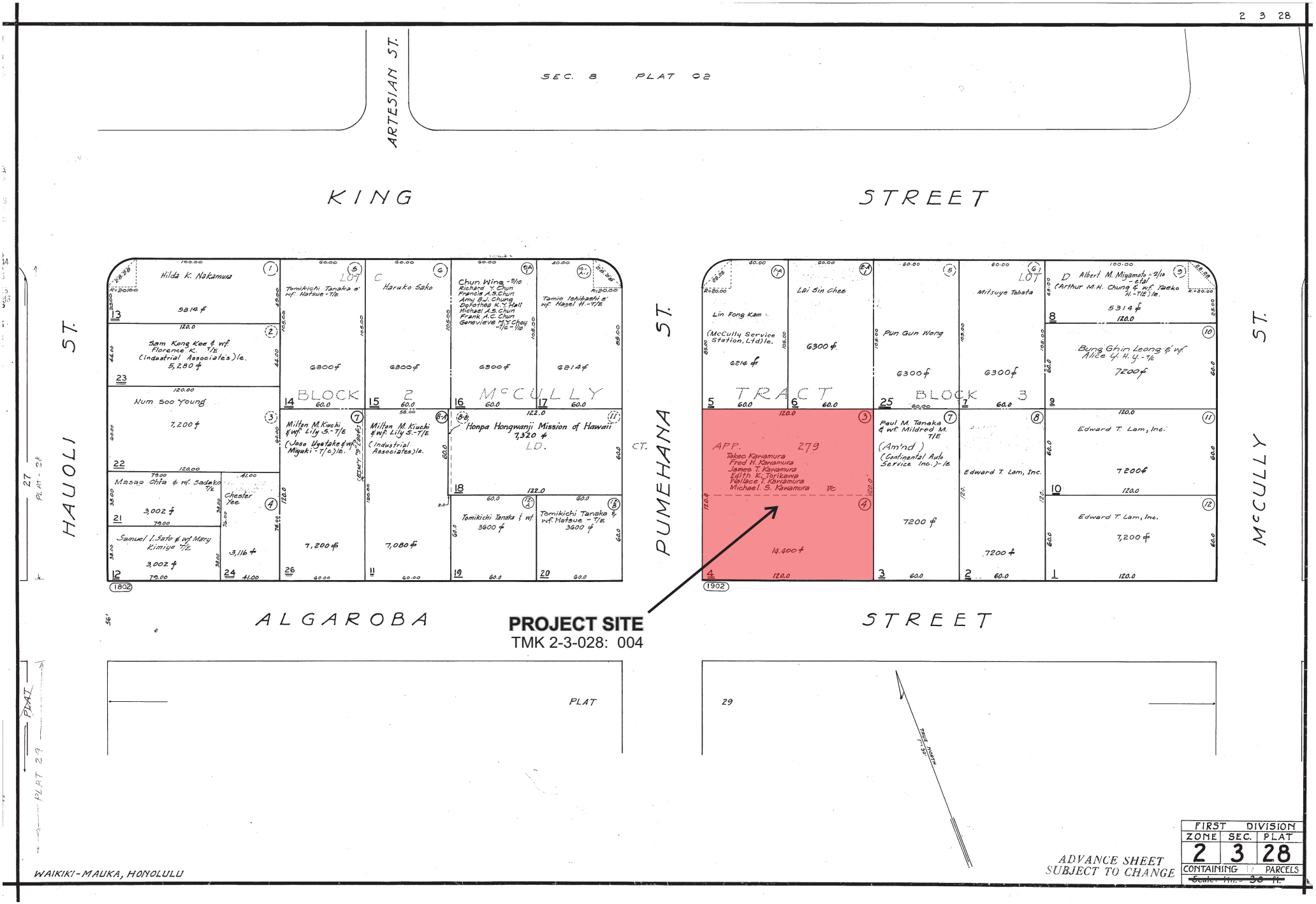


Figure 5: Tax Map Key

6a and 6b provide site photographs of the existing condition of the `Ohana Hale site.

Appendix A contains a Topographic Survey of the property.

Table 1 lists the locational amenities in proximity to the `Ohana Hale site:

Table 1 - Locational Amenities

Service or Amenity	Miles from ‘Ohana Hale
American Savings Bank	0.1 Miles
Shell Gas Station	0.2 Miles
Lunalilo Elementary School	0.3 Miles
McCully Public Library	0.3 Miles
Times Supermarket & Pharmacy	0.6 Miles
Mō’ili’ili Community Center	0.6 Miles
Maryknoll High School	0.7 Miles
Post Office	0.8 Miles
McCully/Mō’ili’ili Fire Station	0.9 Miles
Ala Moana Satellite City Hall	1.0 Miles
Washington Middle School	1.0 Miles
Honolulu Police Department	1.5 Miles
Straub Hospital	2.2 Miles

Source: Appendix B - `Ohana Hale Market Study

2.1.2 Land Use Designations

The current land use designations for the `Ohana Hale project, TMK: (1) 2-3-028: 004 are as follows:

- State Land Use: Urban (Figures 7 and 7a)
- County Zoning: BMX-3 Community Business Mixed-Use (Figures 8 and 8a)
- Primary Urban Center Development Plan: Medium and Higher-Density Residential / Mixed-Use and District Commercial (Figure 9)
- Special District: none
- Special Management Area (SMA): not in SMA

Figure 6a: Site Photos

1. View from Pumehana Street

2. View from Algaroba Street

3. Algaroba Street with Ohana Hale Site on the left.

Figure 6b: Site Photos

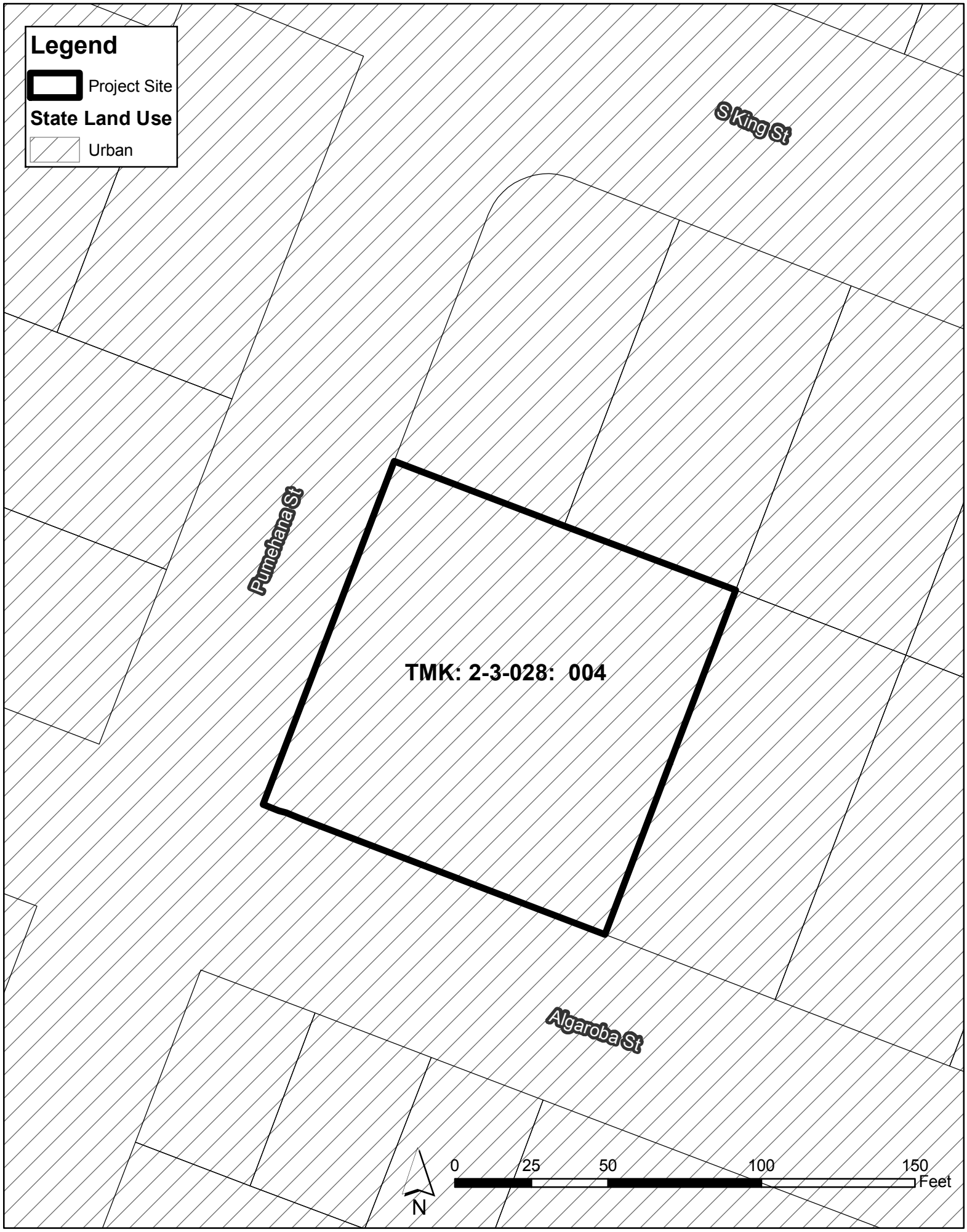


Figure 7: State Land Use

Figure 7a: State Land Use (zoomed out)

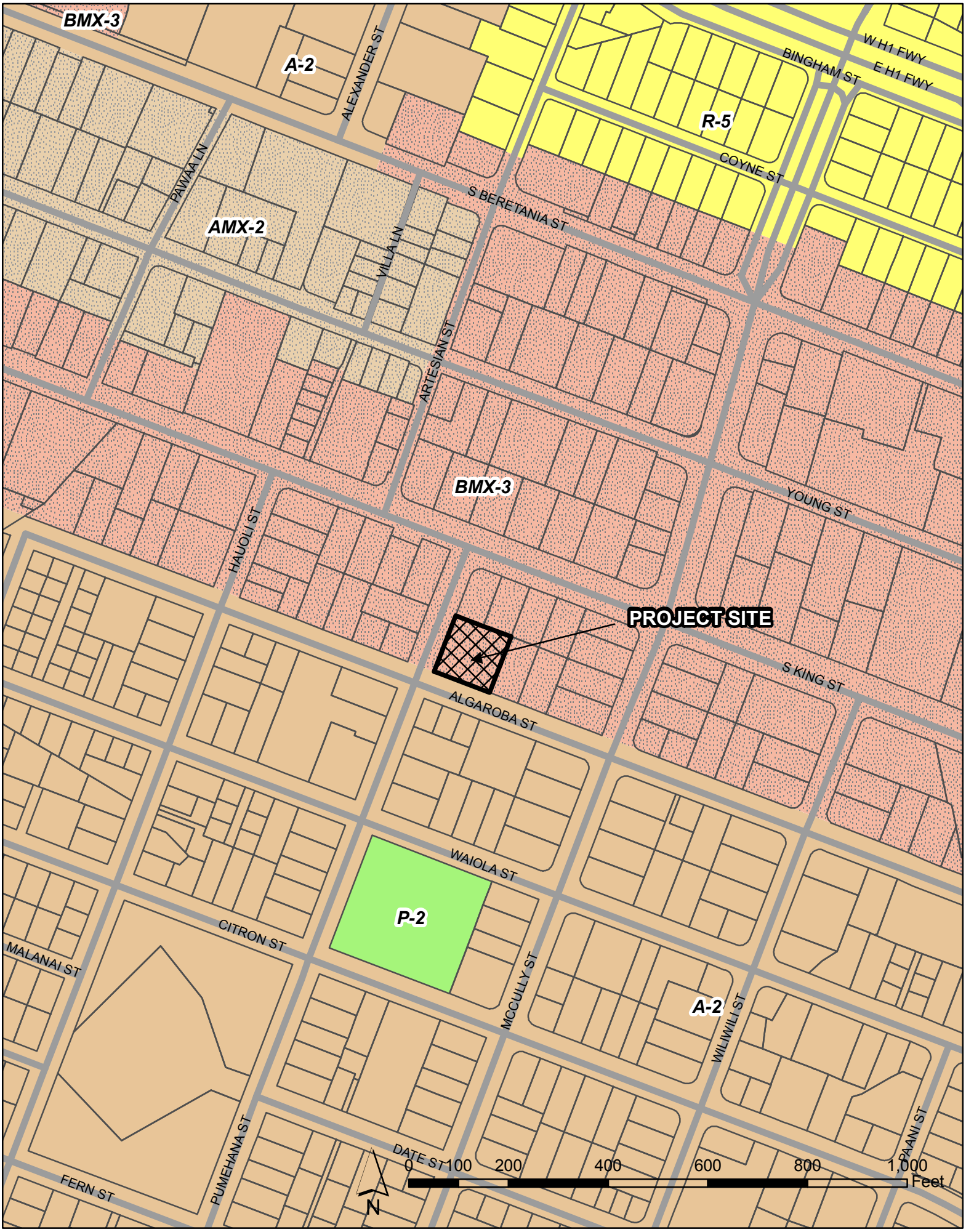


Figure 8: City & County of Honolulu Zoning

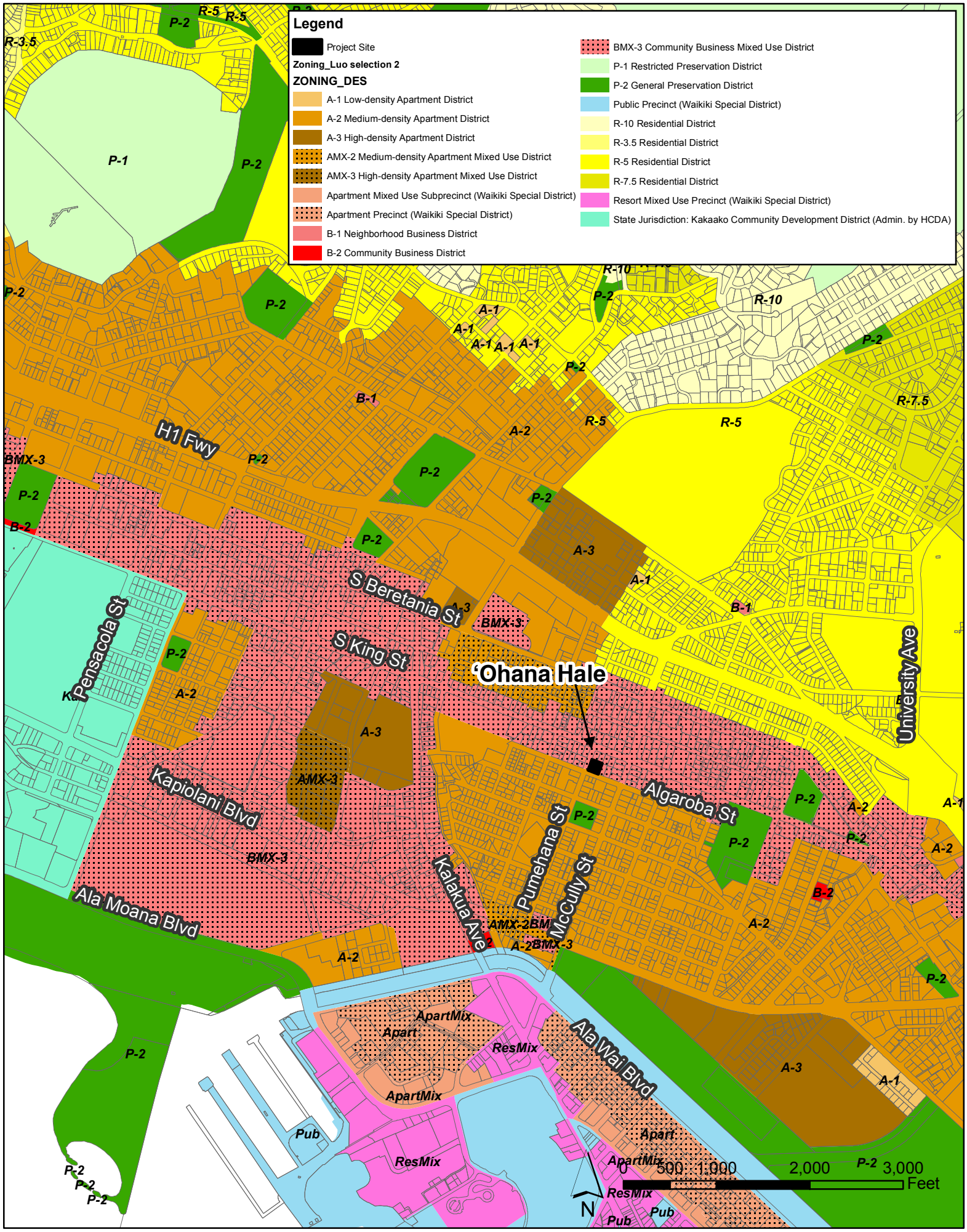


Figure 8a: City & County of Honolulu Zoning (zoomed out)

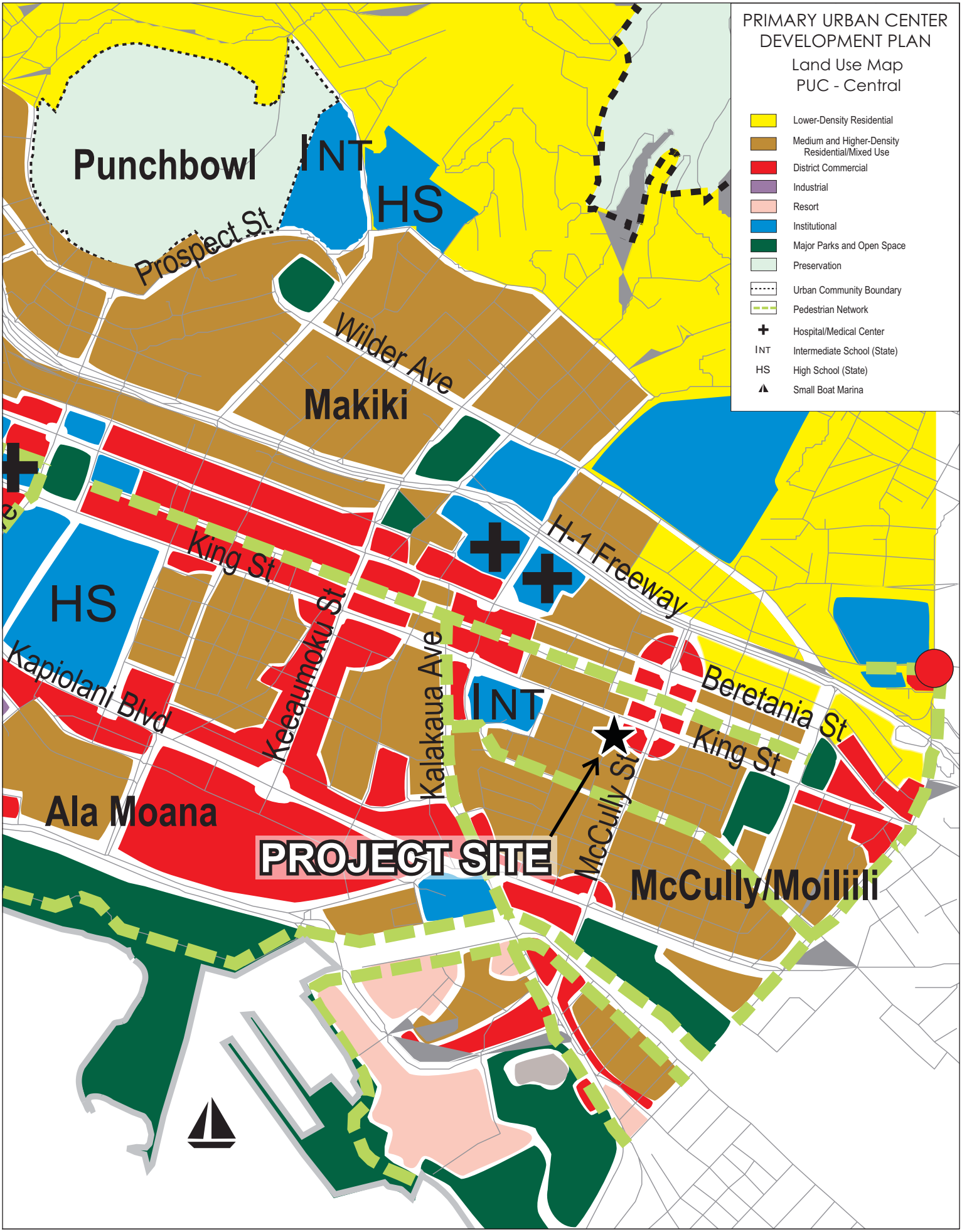


Figure 9: PUC Development Plan

2.2 DESCRIPTION OF ‘OHANA HALE

2.2.1 Statement of Purpose and Need for ‘Ohana Hale

The `Ohana Hale condominium addresses the need for affordable housing on O`ahu, particularly within Honolulu’s primary urban center (PUC). Due to the focus on high-rise luxury condominium development in recent years, very few moderately-priced condominium buildings have been developed in the Honolulu PUC. New affordable housing has primarily been developed in suburban Oahu, where residents are separated by considerable commutes from their workplace. In the urban center, affordable housing more often consists of rental housing. This has resulted in a shortage of for-sale affordable residential dwellings for working residents.

`Ohana Hale is an urban infill development. Urban infill can be defined as new development that is sited on vacant or under-developed land within an existing community, and that is enclosed by other types of development and land uses. Urban Infill is gaining in popularity as in-town or close-in locations become more attractive to prospective home buyers. Municipalities are also encouraging the practice of urban infill as it is more efficient to use existing infrastructure and services than it is to extend infrastructure and services farther afield. Infill development can also help a community achieve or sustain thresholds of population density necessary for amenities such as park space, community services, retail establishments, and affordable housing. The various elements of urban infill development will be further discussed throughout the ~~Draft~~ Final EA to illustrate that urban infill coincides with the overall vision of the City and County of Honolulu’s General Plan and PUC Development Plan.

Strong demand for affordable housing within the PUC is evidenced by the strong rental demand in the immediate area as well as relatively high prices for existing residential for-sale housing. `Ohana Hale is intended to provide a needed for-sale housing type at an affordable price.

`Ohana Hale is also a mixed-income housing development in that it will provide residential units to residents with varied incomes. Clarity about the meaning of the term mixed-income and about the question of whether the mix is a planned effort to integrate a development or a neighborhood from a socio-economic perspective is of fundamental importance to a discussion of mixed-income housing. Many American neighborhoods have residents of varied incomes, and two of our most prominent new towns of the 1960s and 1970s – Columbia, Maryland, and Reston, Virginia – were planned for a mix of incomes. The new towns of Columbia, Maryland and Reston, Virginia are viewed as pioneering new towns for mixed-income development and housing. One of the goals in the Reston, Virginia new town master plan states; "housing needs can be met at a variety of income levels and at different stages of family life. This kind of mixture permits residents to remain rooted in the community if they so choose – as their particular housing needs change. As a by-product, this also results in the heterogeneity that spells a lively and varied community." Therefore, mixed-income housing development is not a new phenomena; it is a healthy and effective approach to planning and building a community.

The Market Study - Appendix B demographic data demonstrates that the primary market area (PMA) and the Honolulu Metropolitan Statistical Area (MSA) are forecast for a steady increase in population and households through 2017. The PMA is expected to gain 2,099 owner-occupied households through 2017. The median household income in the PMA is higher than in the MSA and nation. The *Demand Analysis* section of the Market Study demonstrates a sufficient amount of income qualified households presently exist for both the condominium and market-rate rental scenarios.

2.2.2 Affordability

Sixty (60)-percent or 108 of 'Ohana Hale's units will be priced in the affordable range for households earning between100% and 120% of the HUD AMI for Honolulu.
Table 2 - 'Ohana Hale Projected Price Points for Restricted Units, illustrates the projected price range by unit type and how these prices compare to the 100% and 120% AMI price limit per the HHFDC – HUD 2014 Income, Sales, and Rent Guidelines. Note that the entire range is below the HHFDC – HUD 2014 guidelines.

Table 2 - 'Ohana Hale Projected Price Points for Restricted Units

UNIT TYPE	NUMBER OF UNITS	RESTRICTED UNITS	RESTRICTED PRICE LOW	RESTRICTED PRICE HIGH	100% AMI PRICE LIMIT PER 2014 HHFDC GUIDANCE	120% AMI PRICE LIMIT PER 2014 HHFDC GUIDANCE
0-BR	78	54	$236,250	$258,383	$324,500	$389,300
1-BR	87	54	$330,600	$378,113	NA	$445,000
2BR	15	0	NA	NA	NA	NA
Total	180	108				

*Assumes 4.5% homebuyer interest rate; 5% down payment; 28% maximum cost of housing; 1 person per studio and 2 persons per 1-BR

MJF Development Corporation will be processing approvals for 'Ohana Hale under, Chapter 201H, HRS, which allows for greater design flexibility and cost effectiveness to facilitate the development of affordable housing. Flexibility and cost savings, resulting in lower housing costs, are achieved by allowing exemptions from certain statutes, ordinances, charter provisions and rules relating to planning, zoning and construction; provided the project primarily provides affordable housing and does not overlook health and safety requirements.

MJF Development Corporation has submitted a Chapter 201H, HRS application (Chapter 201H application) to HHFDC. Through discussions and correspondence with the City and County of Honolulu Department of Planning and Permitting (see Appendix C: correspondence with Department of Planning and Permitting) it was determined that HHFDC was the appropriate agency to process the Chapter 201H application. This

is because ‘Ohana Hale’s unit pricing—while affordable to households earning between 100% and 120% of the HUD AMI for Honolulu—does not meet the City and County of Honolulu’s eligibility requirements for the processing of a Chapter 201H application by the Department of Planning and Permitting. While HHDFC will be processing the Chapter 201H application, the City and County of Honolulu City Council must approve the request for exemptions relating to planning, zoning, and construction standards.

This Final EA serves as the Chapter 201H application agency and public comment document in addition to meeting the content and submittal requirements under Chapter 343, HRS, and Chapter 11-200, Hawaii Administrative Rules (HAR). Relevant information relating to the Chapter 201H application has been included throughout this Final EA and requested exemptions relating to planning, zoning, and construction standards are discussed in more detail in Chapter 5 – Chapter 201H Application and Exemptions. The complete Chapter 201H application is on file with HHFDC. To further clarify, the exemptions are for City and County of Honolulu’s Land Use Ordinance (LUO) and the PUC Development Plan, pursuant to HRS Chapter 201H-38, not exemptions to HRS Chapter 343 requirements.

Per the requirements of HHFDC and as specified in Section 201H-47, HRS, there will be a 10-year buyback clause for the affordable units; therefore, if the purchaser of an affordable unit sells the unit within 10 years, HHFDC has the option to buy back the unit. Resale of the affordable units is also subject to shared appreciation clauses as provided in Section 201H-47, HRS.

MJF Development Corporation is also working with HHFDC to apply for and secure funding through HHFDC’s Dwelling Unit Revolving Fund (DURF) program. The DURF is administered by HHFDC and is referenced in Section 201H-191, HRS.

‘Ohana Hale will also comply with the provisions set forth in Section 103-50, HRS, the enabling legislation for the State of Hawai‘i, Disability Communication and Access

Board review process. The developer will also comply with Chapter 104, HRS, regarding minimum prevailing wages paid to all mechanics and laborers employed on the Project, and Chapter 103B, HRS, which requires that Hawai’i residents compose not less than eighty percent (80%) of the workforce of the Project.

2.2.3 Building Details

The current proposal for ‘Ohana Hale is a 21-story building, up to 189-feet in height, which will include 180 studio, one-bedroom, and two-bedroom fee simple units aimed at the affordable market. A minimum 60 percent, (108) of the units will be priced to be affordable to households earning between 100% and 120% of the HUD AMI for Honolulu. The building floor area will be approximately ~~107,999~~ 113,600 square feet, the lot size is 14,400 square feet or 0.33 acres with a building floor area ratio of ~~7.5~~ 7.89. Table 3 provides a building summary.

Figure 1 provides the ‘Ohana Hale site plan. Figure 2 provides a rendering of ‘Ohana Hale. Appendix D contains the ‘Ohana Hale architectural drawings.

Table ~~2~~ 3 – ‘Ohana Hale Building Summary

Bedroom/Bath	**Number of Units**	**Size (sq. ft.)**	**Number of Floors**	21 - (13 res. / 8 parking)
Studio/1	~~96~~ 78	335	**Building Height**	189.5-feet
1/1	~~79~~ 87	456 - 498	**Parking**	197 stalls
2/2	15	762 – 791	**Loading**	2 stalls
Total Units	180		**Elevators**	2

2.2.4 Access and Parking

Vehicular access to ‘Ohana Hale will be via a driveway on Algaroba Street. ‘Ohana Hale is located at the northeast corner of Pumehana Street and Algaroba Street.

Current plans are for the parking structure to contain 197 parking spaces. With 207 spaces required by code, MJF Development Corporation is requesting the option to

reduce the parking by 10 stalls. Americans with Disability Act (ADA) accessible stalls in compliance with City and County of Honolulu requirements will be provided.

`Ohana Hale is located on Pumehana Street, which is in proximity and walking distance to King Street. TheBus routes along King Street are: 1 – Kahala Mall, 1L – Hawaii Kai (limited stops) and 6 – Woodlawn Drive – via East-West Road. King Street is a major west to east bus thoroughfare. The urban location in proximity to stores, services, and transit routes provides opportunities for `Ohana Hale residents to reduce trips by cars, or possibly minimize the need for car.

2.3 DEVELOPMENT TIMETABLE

Construction of `Ohana Hale will commence when all approvals are granted from the pertinent State of Hawaii or City and County of Honolulu agencies. The proposed construction timeframe is as follows:

Process	Dates	Duration
Design/Entitlement	August 2013 to January 2015	17 months
Construction Start	August 2015	--
Construction End	August 2017	24 months

3.0 ASSESSMENT OF THE AFFECTED ENVIRONMENT, POTENTIAL IMPACTS, AND MITIGATION MEASURES

This chapter describes the existing environmental conditions (physical, natural, and human) of the project area. Potential impacts that may result from the proposed ‘Ohana Hale development, and mitigation measures that may be implemented, are also disclosed and discussed.

3.1 TOPOGRAPHY

The topography of the ‘Ohana Hale site is flat and level, as the site was extensively modified to accommodate current structures on site. According to the Phase 1 Environmental Site Assessment, the elevation of the subject site is approximately 7 feet above mean sea level. The center of the site is located at approximately 21° 17’ 40.9” north latitude and 157° 49’ 52.7” west longitude, Phase 1: Environmental Site Assessment – ~~(see~~ Appendix E~~)~~.

Potential Impacts and Mitigation Measures

The ‘Ohana Hale site has been previously modified, and the site currently consists of one (1) single-family home, one (1) triplex, and one (1) two-story apartment building with 13 units. Therefore, the proposed improvements will not require any major alterations to the topography of the land and no significant impacts are anticipated.

3.2 SOILS

The United States Department of Agriculture (USDA), Natural Resource Conservation Service (NRCS) classifies the ‘Ohana Hale site as FL – fill land, mixed. The Soil Survey of Islands of Kauai, Oahu, Maui, and Lanai, State of Hawaii classifies the ‘Ohana Hale site as Lualualei-Fill. The characteristics of this soil type is deep, nearly level to moderately

sloping, well drained soils that have a fine textured or moderately fine textured subsoil or underlying material, and areas of fill land; on coastal plains (Figure 10).

Potential Impacts and Mitigation Measures

All grading operations will be conducted in full compliance with dust, erosion control, and other requirements of the City Grading Ordinance, as well as the provisions of Section 11-60.1-33, Hawai‘i Administrative Rules, on fugitive dust. In addition, best management practices will be included in construction plans to mitigate dust and/or silt emissions.

3.3 NATURAL ~~HAZARDS~~ RESOURCES

~~The ‘Ohana Hale site is located outside of the tsunami evacuation area, and the majority of the site is designated Zone X (areas determined to be outside of the 500-year floodplain) by the Federal Flood Insurance Rate Map. A small portion on the southwest corner of the ‘Ohana Hale site is designated AO Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain) average depths determined (Figure 11). However, this portion of the property is part of the City’s road widening section of approximately 193 square feet.~~

~~Potential Impacts and Mitigation Measures~~

~~On-site construction work will temporarily expose any remaining soil and slightly increase the potential for soil erosion. However, project specifications will incorporate erosion control requirements to mitigate any construction impacts. After construction, impermeable surfaces (i.e., walkways and parking areas) and landscaping will mitigate the potential for soil erosion. Detailed erosion and sediment control measures will be specified in site plans.~~

Soil Map—Island of Oahu, Hawaii

Map Scale: 1:361 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 5 10 20 30

Feet: 0 15 30 60 90

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 4N WGS84

11/27/2013
Page 1 of 3

Figure 10: Soil Survey

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Map Unit Polygons

Soil Map Unit Lines

Soil Map Unit Points

Special Point Features

Blowout

Borrow Pit

Clay Spot

Closed Depression

Gravel Pit

Gravelly Spot

Landfill

Lava Flow

Marsh or swamp

Mine or Quarry

Miscellaneous Water

Perennial Water

Rock Outcrop

Saline Spot

Sandy Spot

Severely Eroded Spot

Sinkhole

Slide or Slip

Sodic Spot

Spoil Area

Stony Spot

Very Stony Spot

Wet Spot

Other

Special Line Features

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Island of Oahu, Hawaii
Survey Area Data: Version 7, Sep 27, 2012

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Data not available.

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Island of Oahu, Hawaii (HI990)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
FL	Fill land, mixed	0.3	100.0%
Totals for Area of Interest		**0.3**	**100.0%**

3.3.1 Water

Clean Water Branch

In consultation with the DOH, Clean Water Branch, it was required that the applicant comply with the applicable provisions in Hawai'i Administrative Rules (HAR) Chapter 11-54 – Water Quality Standards and HAR Chapter 11-55 – Water Pollution Control.

Safe Drinking Water Branch

The State, DOH, Safe Drinking Water Branch (SDWB) had no comments on the Draft EA, as the project will be served by BWS.

Potential Impacts and Mitigation Measures

In consultation with BWS, the existing water system is adequate to accommodate the proposed development. However, as BWS states, the final decision of the availability of water will be confirmed when the building permit application is submitted for approval.

3.3.2 Floodplain Management

The 'Ohana Hale site is located outside of the tsunami evacuation area, and the majority of the site is designated Zone X (areas determined to be outside of the 500-year floodplain) by the Federal Flood Insurance Rate Map. A small portion on the southwest corner of the 'Ohana Hale site is designated Zone AO Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain) average depths determined (Figure 11 – Flood Zone). However, this portion of the property is part of the City's road widening section of approximately 193 square feet.

Potential Impacts and Mitigation Measures

Based on the comments from the Department of Land and Natural Resources (DLNR) – Engineering Division, we consulted with the County National Flood Insurance Program (NFIP) Coordinator at the City and County of Honolulu, DPP. The proposed building will

Figure 11: Flood Zone

not encroach into the AO Flood Zone, which complies with the City and County of Honolulu NFIP Coordinator's consultation.

3.3.3 Wetland Protection

According to HAR Chapter 11-54 – Water Quality Standards, HAR 11-54-2 – Classification of State Waters, subsection (b)(1)(C) – Wetlands, the classification of wetlands are as follows: (i) Elevated wetlands (bogs, marshes, swamps, and associated ponds); and (ii) Low wetlands (marshes, swamps, and associated ponds).

Potential Impacts and Mitigation Measures

The 'Ohana Hale site is not located in a wetland area as classified above. Therefore, no impacts to wetland areas will result from construction and development of this project.

3.3.4 Coastal Zone Management

HRS Chapter 205A – Coastal Zone Management, defines "coastal zone management area" as "all lands of the State and the area extending seaward from the shoreline to the limit of the State's police power and management authority, including the United States territorial sea." The rationale for this definition is that there is no point of land more than 30 miles from the ocean, therefore, a definite land-sea connection exists throughout the State of Hawai'i.

Potential Impacts and Mitigation Measures

Section 4.1.2 – Coastal Zone Management (Chapter 205A, HRS) provides more discussion on provisions related to the development of 'Ohana Hale.

3.3.5 Unique Natural Features

There are no unique natural features on the project site. However, 'Ohana Hale will be sited within the Punchbowl Lookout to Diamond Head viewshed corridor. Section 3.11 – Visual Resources provides more discussion on the existing built environment and 'Ohana Hale's location within this viewshed corridor.

Potential Impacts and Mitigation Measures

See Section 3.11 – Visual Resources for illustrative figures and discussion pertaining to the Punchbowl Lookout to Diamond Head viewshed and the proposed project's visual impacts on the viewshed.

3.3.6 Hurricanes and Earthquakes

Hurricanes are one type of tropical cyclone affecting Hawaii that also includes tropical storms and tropical depressions. Hurricanes are tropical storms with winds equal to or greater than 74 miles per hour.

Between 1970 and 1992, 105 tropical cyclones were identified in the central Pacific region resulting in an average of 4.5 storms per year. Not all of these storms directly passed thru the State, and actual hurricane strikes on the Hawaiian Islands are relatively rare in the modern record. More commonly, near-misses that generate large swells and moderately high winds causing varying degrees of damage are the result of hurricanes passing close to the islands (USGS 2002).

A hazard mitigation report prepared by the Federal Emergency Management Agency (FEMA) determined that nine hurricanes approached within 300 nautical miles (about one day's travel time) of the Hawaiian Islands' coastlines between 1970 and 1992 (FEMA 1993). Most hurricanes affecting the islands have focused on Kaua'i. Based upon a tracking of hurricanes since 1950, there appears to be no geographical or

meteorological reasons why hurricanes miss other islands and tend to steer toward Kaua'i (FEMA 1993).

Earthquakes in the State are mainly associated with volcanic eruptions resulting from the inflation or shrinkage of magma reservoirs beneath which shift segments of the volcano. Earthquakes may occur before or during an eruption or from the underground movement of magma toward the surface. However, earthquakes also occur due to the shifting of tectonic plates. Except for the Island of Hawai'i, the Hawaiian Islands are generally not situated in a high seismic area subject to numerous large earthquakes (Macdonald et al. 1983).

Volcanism is the source of energy for approximately 95 percent of the earthquakes on the Island of Hawai'i. The central region encompassing the islands of Maui and O'ahu are subject to seismicity generally related to tectonic activity on the seafloor near the Hawaiian Islands. Tectonic activity capable of generating hazardous earthquakes is related to seafloor fractures and suspected faults around the islands. Most of the earthquakes that have occurred in the past have been volcanic earthquakes causing little or no damage to the other islands (USGS 2002).

Potential Impacts and Mitigation Measures

As previously stated by FEMA, there appears to be no geographical or meteorological reasons why hurricanes miss other islands and tend to steer toward Kaua'i. This illustrates that predicting future hurricanes and where it will impact is not an exact science at this moment in recoded meteorological history.

As the USGS states, most of the earthquakes that have occurred in the past have been volcanic-related, causing little or no damage to the other islands. Therefore, as hurricanes and earthquakes are concerned, the construction of 'Ohana Hale will comply with current building codes to ensure a structurally-sound building.

3.4 FLORA AND FAUNA

The `Ohana Hale site is urbanized and there are no known federally protected, threatened, or endangered species of plants or animals. The site is currently utilized for residential use, single-family and multi-family.

Potential Impacts and Mitigation Measures

Due to the `Ohana Hale site being currently developed and is not known to contain any federally protected, threatened, or endangered species of plants or animals, no impacts to flora and fauna are expected.

3.5 ARCHAEOLOGICAL AND HISTORIC RESOURCES

An Archaeological Assessment is attached as Appendix F and was conducted by T. S. Dye & Colleagues, Inc. A review of historic documents and archaeological reports within 1 mi. of the proposed `Ohana Hale indicates that the project location is likely to have been peripheral to wetland agricultural fields in traditional Hawaiian times. During the historic era, drainage canals were found here. Houses were built on the project parcel in the 1920s. In the 1960s, two of these homes were demolished to make way for a small apartment complex. The project parcel remained under the ownership of the Kawamura family for a century before they granted it to Pumehana Hui LP in 2013. Fifteen archaeological studies have been conducted within 1 mi. of the proposed `Ohana Hale. These studies have typically found fill sediments overlying natural wetland sediment deposits. Traditional Hawaiian and historic-era human remains were discovered in three locations, the closest of which is two blocks south at the corner of Citron and Pumehana Streets, where disarticulated and secondarily deposited human remains were inadvertently discovered in 1998. Archaeological investigations in the vicinity of the proposed `Ohana Hale has generally failed to identify habitation or other cultural deposits.

Potential Impacts and Mitigation Measures

The proposed `Ohana Hale is located in an area where the State Historic Preservation Division (SHPD) requires an archaeological inventory survey. The archaeological assessment indicates that the likelihood of finding significant subsurface historic properties at the proposed `Ohana Hale is relatively low. However, the type of historic property most likely to be found is human remains. It is recommended that the archaeological inventory survey be carried out after demolition of the existing structures. In this way, the foundations of the proposed Pumehana Street Affordable Housing can be fully investigated to determine the presence or absence of human remains and potentially significant cultural deposits.

3.6 CULTURAL RESOURCES

The proposed `Ohana Hale is located at the corner of Pumehana Street and Algaroba Street in the northeast portion of the Pāwa`a neighborhood. The literal meaning of *Pumehana* is "warmth," and the term *Algaroba* refers to the *kiawe* tree that was introduced to the Hawaiian Islands in the 1820s (22). While these place names may or may not have any bearing on the historic condition of the area, the place name Pāwa`a is more telling. Pāwa`a currently refers to a wedge-shaped neighborhood bounded on the north by the H-1 freeway, on the south by Kapi`olani Boulevard, on the east by McCully Street, and on the west by Ke`eaumoku Street. According to Pukui et al. (22:182), Pāwa`a literally means "canoe shed," and it has been suggested that canoes were brought to Pāwa`a by canals and other inland waterways. These waterways are likely related to the mouth of Makiki Stream which is currently channelized parallel with Kalākaua Avenue.

The *ahupua`a* of Waikīkī has a long and colorful past, and was once the favored locale for the ruling chiefs of O`ahu. This may have begun as early as the fourteenth century, when the *ali`i nui* Ma`ilikūkahi transferred the seat of government to Waikīkī It remained the seat of government until Kamehameha I briefly transferred the government, after unifying the islands, to Kailua-Kona on the island of Hawai`i. Much of early Waikīkī,

through the time of Ma`ilikūkahi in the fourteenth century, was a plantation of irrigated agricultural fields covered in taro and fishponds. This area extended as far inland as Makiki, Mānoa, and Pālolo Valleys.

Potential Impacts and Mitigation Measures

As `Ohana Hale is a urban infill project, and provided that there are no cultural remains found, it is anticipated that there will be no cultural impacts from this proposed development.

3.7 ROADWAYS AND TRAFFIC

The Traffic Impact Analysis Report (TIAR) provides an explanation of the potential traffic impacts that may result from the study project; this includes potential impacts to multiple modes of transportation – pedestrian, bicycle, public transit, and vehicular (see Appendix G). The TIAR presents the results from a series of analyses performed to determine the existing traffic conditions and how traffic conditions would change with the implementation of the study project and future traffic growth.

Potential Impacts and Mitigation Measures

Intersections:

1. McCully Street / Beretania Street;
2. McCully Street / Young Street;
3. Pumehana Street / King Street;
4. McCully Street / King Street; and
5. McCully Street / Algaroba Street.

An evaluation of potentially significant project impacts has also been performed for all modes of travel (pedestrian, bicycle, transit, and vehicle).

Pedestrian:

Sidewalks are recommended to be added along the project frontages of both Pumehana and Algaroba Streets, including an Americans With Disabilities (ADA) curb

ramp at the intersection corner, in order to facilitate anticipated pedestrian activity generated by the project. When combined with the existing sidewalk along the eastern frontage of Pumehana Street near King Street, this additional sidewalk would create a continuous sidewalk on the eastern side of the entire block between Algaroba and King Streets. Implementation of this recommendation would be the responsibility of the project.

In the long-term, the City and County of Honolulu should consider completing the sidewalk discontinuity along Algaroba Street, specifically along the northern frontage of the roadway between Pumehana and McCully Streets. The project's proposed sidewalk along its frontage of Algaroba Street would constitute its contribution towards the elimination of the discontinuity.

A new crosswalk is recommended across the northern Pumehana Street approach to its intersection with Algaroba Street for use by children walking to/from King William Lunalilo Elementary School, which is located three blocks south of this intersection.

Due to its distance from the school, no new school crossing signs would be necessary at this crosswalk. The Manual on Uniform Traffic Control Devices (MUTCD), 9th Edition, only requires such signs adjacent to a school or along established school pedestrian routes.

Bicycle:

There are no project impacts upon the area bicycle network. No new on-street bicycle infrastructure is recommended.

Bicycle racks (or equivalent) should be installed, either in front of or inside the project building (the latter within either the parking garage or the first-floor lobby), consistent with City standards.

Transit:

The project would not represent an impact upon the area transit system. No transit improvements are recommended.

Vehicle:

Project Trip Generation:

The project would generate an estimated 921 daily trips, with 70 trips during the AM peak hour (13 in, 57 out) and 86 trips during the PM peak hour (57 in, 29 out). This estimate incorporates credit for the existing 17 apartments on the project site, a 10% reduction for walking/bicycling, a 5% reduction for use of transit, and use of conservative trip generation rates for an apartment.

Project Trip Distribution and Assignment:

Trip distribution for the project has been derived based upon the relative level of existing traffic on the surrounding street network. The project trips were then assigned along the study street network using that distribution. See Section 4.3 – Project Trip Distribution and Assignment in the TIAR (Appendix G) for more details regarding the project trip distribution.

Intersections:

There are no project impacts at the study intersections. No improvements are recommended at the study intersections.

No improvements are recommended at the intersection of Pumehana and Algaroba Streets, i.e. adjacent to the project site. Traffic volumes at this intersection would not meet the Manual on Uniform Traffic Control Devices (MUTCD) traffic signal warrants.

Project Access:

The project access onto Algaroba Street would operate within acceptable levels. It is recommended that adequate sight distance be provided at this driveway. Assurance of adequate site distance is the responsibility of the project applicant.

A more detailed analysis of the traffic impact and analysis is provided in Appendix G – `Ohana Hale – Traffic Impact Analysis Report.

Construction Impacts:

The City and County of Honolulu, Department of Transportation Services (DTS) recommended that any construction equipment and materials 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 traffic disruptions on the local streets. To mitigate this short-term construction impact, the applicant will comply with this recommendation.

3.8 NOISE

Various local and federal agencies have established guidelines and standards for assessing environmental noise impacts and set noise limits as a function of land use.

Potential Impacts and Mitigation Measures

Short-term noise impacts from construction activities are expected during the construction period. Construction noise will be short-term and limited to daylight hours. Proper mitigation measures will be implemented to minimize noise impacts, and all work will comply with the State Department of Health (DOH) noise limits.

Construction activities will generate noise from related equipment. This construction related noise will have an impact on nearby residents although construction will occur during daylight hours when most adult residents are at work and children are at school. This noise impact will be temporary and last only until project completion (approximately 24 months).

All construction activities will be monitored to ensure compliance with the DOH Administrative Rules, Chapter 11-46, "Community Noise Control."

3.9 AIR QUALITY

Air quality in the vicinity of the project site is primarily affected by vehicular emissions generated along surrounding streets. Among the various air pollutants for which State and National standards have been established, carbon monoxide level is the primary concern in areas near heavy traffic flow. According to the DOH Clean Air Branch, Downtown and Government District Station, at the roof of the DOH building (Kinau Hale); the air quality is in the green (good) range.

Potential Impacts and Mitigation Measures

It is anticipated that no State or Federal air quality standards will be violated during or after the development of `Ohana Hale. The anticipated issues related to air quality are related to construction; however, construction activities such as site clearing and grading, will be temporary. In addition, all construction activities will comply with the provisions of Chapter 11-60.1, HAR, Section 11-60.1-33, Fugitive Dust.

As stated in the DOH, Clean Air Branch Standard Comments, an effective dust control plan will be implemented as necessary. Measures to control dust during various phases of construction include:

- Providing an adequate water source at the site prior to start-up construction activities.
- Irrigating the construction site during periods of drought or high winds.
- Controlling dust debris being hauled away from the project site. Planning the different phases of construction, focusing on minimizing the amount of dust-generating materials and activities, centralizing on-site vehicular traffic routes, and locating potential dust-generating equipment in areas of the least impact. Minimize dust from shoulders and access roads.
- Landscaping and providing rapid covering of bare areas, including slopes, starting from the initial grading phase;
- Providing adequate dust control measures during weekends, after hours, and before daily start-up of construction activities.
- Installing silt screening in the areas of disturbance.

In the long term, `Ohana Hale is not anticipated to generate significant enough volumes of traffic to degrade air quality in the area.

3.10 MAN-MADE HAZARDS

A Phase I Environmental Site Assessment (ESA) was conducted in February 2013 by Central Planet Repair, LLC (Appendix E). The findings of the Phase I ESA documented in the February 25, 2013 report were that the following recognized environmental conditions were present on the subject property:

- Containers of potentially hazardous materials, including the banned pesticide Chlordane, were observed stored in the Building No.1 storage area and in the shed. The two bottles of Chlordane identified in the storage area should be removed from the site under manifest for proper disposal by incineration at a permitted facility. The other potentially hazardous materials should be inventoried and used as appropriate or removed from the site for proper disposal.

Removal of the Chlordane and other potentially hazardous materials from the site was confirmed during a subsequent site visit by Central Planet Repair, LLC on February 26, 2013. A revised Phase I ESA was provided on February 26th documenting the removal of the Chlorodane. The Seller did not provide documentation of the removal as of the date of the revised report.

The following environmental conditions, which are not considered to be *recognized environmental conditions*, as defined by ASTM E1527-05, were revealed during this assessment:

- Because the building on the subject property was built prior to 1980, suspect asbestos-containing materials (ACM) may be an issue at the subject property. Suspect ACM can include floor tiles (with associated mastics) and roofing materials.

- Because the building on the subject property was 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:

- *Continental Auto Service Inc. (Algaroba Auto Repair).* 1918 Algaroba St, S 0.017 mi. The site is RCRA Small Quantity generator (RCRA-CESQG) (generates less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month). No RCRA violations were reported for this site. The site will not affect the environmental condition of the subject property if operated and maintained in accordance with the Federal and State of Hawaii rules and regulations.

- The prior use of the north adjoining property the McCully Service Station, an auto repairing facility with filling station, as shown on the 1949 – 1991 Sanborn Maps, is considered a recognized environmental condition. The HDOH UST records shows that McCully Service Station located at this property (1901 S King Street, Honolulu) was demolished and a total of four out of service underground storage tanks were removed from the ground. The environmental site assessment was not done during the UST removal.
  Documentation regarding closure of the former McCully Service Station USTs was submitted to DOH on 1 December 2012. The document confirms that sampling was not conducted at the time the USTs were removed from the site and also confirms the responsible parties for contamination that may be present at the site and which may migrate offsite. Identification of the responsible party does not mitigate the REC associated with the former use of the site as a gas station. However, it does remove a significant portion of potential business risk for the adjacent property which is the subject of this report.

The RECs connected with the non-adjacent surrounding properties will not affect the environmental condition of the Subject Properties due to the distance to the Subject Properties and the regulatory status of the sites (mostly NFA).

Potential Impacts and Mitigation Measures

Although there are recognized environmental conditions found on the `Ohana Hale site, the conclusion is that it will not affect the environmental condition of the subject property. However, if there are hazardous materials found on the subject property, they will be handled according to Department of Health regulations.

3.11 VISUAL RESOURCES

`Ohana Hale is located in the Primary Urban Center and the BMX-3 Community Business Mixed-Use Zoning District. The PUC Development Plan discusses panoramic views and the urban skyline. The skyline is an important aspect of the city’s image. It establishes a distinctive identity for Honolulu, defines subdistricts within it, and provides directional orientation.

Below are pertinent sections in the PUC Development Plan on Viewshed Analysis:

Section 3.1.1.2 – Scenic Views

Panoramic Views of Natural Features and Landmarks

Panoramic views are broad vistas from distant vantage points. Map A.1, Significant Panoramic Views (page 3-4 in PUC Development Plan), depicts vantage points and orientation of major panoramic views of the following view objects within the Primary Urban Center:

- *The* Ko‘olau *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 (Punchbowl) 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. Views along the Pearl Harbor shoreline and the Pearl Harbor Historic Trail toward the mountains, shoreline, significant landmarks, and adjacent communities should be created and maximized wherever possible and appropriate.*

Section 3.1.3.3 Urban Skyline and Mauka-Makai Views

- Preserve the following panoramic views indicated schematically in Figure 3.1 by establishing building height limits and setbacks that are based on viewplane analyses to determine the sight lines and desired view dimensions and characteristics:
    - From Ala Wai Canal Promenade toward the Ko‘olau Range
    - From Ala Moana Beach Park toward the Ko‘olau Range
    - From Kewalo Basin toward the Ko‘olau Range and Punchbowl
    - From Kākā‘āko Waterfront Park toward Punchbowl and the Ko‘olau Range
    - From Punchbowl Lookout toward Diamond Head
- Preserve and enhance significant mauka or makai view corridors along major collector streets indicated in Figure 3.1 through a combination of zoning controls and streetscape improvements.

Based on our consultation with HHFDC from December 2013 to February 2014, the height of ‘Ohana Hale ~~has been~~ was reduced from 224-feet to its current proposal of 189-feet. This height reduction ~~has minimized~~ minimizes the visual impact of ‘Ohana Hale.

Figure 12 – Northeast View Analysis. ~~illustrates a northeast view analysis with the ‘Ohana Hale condominium in the distance.~~ The view corridor in Figure 12 is looking from the intersection of Lime Street and Hau'oli Street to the northeast toward Mānoa Valley. There is ~~minimal~~ some visual impact on the Ko'olau Mountains, however, the building

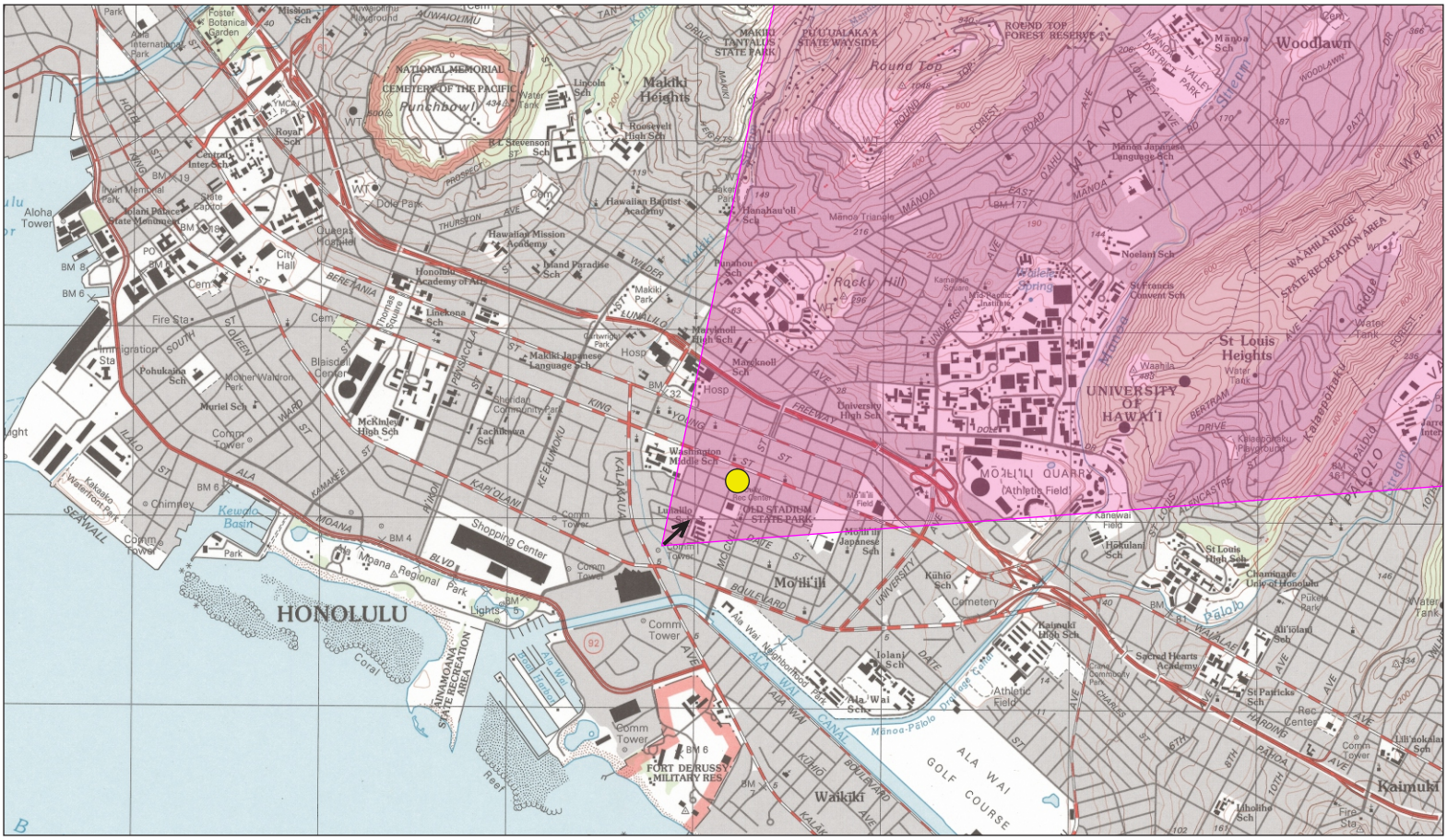
does not exceed the ridgeline of the mountain range. Therefore, the ‘Ohana Hale condominium does not result in a significant visual impact. Moreover, ‘Ohana Hale is not within the panoramic viewshed as illustrated in the PUC Development Plan, Figure 3.1 – View Corridors. The PUC Development Plan, Figure 3.1 illustrates McCully Street as a view corridor looking *mauka* (mountain direction).

Figure 13 – Southeast View Analysis. ~~illustrates a southeast view~~ Figure 13 is looking from the intersection of South Beretania Street and Punahou Street toward Diamond Head, with the proposed ‘Ohana Hale condominium building in the distance. As illustrated, the proposed ‘Ohana Hale building has minimal visual impact and will not exceed the ridgeline of Diamond Head.

Figure 14 – Southwest View Analysis. ~~illustrates a southwest view~~ Figure 14 is looking southwest towards Magic Island from the intersection of University Avenue and Metcalf Street near University High School . ~~analysis looking~~ ~~towards Magic Island~~. As shown, the proposed ‘Ohana Hale building will have visual impact, but it is not the tallest building in the photograph, and it is not a significant visual impact.

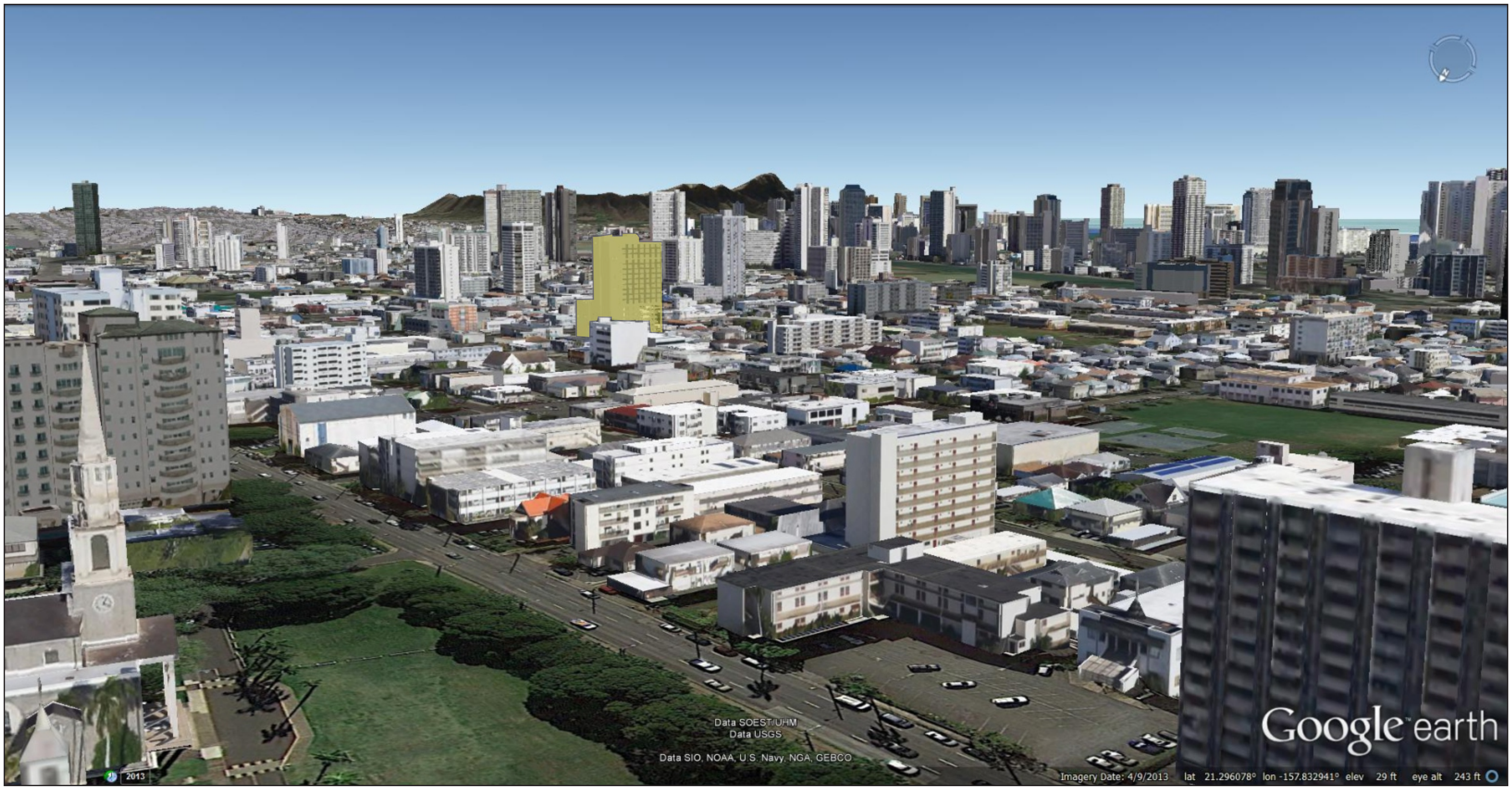
Figure 15 – Detailed View from Punchbowl Lookout. Figure 15 provides an illustration and visual analysis looking towards Diamond Head with ‘Ohana Hale situated at the center of the viewshed. This viewshed is also a view corridor illustrated in the PUC Development Plan, Figure 3.1: View Corridors. As a result from consultation with DPP, the applicant added Figure 15 to the Final EA. When viewed from this perspective, ‘Ohana Hale’s location and height has a minimal to no impact on the viewshed. As a supplement to Figure 15, below is Table 4 – Detailed View from Punchbowl Lookout, which lists the existing buildings in Figure 15 viewshed. Table 4 provides the maximum building height for each building in the viewshed along with the underlying zoning. Essentially, the maximum height variation within the viewshed is due to the underlying zoning district in which the existing buildings are located. The LUO zoning districts from Figure 15 viewshed include A-2: Medium Density Apartment, A-3: High Density Apartment; and BMX-3: Community Business Mixed-Use. As shown in Table 4, the maximum heights in these zoning districts are: A-2: 150-feet; A-3: 350-feet; and BMX-3: 150-feet. ‘Ohana Hale is in the BMX-3 – Community Business Mixed-Use district.

View of the proposed building from the vicinity of Lime Street and Hauoli Street intersection, looking northeast towards Manoa Valley.

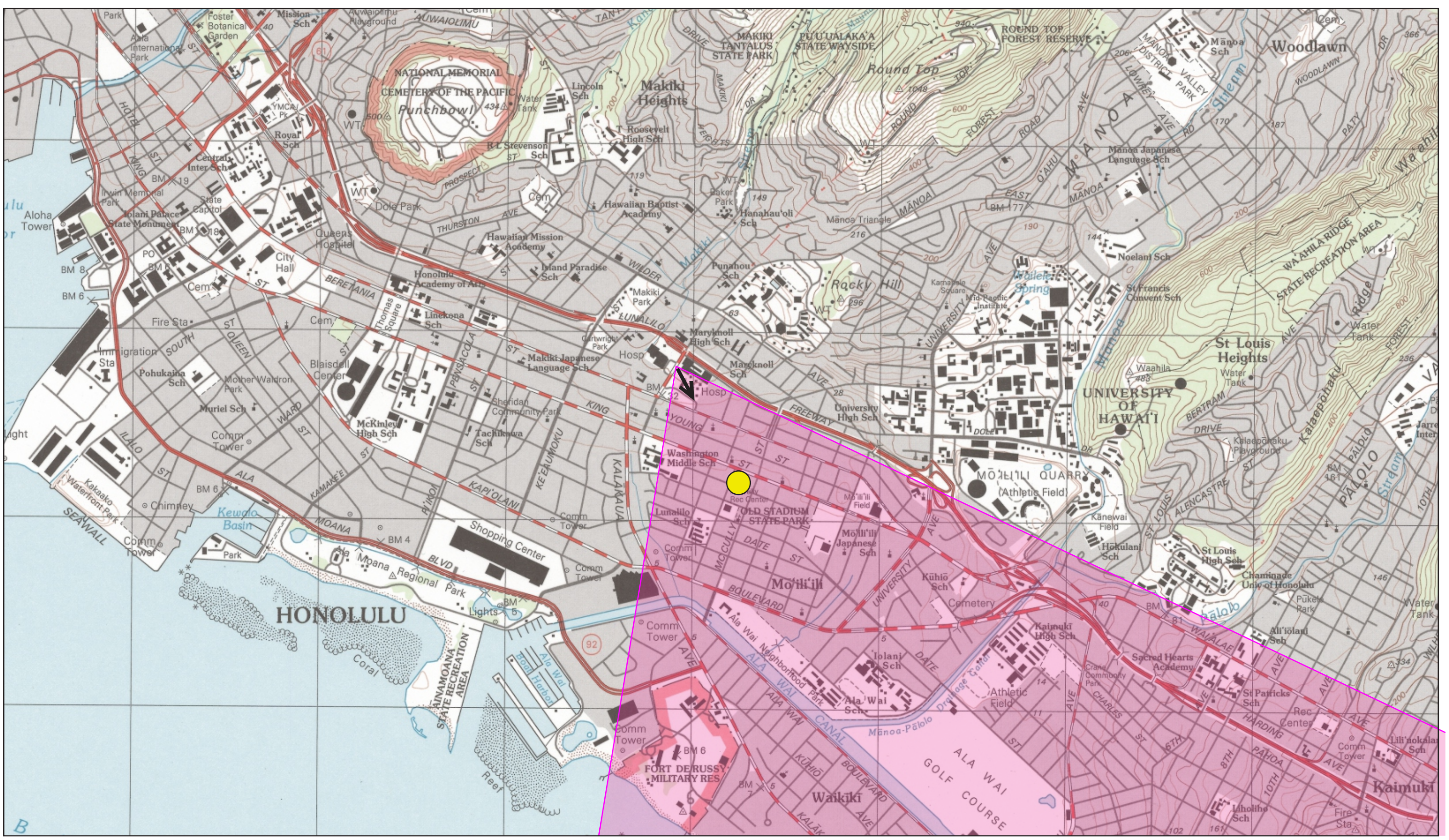


Source: U.S. Geological Study, Google Earth 2013

Figure 12: Northeast View Analysis



View of the proposed building from the vicinity of South Beretania Street and Punahou Street intersection near Central Union Church, looking southeast towards Diamond Head.



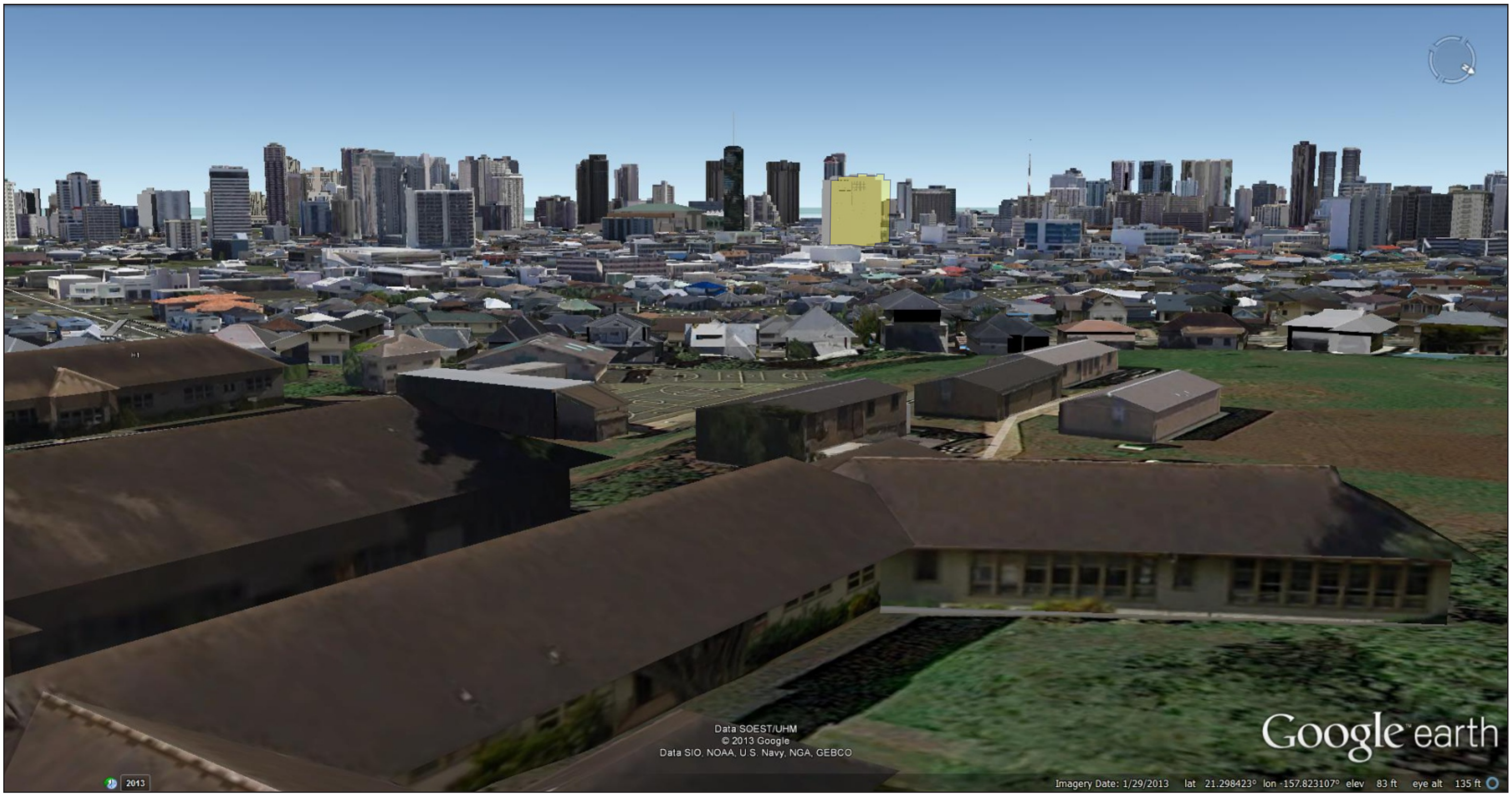
Legend

Site Location

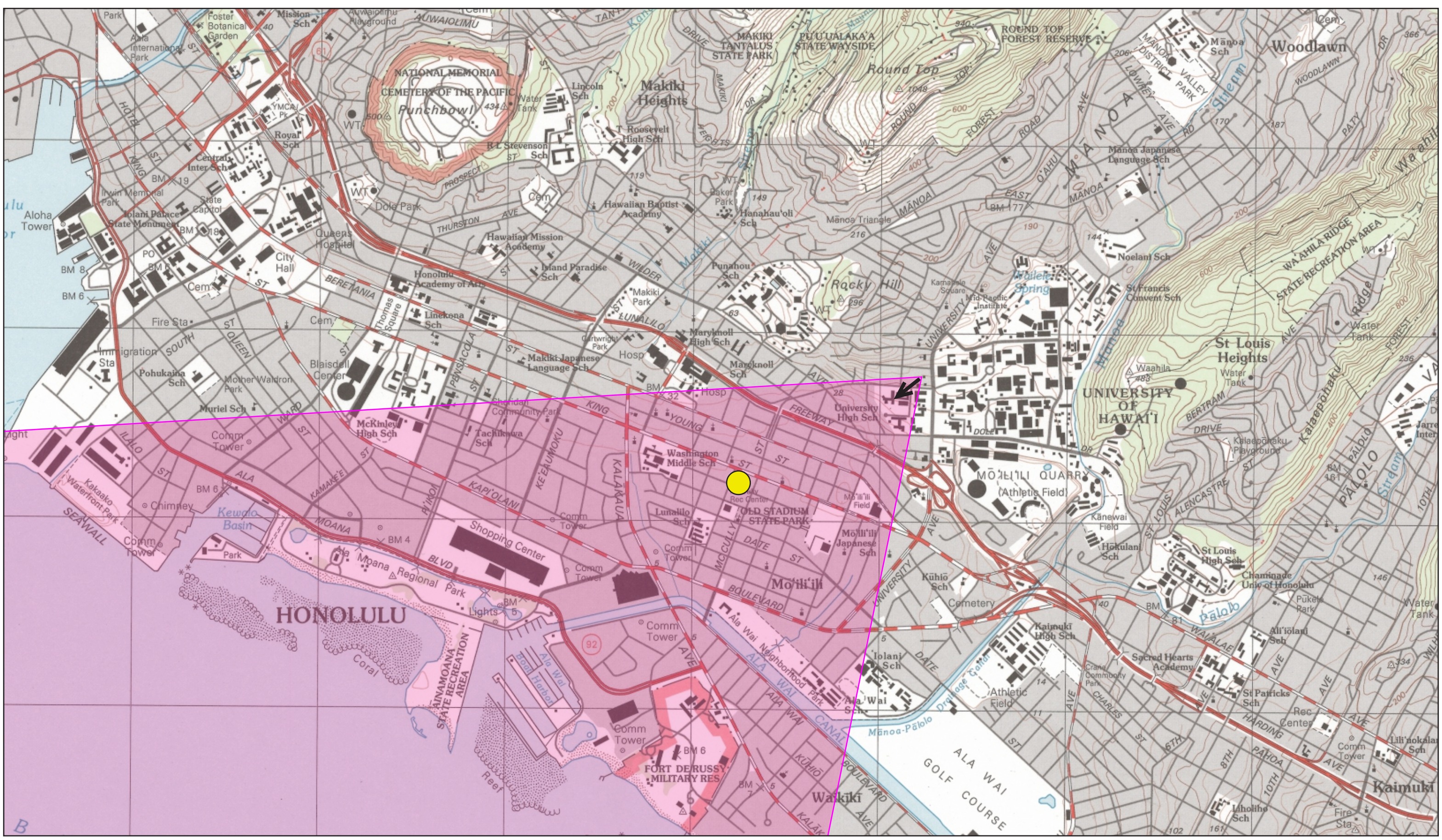
View Plane

Source: U.S. Geoological Study, Google Earth 2013

Figure 13: Southeast View Analysis



View of the proposed building from the vicinity of University Avenue and Metcalf Street intersection near University High School, looking southwest towards Magic Island.



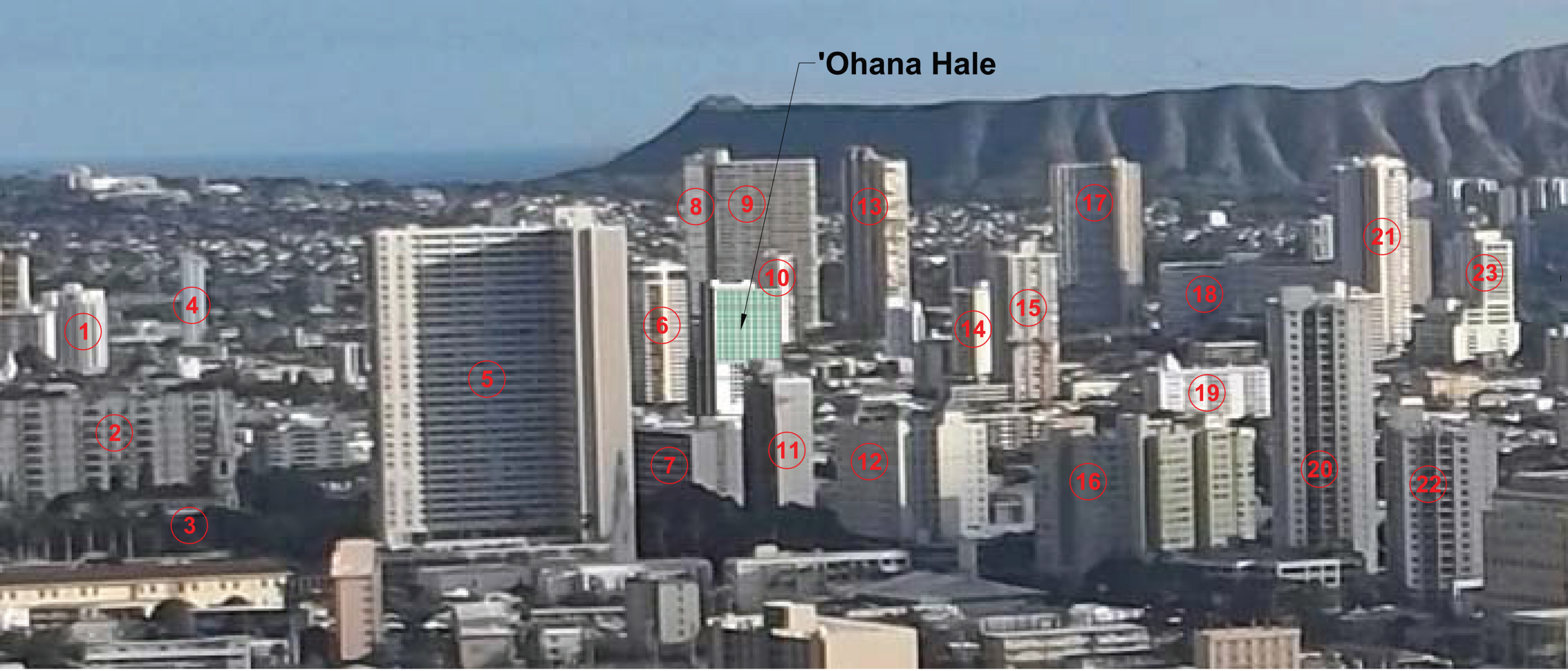
Legend

Site Location

View Plane

Source: U.S. Geoological Study, Google Earth 2013

Figure 14: Southwest View Analysis



DETAIL VIEW FROM PUNCHBOWL LOOKOUT

1. 845 University Ave.
2. Courtyards at Punahou
3. Central Union Church
4. Plumeria Hale
5. Banyan Tree Plaza
6. Parkside Tower
7. Punahou Circle
8. Regency Tower
9. Iolani Court Plaza
10. Kapiolani Royale
11. Punahou Regency
12. Kulana Hale
13. Royal Iolani
14. H & M Apartments
15. Twenty One Hundred
16. One Kalakaua
17. Ala Wai Plaza Skyrise
18. Ala Wai Plaza
19. The Pumehana
20. 1450 Young St.
21. Marco Polo
22. 1448 Young St.
23. Tokai University

Figure 15: Detailed View from Punchbowl Lookout

Table 4 – Detailed View from Punchbowl Lookout

Condominium Name	Address	Tax Map Key	Zoning	Maximum Height
845 University Avenue	845 University Avenue	2-7-016: 019	A-2: Medium Density Apartment	150-feet
Courtyards at Punahou	1740 S. Beretania Street	2-8-011: 020	A-2: Medium Density Apartment	150-feet
Central Union Church	1600 S. Beretania Street	2-8-011: 028	BMX-3: Community Business Mixed-Use	150-feet
Plumeria Hale	2630 Kapiolani Boulevard	2-7-018: 036	A-2: Medium Density Apartment	150-feet
Banyan Tree Plaza	1212 Punahou Street	2-4-007: 002	A-3: High Density Apartment	350-feet
Parkside Tower	2222 Citron Street	2-7-007: 031 2-7-008: 005	A-2: Medium Density Apartment	150-feet
Punahou Circle	1617 S. Beretania Street	2-8-001: 042	AMX-2: Medium Density Apartment Mixed-Use	150-feet
Regency Tower	2525 Date Street	2-7-019: 015	A-3: High Density Apartment	350-feet
`Iolani Court Plaza	2499 Kapiolani Boulevard	2-7-019: 014	A-3: High Density Apartment	350-feet
Kapi`olani Royale	2474 Kapiolani Boulevard	2-7-014: 037	A-2: Medium Density Apartment	150-feet
Punahou Regency	1114 Punahou Street	2-4-006: 001	A-2: Medium Density Apartment	150-feet
Kūlana Hale	1303 Kalakaua Avenue	2-4-006: 005	BMX-3: Community Business Mixed-Use	150-feet
Royal `Iolani	581 Kamoku Street	2-7-020: 009	A-3: High Density Apartment	350-feet
H & M Apartments	777 Paani Street	2-7-006: 022	A-2: Medium Density Apartment	150-feet
Twenty One Hundred	2100 Date Street	2-7-002: 030	A-2: Medium Density Apartment	150-feet
One Kalākaua	1314 Kalakaua Avenue	2-4-005: 020	BMX-3: Community Business Mixed-Use	150-feet
Ala Wai Plaza Skyrise	555 University Avenue	2-7-013:008	A-3: High Density Apartment	350-feet
Ala Wai Plaza	500 University Avenue	2-7-013: 002	A-3: High Density Apartment	350-feet

Condominium Name	Address	Tax Map Key	Zoning	Maximum Height
The Pumehana	1820 Waiola Street	2-3-029: 047	A-2: Medium Density Apartment	150-feet
1450 Young Street	1450 Young Street	2-4-005: 021	BMX-3: Community Business Mixed-Use	150-feet
Marco Polo	2333 Kapiolani Boulevard	2-7-004: 001	A-3: High Density Apartment	350-feet
1448 Young Street	1448 Young Street	2-4-005: 031	BMX-3: Community Business Mixed-Use	150-feet
Tokai University	2241 Kapiolani Boulevard	2-7-004: 004	A-3: High Density Apartment	350-feet

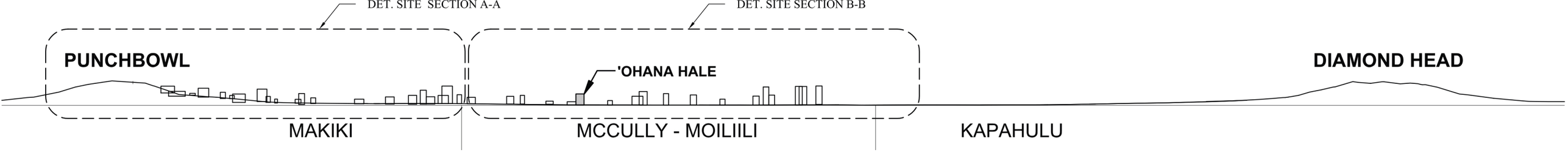
Sources: The Hawaii State Condo Guide website & the City & County of Honolulu, DPP, Honolulu Land Information System website.

Figure 16 – Pedestrian View Perspective. Figure 16 provides an illustration and visual analysis of a viewshed looking *mauka* (mountain direction) along Pumehana Street from a pedestrian perspective. Figure 16 also illustrates the 150-foot height limit line dashed in red. To the left of the pedestrian perspective viewshed is the Lunalilo Elementary School baseball field and to the right are residential dwellings. As illustrated, there is minimal visual impact looking mauka, when comparing the 150-foot height line and the proposed 189-foot height.

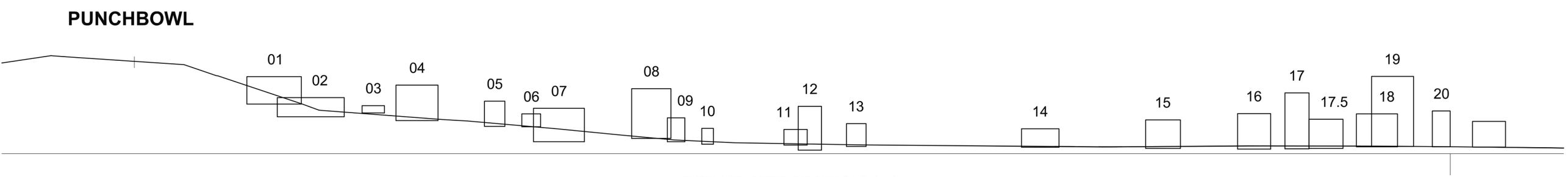
Figure 17 – Detailed Site Section. Figure 17 provides a detailed site section and visual analysis of the existing buildings and 'Ohana Hale from Punchbowl to Diamond Head. The height variations are based on the zoning districts within the site section study area.

Blank Wall. The design of 'Ohana Hale originally created a blank wall along the north and south elevations. In consultation with DPP, the applicant addressed this issue by creating a design feature along the north and south elevations; see Appendix D – 'Ohana Hale Architectural Drawings, Sheet A-4.3 – Conceptual Plans. Sheet A-4.3 contains a decorative pattern narrative explaining the design feature to mitigate the blank wall.

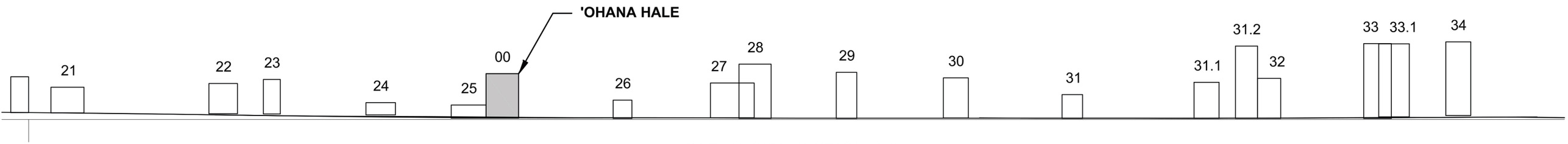
Figure 16 : Pedestrian View Perspective



SITE SECTION
SCALE: 1'-0" = 800'-0"



DETAIL SITE SECTION A-A
SCALE: 1'-0" = 200'-0"



DETAIL SITE SECTION B-B
SCALE: 1'-0" = 200'-0"

LEGEND

00	'Ohana Hale
01	Royal Vista
02	965 Prospect
03	Makiki Cliffs
04	Maunaihi Terrace
05	Makikilani Plaza
06	1556 Thurston
07	Barclay
08	Makiki Plaza
09	Village Maluhia
10	Hassinger Gardens
11	Piikoi Atrium
12	1212 Kinau - HPHA
13	Luna-Liho Towers
14	1326 Keeaumoku
15	1418 Young St
16	1448 Young St
17	1450 Young St
17.5	One Kalakaua
18	Kulana Hale
19	Banyan Tree Plaza
20	Punahou Regency
21	Punahou Circle
22	Courtyards at Punahou
23	1206 Alexander
24	1907 S. Beretania
25	The Pumehana
26	1919 Citron
27	McCully Villa
28	Twenty One Hundred
29	Parkside Tower
30	Scenic Tower
31	745 Isenberg
31.1	Ala Wai Plaza
31.2	Ala Wai Plaza Skyrise
32	Kapiolani Royale
33	Iolani Court Plaza
33.1	Royal Iolani
34	Regency Tower

Figure 17: Detailed Site Section

Potential Impacts and Mitigation Measures

The proposed structure will have a finished height of up to 189-feet, which exceeds the 150-foot height limit of the BMX-3 Community Business Mixed Use District specified in Section 21-3.120-2(b) (Table 21-3.4) in the Land Use Ordinance (LUO). MJF Development Corporation requests an exemption, through the Chapter 201H process, from the height ~~restriction~~ limit specified in the LUO.

Although there is some visual impact from the proposed ‘Ohana Hale building, there is also a great need for affordable housing in this area of urban Honolulu. As the PUC Development Plan states, in town residential neighborhoods offer the greatest amenities for urban living. Consisting mostly of apartment dwellings, these neighborhoods are close to employment centers, universities and cultural institutions. They are also close to grocery stores, shopping districts, and other government, health and commercial services. Moreover, the site’s proximity to rapid transit lines gives residents mobility and makes it possible to live with fewer automobiles. ‘Ohana Hale is an urban infill project that will benefit the community.

Mitigation measures could include a re-orientation of the proposed ‘Ohana Hale to minimize some of the visual impacts shown in Figures 12, 13, ~~and~~ 14, 15, 16, and 17. As illustrated in Figures 15, 16, and 17, there is building height variation due to the different underlying zoning districts in the view study area.

3.12 SOCIO-ECONOMIC CHARACTERISTICS

3.12.1 Community Profile

The ‘Ohana Hale site is located the McCully/Mō’ili’ili neighborhood, defined by the City as Neighborhood Board number 8, which is characterized by a mix of uses, single-family residential, multi-family residential and apartment (mid-rise and high-rise), retail, institutional, and educational facilities.

The McCully neighborhood is primarily residential, along with a mix of neighborhood stores, restaurants, grocery stores, shopping and other facilities serving community residents and University students, faculty, and staff.

According to the Market Study (Appendix B), the 2012 population of Oahu was 962,110. According to U.S. Census data, urban Honolulu has a population of 337,256. According to the City and County of Honolulu’s socioeconomic projections, Year 2010, the population for the McCully/Mō’ili’ili Neighborhood area was 25,734.

In comparison to Oahu as a whole, the McCully/Mō’ili’ili Neighborhood Area population is generally older; has a racial mix with proportionately more Asians than other races; has a lower proportion of family households; and has proportionately lower homeownership rates.

Potential Impacts and Mitigation Measures

`Ohana Hale will have a socio-economic benefit by addressing affordable housing demand in urban Honolulu. `Ohana Hale will provide more opportunity for homeownership in a neighborhood with relatively low homeownership rates. As previously stated in this Final EA, the *Demand Analysis* section demonstrates a sufficient amount of income-qualified households presently exist for the condominium market.

3.12.2 Economy

The median household income in the PMA is lower than the MSA and higher than the nation. Median household income in the PMA grew at a slightly faster rate than the MSA between 2000 and 2012, and significantly faster than the nation. The median household income in the PMA is projected to continue to increase through 2017, at a faster rate than both the MSA and the nation. (See Median Household Income Table on page 34 of Appendix B – `Ohana Hale Market Study).

Household Income Distribution

The Tables on page 36 of the Market Study, “Household Income PMA” and “Owner Household Income PMA,” illustrates the projected household income distribution for the PMA in 2012 and 2017.

The largest income cohort in the PMA is the $75,000-$99,999 bracket, with 13.3 percent of the household population in 2012. In the PMA, 58.5 percent of the total households earned $50,000 or more annually.

Owner Household Income Distribution

The “Owner Household Income PMA” table illustrates the projected owner household income distribution for the PMA in 2012 and 2017.

The largest owner income cohort in the PMA is the $75,000-$99,999 bracket, which contains 14.5 percent of the household population in 2012. In the PMA, 71.3 percent of the total owner households in the PMA earn at least $50,000 annually.

Potential Impacts and Mitigation Measures

Mixed-income housing is good business; there are economic benefits of mixed-income housing. Financially, it is more feasible to develop mixed-income housing in market-rate neighborhoods than it is to develop low-income housing because the upper-income households within the mixed-income development can better support the higher property costs. The development of ‘Ohana Hale coincides with the above-referenced premise that mixed-income housing development in market-rate neighborhoods is a financially feasible and economically sound approach.

3.13 INFRASTRUCTURE

3.13.1 Water

Based on the ~~Draft~~ Site Infrastructure Assessment ~~(see~~ Appendix H~~)~~, the City and County of Honolulu (City), Board of Water Supply (BWS) currently provides potable water to the

project site via existing 8-inch waterlines along Algaroba Street and Pumehana Street. The property is currently serviced by two lateral connections: one to the 8-inch waterline along Algaroba Street and the second to the 8-inch waterline along Pumehana Street.

Three (3) existing fire hydrants are located in close proximity to the `Ohana Hale site.

Potential Impacts and Mitigation Measures

Based on the Board of Water Supply "Water System Standards," dated 2002 (BWS Standards), the proposed domestic water consumption flows are as follows:

Table ~~3~~ 5 - Domestic Water Consumption

Flow Demand	Proposed Domestic Water Consumption (gallons/day)
Average Daily Demand	54,000 gpd
Maximum Daily Demand	81,000 gpd
Peak Hour Flow	162,000 gpd

Source: Appendix H - ~~Draft~~ Site Infrastructure Assessment Report

Water consumption was based on an average daily demand of 300 gallons/unit as indicated in Table 100-18 of the BWS Standards. An inquiry for water availability has been sent to BWS to determine if the existing water system can adequately accommodate the domestic and off-site fire protection requirements of the `Ohana Hale project.

The `Ohana Hale project will likely require a new water lateral connection to the existing 8-inch waterline located along either Algaroba Street or Pumehana Street. An exemption to the cost of this potential new water lateral connection will be requested through the 201H application. A new FM meter will also be required to provide both domestic and fire protection services to the Project. Use of a FM meter allows the Project to make a single lateral connection to the existing waterline to provide

domestic and fire protection services. The actual meter size and type will be determined during the design phase.

Fire protection for the Project will be provided by an on-site fire sprinkler system and supplemented by the existing BWS fire hydrants. All on-site fire protection services will meet the requirements of the Fire Prevention Bureau of the Honolulu Fire Department.

BWS stated that the existing water system is adequate to accommodate the proposed development. The final decision on availability of water will be confirmed when the building permit application is submitted for approval.

The applicant understands from consultation with BWS that potential fees include the Water System Facilities Charge and Installation Charge. However, these fees are not determined until review of the construction plans, building plans, and building permit application. Construction plans, building plans, and the building permit application will be submitted for review and approval following the Final EA phase of the project. If 'Ohana Hale is subject to BWS charges, then the applicant will request a payment deferral.

3.13.2 Wastewater

Wastewater generated by the existing parcel is conveyed to the City's existing wastewater collection system via two (2) 6-inch service laterals to the 6-inch sewer main along Algaroba Street and two (2) 6-inch service laterals to the 8-inch sewer main located along Pumehana Street. Sewage flows are then conveyed to the Beachwalk Wastewater Pump Station and then to the Sand Island Wastewater Treatment Plant for treatment and disposal.

Potential Impacts and Mitigation Measures

Based on the City and County of Honolulu, Department of Wastewater Management, "Design Standards of the Department of Wastewater Management," dated July 1993 (City Sewer Standards), the proposed wastewater flows are as follows:

Table 4 6 - Proposed Wastewater Flows

Flow Demand	Proposed Wastewater Flow (gallons/day)
Average Wastewater Flow	40,320 gpd
Maximum Flow	201,600 gpd
Design Average Flow	57,960 gpd
Design Maximum Flow	219,240 gpd
Design Peak Flow	228,394 gpd

Source: Appendix H – ~~Draft~~ ‘Ohana Hale Site Infrastructure Assessment Report

Wastewater flows were based on an average flow of 80 gallons per capita per day as indicated in Section 22.2.1 of the “City Sewer Standards”. A factor of 2.8 capita per unit was used for estimation purposes. The design flow rates are inclusive of dry weather and wet weather infiltration/inflow rates assuming that sewers are located below the groundwater table.

On December 18, 2012, the Department of Planning and Permitting (DPP) conditionally approved a Sewer Connection Application for connection to the existing sewer system (Application #2012/SCA-0785). The proposed unit count was 180, but the unit mix was different at this time than the current proposal. The DPP has determined that the existing sewer laterals are tributary to inadequate sewer lines and has required that the Project either provide a new sewer lateral connection to the existing sewer manhole (ID #386374) at the intersection of Pumehana Street and Algaroba Street or upsize the existing 6-inch sewer in Algaroba Street to an 8-inch pipe. Approval of the sewer connection is contingent upon submittal and approval of construction plans by DPP. Subsequent to the initial Sewer Connection Application, the proposed unit mix for ‘Ohana Hale was amended to the combination listed in Table 3; 78 studios, 87 one-bedrooms, and 15 two-bedrooms, which required an amended Sewer Connection Application. The amended Sewer Connection Application, 2014/SCA-0193 was approved on March 25, 2014 by DPP – Wastewater Branch. On August 21, 2014, DPP revised the conditions to the sewer connection approval to require that the new sewer lateral connection be made to the existing sewer manhole (ID #386374) at the intersection of Pumehana Street and Algaroba Street. Approval of the sewer connection is contingent upon submittal and approval of construction plans by DPP.

Based on the current SCA approval, DPP estimates the Wastewater System Facility Charge to be ~~$728,284.20~~ $710,316.60. A~~n~~ ~~exemption~~ deferral of ~~to~~ the Wastewater System Facility Charge fee has been applied for ~~in the 201H application~~ with DPP. A revision to the SCA application will be required based on the current unit mix as shown in Table 3 – ‘Ohana Hale Building Summary.

3.13.3 Drainage

The existing property currently consists of three existing structures, a paved driveway and parking lot, and landscaped areas along Pumehana Street and Algaroba Street. Stormwater runoff from the project site generally sheet flows off the property and onto Pumehana Street. Runoff then enters the City’s municipal stormwater drainage system via a catch basin located at the mauka/Diamond Head corner of the intersection of Pumehana Street and Algaroba Street. Runoff is conveyed through the stormwater system and eventually outfalls into the Ala Wai Canal near Kalakaua Avenue.

Potential Impacts and Mitigation Measures

In general, the Project will maintain the existing drainage pattern of the property. The proposed layout is not anticipated to increase the amount of stormwater runoff from the site as the existing site is predominantly paved. Landscaped areas along Pumehana Street and Algaroba Street will be incorporated into the site layout to reduce the amount of stormwater runoff into the City’s drainage system. The project will meet the water quality design criteria outlined in the Rules Related to Storm Drainage Standards as recommended by the Department of Permitting and Planning.

During construction, appropriate erosion control BMPs will be used to minimize the amount of soil transported in stormwater runoff during construction activities. All construction activities will comply with the applicable Federal, State and County regulations and rules for erosion control.

3.13.4 Solid Waste

On O’ahu, most residential and general commercial trash is disposed of at H-POWER (Honolulu Program of Waste Energy Recovery), the City’s waste-to-energy plant located at Campbell Industrial Park. The facility processes up to 3,000 tons per day of municipal solid waste, generating up to 90 megawatts of energy for Hawaiian Electric Company (HECO) — enough to meet nearly 8 percent of Oahu's energy needs. HPOWER also recovers thousands of tons of ferrous (steel) and non-ferrous (aluminum alloy) metal for recycling each year. The electricity generated is bought under a purchase power agreement with HECO. Ash and nonprocessibles are transported and buried at the Waimānalo Gulch Landfill.

The Waimānalo Gulch Landfill is located on the western side of O’ahu. The land is owned by the City and the landfill is operated by Waste Management, Inc. The landfill accepts ash and residue from the H-POWER waste-to-energy facility, industrial wastes, and non-combustible construction and demolition debris.

Potential Impacts and Mitigation Measures

A solid waste management plan will be prepared in accordance with guidelines provided by the City Department of Facility Maintenance. All waste generated by Ohana Hale will be disposed of in a manner and at appropriate sites designated by the City.

`Ohana Hale will comply with applicable requirements of the State DOH and the City Department of Facility Maintenance. `Ohana Hale will also comply with the program goals and objectives of the Integrated Solid Waste Management Act, Chapter 342G, HRS, and the City’s approved integrated solid waste management plans.

Waste generated by site preparation will primarily consist of vegetation, rocks, and debris from clearing, grubbing, and grading. Soil and rocks displaced from grading and clearing will be used as fill within the site as needed. Construction waste will consist of waste lumber, concrete, and other building materials.

During construction, a job-site waste management and recycling program will be implemented to maintain a clean construction site, maximize material recycling, and minimize disposal truck traffic impacts. This recycling program will incorporate the "Three Rs" of effective construction waste management:

- Reduce: by preventing waste before it happens through efficient design.
- Reuse: by using materials removed during demolition (such as rocks and concrete) on site.
- Recycling: by separating recyclable materials from non-recyclable materials and supplying these recyclable materials to a recycler for use as new products.

Construction materials that cannot be recycled will be disposed of in the Waimānalo Gulch Landfill. After construction ‘Ohana Hale will contain a centralized trash chute for solid waste disposal from each floor. Provisions for recycling, such as collection systems and space for bins for recyclables, will be incorporated into the ground floor trash room. A private refuse company will be contracted to haul away solid waste that cannot be recycled.

3.13.5 Electrical and Telecommunications

Existing Hawaiian Electric Company (HECO) overhead power lines, Hawaiian Telcom (HT) overhead telephone lines and Oceanic Time Warner Cable (OTWC) overhead CATV lines are located across Pumehana Street and Algaroba Street from the subject parcel.

Potential Impacts and Mitigation Measures

New underground ductlines will run across Pumehana Street and/or Algaroba Street from new and/or existing poles that support these overhead systems to serve the new housing facility.

Handholes for HECO cables, HT cables and OTWC cables may be required on the property in order to pull service cables into the building.

It is anticipated that the proposed building will be provided with a HECO vault, so space for a HECO pad-mounted transformer on the property will not be required.

Further consultation with the respective utility companies will be conducted to verify required upgrades for the proposed development.

3.14 PUBLIC SERVICES

3.14.1 Schools

The ‘Ohana Hale site is located in the State Department of Education (DOE)’s Ka‘imukī Complex, and is served by Lunalilo Elementary School, Washington Middle School, and Ka‘imukī High School.

King William Lunalilo Elementary School is located at, 810 Pumehana Street, approximately 0.2 miles south of the ‘Ohana Hale site.

Washington Intermediate School is located at 1633 S. King Street, approximately 0.2 miles west from the ‘Ohana Hale site.

Ka‘imukī High School is located at 2705 Ka‘imukī Avenue, approximately 1.2 miles southeast of the ‘Ohana Hale site.

Current school enrollment and capacity for the three schools are listed below in Table 7. The table below illustrates student enrollment for 2012, 2013, and a projected enrollment. ~~based on the Annual Room Tracking Survey (ARTS).~~

Table ~~5~~ 7 - Ka'imukī Complex - Enrollment and Enrollment Projections

School	Enrollment 2012-13	Enrollment 2013-14	Projected Enrollment ~~based on ARTS~~ – 2018-19
King William Lunalilo Elementary School	499	488	~~462~~ 464
Washington Middle School	817	794	856
Ka`imukī High School	862	813	892

Source: Department of Education, ~~2013~~ 2014

Potential Impacts and Mitigation Measures

According to the aforementioned DOE data, elementary enrollment will continue to decline in the next 5 years, while middle school and high school enrollment will ~~slightly~~ increase in the next 5 years. However, these projected enrollment numbers are still lower than historical enrollment data from 2004-2011. Therefore, it is reasonable to conclude that school facilities in the Ka`imukī Complex serving the `Ohana Hale project are adequate to serve the future student population.

3.14.2 Police

Police protection is provided by the Honolulu Police Department (HPD). HPD Headquarters (Alapa`i Headquarters) is located at 801 South Beretania Street.

Potential Impacts and Mitigation Measures

HPD will be notified when the construction phase begins so they may anticipate an increase in calls for service to the area because of traffic complications. As such, mitigation measures will be implemented to minimize construction-related traffic. As a result of consultation with HPD, it was recommended that road closures on Pumehana and Algaroba Streets be conducted during off-peak traffic hours during construction to minimize traffic disruptions. The applicant will notify the contractors that road closures should be conducted during off-peak traffic hours.

HPD also recommended that the ingress and egress for 926 and 934 Pumehana Street residents and visitors are not blocked during construction hours. The applicant will notify the contractors not to block the ingress and egress during construction hours.

3.14.3 Fire

The McCully/Mō'ili'ili Fire Station (Station 29) at 2425 Date Street is the primary response to this area in case of an emergency. The Honolulu Fire Department (HFD) responded to the applicant's ~~pre-consultation memorandum on December 2, 2013~~ Draft EA on April 23, 2014. The response memo to the Honolulu Fire Department is attached in Appendix I – Draft EA ~~Pre-Consultation~~ Comment and Response Letters.

Potential Impacts and Mitigation Measures

There may be occasional demand for firefighting services. To mitigate potential structural fires, 'Ohana Hale will be equipped with modern fire control devices, and access for fire apparatus, water supply, and building construction will be in conformance with existing codes and standards.

During the engineering and construction phase of this project, the applicant will ensure compliance with applicable codes pertaining to the fire department access road. There is no on-site fire hydrant, but there is an existing fire hydrant across the street from the 'Ohana Hale site, at the corner of Pumehana and Algaroba Streets (see photograph in Appendix K –Draft EA Comment and Response Letters). The applicant will ensure that the unobstructed width and unobstructed vertical clearance of a fire apparatus access road is complied with during the engineering and construction phase of this project. Civil drawings will be submitted to HFD for review and approval.

3.14.4 Medical Facilities

Several healthcare facilities in Honolulu provide primary patient care to adults and children. The nearest hospital that provides 24-hour emergency service is Straub Clinic & Hospital at 888 South King Street. The hospital is approximately five minutes from the McCully Fire Station by ambulance. Also near the project site, the Kapi'olani Medical

Center for Women & Children at 1319 Punahou Street has a 24-hour pediatric emergency room.

Potential Impacts and Mitigation Measures

`Ohana Hale is not expected to significantly increase the need for emergency service, and is not expected to have a long-term adverse impact on emergency medical providers or their ability to service the community. There may be an unavoidable and occasional need for emergency health care services by residents of `Ohana Hale.

3.14.5 Recreational Facilities

There are numerous recreational facilities in Honolulu. The well-known Waikiki beach parks, Kapi'olani Park, Kewalo Basin, Kākā'āko Waterfront Park, Ala Wai Boat Harbor, Mount Tantalus, and Diamond Head State Park are located within a three-mile radius of the project site.

The following public recreational facilities are located within convenient distance from the `Ohana Hale site. Figure ~~15~~ 18 – Neighborhood Amenities, illustrates the proximity of `Ohana Hale to the abundance of parks and recreational areas within a 0.25 mile radius and a 0.5 mile radius. The rationale for illustrating the 0.25 mile and 0.5 mile radii is to show what is a comfortable walking distance to experience and enjoy these recreational and neighborhood amenities. Figure ~~15~~ 18 also shows parks and recreational areas within a convenient distance outside the 0.25 and 0.5 mile radii.

- Ala Moana Regional Park, 1201 Ala Moana Boulevard
- Ala Wai Community Park, 2015 Kapi`olani Boulevard
- Ala Wai Promenade, 1828 Kalakaua Avenue
- Cartwright Neighborhood Park, 1314 Makiki Street
- Makiki District Park,1527 Ke`eaumoku Street
- McCully District Park, 831 Pumehana Street
- Mō'ili'ili Neighborhood Park, 1115 Isenberg Street
- Old Stadium Park, 2237 King Street
- Sheridan Community Park, 833 Pi`ikoi Street

- Stevenson Recreation Center, 1202 Prospect Street
- Thomas Square, 1102 Victoria Street
- Boy’s and Girl’s Club, 1704 Waiola Street

Potential Impacts and Mitigation Measures

MJF Development Corporation plans to ask for an exemption to park dedication requirements (Chapter 22, Article 7, Revised Ordinances of Honolulu) through the 201H process. As ‘Ohana Hale is an affordable housing project, the on-site amenities proposed are to be limited, to both reduce the sales price for units as well as limit maintenance fees for residents. As previously stated in the ~~Draft~~ Final EA, the ‘Ohana Hale development is an urban infill project and is in walking distance to many services and amenities; including recreational facilities.

4.0 LAND USE CONFORMANCE

4.1 STATE OF HAWAI‘I

4.1.1 State Land Use Law (Chapter 205, Hawaii Revised Statutes)

§205-2 Districting and classification of lands.

(a) There shall be four major land use districts in which all lands in the State shall be placed: urban, rural, agricultural, and conservation.

(b) Urban districts shall include activities or uses as provided by ordinances or regulations of the county within which the urban district is situated.

Discussion: The `Ohana Hale site is located within the State Urban District, and is consistent with the uses allowed in this district.

4.1.2 Coastal Zone Management (Chapter 205A, Hawaii Revised Statutes)

§205A-2 Coastal zone management program; objectives and policies. *(a) The objectives and policies in this section shall apply to all parts of this chapter.*

(b) Objectives.

(1) Recreational resources;

(A) Provide coastal recreational opportunities accessible to the public.

(2) Historic resources;

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

(3) Scenic and open space resources;

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

(4) Coastal ecosystems;

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

(5) Economic uses;

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

(6) Coastal hazards;

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

(7) Managing development;

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

(8) Public participation;

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

(9) Beach protection;

(A) Protect beaches for public use and recreation.

(10) Marine resources;

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

(1) Recreational resources;

(A) Improve coordination and funding of coastal recreational planning and management; and
(B) Provide adequate, accessible, and diverse recreational opportunities in the coastal zone management area by:
(i) Protecting coastal resources uniquely suited for recreational activities that cannot be provided in other areas;
(ii) Requiring replacement of coastal resources having significant recreational value including, but not limited to surfing sites, fishponds, and sand beaches, when such resources will be unavoidably damaged by development; or requiring reasonable

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

(2) Historic resources;

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

(3) Scenic and open space resources;

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

(4) Coastal ecosystems;

(A) Exercise an overall conservation ethic, and practice stewardship in the protection, use, and development of marine and coastal resources;
(B) Improve the technical basis for natural resource management;
(C) Preserve valuable coastal ecosystems, including reefs, of significant biological or economic importance;

(D) Minimize disruption or degradation of coastal water ecosystems by effective regulation of stream diversions, channelization, and similar land and water uses, recognizing competing water needs; and
(E) Promote water quantity and quality planning and management practices that reflect the tolerance of fresh water and marine ecosystems and maintain and enhance water quality through the development and implementation of point and nonpoint source water pollution control measures;

(5) Economic uses;

(A) Concentrate coastal dependent development in appropriate areas;
(B) Ensure that coastal dependent development such as harbors and ports, and coastal related development such as visitor industry facilities and energy generating facilities, are located, designed, and constructed to minimize adverse social, visual, and environmental impacts in the coastal zone management area; and
(C) Direct the location and expansion of coastal dependent developments to areas presently designated and used for such developments and permit reasonable long-term growth at such areas, and permit coastal dependent development outside of presently designated areas when:
(i) Use of presently designated locations is not feasible;
(ii) Adverse environmental effects are minimized; and
(iii) The development is important to the State's economy;

(6) Coastal hazards;

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

(7) Managing development;

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

(8) Public participation;

(A) Promote public involvement in coastal zone management processes;

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

(9) Beach protection;

(A) Locate new structures inland from the shoreline setback to conserve open space, minimize interference with natural shoreline processes, and minimize loss of improvements due to erosion;
(B) Prohibit construction of private erosion-protection structures seaward of the shoreline, except when they result in improved aesthetic and engineering solutions to erosion at the sites and do not interfere with existing recreational and waterline activities;
(C) Minimize the construction of public erosion-protection structures seaward of the shoreline;
(D) Prohibit private property owners from creating a public nuisance by inducing or cultivating the private property owner's vegetation in a beach transit corridor; and
(E) Prohibit private property owners from creating a public nuisance by allowing the private property owner's unmaintained vegetation to interfere or encroach upon a beach transit corridor;

(10) Marine resources;

(A) Ensure that the use and development of marine and coastal resources are ecologically and environmentally sound and economically beneficial;
(B) Coordinate the management of marine and coastal resources and activities to improve effectiveness and efficiency;
(C) Assert and articulate the interests of the State as a partner with federal agencies in the sound management of ocean resources within the United States exclusive economic zone;
(D) Promote research, study, and understanding of ocean processes, marine life, and other ocean resources to acquire and inventory information necessary to understand how ocean development activities relate to and impact upon ocean and coastal resources; and
(E) Encourage research and development of new, innovative technologies for exploring, using, or protecting marine and coastal resources.

§205A-4 Implementation of objectives, policies, and guidelines. *(a) In implementing the objectives of the coastal zone management program, the agencies shall give full consideration to ecological, cultural, historic, esthetic, recreational, scenic, and open space values, and coastal hazards, as well as to needs for economic development.*

Discussion: In compliance with Objective (5)(A), 'Ohana Hale is much needed below market and mixed-income housing located in urban Honolulu a suitable location for such development. Although a small section of the subject property is located within flood zone AO, the proposed building will not be sited in the flood zone, which complies with the City and County of Honolulu NFIP Coordinator's consultation. Section 3.11 – Visual Resources provides discussion on the Punchbowl Lookout to Diamond Head viewshed. As illustrated from Figure 15 – Detailed View from Punchbowl Lookout, 'Ohana Hale's location and height has a minimal to no impact on the viewshed. Some of the existing buildings have far greater visual impact. In compliance with Policy (3)(D), 'Ohana Hale is not coastal dependent and is located inland, therefore has little to no impact on coastal areas. According to the Hawai'i State Civil Defense, Tsunami Evacuation Zone Mapping Tool, 'Ohana Hale is located outside the tsunami hazard area.

4.1.3 ~~4.1.2~~ Hawaii State Plan (Chapter 226, Hawaii Revised Statutes)

§226-3 Overall Theme

Hawaii's people, as both individuals and groups, generally accept and live by a number of principles or values which are an integral part of society. This concept is the unifying theme of the state plan. The following principles or values are established as the overall theme of the Hawaii state plan:

(1) Individual and family self-sufficiency refers to the rights of people to maintain as much self-reliance as possible. It is an expression of the value of independence, in other words, being able to freely pursue personal interests and goals. Self-sufficiency means that individuals and families can express and maintain their own self-interest so long as that self-interest does not adversely affect the general welfare. Individual freedom and individual achievement are possible only by reason of other people in society, the institutions, arrangements and customs that they maintain, and the rights and responsibilities that they sanction.

(2) Social and economic mobility refers to the right of individuals to choose and to have the opportunities for choice available to them. It is a corollary to self-sufficiency. Social and economic mobility means that opportunities and incentives are available for people to seek out their own levels of social and economic fulfillment.

(3) Community or social well-being is a value that encompasses many things. In essence, it refers to healthy social, economic, and physical environments that benefit the community as a whole. A sense of social responsibility, of caring for others and for the well-being of our community and of participating in social and political life, are important aspects of this concept. It further implies the aloha spirit--attitudes of tolerance, respect, cooperation and unselfish giving, within which Hawaii's society can progress.

One of the basic functions of our society is to enhance the ability of individuals and groups to pursue their goals freely, to satisfy basic needs and to secure desired socio-economic levels. The elements of choice and mobility within society's legal framework are fundamental rights. Society's role is to encourage conditions within which individuals and groups can approach their desired levels of self-reliance and self-determination. This enables people to gain confidence and self-esteem; citizens contribute more when they possess such qualities in a free and open society.

Government promotes citizen freedom, self-reliance, self-determination, social and civic responsibility and goals achievement by keeping order, by increasing cooperation among many diverse individuals and groups, and by fostering social and civic responsibilities that affect the general welfare. The greater the number and activities of individuals and groups, the more complex government's role becomes. The function of government, however, is to assist citizens in attaining their goals. Government provides for meaningful participation by the people in decision-making and for effective access to authority as well as an equitable sharing of benefits. Citizens have a responsibility to work with their government to contribute to society's improvement. They must also conduct their activities within an agreed-upon legal system that protects human rights. (L 1978, c 100, pt of §2)

Discussion: The self-sufficiency and self-reliance provisions in the Hawaii State Plan can be viewed as promoting upward mobility and homeownership. `Ohana Hale provides this opportunity by building 108 affordable units for individuals and families. Homeownership provides social and economic mobility in a community. As is well documented and studied, homeownership in Hawai`i is a challenge for many individuals and families.

§226-4 State Goals

In order to guarantee, for present and future generations, those elements of choice and mobility that insure that individuals and groups may approach their desired levels of self-reliance and self-determination, it shall be the goal of the State to achieve:

(1) A strong, viable economy, characterized by stability, diversity, and growth, that enables the fulfillment of the needs and expectations of Hawaii's present and future generations.

(2) A desired physical environment, characterized by beauty, cleanliness, quiet, stable natural systems, and uniqueness, that enhances the mental and physical well-being of the people.

(3) Physical, social, and economic well-being, for individuals and families in Hawaii, that nourishes a sense of community responsibility, of caring, and of participation in community life. (L 1978, c 100, pt of §2; am L 1986, c 276, §3)

Discussion: Affordable housing is sustainable development. In this context, "sustainable" can be defined as social and economic sustainability. Affordable housing provides social mobility and economic opportunities that would not be possible with just market-driven and luxury housing prices. `Ohana Hale is also a mixed-income development in a neighborhood with adequate schools, parks, and other social and recreational opportunities. Affordable, mixed-income developments sustains the social fabric of a community and neighborhood.

§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 individuals, through collaboration and cooperation between government and nonprofit and for-profit developers to ensure that more affordable housing is made available to very low-, low- and moderate-income segments of Hawaii's population.

(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 low-income, moderate-income, and gap-group households.

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

(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.

Discussion: `Ohana Hale will provide affordable housing for the moderate-income segment of Honolulu's population that is currently underserved. Moreover, the project will increase homeownership opportunities and increase housing choice in the urban Honolulu area and for citizens who desire city-living over a suburban lifestyle. `Ohana Hale is in a desirable location in McCully with close proximity to schools, open space, recreation, shopping, and other basic need services.

4.2 CITY AND COUNTY OF HONOLULU

4.2.1 General Plan

The General Plan for the City and County of Honolulu establishes long-range objectives and policies for the general welfare of the public and, together with the City Charter, provides a direction and framework to guide the programs and activities of the City and County of Honolulu.

The General Plan is a guide for all levels of government, private sector, neighborhood and citizen groups, organizations, and individual citizens in eleven (11) areas of concern:

1) population;
2) economic activity;
3) the natural environment;
4) housing;
5) transportation and utilities;
6) energy
7) physical development and urban design;
8) public safety;

9) health and education;
10) culture and education; and
11) government operations and fiscal management.

The proposed project is in accordance with the following General Plan policies:

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 the full development of the primary urban center.

Discussion: ‘Ohana Hale is located within the Primary Urban Center (PUC). Housing that is affordable to the workforce and centrally located is important to ease the burden on transportation systems, minimizes the need for an automobile, and contributes to a vibrant, 24-hour city. This General Plan policy also coincides with urban infill elements as ‘Ohana Hale will "facilitate the full development of the primary urban center."

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 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.

Discussion: ‘Ohana Hale will provide a minimum 60% (108 residential units) at affordable prices between 100% (22 units) and 120% (86 units) of the HHFDC-HUD AMI (see Section 2.2.2 - Affordability). ‘Ohana Hale will increase the inventory of affordable residential condominiums in the PUC, near employment, recreation, and commercial centers. As previously stated, ‘Ohana Hale is an urban infill development, which has the following benefits: 1) allows communities to achieve and sustain population density thresholds that are needed to attract certain amenities (parks, community services, retail); and 2) can be an effective tool for increasing supply of more affordable homes in an efficient manner. As an urban infill project, ‘Ohana Hale achieves the aforementioned General Plan housing objectives and policies and strives towards a more sustainable, efficient, and balanced city.

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.

Policy 9: Exclude from residential areas, uses which are major sources of noise and air pollution.

Objective B: To develop Honolulu (Wai’alae-Kahala to Hālawa*), 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.

Policy 5: Require new developments in stable, established communities and rural areas to be compatible with the existing communities and areas.

Policy 6: Provide special design standards and controls that will allow more compact development and intensive use of lands in the primary urban center.

Discussion: `Ohana Hale is consistent with policies to promote development in the PUC. By design, `Ohana Hale is also consistent with the policy to provide for more compact development and intensive use of urban lands. `Ohana Hale will add residents to an already vibrant, mixed-use neighborhood through the addition of affordable and attractive housing.

The Smart Growth Network developed a set of ten (10) basic principles which relate to the above-referenced General Plan objectives and policies. The ten (10) smart growth principles are:

1) Mix land uses
2) Take advantage of compact building design
3) Create a range of housing opportunities and choices
4) Create walkable neighborhoods
5) Foster distinctive, attractive communities with a strong sense of place
6) Preserve open space, farmland, natural beauty, and critical environmental areas
7) Strengthen and direct development towards existing communities
8) Provide a variety of transportation choices
9) Make development decisions predictable, fair, and cost effective
10) Encourage community and stakeholder collaboration in development decisions

`Ohana Hale is compatible with and relevant to most of these Smart Growth principles. `Ohana Hale creates a range of housing opportunities and choices, relating to the housing policies of the General Plan; creates walkable neighborhoods, by locating near an abundance of services and amenities and by creating sidewalks along the project

area; preserves open space, farmland, natural beauty, and critical environmental areas by locating within the Primary Urban Center of Honolulu, which simultaneously minimizes urban sprawl in the suburban areas and the loss of agricultural lands in rural areas; strengthens and directs development towards existing communities by locating in the urban core of Honolulu and providing a housing choice that is in high demand; and provides a variety of transportation choices by locating near transit lines and being walkable to an array of services and amenities.

`Ohana Hale is compatible to and in accordance with the aforementioned Smart Growth principles and General Plan objectives and policies relating to population, housing, and physical development and urban design.

4.2.2 Primary Urban Center Development Plan

The City Department of Planning and Permitting (DPP) has established Development/Sustainable Communities Plans for eight geographic regions that include all areas of O`ahu. These community-oriented plans are intended to help guide public policy, investment, and decision-making through the 2025 planning horizon. `Ohana Hale is located within the Primary Urban Center (PUC).

The PUC Development Plan Land Use Map designates the `Ohana Hale site as Medium-Higher-Density Residential / Mixed-Use and a sliver of the property is in District Commercial (Figure 9 – PUC Development Plan).

The following is a description of these designations:

Medium- Higher-Density Residential / Mixed-Use. *Shown on the maps as light brown, the Medium- and Higher-Density Residential / Mixed-Use designation is generally applied to centrally located neighborhoods that are served by major east-west highways and arterials, as well as by express public transit. They include apartment areas in the Pearl City region makai of the H-1 Freeway; apartment areas in Salt Lake, Red Hill, and nearby military reservations; areas of Kalihi-* Pālama *between the H-1 Freeway and Dillingham Boulevard; and areas across the coastal plain of central Honolulu – i.e. Liliha, Vineyard, Punchbowl, Makiki,* Kākā‘ako*, McCully-Mō‘ili‘ili, Waikiki, and Date Street. Because of their central location, predominantly single-family*

residential areas in lower Manoa, McCully, and Kaimuki that lie near the H-1 Freeway should be considered for Higher-Density Residential use in the future.

District Commercial. *District Commercial includes a wide variety of commercial uses located in the core areas of the Primary Urban Center. These districts typically have larger facilities and serve larger populations than community/neighborhood commercial districts. They may include major office buildings, shopping centers, and older commercial streets that serve a district-wide, regional or island wide population. Mixed uses, medium to higher density residential uses where appropriate, and higher densities are encouraged in these areas. Downtown should have the tallest buildings on Oahu. In other areas, maximum building heights should be established on the basis of viewplane studies to preserve views of natural landmarks.*

Discussion: ~~‘Ohana Hale, a high-density residential condominium, is consistent with this designations.~~ McCully, a prime location in urban Honolulu, with good access to various amenities, public transit, and pedestrian activity, is a neighborhood in transition. With the high cost of housing in Honolulu, there is a shift toward urban living. ‘Ohana Hale provides the opportunity for residents to live in urban Honolulu while benefitting both from lower housing costs and fewer vehicle miles traveled by residing near employment centers, amenities and services. As stated in the PUC Development Plan, these maps illustrate the long-range vision of the future of the plan area and the major land use and open space policies that are articulated in the plan. In using these maps, it should be noted that:

1) These maps are general and conceptual.
2) The maps are illustrative of the plan’s policy statements, presented in the text of the PUC Development Plan document.

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 address 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 multi-generational households.

3.3.1.1 Housing Stock and Occupancy

A little more than one-fourth (1/4) of all housing units in the PUC were built prior to 1959, the year of Statehood.

In the 1980s and early 1990s, the City and 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 have been developed, and funding for new housing has 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

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.

Other PUC neighborhoods, such as Makiki and McCully-Mō'ili'ili, already have substantial amounts of medium- and high-density housing. Several important factors, however, hinder the development of new residences, especially new multifamily dwellings. These factors may be briefly summarized as follows:

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. These factors limit the availability of affordable housing for middle- and lower-income families in the PUC. While the City and County of Honolulu cannot directly affect market factors, it can support new housing development by modifying zoning and building regulations, and upgrading infrastructure.*

Discussion: The aforementioned affordable housing issues are documented in the PUC Development Plan. These issues provide the discourse and rationale for requesting land use, zoning, and other pertinent exemptions through the Chapter 201H process. The requested exemptions, which are elaborated in Chapter 5 of this ~~Draft~~ Final EA assists in keeping development costs to a minimum, resulting in lower and more affordable housing prices for citizens.

`Ohana Hale is in accordance with the following PUC Development Plan policies, Section 3.3.2 Policies (page 3-36):

3.3.2 Policies

The following policies are intended to promote housing choices in livable in-town neighborhoods that are planned for higher-density residential and mixed uses.
• 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.

• 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.

Discussion: `Ohana Hale will provide a minimum of 60% (108 residential units) at affordable prices to residents earning between 100% to 120% of the HHFDC-HUD AMI (see Section 2.2.2 - Affordability).

As stated in the PUC DP Section 3.3.1.2 Development of New Housing, "new housing is developed on land which is underutilized or where it is not economical to maintain the existing uses or structures." This is common in the redevelopment of neighborhoods that are transitioning from past housing projects that were built well below the zoning development standards. When these housing developments were built, the urban population was significantly lower and therefore, urban Honolulu had a lower demand for housing. This trend created underdeveloped parcels throughout urban Honolulu. However, as decades passed and population increased in the urban Honolulu,

demand for more housing stock increased resulting in the current phase of redevelopment of neighborhoods in transition. Rather than maintaining underdeveloped housing projects in neighborhoods that are primed for redevelopment, it is more feasible to build new housing that meets current housing demand for citizens in urban Honolulu and McCully.

As one of the PUC Development Plan policies state, "provide exemptions from zoning and building codes for housing projects that meet established standards of affordability, on a case-by-case basis." This policy promotes the development of affordable housing that is in high demand, as discussed in this Final EA report. Development standards exemptions provide the opportunity for developers to build more residential units which, based on the percentage requirements, increases the amount of affordable units in new residential developments applying for Chapter 201H, HRS housing projects. As mentioned throughout the EA, 'Ohana Hale is providing 108 affordable units out of the 180 total units, equating to 60% of the units priced within 100% to 120% AMI.

'Ohana Hale is located near major bus stops at South King Street and McCully Street. 'Ohana Hale's proximity to local services and easy access throughout the city via transit is consistent with housing choice policies set forth by the City. The 'Ohana Hale condominium is located in walking distance to public transit, services, and amenities; which can be viewed as bus transit-oriented development (TOD), coinciding with the above-referenced policy on TOD.

4.2.3 City & County of Honolulu - Land Use Ordinance

All lands within the City & County are zoned into specific districts. According to the Department of Planning and Permitting, the project site is zoned Community Business Mixed Use (BMX-3). According to Sec. 21-3.120 of the Land Use Ordinance (LUO):

Sec. 21-3.120 Business mixed use districts--Purpose and intent.

(a) The purpose of the business mixed use districts is to recognize that certain areas of the city have historically been mixtures of commercial and residential uses, occurring vertically and horizontally and to encourage the continuance and strengthening of this pattern. It is the intent to provide residences in very close proximity to employment and retail opportunities, provide innovative and stimulating living environments and reduce overall neighborhood energy consumption.

(b) The intent of the BMX-3 community business mixed use districts is to provide areas for both commercial and residential uses outside of the central business mixed use district and at a lower intensity than the central business mixed use district.

Discussion: ‘Ohana Hale is consistent with the purpose and intent of this zoning district. According to Figure 8 – Zoning Map, the ‘Ohana Hale project site is located along the King Street corridor within the BMX-3 – Community Business Mixed-Use zoning district. The ‘Ohana Hale site is also located adjacent to the A-2 – Medium-Density Apartment zoning district. The King Street BMX-3 district corridor is characterized by various commercial uses. This commercial corridor is consistent with the intent of the BMX-3 district as the uses are at a lower intensity than the central business mixed-use district. The ‘Ohana Hale project site is located at the edge of the BMX-3 district and is characterized by low-rise apartment uses and commercial uses that are also consistent with the intent of the BMX-3 district. The height limit in the BMX-3 district and A-2 district is 150-feet. The intent of the proposed 189-foot building is to spread fixed costs over a greater number of units, making the project financially viable, keeping unit prices affordable, and limiting maintenance fees for the future residents. In addition, the proposed 189-foot building makes it possible to provide more affordable units; 180 units are proposed, 60% or 108 of which will be in the affordable range. Twenty-two (22) units will be priced in the 100% AMI range and eighty-six (86) units will be priced in the 120% AMI range.

Since ‘Ohana Hale is proposed under the provisions of HRS Chapter 201H, exemptions will be sought to the LUO. Proposed exemptions are discussed in Chapter 5 of this ~~Draft~~ Final EA.

4.3 APPROVALS AND PERMITS

Table ~~6~~ 8 - Approvals and Permits Summary

Permit/Approval	Responsible Agency
Chapter 201H, HRS DURF Application	State HHFDC / City & County of Honolulu, City Council
Chapter 343, HRS	State ~~OEQC~~ HHFDC
Americans with Disability Act (ADA) of 1990 Accessibility Requirements and Federal Fair Housing Act – Accessibility Guidelines	State Disability and Communication Access Board
Building Permit for building, electrical, plumbing, sidewalk/driveway, and demolition work (variance for building permit when work is done in setback areas)	City & County of Honolulu, Department of Planning and Permitting
Grubbing, Grading/Trenching, Street Usage, and Stockpiling Permit	City & County of Honolulu, Department of Planning and Permitting
Sewer Connection Permits	City & County of Honolulu, Department of Planning and Permitting
Water Connection	Board of Water Supply
Water Quality	State Department of Health

5.0 CHAPTER 201H APPLICATION AND EXEMPTIONS

5.1 INTRODUCTION

Hawaii Revised Statutes (HRS) Section 201H-38, “Housing development; exemption from statutes, ordinances, charter provisions, and rules” allows for eligible 201H projects to seek exemptions from all statues, 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.

`Ohana Hale will be a 180-unit for sale condominium building centrally located in urban Honolulu. At least 108 units (60 percent) will meet the affordability requirements of the Chapter 201H program in that they will be priced to be affordable to households earning between 100% and 120% percent of the HHFDC-HUD AMI ~~median income~~ for Honolulu. The exemptions requested below are required to maintain the financial feasibility of `Ohana Hale. The primary goal is to maximize the number of units on the site reducing the overall development cost on a per unit basis. This in turn achieves MJF Development Corporation’s and the State of Hawaii’s joint goal of maximizing the number of affordable homes delivered to the public in an aesthetic and efficient building situated in a prime urban location and located in close proximity to major employment centers and public transportation corridors, and daily services. Below is a detailed description of the exemptions being requested for `Ohana Hale. A summary of requested exemptions is also included following the detailed description.

5.2 REQUESTED EXEMPTIONS

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

❖ An exemption from Land Use Ordinance Sec. 21-3.120-2(b) (Table 21-3.4) is sought to allow ‘Ohana Hale to exceed the current allowable maximum height of 150 feet. ‘Ohana Hale consists of a single structure which may be as high as 189 feet. This additional height has minimal visual impact toward the Ko’olau mountains and Diamond Head. However, the proposed height of ‘Ohana Hale does not exceed the ridgelines of the Ko’olau mountains and Diamond Head. Refer to the discussion and analysis in Section 3.11 - Visual Resources and Figures 12~~, 13, and 14~~ – 17.

❖ An exemption from Land Use Ordinance Sec. 21-3.120-2(b) (Table 21-3.4) is sought to allow ‘Ohana Hale to exceed the maximum allowable density, floor area ratio (FAR) of 2.5 which allows a maximum building floor area of 50,400 square feet. Upon consultation with DPP, it was determined that ‘Ohana Hale does not qualify for the open space bonus which may have allowed a maximum FAR of 3.5. Therefore, the maximum prescribed FAR for this project is 2.5. ‘Ohana Hale will have a building floor area of up to ~~107,999~~ 113,600 and a proposed FAR of ~~7.5~~ 7.89. The proposed FAR exemption is needed to provide more affordable housing units, to increase the overall housing stock for the McCully-Mō’ili’ili neighborhood, and to keep the project financially feasible.

❖ An exemption from Land Use Ordinance Sec. 21-3.120-2(b) (Table 21-3.4) is sought to allow the P1 parking levels and residential units of ‘Ohana Hale to encroach into the required 10-foot rear yard setback and 10-foot side yard setback.

❖ An exemption from Land Use Ordinance Sec. 21-3.120-2(b) (Table 21-3.4) is sought to allow the ground floor parking and loading zone spaces and part of the residential condominium of ‘Ohana Hale to encroach into the required 10-foot side yard setback by about 10 feet along the north side (rear) of the property.

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

❖ An 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 requirement is to provide 188 resident and 19 guest parking stalls for a total of 207 stalls. The current design provides for 197, or 10 fewer parking stalls. Considering 'Ohana Hale's close proximity to bus lines and major employment centers some of the residents and guests are anticipated to use public transportation, reducing the demand for parking stalls within 'Ohana Hale.

Exemption from Revised Ordinances of Honolulu, Land Use Ordinance Section 21-3.120-2(5)(A), Street Setbacks and Street Trees and Figure 21-3.7

An exemption from Land Use Ordinance Sec. 21-3.120-2(5)(A) and Figure 21-3.7 to allow 'Ohana Hale's portions of the upper floors of the residential tower building mass to encroach into the building Height Setback Envelope. See Figure 19 – Street Setback Requested Exemption for a graphic illustration of the requested exemption. This exemption is needed in order to provide more residential units resulting in more below market units that are in demand in urban Honolulu.

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

❖ An exemption is sought from the Park Dedication requirements as set forth in Chapter 22, Article 7, Revised Ordinances of Honolulu. The requirement is to provide approximately ~~10,799~~ 11,360 square feet of park space for 'Ohana Hale[1]. The 'Ohana Hale site is limited in size and, therefore, has limited land available for park dedication. While there will be landscaped open space at select locations around the building, such space is not sufficient to meet the City and County of Honolulu's Park Dedication

[1] The Park Dedication requirement is based on 10% of the maximum floor area (113,600 square feet) which equals11,360 square feet or 180 units x 110 square feet per unit which equals 19,800 square feet, whichever is less.

Figure 18: Neighborhood Amenities

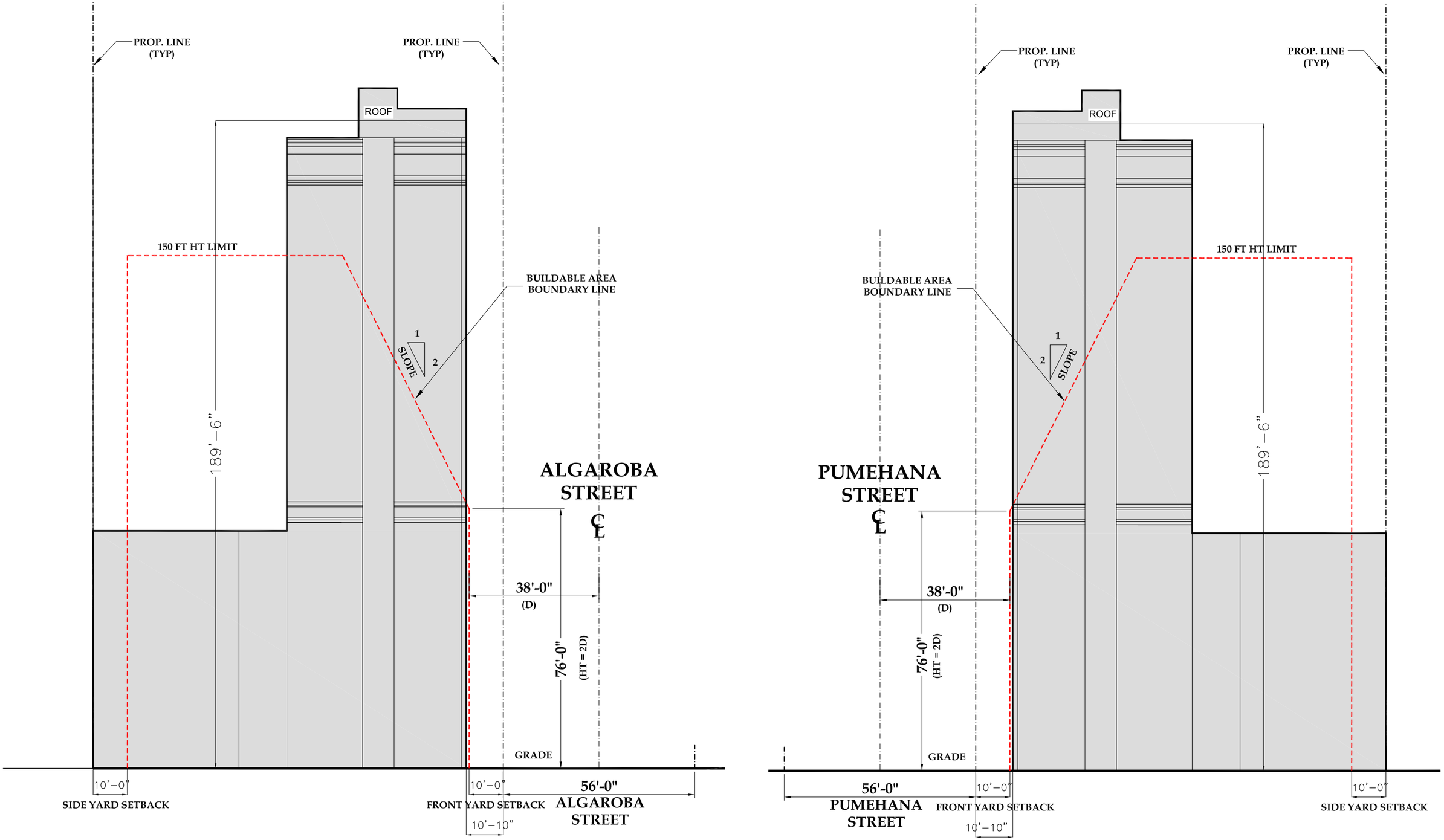


FIGURE 19 - Street Setback Requested Exemption

GRAPHIC SCALE
0' 10' 20' 30'

CONCEPTUAL PLANS

September 23, 2014

requirements. If an onsite private park is not provided for ‘Ohana Hale, there is an in-lieu fee requirement which is based on the following formula; 110 x 180 (proposed units) = 19,800 sf x $187.50 (acquisition cost per square foot ~~appraised value~~) = $3,712,500.00. An exemption from the in-lieu fee is also sought for ‘Ohana Hale. The rationale is to keep the project financially feasible. As previously stated throughout the ~~Draft~~ EA, there are plentiful recreational amenities within walking distance to ‘Ohana Hale. Refer to Figure 18 – Neighborhood Amenities for a graphic representation of the amenities in proximity to ‘Ohana Hale.

During the 30-day Draft EA public comment period the City Department of Parks and Recreation (DPR) submitted a comment letter dated April 10, 2014 (see Appendix K - Draft EA Comment and Response Letters) which states that DPR supports the exemption request for the 108 price-restricted units, but does not support the exemption request for the 72 market rate units. Per DPR’s letter, 110 sf x 72 market rate units = 7,920 sf of open space is required on-site. In lieu of providing open space, a fee of approximately $1,485,000.00 would be required (7,920 sf x $187.50 – site cost per sf). The City would use the funds to improve parks in and around ‘Ohana Hale’s community.
As discussed in the Draft EA a 358 square-foot community room was proposed on the ground floor. The applicant proposed to DPR to enlarge the ground floor Community Space to 1,001 square feet in an attempt to gain support for a full exemption from the Park Dedication requirement. The design for the revised community space was submitted to DPR in late June, 2014. From late-June 2014 until late-August 2014, the Applicant received no determination or comment from DPR.

In October of 2014, DPR stated that the 1,001 sf community room was not sufficient for full exemption from the fee. In response to consultation with HHFDC on this issue, the applicant will provide a recreation deck on level R-1 on top of the parking structure and will request a full exemption from the park dedication fees. The 3,083 square foot recreation deck along with the 1,001 square foot ground-floor community space provides on-site social gathering places for future residents of ‘Ohana Hale. Based on

providing the recreation deck and the ground floor community space, the applicant requests a park dedication fee exemption.

The recreation deck addition also resulted in a change of the unit mix to 78 Studio, 87 One-Bedroom, and 15 Two-Bedroom units and increased the FAR from 7.5 to 7.89.

Exemption from Primary Urban Center Development Plan Guidelines

❖ Scenic Views - An exemption from the Primary Urban Center (PUC) Development Plan policies and guidelines as they relate to scenic views (PUC Section 3.1.1.2 – Scenic Views; Map A.1 – Significant Panoramic Views; Policy 3.1.2 - Policies; and Guideline 3.1.3.3 – Urban Skyline and *Mauka-Makai* Views) is requested. The proposed height of `Ohana Hale does not exceed the ridgelines of the Ko'olau mountains and Diamond Head in the distance. Refer to the discussion and analysis in Section 3.11 - Visual Resources and Figures 12~~, 13, and 14~~ – 17.

❖ Plazas - An exemption from the Primary Urban Center (PUC) Development Plan policies and guidelines as they relate to plazas (PUC Policy 3.1.2 - Policies; and Guideline 3.1.3.7 – Other Urban Open Spaces) is requested. At 14,400 square feet, the `Ohana Hale site is relatively small and does not afford the flexibility a larger site would provide in meeting this goal of creating public open space on the property while providing the maximum number of allowable affordable units.

❖ Maximum Building Heights – An exemption from the Primary Urban Center (PUC) Development Plan policies and guidelines as they relate to maximum building heights (PUC Policy 3.2.2.3 – In-Town Residential Neighborhoods) is requested. This exemption is requested in order to provide more below-market residential which are in high demand in urban Honolulu.

❖ Pedestrian Amenities – An exemption from the Primary Urban Center (PUC) Development Plan policies and guidelines as they relate to additional pedestrian amenities (PUC Policy 3.2.2.3 – In-Town Residential Neighborhoods) is requested. The

`Ohana Hale development will provide sidewalks adjacent to the subject parcel along Algaroba Street and Pumehana Street.

December 2014 Consultation with DPP:

The applicant consulted with DPP in December 2014 regarding the slight increase in FAR from 7.5 to 7.89 and the requested exemption to Land Use Ordinance Section 21-3.120-2(5)(A), Street Setbacks and Street Trees and Figure 21-3.7. DPP did not provide written comments on these additional requested exemptions, but they were updated on the changes.

Building Permit and Plan Review Fees

An exemption from Sections 18-6.1 and 18-6.2, Revised Ordinances of Honolulu is requested, to allow exemption from plan review and building permit fees, estimated at $25,000 (maximum) and $124,000, respectively. This exemption is requested to assist in the cost feasibility of the project.

Public Works/Infrastructure Fees

❖ ~~An exemption~~ Deferral of fees from Revised Ordinances of Honolulu (ROH), Sec. 14-6.1 and 14-6.4 is sought to ~~exempt~~ defer `Ohana Hale from payment of Board of Water Supply connection and Wastewater sewer connection fees. ~~Such fees add significantly to the cost of the `Ohana Hale. Exemption from these fees allows delivery of the units at a lower and more affordable price.~~ Fees will be paid when MJF Development Corporation obtains a construction loan.

~~❖ An exemption~~ A deferral from ROH, Sec. 14-3.2 is sought ~~to exempt `Ohana Hale from~~ for sewer installation charges. ~~See Wastewater System Facilities Charge estimate below.~~ The Residential Wastewater System Facility Charge from the most recent SCA is $710,316.60, although this is expected to change slightly due to the revised unit mix included in this Final EA.

❖ ~~An exemption~~ A deferral from ROH, Sec. 14-14.4 is sought ~~to exempt ‘Ohana Hale from~~ for grading and grubbing permit fees. The grading quantities are not yet determined. ~~The grading permit fee is $450.00.~~ There is a $450.00 Grading Permit Fee.

❖ ~~An exemption~~ A deferral from ROH, Sec. 14-12.12 is sought ~~to exempt ‘Ohana Hale from~~ for private storm drain connection license fee, which is $100.00.

❖ ~~An exemption is sought to exempt ‘Ohana Hale from a new water lateral connection charge.~~ ~~The BWS Water Facilities Charge is $347,602.73.~~ Based on consultation with BWS, the Water System Facilities Charge and Installation Charge are not determined until the submittal and review of the construction plan, building plan, and building permit application. If BWS determines that such charges are required, MJF Development Corporation will requests a deferral from ~~this charge~~ these fees until funding from the construction loan is available. The relevant BWS Rules and Regulations Sections are; Section 1-102 – Water System Facilities Charge, Section 2-202(2) – Installation of Water Service, Installation Charge, and Section 2-202(3) – Installation of Water Service, Water System Facilities Charge.

5.3 SUMMARY OF REQUESTED EXEMPTIONS

Below is a summary of requested exemptions.

Summary of Requested Exemptions			
Land Use Ordinance			
Development Standard / Item	**Relevant Section / Requirement**	**Proposed Development Standard**	**Rationale for Proposal**
Building Height	Sec. 21-3.120-2(b) (Table 21-3.4) / 150-feet	189.5-feet	The proposed height provides 180 units, 108 of which are affordable and assists in the cost feasibility of the project.
Floor Area Ratio / Density	Sec. 21-3.120-2(b) (Table 21-3.4) ~~3.5~~ 2.5 maximum FAR	7.89 ~~5~~ FAR	As stated in Section 5.2, ~~with open space bonus~~ based on consultation with DPP, the maximum FAR is ~~3.5~~ 2.5. Proposed 7.89 FAR is to provide more affordable units and keep the project financially feasible.
~~Side Yard Setback~~	~~Sec. 21-3.120-2(b) (Table 21-3.4) / 10-feet~~	~~0-feet~~	~~In order to meet the parking and loading zone requirements, the project needs the side yard setback space.~~
Rear Yard and side yard Setback	Sec. 21-3.120-2(b) (Table 21-3.4) / 10-feet	0-feet	Rear Yard setback: In order to meet turning radius widths (safety issue) ~~in~~ for the parking structure ramp, the project needs the rear yard setback space. Side Yard setback: needed to meet the parking and loading zone requirements.
Building Height Setback Envelope and Street Setbacks (B-2, BMX-3, I-2, I-3 and IMX Districts)	Sec. 21-3.120-2(5)(A) and Figure 21-3.7	Upper floors of the building will encroach.	Compliance with the development standard will require costly provisions within the buildings structural systems. The current structural design provides 108 below market priced units.

Parking			
	Sec. 21-6.20 (Table 21-6.1)	207 parking stalls required	197 parking stalls provided. An exemption for 10 parking stalls is ~~a minor~~ requested.
Parking Required	188		
Guest	19		
Total	207		
Park Dedication Requirement			
Park Dedication: Waiver of Full In-Lieu Fee	Chapter 22, Article 7, Revised Ordinances of Honolulu requires Private park of 19,800 sf or in lieu fee: 19,800 sf x $~~120~~187.50 (~~approximate appraisal~~ site cost per sf) = $3,712,500	Waiver of private park dedication and in lieu fee. Approximate waiver is ~~$2,376,000.00~~ $3,712,500.	Providing a 3,083 sf Recreation Deck and community space on-site. The McCully District Park is in walking distance from ‘Ohana Hale, as well as school fields. See Figure ~~15~~ 18 – Neighborhood Amenities for a graphic representation of amenities in proximity to ‘Ohana Hale.
Primary Urban Center Development Plan			
Scenic Views	PUC 3.1.1.2; Map A-1; Policy 3.1.2; Guideline 3.1.3.3 / Not specified; see Figure 3.1:View Corridors	189.5-foot condominium with 180 units	There is visual impact, however, ~~it’s~~ it is not significant and the proposed building does not exceed ridgelines.
Plazas	PUC Policy 3.1.2; Guideline 3.1.3.7 / Not specified, conceptual	No proposed plaza concept.	No plaza concept is proposed, in order to keep the project financially feasible and to provide 60% (108 ~~units~~) affordable units.
Max. Building Height	PUC Policy 3.2.2.3 / Not specified for BMX-3 zoning districts in the PUC Development Plan	189 –foot condominium with 180 units	Market conditions dictate the proposed unit count and providing 60% (108 units) in the affordable range between 100% to 120% HUD AMI.
Pedestrian Amenities	PUC Policy 3.2.2.3 / Designed to reflect human scale	Sidewalks to be provided along the two cross-streets.	‘Ohana Hale is providing sidewalks along Algaroba and Pumehana Streets.

Permit / Infrastructure / Tax Fees
In addition to the exemptions above, the applicant will also be requesting the following: (See Section 5.2 – Requested Exemptions, for fee amounts) 1. ~~Exemption~~ Deferral is requested of Plan Review and Building Permit fees, estimated at $25,000 and $~~148~~124,000, respectively (Sections 18-6.1 and 18-6.2, ROH). 2. ~~Exemption~~ Deferral is requested from facilities fees charged by Board of Water Supply and Wastewater Branch, respectively, to hook-up to county water and sewer (Sections 14-6.1 and 14-6.4, ROH). Water System Facility Charge as related to BWS Rules and Regulations Sections 1-102, 2-202(2), and 2-202(3). 3. ~~Exemption~~ Deferral is requested from sewer lateral connection and installation charges (ROH, Sec. 14-3.2), grading and grubbing permit fees (ROH, Sec. 14-4.4), private storm drain connection license fee (ROH, Sec. 14-12.12) and residential wastewater system facility charge (ROH Sec. 14-10.3). 4. ~~Exemption~~ Deferral is requested from any fees associated with requirement of a new water lateral connection.

6.0 ALTERNATIVES

6.1 NO ACTION ALTERNATIVE

While the no action alternative provides rental housing for residents in the 17 existing units on site, based on the BMX-3 Community Business Mixed-Use zoning district development standards, this property is under-developed.

6.2 ALTERNATIVE SITE DEVELOPMENT CONCEPTS

Five (5) alternative site development and design concepts were developed for the `Ohana Hale site. Based on the BMX-3 Community Business Mixed-Use zoning development standards and other LUO development standards provisions, these three (3) designs were conceptualized as such:

1) **Separate parking structure from the condominium building:** While this design would meet the 150-foot height limit by separating the parking from the residential units, the 14,400 square foot parcel is too small to design and implement this building concept. Smaller, urban-infill-type lots are common in urban Honolulu and the separation of parking structure to building presents a development and design challenge that many applicants, property owners, and developers face. This alternative would not require development standards exemptions, but the obstacle to this design is the parcel size.

2) **Diagonal Tower concept:** This design alternative consists of 176-units and a 255-foot tower, well above the maximum height of 150-feet in the BMX-3 zoning district. The diagonal tower provides fewer units and is 74-feet taller than the current proposal, which is an extreme exemption request for height. This alternative would have a significant viewshed impact, which could result in a significant impact determination by OEQC. This determination of significant impact would require a full Environmental Impact Statement.

3) **Reduced Height concept:** As listed and illustrated on Appendix L – Reduced Height Alternative, Sheet A-1.2 , ~~T~~ this design alternative has 62 units, is 126-feet tall, and ~~meets the FAR requirement of~~ consists of a ~~3.5~~ 3.37 FAR. This design alternative meets the height requirement set forth in the BMX-3 – Community Business Mixed-Use district, but still requires an FAR exemption as the maximum FAR is 2.5. This illustrates the challenges of redevelopment in urban Honolulu as the LUO stipulates development standards that do not coincide with actual property layouts. There are properties with infill development potential, but many do not meet all development standards prescribed in the LUO. This provides the rationale of having variance provisions, or in this case, exemption provisions set forth in Chapter 201H, HRS for affordable housing developments. ~~However~~ While this design alternative reduces height, FAR, and unit count to be closer to LUO compliance, it does not provide enough residential units to make the project financially feasible~~.~~ ~~Moreover, this design alternative would not provide an~~ nor does it provide an adequate amount of affordable units to meet market demand (see Appendix B - Market Study). The preferred alternative provides 108 affordable units within the 100% and 120% AMI price range for Honolulu (see Table 2 – ‘Ohana Hale Projected Price Points, page 15. ~~This design alternative would not require development standards exemptions.~~

4) **Mixed-Use Concept:** This design concept would consist of commercial/retail on the ground floor and mid-rise residential development above. Although this proposal would meet the BMX-3 Community Business Mixed Use zoning district development standards and requirements, it would not provide the amount of residential units to meet market demand for moderate-affordable residential units. Moreover, there is adequate commercial/retail use in proximity and walking distance to the project site. This design alternative would not require development standards exemptions.

5) **All Retail Development:** This development concept would consist of retail use on the 14,400 square foot, BMX-3 parcel meeting the development standards in this

zoning district. With current retail use in proximity to the project site, there may be no market demand for retail on this parcel. Moreover, the current use on this parcel is residential use; therefore, it may be more suitable for a mixed-use or pure residential use on this site. This all-retail alternative complies with the BMX-3 zoning district development standards.

Although most of these alternatives would not require zoning development standards exemptions, the proposed 'Ohana Hale condominium provides the most affordable units (108 of the 180 units), which there is market demand and need for in the urban Honolulu area.

7.0 DETERMINATION, 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 Final EA evaluated existing cultural and environmental conditions and determined that no known natural or cultural resources will be lost or destroyed as a result of the development of ‘Ohana Hale.

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

‘Ohana Hale is consistent with State and City land use designations. ‘Ohana Hale involves the redevelopment of an urban use site, also known as “urban infill” with a use consistent with the General Plan, PUC Development Plan, and Land Use Ordinance. As discussed in Section 4.2.2 – Primary Urban Center Development Plan, McCully is a prime location in urban Honolulu, with good access to various amenities, public transit, and pedestrian activity, McCully is a neighborhood in transition. With the high cost of housing and automobile gas prices in Honolulu, there is a shift toward urban living. ‘Ohana Hale provides the opportunity for residents to live in urban Honolulu and to benefit both from lower housing costs and minimizing vehicle miles traveled by residing near employment centers, amenities and services. Urban infill development is an environmentally sustainable approach to land development.

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.

‘Ohana Hale is consistent with the environmental policies, goals, and guidelines as established in Chapter 344, HRS. The purpose of Chapter 344 – Environmental Policy, *is to establish a state policy which will encourage productive and enjoyable harmony between people and their environment, promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of humanity, and enrich the understanding of the ecological systems and natural resources important to the people of Hawaii.*

~~One of the policies in Chapter 344, HRS 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.”~~
Two of the policies in §344-3 states, “Establishing communities which provide a sense of identity, wise use of land, efficient transportation, and aesthetic and social satisfaction in harmony with the natural environment which is uniquely Hawaiian; and establishing a

commitment on the part of each person to protect and enhance Hawaii’s environment and reduce the drain on nonrenewable resources. ‘Ohana Hale is consistent with ~~this policy~~ these policies by ~~locating~~ developing this project in urban Honolulu and providing an “urban infill” development that is in proximity to shopping, employment, education and recreation~~.~~; thereby reducing dependence on nonrenewable resources.

D. Substantially affects the economic or social welfare of the community or State.

‘Ohana Hale will also positively benefit the economic and social welfare of the community by providing affordable housing which is in high demand in an urban infill and mixed-income neighborhood.

Construction of ‘Ohana Hale will also economically benefit the community and State by creating jobs and increasing sales within the construction industry supply chain. Tax revenues will be generated by the short-term construction work and also revenues by the long-term employment and secondary service industry jobs that support the increase in population. ‘Ohana Hale will also increase property tax revenues by adding 180-units to the housing stock in urban Honolulu.

E. Substantially affects public health.

Construction and development of ‘Ohana Hale may pose temporary impacts to noise and air quality levels (i.e., fugitive dust from grading work, noise and exhaust emissions from construction equipment and vehicles). However, these potential impacts will be short-term and are not expected to significantly affect public health. All construction 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.

‘Ohana Hale will have a secondary impact of creating residences for 180 new households in the McCully- Mō’ili’ili Neighborhood area. As stated in this ~~Draft~~ Final EA, public facilities have adequate capacity to serve the development. As stated and illustrated in Section 3.14.1 – Schools, there are adequate school facilities to serve the new households from ‘Ohana Hale.

G. Involves a substantial degradation of environmental quality.

Construction activities are anticipated to result in short-term impacts to noise, air quality, and traffic in the immediate vicinity and neighborhood. With the implementation of mitigation measures during the construction period, ‘Ohana Hale’s development will not result in long-term degradation to environmental quality.

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

No cumulative effects are anticipated, as ‘Ohana Hale involves the development of residential uses within the urban Honolulu area that are consistent with long-range land use plans and designations, as set forth in the City and County of Honolulu General Plan and the PUC Development Plan.

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

The ‘Ohana Hale site and surrounding neighborhood and area consists of urban uses, structures, and the landscaped environment does not provide habitat for any rare, threatened, or endangered species.

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

Construction activities for the development of ‘Ohana Hale could temporarily impact noise, air and water quality levels (i.e., fugitive dust from grading work, noise and exhaust emissions from construction equipment and vehicles). However, these potential impacts will be short-term and are not expected to be detrimental. All construction activities will comply with applicable regulations and appropriate mitigation measures will be implemented as necessary and required.

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.

‘Ohana Hale is not located within an environmentally-sensitive area and is not expected to impact any environmentally-sensitive areas such as critical habitat for endangered species. The ‘Ohana Hale site is designated by the FIRM as X (outside of the floodplain), and a small portion as AO (Figure 11 – Flood Zone Map). The site is located away from the shoreline and is outside of the tsunami evacuation and beach area. The site is also flat and does not appear to be located on geologically hazardous land. Moreover, the site is not located adjacent or in proximity to an estuary or freshwater or coastal waters.

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

According to Figure 3.1 – View Corridors in the PUC Development Plan (page 3-4), the ‘Ohana Hale site is not within a significant mauka-makai viewplane. Section 3.11 – Visual Resources, of this Final EA provides a detailed discussion and analysis on the view plane analyses as illustrated in Figures 12 to 17. The proposed condominium will have visual impact, but not substantial as the structure will not exceed the ridgelines of the Ko’olau mountains and Diamond Head.

M. Requires substantial energy consumption

There will be short-term substantial energy consumption during the demolition and construction phase of this project, however, in the long-term there will be minimal to normal energy consumption as current construction and design standards are more energy-efficient.

The units at 'Ohana Hale will consist of Energy-Star appliances; low-flow toilets, and low-flow sinks. This will contribute to long-term energy savings.

7.2 DETERMINATION

Based on the impacts and mitigation measures examined in this document and analyzed under the above criteria, it is anticipated that 'Ohana Hale will not have a significant impact on the local, County, or Statewide physical or human environments. Pursuant to Chapter 343, HRS, the Approving Agency, which for this project is the Hawaii Housing Finance & Development Corporation (HHFDC), is anticipated to issue a Finding of No Significant Impact (FONSI).

8.0 CONSULTATION

MJF Development Corporation initiated public and agency comment to 'Ohana Hale through letters and meetings requesting input prior to development of this EA.

8.1 AGENCY PRE-CONSULTATION

The following public agencies were sent pre-consultation letters for the preparation of this EA:

State of Hawaii

- Department of Education *
- Department of Land & Natural Resources
- Hawaii Housing Finance & Development Corporation
- Department of Health – Office of Environmental Quality Control*
- Department of Health – Environmental Health Administration*
- Department of Health – Wastewater Branch*

City & 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*
- Department of Planning and Permitting*
- 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 & Individuals

- Councilmember Ann Kobayashi
- Representative Scott Saiki
- Senator Brickwood Galuteria
- Mr. Ron Lockwood, Chair, McCully Mō’ili’ili Neighborhood Board # 8

Those agencies with a (*) provided comments, which have been incorporated into this EA. Letters and responses are provided in Appendix I.

8.2 ADDITIONAL CONSULTATION

In addition to pre-consultation letters MJF Development Corporation has also initiated public involvement through meetings, which as of August 2013 have included:

McCully/ Mō’ili’ili Neighborhood Board No. 8 – MJF Development Corporation and Pacific Atelier International, Inc. presented the ‘Ohana Hale project to the Neighborhood Board members at the August 1, 2013 meeting. Issues of concern included: parking, height, school impact, and traffic. The project was deferred to a later Neighborhood Board meeting date to take action and vote.

MJF Development Corporation and Pacific Atelier International, Inc. presented the ‘Ohana Hale project to the Neighborhood Board members at the November 7, 2013 meeting. Major issues included: parking, height, school impact, and traffic. The Neighborhood Board voted to continue and encourage the development of ‘Ohana Hale by a vote of 10 aye; 2 no.

MJF Development Corporation, Pacific Atelier International, Inc., and Hawai‘i Planning LLC presented the ‘Ohana Hale project to the Neighborhood Board members at the February 6, 2014 meeting. The presentation included a follow-up on the major issues from the November 7, 2013 Neighborhood Board meeting. Issues of concern included: height, parking, definition of affordable, and rationale for the requested variances. The minutes of this meeting are online at the City and County of Honolulu’s website. The Neighborhood Board voted to support the project with no variances by a vote of 10 aye; 1 no; and 1 abstain.

Hawai‘i Housing Finance & Development Corporation – MJF Development Corporation and Hawai`i Planning LLC met with HHFDC on October 10, 2013 to discuss the 201H and DURF application processes. Hawai`i Planning LLC has been in ongoing dialogue and discussion on `Ohana Hale as it pertains to height, FAR, and the affordability mix. Meetings with HHFDC have been held on December 27, 2013, January 9, February 5, March 3, and March 20, 2014.

Following the submittal of the Draft EA, there were additional meetings with HHFDC to discuss issues from the State and County government agency letters. Hawai`i Planning LLC and Zen Sawyer Consulting, LLC met with HHFDC staff on Thursday, May 1, 2014 to discuss comments and responses on the DURF application, which resulted in the generation of Table 2 – `Ohana Hale Projected Price Points, page 15.

Hawai`i Planning LLC and Pacific Atelier International, Inc. met with HHFDC staff on Tuesday, June 17, 2014 to discuss issues from the DPP comment letter dated May 8, 2014 (see Appendix K – Draft Environmental Assessment Comment Letters and Responses). The key discussion points were: blank wall mitigation (see Appendix D – `Ohana Hale Architectural Drawings); and the new view study figures (see Figures 15-17). The blank wall mitigation and new view study figures are discussed and analyzed in Section 3.11 – Visual Resources.

Department of Health – Office of Environmental Quality Control – Hawai`i Planning LLC met with OEQC on October 14, 2013 to discuss the EA process.

Councilmember Ann Kobayashi: Hawai`i Planning LLC met with Councilmember Ann Kobayashi on Monday, March 17, 2014. At the meeting a project summary was presented which included excerpts from the Draft EA in addition to maps and figures. Councilmember Kobayashi asked questions about the requested exemptions and expressed her support of affordable housing in general. The `Ohana Hale project received a letter of support from Councilmember Kobayashi dated March 20, 2014; see Appendix J – Letters of Support.

Hawai`i Planning LLC again met with Councilmember Kobayashi on Friday, May 9, 2014. At the meeting, Councilmember Kobayashi expressed her continued support for `Ohana Hale. She also shared a policy report titled "Reimagining Housing in Hawai`i," researched and authored by the Hawai`i Appleseed Center for Law and Economic Justice (www.hiappleseed.org).

Council Chair Ernest Y. Martin: Hawai`i Planning LLC met with a staff member from Council Chair Martin's office on Monday, May 5, 2014. At the meeting a project summary was presented which consisted of narrative excerpts, maps, and figures from the Draft EA. The `Ohana Hale project received a letter of support from Council Chair Ernest Y. Martin in a memorandum dated May 21, 2014; see Appendix J – Letters of Support.

Councilmember Stanley Chang: Hawai`i Planning LLC met with a staff member from Councilmember Chang's office on Friday, May 9, 2014. At the meeting a project summary was presented which consisted of the narrative excerpts, maps, and figures from the Draft EA. Councilmember Chang's staff asked questions related to the Chapter 201H and EA process, infrastructure, sewer, and affordability. Hawai`i Planning LLC shared a summary of these processes and issues and how the project will be forwarded to City Council following HHFDC Board approval.

Councilmember Breene Harimoto: Hawai`i Planning LLC met with Councilmember Harimoto on Monday, May 19, 2014. At the meeting a project summary was presented which consisted of narrative excerpts, maps, and figures from the Draft EA. Councilmember Harimoto verbally supports the `Ohana Hale project and strongly supports affordable housing in general.

DPP – Land Use Planning Division and Planning Division Staff: Hawai`i Planning LLC, Pacific Atelier International, Inc., and Zen Sawyer Consulting, LLC (via phone conference call), met with DPP Staff on Thursday, May 22, 2014. The agenda for this meeting included discussion of the Draft EA comment letter from DPP dated May 8,

2014. The key discussion points included the requested exemptions related to: parking, height, FAR, setbacks, and park dedication. Other discussion points included implementation of ground –floor commercial use which complies with BMX-3 permitted uses in the LUO. Refer to Appendix K – Draft Environmental Assessment Comment Letters and Responses for the DPP comment letter and the response letter.

8.3 COMMENTS TO THE DRAFT ENVIRONMENTAL ASSESSMENT

The following agencies were provided copies of the Draft EA. Those marked with a (*) provided comments to the Draft EA. Appendix K contains all comment letters received and responses.

State of Hawaii

- Department of Education *
- Department of Land & Natural Resources – Land Division *
- Hawaii Housing Finance & Development Corporation
- Department of Health – Office of Environmental Quality Control *
- Department of Health – Environmental Planning Office *
- Department of Health – Wastewater Branch
- Disability and Communication Access Board *

City & 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 *
- Department of Planning and Permitting *
- 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 *

State Public and Regional Libraries

- McCully/ Mō’ili’ili Public Library
- Hawaii State Library – Hawaii Documents Center
- Ka`imukī Regional Library
- Kāne’ohe Regional Library
- Pearl City Regional Library
- Hawai’i Kai Regional Library
- Hilo Regional Library
- Kahului Regional Library
- Līhu’e Regional Library

Private Organizations & Individuals

- Councilmember Ann Kobayashi
- Senator Brickwood Galuteria
- Mr. Ron Lockwood, Chair, McCully Mō’ili’ili Neighborhood Board # 8

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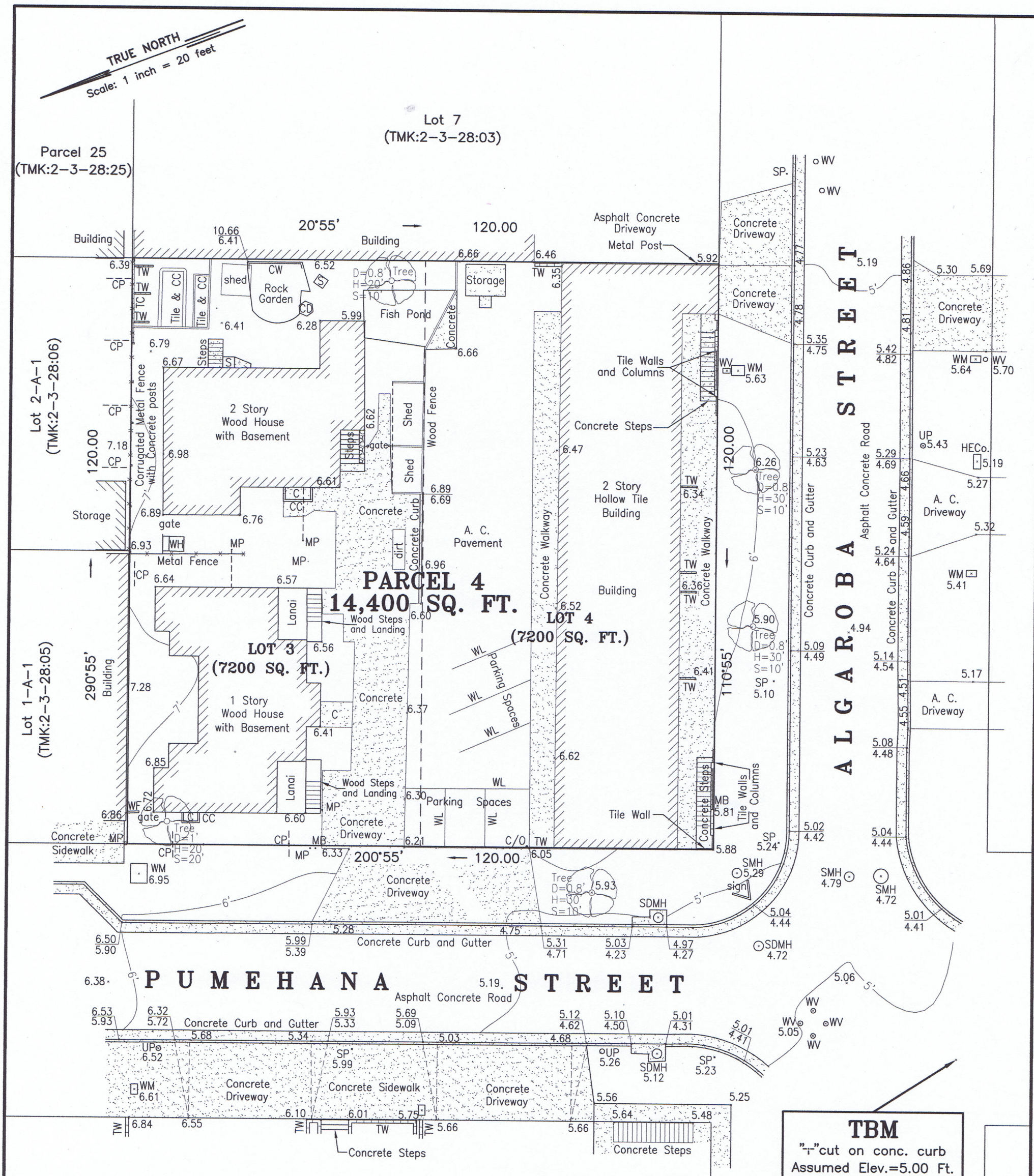
Appendix A

Topographic Survey Map



JAIME F. ALIMBOYOGUEN
LICENSED PROFESSIONAL LAND SURVEYOR
No. 8216
HAWAII, U.S.A.

This work was prepared by me or under my direct supervision.

TOPOGRAPHIC SURVEY MAP

PARCEL 4

Being all of Lots 3 and 4
as shown on Map 4
of Land Court Application 279

Waikiki, Honolulu, Oahu, Hawaii

Tax Map Key: 2-3-28:04

Scale: 1 inch = 20 feet

Date: May 9, 2013

NOTES:

1. Only improvements shown were located.
2. Elevations are assumed and relative.

LEGENDS AND ABBREVIATIONS:

- C Concrete
- CC Concrete Curb
- CD Concrete Decor
- CP Clothesline Post
- C/O Cleanout
- CW Concrete Wall
- HECo. Hawaiian Elec. Co. Box
- MB Mailbox
- MP Metal Post
- S Storage
- SDMH Storm Drain Manhole
- SMH Sewer Manhole
- SP Sign Post
- TW Tile Wall
- UP Utility Pole
- WF Wood Fence
- WH Water Heater
- WL White Line
- WM Water Meter
- WV Water Valve

Appendix B

Market Study

NOVOGRADAC & COMPANY LLP®

CERTIFIED PUBLIC ACCOUNTANTS

A MARKET CONDITIONS AND PROJECT EVALUATION SUMMARY OF

OHANA HALE

Located At

929 PUMEHANA STREET AND 1918 ALGAROBA STREET
HONOLULU, HONOLULU COUNTY, HAWAII

Effective Date: October 29, 2013
Report Date: February 27, 2014

Prepared For

Frank Mola
President
Coastal Rim Properties, Inc.
16601 Gothard Street, Suite F
Huntington Beach, CA 92647

Prepared By

Novogradac & Company LLP
7227 Metcalf Avenue, Suite 250
Overland Park, KS 66204
913 / 262-3500

NOVOGRADAC
& COMPANY LLP®
CERTIFIED PUBLIC ACCOUNTANTS

February 27, 2014

Frank Mola
President
Coastal Rim Properties, Inc.
16601 Gothard Street, Suite F
Huntington Beach, CA 92647

Re: Market Study of proposed Ohana Hale
Honolulu, Hawaii

Dear Mr. Mola:

At your request, Novogradac & Company LLP has performed a study of the condominium housing and multifamily rental market in the Honolulu, Hawaii area.

The purpose of this market study is assess the viability of Ohana Hale (Subject), a proposed 180-unit high-rise development. For the purpose of this analysis, we have analyzed the Subject two ways: as both a for-sale condominium project and as a rental project. As a condominium project, the sponsor will restrict 12 and 48 percent of the proposed condominium units (22 and 86 units) to households earning up to 100 and 120 percent of the area median income (AMI), respectively, as required under the Hawaii Housing Finance and Development Corporation (HHFDC) Dwelling Unit Revolving Fund (DURF). The remaining units will be unrestricted. As a rental project, the units would not be subject to any income or rent restrictions. It should be noted that we have neither provided a recommendation of which scenario (renter or owner) is more feasible nor analyzed the Subject's highest and best use.

The following report provides support for the findings of the study and outlines the sources of information and the methodologies used to arrive at these conclusions. The scope of this report meets the requirements of the HHFDC, including the following:

- Executive Summary
- Project Description
- Regional and Local Market Area Analysis
- Supply Analysis
- Demand Analysis
- Conclusions and Recommendations

The depth of discussion contained in the report is specific to the needs of the client as well as the requirements of HHFDC pursuant to the market study guidelines outlined in Appendix 1 of the 2013/2014 Qualified Allocation Plan. Given the nature of the Subject development, some

deviations may be made from the HHFDC market study requirements, as these guidelines are targeted toward affordable rental development, as opposed to owner-occupied development. Novogradac & Company LLP adheres to market study guidelines promulgated by the National Council of Housing Market Analysts (NCHMA). This report deviates from NCHMA market study guidelines in areas specified in HHFDC market study requirements, and therefore is not in compliance with NCHMA market study guidelines. The report and the conclusions are subject to the *Assumptions and Limiting Conditions* attached.

The ***Government Consulting and Valuation Advisory*** (GoVal) Group of Novogradac provides valuation services including housing needs assessments, appraisal services for market-rate and affordable housing properties, both for sale and rental, market studies, GIS and demographic analysis, feasibility analysis, and rent comparability studies throughout the country. The GoVal Group performs approximately 1,800 market studies and appraisals per year and in the past decade nearly 11,500 market studies and appraisals have been completed nationwide. These reports were completed for developers, lenders, syndicators, investors, or directly for state and local agencies. Reflecting this experience, the firm maintains client relationships with the leading multifamily housing sponsors in the industry.

Coastal Rim Properties, Inc. is the client in this engagement. We understand that they will use this document to assist in obtaining HHFDC and/or other financing, as well as internal investment decisions. Intended users are those transaction participants who are interested parties and have knowledge of the applicable HHFDC program. These could include local housing authorities, state allocating agencies, state lending authorities, as well as construction and permanent lenders. As our client, Coastal Rim Properties, Inc. owns this report and permission must be granted from them before another third party can use this document. We assume that by reading this report another third party has accepted the terms of the original engagement letter including scope of work and limitations of liability. We are prepared to modify this document to meet any specific needs of the potential users under a separate agreement.

K. David Adamescu inspected the Subject property. Additionally, Mr. Adamescu performed research and an analysis of the Subject property and comparable market data incorporated in this report. Mike Anderson and Mariam Abdelhamid provide assistance with the research.

Please do not hesitate to contact us if there are any questions regarding the report or if Novogradac & Company LLP can be of further assistance. It has been our pleasure to assist you with this project.

Respectfully submitted,
Novogradac & Company LLP

Rebecca S. Arthur, MAI
Partner

Rachel Barnes Denton
Principal

K. David Adamescu
Real Estate Analyst
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EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

- The proposed Subject will consist of a single 21-story, high-rise structure housing 180 studio, one and two-bedroom units. The first eight stories will consist of garage parking. The construction of the Subject is expected to begin in February 2015, with an estimated completion date of February 2017.

- The purpose of this market study is assess the viability of Ohana Hale (Subject), a proposed 180-unit high-rise development. For the purpose of this analysis, we have analyzed the Subject two ways: as both a for-sale condominium project and as a rental project. As a condominium project, the sponsor will restrict 12 and 48 percent of the proposed condominium units (22 and 86 units) to households earning up to 100 and 120 percent of the area median income (AMI), respectively, as required under the Hawaii Housing Finance and Development Corporation (HHFDC) Dwelling Unit Revolving Fund (DURF). The remaining units will be unrestricted. As a rental project, the units would not be subject to any income or rent restrictions. It should be noted that we have neither provided a recommendation of which scenario (renter or owner) is more feasible nor analyzed the Subject's highest and best use.

- Unemployment in the Honolulu Metropolitan Statistical Area (MSA) decreased from 2002 to 2006. However, from 2007 to 2009, the unemployment rate increased from 2.5 to 5.8 percent, which was a result of the recent national recession. The unemployment rate began to decline in 2010, which has continued to present. The 2013 year-to-date average unemployment rate indicates a 0.8 percentage point decrease since year end 2012. Furthermore, the July 2013 unemployment rate is 4.2 percent, compared to 5.5 percent from July 2012. The national recession and mortgage crisis have impacted both the MSA and the nation, which is reflected in the data. However, it appears that the MSA has not been as severely affected as the nation. Additionally, the Honolulu, HI MSA appears to be outperforming the nation in terms of unemployment as the July 2013 unemployment rate was significantly lower than the nation, 4.2 percent versus 7.7 percent, respectively.

  From 2003 to 2006, the MSA and the nation experienced continual employment growth. In fact, the nation continued to experience employment growth in 2007, while the MSA experienced a slight decrease in total employment. Total employment in the MSA remained flat in 2008 and decreased significantly in 2009, consistent with the recent national recession. In 2010 and 2011 the MSA experienced an increase in total employment; however, the growth in total employment stagnated in 2012 and has remained so through YTD 2013, increasing by 0.1 and 0.2 percent, respectively.

- The demographic data demonstrates that the primary market area (PMA) and MSA are forecast for a steady increase in population and households through 2017. The PMA is expected to gain 2,099 owner-occupied households and 2,628 renter-occupied households through 2017. The median household income in the PMA is higher than in the MSA and nation. The *Demand Analysis* section will demonstrate a sufficient amount of income-qualified households presently exist for both the condominium and market-rate rental scenarios.

- Generally, all of the comparables are located in very walkable neighborhoods, similar to the Subject. However, all of the comparables are located within neighborhoods with slightly superior to superior condition improvements. In terms of locational value, The Cove Waikiki, Allure Waikiki, and The Watermark have generally superior locations on Waikiki, while the remaining comparables have slightly superior locations.

Condominium Housing Summary

- The Subject will offer a slightly inferior common area amenities package in comparison to the comparable properties. The majority of the common area amenities that will be offered at the Subject are offered at all of the comparables. The Subject will not offer a clubhouse/meeting room, which is offered at ten of the comparables; a swimming pool, which is offered at ten of the comparables; an exercise facility, which is offered at seven of the comparables; or a Jacuzzi, which is offered at seven of the comparables. Additionally, five of the comparables offer a business center, four offer a sauna, three offer a theatre, and three offer a playground. The Subject is considered slightly inferior overall in terms of amenities.

- Condominium units within the PMA exhibit premium pricing by floor level and view. Generally, the price increases by floor and units facing Diamond Head achieve the highest premium. Four of five active high-rise comparables reported floor premiums, with an approximate one percent premium per floor reported as typical. All of the high-rise comparables reported view premiums, with Diamond Head views having the highest premium generally ranging from one to 15 percent. Based on the floor and view premiums being achieved at the comparables, as well as considering the Subject's building design and location, we estimate a floor premium of one percent and a Diamond Head view premium of an additional one percent.

- We were able to obtain pre-sale absorption data from eight comparables, ranging from eight to 205 units per month, with an average of 70 units per month. Based upon the relatively fast pre-sales of yet-to-be-completed projects and the strong absorption pace exhibited by the most recently closed development, we believe that the Subject will be able to pre-sale its 180 units in approximately five months, equating to a sales velocity of approximately 36 units per month.

- All of the comparable condominium units operate as a condominium owner's association and owners are assessed maintenance fees to cover the association's shared expenses. All of the maintenance fees of the comparable properties include water, sewer and trash for the residential units, and all utilities, operating expenses and insurance of common areas. Some of the comparable maintenance fees also include broadband internet and cable. These fees are commonly charged on a per-square-foot basis, and may also include a flat fee for membership dues. Due to the fact that maintenance fees vary based on level of service, operating expenses, building design, and utility consumption, comparisons are difficult. The comparables indicated maintenance fees ranging from $0.48 to $0.83 per square foot. We anticipate lower operating expenses due to the fact that the Subject offers fewer amenities and is significantly smaller. A property that is currently in pre-construction phase, 801 South Street, has indicated that maintenance fees will range from $0.39 to $0.50 per square foot.

The property offers similar amenities compared with the Subject; therefore, we believe a maintenance fee of $0.50 per square foot is reasonable.

MAINTENANCE FEES

Unit Type	Unit Size (SF)	Maintenance Fee Per Square Foot	Monthly Maintenance Fee
Studio	335 - 387	$0.50	$168 to $194
1 BR	454 - 498	$0.50	$227 to $249
2 BR	986 - 1,082	$0.50	$493 to $541

- Upon completion, the Subject will offer an excellent quality product with competitive amenities. The primary strengths of the Subject will be its condition, while its location will be slightly inferior to inferior relative to the comparables. Despite some smaller than average unit sizes, we anticipate the Subject's units to be well-accepted in the market. The Subject's residential units will occupy floors nine through 21 and the 'affordable' units will generally consist of the units occupying floors nine through 15, which include the studio and one-bedroom units only. Based on the price per square foot of comparable properties in the market, we believe that the Subject is capable of achieving unrestricted base pricing of $750, $725 to $750, and $650 per square foot, for studio, one, and two-bedroom units, respectively (with two-bedroom pricing considering their location only on the top floor). Overall, the downtown Honolulu condominium market is considered strong and the Subject should compete well.

ACHIEVABLE FOR-SALE PRICING

Unit Type	Number of Units	Unit Size (SF)	Surveyed Min Price per SF	Surveyed Max Price per SF	Surveyed Average Price per SF	Novoco Achievable Price per SF (Low)*	Novoco Achievable Price per SF (High)*
0BR/1BA	84	335	$360	$1,038	$669	$750	$942
0BR/1BA	12	387	$360	$1,038	$669	$750	$942
1BR/1BA	24	454	$613	$789	$689	$725	$910
1BR/1BA	22	484	$613	$789	$689	$700	$879
1BR/1BA	11	494	$613	$789	$689	$700	$879
1BR/1BA	22	498	$613	$789	$689	$700	$879
2BR/1BA	2	986	$423	$664	$558	$650	$650
2BR/1BA	2	1005	$423	$664	$558	$650	$650
2BR/1BA	1	1082	$423	$664	$558	$650	$650

*Residential units will occupy floors nine through 21 and the 'affordable' units will generally consist of the units occupying floors nine through 16, which include the studio and one-bedroom units only; the 'high' pricing reflects a one percent per floor premium and an additional one percent per foor view premium over the established unrestricted 'base' pricing of $750, $725 to $750, and $650 per square foot, for studio, one, and two-bedroom units, respectively (with two-bedroom pricing considering their location only on the top floor; two-bedroom units will be located on the top floor and offer mountain views and there is no range in pricing presented).

ACHIEVABLE FOR-SALE PRICING

Unit Type	Number of Units	Unit Size (SF)	Surveyed Min Price per SF	Surveyed Max Price per SF	Surveyed Average Price per SF	Novoco Achievable Unit Price (Low)*	Novoco Achievable Unit Price (High)*
0BR/1BA	84	335	$360	$1,038	$669	$251,250	$315,522
0BR/1BA	12	387	$360	$1,038	$669	$290,250	$364,498
1BR/1BA	24	454	$613	$789	$689	$329,150	$413,349
1BR/1BA	22	484	$613	$789	$689	$338,800	$425,468
1BR/1BA	11	494	$613	$789	$689	$345,800	$434,258
1BR/1BA	22	498	$613	$789	$689	$348,600	$437,775
2BR/1BA	2	986	$423	$664	$558	$640,900	$640,900
2BR/1BA	2	1005	$423	$664	$558	$653,250	$653,250
2BR/1BA	1	1082	$423	$664	$558	$703,300	$703,300

*Residential units will occupy floors nine through 21 and the 'affordable' units will generally consist of the units occupying floors nine through 16, which include the studio and one-bedroom units only; the 'high' pricing reflects a one percent per floor premium and an additional one percent per foor view premium over the established unrestricted 'base' pricing of $750, $725 to $750, and $650 per square foot, for studio, one, and two-bedroom units, respectively (with two-bedroom pricing considering their location only on the top floor; two-bedroom units will be located on the top floor and offer mountain views and there is no range in pricing presented).

AFFORDABILITY SUMMARY

Unit Type	Household Assumption	Affordable Sales Price Guidelines 100% AMI*	Affordable Sales Price Guidelines 120% AMI*	Achievable Unit Price (Low)	Achievable Unit Price (High)	Published Income Limits 100% AMI*	Published Income Limits 120% AMI*	Indicated Minimum Income (Low)	Indicated Minimum Income (High)
0BR / 1BA	1 Person	**$331,700**	**$398,000**	$251,250	$364,498	**$68,600**	**$82,320**	$54,559	$76,809
1BR / 1BA**	2 Person	**$379,100**	**$454,900**	$329,150	$437,775	**$78,400**	**$94,080**	$71,291	$115,666
2BR / 1BA***	3 Person	**N/Ap**	**N/Ap**	$640,900	$703,300	**N/Ap**	**N/Ap**	$139,209	$152,624

*Maximum price and income guidelines are established by HHFDC and are based on household size. Maximum price assumes a 4.5% APR mortgage with a 5% downpayment and an income to mortgage payment ratio of 28%, per HHFDC guidelines.

**Minimum income for higher priced 1BR units exceeds maximum 120% AMI income limit; however, it is reasonable to assume that these units may be sold as unrestricted units.

***The five two-bedroom units will be located on the top floor and all be unrestricted

- Based on our demand analysis, we believe that there is adequate demand in the primary market area for the Subject property as proposed based on the demographic information. The overall capture rates for the Subject's 100 percent AMI, 120 percent AMI, and unrestricted units are 1.4, 7.2, and 2.9 percent, respectively. The overall capture rate for all 180 units is 5.2 percent. These rates are considered good and achievable. The Subject's Novoco achievable pricing meets HHDFC DURF affordability requirements for the proposed units targeting 100 and 120 percent AMI; the achievable pricing for all of the proposed units are also in-line with market pricing. Overall, market characteristics indicate adequate demand for the Subject.

Market Rate Rental Summary

- The Subject will offer a competitive in-unit amenities package in comparison to the comparable properties. The most common in-unit amenities that will be offered at the Subject but are not offered at several comparables include garbage disposals, central air conditioning, dishwashers, microwaves, and in-unit washers/dryer. In contrast, the Subject will not offer cable/internet included in the rent, balconies/patios, coat closets, exterior storage, and ceiling fans. The Subject will offer a similar to inferior common area amenities package in comparison to the comparable properties. The common area amenities that will be offered at the Subject but are not offered at several comparables include elevators, and on-

site management. In contrast, the Subject will not offer an exercise facility, a swimming pool, and a recreation area, which are offered by multiple comparable properties. The Subject is considered competitive to slightly superior overall in terms of amenities.

- The Subject will offer 197 garage parking spaces, which equates to a total of 1.1 spaces per unit. Parking will be provided at a monthly charge of $75. Six of the nine comparables offer similar garage parking, with four charging monthly fees ranging from $60 to $100 per month. Additionally, we believe that the proposed parking is reasonable given the proposed unit mix and the Subject's downtown location within close proximity to public transportation and employment nodes.

- Vacancy rates at the comparable properties range from zero to 8.3 percent, with an overall vacancy rate of 3.4 percent. It should be noted that the property manager at Punahou Circle Apartments indicted that 50 percent of tenants are students and vacancies typically fluctuate as a result. Taking all of this data into account, we expect the Subject will be able to maintain a vacancy rate of five percent or less upon stabilization.

- The Subject will offer a 21-story high rise design (there will be 13 stories of residential above an eight story parking garage). Based on our evaluation of the Subject building design, we believe view and floor premiums are achievable at the Subject. Two of the comparables offer floor/view premiums, Capitol Place Apartments and Royal Capital Plaza. Each of these offers units at higher floors and with ocean/mountain views at a premium between $200 and $350. These properties are 39 and 40 stories each, respectively. Managers estimated that a rental view premium would be achievable starting on the 15th floor for views oriented toward Diamond Head/ocean. Therefore, we believe that the units on the 15th through 20th floors could achieve a premium of approximately $200.

- Upon completion of construction, the Subject will offer a good quality product with competitive amenities. The primary strengths of the Subject will its excellent condition, views, and amenities. Average vacancy within the market is 3.4 percent, although Capitol Place Apartments, the most similar comparable property to the Subject, maintains a waiting list for one and two-bedroom units. Concessions are not common within the market. The Novoco estimated achievable base rents for the Subject's studio, one, and two-bedroom units are $1,125 to $1,275, $1,450 to $1,500, and $2,150 to $2,250, respectively. We believe the NOVOCO achievable rents for the Subject will be well-accepted within the market.

- None of the comparables have been recently built, thus no absorption data is available. Although two of the comparables, Liona Apartments and Waena Apartments, reported recent renovations, tenants were reportedly temporarily relocated or not displaced. Based upon the relatively low vacancy rates in the market, we believe that the Subject will reach a stabilized occupancy of 95 percent within four to five months. This lease-up period equates to a rate of approximately 36 units per month.

- The effective demand in one year is adjusted for income eligibility and renter status, and it is further adjusted by the number of units that are currently in lease-up or planned in the PMA.

As such, the calculations generate a capture rate of 5.5 percent, which indicates expected absorption of less than one year.

PROJECT DESCRIPTION

PROJECT DESCRIPTION

SITE DESCRIPTION

The location of a multifamily property can have a substantial negative or positive impact upon the performance, safety and appeal of the project. The site description discusses the physical features of the sites, as well as the layout, access issues and traffic flow.

General: The Subject is located at the intersection of Pumehana Street and Algaroba Street in Honolulu, Honolulu County, Hawaii.

Shape: The Subject site is generally rectangular.

Size: Approximately 0.33 acres, or 14,400 square feet.

Zoning: The Subject site is zoned BMX-3, which permits multifamily and commercial uses.

Frontage: The Subject site has frontage along Pumehana Street and Algaroba Street.

Adjoining Land Uses: The Subject site is located in the McCully neighborhood of Honolulu downtown district and is surrounded by predominately commercial office and residential uses with scattered retail uses. A multifamily building in generally fair condition is adjacent to the north with a retail building in good condition beyond. An automotive repair shop in fair condition is located to the east of the Subject. Farther east is a restaurant and commercial office/retail building in good condition. Immediately south of the Subject are single-family residential uses in good condition. West of the Subject are several multifamily uses in good condition. Many local amenities are within walking distance of the Subject site.

Topography and Existing Improvements: The site is generally level. The site is currently improved with a single-family home, a duplex, and a two-story multifamily residential structure that will be demolished to accommodate the Subject. Minimal vegetation exists on the site.

Access and Traffic Flow: The Subject will offer good accessibility from Algaroba Street on the southwest and Pumehana Street on the northwest. Both are secondary residential roads with generally light to moderate traffic flow. Pumehana Street provides access to King Street to the northeast, while

Algaroba Street connects with McCully Street to the south. King Street and McCully Street are major arterials that provide access throughout the central portion of Honolulu. McCully Street provides access to Interstate H1 approximately 0.3 miles to the northeast. Interstate H1 is a major highway that provides access throughout the Honolulu region.

Visibility/Views: Visibility is good from all adjacent streets. Additionally, given that the surrounding improvements are all three-stories or less and the Subject will be 21-stories, there will be good visibility from King Street and McCully Street to the northeast and southeast, respectively. Given the Subject's relative height to the existing improvements in the neighborhood and that the Subject's residential units will occupy floors nine and above, there will be unobstructed views in all directions. Views are considered good to excellent. View premiums are typically available in the market for high floors in high-rise design. Based on our evaluation of the Subject site location, surrounding land uses, building design, we believe that view and floor premiums are likely achievable.

Soil and Subsoil Conditions: We were not provided with soil surveys, but the surrounding and existing improvements suggest that the soils are adequate for development.

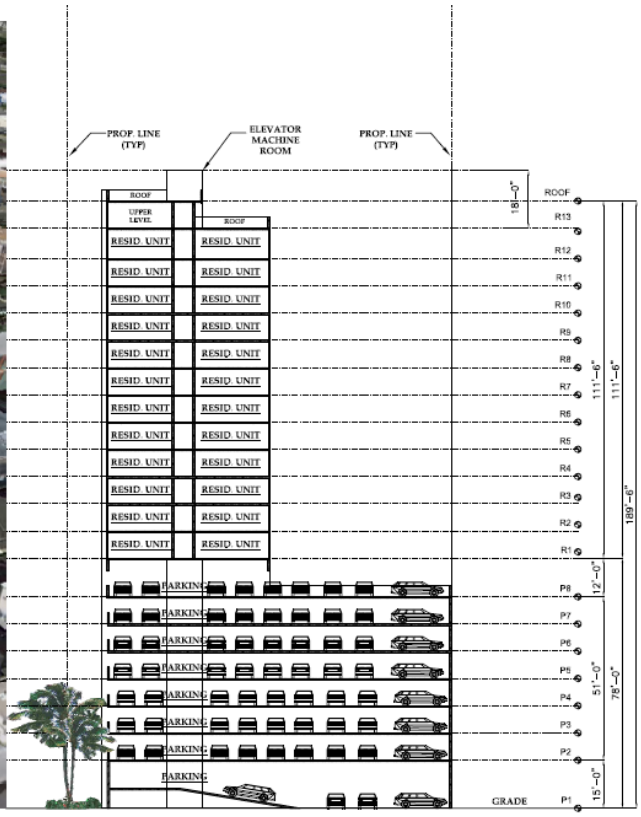
Flood Plain: According to www.floodinsights.com Community Panel Number 150001 0366G, dated January 19, 2011, the site is located in Zone X, an area that is outside of the 100 and 500-year flood zone.

Environmental: We were not provided with an environmental assessment report. We did not observe any obvious environmental hazards during our site inspections; however, we are not experts within this field.

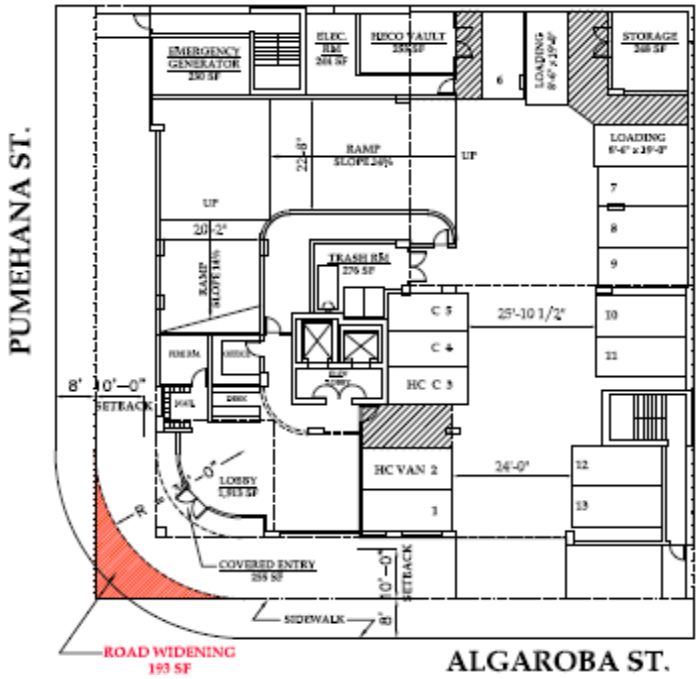
Detrimental Influences: We are unaware of any detrimental influences that would impact the value of the Subject.

Conclusion: The Subject site appears physically capable of supporting a variety of legally permissible uses, and is considered a desirable location.

3D VIEW LOOKING MAUKA
SCALE: NTS



CROSS SECTION LOOKING MAUKA
SCALE: NTS



DESCRIPTION OF IMPROVEMENTS

Our description of the improvements is based upon information provided by the developer. We assume that this information is accurate.

Construction Type: The building will consist of steel and concrete frame construction with steel and glass exterior. The roofs will be flat with composite rubber.

Construction/ Completion Timeline: The construction of the Subject is expected to begin in February 2015, with an estimated completion date of February 2017.

Unit Mix and Size: The unit mix and square footage per unit type is as follows:

UNIT MIX AND SQUARE FOOTAGE

Unit Type	Number of Units	Unit Size (SF)	Net Area
0BR/1BA	84	335	28,140
0BR/1BA	12	387	4,644
1BR/1BA	24	454	10,896
1BR/1BA	22	484	10,648
1BR/1BA	11	494	5,434
1BR/1BA	22	498	10,956
2BR/1BA	2	986	1,972
2BR/1BA	2	1,005	2,010
2BR/1BA	1	1,082	1,082
Total	**180**		**75,782**

NLA: 75,782 SF, per the developer.

Proposed Pricing/Rents: The sponsor has not yet established proposed pricing and rents; they intend to consider the conclusions presented in this analysis when developing their pro forma.

Current Rents and Operation: The Subject will be new construction, and therefore has no current rents or operational statistics.

Commercial Space: The Subject will not feature a commercial component.

Scope of Renovation: Not applicable.

Number of Stories: 21 stories, including an eight-story parking structure.

Community Amenities: Upon completion, the Subject will offer on-site management, off-street garage parking, and elevators.

Unit Amenities: Upon completion, the Subject's unit amenities will include air conditioning, drapes, carpeting, furniture and pre-wiring for cable TV and high speed internet. Appliances will include a refrigerator, electric stove/oven, dishwasher, and garbage disposal. Additionally, all units will include a washer/dryer.

Parking: Parking will be included in the purchase price for the condominium scenario, while a monthly charge of $75 is proposed for the rental scenario. The Subject will offer 197 garage parking spaces, which equates to a total of 1.1 spaces per unit. The proposed on-site parking is deemed reasonable given the proposed unit mix and the Subject's urban location within close proximity to public transportation and employment nodes.

Utility Structure: The tenant will pay for all utilities. The building will be all electric.

Americans with Disabilities Act of 1990: We assume the property will have no violations of the Americans with Disabilities Act 1990.

Quality of Construction: We assume the property will be constructed in a timely manner consistent with information provided, using good quality materials in a workmanlike manner.

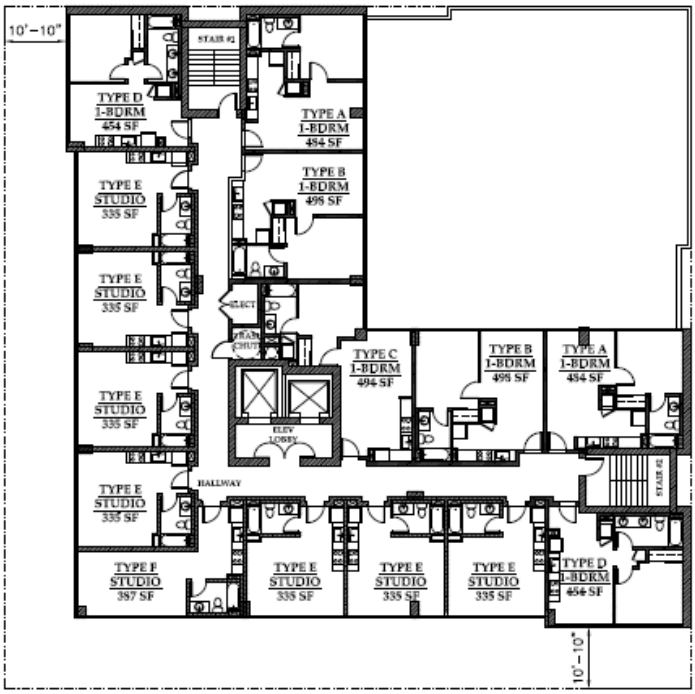
Condition: The Subject will be in excellent condition upon completion.

Functional Utility: We have reviewed the proposed floor plans and the Subject will not suffer from functional obsolescence.

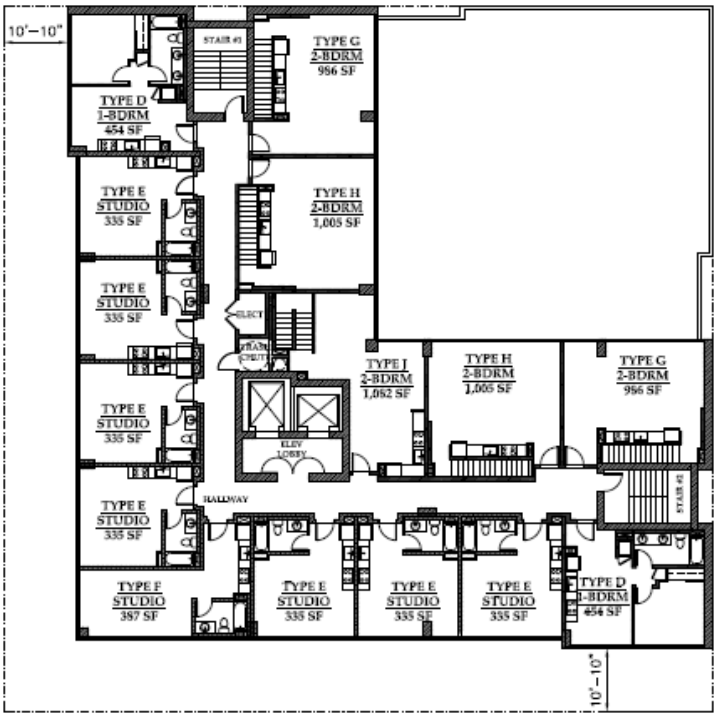
Deferred Maintenance: The Subject will be new construction and not suffer from deferred maintenance.

Conclusion: Upon completion, we anticipate the finished product of the Subject will be comparable or superior to the quality of existing multifamily housing stock in the market area.

Floor Plans



R1 THRU R11 FLOOR PLAN



R12 FLOOR PLAN

REGIONAL AND LOCAL AREA ANALYSIS

REGIONAL AND LOCAL AREA ANALYSIS

REGIONAL AND LOCAL AREA DESCRIPTION

The Subject is located in Honolulu, Hawaii in southern Honolulu County, on the island of Oahu. Honolulu is the county seat and the county's most populous city. According to 2010 Census data, Honolulu has a population of 337,256. Honolulu County is also known as the Honolulu Metropolitan Statistical Area (MSA). A map of the region is located below.

ECONOMIC ANALYSIS

Employment by Industry

The following table illustrates the distribution of employment sectors by industry within the PMA and the nation.

2010 EMPLOYMENT BY INDUSTRY				
	PMA		USA	
Industry	Number Employed	Percent Employed	Number Employed	Percent Employed
Health Care/Social Assistance	8,342	13.3%	18,891,157	13.9%
Retail Trade	8,003	12.8%	15,464,986	11.4%
Accommodation/Food Services	7,163	11.4%	9,114,767	6.7%
Public Administration	6,707	10.7%	6,916,821	5.1%
Educational Services	5,322	8.5%	14,168,096	10.4%
Construction	3,570	5.7%	8,872,843	6.5%
Transportation/Warehousing	3,429	5.5%	5,487,029	4.0%
Other Services (excl Publ Adm)	3,118	5.0%	6,679,783	4.9%
Prof/Scientific/Tech Services	3,043	4.9%	8,520,310	6.3%
Finance/Insurance	2,701	4.3%	6,883,526	5.1%
Admin/Support/Waste Mgmt Srvcs	2,546	4.1%	5,114,479	3.8%
Wholesale Trade	2,000	3.2%	4,407,788	3.2%
Arts/Entertainment/Recreation	1,697	2.7%	2,628,374	1.9%
Manufacturing	1,570	2.5%	13,047,475	9.6%
Real Estate/Rental/Leasing	1,516	2.4%	2,825,263	2.1%
Information	1,032	1.6%	3,158,778	2.3%
Utilities	527	0.8%	1,115,793	0.8%
Agric/Forestry/Fishing/Hunting	293	0.5%	1,790,318	1.3%
Mgmt of Companies/Enterprises	24	0.0%	202,384	0.1%
Mining	15	0.0%	723,991	0.5%
Total Employment	**62,618**	**100.0%**	**136,013,961**	**100.0%**

Source: ESRI Demographics 2010, Novogradac & Company LLP, 10/2013
*Industry data current as of 2010. Other projections current as of 2012.

The previous table reflects the workforce for the PMA. The workforce is heavily concentrated in the healthcare/social assistance, retail trade, accommodation/food services, and public administration industries. There is a larger percentage employed in the PMA within the accommodation/food services and retail trade sectors than the nation. The dominance of the retail trade and accommodation/food services sectors can be attributed to the tourism industry, which the economy is heavily reliant upon. There is also a much larger percentage employed in the public administration sector in the PMA than in the nation. This is due to the large presence of military in the area as the Subject is in close proximity to Hickam Air Force Base and Pearl Harbor Naval Station. The large percentage employed in the public administration sector within the PMA can also be attributed to workers that are employed by the state government, as Honolulu is the state capital. The significant percentage of the workforce employed in the retail trade industry is a sign of economic growth; however, this industry also tends to be volatile, particularly during times when the economy is struggling.

Employment and Unemployment Trends

The following table details employment and unemployment trends for the MSA and the nation from 2002 through July 2013.

EMPLOYMENT & UNEMPLOYMENT TRENDS (NOT SEASONALLY ADJUSTED)								
	Honolulu, HI MSA				USA			
Year	Total Employment	% Change	Unemployment Rate	Change	Total Employment	% Change	Unemployment Rate	Change
2002	412,897	-	3.9%	-	136,485,000	-	5.8%	-
2003	417,519	1.1%	3.7%	-0.2%	137,736,000	0.9%	6.0%	0.2%
2004	419,506	0.5%	3.1%	-0.6%	139,252,000	1.1%	5.5%	-0.5%
2005	427,632	1.9%	2.7%	-0.4%	141,730,000	1.8%	5.1%	-0.4%
2006	430,852	0.8%	2.4%	-0.3%	144,427,000	1.9%	4.6%	-0.5%
2007	430,553	-0.1%	2.5%	0.1%	146,047,000	1.1%	4.6%	0.0%
2008	430,589	0.0%	3.6%	1.1%	145,362,000	-0.5%	5.8%	1.2%
2009	418,139	-2.9%	5.8%	2.2%	139,877,000	-3.8%	9.3%	3.5%
2010	425,915	1.9%	5.7%	-0.1%	139,064,000	-0.6%	9.6%	0.3%
2011	434,073	1.9%	5.6%	-0.1%	139,869,000	0.6%	8.9%	-0.7%
2012	434,339	0.1%	5.2%	-0.4%	142,469,000	1.9%	8.1%	-0.8%
2013 YTD Average*	435,178	0.2%	4.4%	-0.8%	143,644,875	0.8%	7.7%	-0.4%
Jul-2012	430,994	-	5.5%	-	143,126,000	-	8.6%	-
Jul-2013	430,809	0.0%	4.2%	-1.3%	145,113,000	1.4%	7.7%	-0.9%

Source: U.S. Bureau of Labor Statistics, October 2013

*2013 data is through Jul

Unemployment in the Honolulu Metropolitan Statistical Area (MSA) decreased from 2002 to 2006. However, from 2007 to 2009, the unemployment rate increased from 2.5 to 5.8 percent, which was a result of the recent national recession. The unemployment rate began to decline in 2010, which has continued to present. The 2013 year-to-date average unemployment rate indicates a 0.8 percentage point decrease since year end 2012. Furthermore, the July 2013 unemployment rate is 4.2 percent, compared to 5.5 percent from July 2012. The national recession and mortgage crisis have impacted both the MSA and the nation, which is reflected in the data. However, it appears that the MSA has not been as severely affected as the nation. Additionally, the Honolulu, HI MSA appears to be outperforming the nation in terms of unemployment as the July 2013 unemployment rate was significantly lower than the nation, 4.2 percent versus 7.7 percent, respectively.

From 2003 to 2006, the MSA and the nation experienced continual employment growth. In fact, the nation continued to experience employment growth in 2007, while the MSA experienced a slight decrease in total employment. Total employment in the MSA remained flat in 2008 and decreased significantly in 2009, consistent with the recent national recession. In 2010 and 2011 the MSA experienced an increase in total employment; however, the growth in total employment stagnated in 2012 and has remained so through YTD 2013, increasing by 0.1 and 0.2 percent, respectively.

Major Employers
The following table details the state's largest nongovernment employers.

STATE OF HAWAII MAJOR EMPLOYERS		
Employer Name	**Industry**	**Number of Employees**
Altres Medical	Healthcare	10,000
Kapiolani Medical Center	Healthcare	5,000
Kyo-Ya Co Ltd	Accommodations	4,000
Queen's Medical Center	Healthcare	3,500
Hawaii Health Systems Corp	Healthcare	3,400
Tripler Army Medical Center	Healthcare	2,826
Bank of Hawaii	Finance	2,500
St. Francis Healthcare	Healthcare	2,100
Aeko Kula Inc.	Air Cargo	2,090
Towne Realty of Hawaii	Real Estate	2,001
Kaiser Permanente Medical	Healthcare	2,000
Straub Clinic and Hospital	Healthcare	1,900
Oahu Transit Service	Transportation	1,799
Polynesian Cultural Center	Cultural	1,700
Outrigger Enterprises Group	Accommodations	1,600
Hilton-Hawaiian Village Beach	Accommodations	1,500
Honolulu Airport	Air Transportation	1,500
Grand Wailea Resort Hotel	Accommodations	1,400
Roberts Overnighters	Entertainment	1,400
Kuakini Emergency Service	Healthcare	1,300
Hilton-Waikoloa Village	Accommodations	1,200
Kaimuki Toyota/Suzuki	Automotive	1,200

Source: data.hawaii.gov, Novogradac & Co. LLP, October 2013

The largest non-governmental employers in the area are concentrated in the healthcare and accommodations industries. The largest employer in the area is the federal, state, and local government due to the presence of the various military installations and the fact Honolulu is the state capitol. Further employment information regarding government employers within the area was unavailable.

Employment Analysis and Expansion/Contractions
The recent national recession had a considerable negative impact on Hawaii's economy as it is heavily reliant on the tourism industry. However, according to the State of Hawaii Department of Business, Economic Development, and Tourism, total visitor spending for the month of August 2013 increased 5.0 percent from August 2012. Total visitor expenditures for the first eight months of 2013 represented a 3.9 percent increase in visitors from the same time period in 2012. The increase in total expenditures is due to an overall increase of visitors and higher overall daily visitor spending.

Despite the recent recession, it appears that the Hawaiian economy is recovering by the increase in the total number of visitors during 2011 and 2012, according to statistics from the State of Hawaii Department of Business, Economic Development, and Tourism. Additionally, Honolulu County is still working towards a diversified economic base with technology-intensive and knowledge-based enterprises. According to the Oahu Economic Development Board, Honolulu County is still continuing its efforts to further various technology driven sectors including

alternative energy, diversified agriculture, ocean and earth sciences, film and digital media, and satellite tracking. Additionally, the Oahu Economic Development Board indicated that Honolulu is an attractive location for new businesses due to its strategic mid-pacific location, time zone advantage, and well developed infrastructure.

The Chamber of Commerce of Hawaii, the Oahu Economic Development Board, and the State of Hawaii Department of Business, Economic Development, and Tourism could not provide specific information pertaining to new businesses locating to Honolulu County and resulting job growth, or any employment contractions that have occurred within the last six months. Although we were not able to retrieve specific information regarding businesses that have recently expanded or relocated to Honolulu, we were able to gather information on a more macro level from another source with information about the economic climate in the Subject's area. A statistician at the State's Department of Business, Economic Development, and Tourism noted that Hawaii is well known for its sizeable barriers to entry when it comes to development projects (including multifamily), largely in part to scarcity and cost of land and difficult permitting processes. Despite the contact's report on the state of new business development, the contact affirmed the crucial importance of affordable housing programs in the development of multi-family housing projects. He stated that the high cost of land imposes a financial barrier to entry that many developers of affordable multifamily housing cannot overcome without subsidies or other favorable financing.

Hickam Air Force Base and Naval Station Pearl Harbor

Hickam Air Force Base and Pearl Harbor are located approximately three and six miles west of the downtown district, respectively. Together, they account for approximately 40,000 jobs in the MSA. Hickam Air Force Base consists of 2,850 acres of land and facilities bordering Pearl Harbor and first opened in 1934. During World War II the base was a major center for training pilots and assembling aircraft, as well as serving as the hub of the Pacific aerial network. Today the base remains a launch point of strategic air mobility and operation missions. The air force base was slightly affected by the 2005 BRAC realignment, losing approximately 262 jobs.

Pearl Harbor was established as a U.S. naval base in 1908. Today the base coordinates, schedules, and provides assigned waterfront services to all home-ported and visiting ships and vessels at the Pearl Harbor Naval Complex. The naval station was slightly affected by the 2005 BRAC realignment, losing approximately 290 jobs.

Despite both Hickam Air Force and Base Pearl Harbor losing jobs during the BRAC realignment, both stations continue to have a huge impact on the area today. According to the Chamber of Commerce of Hawaii, the Pearl Harbor Naval Shipyard is the largest industrial employer in Hawaii. Additionally, the U.S. Department of Defense is a major source of revenue to the state, second only to tourism. The chamber also indicated that the total spending by the armed services in Hawaii in 2007 was $8.2 billion, which resulted in direct and indirect impacts totaling $12.2 billion to Hawaii's economy, in addition to accounting for over hundreds of thousands of jobs and $7.6 billion in household earnings. Both Hickam Air Force Base and Pearl Harbor provide employment and revenue to the state.

Worker Adjustment and Retraining Notification (WARN) notices for companies in Hawaii are available by request from the Department of Labor and Industrial Relations – State of Hawaii. Our emails and phone calls have gone unreturned as of the effective date of this report.

Employment Analysis

The Subject will be located in Honolulu, Hawaii. Given the Subject's location, we have focused on the state of Hawaii and HUD's Pacific region in framing our economic analysis. According to Hawaii's list of major employers, the accommodations and health care sectors have historically dominated the local private sector economy, while government and military jobs are prevalent within the public sector in the region.

According to HUD's Regional Market Conditions for the second quarter of 2013 in the Pacific Region, **"Nonfarm payroll growth was positive in all four states in the Pacific region during the second quarter**, despite wide scale job losses from 2008 to 2010. The region added 335,400 jobs in the second quarter of 2013, a 1.8 percent increase compared with the three month average number of jobs recorded for the second quarter of 2012. The same sectors that led overall job growth in the region drove job growth in each state in the region, where the professional and business services sector increased by 81,100 jobs, or 2.9 percent, and the leisure and hospitality sector increased by 84,100 jobs, or 3.6 percent. The government sector declined by 10,600 jobs, or 0.3 percent.

During the twelve months ending July 2013, Hawaii nonfarm payrolls gained 8,000 jobs, or 1.3 percent, compared with a gain of 5,300 jobs, or 0.9 percent, during the twelve months ending June 2012. California gained 256,300 jobs, or 1.8 percent, compared with a gain of 161,200, or 1.2 percent, during the same quarter the previous year. Nonfarm payrolls in Arizona rose by 49,500 jobs, or 2.0 percent, during the second quarter of 2013, compared with the increase of 38,250 jobs, or 1.6 percent, during 2012. Nevada added 21,600 jobs, an increase of 1.9 percent, compared with the addition of 10,700 jobs, a 1 percent increase, during 2012. The average unemployment rate for the region decreased to 8.4 percent from 10.1 percent a year ago.

Single-family homebuilding, home sales, and sales prices increased throughout the region, and sales and rental vacancy rates declined. The number of distressed properties continued to decline throughout the region, but surpluses of distressed properties remain in several areas. Although market conditions appear to be gradually improving, the sales housing market conditions ranged from balanced to slightly soft during the second quarter of this past year, arguably due to high unemployment and tight lending requirements. According to CoreLogic, Inc., new and existing home sales in the region increased 0.2 percent, to 678,400 homes, during the 12 months ending May 2013. In Arizona, sales declined 1.7 percent, to 144,300, and the average home sales price in Phoenix increased 20.6 percent, to $168,400, partially because of a decline in Real Estate Owned (REO) sales. As a percentage of existing home sales, REO sales in Arizona decreased by more than 73 percent during the 12 months ending May 2013.

Increased single-family building activity occurred in all four states of the region, ranging from an increase of 100 homes, or 19 percent, in Hawaii to an increase of 2,375 homes, or 33 percent, in California. In California, the number of new and existing home sales increased by 2.9 percent, to a total of 452,600, during the 12 months ending May 2013. In the San Francisco Bay

Area, 54,700 homes sold, a 3.4 percent increase compared with the number sold during the previous 12 months. During the same period, the average home sales price increased 16.4 percent, to $600,600. **Home sales and average prices both increased in the Hawaii, but in Nevada those factors moved in opposite directions over the course of the same 12 month period ending in May 2013. In Hawaii, new and existing home sales rose by 1.2 percent, to 16,100 homes sold, and the average home sales price in Honolulu increased 9.8 percent, to $530,300.** New and existing home sales in Nevada declined 12.8 percent, to 65,400; however, the average sales price for a house in Las Vegas rose by 20.6 percent, to $168,400, in the span of 12 months ending May 2013.

During the second quarter of 2013, 4.7 percent of home loans in the region were 90 or more days delinquent, were in foreclosure, or transitioned into REO, down from 7.2 percent during the second quarter of 2012 (LPS Applied Analytics). The statewide rates of distressed loans ranged from 3.9 percent in Arizona to 10.5 percent in Nevada, down from 6.6 and 13.5 percent respectively.

Because of improved home sales markets in the Pacific region, single-family construction activity, as measured by the number of single-family homes permitted, rose during the second quarter of 2013. Based on preliminary data, 18,300 single-family homes were permitted in the region, a 22-percent increase over the number permitted during the previous quarter. The greatest percentage increases in home construction occurred in California, where the number of single-family homes permitted increased by 2,375 or 33 percent. **The number of single-family homes permitted in Hawaii increased by 100 homes, or an increase of 19 percent.**

Rental housing markets in the Pacific region varied from soft to tight in the second quarter of 2013. Rental market conditions softened but remained tight in the San Francisco Bay Area; according to Axiometrics Inc., from the second quarter of 2012 to the second quarter of 2013, the apartment rental vacancy rates in the San Francisco MSA declined from 3.9 to 3.7 percent. The rental vacancy rate in Los Angeles declined from 4.9 to 4.8 percent. Average rents rose in all but 1 of the 10 areas and ranged from **a 2.9-percent decrease in Honolulu** to a 7.8-percent increase in San Jose during the second quarter of 2013.

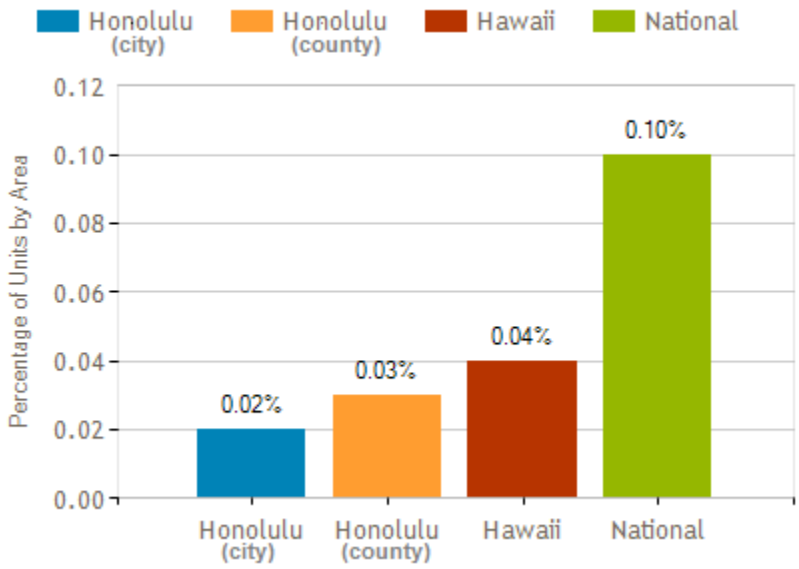
Axiometrics Inc. reported that apartment rental vacancy rates were down from the second quarter of 2012 to the second quarter of 2013 in all of the Pacific region's major metropolitan areas, with the exception of Las Vegas and San Jose. From the second quarter of 2012 to the second quarter of 2013, in the San Francisco-Oakland-Fremont metropolitan area, the apartment vacancy rate declined from 3.9 to 3.7 percent, and, in the Los Angeles-Glendale-Santa Ana metropolitan area, the rate fell from 4.9 to 4.8 percent. In the Phoenix area, the apartment vacancy rate declined from 7.2 percent in the second quarter of 2012 to 6.7 percent in the second quarter of 2013.

The rental housing markets in the metropolitan areas in Arizona were slightly soft but balanced out in the second quarter of 2013. According to Axiometrics Inc., the apartment rental vacancy rate in Phoenix was 6.7 percent, down from 7.2 percent in the second quarter of 2012. Increasing population growth was partially responsible for the decline in vacancy rates. During the second quarter of 2013, the rental housing markets in Nevada remained soft due to slow job growth.

Multifamily construction activity, as measured by the number of multifamily units permitted, increased in three of the four Pacific region states during the second quarter of 2013. Based on preliminary data, 14,300 multifamily units were permitted in the region, a 54-percent increase from the previous quarter. The combination of increased renter demand and declining vacancy rates was the main impetus for the rising number of multifamily permits. During the second quarter of 2013, the number of multifamily units permitted in Arizona increased by 1,425, or 390 percent; by 3,200 units, or 40 percent, in California; and by 900 units, or 255 percent, in Nevada. **The number of multifamily units permitted in Hawaii decreased by 450 units, or a 94 percent slide from the previous quarter."**

Economic Impact of the Mortgage and Credit Crisis

We researched several local, regional, and national data sources and publications in order to ascertain information pertaining to the mortgage crisis and its impact on the local market. Overall, the nation continues to be hit hard by the mortgage crisis. According to www.RealtyTrac.com, within the state of Hawaii, Honolulu County had the lowest rate of foreclosures during September 2013 with a foreclosure rate of 0.02 percent, or 1 in every 3,685 households. Honolulu County had a slightly higher foreclosure rate of 0.03 percent, while the state of Hawaii displayed a 0.04 percent foreclosure rate. The national foreclosure rate in September 2013 was 0.10 percent. Overall, the MSA and state of Hawaii have been impacted by the current national recession to date. However, it appears that the MSA has fared better than the nation as a whole, which is evident by the lower unemployment rate and smaller employment losses during the recent recession. Similarly, the relatively minor impact of the mortgage crisis has lessened the overall negative impact of the recession on the local economy. The graph below illustrates a geographical comparison for the Subject's area by a percentage of units currently in foreclosure.



Source: realtytrac.com, 10/2013

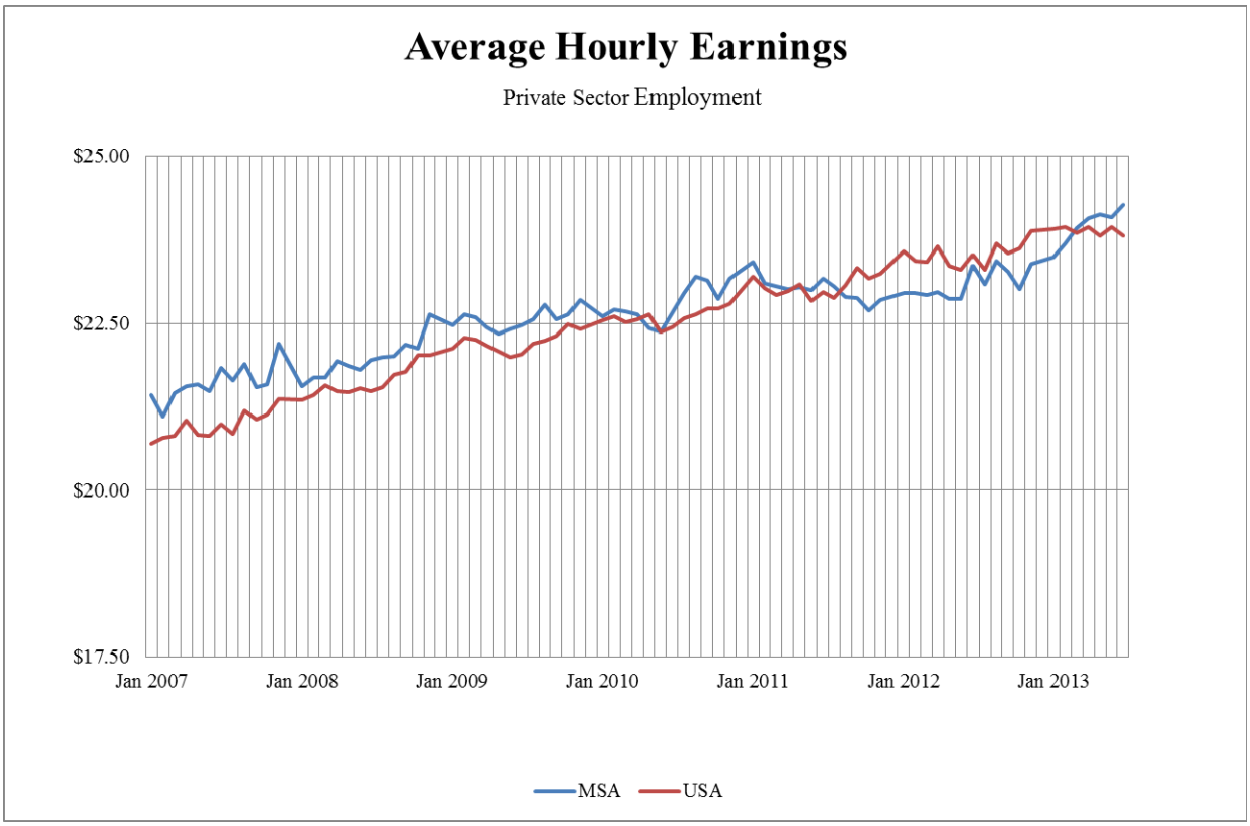
Wages by Occupation

The following table details the wages by occupation in the MSA.

HONOLULU, HI MSA – MAY 2012 AREA WAGE ESTIMATES			
Occupation	**Number of Employees**	**Mean Hourly Wage**	**Mean Annual Wage**
Total all occupations	**433,400**	**$22.24**	**$46,260**
Management Occupations	26,260	$43.06	$89,560
Business and Financial Operations Occupations	21,170	$30.54	$63,530
Computer and Mathematical Occupations	8,340	$33.58	$69,840
Architecture and Engineering Occupations	7,830	$37.08	$77,120
Life, Physical, and Social Science Occupations	4,660	$34.21	$71,150
Community and Social Services Occupations	8,340	$21.35	$44,410
Legal Occupations	3,020	$43.11	$89,660
Education, Training, and Library Occupations	32,880	$23.77	$49,440
Arts, Design, Entertainment, Sports, and Media Occupations	6,840	$22.64	$47,090
Healthcare Practitioners and Technical Occupations	21,180	$40.96	$85,200
Healthcare Support Occupations	11,910	$15.18	$31,580
Protective Service Occupations	15,190	$18.88	$39,260
Food Preparation and Serving-Related Occupations	48,350	$11.53	$23,990
Building and Grounds Cleaning and Maintenance Occupations	20,930	$13.79	$28,690
Personal Care and Service Occupations	11,690	$12.95	$26,940
Sales and Related Occupations	44,520	$16.14	$33,570
Office and Administrative Support Occupations	66,820	$17.16	$35,700
Farming, Fishing, and Forestry Occupations	620	$13.87	$28,840
Construction and Extraction Occupations	18,210	$30.27	$62,960
Installation, Maintenance, and Repair Occupations	16,840	$24.46	$50,890
Production Occupations	10,840	$17.76	$36,940
Transportation and Material Moving Occupations	26,960	$19.24	$40,010

Source: US Bureau of Labor Statistics, effective 5/2012

The previous table illustrates average hourly and annual wages by employment classification. It should be noted that 2013 wage data is not yet available according to the Bureau of Labor Statistics' website. The above chart shows average hourly and annual wages by employment classification. The classification with the lowest average weekly wage is food preparation and serving related occupations, at $11.53 per hour. The highest average hourly wage of $43.11 is legal occupations.



Commuting Patterns

The chart below shows the travel time to work for the PMA according to ESRI data.

COMMUTING PATTERNS		
2000 Commuting Time to Work	**Number of Commuters**	**Percentage**
Travel Time < 5 min	2,552	1.52%
Travel Time 5-9 min	13,987	8.34%
Travel Time 10-14 min	27,471	16.38%
Travel Time 15-19 min	33,174	19.78%
Travel Time 20-24 min	28,424	16.95%
Travel Time 25-29 min	9,074	5.41%
Travel Time 30-34 min	28,361	16.91%
Travel Time 35-39 min	2,907	1.73%
Travel Time 40-44 min	4,913	2.93%
Travel Time 45-59 min	9,083	5.42%
Travel Time 60-89 min	5,534	3.30%
Travel Time 90+ min	2,198	1.31%
Average Travel Time	23 Minutes	-

Source: US Census 2000, Novogradac & Company LLP, October 2013

As shown above, the average travel time for individuals in the PMA is 23 minutes. The majority of commuters, 75 percent, have a travel time between 10 and 34 minutes. The large number of

commuters with commute times in that range suggests that workers in the PMA commute throughout the greater Honolulu area to work.

Conclusion

Total employment in Honolulu County remained relatively unchanged from 2006 to 2008, but as a direct result of the recent national recession, the County experienced a 2.9 percent decrease in total employment in 2009. Although that 2.9 percent decrease amounted to the loss of over 12,000 jobs, this decrease was less than that of the decline in total employment experienced by the nation as a whole, which dropped by 3.8 percent. Between 2010 and 2011, the Honolulu MSA experienced growth in total employment by 1.9 percent in each of the respective years. Although the area experienced slower rates in total employment growth in 2012 and 2013 YTD, total employment was positive in both years, at 0.1 and 0.2 percent respectively. The largest employment sectors in the PMA are health care/social assistance, retail trade, accommodation/food services, and public administration sectors. The large percentage of employment in the retail trade sector can be attributed to Hawaii's large tourism industry. The large percentage of employment in public administration can be attributed to the Subject's close proximity to Hickam Air Force Base and Pearl Harbor Naval Station as well as all of the workers employed by the State of Hawaii, as Honolulu is the state capital. The local economy has suffered due to the national recession as it is heavily reliant on the tourism industry. However, based on the tourism statistics provided by the State of Hawaii Department of Business, Economic Development, and Tourism, the state has experienced a significant increase in the overall number of visitors and visitor spending over the previous two years. The fallout from the mortgage crisis has been moderate in the area. Overall, it appears as if the local economy is well on its way to recovery.

NEIGHBORHOOD DESCRIPTION AND ANALYSIS

Introduction

The neighborhood surrounding an apartment property often impacts the property's status, image, class, and style of operation, and sometimes its ability to attract and properly serve a particular market segment. This section investigates the property's neighborhood and evaluates any pertinent location factors that could affect its rent, its occupancy, and overall profitability.

Location and Boundaries

The Subject is located within the McCully neighborhood of the Honolulu downtown district in Honolulu County. A map of the Subject's location within the McCully neighborhood follows.

Accessibility

The Subject will offer good accessibility from Algaroba and Pumehana Street. South King Street, a major eastbound one-way street with moderate to heavy traffic flow, is accessed via Pumehana Street, while McCully Street, a major north-south street with moderate traffic flow, is accessed to the east via Algaroba Street. McCully Street provides access to Interstate-H1 approximately 0.4 miles north of the Subject. Interstate-H1 Provides access to much of Honolulu.

Predominant Land Usage

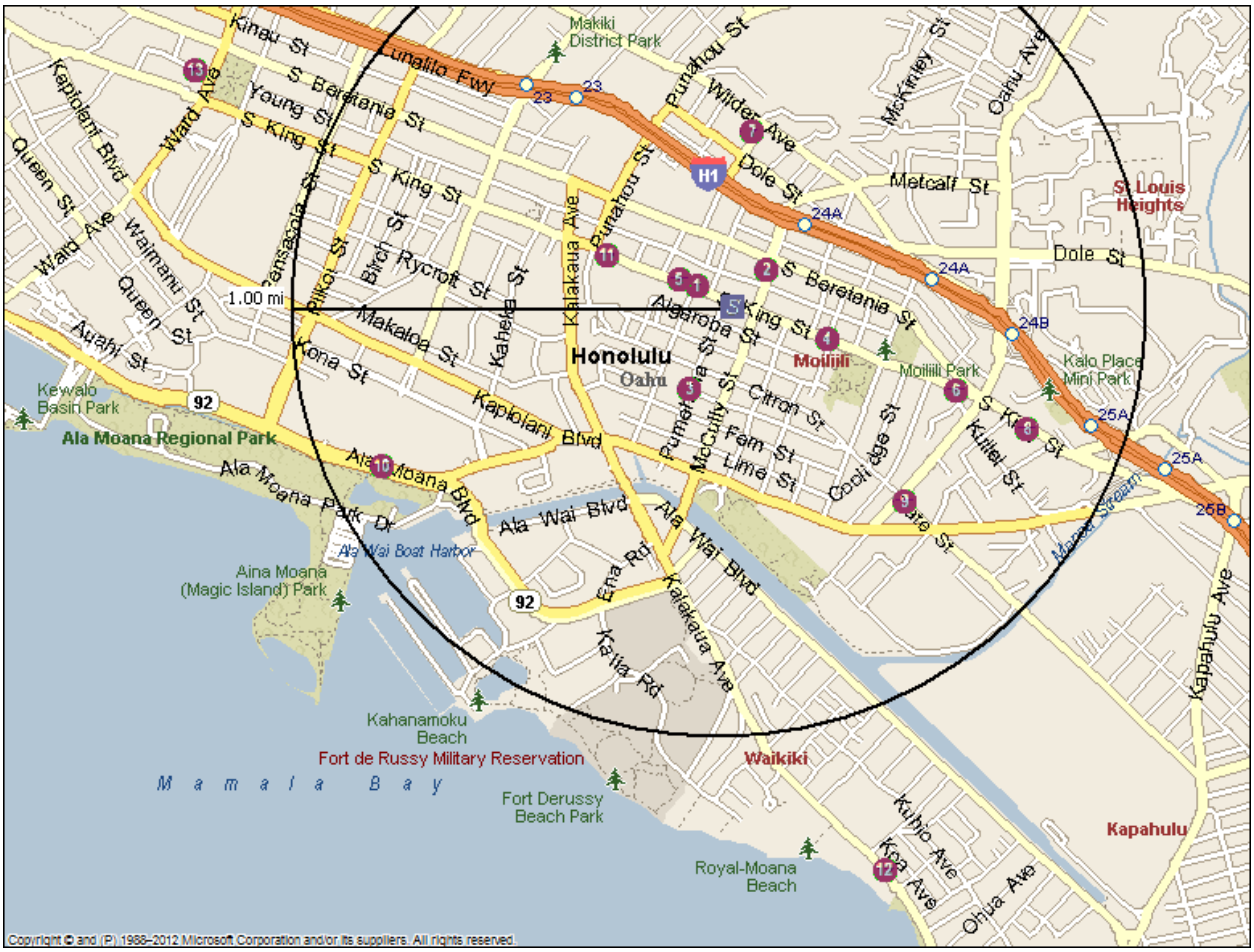
The Subject site is located in the McCully neighborhood of the Honolulu downtown districtand is surrounded by predominately commercial office and residential uses with scattered retail uses. A multifamily building in generally fair condition, is adjacent to the north with a retail building in good condition beyond. An automotive repair shop in fair condition is located to the east of the Subject. Farther east is a restaurant and commercial office/retail building in good condition. Immediately south of the Subject are single-family residential uses in good condition. West of the Subject are several multifamily uses in good condition. According to walkscore.com, the Subject has a walkscore of 83, Very Walkable, meaning that most errands can be accomplished on foot.

The nearest retail to the Subject is concentrated along South King Avenue, approximately 0.1 miles to the southwest. This retail district is characterized by small business retail, with the exception of a CarQuest Auto Parts store north of the Subject. Retail in the neighborhood is in

generally average overall condition and appears to be 90 percent occupied.

Proximity to Local Services

The preceding table illustrates the Subject's proximity to local services. The Subject is located within reasonable proximity to retail, educational, and medical services.

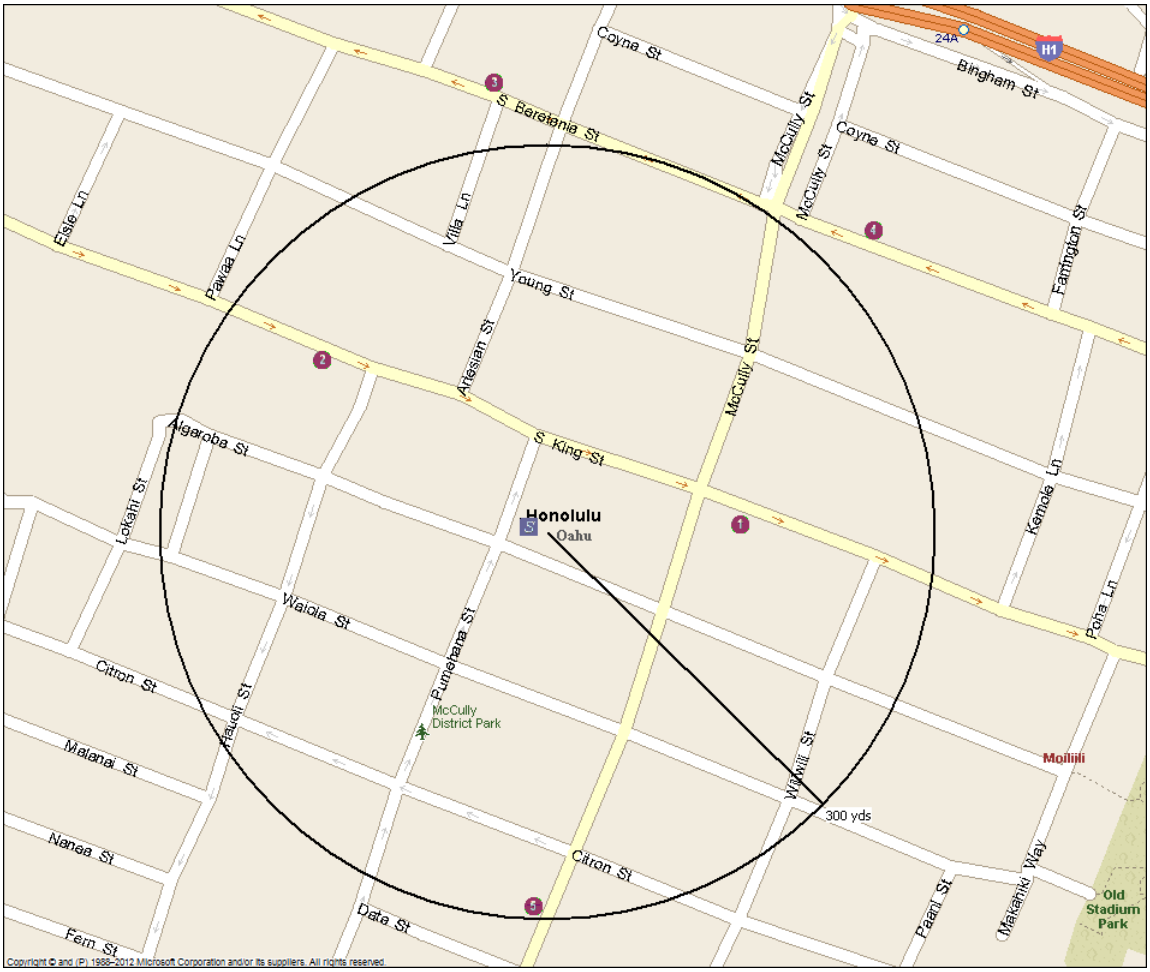


LOCATIONAL AMENITIES

Map #	Service or Amenity	Miles From Subject
1	American Savings Bank	0.1 miles
2	Shell Gas Station	0.2 miles
3	Luna Lio Elementary School	0.3 miles
4	Public Library	0.3 miles
5	Times Supermarket and Pharmacy	0.6 miles
6	Moiliili Community Center	0.6 miles
7	Maryknoll High School	0.7 miles
8	Post Office	0.8 miles
9	Fire Department	0.9 miles
10	Ala Moana City Hall	1.0 miles
11	Washington Intermediate School	1.0 miles
12	Honolulu Police Department	1.5 miles
13	Straub Hospital	2.2 miles

Adequacy of Public Transportation

Bus service on the Island of Oahu is available through the Oahu Transit System. The Subject's neighborhood is served by multiple bus stops. The nearest bus stop is located 150 yards from the Subject. A map detailing the location of the Subject in proximity to local bus stops is illustrated below.



PUBLIC TRANSPORTATION

Map #	Bus Stop Location
1	S King St & McCully St
2	S King & Hauli St
3	S Beretania St & Artesian St
4	S Beretania St & McCully St
5	McCully St & Date St

Crime

The following table illustrates crime rates in the PMA and the Honolulu, Hawaii Metropolitan Statistical area.

2012 CRIME RISK INDICES

	PMA	Honolulu, HI MSA
Total Crime*	349	172
Personal Crime*	142	71
Murder	59	30
Rape	190	95
Robbery	190	95
Assault	166	82
Property Crime*	396	194
Burglary	254	125
Larceny	391	191
Motor Vehicle Theft	592	291

Source: ESRI Demographics 2012, Novogradac & Company LLP, October 2013
*Unweighted aggregations

For comparison purposes, a crime index below 100 is below the national average, and a crime index above 100 is above the nation's crime index average. Overall crime in the PMA is significantly above the national average and the MSA. Based on the information presented in the above table, personal crime is lower in the PMA and MSA than property crime, which occurs at a high rate. All categories of crime in the PMA are higher than the national average and the MSA with the exception of murder, which is higher in the PMA than the MSA but lower than the national average. According to interviews with property managers, crime in the immediate area is not a significant problem despite the data; nonetheless, the Subject will offer secured entry systems with intercom. Additionally, the parking garage will be secured. We believe that based on the performance of the comparables in the PMA, which offer similar security, that crime will not be an issue.

Conclusion

The Subject neighborhood consists of the McCully neighborhood, located in downtown Honolulu. The walkability of the neighborhood is considered good and access to public transportation is excellent. According to walkscore.com, the Subject has a walkscore of 83, Very Walkable, meaning that most errands can be accomplished on foot. The construction of the Subject will create a positive impact upon the neighborhood by continuing to provide quality multifamily housing that will be in good condition upon completion. The Subject site is located within close proximity to local services, recreation, education, and retail.

DEMOGRAPHIC ANALYSIS

For the purpose of this study, it is necessary to define the market area, or the area from which potential tenants for the project are likely to be drawn. In some areas, residents are very much "neighborhood oriented" and are generally very reluctant to move from the area where they have grown up. In other areas, residents are much more mobile and will relocate to a completely new area, especially if there is an attraction such as affordable housing at below market rents. The primary market area (PMA) for the Subject generally consists of the city of Honolulu.

There are no natural boundaries in Honolulu that would inhibit anyone from relocating to the Subject. The market area boundaries identified are a reasonable approximation regarding the potential rental or for-sale market for the Subject. Housing of all types is in strong demand. Housing in this market is at a premium, with low for-sale inventory and few rental vacancies.

The PMA boundaries and overall market health assessment are based upon analyses of physical boundaries, which include traffic and commute patterns within the area, surveys of existing market rate apartment and condominium projects undertaken by Novogradac & Company LLP, and insights gained from real estate agents, resident managers, area planning staff, and others familiar with the multifamily and condominium markets. The PMA boundaries for the for-sale and rental scenarios are identical. We recognize several sub-markets/neighborhoods exist within this PMA; however, market data demonstrates that a significant amount of the local population considers housing opportunities within these boundaries. Given the opportunity to locate good quality housing, both renters and owners will move within these areas. We anticipate the majority of demand will be generated from this geographic area. Leakage is anticipated from outside the PMA from other parts of Oahu; we will incorporate a leakage estimate of 25 and 35 percent to reflect this potential for the rental and for-sale demand scenarios, respectively.

The secondary market area (SMA) for the Subject is considered to be the Honolulu, HI MSA, which consists of Honolulu County. Maps outlining the PMA and SMA can be found on the following pages.

PMA Map

Honolulu, HI PMA

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SMA Map

Population and Households

The tables below illustrate population and household trends in the PMA, MSA, and nation from 2000 through 2017.

POPULATION

Year	PMA		Honolulu, HI MSA		USA	
	Number	*Annual Change*	*Number*	*Annual Change*	*Number*	*Annual Change*
2000	371,495	-	876,156	-	281,421,906	-
2012	393,912	0.5%	962,110	0.8%	313,129,017	0.9%
2017	406,122	0.6%	993,240	0.6%	323,986,227	0.7%

Source: ESRI Demographics 2012, Novogradac & Company LLP, October 2013

HOUSEHOLDS

Year	PMA		Honolulu, HI MSA		USA	
	Number	*Annual Change*	*Number*	*Annual Change*	*Number*	*Annual Change*
2000	140,414	-	287,356	-	105,991,193	-
2012	149,213	0.5%	314,221	0.8%	118,208,713	0.9%
2017	153,940	0.6%	324,590	0.7%	122,665,498	0.8%

Source: ESRI Demographics 2012, Novogradac & Company LLP, October 2013

Population increased in the PMA 0.5 percent annually between 2000 and 2012, slightly slower than both the MSA and the nation, and it is projected to continue to increase through 2017 at a slightly faster rate that is equal to the anticipated growth rate of the MSA. Total households also increased by 0.5 percent annually in the PMA between 2000 and 2012, which was slightly slower than both the MSA and the nation. Total households are projected to continue to increase in the PMA through 2017 at 0.6 percent, lagging slightly behind the MSA and the nation.

Average Household Size

The table below illustrates average household sizes in the PMA, MSA, and nation.

AVERAGE HOUSEHOLD SIZE

Year	PMA		Honolulu, HI MSA		USA	
	Number	*Annual Change*	*Number*	*Annual Change*	*Number*	*Annual Change*
2000	2.57	-	2.94	-	2.58	-
2012	2.55	-0.1%	2.95	0.0%	2.58	0.0%
2017	2.55	0.0%	2.95	0.0%	2.58	0.0%

Source: ESRI Demographics 2012, Novogradac & Company LLP, October 2013

As illustrated in the above table, the average household size decreased slightly between 2000 and 2012 in the PMA, while there was a slight increase in the MSA and no change in the nation. Through 2017, the average households size is projected to remain stable for the PMA, MSA and nation. The PMA has a smaller average household size than both the MSA and the nation.

Median Household Income Levels

The table below illustrates the median household income in the PMA, MSA, and the nation from 2000 through 2017.

MEDIAN HOUSEHOLD INCOME

Year	PMA		Honolulu, HI MSA		USA	
	Amount	*Annual Change*	*Amount*	*Annual Change*	*Amount*	*Annual Change*
2000	$45,111	-	$52,120	-	$42,164	-
2012	$58,464	2.4%	$65,756	2.1%	$50,157	1.5%
2017	$70,711	4.2%	$77,467	3.6%	$56,895	2.7%

Source: ESRI Demographics 2012, Novogradac & Company LLP, October 2013

The median household income in the PMA is lower than the MSA and higher than the nation. Median household income in the PMA grew at a slightly faster rate than the MSA between 2000 and 2012, and significantly faster than the nation. The median household income in the PMA is projected to continue to increase through 2017, at a faster rate than both the MSA and the nation.

The map below illustrates the annual median household income growth in the state of Hawaii by county:

2000 - 2010 MHI Annual Growth Rate

NOVOGRADAC & COMPANY LLP
www.novoco.com

As the previous map illustrates, median household income grew between 2.06 to 2.07 percent annually from 2000 to 2010, which ranks in the upper half of Hawaii counties during the same time period. Areas of higher MHI growth appear to be concentrated in the major metropolitan area of Honolulu and the northwestern portion of the island chain. Counties with the slowest rate of median income growth are largely concentrated in the central and southeastern portions of the state.

Household Income Distribution

The following table illustrates the projected household income distribution for the PMA in 2012 and 2017.

HOUSEHOLD INCOME PMA

Income Cohort	PMA 2012		PMA 2017		Annual Change 2012 to 2017	
	Number	*Percentage*	*Number*	*Percentage*	*Number*	*Percentage*
$0-9,999	10,597	7.1%	9,840	6.4%	-151	-1.4%
$10,000-19,999	11,913	8.0%	10,798	7.0%	-223	-1.9%
$20,000-29,999	13,542	9.1%	12,163	7.9%	-276	-2.0%
$30,000-39,999	13,007	8.7%	12,073	7.8%	-187	-1.4%
$40,000-49,999	12,796	8.6%	11,555	7.5%	-248	-1.9%
$50,000-59,999	11,284	7.6%	10,899	7.1%	-77	-0.7%
$60,000-74,999	14,478	9.7%	13,999	9.1%	-96	-0.7%
$75,000-99,999	19,844	13.3%	19,486	12.7%	-72	-0.4%
$100,000-124,999	13,677	9.2%	14,858	9.7%	236	1.7%
$125,000-149,999	9,109	6.1%	10,906	7.1%	359	3.9%
$150,000-199,999	8,645	5.8%	11,383	7.4%	548	6.3%
$200,000+	10,322	6.9%	15,981	10.4%	1,132	11.0%
Total	**149,213**	**100.0%**	**153,940**	**100.0%**		

Source: Ribbon Demographics 2013, Novogradac & Company LLP, October 2013

The largest income cohort in the PMA is the $75,000-$99,999 bracket, with 13.3 percent of the household population in 2012. In the PMA, 58.5 percent of the total households earned $50,000 or more annually.

Owner Household Income Distribution

The following table illustrates the projected owner household income distribution for the PMA in 2012 and 2017.

OWNER HOUSEHOLD INCOME PMA

Income Cohort	PMA 2012		PMA 2017		Annual Change 2012 to 2017	
	Number	*Percentage*	*Number*	*Percentage*	*Number*	*Percentage*
$0-9,999	2,628	3.7%	2,320	3.2%	-62	-2.3%
$10,000-19,999	3,706	5.3%	3,117	4.3%	-118	-3.2%
$20,000-29,999	4,662	6.6%	3,967	5.5%	-139	-3.0%
$30,000-39,999	4,422	6.3%	4,019	5.5%	-80	-1.8%
$40,000-49,999	4,799	6.8%	4,166	5.8%	-127	-2.6%
$50,000-59,999	5,077	7.2%	4,644	6.4%	-87	-1.7%
$60,000-74,999	6,494	9.2%	6,135	8.5%	-72	-1.1%
$75,000-99,999	10,178	14.5%	9,276	12.8%	-180	-1.8%
$100,000-124,999	8,142	11.6%	8,330	11.5%	38	0.5%
$125,000-149,999	6,147	8.7%	6,862	9.5%	143	2.3%
$150,000-199,999	6,173	8.8%	7,801	10.8%	326	5.3%
$200,000+	7,918	11.3%	11,808	16.3%	778	9.8%
Total	**70,347**	**100.0%**	**72,446**	**100.0%**		

Source: Ribbon Demographics 2013, Novogradac & Company LLP, October 2013

The largest owner income cohort in the PMA is the $75,000-$99,999 bracket, which contains 14.5 percent of the household population in 2012. In the PMA, 71.3 percent of the total owner households in the PMA earn at least $50,000 annually.

Renter Household Income Distribution

The following table illustrates the projected renter household income distribution for the PMA in 2012 and 2017.

RENTER HOUSEHOLD INCOME PMA

	PMA					
Income Cohort	**2012**		**2017**		**Annual Change 2012 to 2017**	
	Number	*Percentage*	*Number*	*Percentage*	*Number*	*Percentage*
$0-9,999	7,969	10.1%	7,519	9.2%	-90	-1.1%
$10,000-19,999	8,207	10.4%	7,681	9.4%	-105	-1.3%
$20,000-29,999	8,879	11.3%	8,196	10.1%	-137	-1.5%
$30,000-39,999	8,585	10.9%	8,053	9.9%	-106	-1.2%
$40,000-49,999	7,996	10.1%	7,389	9.1%	-121	-1.5%
$50,000-59,999	6,207	7.9%	6,256	7.7%	10	0.2%
$60,000-74,999	7,983	10.1%	7,864	9.6%	-24	-0.3%
$75,000-99,999	9,666	12.3%	10,210	12.5%	109	1.1%
$100,000-124,999	5,535	7.0%	6,528	8.0%	199	3.6%
$125,000-149,999	2,962	3.8%	4,044	5.0%	216	7.3%
$150,000-199,999	2,472	3.1%	3,581	4.4%	222	9.0%
$200,000+	2,403	3.0%	4,172	5.1%	354	14.7%
Total	**78,866**	**100.0%**	**81,494**	**100.0%**		

Source: Ribbon Demographics 2013, Novogradac & Company LLP, October 2013

The largest renter income cohort in the PMA is the $75,000-$99,999 bracket, which contains 12.3 percent of the households in 2012. In the PMA, there is a significant concentration of the renters earning above $50,000 at 47.2 percent.

Conclusion

The demographic data demonstrates that the PMA and MSA are forecast for a steady increase in population and households through 2017. The PMA is expected to gain 2,099 owner-occupied households and 2,628 renter-occupied households through 2017. The median household income in the PMA is higher than in the MSA and nation. The *Demand Analysis* section will demonstrate a sufficient amount of income-qualified households presently exist for both the condominium and market-rate rental scenarios.

LOCAL HOUSING TRENDS AND INTERVIEWS

LOCAL HOUSING TRENDS AND INTERVIEWS

Tenure Patterns

The table below illustrates the breakdown by household tenure within the PMA for the years 2000, 2012, and 2017.

TENURE PATTERNS PMA

Year	Owner-Occupied Units	Percentage Owner-Occupied	Renter-Occupied Units	Percentage Renter-Occupied
2000	65,879	46.9%	74,535	53.1%
2012	70,347	47.1%	78,866	52.9%
2017	72,446	47.1%	81,494	52.9%

Source: ESRI Demographics 2012, Novogradac & Company LLP, October 2013

As illustrated above, approximately 47.1 percent of households in the PMA are owner-occupied as of 2012; this percentage is projected to remain stable through 2017 and the total number of owner and renter-occupied units is projected to increase.

Building Permits

The table below illustrates the number of permits issued in Honolulu County, Hawaii since 2002. It should be noted that 2013 data is through October.

BUILDING PERMITS: HONOLULU COUNTY - 2002 to 2013

Year	Single-family and Duplex	Three and Four-Family	Five or More Family	Total Units
2002	1,976	67	630	2,673
2003	2,994	12	467	3,473
2004	1,906	108	2,070	4,084
2005	2,079	160	1,749	3,988
2006	1,727	0	879	2,606
2007	566	148	1,158	1,872
2008	588	0	265	853
2009	870	20	146	1,036
2010	889	0	1,002	1,891
2011	734	9	981	1,724
2012	994	35	695	1,724
2013	1,671	0	132	1,803
Total	**16,994**	**559**	**10,174**	**27,727**
Average**	**1,393**	**51**	**913**	**2,357**

*Only includes through October 2013

** Does not include 2013 permits

Building permit information presented in the previous table indicates that the national recession greatly impacted development from 2007 to present, although the year to date number of single-family homes in 2013 indicates gradual recovery. Single-family homes and complexes with five or more units are dominant in Honolulu County. It appears that single-family homes have been more negatively affected by the economic downturn.

Condominium Housing Activity

The following tables and discussion illustrates the historical performance of the Honolulu condominium market.

Median Sales Price – Condominium/Co-op

City of Honolulu, HI

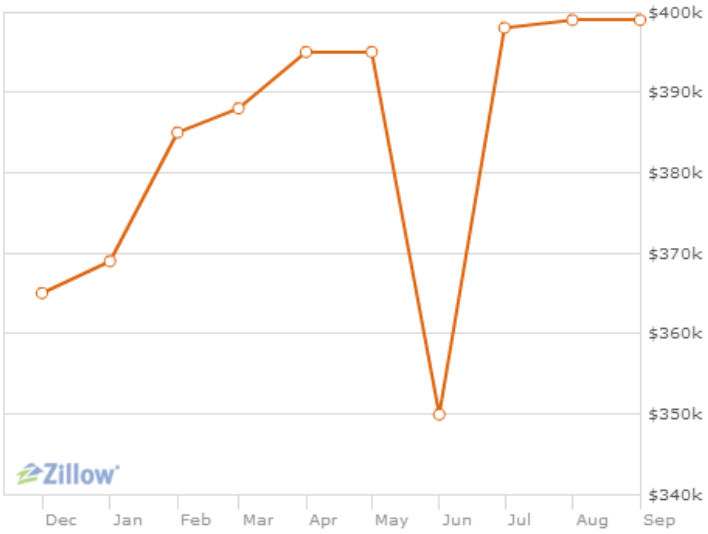
Source: Zillow.com 11/2013.

The median sales price for condominiums in Honolulu for August 2013 was $364,000. This represents an increase of 3.12 percent, or $11,000, compared to the prior quarter and an increase of 10.3 percent compared to the prior year. Historically, sales prices have appreciated 12.0 percent over the last five years in Honolulu. The average listing price for Honolulu condominiums for sale on Zillow was $399,000 for the week ending September 1, 2013, which is similar to the prior month and an increase of 0.5 percent over September 2012.

Average Price per Square Foot – Condominium/Co-op
City of Honolulu, HI
Source: Zillow.com 11/2013.

The average price per square foot in the city has been increasing steadily after reaching a low in June 2008 of $408. The average price per square foot in Honolulu was $526 as of September 2013, an increase of 9.5 percent, year-over-year.

Average List Price – Condominium/Co-op
City of Honolulu, HI
Source: Zillow.com 11/2013.



As illustrated, the average listing price at the beginning of December 2012 was $365,000, which has since increased to $399,000 as of September 1, 2013.

REIS Multifamily Rental Housing Report

According to REIS.com, the vacancy rates have decreased and asking rents have increased slightly in the Honolulu market from the second quarter 2013 to the third quarter 2013. The year-to-date average vacancy rate within the Subject's submarket is lower than that of the Western Region and the United States as a whole.

	Vacancy Rates			
	Quarterly			Annualized
	3Q13	2Q13	YTD Avg	1 Year
Honolulu	2.7%	2.8%	2.6%	2.6%
West	3.6%	3.6%	3.6%	4.2%
United States	4.3%	4.3%	4.3%	4.9%
Average over period ending:	09/30/13	06/30/13	09/30/13	12/31/12

Source: REIS, 11/2013

	Asking Rent Growth			
	Quarterly			Annualized
	3Q13	2Q13	YTD Avg	1 Year
Honolulu	0.5%	1.3%	0.7%	2.6%
West	1.0%	0.7%	0.8%	2.9%
United States	0.9%	0.7%	0.7%	2.0%
Average over period ending:	09/30/13	06/30/13	09/30/13	12/31/12

Source: REIS, 11/2013

LOCAL HOUSING INTERVIEWS

Local Housing Authority

We spoke with Carole Chung-Yokoyama, Operations Manager with the City and County of Honolulu's Department of Community Services - Rental Assistance, regarding the Housing Choice Voucher (HCV) program in the county. Ms. Chung-Yokoyama stated that there are approximately 3,500 vouchers allocated within the city and county of Honolulu, all of which are currently in use. The waiting list had been closed since 2005 until the first quarter of 2012, when the waiting list was last purged. The waiting list is currently closed with the wait for a voucher estimated to be five to seven years.

Additionally, the City and County of Honolulu Housing Authority operates a City Housing Rental Assistance Program (RAP). This program allows rental assistance payments of up to $170 per month on behalf of an eligible participant by the local housing authority. Individuals receiving any other State or Federal assistance are not eligible for this program. Further, the RAP program is project-based. If a tenant moves, the rental assistance for that tenant terminates and the new tenant moving into the vacated unit may receive the RAP assistance if income qualified. Participating projects include Chinatown Gateway (Subject), Harbor Village (Subject), Lani Huli Senior Housing, Manoa Gardens Elderly, Tenney Village Rehab, and West Loch Village. Payment standards for the RAP program and HCV program are the same.

The payment standards for both programs are illustrated in the table following.

PAYMENT STANDARDS	
Unit Type	**Amount**
Studio	$1,112
One-bedroom	$1,202
Two-bedroom	$1,591
Three-bedroom	$2,308
Four-bedroom	$2,583
Five-bedroom	$2,971

The Subject's achievable gross market rents are above the current payment standards and would likely be above the amount reimbursed for both HCV and RAP voucher holders.

Recent and Proposed Construction

We contacted Mike Watkins with the Planning Department at the City and County of Honolulu to determine if any multifamily developments are proposed or under construction within the PMA. In addition, we have added two developments that the sponsor intends to build, Waimanu and Tokai. The sponsor has not yet determined whether these developments will be condominium or rental developments. We have considered both developments in our demand calculations for both condominium and rental developments. The following table summarizes condominium projects that are under construction, approved, or proposed in the PMA.

Planned and Proposed Condominium Developments

Project Name	Design	Type	Units	Timing	Status	Unsold Affordable Units	Unsold Unrestricted Units
One Ala Moana*	Highrise	Market	210	Dec-14	Under Construction	0	0
The Cove Waikiki*	Midrise	Market	117	Dec-14	Under Construction	0	0
801 South*	Highrise	Affordable	635	Jul-15	Under Construction	0	0
Waihonua*	Highrise	Market	341	Dec-15	Under Construction	0	0
Symphony Honolulu*	Highrise	Affordable/Market	388	Jan-16	Under Construction	0	113
The Collection*	Highrise/Townhome	Market	466	Dec-16	Approved	0	149
Keauhou Place	Highrise/Loft/Townhome	Market	435	Jul-17	Approved	0	435
404 Ward	Highrise	Affordable/Market	415	N/Av	Approved	375	40
Hale Ka Lae	Highrise	Market	250	N/Av	Approved	0	250
Waimanu**	Highrise	Affordable/Market	153	Apr-16	Proposed	78	75
Tokai**	Highrise	Market	143	May-16	Proposed	0	143
Aloha Kai	Highrise	Market	128	N/Av	Proposed	0	128
1108 Auahi Street	Highrise	Market	300	N/Av	Proposed	0	300
1120 Ala Moana Blvd	Highrise	Market	200	N/Av	Proposed	0	200
		Totals				**453**	**1,833**

*Has been examined as a comparable

**Will be developed by the sponsor

There is a current pipeline of 453 affordable condominium units and 1,833 unrestricted condominium units yet to be sold in the market. We have deducted the pipeline inventory from our condominium demand calculations accordingly.

The following is a summary of the rental developments that are planned, proposed, or under construction in the PMA.

Planned and Proposed Rental Developments

Project Name	Design	Type	Units	Timing	Status
Halekauwila Place	Highrise	Affordable	204	Mar-15	Under Construction
Senior Residence at Piikoi	Highrise	Affordable Senior	160	Dec-15	Under Construction
Waimanu*	Midrise	Market	153	Jan-16	Proposed
Tokai*	Highrise	Market	143	Apr-16	Proposed

*Will be developed by the sponsor

With the exception of the sponsor's Tokai and Waimanu developments, all of the proposed and under construction rental product in the PMA will be affordable and target low to moderate income households. As we have also evaluated the Subject as an unrestricted rental community, we have deducted the sponsor's known proposed units from demand.

CONDOMINIUM HOUSING ANALYSIS

CONDOMINIUM HOUSING ANALYSIS

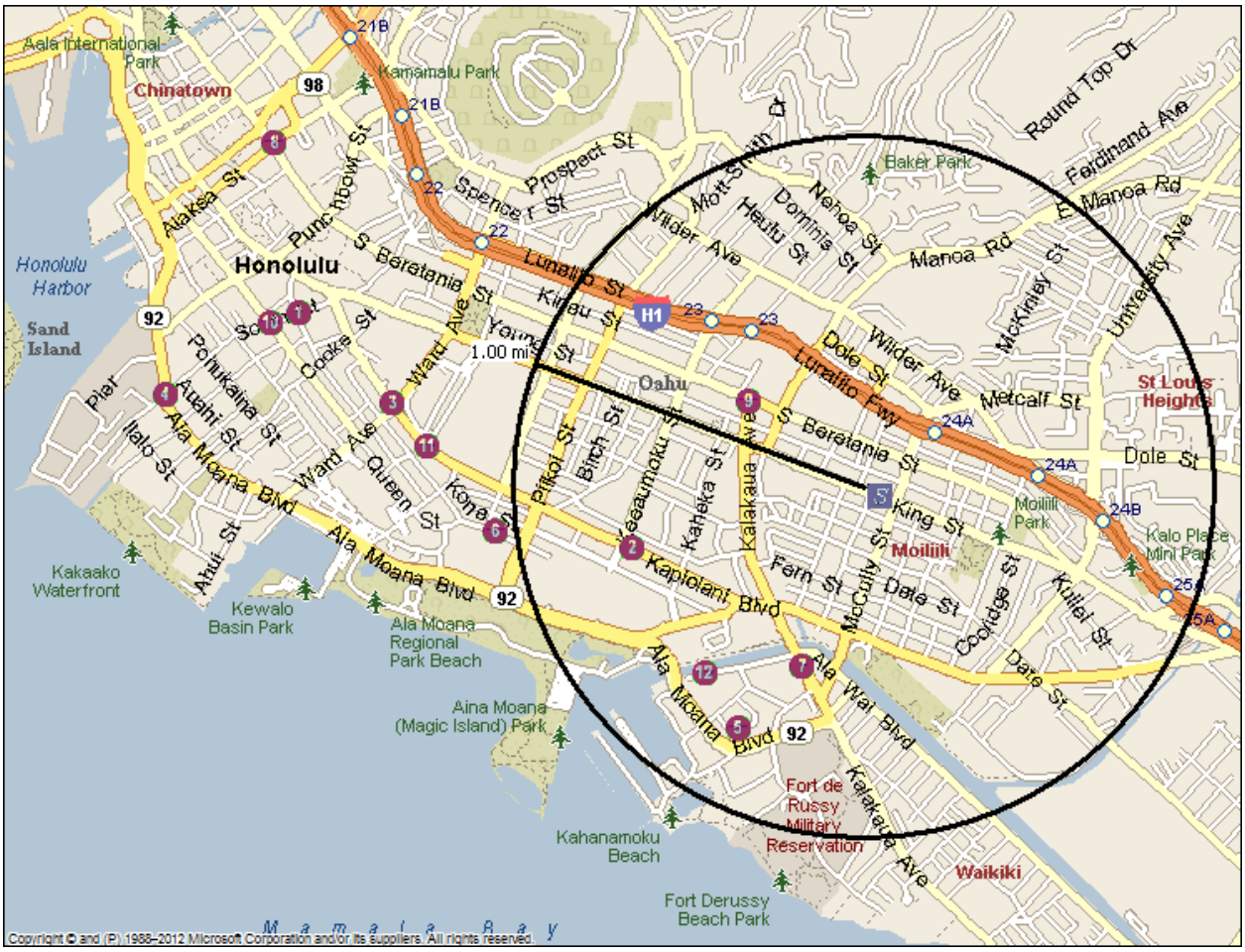
SURVEY OF COMPARABLE PROJECTS

Comparable properties are examined on the basis of physical characteristics, i.e. building type, age/quality, level of common amenities, absorption, as well as similarity in sales price. We attempted to compare the Subject to properties from the competing market to provide a picture of the health and available supply in the market.

Description of Property Types Surveyed

To evaluate the competitive position of the Subject, we performed a field survey of currently active new condominium communities as well as recently completed condominiums. Comparable properties are examined on the basis of physical characteristics, i.e. building type, age/quality, level of common amenities, absorption, as well as similarity in rent. We attempted to compare the Subject to properties from the competing market area to provide a picture of the health and available supply in the market. The following pages include a summary of comparable properties and individual property profiles. A map of the comparables, in relation to the Subject, is included on the following page as well.

Map of Comparable Condominium Properties



COMPARABLE CONDOMINIUM PROPERTIES

Map #	Property Name	Status*	Year Built	Units	Stories	Distance from Subject
1	801 South Street	Active	2015	616	46	2.2 miles
2	One Ala Moana	Active	2014	205	23	0.9 miles
3	Symphony Honolulu	Active	2016	388	45	1.7 miles
4	The Collection	Active	2016	466	43	2.5 miles
5	The Cove Waikiki	Active	2014	117	5	1.2 miles
6	Waihonua	Active	2015	341	43	1.5 miles
7	Allure Waikiki	Completed	2010	291	35	0.7 miles
8	Capitol Place	Completed	2008	384	39	2.4 miles
9	Holomua	Completed	2013	176	23	0.8 miles
10	Keola L'ai	Completed	2008	341	43	2.3 miles
11	Pacifica Honolulu	Completed	2011	492	46	1.6 miles
12	The Watermark	Completed	2008	196	38	0.9 miles

*Active projects are pending construction completion and no closed sales have occurred

Distances are based on drive-path distances

Comparable #1

801 South Street

Status	Active
Location	801 South Street Honolulu, HI 96813 Honolulu County
Units	616
Type	Highrise
Stories	46
Marketing Began	Mar-13
Last Unit Sold	Jun-13
Construction Begins	Jun-13
Construction Completes	Jul-15
Percent Sold	100%
Sales Pace/Month	205
Monthly Maintenance Fee	$0.48 to $0.51 per square foot
Contact Name	Ann Noguchi - Marcus & Associates
Phone	808-224-6226

Unit Mix

Beds	Baths	Units	Size (SF)	Pricing	Pricing Per Square Foot
0	1	88	384	$253,200 to $290,400	$659 to $756
1	1	264	495-522	$325,400 to $381,200	$657 to $730
2	1	44	714	$405,800 to $467,900	$568 to $655
2	1.5	44	776	$394,000 to $482,400	$508 to $622
2	2	176	816	$422,900 to $501,300	$518 to $614

Amenities

In-Unit Amenities	Balcony/patio Carpeting Central A/C Dishwasher Exterior Storage Garbage Disposal Microwave Oven Refrigerator Walk-In Closet Washer/Dryer	**Security**	Limited Access
Property	Elevators Garage Meeting Rooms On-Site Management Off-Street Parking Picnic Area	**Premium**	none
Services	none	**Other**	none

Comments

Maintenance fees are $0.48 to $0.51 per square foot and cover water, sewer, trash, common area maintenance, common area insurance and staff salaries. There is a $500 to $600 per floor premium for studios, $900 to $1,000 per floor premium for one-bedroom, $1,200 to $4,000 per floor premium for two-bedroom units. There is an estimated one percent premium for Diamond Head/ocean view. The property is being offered as workforce housing and the initial sales of units were restricted to families earning 140 percent of the AMI or less. After one year of owner-occupancy, the units may transfer without restriction.

Comparable #2

One Ala Moana

Status	Active
Location	1519 Kapiolani Blvd (Approx) Honolulu, HI 96814 Honolulu County
Units	205
Type	Highrise
Stories	23
Marketing Began	Dec-12
Last Unit Sold	Dec-12
Construction Begins	Apr-13
Construction Completes	Nov-14
Percent Sold	100%
Sales Pace/Month	203
Monthly Maintenance Fee	N/A
Contact Name	Tammie - Heyer & Associates
Phone	808-692-0060

Unit Mix

Beds	Baths	Units	Size (SF)	Pricing	Pricing Per Square Foot
1	1	53	761-877	Starting at $500,000	Starting at $657
2	2	78	1,159-1,278	Not Available	Not Available
2.5	2.5	25	1461	Not Available	Not Available
3	2.5	3	1952	Not Available	Not Available
3	3	42	1791	Not Available	Not Available
3	3.5	4	3,669-4,069	Starting at $9,000,000	Starting at $2,500

Amenities

In-Unit Amenities		**Security**	Limited Access
	Carpeting		Security Patrol
	Central A/C		Video Surveillance
	Dishwasher		
	Exterior Storage		
	Garbage Disposal		
	Microwave		
	Oven		
	Refrigerator		
	Walk-In Closet		
	Washer/Dryer		
Property	Business Center	**Premium**	none
	Clubhouse		
	Courtyard		
	Elevators		
	Garage		
	Jacuzzi		
	Meeting Rooms		
	On-Site Management		
	Off-Street Parking		
	Picnic Area		
	Playground		
	Recreation Area		
	Swimming Pool		
	Theatre		
Services	none	**Other**	none

Comments

Maintenance fees were not disclosed. The property was fully pre-sold on the opening day. According to the broker, there is a premium for Diamond Head views; however, no estimate was provided.

Comparable #3

Symphony Honolulu

Status	Active
Location	888 Kapiolani Blvd Honolulu, HI 96814 Honolulu County
Units	388
Type	Highrise
Stories	45
Marketing Began	Jun-13
Last Unit Sold	N/A
Construction Begins	Nov-13
Construction Completes	Jan-16
Percent Sold	71%
Sales Pace/Month	55
Monthly Maintenance Fee	$0.66 per square foot
Contact Name	Reid - Inspiration at HDC
Phone	808-596-8688

Unit Mix

Beds	Baths	Units	Size (SF)	Pricing	Pricing Per Square Foot
1	1	52	672	Starting at $530,000	Starting at $788
2	2	241	922-1,724	Starting at $650,000	Starting at $705
3	2	90	1,454-1,520	Starting at $880,000	Starting at $605
3	3	3	1,621-1,781	Not Available	Not Available
3	3.5	2	2,053	$1,600,000	Starting at $779

Amenities

In-Unit Amenities	Balcony/patio Carpeting Central A/C Dishwasher Exterior Storage Garbage Disposal Microwave Oven Refrigerator Walk-In Closet Washer/Dryer	**Security**	Limited Access Security Patrol Video Surveillance
Property	Business Center Clubhouse Courtyard Elevators Garage Jacuzzi Meeting Rooms On-Site Management Off-Street Parking Picnic Area Swimming Pool	**Premium**	none
Services	none	**Other**	none

Comments

Maintenance fees are $0.66 per square foot and cover water, sewer, trash, cable, internet, common area maintenance, common area insurance and staff salaries. One-hundred units are reserved for owner occupants who earn $108,000 or less as a single person, or $120,000 or less as a two-person household (corresponding with approximately 150% AMI). There is a floor premium of approximately $5,700, or approximately one percent, per floor. According to the contact, a Diamond Head view (approximately 15 percent premium) is most expensive, and ocean (approximately 10 percent premium), mountain and ewa views (both similarly priced) are progressively less expensive. An estimated 70 percent of buyers are from the Honolulu area, with remaining buyers from the United State mainland and Asia. An estimated 75 percent of buyers are current homeowners and 25 percent are current renters.

Comparable #4

The Collection

Status	Active
Location	600 Ala Moana Boulevard Honolulu, HI 96813 Honolulu County
Units	466
Type	Highrise
Stories	43
Marketing Began	Aug-13
Last Unit Sold	N/A
Construction Begins	Jun-14
Construction Completes	Dec-16
Percent Sold	53%
Sales Pace/Month	83
Monthly Maintenance Fee	$0.83 per square foot
Contact Name	Rosilia - Heyer & Associates
Phone	808-548-0260

Unit Mix

Beds	Baths	Units	Size (SF)	Pricing	Pricing Per Square Foot
1	1	86	579-700	High $300,000's to low $500,000's	$650 to $750
2	2	236	870-959	Mid $500,000's to high $800,000's	$650 to $900
3	2	75	1,133-1,217	Mid $700,000's to high $900,000's	$650 to $800

Amenities

In-Unit Amenities		**Security**	Limited Access
	Carpeting Central A/C Dishwasher Exterior Storage Garbage Disposal Microwave Oven Refrigerator Walk-In Closet Washer/Dryer		
Property	Clubhouse Elevators Exercise Facility Meeting Rooms On-Site Management Off-street Parking Picnic Area Playground Swimming Pool	**Premium**	none
Services	none	**Other**	none

Comments

Maintenance fees are $0.83 per sqare foot plus $61 per unit ($46 for cable and internet, $15 for Kaka'ako Assocition Fee). The maintenance fees cover water, sewer, trash, common area maintenance, building operations and insurance on the structure. There is a floor premium of approximately 1% per floor; additionally, the Diamond Head/ocean view side of the building has an extra premium of approximately 1% per floor. One-bedroom units are provided with one parking space and a storage locker, while two and three-bedroom units are provided with two parking spaces and a storage locker.

Comparable #5

The Cove Waikiki

Status	Active
Location	1800 Kaioo Drive Honolulu, HI 96815 Honolulu County
Units	117
Type	Midrise
Stories	5
Marketing Began	Nov-11
Last Unit Sold	Jan-12
Construction Begins	Aug-13
Construction Completes	Jul-14
Percent Sold	100%
Sales Pace/Month	59
Monthly Maintenance Fee	N/A
Contact Name	Caldwell Banker
Phone	808.943.0770

Unit Mix

Beds	Baths	Units	Size (SF)	Pricing	Pricing Per Square Foot
1	1	27	561-704	$370,360 to $489,360	$660 to $695
2	1	16	787-925	$455,290 to $518,925	$561 to $579
2	2	74	820-854	$483,830 to $491,755	$575 to $590

Amenities

In-Unit Amenities	Balcony/patio Dishwasher Garbage Disposal Microwave Oven Refrigerator Walk-In Closet Wall A/C Washer/Dryer	**Security**	Limited Access
Property	Garage Courtyard Elevators On-Site Management Off-Street Parking Picnic Area Swimming Pool	**Premium**	none
Services	none	**Other**	none

Comments

The property features three mid-rise buildings in an urban neighborhood. Maintenance fees are approximately $0.64 per square foot and cover water, sewer, trash, common area insurance and operation costs.

Comparable #6

Waihonua

Status	Active
Location	1223 Waimanu Street (Approx) Honolulu, HI 96814 Honolulu County
Units	341
Type	Highrise
Stories	43
Marketing Began	Dec-11
Last Unit Sold	Apr-12
Construction Begins	Dec-12
Construction Completes	May-15
Percent Sold	100%
Sales Pace/Month	85
Monthly Maintenance Fee	N/A
Contact Name	Lauren Robbin
Phone	808-284-2980

Unit Mix

Beds	Baths	Units	Size (SF)	Pricing	Price per Square Foot
1	1	78	645-647	Starting at $400,000	Starting at $620
2	2	182	940-1,214	Starting at $565,000	Starting at $601
3	2	75	1,227-1,935	Starting at $720,000	Starting at $587
3	2.5	3	2,015	Not Available	Not Available
3	3	3	1,649	Not Available	Not Available

Amenities

In-Unit Amenities		**Security**	Limited Access
	Carpeting Central A/C Dishwasher Exterior Storage Garbage Disposal Microwave Oven Refrigerator Walk-In Closet Washer/Dryer		
Property	Clubhouse Courtyard Garage Elevators Exercise Facility Meeting Rooms On-Site Management Off-Street Parking Picnic Area Swimming Pool	**Premium**	none
Services	none	**Other**	none

Comments

Maintenance fees were not disclosed, but will cover water, sewer, trash, basic cable, internet, operating expenses and common area insurance. According to the project's Sales Manager, approximately 50 percent of buyers are local buyers, 20 percent are from the mainland, 15 percent are from Japan, 10 percent are from China, and five percent are from Canada, Korea, or elsewhere. Additionally, an estimated 80 percent of buyers are current homeowners and 20 percent are moving from rental units. Sales staff would not disclose premiums for views or floors.

Comparable #7

Allure Waikiki

Status	Completed
Location	1837 Kalakaua Avenue Honolulu, HI 96815 Honolulu County
Units	291
Type	Highrise
Stories	35
Year Built / Renovated	2010
Presale Period	N/Av
First Unit Closed	May-10
Last Unit Closed	Oct-11
Average Monthly Absorption	17 units
Major Competitors	The Watermark
Tenant Characteristics	Not Identified
Contact Name	Lauren - Intracorp
Phone	949-955-2370

Unit Mix

Beds	Baths	Units	Size (SF)	Average Initial Price	Average Initial Price per Square Foot	Average 2013 Resale Price	Average 2013 Resale Price per Square Foot	Monthly Maintenance Fee	Monthly Maintenance fee per Square Foot
1	1.5	9	833	$539,204	$647	N/A	N/A	$625	$0.75
2	2	26	951	$571,896	$601	N/A	N/A	$713	$0.75
2	2	16	1,009	$553,862	$549	N/A	N/A	$757	$0.75
2	2	18	1,049	$717,021	$684	N/A	N/A	$787	$0.75
2	2	60	1,057	$638,376	$604	$955,920	$904	$793	$0.75
2	2	30	1,102	$606,507	$550	$905,933	$822	$827	$0.75
2	2	19	1,113	$624,128	$561	$972,500	$874	$845	$0.76
2	2	29	1,216	$633,667	$521	$1,088,050	$895	$923	$0.76
2	2	30	1,234	$697,207	$565	$1,260,440	$1,021	$936	$0.76
2	2	30	1,381	$714,486	$517	$1,013,075	$734	$1,050	$0.76
3	2	11	1,409	$799,121	$567	$1,138,267	$808	$1,077	$0.76
3	2	12	1,633	$947,768	$580	$1,468,700	$899	$1,240	$0.76
3	2	1	1,837	$696,003	$379	N/A	N/A	$1,396	$0.76

Resale Values

According to public records, 178 units have resold to date. On average, the resale prices by unit type range from 18.5 to 81.1 percent higher than the initial sale, with an average increase of 46.1 percent.

Amenities

In-Unit Amenities:

- Balcony/Patio
- Blinds
- Central A/C
- Coat Closet
- Dishwasher
- Ceiling Fan
- Garbage Disposal
- Microwave
- Oven
- Refrigerator
- Walk-In Closet
- Washer/Dryer
- Washer/Dryer Hook-Ups

Security:

- Limited Access

Community Amenities:

- Clubhouse
- Courtyard
- Elevators
- Exercise Facility
- Garage
- Jacuzzi
- Meeting Rooms
- Off-Street Parking
- On-Site Management
- Picnic Area
- Recreation Area
- Sauna
- Swimming Pool

Services:

- None

Comments

According the the property manager, the building is approximately 60 percent owner-occupied. The maintenance fees are approximataly $0.75 per square foot and cover water, sewer, trash, basic cable and internet and the association's insurance and operation costs.

Comparable #8

Capitol Place

Status	Completed
Location	1200 Queen Emma Street Honolulu, HI 69813 Honolulu County
Units	384
Type	Highrise
Stories	39
Year Built / Renovated	2008
Presale Period	N/Av
First Unit Closed	Feb-08
Last Unit Closed	Dec-09
Average Monthly Absorption	18 units per month
Major Competitors	Not identified
Tenant Characteristics	Not identified
Contact Name	Kevin Cole - Hawaiiana
Phone	808-593-6369

Unit Mix

Beds	Baths	Units	Size (SF)	Average Initial Price	Average Initial Price per Square Foot	Average 2013 Resale Price	Average 2013 Resale Price per Square Foot	Monthly Maintenance Fee	Monthly Maintenance Fee Per Square Foot
1	1	53	633	$418,293	$661	$505,000	$798	$475	$0.75
1	1	12	729	$559,281	$767	$580,000	$796	$547	$0.75
1	1	6	1,024	$649,242	$634	N/A	N/A	$768	$0.75
2	1	27	805	$507,083	$630	$533,000	$662	$604	$0.75
2	1	27	857	$541,772	$632	$599,000	$699	$643	$0.75
2	1	6	963	$623,537	$647	$725,000	$753	$722	$0.75
2	2	26	1,034	$690,949	$668	$740,000	$716	$776	$0.75
2	2	26	1,040	$699,454	$673	$730,000	$702	$780	$0.75
2	2	54	1,049	$640,446	$611	$683,750	$652	$787	$0.75
2	2	27	1,085	$622,158	$573	$655,000	$604	$814	$0.75
2	2	6	1,103	$656,925	$596	$735,000	$666	$827	$0.75
2	2	6	1,203	$856,417	$712	$897,000	$746	$902	$0.75
2	2	6	1,215	$845,992	$696	$896,500	$738	$911	$0.75
2	2	12	1,268	$810,419	$639	$875,000	$690	$951	$0.75
3	2	27	1,253	$807,047	$644	$832,633	$665	$940	$0.75
3	2	27	1,292	$842,639	$652	$700,000	$542	$969	$0.75
3	2	27	1,292	$822,454	$637	$928,000	$718	$969	$0.75
3	2	6	1,417	$1,004,058	$709	$1,100,000	$776	$1,063	$0.75
3	2	6	1,457	$1,067,867	$733	$1,238,000	$850	$1,093	$0.75
3	2	6	1,493	$1,043,125	$699	N/A	N/A	$1,120	$0.75

Resale Values

According to public records, 176 units have resold to date. On average, the resale prices by unit type are 3.3 percent lower to 18.6 percent higher than the initial sale, with an average price increase of 5.2 percent.

Amenities

In-Unit Amenities:

- Balcony/Patio
- Blinds
- Carpet
- Central A/C
- Coat Closet
- Dishwasher
- Ceiling Fan
- Garbage Disposal
- Microwave
- Oven
- Refrigerator
- Walk-In Closet
- Washer/Dryer
- Washer/Dryer Hook-Ups

Security:

- Limited Access
- Patrol

Community Amenities:

- Business Center
- Clubhouse
- Courtyard
- Elevators
- Exercise Facility
- Exterior Storage
- Garage
- Jacuzzi
- Meeting Rooms
- Off-Street Parking
- On-Site Management
- Picnic Area
- Playground
- Swimming Pool
- Theatre

Services:

- None

Comments

Maintenance fees are approximately $0.75 per square foot, which covers water, sewer, trash, common area insurance and operation costs.

Comparable #9

Holomua

Status	Completed
Location	1315 Kalakaua Avenue Honolulu, HI 96826 Honolulu County"
Units	176
Type	Highrise
Stories	23
Year Built / Renovated	2013
Presale Period	June 2009 to August 2009
First Unit Closed	N/A
Last Unit Closed	N/A
Average Monthly Absorption	88 units presold per month
Major Competitors	Capitol Place, Pacifica
Tenant Characteristics	Not Identified
Contact Name	Barry
Phone	808-864-1500

Unit Mix (face rent)

Beds	Baths	Units	Size (SF)	Average Initial Price (Market Rate Units)	Market Rate Price/SF	Average Initial Price (Affordable Units)	Affordable Price/SF
1	1	N/A	354-619	$320,100 to 364,100	$588 to $904	$239,900 to $332,700	$537 to $678
2	1	N/A	705	$386,300 to $435,800	$548 to $618	$336,000 to $393,400	$477 to $558
2	2	N/A	752-790	$421,800 to $467,700	$561 to $592	$334,700 to $391,200	$445 to $495

Resale Values

None recorded.

Amenities

In-Unit Amenities:

- Balcony/patio
- Carpeting
- Dishwasher
- Garbage Disposal
- Microwave
- Oven
- Refrigerator
- Walk-In Closet
- Wall A/C
- Washer/Dryer

Security:

- Limited Access
- Security Patrol
- Video Surveillance

Community Amenities:

- Business Center
- Clubhouse
- Courtyard
- Elevators
- Garage
- Meeting Rooms
- On-Site Management
- Off-Street Parking
- Meeting Rooms

Services:

- None

Comments

The property opened in July 2013; however, no closed sales activity has been recorded by the assessor. Maintenance fees range from $186 to $397 depending on unit size and cover water, sewer, trash and common area manintenance and insurance. Of the 114 units, 90 units are restricted to owner-occupants who earn less than 140 percent of AMI. There was an approximate $1,000 per floor premium. It was explained that there were no view premiums; however, market rate units were provided ocean views, while affordable units were provided mountain views.

Comparable #10

Keola L'ai

Status	Completed
Location	600 Queen Street Honolulu, HI 96813 Honolulu County
Units	341
Type	Highrise
Stories	43
Year Built / Renovated	2008
Presale Period	N/Av
First Unit Closed	Jan-08
Last Unit Closed	Apr-09
Average Monthly Absorption	21 to 22 units per month
Major Competitors	Capitol Place, Pacifica
Tenant Characteristics	Not Identified
Contact Name	Mary
Phone	(808) 524-0600

Unit Mix (face rent)

Beds	Baths	Units	Size (SF)	Average Initial Price	Average Initial Price per Square Foot	Average 2013 Resale Price	Average 2013 Resale Price per Square Foot	Monthly Maintenance Fee	Monthly Maintenance Fee Per Square Foot
1	1	30	673	$464,538	$690	$507,500	$754	$451	$0.67
1	1	30	686	$417,023	$608	$517,500	$754	$460	$0.67
2	1	5	780	$344,086	$441	$510,000	$654	$585	$0.75
2	1	5	785	$344,086	$438	N/A	N/A	$589	$0.75
2	1	10	876	$354,086	$404	N/A	N/A	$657	$0.75
2	1	10	881	$354,086	$402	N/A	N/A	$661	$0.75
2	2	30	934	$498,552	$534	$625,000	$669	$701	$0.75
2	2	31	953	$573,600	$602	$628,250	$659	$715	$0.75
2	2	31	993	$703,185	$708	$695,000	$700	$745	$0.75
2	2	91	1,022	$712,856	$698	$690,500	$676	$767	$0.75
2	2	29	1,045	$568,172	$544	$617,500	$591	$784	$0.75
2	2	2	2,235	$1,880,000	$841	N/A	N/A	$1,676	$0.75
2	2	37	1,402	$977,700	$697	$955,167	$681	$1,052	$0.75

Resale Values

According to public records, 176 units have resold to date. On average, the resale prices by unit type are 2.6 percent lower to 50.0 percent higher than the initial sale, with an average price increase of 17.1 percent.

Amenities

In-Unit Amenities:

- Balcony/Patio
- Blinds
- Carpet
- Central A/C
- Coat Closet
- Dishwasher
- Ceiling Fan
- Garbage Disposal
- Microwave
- Oven
- Refrigerator
- Walk-In Closet
- Washer/Dryer
- Washer/Dryer Hook-Ups

Security:

- Limited Access
- Patrol

Community Amenities:

- Clubhouse
- Courtyard
- Elevators
- Exercise Facility
- Exterior Storage
- Garage
- Jacuzzi
- Meeting Rooms
- Off-Street Parking
- On-Site Management
- Picnic Area
- Swimming Pool

Services:

- None

Comments

Maintenance fees range from $0.67 to $0.75 per square foot and cover water, sewer, trash, broadband internet, and common area insurance and operation costs.

Comparable #11

Pacifica Honolulu

Status	Completed
Location	1009 Kapiolani Blvd Honolulu, HI 96814 Honolulu County
Units	492
Type	Highrise
Stories	46
Year Built / Renovated	2011
Presale Period	April-09
First Unit Closed	Aug-11
Last Unit Closed	Aug-12
Average Monthly Absorption	41 units per month
Major Competitors	Not Identified
Tenant Characteristics	Not Identified
Contact Name	Ryan - Pacifica Honolulu
Phone	808-591-9222

Unit Mix

Beds	Baths	Units	Size (SF)	Average Initial Price	Average Initial Price per Square Foot	Average 2013 Resale Price	Average 2013 Resale Price per Square Foot	Monthly Maintenance Fee	Monthly Maintenance fee per Square Foot
1	1	18	661	$466,343	$706	N/A	N/A	$430	0.65
1	1	21	663	$470,636	$710	$535,000	$807	$431	0.65
1	1	30	732	$448,508	$613	N/A	N/A	$476	0.65
2	2	74	728	$433,834	$596	$625,000	$859	$473	0.65
2	2	82	747	$451,218	$604	N/A	N/A	$486	0.65
2	2	35	798	$485,921	$609	$640,000	$802	$519	0.65
2	2	75	899	$521,959	$581	$696,333	$775	$584	0.65
2	2	33	986	$556,508	$564	N/A	N/A	$641	0.65
2	2	5	993	$663,422	$668	N/A	N/A	$645	0.65
2	2	40	1,033	$547,300	$530	N/A	N/A	$671	0.65
2	2	26	1,056	$600,711	$569	$769,000	$728	$686	0.65
2	2	20	1,130	$711,383	$630	$860,000	$761	$735	0.65
2	2	6	1,268	$667,575	$526	N/A	N/A	$824	0.65
3	3	18	1,391	$741,326	$533	N/A	N/A	$904	0.65
3	3	3	1,521	$958,787	$630	N/A	N/A	$989	0.65
3	3	1	1,740	$1,525,760	$877	N/A	N/A	$1,131	0.65
3	3	2	1,811	$1,462,334	$807	N/A	N/A	$1,177	0.65

Resale Values

According to public records, 32 units have resold to date. On average, the resale prices by unit type are 15.2 to 24.7 percent higher than the initial sale, with an average price increase of 18.2 percent.

Amenities

In-Unit Amenities:

- Balcony/Patio
- Blinds
- Central A/C
- Coat Closet
- Dishwasher
- Ceiling Fan
- Garbage Disposal
- Microwave
- Oven
- Refrigerator
- Walk-In Closet
- Washer/Dryer
- Washer/Dryer Hook-Ups

Security:

- Limited Access

Community Amenities:

- Clubhouse
- Courtyard
- Elevators
- Exercise Facility
- Garage
- Jacuzzi
- Meeting Rooms
- Off-Street Parking
- On-Site Management
- Picnic Area
- Recreation Area
- Sauna
- Swimming Pool
- Theatre

Services:

- None

Comments

The maintenance fees for this property are $0.65 per square foot and cover water, sewer, trash, basic cable and the association's insurance and operation costs.

Comparable #12

The Watermark

Status	Completed
Location	1551 Ala Wai Blvd Honolulu, HI 96815 Honolulu County
Units	196
Type	Highrise
Stories	38
Year Built / Renovated	2008
Presale Period	April-09 to Dec-09
First Unit Closed	May-07
Last Unit Closed	Jun-09
Average Monthly Absorption	8 units per month
Major Competitors	Not Identified
Tenant Characteristics	Not Identified
Contact Name	Robin Markell
Phone	808-735-4200

Unit Mix (face rent)

Beds	Baths	Units	Size (SF)	Average Initial Price	Average Initial Price per Square Foot	Average 2013 Resale Price	Average 2013 Resale Price per Square Foot	Monthly Maintenance Fee	Monthly Maintenance Fee Per Square Foot
2	2	16	1,081	$989,298	$915	$770,000	$712	$973	$0.90
2	2	71	1,112	$1,117,001	$1,004	$1,022,917	$920	$1,001	$0.90
2	2	36	1,113	$1,106,665	$994	$1,078,750	$969	$1,002	$0.90
2	2	16	1,118	$930,584	$832	N/A	N/A	$1,006	$0.90
2	2	36	1,196	$1,172,841	$981	$1,259,000	$1,053	$1,076	$0.90
2	2	2	1,269	$1,628,298	$1,283	N/A	N/A	$1,142	$0.90
2	2	1	1,873	$2,937,000	$1,568	N/A	N/A	$1,686	$0.90
3	2	1	2,280	$2,900,000	$1,272	N/A	N/A	$2,052	$0.90
3	3	1	1,275	$2,136,650	$1,676	N/A	N/A	$1,148	$0.90
3	3	16	2,198	$2,118,023	$964	$2,720,000	$1,237	$1,978	$0.90

Resale Values

According to public records, 74 units have resold to date. On average, the resale prices by unit type are 13.2 percent lower to 4.3 percent higher than the initial sale, with an average price decrease of 5.6 percent. The property manager was unable to comment on this trend.

Amenities

In-Unit Amenities:

- Balcony/Patio
- Blinds
- Central A/C
- Coat Closet
- Dishwasher
- Ceiling Fan
- Garbage Disposal
- Microwave
- Oven
- Refrigerator
- Walk-In Closet
- Washer/Dryer
- Washer/Dryer Hook-Ups

Security:

- Limited Access

Community Amenities:

- Business Center
- Clubhouse
- Courtyard
- Elevators
- Exercise Facility
- Exterior Storage
- Garage
- Jacuzzi
- Meeting Rooms
- Off-Street Parking
- On-Site Management
- Picnic Area
- Recreation Area
- Sauna
- Swimming Pool
- Theatre

Services:

- None

Comments

The property is approximately 80 percent owner/occupied. The contact could not provide any detail as to the origin of the original buyers. The maintenance fees are approximately $0.90 per square foot and covers water, sewer, trash, basic cable and the association's insurance and operation costs.

PROPERTY CHARACTERISTICS

Following are relevant characteristics of comparable properties surveyed:

Location

The Subject is located in a generally average neighborhood in Honolulu with good access to amenities and employment. All of the condominium comparables are located in Honolulu, within 2.5 miles of the Subject. According to walkscore.com, the Subject has a walkscore of 83, Very Walkable, meaning that most errands can be accomplished on foot. The following table illustrates the walkscores of the comparable properties.

WALKSCORE

Property	Walkscore	Description
Ohana Hale (Subject)	83	Very Walkable
801 Street	86	Very Walkable
One Ala Moana	92	Walker's Paradise
Symphony Honolulu	89	Very Walkable
The Collection	89	Very Walkable
The Cove Waikiki	78	Very Walkable
Waihonua	91	Walker's Paradise
Allure Waikiki	86	Very Walkable
Capitol Place	98	Walker's Paradise
Holomua	86	Very Walkable
Keola L'ai	88	Very Walkable
Pacifica Honolulu	89	Very Walkable
The Watermark	83	Very Walkable

Source: walkscore.com

Generally, all of the comparables are located in very walkable neighborhoods, similar to the Subject. However, all of the comparables are located within neighborhoods with slightly superior to superior condition improvements. In terms of locational value, The Cove Waikiki, Allure Waikiki, and The Watermark have generally superior locations on Waikiki, while the remaining comparables have slightly superior locations.

Size, Age and Condition

The Subject will offer 180 units in a 20-story high-rise structure to be completed in 2016. The comparables range in size from 117 to 616 units, with an average of 334 units. In terms of size, the Subject is below the average of the comparables yet appears reasonable.

The completed comparables were constructed between 2008 and 2013, and are considered to be in excellent condition. The Subject will be generally similar to the active and completed comparables with respect to age and condition.

Unit Size
The following table illustrates the unit sizes of the Subject and the comparable properties.

UNIT SIZE COMPARISON

Unit Type	Subject	Surveyed Min	Surveyed Max	Surveyed Average	Advantage/ Disadvantage
Studio	335 - 387	313	384	384	-13% to 1%
1 BR	454 - 498	487	1,024	605	-25% to -18%
2 BR	986 - 1,082	705	2,235	1,005	-2% to -8%

As the table illustrates, the Subject's unit sizes are within or slightly below the range of the comparables. All of the Subject's proposed unit sizes are generally below the surveyed averages. We have considered the Subject's unit sizes in our achievable for-sale pricing.

Number of Baths
The Subject will offer one full bath all unit types. All comparables with studio units offer one full bath. Eleven of the 12 comparables offer one bath in one-bedroom units and five offer one bath in two-bedroom units. We believe that the proposed number of baths is market-oriented.

Amenities, Security, and Parking Comparison
A detailed description of amenities included in both the Subject properties and the comparable properties can be found in the amenity matrice following.

UNIT MATRIX REPORT

	Ohana Hale	801 South Street	One Ala Moana	Symphony Honolulu	The Collection	The Cove Waikiki	Waihonua	Allure Waikiki	Capitol Place	Holomua	Keola L'ai	Pacifica Honolulu	The Watermark
Comp #	Subject	1	2	3	4	5	6	7	8	9	10	11	12
Property Information													
Property Type	Highrise (25 stories)	Highrise (46 Stories)	Highrise (23 Stories)	Highrise (45 Stories)	Highrise (43 Stories)	Midrise (5 Stories)	Highrise (43 Stories)	Highrise (35 Stories)	Highrise (39 stories)	Highrise (23 stories)	Highrise (43 Stories)	Highrise (46 stories)	Highrise (38 Stories)
Year Built / Renovated	2016 / n/a	2015/ n/a	2014/ n/a	2016/ n/a	2016/ n/a	2014/ n/a	2015/ n/a	2010 / n/a	2008 / n/a	2013 n/a	2008 / n/a	2011 / n/a	2008/ n/a
Market (Conv.)/Subsidy Type	Market	Market	Market	Market	Market	Market	Market	Market	Market	Market	Market	Market	Market
In-Unit Amenities													
Balcony/Patio	no	yes	yes	yes	no	yes	no	yes	yes	yes	yes	yes	yes
Blinds	yes	no	no	no	no	no	no	yes	yes	no	yes	yes	yes
Carpeting	no	yes	yes	yes	yes	no	yes	no	yes	yes	yes	no	no
Central A/C	yes	yes	yes	yes	yes	no	yes	yes	yes	no	yes	yes	yes
Coat Closet	no	no	no	no	no	no	no	yes	yes	no	yes	yes	yes
Dishwasher	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Exterior Storage	no	yes	yes	yes	yes	no	yes	no	no	no	no	no	yes
Ceiling Fan	no	no	no	no	no	no	no	yes	yes	no	yes	yes	yes
Garbage Disposal	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Microwave	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Oven	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Refrigerator	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Walk-In Closet	no	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Wall A/C	no	no	no	no	no	yes	no	no	no	yes	no	no	no
Washer/Dryer	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Washer/Dryer hookup	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Property Amenities													
Business Center/Computer Lab	no	no	yes	yes	no	no	no	no	yes	yes	no	no	yes
Clubhouse/Meeting Room/Community Room	no	yes	no	yes	yes	no	yes	yes	yes	yes	yes	yes	yes
Courtyard	no	no	yes	yes	no	yes	yes	yes	yes	yes	yes	yes	yes
Elevators	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Exercise Facility	no	no	no	no	yes	no	yes	yes	yes	no	yes	yes	yes
Garage	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Jacuzzi	no	no	yes	yes	no	no	no	yes	yes	no	yes	yes	yes
Off-Street Parking	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
On-Site Management	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Picnic Area	no	yes	yes	yes	yes	yes	yes	yes	yes	no	yes	yes	yes
Playground	no	no	yes	no	yes	no	no	no	yes	no	no	no	no
Recreation Areas	no	no	yes	no	no	no	no	yes	yes	no	no	yes	yes
Sauna	no	no	no	no	no	no	no	yes	yes	no	no	yes	yes
Swimming Pool	no	no	yes	yes	yes	yes	yes	yes	yes	no	yes	yes	yes
Theatre	no	no	yes	no	no	no	no	no	no	no	yes	no	yes
Security													
Patrol	no	no	yes	yes	no	no	no	no	yes	yes	no	no	no
Video Surveillance	no	no	yes	yes	no	no	no	no	no	yes	no	no	no

As the previous table illustrates, the Subject will offer a slightly inferior in-unit amenities package in comparison to all of the comparables. The majority of the in-unit amenities that will be offered at the Subject are offered at all of the comparables, with the exception of blinds, central a/c, and in-unit alarms. In contrast, the Subject will not offer walk-in closets, which are found at all of the comparables; balconies/patios, which are found at ten of the comparables; coat closets, which are found at five of the comparables; or ceiling fans, which are found at five of the comparable properties.

The Subject will offer a slightly inferior common area amenities package in comparison to the comparable properties. The majority of the common area amenities that will be offered at the Subject are offered at all of the comparables. The Subject will not offer a clubhouse/meeting room, which is offered at ten of the comparables; a swimming pool, which is offered at ten of the comparables; an exercise facility, which is offered at seven of the comparables; or a Jacuzzi, which is offered at seven of the comparables. Additionally, five of the comparables offer a business center, four offer a sauna, three offer a theatre, and three offer a playground. The Subject is considered slightly inferior overall in terms of amenities.

Parking will be included in the purchase price for the condominium concept, similar to all of the comparables. The Subject will offer 197 garage parking spaces, which equates to a total of 1.1 space per unit. The proposed on-site parking is deemed reasonable given the proposed unit mix and the Subject's urban location within close proximity to public transportation and employment nodes.

Maintenance Fees

All of the comparable condominium units operate as a condominium owner's association and owners are assessed maintenance fees to cover the association's shared expenses. All of the maintenance fees of the comparable properties include water, sewer and trash for the residential units, and all utilities, operating expenses and insurance of common areas. Some of the comparable maintenance fees also include broadband internet and cable. These fees are commonly charged on a per-square-foot basis, and may also include a flat fee for membership dues. Due to the fact that maintenance fees vary based on level of service, operating expenses, building design, and utility consumption, comparisons are difficult. The comparables indicated maintenance fees ranging from $0.48 to $0.83 per square foot. The following table illustrates the maintenance fees and amenities offered by the comparables.

MAINTENANCE FEES

Property Name	Location	Year Built	Stories	Amenities	Maintenance Fees
Ohana Hale (Subject)	**Honolulu**	**2016**	**25**	**Elevators, Garage, On-site Management, Picnic Area, Recreation Areas**	**$0.50 per square foot (Novoco estimate)**
801 South Street	Honolulu	2015	46	Elevators, Garage, Meeting Rooms, On-site Management, Picnic Area	$0.48 to $0.51 per square foot
The Cove Waikiki	Honolulu	2014	5	Elevators, Garage, On-site Management, Swimming Pool, Courtyard	$0.64 per square foot
Keola L'ai	Honolulu	2008	43	Clubhouse, Elevators, Garage, Exercise Room, On-site Management, Meeting Rooms, Swimming Pool, Jacuzzi, Picnic Area, Cable, Broadband Internet	$0.67 to $0.75 per squre foot
Capitol Place	Honolulu	2008	39	Clubhouse, Elevators, Garage, Exercise Room, On-site Management, Meeting Rooms, Swimming Pool, Jacuzzi, Picnic Area, Theatre	$0.75 per square foot
Symphony Honolulu	Honolulu	2016	45	Business Center, Clubhouse, Elevators, Garage, Jacuzzi, On-Site Management, Swimming Pool	$0.66 per square foot
The Collection	Honolulu	2016	83	Clubhouse, Elevators, Garage, Meeting Rooms, On-site Management, Picnic Area, Playground, Swimming Pool, Cable, Broadband Internet	$0.83 per square foot
Allure Waikiki	Honolulu	2010	35	Clubhouse, Elevators, Garage, Exercise Room, On-site Management, Meeting Rooms, Picnic Area, Recreation Area, Swimming Pool, Jacuzzi, Cable, Broadband Internet	$0.75 per square foot

We anticipate lower operating expenses due to the fact that the Subject offers fewer amenities and is significantly smaller. A property that is currently in the pre-construction phase, 801 South Street, has indicated that maintenance fees will range from $0.39 to $0.50 per square foot. The property offers similar amenities compared with the Subject; therefore, we believe a maintenance fee of $0.50 per square foot is reasonable.

MAINTENANCE FEES

Unit Type	Unit Size (SF)	Maintenance Fee Per Square Foot	Monthly Maintenance Fee
Studio	335 - 387	$0.50	$168 to $194
1 BR	454 - 498	$0.50	$227 to $249
2 BR	986 - 1,082	$0.50	$493 to $541

Premium Pricing

The following table summarizes the floor and view premiums at the active comparables.

FLOOR/VIEW PREMIUMS

Property Name	Floor Premium	View Premium
801 South Street	$600 to $4,000 per floor	1% Diamond Head View
One Ala Moana	None	Yes, unable to estimate
Symphony Honolulu	Approx. 1% per floor	15% Diamond Head, 10% Ocean
The Collection	Approx. 1% per floor	1% Diamond Head View
The Cove Waikiki	None	None
Waihonua	Yes, unable to estimate	Yes, unable to provide

Condominium units within the PMA exhibit premium pricing by floor level and view. Generally, the price increases by floor and units facing Diamond Head achieve the highest premium. Four of five active high-rise comparables reported floor premiums, with an approximate one percent premium per floor reported as typical. All of the high-rise comparables reported view premiums, with Diamond Head views having the highest premium generally ranging from one to 15 percent. Based on the floor and view premiums being achieved at the comparables, as well as considering the Subject's building design and location, we estimate a floor premium of one percent and a Diamond Head view premium of an additional one percent.

MARKET CHARACTERISTICS

Following are relevant market characteristics for comparable properties surveyed.

Absorption

The following table illustrates the absorption rate at the comparable condominium properties that are fully absorbed.

ABSORPTION - CLOSED SALES

Property	Location	Units	First Unit Closed	Last Unit Closed	Average Monthly Absorption
Pacifica Honolulu	Honolulu	492	Aug-11	Aug-12	41 units
Allure Waikiki	Honolulu	291	May-10	Oct-11	17 units
Capitol Place	Honolulu	384	Feb-08	Dec-09	17 to 18 units
The Watermark	Honolulu	196	May-07	Jun-09	8 units
Keola L'ai	Honolulu	341	Jan-08	Apr-09	21 to 22 units

Pacifica Honolulu experienced the highest absorption rate and is the most recently completed condominium development, closing each of the property's 492 units within one year. In addition to these comparables, we surveyed projects currently pre-selling to determine the strength of the current new construction market. The following table details the presales activity of several properties located within the PMA.

PRESALES ACTIVITY

Property	Location	Units	Presales Began	Sold-out Date	Units presold per month	Status
801 South Street	Honolulu	616	Mar-13	Jul-13	123.2	Summer 2015 completion
The Cove Waikiki	Honolulu	117	Dec-11	Apr-13	7.8	July 2014 completion
One Ala Moana	Honolulu	205	Jan-13	Jan-13	205.0	Late 2014 completion
Waihonua	Honolulu	341	Dec-11	Jun-12	48.7	May 2015 completion
Holomua	Honolulu	176	Jun-09	Apr-11	8.0	Open, units closing
Pacifica Honolulu	Honolulu	492	Apr-09	Dec-09	61.5	Open
The Watermark	Honolulu	196	Mar-06	Sep-06	32.7	Open

Notably, an article posted by Pacific Business News, "Complex marketing strategies help luxury condos sell out fast," indicates that One Ala Moana sold out in a matter of hours at its initial offering. Additionally, two of the properties that we surveyed have not completely sold out. Symphony Honolulu, which began presales in June 2013, has sold approximately 71 percent of its 422 units, while The Collection, which began presales in August 2013, has sold approximately 68 percent of its 466 units to date. Based upon the relatively fast pre-sales of yet-to-be-completed projects and the strong absorption pace exhibited by the most recently closed development , we believe that the Subject will be able to pre-sale its 180 units in approximately five months, equating to a sales velocity of approximately 36 units per month.

Achievable For-Sale Pricing

The achievable pricing was determined by comparing the aesthetic quality, amenities, unit sizes, etc. to that of the comparable condominium projects in the area. Novogradac & Company concluded that the Subject will be competitive with the market rate competition and achievable pricing is within than the range of closed sales at the comparable properties. Achievable pricing represents net market rate pricing levels that we believe a project of the Subject's condition and quality could reasonably achieve.

As a condominium project, the sponsor will restrict 12 and 48 percent of the proposed condominium units (22 and 86 units) to households earning up to 100 and 120 percent of the area median income (AMI), respectively, as required under the Hawaii Housing Finance and Development Corporation (HHFDC) Dwelling Unit Revolving Fund (DURF). The restricted units will generally consist of the units occupying floors nine through 15, which include studio and one-bedroom units only. The following table illustrates the average price per square foot of most recent sales at the comparable properties in comparison with the Subject.

ACHIEVABLE FOR-SALE PRICING

Unit Type	Number of Units	Unit Size (SF)	Surveyed Min Price per SF	Surveyed Max Price per SF	Surveyed Average Price per SF	Novoco Achievable Price per SF (Low)*	Novoco Achievable Price per SF (High)*
0BR/1BA	84	335	$360	$1,038	$669	$750	$942
0BR/1BA	12	387	$360	$1,038	$669	$750	$942
1BR/1BA	24	454	$613	$789	$689	$725	$910
1BR/1BA	22	484	$613	$789	$689	$700	$879
1BR/1BA	11	494	$613	$789	$689	$700	$879
1BR/1BA	22	498	$613	$789	$689	$700	$879
2BR/1BA	2	986	$423	$664	$558	$650	$650
2BR/1BA	2	1005	$423	$664	$558	$650	$650
2BR/1BA	1	1082	$423	$664	$558	$650	$650

*Residential units will occupy floors nine through 21 and the 'affordable' units will generally consist of the units occupying floors nine through 16, which include the studio and one-bedroom units only; the 'high' pricing reflects a one percent per floor premium and an additional one percent per foor view premium over the established unrestricted 'base' pricing of $750, $725 to $750, and $650 per square foot, for studio, one, and two-bedroom units, respectively (with two-bedroom pricing considering their location only on the top floor; two-bedroom units will be located on the top floor and offer mountain views and there is no range in pricing presented).

ACHIEVABLE FOR-SALE PRICING

Unit Type	Number of Units	Unit Size (SF)	Surveyed Min Price per SF	Surveyed Max Price per SF	Surveyed Average Price per SF	Novoco Achievable Unit Price (Low)*	Novoco Achievable Unit Price (High)*
0BR/1BA	84	335	$360	$1,038	$669	$251,250	$315,522
0BR/1BA	12	387	$360	$1,038	$669	$290,250	$364,498
1BR/1BA	24	454	$613	$789	$689	$329,150	$413,349
1BR/1BA	22	484	$613	$789	$689	$338,800	$425,468
1BR/1BA	11	494	$613	$789	$689	$345,800	$434,258
1BR/1BA	22	498	$613	$789	$689	$348,600	$437,775
2BR/1BA	2	986	$423	$664	$558	$640,900	$640,900
2BR/1BA	2	1005	$423	$664	$558	$653,250	$653,250
2BR/1BA	1	1082	$423	$664	$558	$703,300	$703,300

*Residential units will occupy floors nine through 21 and the 'affordable' units will generally consist of the units occupying floors nine through 16, which include the studio and one-bedroom units only; the 'high' pricing reflects a one percent per floor premium and an additional one percent per foor view premium over the established unrestricted 'base' pricing of $750, $725 to $750, and $650 per square foot, for studio, one, and two-bedroom units, respectively (with two-bedroom pricing considering their location only on the top floor; two-bedroom units will be located on the top floor and offer mountain views and there is no range in pricing presented).

The Subject will be most similar to Capitol Place and 801 South Street. Compared with Capitol Place, the Subject will offer a similar condition, slightly inferior location, slightly inferior to similar unit sizes and a slightly inferior amenities package. Compared with 801 South Street, the Subject will offer generally superior units sizes, slightly superior condition, and a slightly inferior location and similar amenities package. The following tables illustrate the average 2013 selling prices by bedroom type for units at Capitol Place and 801 South Street in comparison with Novoco achievable pricing at the Subject.

SUBJECT COMPARISON WITH CAPITOL PLACE

Unit Type	Novoco Achievable Price (Low)	Novoco Achievable Price (High)	Unit Size (SF)	Achievable Price per Square Foot (Low)	Achievable Price per Square Foot (High)	Capitol Place 2013 Average Sold Price	Capitol Place Size (SF)	Capitol Place Price per Square Foot	Subject Price (High) Difference
0BR/1BA	$251,250	$315,522	335	$750	$942	N/A	N/A	N/A	N/A
0BR/1BA	$290,250	$364,498	387	$750	$942	N/A	N/A	N/A	N/A
1BR/1BA	$329,150	$413,349	454	$725	$910	$505,000	633	$798	14%
1BR/1BA	$338,800	$425,468	484	$700	$879	$505,000	633	$798	10%
1BR/1BA	$345,800	$434,258	494	$700	$879	$505,000	633	$798	10%
1BR/1BA	$348,600	$437,775	498	$700	$879	$533,000	805	$662	33%
2BR/1BA	$640,900	$640,900	986	$650	$650	$832,633	1,253	$665	-2%
2BR/1BA	$653,250	$653,250	1,005	$650	$650	$832,633	1,253	$665	-2%
2BR/1BA	$703,300	$703,300	1,082	$650	$650	$832,633	1,253	$665	-2%

SUBJECT COMPARISON WITH 801 SOUTH STREET

Unit Type	Novoco Achievable Price (Low)	Novoco Achievable Price (High)	Unit Size (SF)	Achievable Price per Square Foot (Low)	Achievable Price per Square Foot (High)	801 South St 2013 Average Sold Price	801 South St Size (SF)	801 South St Price per Square Foot	Subject Price (High) Difference
0BR/1BA	$251,250	$315,522	335	$750	$942	$253,200	384	$659	43%
0BR/1BA	$290,250	$364,498	387	$750	$942	$253,200	384	$659	43%
1BR/1BA	$329,150	$413,349	454	$725	$910	$325,400	495	$657	38%
1BR/1BA	$338,800	$425,468	484	$700	$879	$325,400	495	$657	34%
1BR/1BA	$345,800	$434,258	494	$700	$879	$325,400	495	$657	34%
1BR/1BA	$348,600	$437,775	498	$700	$879	$325,400	495	$657	34%
2BR/1BA	$640,900	$640,900	986	$650	$650	$422,900	776	$545	19%
2BR/1BA	$653,250	$653,250	1,005	$650	$650	$422,900	776	$545	19%
2BR/1BA	$703,300	$703,300	1,082	$650	$650	$422,900	776	$545	19%

Overall, the Subject will be generally inferior to Capitol Place and slightly superior to 801 South Street, and we will conclude to achievable unrestricted base pricing of $750, $725 to $750, and $650 per square foot, for studio, one, and two-bedroom units, respectively (with two-bedroom pricing considering their location only on the top floor).

Summary Evaluation of the Project

Upon completion, the Subject will offer an excellent quality product with competitive amenities. The primary strengths of the Subject will be its condition, while its location will be slightly inferior to inferior relative to the comparables. Despite some smaller than average unit sizes, we anticipate the Subject's units to be well-accepted in the market. The Subject's residential units will occupy floors nine through 20 and the 'affordable' units will generally consist of the units occupying floors nine through 15, which include the studio and one-bedroom units only. Based on the price per square foot of comparable properties in the market, we believe that the Subject is capable of achieving unrestricted base pricing of $750, $725 to $750, and $650 per square foot, for studio, one, and two-bedroom units, respectively (with two-bedroom pricing considering their location only on the top floor). Overall, the downtown Honolulu condominium market is considered strong and the Subject should compete well.

CONDOMINIUM DEMAND ANALYSIS

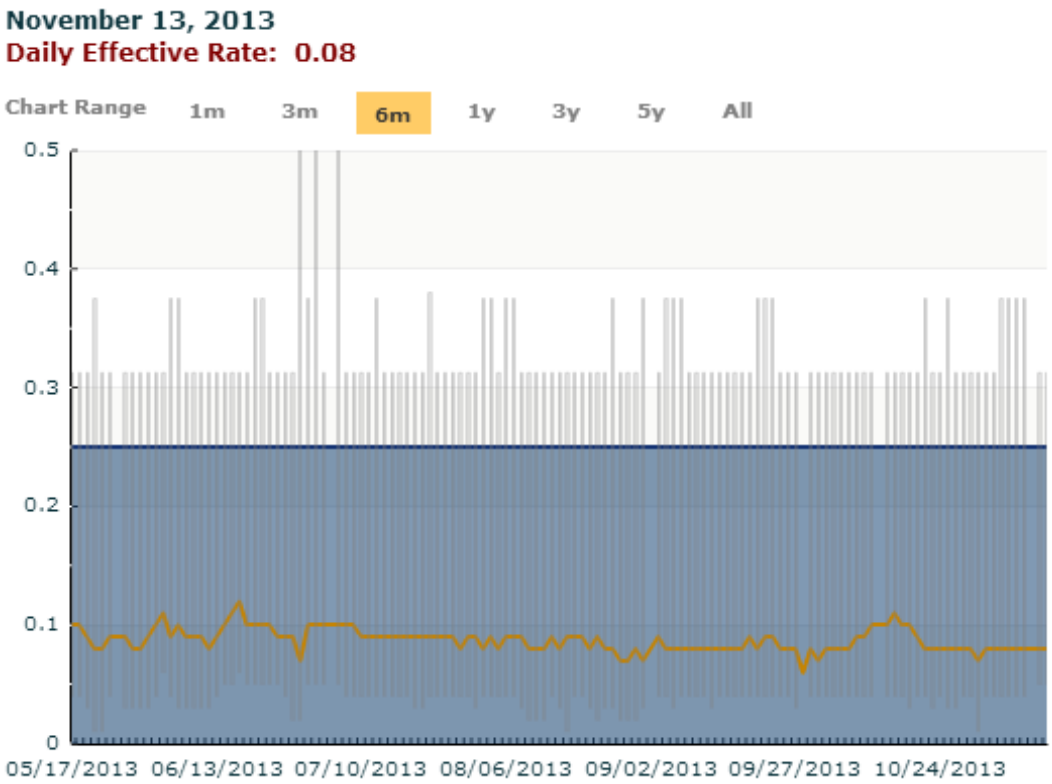
Introduction

The Subject is a proposed development that will offer 180 studio, one, and two-bedroom condominium units in a 20-story high-rise design. The sponsor the sponsor will restrict 12 and 48 percent of the proposed condominium units (22 and 86 units) to households earning up to 100 and 120 percent of the area median income (AMI), respectively, as required under the Hawaii Housing Finance and Development Corporation (HHFDC) Dwelling Unit Revolving Fund (DURF). The remaining 40 percent of the condominiums will not be income or price restricted.

Interest Rate Trends

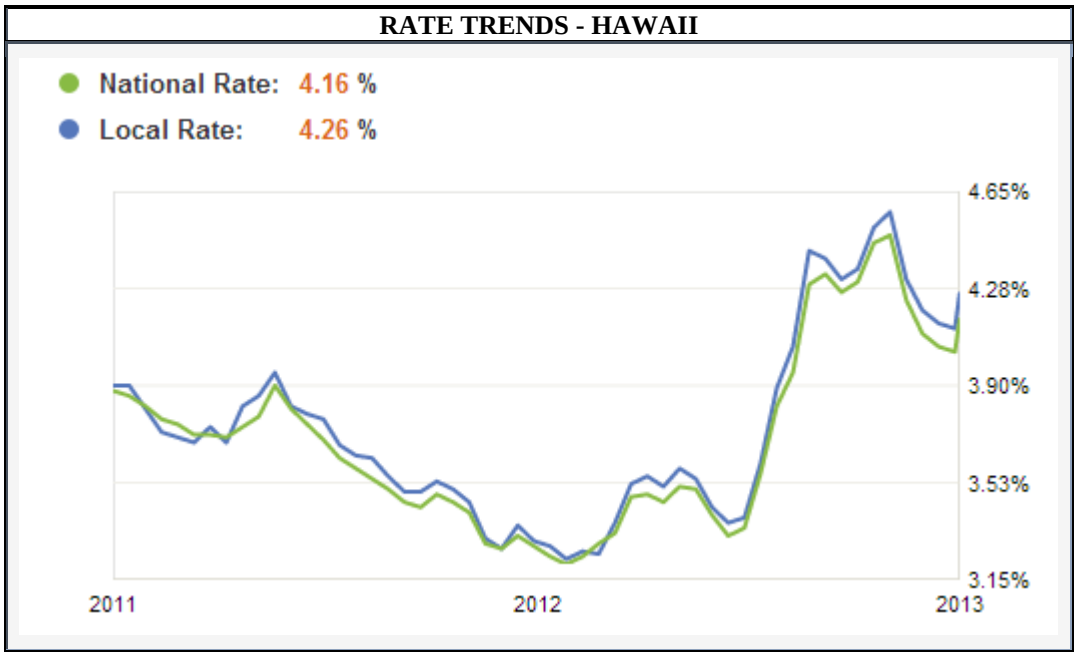
Realtors indicated that interest rates have remained relatively stable over the past two years in the area. The following charts provided by the Federal Reserve Bank of New York shows the change in the federal funds rate from May 2013 to November 2013. Mortgage interest rates generally move in direct correlation with the funds rate.

Federal Funds Chart



Source: Federal Reserve Bank of New York, 11/2013.

As the previous chart demonstrates, the daily effective federal funds interest rate has remained between 0.6 and 0.12. The following table, provided by zillow.com, tracks the change in interest rates in Hawaii from November 2011 through November 2013. The average interest rate in Hawaii in November 2013 is approximately 4.26 percent, slightly above the national average.



According to current bankrate.com estimates, interest rates in the Honolulu area generally range from 4.3 to 5.1 percent for households with acceptable credit scores. We will assume an interest rate of 4.5 percent for our analysis.

New Supply

We contacted Mike Watkins with the Planning Department at the City and County of Honolulu to determine if any condominium developments are proposed or under construction within the PMA. In addition, we have added two developments that the sponsor intends to build, Waimanu and Tokai. The sponsor has not yet determined whether these developments will be condominium or rental developments. We have considered both developments in our demand calculations for the potential development scenarios. The following is a summary of the condominium developments that are planned, proposed, or under construction in the PMA.

Planned and Proposed Condominium Developments

Project Name	Design	Type	Units	Timing	Status	Unsold Affordable Units	Unsold Unrestricted Units
One Ala Moana*	Highrise	Market	210	Dec-14	Under Construction	0	0
The Cove Waikiki*	Midrise	Market	117	Dec-14	Under Construction	0	0
801 South*	Highrise	Affordable	635	Jul-15	Under Construction	0	0
Waihonua*	Highrise	Market	341	Dec-15	Under Construction	0	0
Symphony Honolulu*	Highrise	Affordable/Market	388	Jan-16	Under Construction	0	113
The Collection*	Highrise/Townhome	Market	466	Dec-16	Approved	0	149
Keauhou Place	Highrise/Loft/Townhome	Market	435	Jul-17	Approved	0	435
404 Ward	Highrise	Affordable/Market	415	N/Av	Approved	375	40
Hale Ka Lae	Highrise	Market	250	N/Av	Approved	0	250
Waimanu**	Highrise	Affordable/Market	153	Apr-16	Proposed	78	75
Tokai**	Highrise	Market	143	May-16	Proposed	0	143
Aloha Kai	Highrise	Market	128	N/Av	Proposed	0	128
1108 Auahi Street	Highrise	Market	300	N/Av	Proposed	0	300
1120 Ala Moana Blvd	Highrise	Market	200	N/Av	Proposed	0	200
	Totals					**453**	**1,833**

*Has been examined as a comparable

**Will be developed by the sponsor

There is a current pipeline of 453 affordable condominium units and 1,833 unrestricted condominium units yet to be sold in the market. We have deducted the pipeline inventory from our condominium demand calculations accordingly.

PURCHASING POWER

We contacted several mortgage brokers regarding the typical income requirements to qualify for condominium mortgages. According to these brokers, buyers will qualify for mortgages as long as total debt to gross income does not exceed 40 to 45 percent. HHFDC's Affordable Sales Price Guidelines are established assuming a 5% down payment where mortgage debt does not exceed 28 percent of monthly gross income. This ratio appears reasonable for both the 140 percent AMI and unrestricted income scenarios. Using a mortgage debt to income ratio of 28 percent, we have estimated the income levels necessary to purchase the Subject's units at an interest rate of 4.5 percent with five percent down payment. The following tables illustrate this analysis.

COST ANALYSIS - STUDIO - 4.5% (LOW)

Inputs		Ownership	Notes
Unit Price		**$251,250**	Novoco Achievable Price
Closing Costs	3%	$7,538	
Downpayment	5%	$12,563	
Principal		$238,688	
Interest Rate	**4.50%**		
Amortization period	30		
Monthly Payment		$1,209	
Annual Payment		$14,513	
Real Estate Taxes		$879	Taxes based on 100% of average home price with a rate of 0.0035%
Private Mortgage Insurance	0.50%	$1,193	
Homeowner's Insurance		$500	Local agent quote for condominium
			Include al
Annual Maintenance Fees		$2,010	
Total Annual Cost		$19,096	
Total Monthly Cost		$1,591	
Monthly Income Required		$4,547	Assumes a housing expense of 35% of income
Annual Income Required		$54,559	

COST ANALYSIS - STUDIO - 4.5% (HIGH)

Inputs		Ownership	Notes
Unit Price		**$364,498**	Novoco Achievable Price
Closing Costs	3%	$10,935	
Downpayment	5%	$18,225	
Principal		$346,273	
Interest Rate	**4.50%**		
Amortization period	30		
Monthly Payment		$1,755	
Annual Payment		$21,054	
Real Estate Taxes		$1,276	Taxes based on 100% of average home price with a rate of 0.0035%
Private Mortgage Insurance	0.50%	$1,731	
Homeowner's Insurance		$500	Local agent quote for condominium
Annual Maintenance Fees		$2,322	
Total Annual Cost		$26,883	
Total Monthly Cost		$2,240	
Monthly Income Required		$6,401	Assumes a housing expense of 35% of income
Annual Income Required		$76,809	

COST ANALYSIS - ONE-BEDROOM - 4.5% (LOW)

Inputs		Ownership	Notes
Unit Price		**$329,150**	Novoco Achievable Price
Closing Costs	3%	$9,875	
Downpayment	5%	$16,458	
Principal		$312,693	
Interest Rate	**4.50%**		
Amortization period	30		
Monthly Payment		$1,584	
Annual Payment		$19,012	
Real Estate Taxes		$1,152	Taxes based on 100% of average home price with a rate of 0.0035%
Private Mortgage Insurance	0.50%	$1,563	
Homeowner's Insurance		$500	Local agent quote for condominium
			Include a
Annual Maintenance Fees		$2,724	
Total Annual Cost		$24,952	
Total Monthly Cost		$2,079	
Monthly Income Required		$5,941	Assumes a housing expense of 35% of income
Annual Income Required		$71,291	

COST ANALYSIS - ONE-BEDROOM - 4.5% (HIGH)

Inputs		Ownership	Notes
Unit Price		**$437,775**	Novoco Achievable Price
Closing Costs	3%	$13,133	
Downpayment	5%	$21,889	
Principal		$415,886	
Interest Rate	**4.50%**		
Amortization period	30		
Monthly Payment		$2,107	
Annual Payment		$25,287	
Real Estate Taxes		$1,532	Taxes based on 100% of average home price with a rate of 0.0035%
Private Mortgage Insurance	0.50%	$2,079	
Homeowner's Insurance		$500	Local agent quote for condominium
Annual Maintenance Fees		$2,988	
Total Annual Cost		$32,386	
Total Monthly Cost		$2,699	
Monthly Income Required		$9,639	Assumes a housing expense of 35% of income
Annual Income Required		$115,666	

COST ANALYSIS - TWO-BEDROOM - 4.5% (LOW)

Inputs		Ownership	Notes
Unit Price		**$640,900**	Novoco Achievable Price
Closing Costs	3%	$19,227	
Downpayment	5%	$32,045	
Principal		$608,855	
Interest Rate	**4.50%**		
Amortization period	30		
Monthly Payment		$3,085	
Annual Payment		$37,020	
Real Estate Taxes		$2,243	Taxes based on 100% of average home price with a rate of 0.0035%
Private Mortgage Insurance	0.50%	$3,044	
Homeowner's Insurance		$500	Local agent quote for condominium
			Include all
Annual Maintenance Fees		$5,916	
Total Annual Cost		$48,723	
Total Monthly Cost		$4,060	
Monthly Income Required		$11,601	Assumes a housing expense of 35% of income
Annual Income Required		$139,209	

COST ANALYSIS - TWO-BEDROOM - 4.5% (HIGH)

Inputs		Ownership	Notes
Unit Price		**$703,300**	Novoco Achievable Price
Closing Costs	3%	$21,099	
Downpayment	5%	$35,165	
Principal		$668,135	
Interest Rate	**4.50%**		
Amortization period	30		
Monthly Payment		$3,385	
Annual Payment		$40,624	
Real Estate Taxes		$2,462	Taxes based on 100% of average home price with a rate of 0.0035%
Private Mortgage Insurance	0.50%	$3,341	
Homeowner's Insurance		$500	Local agent quote for condominium
Annual Maintenance Fees		$6,492	
Total Annual Cost		$53,418	
Total Monthly Cost		$4,452	
Monthly Income Required		$12,719	Assumes a housing expense of 35% of income
Annual Income Required		$152,624	

The following table compares the results of the analysis with the guidelines published by Hawaii Housing Finance & Development Corporation.

AFFORDABILITY SUMMARY

Unit Type	Household Assumption	Affordable Sales Price Guidelines 100% AMI*	Affordable Sales Price Guidelines 120% AMI*	Achievable Unit Price (Low)	Achievable Unit Price (High)	Published Income Limits 100% AMI*	Published Income Limits 120% AMI*	Indicated Minimum Income (Low)	Indicated Minimum Income (High)
0BR / 1BA	1 Person	**$331,700**	**$398,000**	$251,250	$364,498	**$68,600**	**$82,320**	$54,559	$76,809
1BR / 1BA**	2 Person	**$379,100**	**$454,900**	$329,150	$437,775	**$78,400**	**$94,080**	$71,291	$115,666
2BR / 1BA***	3 Person	**N/Ap**	**N/Ap**	$640,900	$703,300	**N/Ap**	**N/Ap**	$139,209	$152,624

*Maximum price and income guidelines are established by HHFDC and are based on household size. Maximum price assumes a 4.5% APR mortgage with a 5% downpayment and an income to mortgage payment ratio of 28%, per HHFDC guidelines.

**Minimum income for higher priced 1BR units exceeds maximum 120% AMI income limit; however, it is reasonable to assume that these units may be sold as unrestricted units.

***The five two-bedroom units will be located on the top floor and all be unrestricted

Demand Analysis

The following demand analysis assumes that interest rates remain low, around 4.5 percent.

INCOME LIMITS

Unit Type	Minimum Allowable Income	Maximum Allowable Income	Minimum Allowable Income	Maximum Allowable Income	Minimum Allowable Income	Maximum Allowable Income
	100% AMI		*120% AMI*		*Unrestricted*	
Studio	$54,559	$68,600	$68,600	$82,320	$82,320	$200,000+
1BR	$71,291	$78,400	$78,400	$94,080	$94,080	$200,000+
2BR	N/A	N/A	N/A	N/A	$139,209	$200,000+

RENTER INCOME DISTRIBUTION 2012

Income Cohort	Total Renter Households	100% AMI			120% AMI			Unrestricted		
		cohort overlap	*% in cohort*	*# in cohort*	*cohort overlap*	*% in cohort*	*# in cohort*	*cohort overlap*	*% in cohort*	*# in cohort*
$0-9,999	7,969									
$10,000-19,999	8,207									
$20,000-29,999	8,879									
$30,000-39,999	8,585									
$40,000-49,999	7,996									
$50,000-59,999	6,207	5,440	54.41%	3,377						
$60,000-74,999	7,983	14,999	100.00%	7,983	6,399	42.66%	3,406			
$75,000-99,999	9,666	3,400	13.60%	1,315	19,081	76.33%	7,378	17,679	70.72%	6,836
$100,000-124,999	5,535							24,999	100.00%	5,535
$125,000-149,999	2,962							24,999	100.00%	2,962
$150,000-199,999	2,472							49,999	100.00%	2,472
$200,000+	2,403							199,999	100.00%	2,403
Total	**78,866**		**16.07%**	**12,675**		**13.67%**	**10,784**		**25.62%**	**20,207**

OWNER INCOME DISTRIBUTION 2012

Income Cohort	Total Owner Households	100% AMI			120% AMI			Unrestricted		
		cohort overlap	*% in cohort*	*# in cohort*	*cohort overlap*	*% in cohort*	*# in cohort*	*cohort overlap*	*% in cohort*	*# in cohort*
$0-9,999	2,628									
$10,000-19,999	3,706									
$20,000-29,999	4,662									
$30,000-39,999	4,422									
$40,000-49,999	4,799									
$50,000-59,999	5,077	5,440								
$60,000-74,999	6,494	14,999	100.00%	6,494	6,399	42.66%	2,771			
$75,000-99,999	10,178	3,400	13.60%	1,384	19,081	76.33%	7,769	17,679	70.72%	7,198
$100,000-124,999	8,142							24,999	100.00%	8,142
$125,000-149,999	6,147							24,999	100.00%	6,147
$150,000-199,999	6,173							49,999	100.00%	6,173
$200,000+	7,918							199,999	100.00%	7,918
Total	**70,347**		**9.99%**	**7,879**		**13.36%**	**10,540**		**45.11%**	**35,578**

All of the comparable properties surveyed were questioned about the demand characteristics of an 'average buyer.' Most reported that buyers came from eastern Oahu and areas around Honolulu County. The PMA boundaries and overall market health assessment are based primarily on surveys of existing and actively pre-selling condominium developments undertaken by Novogradac & Company LLP, and insights gained from realtors active in the area and others familiar with the condominium market. Based on an analysis of demographic data, geographic,

social, and political boundaries, including interviews with realtors in the area, the majority of demand will be generated from this geographic area. However, leakage is expected from outside the PMA from other parts of Honolulu County, as well as outside of the state. Other characteristics of buyers are dependent on the housing size, price, and location. Most lower-priced homes attract young families, first-time homebuyers, and retirees.

We contacted several brokers in the area to understand the typical buyer in the local condominium market.

- David Buck of Hawaii Life Realty indicated that approximately one-half of the condominiums sales he was a part in the region (including the entire southern Oahu region) of involved local buyers who were selling condominiums before moving to new condominiums or downsizing to smaller condominiums. Mr. Buck indicated that approximately 10 percent of the buyers he worked for were first-time homeowners and approximately 15 percent of the sales involved buyers who were from outside of Oahu.

- According to sales staff at Symphony Honolulu, an estimated 70 percent of buyers are from the Honolulu area, with remaining buyers from the United State mainland and Asia. An estimated 75 percent of buyers are current homeowners and 25 percent are moving from a rental unit.

- According to the sales staff at Waihonua, approximately 50 percent of buyers are local buyers, 20 percent are from the mainland, 15 percent are from Japan, 10 percent are from China, and five percent are from Canada, Korea, or elsewhere. Additionally, an estimated 80 percent of buyers are current homeowners and 20 percent are moving from a rental situation.

Based on the data that we obtained, we believe a leakage factor of 35 percent for buyers originating from outside of the PMA, including outside of the state, is appropriate. An estimated one-third of buyers are expected to be first-time homeowners and therefore we believe that five percent is a reasonable estimation of annual renter-to-owner conversion. We estimate 75 of condominium buyers are current homeowners; therefore, we believe that a five percent annual turnover is reasonable.

The following table illustrates calculation of the Subject's capture rates assuming that 60 percent of the Subject's units (108 units) will be restricted at 140 percent AMI and the remaining 40 percent (72 units) will be unrestricted. These estimates are considered conservative as it is based on existing demand only and does not account for household growth between now and the beginning of the sales period.

INCOME ELIGIBLE HOUSEHOLDS				
	100% AMI	**120% AMI**	**Unrestricted**	**All**
Minimum Income	$54,559	$68,600	$82,320	$54,559
Maximum Income	$78,400	$94,080	$200,000+	$200,000+
Number of Income Qualified Renters	12,675	10,784	20,207	34,398
% of Renters Becoming Homeowners	5%	5%	5%	5%
Estimated Income Qualified First Time Homeowners	634	539	1,010	1,720
Number of Income Qualified Owners	7,879	10,540	35,578	39,897
% of Owners Moving to a New Home	5%	5%	5%	5%
Estimated Income Qualified Owners Transferring	394	527	1,779	1,995
Portion Originating from PMA	65%	65%	65%	65%
Total Income Qualified Households	1,581	1,640	4,291	5,715
Number of Homes Yet To be Absorbed	0	453	1,833	2,286
Overall Capture Rate	**1.4%**	**7.2%**	**2.9%**	**5.2%**

Conclusion

Based on our demand analysis, we believe that there is adequate demand in the primary market area for the Subject property as proposed based on the demographic information. The overall capture rates for the Subject's 100 percent AMI, 120 percent AMI, and unrestricted units are 1.4, 7.2, and 2.9 percent, respectively. The overall capture rate for all 180 units is 5.2 percent. These rates are considered good and achievable. The Subject's Novoco achievable pricing meets HHDFC DURF affordability requirements for the proposed units targeting 100 and 120 percent AMI; the achievable pricing for all of the proposed units are also in-line with market pricing. Overall, market characteristics indicate adequate demand for the Subject.

RENTAL HOUSING ANALYSIS

SURVEY OF COMPARABLE RENTAL PROJECTS

Comparable properties are examined on the basis of physical characteristics, i.e. building type, age/quality, level of common amenities, absorption, as well as similarity in rent. We attempted to compare the Subject to properties from the competing market to provide a picture of the health and available supply in the market.

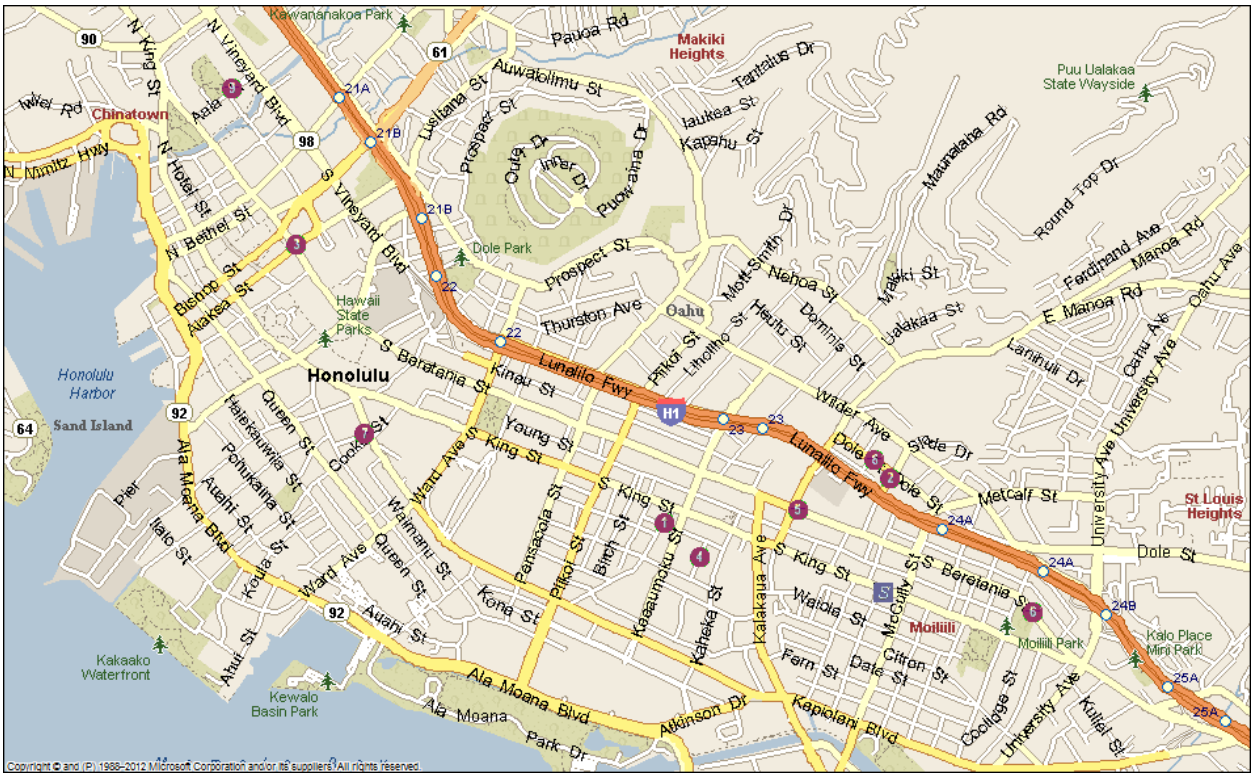
Description of Property Types Surveyed

To evaluate the competitive position of the Subject we performed a field survey of unrestricted rental properties. The table below outlines properties located within or near the PMA that were not utilized in the analysis of the competitive rental market.

EXCLUDED PROPERTIES IN THE PMA			
Property Name	**Location**	**Rent Structure**	**Reason for Exclusion**
2211 Ala Wai Boulevard	Honolulu	Market	Unit Mix/Primarily Owner-Occupied Condos
Country Club Plaza	Honolulu	Market	Primarily Owner-Occupied Condos
Country Club Villages	Honolulu	Market	Primarily Owner-Occupied Condos
Country Club Vista	Honolulu	Market	Primarily Owner-Occupied Condos
East Lake Apartments	Honolulu	Market	Unit Mix: Only 1BR Units
Fairway Gardens	Honolulu	Market	Primarily Owner-Occupied Condos
Five Regents	Honolulu	Market	Unit Mix: Only Studio Units
Foster Heights Villas	Honolulu	Market	Building Design/Primarily Owner-Occupied Condos
Ilima Gardens	Honolulu	Market	Primarily Owner-Occupied Condos
Imperial Plaza	Honolulu	Market	Primarily Owner-Occupied Condos/Commercial Space
Lake View Royal	Honolulu	Market	Unit Mix: Only 3BR Units
Lakeside Holiday	Honolulu	Market	Building Design/Primarily Owner-Occupied Condos
Lakeside West	Honolulu	Market	Unit Mix/Primarily Owner-Occupied Condos
Lakeview Gardens	Honolulu	Market	Primarily Owner-Occupied Condos
Likini West	Honolulu	Market	Unit Mix/Primarily Owner-Occupied Condos
Ocean Vista	Honolulu	Market	Primarily Owner-Occupied Condos
Poly Vista Apartments	Honolulu	Market	Could not Contact
Royal Towers	Honolulu	Market	Primarily Owner-Occupied Condos
Sunset Lakeview	Honolulu	Market	Primarily Owner-Occupied Condos
The Candlewood	Honolulu	Market	Primarily Owner-Occupied Condos
The Greenview	Honolulu	Market	Primarily Owner-Occupied Condos
The Greenway	Honolulu	Market	Primarily Owner-Occupied Condos
The Greenwood	Honolulu	Market	Primarily Owner-Occupied Condos

Comparable properties are examined on the basis of physical characteristics, i.e. building type, age/quality, level of common amenities, absorption, as well as similarity in rent. We attempted to compare the Subject to properties from the competing market area to provide a picture of the health and available supply in the market. The following pages include a summary of comparable properties and individual property profiles. A map of the comparables, in relation to the Subject, is included on the following page as well.

Map of Comparable Properties



COMPARABLE PROPERTIES

#	Property Name	City	Type	Distance
1	Ala Moana Banyan	Honolulu	Market	1.6 miles
2	Alexander Gardens	Honolulu	Market	0.6 miles
3	Capitol Place Apartments	Honolulu	Market	2.1 miles
4	Liona Apartments	Honolulu	Market	1.1 miles
5	Punahou Circle Apartments	Honolulu	Market	0.6 miles
6	Rainbow Vista	Honolulu	Market	0.8 miles
7	Royal Capital Plaza	Honolulu	Market	2.0 miles
8	Tiare Apartments	Honolulu	Market	0.7 miles
9	Waena Apartments	Honolulu	Market	3.3 miles

Distances are based on drive-path distances

SUMMARY MATRIX

Comp #	Project	Distance	Type / Built / Renovated	Market / Subsidy	Units	#	%	Restriction	Rent (Adj.)	Size (SF)	Wait List?	Units Vacant	Vacancy Rate
Subject	Ohana Hale	n/a	Highrise	Market	Studio / 1BA	84	46.70%	Market	N/A	335		N/A	N/A
	929 Pumehana Street		(20 stories)		Studio / 1BA	12	6.70%	Market	N/A	387		N/A	N/A
	Honolulu, HI 96826		2014 / n/a		1BR / 1BA	24	13.30%	Market	N/A	454		N/A	N/A
	Honolulu County				1BR / 1BA	22	12.20%	Market	N/A	484		N/A	N/A
					1BR / 1BA	11	6.10%	Market	N/A	494		N/A	N/A
					1BR / 1BA	22	12.20%	Market	N/A	498		N/A	N/A
					2BR / 1BA	2	1.10%	Market	N/A	986		N/A	N/A
					2BR / 1BA	2	1.10%	Market	N/A	1,005		N/A	N/A
					2BR / 1BA	1	0.60%	Market	N/A	1,082		N/A	N/A
						143	100%					N/A	N/A
1	Ala Moana Banyan	1.5 miles	Highrise	Market	Studio / 1BA	35	62.50%	Market	$800	307	No	0	0.00%
	929 Sheridan		(8 stories)		Studio / 1BA	20	35.70%	Market	$1,200	307	No	0	0.00%
	Honolulu, HI 96814		1969 / n/a		1BR / 1BA	1	1.80%	Market	$1,950	560	No	0	0.00%
	Honolulu County												
						56	100%					0	0.00%
2	Alexander Gardens	1.5 miles	Garden	Market	Studio / 1BA	3	10.00%	Market	$1,276	336	No	0	0.00%
	1472 Alexander		(3 stories)		1BR / 1BA	18	60.00%	Market	$1,462	446	No	0	0.00%
	Honolulu, HI 96822		1957 / 1977		2BR / 1BA	9	30.00%	Market	$1,699	716	No	0	0.00%
	Honolulu County												
						30	100%					0	0.00%
3	Capitol Place Apartments	3.3 miles	Highrise	Market	1BR / 1BA	N/A	N/A	Market	$2,500	689	Yes	0	N/A
	1200 Queen Emma Street		(39 stories)		1BR / 1BA	N/A	N/A	Market	$2,200	689	Yes	0	N/A
	Honolulu, HI 96813		2008 / n/a		2BR / 1BA	N/A	N/A	Market	$2,600	810	Yes	N/A	N/A
	Honolulu County				2BR / 2BA	N/A	N/A	Market	$3,300	1,093	Yes	N/A	N/A
					3BR / 2BA	N/A	N/A	Market	$3,500	1,348	No	N/A	N/A
					3BR / 3BA	N/A	N/A	Market	$4,800	1,500	No	N/A	N/A
						185	100%					6	3.20%
4	Liona Apartments	1.1 miles	Lowrise	Market	Studio / 1BA	44	80.00%	Market	$895	300	No	1	2.30%
	952 Ahana Street		(3 stories)		1BR / 1BA	11	20.00%	Market	$1,150	560	No	0	0.00%
	Honolulu, HI 96814		1962 / 2010										
	Honolulu County												
						55	100%					1	1.80%
5	Punahou Circle Apartments	1.1 miles	Highrise	Market	Studio / 1BA	18	18.80%	Market	$1,100	485	No	4	22.20%
	1617 South Beretania Street		(12 stories)		1BR / 1BA	46	47.90%	Market	$1,150	580	No	3	6.50%
	Honolulu, HI 96826		1963 / n/a		2BR / 1BA	32	33.30%	Market	$1,850	800	No	1	3.10%
	Honolulu County												
						96	100%					8	8.30%
6	Rainbow Vista	0.9 miles	Lowrise	Market	Studio / 1BA	6	22.20%	Market	$1,190	317	No	0	0.00%
	2436 S. Beretania		(3 stories)		1BR / 1BA	13	48.10%	Market	$1,375	491	No	0	0.00%
	Honolulu, HI 96826		1970 / 1990's		1BR / 1BA	0	0.00%	Market	$1,420	491	No	0	N/A
	Honolulu County				1BR / 1BA	0	0.00%	Market	$1,375	491	No	0	N/A
					2BR / 1BA	8	29.60%	Market	$1,850	723	No	0	0.00%
						27	100%					0	0.00%
7	Royal Capital Plaza	1.9 miles	Highrise	Market	1BR / 1BA	137	45.10%	Market	$1,674	650	No	1	0.70%
	876 Curtis Street		(40 stories)		2BR / 2BA	167	54.90%	Market	$1,980	886	No	3	1.80%
	Honolulu, HI 96813		1986 / n/a										
	Honolulu County												
						304	100%					4	1.30%
8	Tiare Apartments	1.4 miles	Garden	Market	Studio / 1BA	3	10.00%	Market	$1,257	469	No	0	0.00%
	1735 Dole Street		(3 stories)		1BR / 1BA	16	53.30%	Market	$1,413	572	No	1	6.20%
	Honolulu, HI 96822		1960 / n/a		1BR / 1BA	8	26.70%	Market	$1,463	640	No	0	0.00%
	Honolulu County				2BR / 1BA	3	10.00%	Market	$1,744	771	No	0	0.00%
						30	100%					1	3.30%
9	Waena Apartments	3.6 miles	Garden	Market	1BR / 1BA	N/A	N/A	Market	$1,570	582	No	N/A	N/A
	1320 Aala St.		(3 stories)		1BR / 1BA	N/A	N/A	Market	$1,505	485	No	N/A	N/A
	Honolulu, HI 96817		1970 / 2011		2BR / 1BA	N/A	N/A	Market	$1,735	760	No	N/A	N/A
	Honolulu County				2BR / 1BA	N/A	N/A	Market	$1,655	732	No	N/A	N/A
					3BR / 1BA	N/A	N/A	Market	$1,980	823	No	N/A	N/A
					4BR / 2BA	N/A	N/A	Market	$2,500	1,064	No	N/A	N/A
					4BR / 2BA	N/A	N/A	Market	$2,450	1,014	No	N/A	N/A
						468	100%					23	4.90%

PROPERTY PROFILE REPORT

Ala Moana Banyan

Effective Rent Date	**10/21/2013**
Location	929 Sheridan Honolulu, HI 96814 Honolulu County
Distance	1.6 miles
Units	56
Vacant Units	0
Vacancy Rate	0.0%
Type	Highrise (8 stories)
Year Built/Renovated	1969 / N/A
Marketing Began	N/A
Leasing Began	N/A
Last Unit Leased	N/A
Major Competitors	None Identified
Tenant Characteristics	Mixed tenancy, many Japanese immigrants
Contact Name	William / Mitzu
Phone	808.955.0650/808.593.1180

Market Information

Program	Market
Annual Turnover Rate	23%
Units/Month Absorbed	N/A
HCV Tenants	0%
Leasing Pace	2 to 3 Weeks
Annual Chg. in Rent	4% decrease of larger studio units
Concession	None

Utilities

A/C	not included -- window
Cooking	not included -- electric
Water Heat	not included -- electric
Heat	not included -- electric
Other Electric	not included
Water	included
Sewer	included
Trash Collection	included

Unit Mix (face rent)

Beds	Baths	Type	Units	Size (SF)	Rent	Concession (monthly)	Restriction	Waiting List	Vacant	Vacancy Rate	Max Rent?	Range
0	1	Highrise (8 stories)	35	307	$800	$0	Market	No	0	0.0%	N/A	None
0	1	Highrise (8 stories)	20	307	$1,200	$0	Market	No	0	0.0%	N/A	None
1	1	Highrise (8 stories)	1	560	$1,950	$0	Market	No	0	0.0%	N/A	None

Unit Mix

Market	Face Rent	Conc.	Concd. Rent	Util.	Adj. Rent
Studio / 1BA	$800 - $1,200	$0	$800 - $1,200	$0	$800 - $1,200
1BR / 1BA	$1,950	$0	$1,950	$0	$1,950

Amenities

In-Unit

Blinds
Ceiling Fan
Refrigerator
Carpeting
Oven
Window A/C

Security

Intercom (Phone)
Limited Access
Perimeter Fencing

Services

None

Property

Elevators
Central Laundry
On-Site Management
Garage
Off-Street Parking

Premium

None

Other

None

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Comments

The contact reported that the studio units that rent for $800 a month do not have a kitchenette. Studio units with a kitchenette (which includes an oven and refrigerator) rent for $1,200 a month. Management stated that basic cable is provided to all units for no additional charge. The contact indicated that they do not have any available units at this time but she anticipated a few units to become available over the next month.

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PROPERTY PROFILE REPORT

Alexander Gardens

Effective Rent Date	**10/23/2013**
Location	1472 Alexander Honolulu, HI 96822 Honolulu County
Distance	0.6 miles
Units	30
Vacant Units	0
Vacancy Rate	0.0%
Type	Garden (3 stories)
Year Built/Renovated	1957 / 1977
Marketing Began	N/A
Leasing Began	N/A
Last Unit Leased	N/A
Major Competitors	None identified
Tenant Characteristics	Mixed tenancy
Contact Name	Ryan / Venissa
Phone	808.593.6357/808-454-3498

Market Information

Program	Market
Annual Turnover Rate	15%
Units/Month Absorbed	N/A
HCV Tenants	0%
Leasing Pace	1 week
Annual Chg. in Rent	None
Concession	None

Utilities

A/C	not included -- window
Cooking	not included -- gas
Water Heat	not included -- gas
Heat	not included -- gas
Other Electric	not included
Water	not included
Sewer	not included
Trash Collection	not included

Unit Mix (face rent)

Beds	Baths	Type	Units	Size (SF)	Rent	Concession (monthly)	Restriction	Waiting List	Vacant	Vacancy Rate	Max Rent?	Range
0	1	Garden (3 stories)	3	336	$1,200	$0	Market	No	0	0.0%	N/A	None
1	1	Garden (3 stories)	18	446	$1,375	$0	Market	No	0	0.0%	N/A	None
2	1	Garden (3 stories)	9	716	$1,600	$0	Market	No	0	0.0%	N/A	None

Unit Mix

Market	Face Rent	Conc.	Concd. Rent	Util.	Adj. Rent
Studio / 1BA	$1,200	$0	$1,200	$76	$1,276
1BR / 1BA	$1,375	$0	$1,375	$87	$1,462
2BR / 1BA	$1,600	$0	$1,600	$99	$1,699

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Amenities

In-Unit

Balcony/Patio
Carpeting
Exterior Storage
Refrigerator
Washer/Dryer hookup
Blinds
Coat Closet
Oven
Window A/C

Security

Intercom (Buzzer)
Perimeter Fencing

Services

None

Property

Central Laundry
Picnic Area
Swimming Pool
Off-Street Parking
Recreation Areas

Premium

None

Other

None

Comments

The property is a condominium development that is 50 percent occupied by renters.

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PROPERTY PROFILE REPORT

Capitol Place Apartments

Effective Rent Date	**10/31/2013**
Location	1200 Queen Emma Street Honolulu, HI 96813 Honolulu County
Distance	2.1 miles
Units	185
Vacant Units	6
Vacancy Rate	3.2%
Type	Highrise (39 stories)
Year Built/Renovated	2008 / N/A
Marketing Began	N/A
Leasing Began	N/A
Last Unit Leased	N/A
Major Competitors	None Identified
Tenant Characteristics	Retirees, young professionals, families, many military personnel in the three bedroom units
Contact Name	Property Manager/RE Agent (Tammy
Phone	808.695.2000/808.393.8744

Market Information

Program	Market
Annual Turnover Rate	10%
Units/Month Absorbed	N/A
HCV Tenants	0%
Leasing Pace	Two weeks
Annual Chg. in Rent	5%
Concession	None

Utilities

A/C	not included -- central
Cooking	not included -- electric
Water Heat	not included -- electric
Heat	not included -- electric
Other Electric	not included
Water	included
Sewer	included
Trash Collection	included

Unit Mix (face rent)

Beds	Baths	Type	Units	Size (SF)	Rent	Concession (monthly)	Restriction	Waiting List	Vacant	Vacancy Rate	Max Rent?	Range
1	1	Highrise (39 stories)	N/A	689	$2,500	$0	Market	Yes	0	N/A	N/A	HIGH
1	1	Highrise (39 stories)	N/A	689	$2,200	$0	Market	Yes	0	N/A	N/A	LOW
2	1	Highrise (39 stories)	N/A	810	$2,600	$0	Market	Yes	N/A	N/A	N/A	None
2	2	Highrise (39 stories)	N/A	1,093	$3,300	$0	Market	Yes	N/A	N/A	N/A	None
3	2	Highrise (39 stories)	N/A	1,348	$3,500	$0	Market	No	N/A	N/A	N/A	None
3	3	Highrise (39 stories)	N/A	1,500	$4,800	$0	Market	No	N/A	N/A	N/A	None

Unit Mix

Market	Face Rent	Conc.	Concd. Rent	Util.	Adj. Rent
1BR / 1BA	$2,200 - $2,500	$0	$2,200 - $2,500	$0	$2,200 - $2,500
2BR / 1BA	$2,600	$0	$2,600	$0	$2,600
2BR / 2BA	$3,300	$0	$3,300	$0	$3,300
3BR / 2BA	$3,500	$0	$3,500	$0	$3,500
3BR / 3BA	$4,800	$0	$4,800	$0	$4,800

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Amenities

In-Unit

Balcony/Patio
Carpeting
Coat Closet
Exterior Storage
Garbage Disposal
Oven
Washer/Dryer
Blinds
Central A/C
Dishwasher
Ceiling Fan
Microwave
Refrigerator

Security

Limited Access

Services

None

Property

Concierge
Garage
Off-Street Parking
Picnic Area
Swimming Pool
Wi-Fi
Exercise Facility
Jacuzzi
On-Site Management
Playground
Theatre

Premium

Floor
View

Other

None

Comments

Information was collected from property management as well as a real estate agent leasing units at the property. Management reported that of the 394 units at the property, 209 of the units are owner-occupied and 185 units are renter-occupied. Management reported that there are 66 one-bedroom units, 262 two-bedroom units, and 66 three-bedroom units. Management also reported that rents have generally increased over the past year at the property and that the higher the floor, the higher the rent typically is. The real estate agent indicated that the majority of three-bedroom units were rented by military personnel as they are the only ones who can afford the higher rental prices due to their housing allowances. The real estate agent also indicated that there was a high demand for lower priced rentals in Honolulu, as many of the prospective tenants that contact her cannot afford the units in the market. The real estate agent mentioned that internet and basic cable are included in the rents.

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PROPERTY PROFILE REPORT

Liona Apartments

Effective Rent Date	**10/21/2013**
Location	952 Ahana Street Honolulu, HI 96814 Honolulu County
Distance	1.1 miles
Units	55
Vacant Units	1
Vacancy Rate	1.8%
Type	Lowrise (3 stories)
Year Built/Renovated	1962 / 2010
Marketing Began	N/A
Leasing Began	N/A
Last Unit Leased	N/A
Major Competitors	None Identified
Tenant Characteristics	Mixed tenancy
Contact Name	Jason
Phone	808.738.3106/808.738.3100

Market Information

Program	Market
Annual Turnover Rate	15%
Units/Month Absorbed	N/A
HCV Tenants	6%
Leasing Pace	1 to 2 Weeks
Annual Chg. in Rent	Studio increased 2%, 1BR dec. 2%
Concession	None

Utilities

A/C	not included -- none
Cooking	not included -- electric
Water Heat	not included -- electric
Heat	not included -- electric
Other Electric	not included
Water	included
Sewer	included
Trash Collection	included

Unit Mix (face rent)

Beds	Baths	Type	Units	Size (SF)	Rent	Concession (monthly)	Restriction	Waiting List	Vacant	Vacancy Rate	Max Rent?	Range
0	1	Lowrise (3 stories)	44	300	$895	$0	Market	No	1	2.3%	N/A	None
1	1	Lowrise (3 stories)	11	560	$1,150	$0	Market	No	0	0.0%	N/A	None

Unit Mix

Market	Face Rent	Conc.	Concd. Rent	Util.	Adj. Rent
Studio / 1BA	$895	$0	$895	$0	$895
1BR / 1BA	$1,150	$0	$1,150	$0	$1,150

Amenities

In-Unit

Blinds
Ceiling Fan
Oven
Carpeting
Garbage Disposal
Refrigerator

Security

Limited Access
Patrol
Video Surveillance

Services

None

Property

Garage
Off-Street Parking
Central Laundry

Premium

None

Other

None

Comments

Management reported that the property has 30 off-street surface parking spaces which cost $50 a month and 50 garage units which cost $100 a month.

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PROPERTY PROFILE REPORT

Punahou Circle Apartments

Effective Rent Date	**10/09/2013**
Location	1617 South Beretania Street Honolulu, HI 96826 Honolulu County
Distance	0.6 miles
Units	96
Vacant Units	8
Vacancy Rate	8.3%
Type	Highrise (12 stories)
Year Built/Renovated	1963 / N/A
Marketing Began	N/A
Leasing Began	N/A
Last Unit Leased	N/A
Major Competitors	Condominium rentals in the area
Tenant Characteristics	50% families, 50% students
Contact Name	Pete/Tisha
Phone	Property: (808)949-6998/ Property Mgt:

Market Information

Program	Market
Annual Turnover Rate	13%
Units/Month Absorbed	N/A
HCV Tenants	2%
Leasing Pace	Pre-lease to one week
Annual Chg. in Rent	Fluctuated
Concession	None

Utilities

A/C	not included -- central
Cooking	not included -- electric
Water Heat	not included -- electric
Heat	not included -- electric
Other Electric	not included
Water	included
Sewer	included
Trash Collection	included

Unit Mix (face rent)

Beds	Baths	Type	Units	Size (SF)	Rent	Concession (monthly)	Restriction	Waiting List	Vacant	Vacancy Rate	Max Rent?	Range
0	1	Highrise (12 stories)	18	485	$1,100	$0	Market	No	4	22.2%	N/A	None
1	1	Highrise (12 stories)	46	580	$1,150	$0	Market	No	3	6.5%	N/A	None
2	1	Highrise (12 stories)	32	800	$1,850	$0	Market	No	1	3.1%	N/A	None

Unit Mix

Market	Face Rent	Conc.	Concd. Rent	Util.	Adj. Rent
Studio / 1BA	$1,100	$0	$1,100	$0	$1,100
1BR / 1BA	$1,150	$0	$1,150	$0	$1,150
2BR / 1BA	$1,850	$0	$1,850	$0	$1,850

Amenities

In-Unit

Balcony/Patio
Carpeting
Garbage Disposal
Refrigerator
Blinds
Ceiling Fan
Oven

Security

Limited Access

Services

None

Property

Elevators
Central Laundry
Garage
On-Site Management

Premium

None

Other

None

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Comments

Management indicated that approximately half of their tenants are students, which leads to higher during the summer.

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PROPERTY PROFILE REPORT

Rainbow Vista

Effective Rent Date	**10/09/2013**
Location	2436 S. Beretania Honolulu, HI 96826 Honolulu County
Distance	0.8 miles
Units	27
Vacant Units	0
Vacancy Rate	0.0%
Type	Lowrise (3 stories)
Year Built/Renovated	1970 / 1990's
Marketing Began	N/A
Leasing Began	N/A
Last Unit Leased	N/A
Major Competitors	None Identified
Tenant Characteristics	Mixed tenancy
Contact Name	Jessica
Phone	866.621.8777/808.253.9883

Market Information

Program	Market
Annual Turnover Rate	22%
Units/Month Absorbed	N/A
HCV Tenants	0%
Leasing Pace	2 Weeks
Annual Chg. in Rent	Fluctuated
Concession	None

Utilities

A/C	not included
Cooking	not included -- gas
Water Heat	not included -- gas
Heat	not included -- electric
Other Electric	not included
Water	included
Sewer	included
Trash Collection	included

Unit Mix (face rent)

Beds	Baths	Type	Units	Size (SF)	Rent	Concession (monthly)	Restriction	Waiting List	Vacant	Vacancy Rate	Max Rent?	Range
0	1	Lowrise (3 stories)	6	317	$1,190	$0	Market	No	0	0.0%	N/A	None
1	1	Lowrise (3 stories)	13	491	$1,375	$0	Market	No	0	0.0%	N/A	AVG
1	1	Lowrise (3 stories)	0	491	$1,420	$0	Market	No	0	N/A	N/A	HIGH
1	1	Lowrise (3 stories)	0	491	$1,375	$0	Market	No	0	N/A	N/A	LOW
2	1	Lowrise (3 stories)	8	723	$1,850	$0	Market	No	0	0.0%	N/A	None

Unit Mix

Market	Face Rent	Conc.	Concd. Rent	Util.	Adj. Rent
Studio / 1BA	$1,190	$0	$1,190	$0	$1,190
1BR / 1BA	$1,375 - $1,420	$0	$1,375 - $1,420	$0	$1,375 - $1,420
2BR / 1BA	$1,850	$0	$1,850	$0	$1,850

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Amenities

In-Unit

Blinds
Carpeting
Garbage Disposal
Oven
Refrigerator

Security

Intercom (Buzzer)
Limited Access
Perimeter Fencing

Services

None

Property

Garage
Central Laundry
Off-Street Parking
On-Site Management

Premium

None

Other

None

Comments

The property does not accept housing choice vouchers

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PROPERTY PROFILE REPORT

Royal Capital Plaza

Effective Rent Date	**11/08/2013**
Location	876 Curtis Street Honolulu, HI 96813 Honolulu County
Distance	2 miles
Units	304
Vacant Units	4
Vacancy Rate	1.3%
Type	Highrise (40 stories)
Year Built/Renovated	1986 / N/A
Marketing Began	N/A
Leasing Began	N/A
Last Unit Leased	N/A
Major Competitors	None Identified
Tenant Characteristics	Mixed tenancy from local area and abroad
Contact Name	Michael
Phone	808-591-8823 ext 2

Market Information

Program	Market
Annual Turnover Rate	18%
Units/Month Absorbed	N/A
HCV Tenants	0%
Leasing Pace	1 to 2 weeks
Annual Chg. in Rent	Varies by owner
Concession	None

Utilities

A/C	not included -- none
Cooking	not included -- electric
Water Heat	not included -- electric
Heat	not included -- electric
Other Electric	not included
Water	not included
Sewer	included
Trash Collection	included

Unit Mix (face rent)

Beds	Baths	Type	Units	Size (SF)	Rent	Concession (monthly)	Restriction	Waiting List	Vacant	Vacancy Rate	Max Rent?	Range
1	1	Highrise (40 stories)	137	650	$1,650	$0	Market	No	1	0.7%	N/A	AVG*
2	2	Highrise (40 stories)	167	886	$1,950	$0	Market	No	3	1.8%	N/A	AVG*

Unit Mix

Market	Face Rent	Conc.	Concd. Rent	Util.	Adj. Rent
1BR / 1BA	$1,650	$0	$1,650	$24	$1,674
2BR / 2BA	$1,950	$0	$1,950	$30	$1,980

Amenities

In-Unit

Blinds
Dishwasher
Garbage Disposal
Refrigerator
Washer/Dryer
Carpeting
Exterior Storage
Oven
Walk-In Closet

Security

Intercom (Phone)
Limited Access
Patrol
Video Surveillance

Services

None

Property

Clubhouse/Meeting
Exercise Facility
On-Site Management
Recreation Areas
Swimming Pool
Elevators
Garage
Picnic Area
Sauna

Premium

Floor
View

Other

None

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Comments

The contact stated that the development is a mix of owner-occupied/for sale condominiums and rental units. Estimated rental units are illustrated in the profile. Floors 1-5 are for the parking garage. One garage space is included with rent. It was approximated that rooms with views typically included a premium of $200 to $350 per month. Data verified through on site management, real estate firms listing rentals, and craigslist.com.

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PROPERTY PROFILE REPORT

Tiare Apartments

Effective Rent Date	**10/23/2013**
Location	1735 Dole Street Honolulu, HI 96822 Honolulu County
Distance	0.7 miles
Units	30
Vacant Units	1
Vacancy Rate	3.3%
Type	Garden (3 stories)
Year Built/Renovated	1960 / N/A
Marketing Began	N/A
Leasing Began	N/A
Last Unit Leased	N/A
Major Competitors	None identified
Tenant Characteristics	Mixed tenancy
Contact Name	Brandie / 808-593-6867
Phone	808.593.9100

Market Information

Program	Market
Annual Turnover Rate	10%
Units/Month Absorbed	N/A
HCV Tenants	0%
Leasing Pace	1 week
Annual Chg. in Rent	None
Concession	None

Utilities

A/C	not included
Cooking	not included -- gas
Water Heat	not included -- gas
Heat	not included
Other Electric	not included
Water	included
Sewer	not included
Trash Collection	not included

Unit Mix (face rent)

Beds	Baths	Type	Units	Size (SF)	Rent	Concession (monthly)	Restriction	Waiting List	Vacant	Vacancy Rate	Max Rent?	Range
0	1	Garden (3 stories)	3	469	$1,200	$0	Market	No	0	0.0%	N/A	None
1	1	Garden (3 stories)	16	572	$1,350	$0	Market	No	1	6.2%	N/A	None
1	1	Garden (3 stories)	8	640	$1,400	$0	Market	No	0	0.0%	N/A	None
2	1	Garden (3 stories)	3	771	$1,675	$0	Market	No	0	0.0%	N/A	None

Unit Mix

Market	Face Rent	Conc.	Concd. Rent	Util.	Adj. Rent
Studio / 1BA	$1,200	$0	$1,200	$57	$1,257
1BR / 1BA	$1,350 - $1,400	$0	$1,350 - $1,400	$63	$1,413 - $1,463
2BR / 1BA	$1,675	$0	$1,675	$69	$1,744

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Amenities

In-Unit

Balcony/Patio
Carpeting
Exterior Storage
Oven
Blinds
Coat Closet
Ceiling Fan
Refrigerator

Security

None

Services

None

Property

Elevators
Off-Street Parking
Recreation Areas
Central Laundry
Picnic Area
Swimming Pool

Premium

None

Other

None

Comments

This property is a condominium property where 50 percent of the tenants are renters.

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PROPERTY PROFILE REPORT

Waena Apartments

Effective Rent Date	**10/21/2013**
Location	1320 Aala St. Honolulu, HI 96817 Honolulu County
Distance	3.3 miles
Units	468
Vacant Units	23
Vacancy Rate	4.9%
Type	Garden (3 stories)
Year Built/Renovated	1970 / 2011
Marketing Began	N/A
Leasing Began	N/A
Last Unit Leased	N/A
Major Competitors	N/A
Tenant Characteristics	N/A
Contact Name	Leasing agent
Phone	808.550.0440

Market Information

Program	Market
Annual Turnover Rate	30%
Units/Month Absorbed	N/A
HCV Tenants	0%
Leasing Pace	Two weeks
Annual Chg. in Rent	Increased
Concession	None

Utilities

A/C	not included -- window
Cooking	not included -- electric
Water Heat	not included -- electric
Heat	not included -- electric
Other Electric	not included
Water	included
Sewer	included
Trash Collection	included

Unit Mix (face rent)

Beds	Baths	Type	Units	Size (SF)	Rent	Concession (monthly)	Restriction	Waiting List	Vacant	Vacancy Rate	Max Rent?	Range
1	1	Garden (3 stories)	N/A	582	$1,570	$0	Market	No	N/A	N/A	N/A	HIGH
1	1	Garden (3 stories)	N/A	485	$1,505	$0	Market	No	N/A	N/A	N/A	LOW
2	1	Garden (3 stories)	N/A	760	$1,735	$0	Market	No	N/A	N/A	N/A	HIGH
2	1	Garden (3 stories)	N/A	732	$1,655	$0	Market	No	N/A	N/A	N/A	LOW
3	1	Garden (3 stories)	N/A	823	$1,980	$0	Market	No	N/A	N/A	N/A	AVG*
3	1.5	Garden (3 stories)	N/A	938	$2,115	$0	Market	No	N/A	N/A	N/A	HIGH
3	1.5	Garden (3 stories)	N/A	904	$2,035	$0	Market	No	N/A	N/A	N/A	LOW
4	2	Garden (3 stories)	N/A	1,064	$2,500	$0	Market	No	N/A	N/A	N/A	HIGH
4	2	Garden (3 stories)	N/A	1,014	$2,450	$0	Market	No	N/A	N/A	N/A	LOW

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Waena Apartments, continued

Unit Mix

Market	Face Rent	Conc.	Concd. Rent	Util.	Adj. Rent
1BR / 1BA	$1,505 - $1,570	$0	$1,505 - $1,570	$0	$1,505 - $1,570
2BR / 1BA	$1,655 - $1,735	$0	$1,655 - $1,735	$0	$1,655 - $1,735
3BR / 1BA	$1,980	$0	$1,980	$0	$1,980
3BR / 1.5BA	$2,035 - $2,115	$0	$2,035 - $2,115	$0	$2,035 - $2,115
4BR / 2BA	$2,450 - $2,500	$0	$2,450 - $2,500	$0	$2,450 - $2,500

Amenities

In-Unit

Balcony/Patio
Carpeting
Refrigerator
Blinds
Oven

Security

Patrol
Perimeter Fencing

Services

None

Property

Business Center/Computer Lab
Off-Street Parking
Picnic Area
Exercise Facility
On-Site Management
Playground

Premium

None

Other

None

Comments

No additional comments.

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PROPERTY CHARACTERISTICS

Following are relevant characteristics of comparable properties surveyed:

Location

All of the comparables are located in Honolulu, within three miles of the Subject. Each of the comparables is located in a dense area with many local amenities within walking distance. As depicted below, the Subject and all of the comparables have relatively high Walkscores, ranging between 'very walkable' and 'walker's paradise.'

WALKSCORE

Property Name	Value	Definition
Subject	**83**	**Very Walkable**
Ala Moana Banyan	94	Walkers Paradise
Alexander Gardens	77	Very Walkable
Capitol Place Apartments	98	Walkers Paradise
Liona Apartments	88	Very Walkable
Punahou Circle Apartments	85	Very Walkable
Rainbow Vista	91	Walkers Paradise
Royal Capital Plaza	95	Walkers Paradise
Tiare Apartments	77	Very Walkable
Waena Apartments	89	Very Walkable

Generally, all of the comparables are located in very walkable neighborhoods, similar to the Subject. However, all of the comparables are located within neighborhoods with slightly superior to superior condition improvements. Overall, the comparables are considered to offer slightly superior locations.

Size, Age and Condition

The Subject property will have 180 units while the comparables range in size from 30 to 468 units, with an average of 139 units. In terms of number of units, the Subject will be similar to Capitol Place Apartments, Royal Capital Plaza, and Punahou Circle Apartments. The Subject's proposed number of units appears reasonable.

The surveyed properties were constructed and/or renovated between 1957 and 2011. Liona Apartments and Waena Apartments were both renovated in 2010 and 2011, respectively and Capitol Place Apartments was built in 2008. These properties are in excellent condition and will be considered similar to the Subject. The remaining properties were constructed and/or renovated between 1957 and the 1990s and exhibit average to good condition. These properties will be considered slightly inferior to inferior to the Subject.

Unit Size
The following table illustrates the unit sizes of the Subject and the comparable properties.

UNIT SIZE COMPARISON

Unit Type	Subject	Surveyed Min	Surveyed Max	Surveyed Average	Advantage/ Disadvantage
Studio	335 - 387	300	485	334	0% to 16%
1 BR	454 - 498	446	689	566	-22% to -12%
2 BR	986 - 1,082	716	1,093	810	22% to 34%

As the table illustrates, the Subject's unit sizes are within the range of the comparables and all but the one-bedroom plans are above the averages. We have reviewed the floor plans and consider them to be marketable. Nonetheless, we have considered the general size disadvantage in our achievable rent determinations.

Number of Baths
The Subject will offer one full bath in all unit types. All comparables with studio units offer one bath in this unit type. Eleven of the 12 comparables offer one bath in one-bedroom units and five offer one bath in two-bedroom units. We believe that the proposed number of baths is market-oriented.

Amenities, Security, and Parking Comparison
A detailed description of amenities included in both the Subject properties and the comparable properties can be found in the amenity matrix following.

UNIT MATRIX REPORT

	Ohana Hale	Ala Moana Banyan	Alexander Gardens	Capitol Place Apartments	Liona Apartments	Punahou Circle Apartments	Rainbow Vista	Royal Capital Plaza	Tiare Apartments	Waena Apartments
Comp #	Subject	1	2	3	4	5	6	7	8	9
Property Information										
Property Type	Highrise (20 stories)	Highrise (8 stories)	Garden (3 stories)	Highrise (39 stories)	Lowrise (3 stories)	Highrise (12 stories)	Lowrise (3 stories)	Highrise (40 stories)	Garden (3 stories)	Garden (3 stories)
Year Built / Renovated	2014 / n/a	1969 / n/a	1957 / 1977	2008 / n/a	1962 / 2010	1963 / n/a	1970 / 1990's	1986 / n/a	1960 / n/a	1970 / 2011
Market (Conv.)/Subsidy Type	Market	Market	Market	Market	Market	Market	Market	Market	Market	Market
Utility Adjusments										
Cooking	no	no	no	no	no	no	no	no	no	no
Water Heat	no	no	no	no	no	no	no	no	no	no
Heat	no	no	no	no	no	no	no	no	no	no
Other Electric	no	no	no	no	no	no	no	no	no	no
Water	yes	yes	no	yes	yes	yes	yes	no	yes	yes
Sewer	yes	yes	no	yes	yes	yes	yes	yes	no	yes
Trash Collection	yes	yes	no	yes	yes	yes	yes	yes	no	yes
In-Unit Amenities										
Balcony/Patio	no	no	yes	yes	no	yes	no	no	yes	yes
Blinds	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Carpet/Hardwood	yes	no	no	no	no	no	no	no	no	no
Carpeting	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Central A/C	yes	no	no	yes	no	no	no	no	no	no
Coat Closet	no	no	yes	yes	no	no	no	no	yes	no
Dishwasher	yes	no	no	yes	no	no	no	yes	no	no
Exterior Storage	no	no	yes	yes	no	no	no	yes	yes	no
Ceiling Fan	no	yes	no	yes	yes	yes	no	no	yes	no
Garbage Disposal	yes	no	no	yes	yes	yes	yes	yes	no	no
Microwave	yes	no	no	yes	no	no	no	no	no	no
Oven	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Refrigerator	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Walk-In Closet	no	no	no	no	no	no	no	yes	no	no
Window A/C	no	yes	yes	no	no	no	no	no	no	no
Washer/Dryer	yes	no	no	yes	no	no	no	yes	no	no
Washer/Dryer hookup	yes	no	yes	no	no	no	no	no	no	no
Property Amenities										
Business Center/Computer Lab	no	no	no	no	no	no	no	no	no	yes
Clubhouse/Meeting Room/Community Room	no	no	no	no	no	no	no	yes	no	no
Concierge	no	no	no	yes	no	no	no	no	no	no
Elevators	yes	yes	no	no	no	yes	no	yes	yes	no
Exercise Facility	no	no	no	yes	no	no	no	yes	no	yes
Garage	yes	yes	no	yes	yes	yes	yes	yes	no	no
Jacuzzi	no	no	no	yes	no	no	no	no	no	no
Central Laundry	no	yes	yes	no	yes	yes	yes	no	yes	no
Off-Street Parking	yes	yes	yes	yes	yes	no	yes	no	yes	yes
On-Site Management	yes	yes	yes	yes	no	yes	yes	yes	no	yes
Picnic Area	no	no	yes	yes	no	no	no	yes	yes	yes
Playground	no	no	no	yes	no	no	no	no	no	yes
Recreation Areas	no	no	yes	no	no	no	no	yes	yes	no
Sauna	no	no	no	no	no	no	no	yes	no	no
Swimming Pool	no	no	yes	yes	no	no	no	yes	yes	no
Theatre	no	no	no	yes	no	no	no	no	no	no
Wi-Fi	no	no	no	yes	no	no	no	no	no	no
Garage Fee	N/A	$100.00	N/A	N/A	$100.00	$60.00	$100.00	N/A	N/A	N/A
Services										
Security										
Intercom (Buzzer)	yes	no	yes	no	no	no	yes	no	no	no
Intercom (Phone)	no	yes	no	no	no	no	no	yes	no	no
Limited Access	no	yes	no	yes	yes	yes	yes	yes	no	no
Patrol	no	no	no	no	yes	no	no	yes	no	yes
Perimeter Fencing	no	yes	yes	no	no	no	yes	no	no	yes
Video Surveillance	no	no	no	no	yes	no	no	yes	no	no
Premium Amenities										
Floor	yes	no	no	yes	no	no	no	yes	no	no
View	yes	no	no	yes	no	no	no	yes	no	no

As the previous table illustrates, the Subject will offer a competitive in-unit amenities package in comparison to the comparable properties. The most common in-unit amenities that will be offered at the Subject but are not offered at several comparables include garbage disposals, central air conditioning, dishwashers, microwaves, and in-unit washers/dryer. In contrast, the Subject will not offer cable/internet included in the rent, balconies/patios, coat closets, exterior storage, and ceiling fans. The Subject will offer a similar to inferior common area amenities package in comparison to the comparable properties. The common area amenities that will be offered at the Subject but are not offered at several comparables include elevators and on-site management. In contrast, the Subject will not offer an exercise facility, a swimming pool, and a recreation area, which are offered by multiple comparable properties. The Subject is considered competitive to slightly superior overall in terms of amenities.

The Subject will offer 198 garage parking spaces, which equates to a total of 1.1 spaces per unit. Parking will be provided at a monthly charge of $75. Six of the nine comparables offer similar garage parking, with four charging monthly fees ranging from $60 to $100 per month. Additionally, we believe that the proposed parking is reasonable given the proposed unit mix and the Subject's downtown location within close proximity to public transportation and employment nodes.

MARKET CHARACTERISTICS

Following are relevant market characteristics for comparable properties surveyed.

Absorption

None of the comparables have been recently built, thus no absorption data is available. Although two of the comparables, Liona Apartments and Waena Apartments, reported recent renovations, tenants were reportedly temporarily relocated or not displaced. Based upon the relatively low vacancy rates in the market, we believe that the Subject will reach a stabilized occupancy of 95 percent within four to five months. This lease-up period equates to a rate of approximately 36 units per month.

Turnover

We obtained annual turnover statistics from the comparable properties, ranging from 10 to 30 percent annually, with an average of 17 percent. We estimate the Subject will experience a turnover rate of approximately 20 percent or less annually, which is consistent with historic operations at the comparables.

TURNOVER

Property name	Rent Structure	Turnover
Ala Moana Banyan	Market	23%
Alexander Gardens	Market	15%
Capitol Place Apartments	Market	10%
Liona Apartments	Market	15%
Punahou Circle Apartments	Market	13%
Rainbow Vista	Market	22%
Royal Capital Plaza	Market	18%
Tiare Apartments	Market	10%
Waena Apartments	Market	30%
Average Turnover		**17%**

Concessions

None of the comparables are currently offering rental concessions. Concessions are consistent with ongoing marketing strategies during periods of high vacancy and increased tenant turnover. According to market participants, concessions within this market are not common given the demand for rental housing of all types. As a newly constructed development, we do not anticipate the Subject will need to offer concessions to remain competitive within the market.

Vacancy Levels

The following table details vacancy levels at comparable properties included in the survey.

OVERALL VACANCY

Property Name	Rent Structure	Total Units	Vacant Units	Vacancy Rate
Ala Moana Banyan	Market	56	0	0.0%
Alexander Gardens	Market	30	0	0.0%
Capitol Place Apartments	Market	185	6	3.2%
Liona Apartments	Market	55	1	1.8%
Punahou Circle Apartments	Market	96	8	8.3%
Rainbow Vista	Market	27	0	0.0%
Royal Capital Plaza	Market	304	4	1.3%
Tiare Apartments	Market	30	1	3.3%
Waena Apartments	Market	468	23	4.9%
Total		**1,251**	**43**	**3.4%**

Vacancy rates at the comparable properties range from zero to 8.3 percent, with an overall vacancy rate of 3.4 percent. It should be noted that the property manager at Punahou Circle Apartments indicted that 50 percent of tenants are students and vacancies typically fluctuate as a result. Taking all of this data into account, we expect the Subject will be able to maintain a vacancy rate of five percent or less upon stabilization.

Waiting Lists

A waiting list indicates a strong market with high occupancy and unmet demand within the market. Currently eight of nine comparables do not maintain a waiting list, although several are fully occupied and several managers explained that wait lists are not permitted. Capitol Place Apartments, the most recently built comparable, does maintain a waiting list, typically for their one and two-bedroom units. Therefore, we believe that the Subject may maintain a small waiting list once fully absorbed.

View/Floor Premiums

The Subject will offer a 21-story high rise design (there will be 13 stories of residential above an eight story parking garage). Based on our evaluation of the Subject building design, we believe view and floor premiums are achievable at the Subject. Two of the comparables offer floor/view premiums, Capitol Place Apartments and Royal Capital Plaza. Each of these offers units at higher floors and with ocean/mountain views at a premium between $200 and $350. These properties are 39 and 40 stories each, respectively. Managers estimated that a rental view premium would be achievable starting on the 15th floor for views oriented toward Diamond Head/ocean. Therefore, we believe that the units on the 15th through 20th floors could achieve a premium of approximately $200.

REASONABILITY OF RENTS

Achievable Market Rent

The maximum achievable as renovated rents were determined by comparing the aesthetic quality, amenities, unit sizes, etc. to that of the market rate projects in the area. Novogradac & Company concluded that the Subject will be competitive with the market rate competition and achievable rents are within than the market rental range. Achievable rents represent net market rate rent levels that we believe a project of the Subject's condition and quality could reasonably achieve.

The following tables illustrate the market rents, and rents per square foot, being achieved at the comparables and Novoco estimate achievable market rents (and achievable rents per square foot). Rents have been adjusted for difference in utility structure.

MARKET RENT COMPARISON – ADJUSTED RENT

Property Name	0BR	1BR	2BR
Capitol Place Apartments	-	$2,200 - $2,500	$2,600 - $3,300
Waena Apartments	-	$1,505 - $1,570	$1,655 - $1,735
Ala Moana Banyan	$800 - $1,200	$1,950	-
Royal Capital Plaza	-	$1,674	$1,980
Punahou Circle Apartments	$1,100	$1,150	$1,850
Rainbow Vista	$1,190	$1,375 - $1,420	$1,850
Tiare Apartments	$1,257	$1,413 - $1,463	$1,744
Alexander Gardens	$1,276	$1,462	$1,699
Liona Apartments	$895	$1,150	-
Average (excluding Subject)	**$1,103**	**$1,586**	**$2,046**
Novoco Achievable Rents	**$1,125 - $1,275**	**$1,450 - $1,500**	**$2,150 - $2,250**

MARKET RENT COMPARISON - ADJUSTED RENT PER SQUARE FOOT

Property Name	0BR	1BR	2BR
Capitol Place Apartments	-	$3.19 - $3.63	$3.02
Waena Apartments	-	$2.70 - $3.10	$2.26 - $2.28
Ala Moana Banyan	$2.61 - $3.91	$3.48	-
Royal Capital Plaza	-	$2.58	$2.23
Punahou Circle Apartments	$2.27	$1.98	$2.31
Rainbow Vista	$3.80	$2.80 - $2.89	$2.56
Tiare Apartments	$2.68	$2.29 - $2.47	$2.26
Alexander Gardens	$3.80	$3.28	$2.37
Liona Apartments	$2.98	$2.05	-
Average (excluding Subject)	**$3.14**	**$2.80**	**$2.41**
Novoco Achievable Rent Per Square Foot	**$3.29 - $3.36**	**$3.01 - $3.19**	**$2.08 - $2.18**

The most comparable market rate developments to the Subject are Capitol Place Apartments and Tiare Apartments. None of the market rate comparables are able to match the superior condition of the Subject as it will be new construction. Capitol Place Apartments has a slightly superior location, slightly inferior condition (although it was built in 2008), slightly superior unit sizes, slightly superior in-unit amenities, and slightly superior community amenities. Capitol Place Apartments include garage parking, while the Subject will charge $75 per month. Also, Capitol Place Apartments offers one bathroom or two bathrooms in their two-bedroom units, while the Subject will only offer one bathroom in its two-bedroom units. Tiare Apartments has a slightly superior location, inferior condition, slightly superior unit sizes, slightly inferior in-unit amenities, and similar property amenities. We believe that the Subject will be able to achieve base rents within the lower end of the range of these two comparables.

The Novoco estimated achievable base rents for the Subject's studio, one, and two-bedroom units are $1,125 to $1,275, $1,450 to $1,500, and $2,150 to $2,250, respectively. The Novoco estimated achievable rents for the studio and two-bedroom units are slightly above the average rents for the respective unit types, which we believe is reasonable given the Subject's new

construction quality and competitive amenities. We have assumed these achievable rent levels in determining minimum incomes in the demand estimation section that follows.

UNIT MIX AND ACHIEVABLE RENTS

Unit Type	Number of Units	Unit Size (SF)	Achievable Rents
0BR/1BA	84	335	$1,125
0BR/1BA	12	387	$1,275
1BR/1BA	24	454	$1,450
1BR/1BA	22	484	$1,475
1BR/1BA	11	494	$1,500
1BR/1BA	22	498	$1,500
2BR/1BA	2	986	$2,150
2BR/1BA	2	1,005	$2,150
2BR/1BA	1	1,082	$2,250
Total	**180**		

Summary Evaluation of the Project

Upon completion of construction, the Subject will offer a good quality product with competitive amenities. The primary strengths of the Subject will its excellent condition, views, and amenities. Average vacancy within the market is 3.4 percent, although Capitol Place Apartments, the most similar comparable property to the Subject, maintains a waiting list for one and two-bedroom units. Concessions are not common within the market. The Novoco estimated achievable base rents for the Subject's studio, one, and two-bedroom units are $1,125 to $1,275, $1,450 to $1,500, and $2,150 to $2,250, respectively. We believe the NOVOCO achievable rents for the Subject will be well-accepted within the market.

MULTIFAMILY RENTAL DEMAND ANALYSIS

PROJECT SPECIFIC DEMAND ANALYSIS

Introduction

Ohana Hale is a proposed new construction development. We calculated the number of income-eligible residents in this section of the analysis assuming the achievable market rents were set in place.

Household size is assumed to be 1.5 persons per bedroom type for rent calculation purposes.

To assess the likely number of tenants in the market area eligible to live in the Subject, we used Census information as provided by ESRI Demographics and Ribbon Demographics.

Primary Market Area Defined

For the purpose of this study, it is necessary to define the market area, or the area from which potential tenants for the project are likely to be drawn. In some areas, residents are very much "neighborhood oriented" and are generally very reluctant to move from the area where they have grown up. In other areas, residents are much more mobile and will relocate to a completely new area, especially if there is an attraction such as affordable housing at below market rents. The Subject's PMA has been previously defined. We anticipate that 75 percent of the Subject's tenants are anticipated to originate from the PMA; demand estimates will be adjusted to reflect this potential for "leakage."

Income Eligible Calculations

First, we estimate the Subject's minimum and maximum income levels. For market rate multifamily properties, management companies and landlords typically determine the minimum allowable income by requiring a household to earn at least three times the asking rent. Minimum income levels were calculated based on the rents concluded in the multifamily supply section of the report. Since the income bands by household data presented relates to renter households, we have assumed that any current renter household existing in the market would consider the Subject, if they meet the minimum income requirement. Thus, we have not set a maximum income level.

Secondly, we illustrate the household population segregated by income band in order to determine those who are income-qualified to reside in the Subject property.

Third, we combine the income range with the income distribution analysis in order to determine the number of potential income-qualified renter households. This provides an estimate of the total number of renter households that are income-eligible.

The maximum and minimum eligible household incomes for the Subject's concluded units are as follows:

INCOME LIMITS

Unit Type	Minimum Allowable Income	Maximum Allowable Income
	Market Rate	
Studio	$40,500	-
1BR	$52,200	-
2BR	$77,400	-

Income Distribution Table

The following tables illustrate the income distribution of income-qualified renter households in the PMA.

INCOME DISTRIBUTION 2012

Income Cohort	Total Renter Households	Market Rate		
		cohort overlap	*% in cohort*	*# in cohort*
$0-9,999	7,969			
$10,000-19,999	8,207			
$20,000-29,999	8,879			
$30,000-39,999	8,585			
$40,000-49,999	7,996	9,499	95.00%	7,597
$50,000-59,999	6,207	9,999	100.00%	6,207
$60,000-74,999	7,983	14,999	100.00%	7,983
$75,000-99,999	9,666	14,999	60.00%	5,799
$100,000-124,999	5,535	24,999	100.00%	5,535
$125,000-149,999	2,962	24,999	100.00%	2,962
$150,000-199,999	2,472	49,999	100.00%	2,472
$200,000+	2,403	200,000	100.00%	2,403
Total	**78,866**		**51.93%**	**40,959**

Based on this analysis, using 2012 income and demographic data, approximately 40.6 percent of renter households within the PMA would be able to afford to live at the Subject based upon the proposed rent levels.

Number of Appropriate Sized Households

In order to determine the number of appropriate sized households at each bedroom type, first we analyzed the number of persons in each household by renter tenure, as detailed in the following table.

PMA RENTER HOUSEHOLD SIZE DISTRIBUTION

	2000		2012		2017	
Household Size	Total Renter Households	Percent	Total Renter Households	Percent	Total Renter Households	Percent
1 person	25,767	34.6%	28,552	36.2%	30,005	36.8%
2 persons	21,902	29.4%	22,924	29.1%	23,570	28.9%
3 persons	11,400	15.3%	11,609	14.7%	11,911	14.6%
4 persons	8,113	10.9%	7,933	10.1%	8,039	9.9%
5+ persons	7,353	9.9%	7,847	10.0%	7,969	9.8%
Total	**74,535**	**100.0%**	**78,866**	**100.0%**	**81,494**	**100.0%**

Source: Ribbon Demographics 2013, Novogradac & Company LLP, October 2013

Second, we made assumptions based on the average household size in the market; to estimate the distribution of households by unit type. Following are these assumptions.

HOUSEHOLD DISTRIBUTION

40%	Of one-person households in studio units
10%	Of two-person households in studio units
50%	Of one-person households in 1BR units
50%	Of two-person households in 1BR units
10%	Of one-person households in 2BR units
40%	Of two-person households in 2BR units
70%	Of three-person households in 2BR units
10%	Of four-person households in 2BR units
30%	Of three-person households in 3BR units
80%	Of four-person households in 3BR units
50%	Of five-person households in 3BR units

Third, we multiplied the percentage of renter households at each household size by the distribution of those households within each bedroom type. The sum of these percentages is the appropriate percentage of renter households for each bedroom type.

Appropriate Sized Renter Households						
Studio Unit		31.3%	*	40.0%	=	12.5%
	+	25.1%	*	10.0%	=	2.5%
	+	16.4%	*	0.0%	=	0.0%
	+	13.0%	*	0.0%	=	0.0%
	+	14.2%	*	0.0%	=	0.0%
	=					**15.0%**
One-Bedroom Unit		31.3%	*	50.0%	=	15.6%
	+	25.1%	*	50.0%	=	12.6%
	+	16.4%	*	0.0%	=	0.0%
	+	13.0%	*	0.0%	=	0.0%
	+	14.2%	*	0.0%	=	0.0%
	=					**28.2%**
Two-Bedroom Unit		31.3%	*	10%	=	3.1%
	+	25.1%	*	40%	=	10.0%
	+	16.4%	*	70%	=	11.5%
	+	13.0%	*	10%	=	1.3%
	+	14.2%	*	-	=	0.0%
	=					**25.9%**
Total						**69.2%**

ANNUAL CAPTURE RATE ANALYSIS

This calculation derives an estimated market capture rate based on per annum demand. This is an indication of the percentage of the net demand in one year that a rental property at the Subject site consisting of the 180 recommended units must attract to reach stabilized occupancy. This measure essentially takes the available household demand searching for rentals in the market area and deducts competition to determine net demand available to the Subject. The table following outlines the analysis of this methodology.

ANNUAL DEMAND

Calculation					PMA
Number of Renter Households in 2012					78,866
Increase in Number of Renter Households					2,628
Number of Renter Households in 2017					81,494
Existing Demand					
Percentage of Income-Qualified Renter Households					51.9%
Number of Income-Qualified Renter Households					40,931
Losses to Inventory via Conversion of Demolition (accounts for frictional vacancy)					8.5%
Existing Income-Qualified Renter Household Turnover					3,479
New Income-Qualified Demand, Stated Annually					
Increase in Renter Households per Annum					526
Percentage of Income-Qualified Renter Households					51.9%
New Rental Income Qualified Households					**273**
Capture Rate Analysis					
Number of Units in Subject					180
Occupied Units at Subject With Vacancy of:			5%		171
Units Pre-Leased					0
Total Demand (Turnover and Growth) from within PMA					3,752
Portion Originating within PMA					75%
Total Demand (Turnover and Growth) from within PMA					5,003
Less: Existing Projects in Absorption Process (Number of Units)			296		
Total Demand after Competition (Turnover and Growth)					**4,707**
Appropraite Sized Renter Households					
Studio Units	4,707	*	15.0%	=	707
One-bedroom Units	4,707	*	28.2%	=	1327
Two-bedroom Units	4,707	*	25.9%	=	1220
Total Demand for Appropriately Sized Renter Households					**3,255**
Capture Rate Analysis - Developer's Unit Mix					
Studio Units	96	/	707	=	13.6%
One-bedroom Units	79	/	1327	=	6.0%
Two-bedroom Units	5	/	1220	=	0.4%
Annual Capture Rate of Appropriately Sized Households	180	/	3,255	=	**5.5%**

The above tables illustrate demand for the Subject based on capture rates of income eligible owner households. Total demand, both currently present and moving into the market, is adjusted for income eligibility and renter status, it is further adjusted by the number of units that are currently in lease-up or planned in the PMA. The demand estimate remaining is the number of

units that will be unsatisfied in the market without the Subject. In this case it represents 4,707 units, of which 3,255 are appropriately sized households for the Subject. These un-accommodated units of demand will be forced to leave the market without the addition of multifamily housing units. The capture rate is the percentage that the Subject will capture of this demand. A number below 100 percent is a positive indicator and represents an expected absorption rate of less than one year. A number greater than 100 percent indicates absorption pace longer than one year. The above calculation generates an annual capture rate of 13.6 percent for studio units, 6.0 percent for one-bedroom units, and 0.4 percent for two-bedroom units, and an overall rate of 5.5 percent for appropriately sized renter households, which indicates an expected absorption rate of less than one year. This capture rate is above average.

The annual demand for rental housing depends upon the following factors:

Existing Demand - Losses to Inventory via Conversion or Demolition (includes factor for frictional vacancy):
Demand from the PMA will stem from several sources in addition to new growth. These sources include demand from renter households that are forced from existing rental housing due to demolition or conversion of the housing units. Further, demand will stem from existing households that live in the area but move to a new home because people are searching for better housing or housing in a desired location (frictional vacancy). The calculation begins by determining the year 2013 base level eligible demand.

This figure is then adjusted for losses of inventory via conversion or demolition (which also accounts for frictional vacancy in the market). To determine an appropriate percentage within the market we utilized/analyzed various housing characteristics.

The following table illustrates age of housing stock within the PMA.

AGE OF HOUSING STOCK IN PMA

Years	Number of Units	Percent of Housing Stock
1999-3/2000	1,568	1.0%
1995-1998	6,108	3.9%
1990-1994	6,933	4.4%
1980-1989	16,481	10.4%
1970-1979	45,260	28.5%
1960-1969	39,208	24.7%
1950-1959	22,879	14.4%
1940-1949	10,372	6.5%
1939 and Before	9,745	6.1%
Total	**158,554**	**100.0%**

Source: ESRI Demographics 2012, Novogradac & Company LLP, October 2013

As the table indicates, approximately 27 percent of the housing stock was constructed prior to 1960 in the PMA. It is reasonable to assume that a portion of the existing housing units constructed prior to 1960 will leave the market based upon the loss of functional or physical

inadequacies of the units; therefore, we will assume approximately 5.0 percent of these units will leave the market, or 1.4 percent of the total housing supply.

It is also important to recognize demand for new rental housing will come from the market from households in inadequate living situations. According to the most recent census, approximately 1.1 percent of households in the Subject's PMA lack complete plumbing facilities in their housing units.

We have estimated that approximately 1.0 percent or less of the housing units (mostly single-family) are demolished or converted every year within the PMA.

Further, the demand needs to be adjusted for frictional vacancy within the market. According to The Dictionary of Real Estate Appraisal 5th Edition published in 2010 by the Appraisal Institute, frictional vacancy is the amount of vacant space in the market needed for orderly operation. It allows for tenant relocations as leases roll over and expire, and is considered a typical vacancy rate in a given market operating in equilibrium. We believe a frictional vacancy rate of approximately 5.0 percent is appropriate for this market. The following table illustrates our conclusion:

LOSSES TO INVENTORY VIA CONCERSION OR DEMOLITION	
Housing Stock older than 1960 to leave market due to functional or physical inadequacies	1.4%
Lacking complete plumbing facilities	1.1%
Demolition or conversion	1.0%
Frictional vacancy	5.0%
TOTAL PERCENTAGE	**8.5%**

In order to account for demand created by the previously described factors, we believe that adjusting the demand by 8.5 percent for losses of inventory via conversion or demolition, as well as frictional vacancy is conservative and reasonable.

New Renter Household Growth

Household population change as a result of new renter households moving in or out of the area: This was previously calculated, with the renter household population estimated to increase from 2012 to 2017.

Leakage

Further, it should be noted that it is likely that new renter households will be entering the market due to the lack of existing multifamily housing in excellent condition within the PMA. We have adjusted for this using a leakage factor of 25 percent in the demand.

Summary of Effective Demand in One Year

The effective demand in one year is adjusted for income eligibility and renter status, and it is further adjusted by the number of units that are currently in lease-up or planned in the PMA. As such, the calculations generate a capture rate of 5.5 percent, which indicates expected absorption of less than one year.

ADDENDUM A

Assumptions & Limiting Conditions

ASSUMPTIONS & LIMITING CONDITIONS

1. In the event that the client provided a legal description, building plans, title policy and/or survey, etc., the consultant has relied extensively upon such data in the formulation of all analyses.

2. The legal description as supplied by the client is assumed to be correct and the consultant assumes no responsibility for legal matters, and renders no opinion of property title, which is assumed to be good and merchantable.

3. All information contained in the report, which others furnished, was assumed to be true, correct, and reliable. A reasonable effort was made to verify such information, but the author assumes no responsibility for its accuracy.

4. The report was made assuming responsible ownership and capable management of the property. The analyses and projections are based on the basic assumption that the apartment complex will be managed and staffed by competent personnel and that the property will be professionally advertised and aggressively promoted

5. The sketches, photographs, and other exhibits in this report are solely for the purpose of assisting the reader in visualizing the property. The author made no property survey, and assumes no liability in connection with such matters. It was also assumed there is no property encroachment or trespass unless noted in the report.

6. The author of this report assumes no responsibility for hidden or unapparent conditions of the property, subsoil or structures, or the correction of any defects now existing or that may develop in the future. Equipment components were assumed in good working condition unless otherwise stated in this report.

7. It is assumed that there are no hidden or unapparent conditions for the property, subsoil, or structures, which would render it more or less valuable. No responsibility is assumed for such conditions or for engineering, which may be required to discover such factors. The investigation made it reasonable to assume, for report purposes, that no insulation or other product banned by the Consumer Product Safety Commission has been introduced into the Subject premises. Visual inspection by the consultant did not indicate the presence of any hazardous waste. It is suggested the client obtain a professional environmental hazard survey to further define the condition of the Subject soil if they deem necessary.

8. A consulting analysis market study for a property is made as of a certain day. Due to the principles of change and anticipation the value estimate is only valid as of the date of valuation. The real estate market is non-static and change and market anticipation is analyzed as of a specific date in time and is only valid as of the specified date.

9. Possession of the report, or a copy thereof, does not carry with it the right of publication, nor may it be reproduced in whole or in part, in any manner, by any person, without the prior written consent of the author particularly as to value conclusions, the identity of the author or the firm with which he or she is connected. Neither all nor any part of the report, or copy thereof shall be disseminated to the general public by the use of advertising, public relations, news, sales, or other media for public communication without the prior written consent and approval of the appraiser. Nor shall the appraiser, firm, or professional organizations of which the appraiser is a member be identified without written consent of the appraiser.

10. Disclosure of the contents of this report is governed by the Bylaws and Regulations of the professional appraisal organization with which the appraiser is affiliated: specifically, the Appraisal Institute.

11. The author of this report is not required to give testimony or attendance in legal or other proceedings relative to this report or to the Subject property unless satisfactory additional arrangements are made prior to the need for such services.

12. The opinions contained in this report are those of the author and no responsibility is accepted by the author for the results of actions taken by others based on information contained herein.

13. All applicable zoning and use regulations and restrictions are assumed to have been complied with, unless nonconformity has been stated, defined, and considered in the appraisal report.

14. It is assumed that all required licenses, permits, covenants or other legislative or administrative authority from any local, state, or national governmental or private entity or organization have been or can be obtained or renewed for any use on which conclusions contained in this report is based.

15. On all proposed developments, Subject to satisfactory completion, repairs, or alterations, the consulting report is contingent upon completion of the improvements in a workmanlike manner and in a reasonable period of time with good quality materials.

16. All general codes, ordinances, regulations or statutes affecting the property have been and will be enforced and the property is not Subject to flood plain or utility restrictions or moratoriums except as reported to the consultant and contained in this report.

17. The party for whom this report is prepared has reported to the consultant there are no original existing condition or development plans that would Subject this property to the regulations of the Securities and Exchange Commission or similar agencies on the state or local level.

18. Unless stated otherwise, no percolation tests have been performed on this property. In making the appraisal, it has been assumed the property is capable of passing such tests so as to be developable to its highest and best use, as detailed in this report.

19. No in-depth inspection was made of existing plumbing (including well and septic), electrical, or heating systems. The consultant does not warrant the condition or adequacy of such systems.

20. No in-depth inspection of existing insulation was made. It is specifically assumed no Urea Formaldehyde Foam Insulation (UFFI), or any other product banned or discouraged by the Consumer Product Safety Commission has been introduced into the appraised property. The appraiser reserves the right to review and/or modify this appraisal if said insulation exists on the Subject property.

21. Acceptance of and/or use of this report constitute acceptance of all assumptions and the above conditions. Estimates presented in this report are not valid for syndication purposes.

ADDENDUM B

Photographs

Subject and Neighborhood Photographs

View of Subject from north

View of Subject from west

Improvements on Subject site

Improvements on Subject site

View north along Pumehana Street

View south along Pumenhana Street

View south along Algaroba Street

View north along Algaroba Street

View north from Subject site toward residential

View north from Subject site toward commerical and residential

Commerical adjacent to east

Retail to southeast

Commerical to south

View from Subject toward single-family to west

View from Subject toward single-family to west

Multifamily to northwest

Commercial to south

Commercial to south

Multifamily to south

Residential to north

Residential to west

McCully District Park Gym to west

Commercial to east

Commercial to east

ADDENDUM C

Qualifications of Consultants

STATEMENT OF PROFESSIONAL QUALIFICATIONS
REBECCA S. ARTHUR, MAI

I. Education

University of Nebraska, Lincoln, Nebraska
Bachelor of Science in Business Administration – Finance

Appraisal Institute
Designated Member (MAI)

II. Licensing and Professional Affiliation

Designated Member of the Appraisal Institute (MAI)
Member of Commercial Real Estate Women (CREW) Network
Member of National Council of Housing Market Analysts (NCHMA)

State of Arkansas Certified General Real Estate Appraiser No. CG2682N
State of California Certified General Real Estate Appraiser No. AG041010
State of Hawaii Certified General Real Estate Appraiser No. CGA-1047
State of Iowa Certified General Real Estate Appraiser No. CG03200
State of Kansas Certified General Real Estate Appraiser No. G-2153
State of Michigan Certified General Real Estate Appraiser No. 1201074011
State of Minnesota Certified General Real Estate Appraiser No. 40219655
State of Missouri Certified General Real Estate Appraiser No. 2004035401
State of Texas Certified General Real Estate Appraiser No. TX-1338818-G

III. Professional Experience

Partner, Novogradac & Company LLP
Principal, Novogradac & Company LLP
Manager, Novogradac & Company LLP
Real Estate Analyst, Novogradac & Company LLP
Corporate Financial Analyst, Deloitte & Touche LLP

IV. Professional Training

Forecasting Revenue, December 2012
USPAP Update, May 2012
How to Analyze and Value Income Properties, May 2011
Appraising Apartments – The Basics, May 2011
Business Practices and Ethics, December 2010
HUD MAP Third Party Training, June 2010
HUD LEAN Third Party Training, January 2010
National Uniform Standards of Professional Appraisal Practice, April 2010
MAI Comprehensive Four Part Exam, July 2008
Report Writing & Valuation Analysis, December 2006

Advanced Applications, October 2006
Highest and Best Use and Market Analysis, July 2005
Advanced Sales Comparison and Cost Approaches, April 2005
Advanced Income Capitalization, October 2004
Basic Income Capitalization, September 2003
Appraisal Procedures, October 2002
Appraisal Principals, September 2001

V. Real Estate Assignments

A representative sample of Due Diligence, Consulting, or Valuation Engagements includes:

- In general, have managed and conducted numerous market analyses and appraisals for various types of commercial real estate since 2001, with an emphasis on multifamily housing and land.

- Have managed and conducted numerous market and feasibility studies for multifamily housing. Properties types include Section 42 Low Income Housing Tax Credit (LIHTC) Properties, Section 8, USDA and/or conventional. Local housing authorities, developers, syndicators, HUD and lenders have used these studies to assist in the financial underwriting and design of mulitfamily properties. Analysis typically includes; unit mix determination, demand projections, rental rate analysis, competitive property surveying, and overall market analysis. The Subjects include both new construction and rehabilitation properties in both rural and metro regions throughout the United States and its territories.

- Have managed and conducted numerous appraisals of multifamily housing. Appraisal assignments typically involved determining the as is, as if complete and the as if complete and stabilized values. Additionally, encumbered LIHTC and unencumbered values were typically derived. The three traditional approaches to value are developed with special methodologies included to value tax credit equity, below market financing and Pilot agreements.

- Performed market studies and appraisals of proposed new construction and existing properties under the HUD Multifamily Accelerated Processing (MAP) program. These reports meet the requirements outlined in HUD Handbook 4465.1 and Chapter 7 of the HUD MAP Guide for 221(d)(4) and 223(f) programs, as well as the LIHTC PILOT Program.

- Performed numerous market study/appraisals assignments for USDA RD properties in several states in conjunction with acquisition rehabilitation redevelopments. Documents are used by states, FannieMae, USDA, and the developer in the underwriting process. Market studies are compliant to State, FannieMae, and USDA requirements. Appraisals are compliant to FannieMae and USDA HB-1-3560 Chapter 7 and Attachments.

- Completed numerous FannieMae and FreddieMac appraisals of affordable and market rate multi-family properties for DUS Lenders.

- Managed and Completed numerous Section 8 Rent Comparability Studies in accordance with HUD's Section 8 Renewal Policy and Chapter 9 for various property owners and local housing authorities.

- Managed and conducted various City and County-wide Housing Needs Assessments in order to determine the characteristics of existing housing, as well as determine the need for additional housing within designated areas.

- Performed numerous valuations of the General and/or Limited Partnership Interest in a real estate transaction, as well as LIHTC Year 15 valuation analysis.

VI. Speaking Engagements

A representative sample of industry speaking engagements follows:

Institute for Professional Education and Development (IPED): Tax Credit Seminars
Institute for Responsible Housing Preservation (IRHP): Annual Meetings
National Council of Housing Market Analysts (NCHMA): Seminars and Workshops
Novogradac & Company LLP: LIHTC, Developer and Bond Conferences
AHF Live! Affordable Housing Finance Magazine Annual Conference
Kansas Housing Conference

STATEMENT OF PROFESSIONAL QUALIFICATIONS
RACHEL BARNES DENTON

I. EDUCATION

Cornell University, Ithaca, NY
School of Architecture, Art & Planning, Bachelor of Science in City & Regional Planning

II. LICENSING AND PROFESSIONAL AFFILIATION

Appraisal Institute Candidate for Designation
Member of National Council of Housing Market Analysts (NCHMA)
Member of Commercial Real Estate Women (CREW) Network
- 2011 and 2012 Communications Committee Co-Chair for the Kansas City CREW Chapter
- 2013 Director of Communications for Kansas City CREW

State of California Certified General Real Estate Appraiser No. AG044228
State of Colorado Certified General Real Estate Appraiser No. 100031319
State of Hawaii Certified General Real Estate Appraiser No. CGA1048
State of Illinois Certified General Real Estate Appraiser No. 553.002012
State of Kansas Certified General Real Estate Appraiser No. G-2501
State of Missouri Certified General Real Estate Appraiser No. 2007035992
State of Oregon Certified General Real Estate Appraiser No. C000951

III. PROFESSIONAL EXPERIENCE

Novogradac & Company LLP, Principal
Novogradac & Company LLP, Manager
Novogradac & Company LLP, Senior Real Estate Analyst

IV. PROFESSIONAL TRAINING

Educational requirements successfully completed for the Appraisal Institute:
- Appraisal Principals, September 2004
- Basic Income Capitalization, April 2005
- Uniform Standards of Professional Appraisal Practice, November 2005
- Advanced Income Capitalization, August 2006
- General Market Analysis and Highest & Best Use, July 2008
- Advanced Sales Comparison and Cost Approaches, June 2009
- Advanced Applications, June 2010
- Standards and Ethics (USPAP and Business Practices and Ethics) – Current for 2010 to 2015 Cycle

Completed HUD MAP Training, Columbus, Ohio, May 2010

Have presented and spoken at both Novogradac conferences and other industry events.

V. REAL ESTATE ASSIGNMENTS

A representative sample of Due Diligence, Consulting, or Valuation Engagements includes:

In general, have managed and conducted numerous market analyses and appraisals for various types of commercial real estate since 2003, with an emphasis on affordable multifamily housing.

Conducted and managed appraisals of proposed new construction, rehab and existing Low-Income Housing Tax Credit properties, Section 8 Mark-to-Market properties, HUD MAP Section 221(d)(4) and 223(f) properties, USDA Rural Development, and market rate multifamily developments on a national basis. Analysis includes property screenings, economic and demographic analysis, determination of the Highest and Best Use, consideration and application of the three traditional approaches to value, and reconciliation to a final value estimate. Both tangible real estate values and intangible values in terms of tax credit valuation, beneficial financing, and PILOT are considered. Additional appraisal assignments completed include commercial land valuation, industrial properties for estate purposes, office buildings for governmental agencies, and leasehold interest valuation. Typical clients include developers, lenders, investors, and state agencies.

Managed and conducted market studies for proposed Low-Income Housing Tax Credit, HUD MAP, market rate, HOME financed, USDA Rural Development, and HUD subsidized properties, on a national basis. Analysis includes property screenings, market analysis, comparable rent surveys, demand analysis based on the number of income qualified renters in each market, supply analysis and operating expense analysis. Property types include proposed multifamily, senior independent living, large family, acquisition/rehabilitation, historic rehabilitation, adaptive reuse, and single family developments. Typical clients include developers, state agencies, syndicators, investors, and lenders.

Completed and have overseen numerous Rent Comparability Studies in accordance with HUD's Section 8 Renewal Policy and Chapter 9 for various property owners and local housing authorities. The properties were typically undergoing recertification under HUD's Mark to Market Program.

Performed and managed market studies and appraisals of proposed new construction and existing properties insured and processed under the HUD Multifamily Accelerated Processing (MAP) program. These reports meet the requirements outlined in HUD Handbook 4465.1 and Chapter 7 of the HUD MAP Guide for 221(d)(4) and 223(f) programs.

Performed and have overseen numerous market study/appraisal assignments for USDA RD properties in several states in conjunction with acquisition/rehabilitation redevelopments. Documents are used by states, lenders, USDA, and the developer in the underwriting process. Market studies are compliant to State, lender, and USDA requirements. Appraisals are compliant to lender requirements and USDA HB-1-3560 Chapter 7 and Attachments.

Performed appraisals for estate valuation and/or donation purposes for various types of real estate, including commercial office, industrial, and multifamily assets. These engagements were conducted in accordance with the Internal Revenue Service's Real Property Valuation Guidelines, Section 4.48.6 of the Internal Revenue Manual.

Conducted a Highest and Best Use Analysis for a proposed two-phase senior residential development for a local Housing Authority in the western United States. Completed an analysis of existing and proposed senior supply of all types, including both renter and owner-occupied options, and conducted various demand analyses in order to determine level of need and ultimate highest and best use of the site.

Prepared a three-year Asset Management tracking report for a 16-property portfolio in the southern United States. Data points monitored include economic vacancy, levels of concessions, income and operating expense levels, NOI and status of capital projects. Data used to determine these effects on the project's ability to meet its income-dependent obligations.

Performed a community-wide affordable housing market analysis for a medium-sized city in the Midwest. Analysis included demographic and demand forecasts, interviews with local stakeholders, surveys of existing and proposed affordable supply, and reconciliation of operations at existing supply versus projected future need for affordable housing.

Managed a large portfolio of Asset Management reports for a national real estate investor. Properties were located throughout the nation, and were diverse in terms of financing, design, tenancy, and size. Information compiled included income and expenses, vacancy, and analysis of property's overall position in the market.

STATEMENT OF PROFESSIONAL QUALIFICATIONS
K. DAVID ADAMESCU

I. Education

The Ohio State University, Columbus, OH
Masters of City and Regional Planning
Bachelors of Arts, Economics

II. Professional Experience

Real Estate Analyst, Novogradac & Company LLP
Project Director, VWB Research
Field Analyst, The Danter Company

III. Real Estate Assignments

A representative of assignments relating to research and market feasibility studies includes:

- Written and supervised the production of affordable rental housing market studies for projects located throughout the continental United States as well as Alaska. The preponderance of experience is with the Section 42 Low-income Housing Tax Credit, HUD Section 8, and USDA Rural Development programs.

- Additional experience authoring market feasibility analyses for market-rate rental housing, condominium housing, single-family housing, senior-oriented housing, seasonal housing, retail, office, golf course/marina resorts, and mixed-use developments.

- Assisted in numerous appraisals of proposed LIHTC rental housing, commercial office, and commercial retail properties. Analysis typically includes physical inspection of the property and market, concept analysis, demographic and economic analysis, demand and absorption projections, comparable surveying, supply analysis and rent determination, operating expense analysis to determine cost estimates, capitalization rate determination, valuation utilizing the three approaches to value, insurable value estimation, and LIHTC equity valuation.

- Conducted special research for highest and best use evaluations, the impact of “green” development principals on marketability, and seasonal housing dynamics.

- Reviewed third-party market studies and appraisals for investors in the secondary market.

STATEMENT OF PROFESSIONAL QUALIFICATIONS
MICHAEL ANDERSON

I. Education

The Ohio State University, Columbus, OH
Masters of City and Regional Planning

Middle Tennessee State University, Murfreesboro, TN
Bachelor of Science in Recording Industry Management

II. Professional Experience

Researcher, Novogradac & Company LLP, January 2013 – Present
Graduate Assistant, Columbus Public Health, April 2011 – February 2012
Assistant Property Manager, OMNI Management Services, September 2007 – March 2009

III. Research Assignments

A representative sample of Due Diligence, Consulting, or Valuation Engagements includes:

- Assisted numerous market and feasibility studies for family and senior affordable housing. Local housing authorities, developers, syndicators and lenders have used these studies to assist in the financial underwriting and design of market-rate and Low-Income Housing Tax Credit (LIHTC) properties. Analysis typically includes; unit mix determination, demand projections, rental rate analysis, competitive property surveying and overall market analysis.

- Assisted with numerous appraisals of new construction and existing LIHTC and market-rate properties.

- Performed all aspects of data collection and data mining for web-based rent reasonableness systems for use by local housing authorities.

STATEMENT OF PROFESSIONAL QUALIFICATIONS
MARIAM T. ABDELHAMID

I. Education

Old Dominion University, Norfolk VA
Bachelor of Science in Business Administration – Finance & Decision Sciences (2013)

II. Professional Experience

Novogradac & Company LLP – July 2013 - Present
Real Estate Researcher

Dominion Enterprises – May 2012 - July 2012
SEO Intern

Keel Point Advisors, LLC – May 2011 - August 2011
Investments Intern

III. Real Estate Assignments

A representative sample of work on various types of projects:

ADDENDUM D

Market Analyst Certificate of Good Standing

Department of Commerce and Consumer Affairs

CERTIFICATE OF GOOD STANDING

I, the undersigned Director of Commerce and Consumer Affairs of the State of Hawaii, do hereby certify that

NOVOGRADAC & COMPANY LLP

registered under the laws of California

was duly registered to do business in Hawaii as a foreign limited liability partnership on 05/20/2013 , and that, as far as the records of this Department reveal, has complied with all of the provisions of Chapter 425, Hawaii Revised Statutes, regulating foreign limited liability partnerships.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of the Department of Commerce and Consumer Affairs, at Honolulu, Hawaii.

Dated: June 20, 2013

Director of Commerce and Consumer Affairs

To check the authenticity of this certificate, please visit: http://hbe.ehawaii.gov/documents/authenticate.html
Authentication Code: 196890-COGS_PDF-2970K6

Appendix C

201H – Department of Planning & Permitting Correspondence

RECEIVED
SEP 13 2013
PLANPACIFIC, INC.

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

KIRK CALDWELL
MAYOR

GEORGE I. ATTA, FAICP
DIRECTOR

ARTHUR D. CHALLACOMBE
DEPUTY DIRECTOR

2013/ELOG-1687 (JP)

September 11, 2013

Ms. Lisa Leonillo Imata, President
Plan Pacific
1001 Bishop Street, Suite 2755
Honolulu, Hawaii 96813

Dear Ms. Imata:

SUBJECT: Eligibility for Affordable Housing Exemptions
Chapter 201H-38, Hawaii Revised Statutes (HRS)
Coastal Rim Properties, LLC
929 Pumehana Street - McCully
Tax Map Key 2-3-28: 4

This responds to your inquiry, received August 29, 2013, concerning whether a planned affordable housing project on the subject property, which is in the BMX-3 Community Business Mixed Use Distinct, will be eligible for processing by the Department of Planning and Permitting (DPP). We understand that the project will involve 180 multi-family dwelling units, the majority of which will be affordable to households earning up to 140 percent of the median income for Honolulu, with the remainder being sold at market rates. 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

GIA:nw

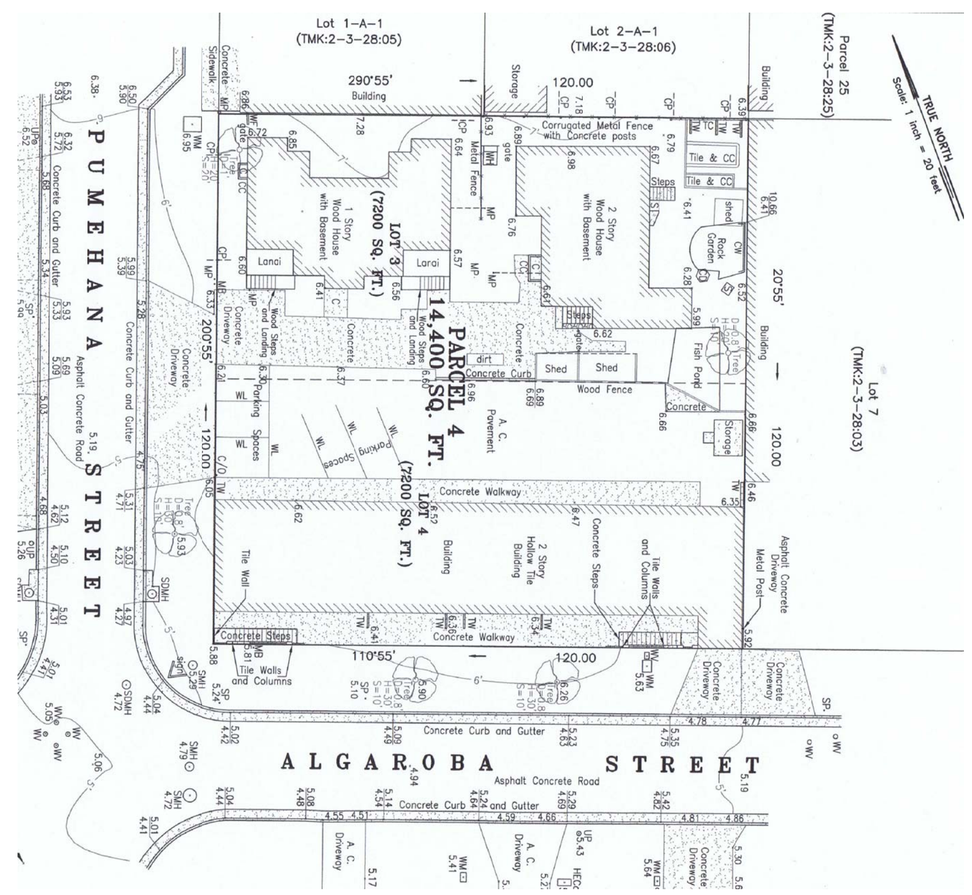
Appendix D

Architectural Drawings – Pacific Atelier International

OHANA HALE

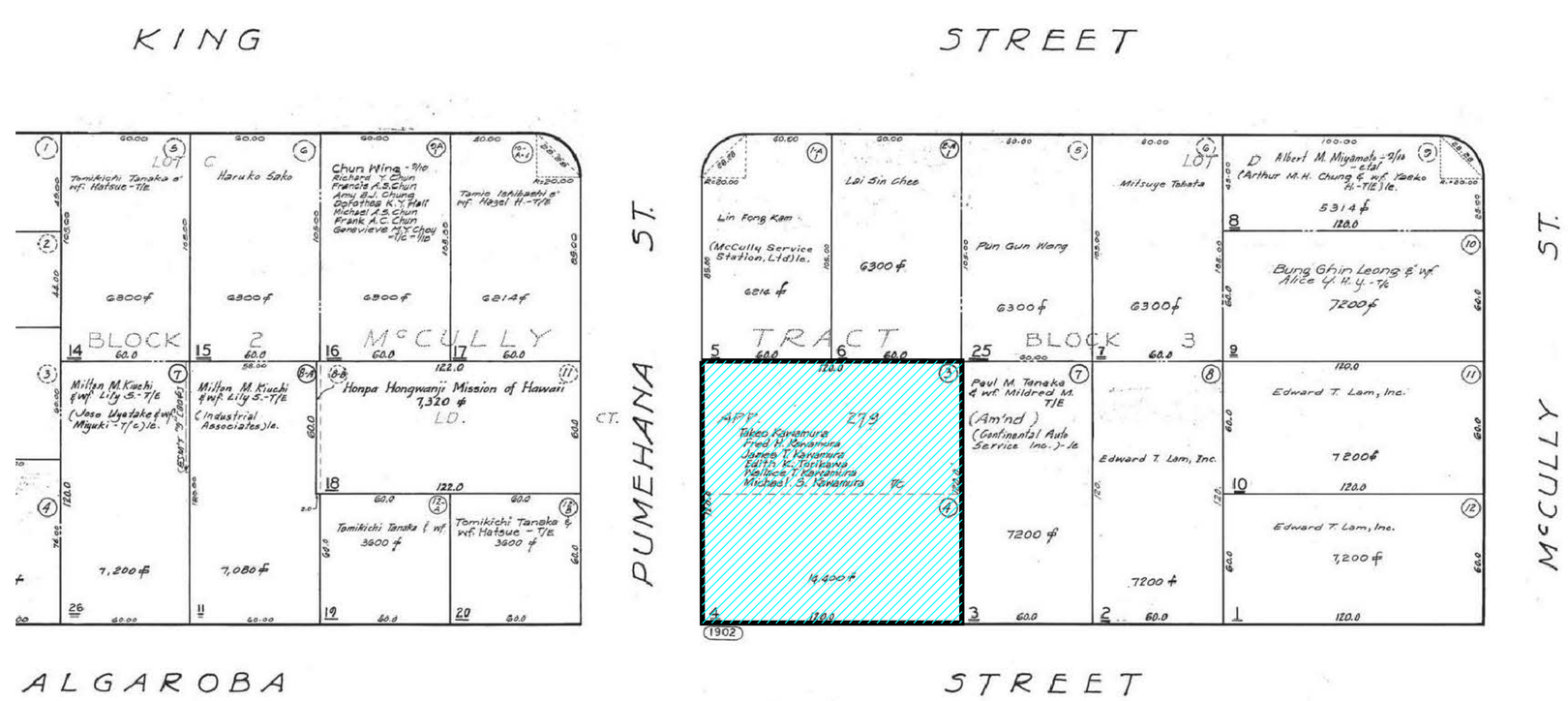
AFFORDABLE HOUSING
A PROPOSED HIGH-RISE RESIDENTIAL DEVELOPMENT
929 Pumehana Street, Honolulu
180 AFFORDABLE RESIDENTIAL UNITS

AERIAL VIEW (PROPOSED)



SURVEY (EXISTING CONDITIONS)

AERIAL VIEW (EXISTING)



PROPOSED PROJECT LOCATION

REVISION

ISSUE:		DATE:
1	HHFDC comments :	January 7, 2014
2	HHFDC comments :	February 6, 2014
3	Parking calcs revision :	February 27, 2014
4	General coordination:	March 6, 2014
8	HHFDC comments:	December 1, 2014

PROJECT:
OHANA HALE
929 Pumehana Street
Honolulu, HI

OWNER:
MJF DEVELOPMENT

PACIFIC ATELIER
INTERNATIONAL, INC.

ARCHITECTURE
INTERIORS + PLANNING

810 Richards Street, Suite 350
Honolulu, Hawaii 96813
tel. 808.533.3688

www.pacificatelier.com

Written dimensions on these drawings shall have precedence over scaled dimensions– Contractor shall verify and be responsible for all dimensions and conditions on the job– Omissions or errors on the drawings shall be immediately reported in writing to the architect, and affected work shall not proceed until certified by the architect– Shop details must be submitted to this office for approval before proceeding with fabrication.

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MAUKA
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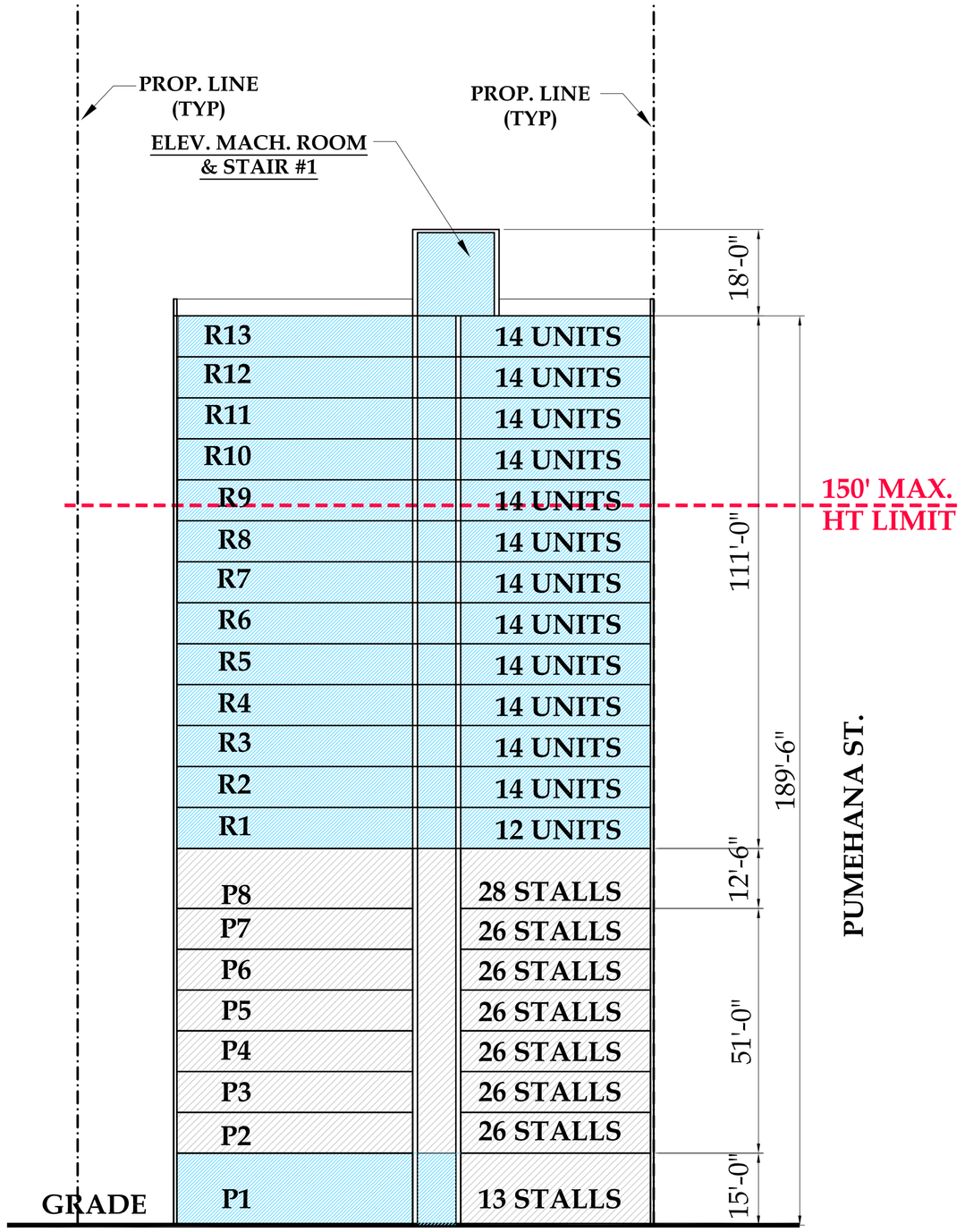
EWA DH
MAKAI

GRAPHIC SCALE
0' 20' 40' 60'

SHEET TITLE:
TITLE SHEET
LOCATION MAP
&
3D-VIEWS

SHEET NUMBER:
A-1.1
CONCEPTUAL PLANS
OF

DATE:
January 9, 2014



180 UNITS 197 STALLS

SCHEMATIC SECTION

LEGEND:

- VEHICULAR CIRCULATION
- PEDESTRIAN CIRCULATION
- PARKING
- FLOOR AREA
- COMMUNITY ROOM (INCLUDED IN FLOOR AREA CALCS)
- OPEN SPACE (AT GRADE)
- OUTDOOR RECREATION SPACE (AT REC DECK)

PROJECT DATA		REQUIRED/ALLOWABLE	PROPOSED
TMK:	2-3-028:004		
LOT AREA:	14,400 SF		
ZONING:	BMX-3		
FRONT YARD SETBACK:		10'-0"	10'-10"
SIDE & REAR YARD SETBACK:		10'-0"	0'-0"
HEIGHT:		150'-0"	189'-6"
FAR & MAX. FAR:		2.5	7.89
MAX. FLOOR AREA:		36,000 SF	113,600 SF
LOT COVERAGE:		NOT REGULATED	
DWELLING UNITS:		100% ADAPTABLE	180 (100% ADAPTABLE)
PARKING:		204 STALLS (185 + 18 GUESTS)	197
HANDICAPPED PARKING:	IBC 2006	7 STALLS	9 STALLS
LOADING:		2 (1 @ 12' x 35' & 1 @ 8.5' x 19'	2 @ 8.5' x 19'
OPEN SPACE (AT GRADE)			2,274 SF
OUTDOOR AREA (AT REC. DECK):			3,083 SF
TYPE OF CONSTRUCTION:			TYPE IA

NOTE: FOR ADDITIONAL AREAS , UNITS & PARKING CALCULATIONS REF. TO DWG. A-2..2

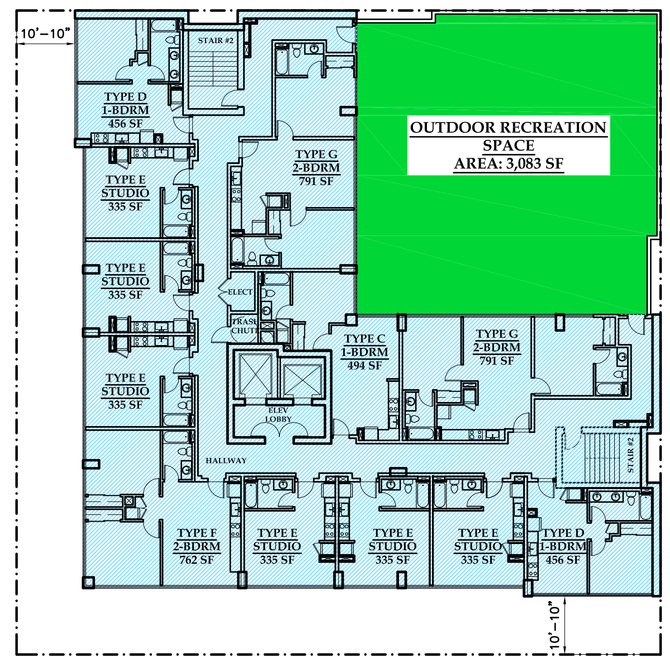
OHANA HALE
(PUMEHANA ST.)
AFFORDABLE HOUSING
180 RESIDENTIAL UNITS

REVISION

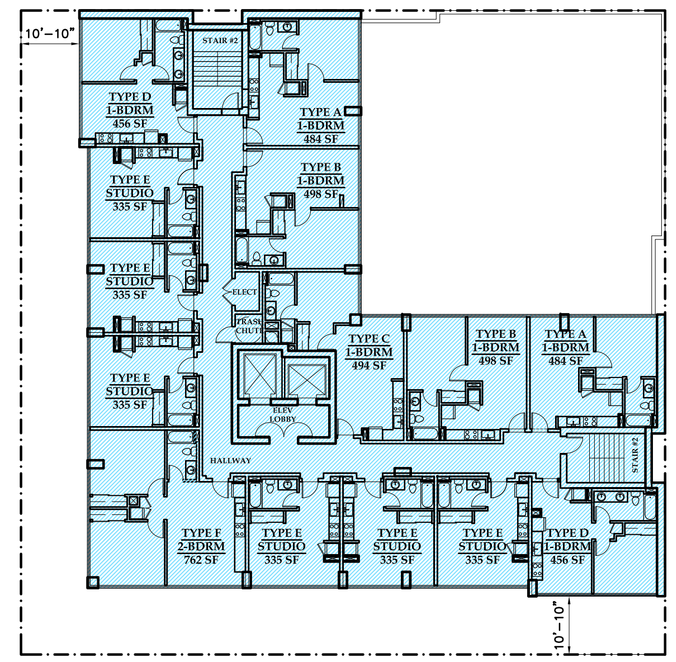
ISSUE:		DATE:
1	HHFDC comments :	January 7, 2014
2	HHFDC comments :	February 6, 2014
3	Parking calcs revision :	February 27, 2014
4	General coordination:	March 6, 2014
8	HHFDC comments:	December 1, 2014

PROJECT:
OHANA HALE
929 Pumehana Street
Honolulu, HI

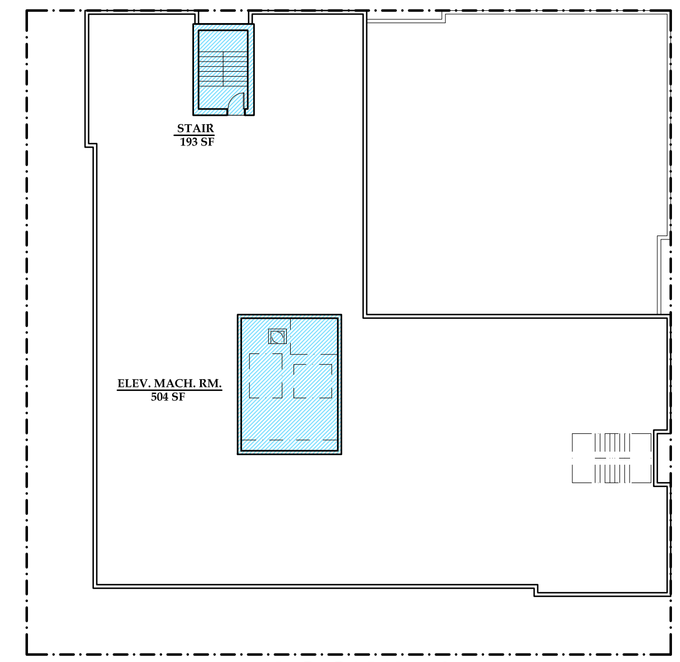
OWNER:
MJF DEVELOPMENT



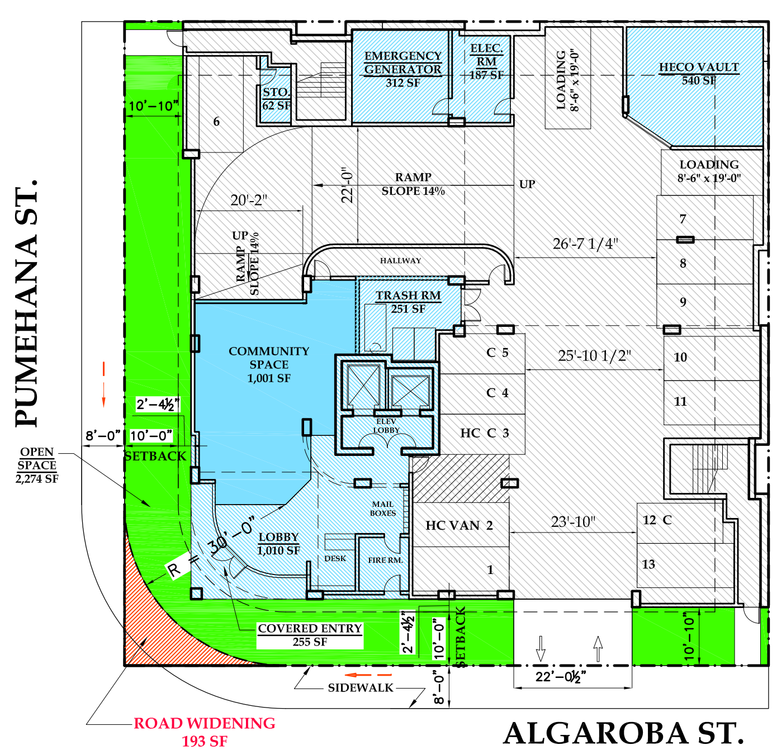
R1 FLOOR PLAN
FLOOR AREA: 8,405
CIRC. & MISC : 2,659 SF
EFFICIENCY: 68%
UNITS: 12



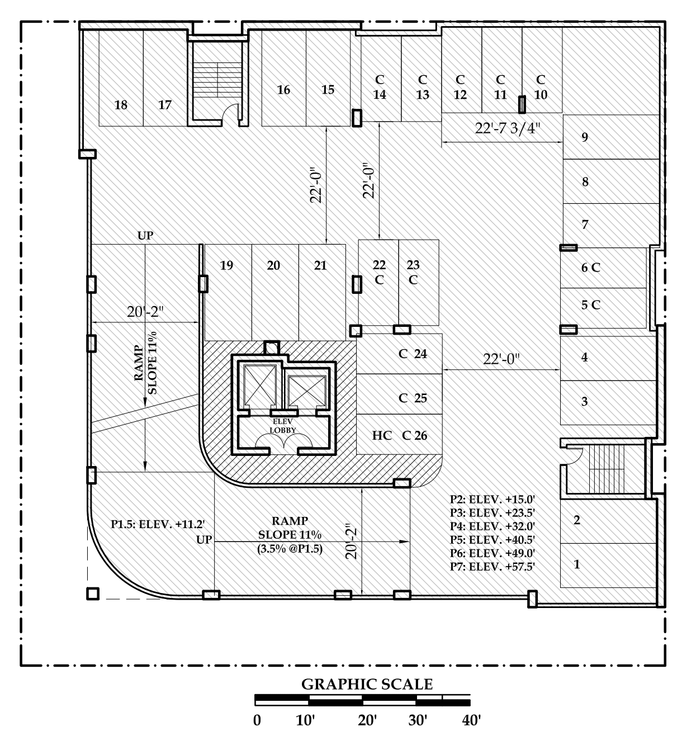
R2 THRU R13 TYP. FLOOR PLAN
GRAPHIC SCALE 0 10' 20' 30' 40'
FLOOR AREA: 100,860 SF (8,405 x 12)
CIRC. & MISC : 27,204 SF (2,267 x 12)
EFFICIENCY: 73%
UNITS : 168 (14 x 12)



ROOF PLAN
FLOOR AREA: 697 SF

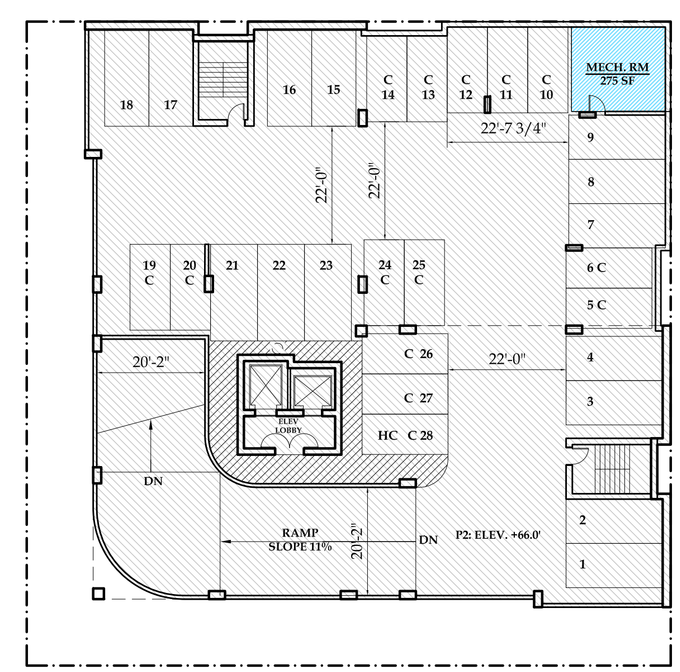


SITE PLAN / P1 LEVEL
FLOOR AREA: 3,363 SF
13 STALLS (9 S + 4 COMPACT - INCLUDED 2 HC)
PARKING AREA: 8,194 SF
EFFICIENCY = 630 SF / STALL



GRAPHIC SCALE 0 10' 20' 30' 40'

P2, P3, P4, P5, P6, P7 LEVEL
FLOOR AREA: 0.00 SF
156 STALLS (26 x 6) / (14 S + 12 C - INCLUDED 1 HC) x 6
PARKING AREA = 69,030 SF (11,505 x 6)
EFFICIENCY = 442 SF / STALL



P8 LEVEL
FLOOR AREA: 275 SF
28 STALLS (14 S + 14 C - INCLUDED 1 HC))
PARKING AREA = 11,230 SF
EFFICIENCY = 401 SF / STALL

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MAUKA

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MAKAI

GRAPHIC SCALE
0' 20' 40' 60'

SHEET TITLE:
PROJECT DATA
DIAGRAMMATIC PLANS
&
SCHEMATIC SECTION

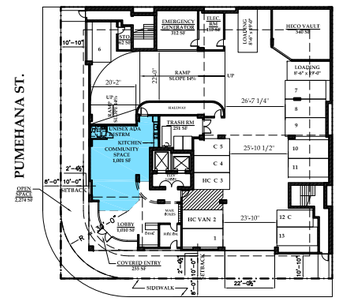
SHEET NUMBER:
A-1.2

CONCEPTUAL PLANS

OF

DATE:
January 9, 2014

PROPOSED PARKING CALCULATIONS					
LEVEL	AREA (SF)	STAND. STALLS	COMP. STALLS	TOTAL STALLS	HC STALLS
P8	11,230	14	14	28	1
P7	11,505	14	12	26	1
P6	11,505	14	12	26	1
P5	11,505	14	12	26	1
P4	11,505	14	12	26	1
P3	11,505	14	12	26	1
P2	11,505	14	12	26	1
P1	8,194	9	4	13	2
TOTAL AREA	86,451				9
STALLS		107	90	197	



SITE PLAN / P1 LEVEL
FLOOR AREA: 3,363 SF
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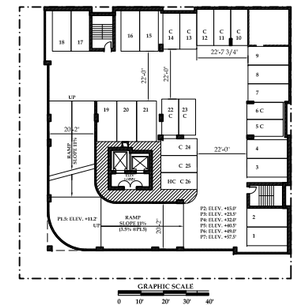
PARKING AREA: 8,194 SF
EFFICIENCY = 630 SF / STALL



P2, P3, P4, P5, P6, P7 LEVEL
FLOOR AREA: 0.00 SF
156 STALLS (26 x 6) / (14 S + 12 C - INCLUDED 1 HC) x 6
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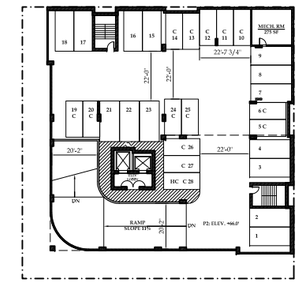
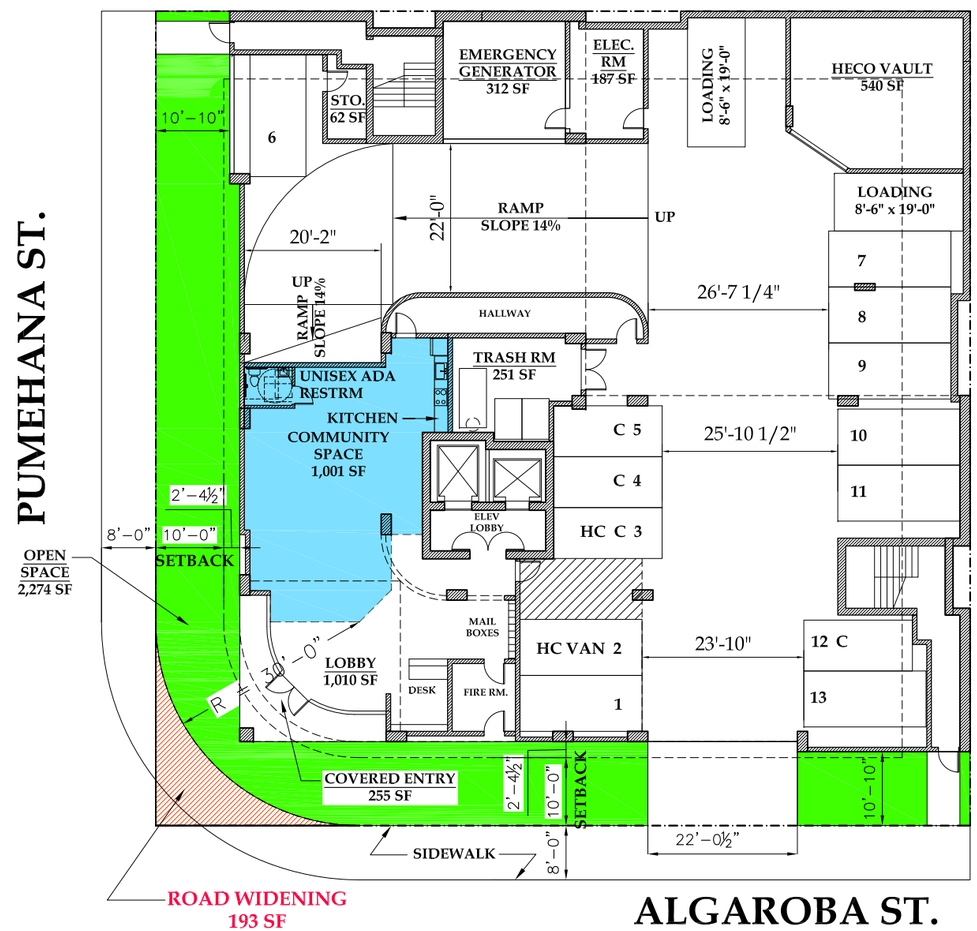
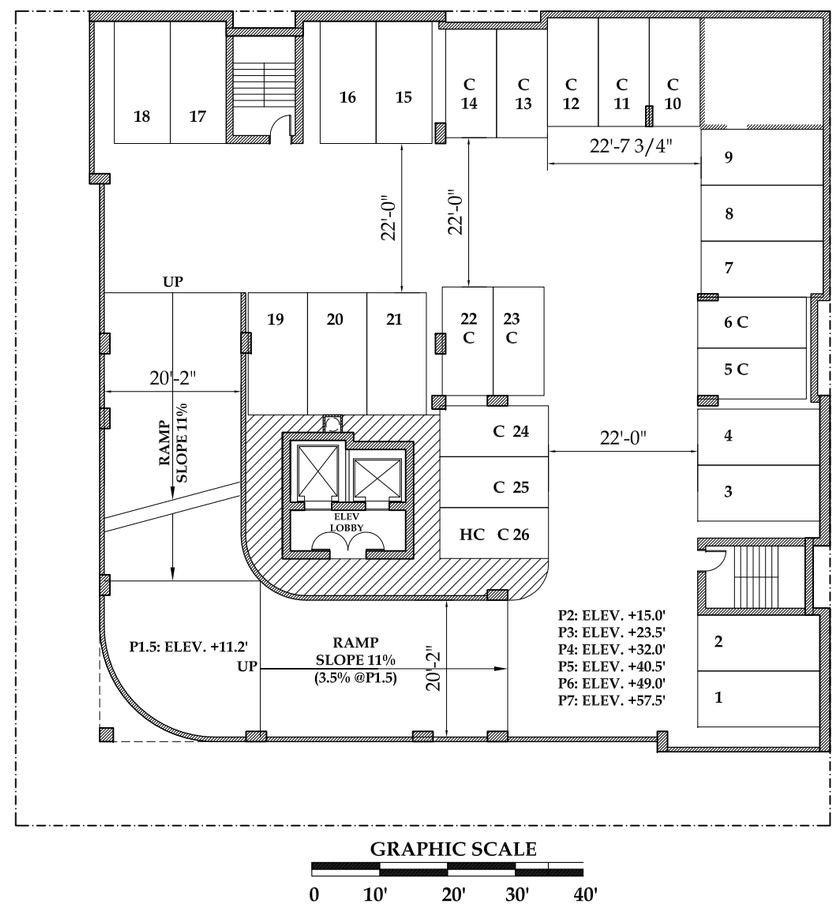


P8 LEVEL
FLOOR AREA: 275 SF
28 STALLS (14 S + 14 C - INCLUDED 1 HC))
PARKING AREA = 11,230 SF
EFFICIENCY = 401 SF / STALL

PARKING AREA DIAGRAMS



SITE PLAN / P1 LEVEL



P2, P3, P4, P5, P6, P7 LEVEL

REVISION

ISSUE:		DATE:
2	HHFDC comments :	February 6, 2014
3	Parking calcs revision :	February 27, 2014
4	General coordination:	March 6, 2014
8	HHFDC comments:	December 1, 2014
9	HHFDC comments:	January 16, 2015

PROJECT:

OHANA HALE
929 Pumehana Street
Honolulu, HI

OWNER:

MJF DEVELOPMENT

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MAUKA
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EWA DH
MAKAI

GRAPHIC SCALE
0' 10' 20' 30'

SHEET TITLE:

PARKING
FLOOR PLANS
&
CALCULATIONS

SHEET NUMBER:

A-2.1

CONCEPTUAL
PLANS

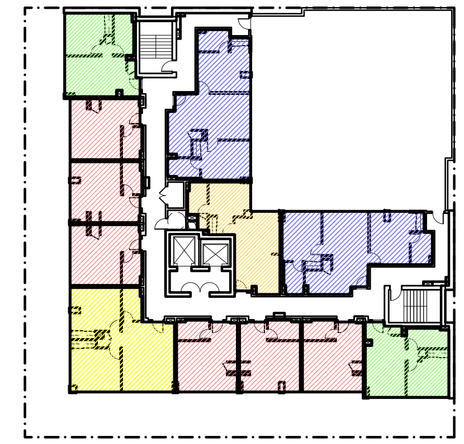
OF

DATE:
January 9, 2014

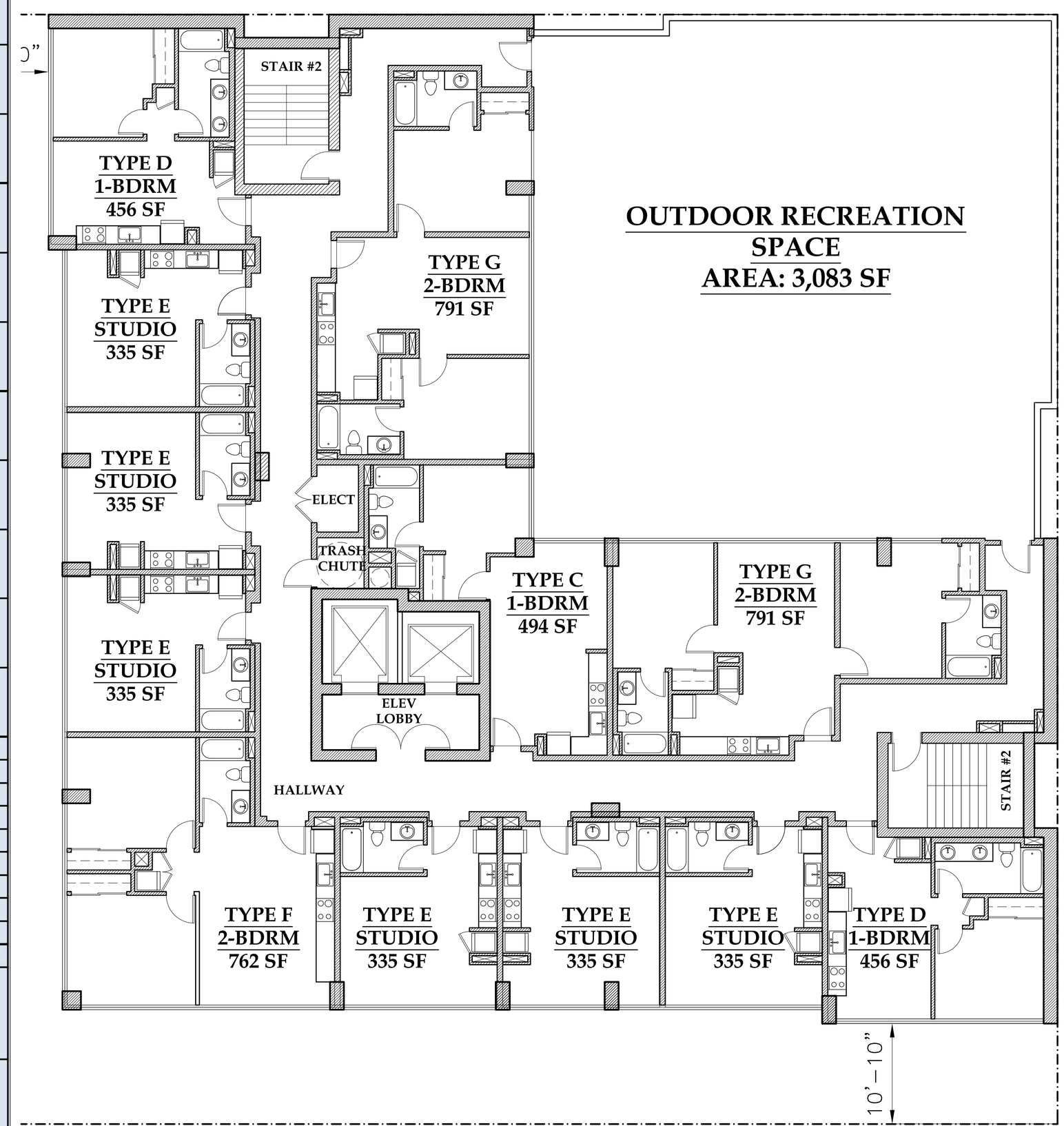
RESIDENTIAL SELLABLE AREA, FLOOR AREA, UNITS TABULATIONS, PARKING AREA & PARKING CALCULATIONS

Date: November 25, 2014

Unit Type		A 1-Bdrm	B 1-Bdrm	C 1-Bdrm	D 1-Bdrm	E Studio	F 2-Bdrm	G 2-Bdrm	TOTAL SELLABLE AREA (SF)	FLOOR AREA (SF)
Sellable Area (SF)		484	498	494	456	335	762	791		
Required Parking per Unit		1	1	1	1	1	1.5	1.5		
Residential Calculations	ROOF								0 0	697
	R13	2 968 2	2 996 2	1 494 1	2 912 2	6 2,010 6	1 762 1.5	0 0 0.0	14 6,142 14.5	8,405
	R12	2 968 2	2 996 2	1 494 1	2 912 2	6 2,010 6	1 762 1.5	0 0 0.0	14 6,142 14.5	8,405
	R11	2 968 2	2 996 2	1 494 1	2 912 2	6 2,010 6	1 762 1.5	0 0 0.0	14 6,142 14.5	8,405
	R10	2 968 2	2 996 2	1 494 1	2 912 2	6 2,010 6	1 762 1.5	0 0 0.0	14 6,142 14.5	8,405
	R9	2 968 2	2 996 2	1 494 1	2 912 2	6 2,010 6	1 762 1.5	0 0 0.0	14 6,142 14.5	8,405
	R8	2 968 2	2 996 2	1 494 1	2 912 2	6 2,010 6	1 762 1.5	0 0 0.0	14 6,142 14.5	8,405
	R7	2 968 2	2 996 2	1 494 1	2 912 2	6 2,010 6	1 762 1.5	0 0 0.0	14 6,142 14.5	8,405
	R6	2 968 2	2 996 2	1 494 1	2 912 2	6 2,010 6	1 762 1.5	0 0 0.0	14 6,142 14.5	8,405
	R5	2 968 2	2 996 2	1 494 1	2 912 2	6 2,010 6	1 762 1.5	0 0 0.0	14 6,142 14.5	8,405
	R4	2 968 2	2 996 2	1 494 1	2 912 2	6 2,010 6	1 762 1.5	0 0 0.0	14 6,142 14.5	8,405
	R3	2 968 2	2 996 2	1 494 1	2 912 2	6 2,010 6	1 762 1.5	0 0 0.0	14 6,142 14.5	8,405
	R2	2 968 2	2 996 2	1 494 1	2 912 2	6 2,010 6	1 762 1.5	0 0 0.0	14 6,142 14.5	8,405
	R1	0 0 0	0 0 0	1 494 1	2 912 2	6 2,010 6	1 762 1.5	2 1,582 3.0	12 5,760 13.5	8,405
Provided Parking Calculations		STAND.	COMP.	TOTAL	Parking Provided		Parking Area			
	P8	14	14	28			11,230			275
	P7	14	12	26			11,505			
	P6	14	12	26			11,505			
	P5	14	12	26			11,505			
	P4	14	12	26			11,505			
	P3	14	12	26	including 8		11,505			
	P2	14	12	26	handicapped stalls &		11,505		Resid. Park'g	
	P1	9	4	13	1 accessible van		8,194		Guest Park'g	3,363
	Total Parking	107	90	197	Total		88,454		Total	
Residential Units		24	24	13	26	78	13	2	180	
Total Residential Sellable Area		11,616	11,952	6,422	11,856	26,130	9,906	1,582	79,464	
Parking Required per Unit		24	24	13	26	78	19.5	3	188	
Unit Type		A 1-Bdrm	B 1-Bdrm	C 1-Bdrm	D 1-Bdrm	E Studio	F 2-Bdrm	G 2-Bdrm	Total Floor Area (SF)	113,600
Unit Area (SF)		484	498	494	456	335	762	791		
Required Parking per Unit		1	1	1	1	1	1.5	1.5		



RESIDENTIAL DIAGRAMS



R1 FLOOR PLAN

REVISION

ISSUE:		DATE:
1	HHFDC comments :	January 7, 2014
2	HHFDC comments :	February 6, 2014
3	Parking calcs revision :	February 27, 2014
4	General coordination:	March 6, 2014
8	HHFDC comments:	December 1, 2014

PROJECT:

OHANA HALE
929 Pumehana Street
Honolulu, HI

OWNER:

MJF DEVELOPMENT

PACIFIC ATELIER
INTERNATIONAL, INC.

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MAUKA

N
EWA DH

MAKAI

GRAPHIC SCALE

0' 8' 16' 24'

SHEET TITLE:

RESIDENTIAL FLOOR PLANS & CALCULATIONS

SHEET NUMBER:

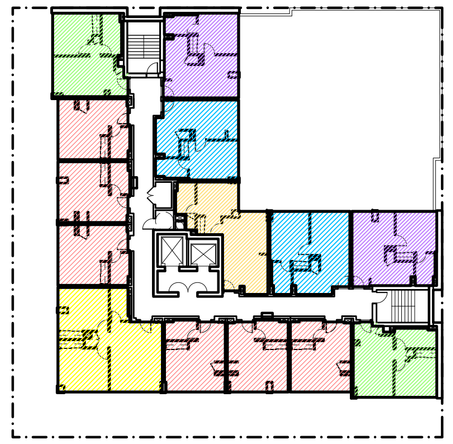
A-2.2

CONCEPTUAL PLANS

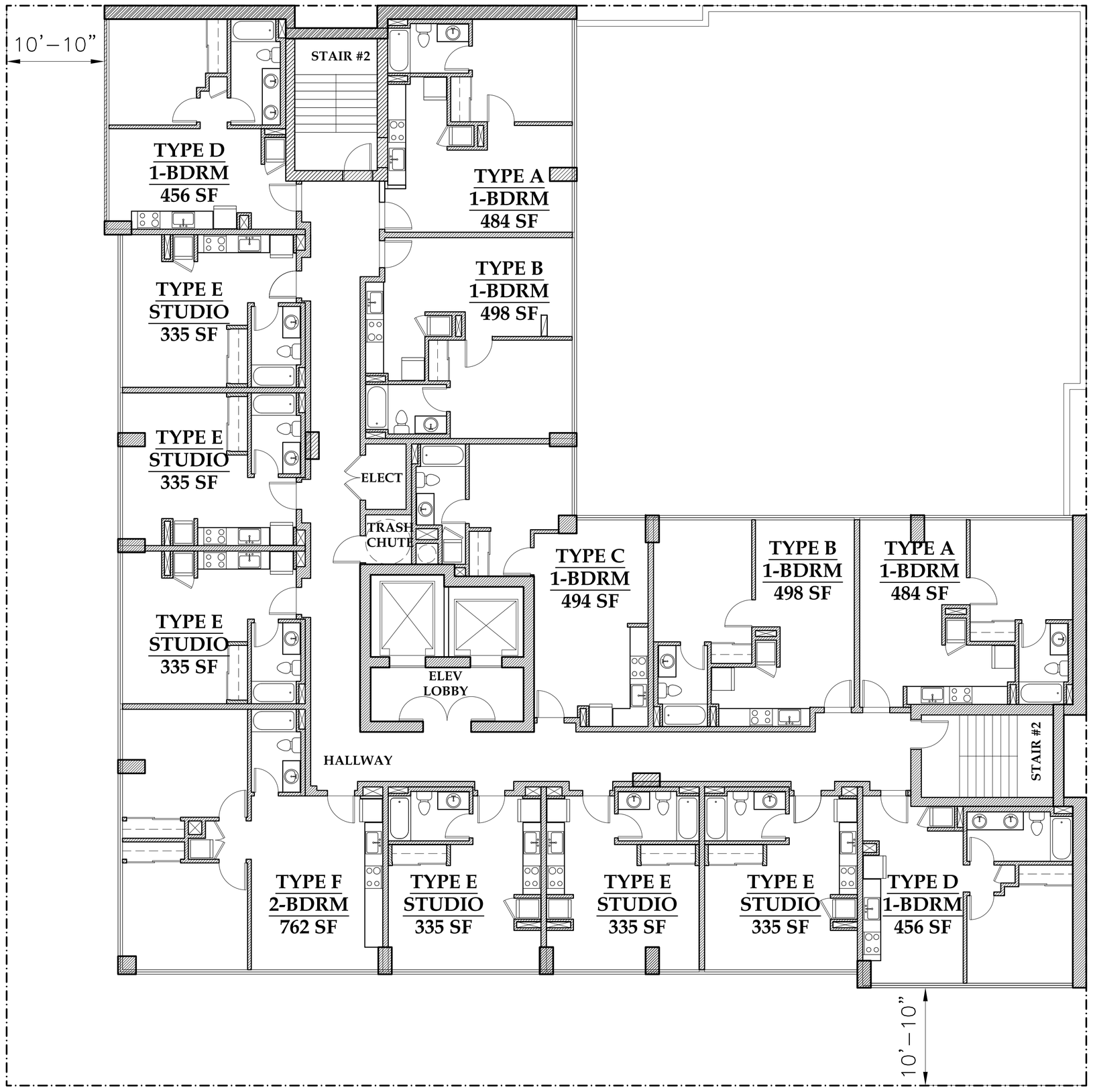
OF

DATE:

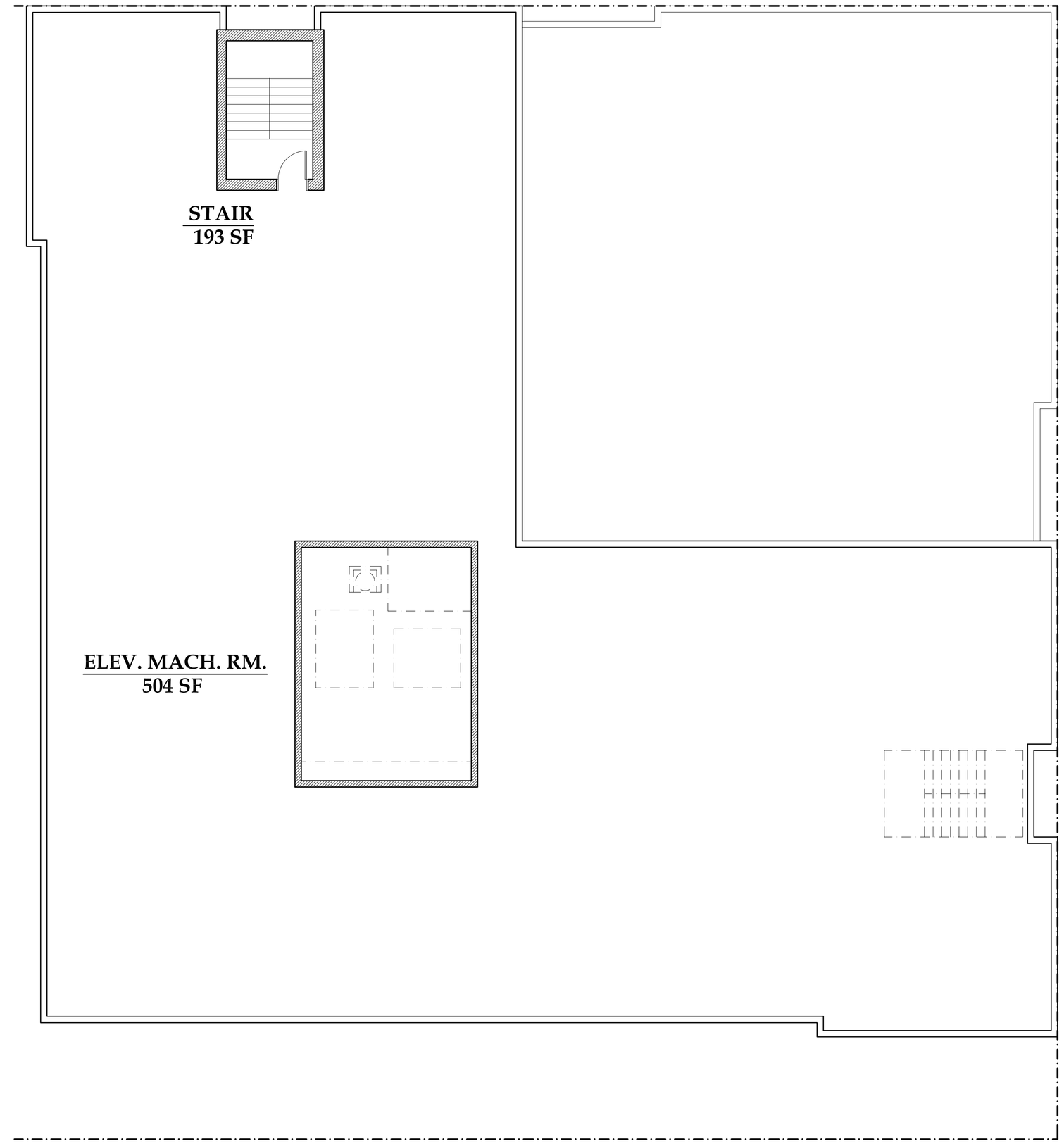
January 9, 2014



RESIDENTIAL DIAGRAMS



R2 THRU R13 TYP. FLOOR PLAN



ROOF PLAN

REVISION

ISSUE:		DATE:
1	HHFDC comments : January 7, 2014	
2	HHFDC comments : February 6, 2014	
3	Parking calcs revision : February 27, 2014	
4	General coordination:	March 6, 2014
8	HHFDC comments:	December 1, 2014

PROJECT:

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MAUKA

MAKAI

GRAPHIC SCALE

0' 8' 16' 24'

SHEET TITLE:

RESIDENTIAL FLOOR PLANS

SHEET NUMBER:

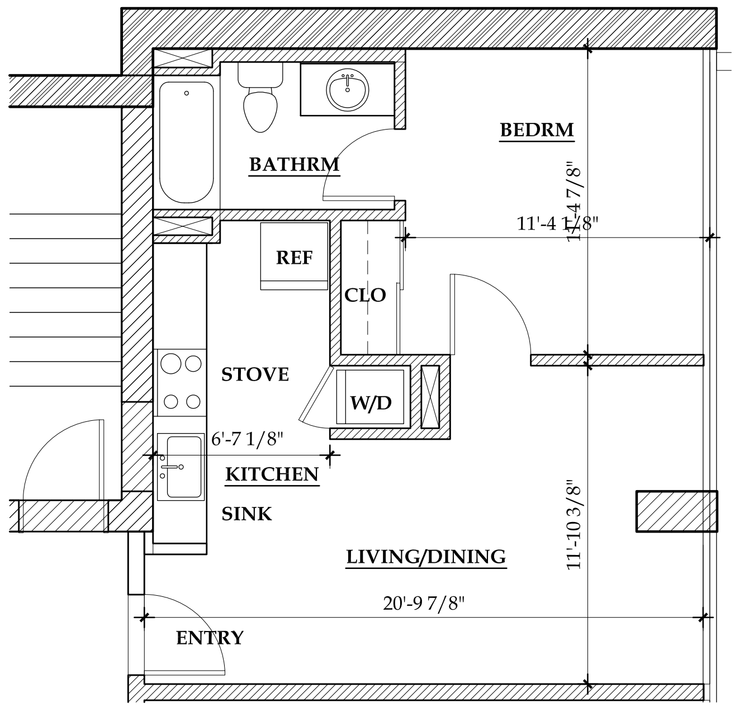
A-2.3

CONCEPTUAL PLANS

OF

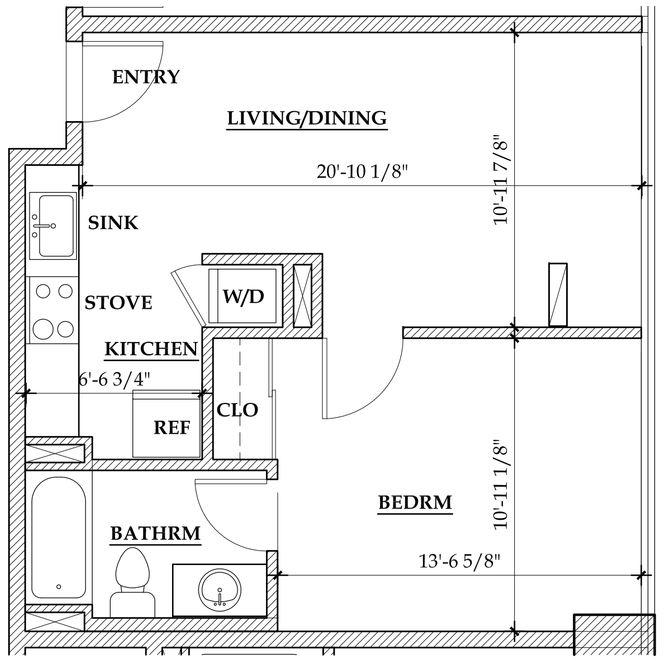
DATE:

January 9, 2014



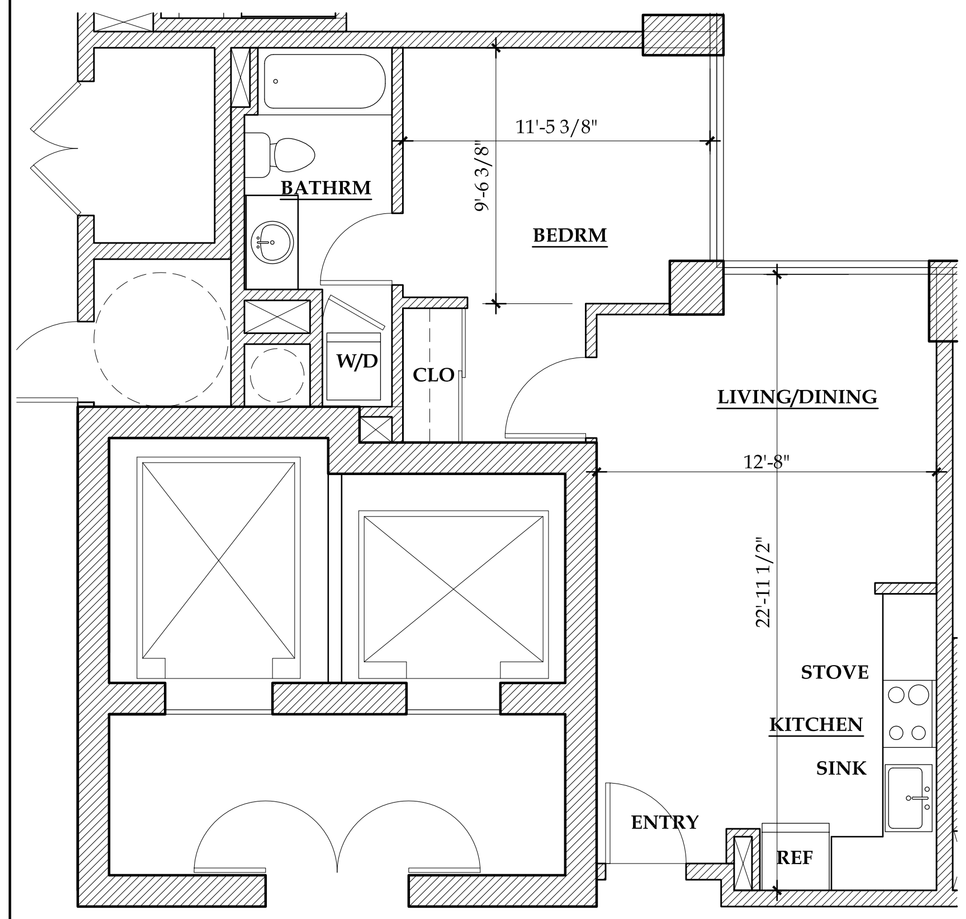
SCALE: 1/8" = 1'-0"

TYPE A 1-BDRM / AREA 484 SF



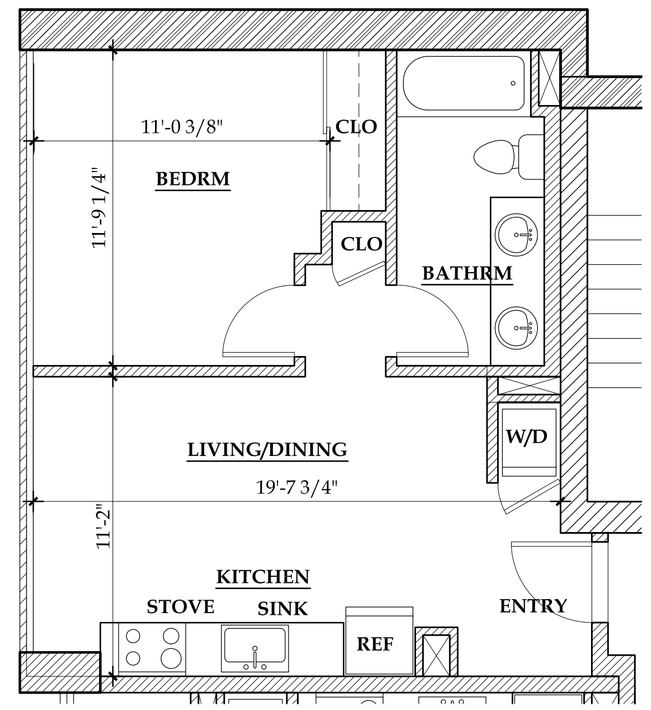
SCALE: 1/8" = 1'-0"

TYPE B 1-BDRM / AREA 498 SF



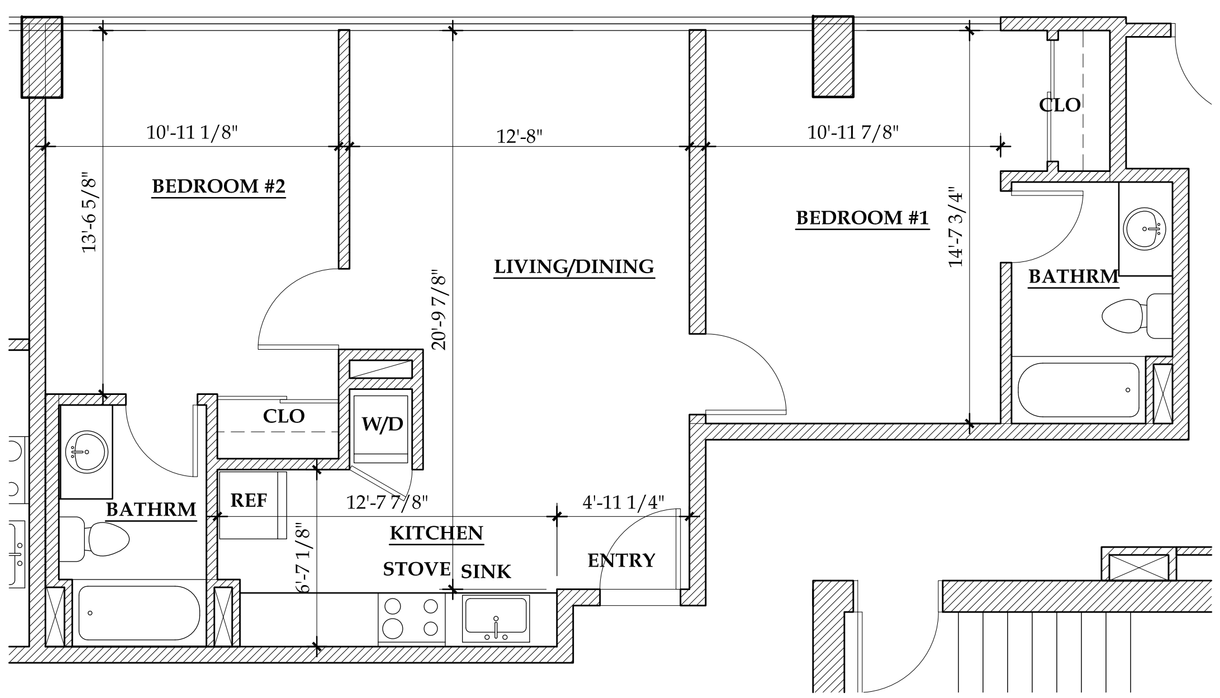
SCALE: 1/8" = 1'-0"

TYPE C 1-BDRM / AREA 494 SF



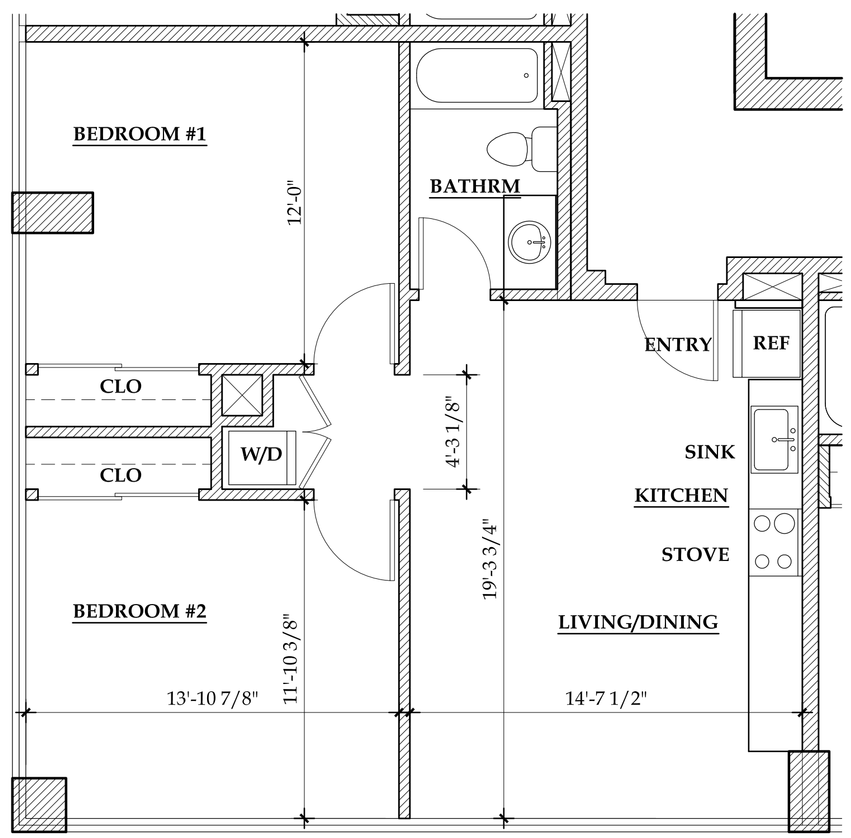
SCALE: 1/8" = 1'-0"

TYPE D 1-BDRM / AREA 456 SF



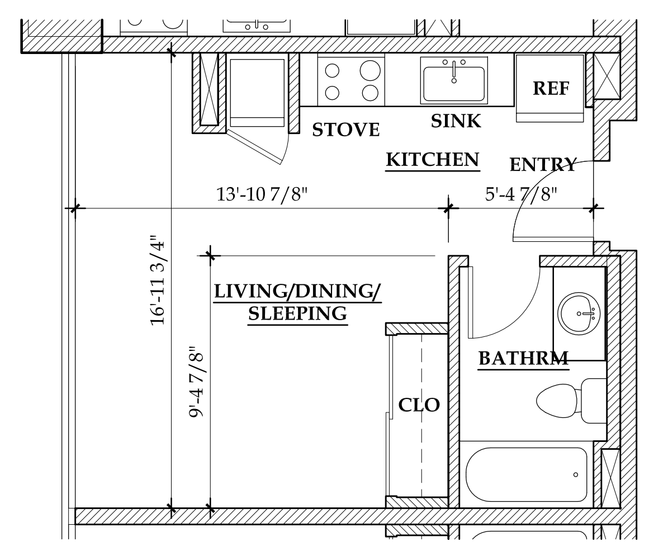
SCALE: 1/8" = 1'-0"

TYPE G 2-BDRM / AREA 791 SF



SCALE: 1/8" = 1'-0"

TYPE F 2-BDRM / AREA 762 SF



SCALE: 1/8" = 1'-0"

TYPE E STUDIO / AREA 335 SF

REVISION

ISSUE:		DATE:
1	HHFDC comments :	January 7, 2014
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PROJECT:

OHANA HALE
929 Pumehana Street
Honolulu, HI

OWNER:

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MAUKA

N
EWA DH

MAKAI

GRAPHIC SCALE

0' 4' 8' 16'

SHEET TITLE:

RESIDENTIAL
UNIT
FLOOR PLANS

SHEET NUMBER:

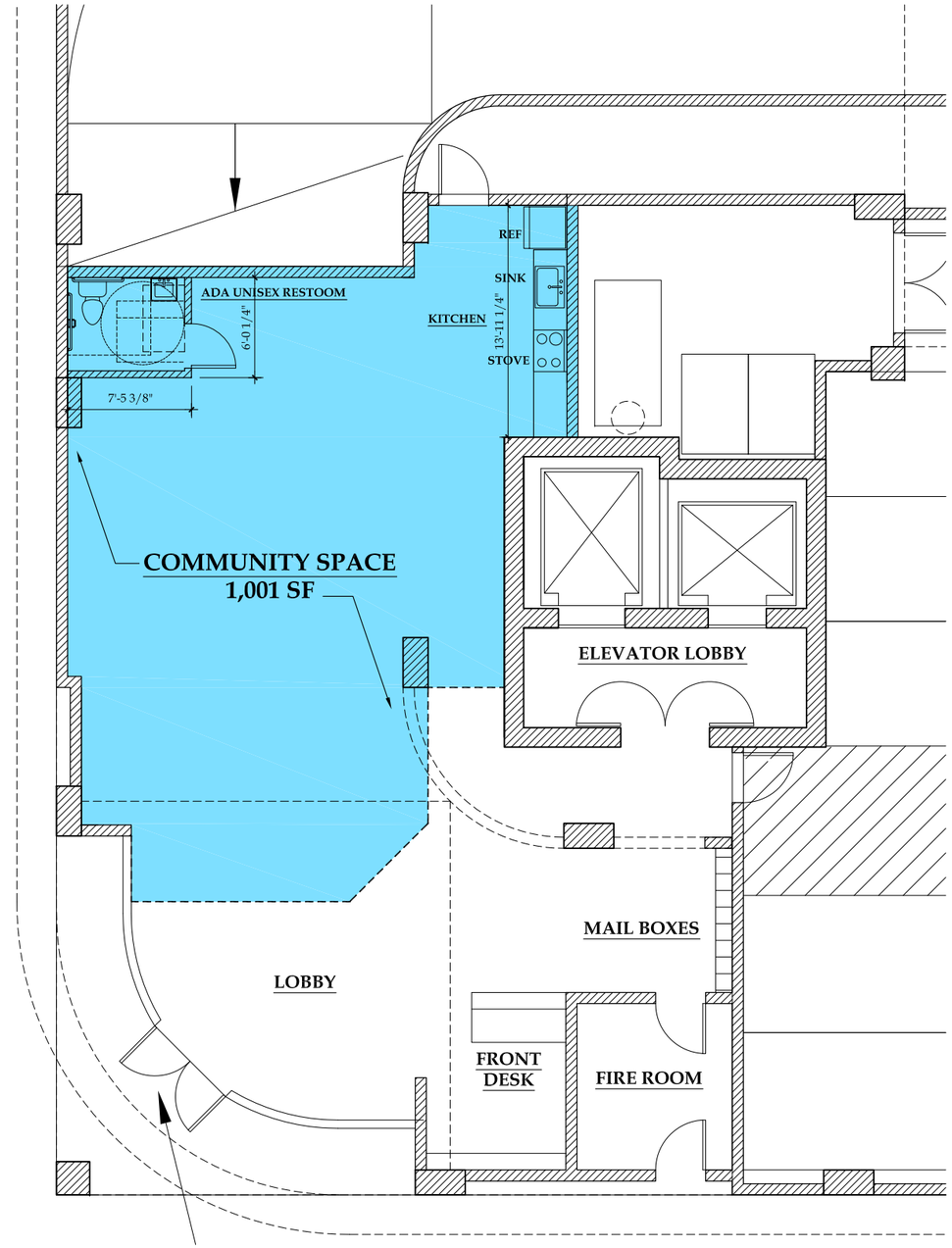
A-2.4

CONCEPTUAL
PLANS

OF

DATE:

January 9, 2014



COMMUNITY SPACE FLOOR PLAN

SCALE: 1/8" = 1'-0"

REVISION

ISSUE:		DATE:
1	HHFDC comments :	January 7, 2014
3	Parking calcs revision :	February 27, 2014
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8	HHFDC comments:	December 1, 2014
9	HHFDC comments:	January 16, 2015

PROJECT:

OHANA HALE
929 Pumehana Street
Honolulu, HI

OWNER:

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MAUKA

N
EWA DH

MAKAI

GRAPHIC SCALE

0' 4' 8' 16'

SHEET TITLE:

DETAIL
FLOOR PLANS

SHEET NUMBER:

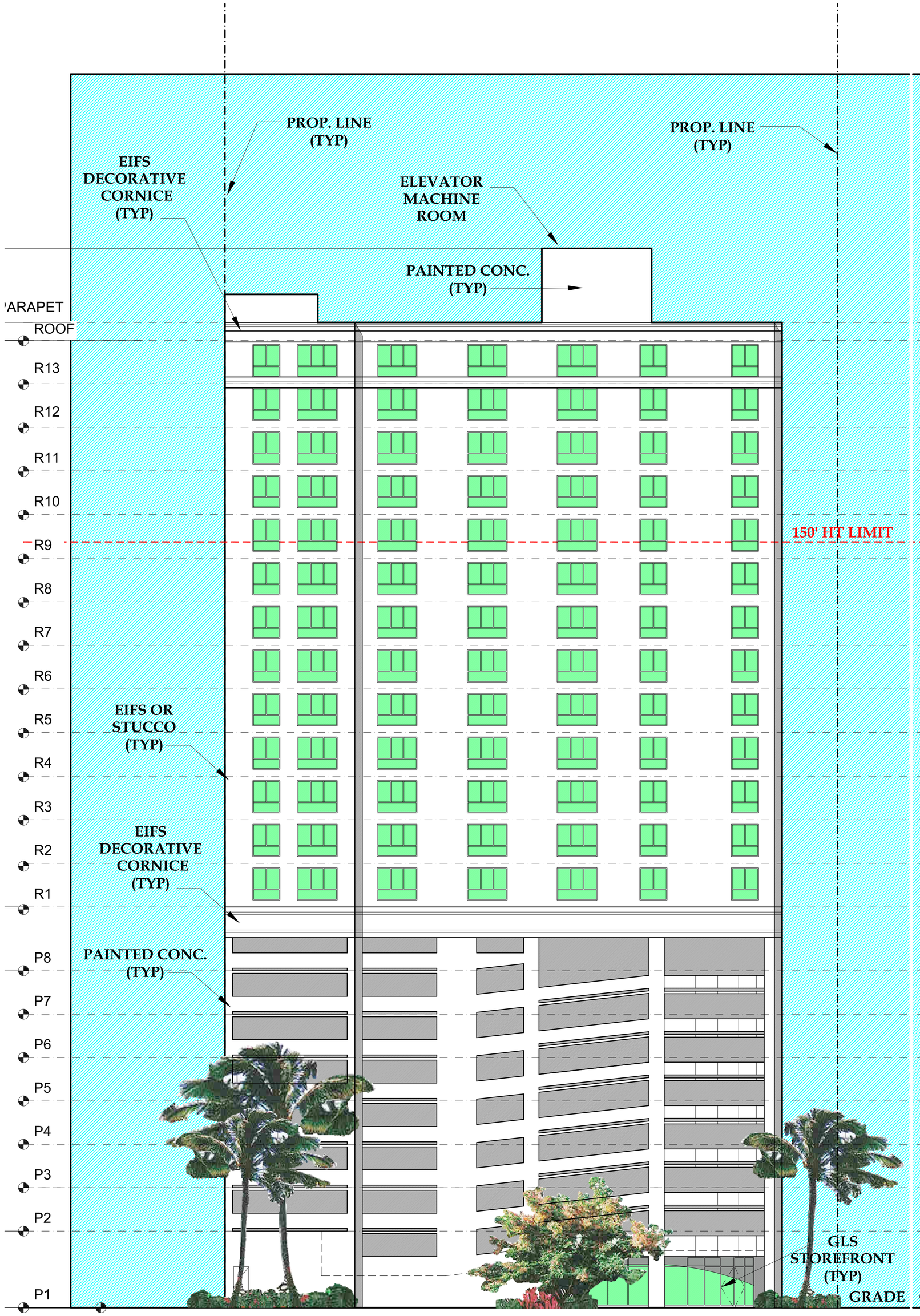
A-2.5

CONCEPTUAL
PLANS

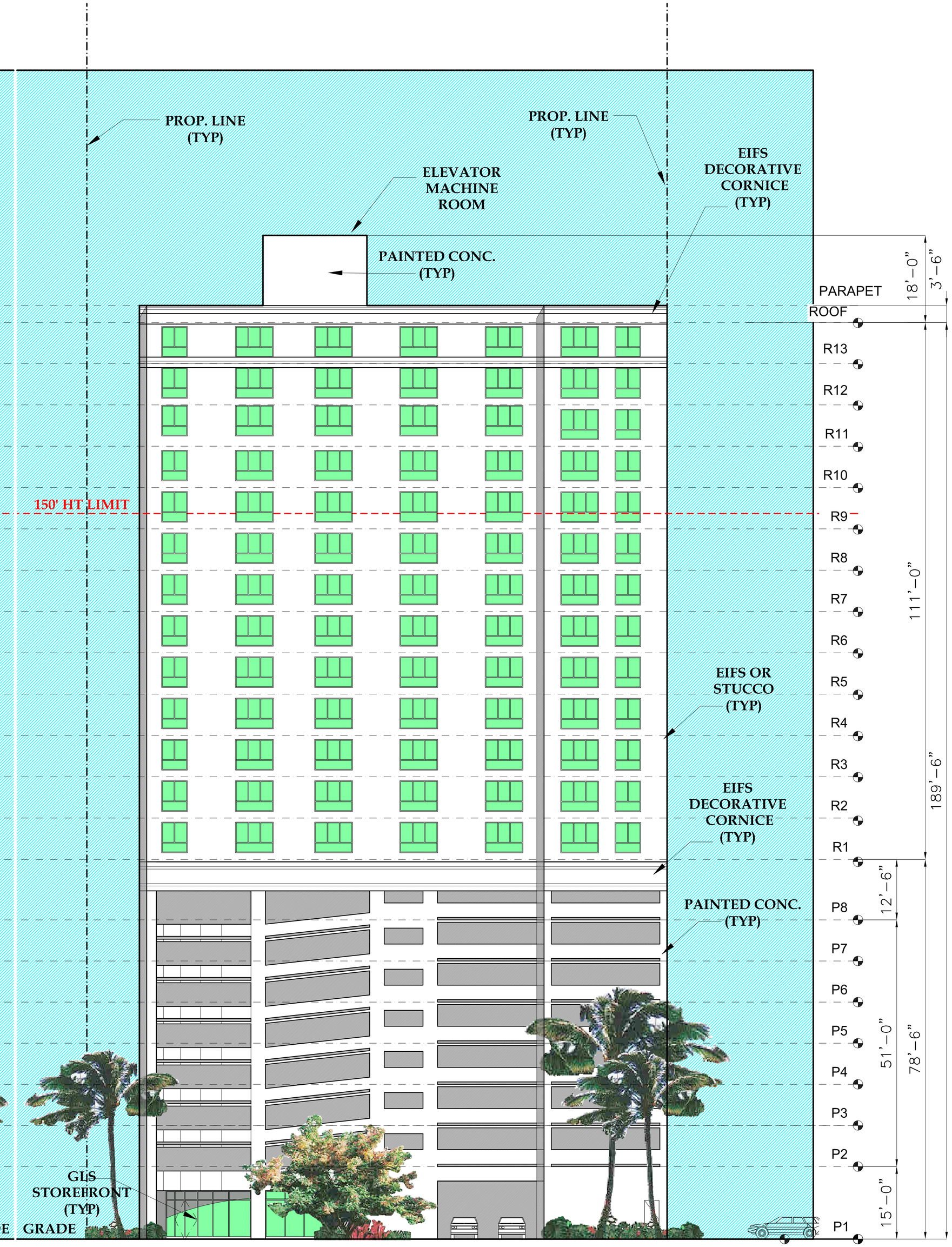
OF

DATE:

January 9, 2014



EWA ELEVATION
(PUMEHANA ST.)



MAKAI ELEVATION
(ALGAROBA ST.)

REVISION

ISSUE:		DATE:
1	HHFDC comments :	January 7, 2014
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PROJECT:

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MAUKA

N
EWA DH

MAKAI

GRAPHIC SCALE

0' 10' 20' 30'

SHEET TITLE:

EXTERIOR ELEVATIONS

SHEET NUMBER:

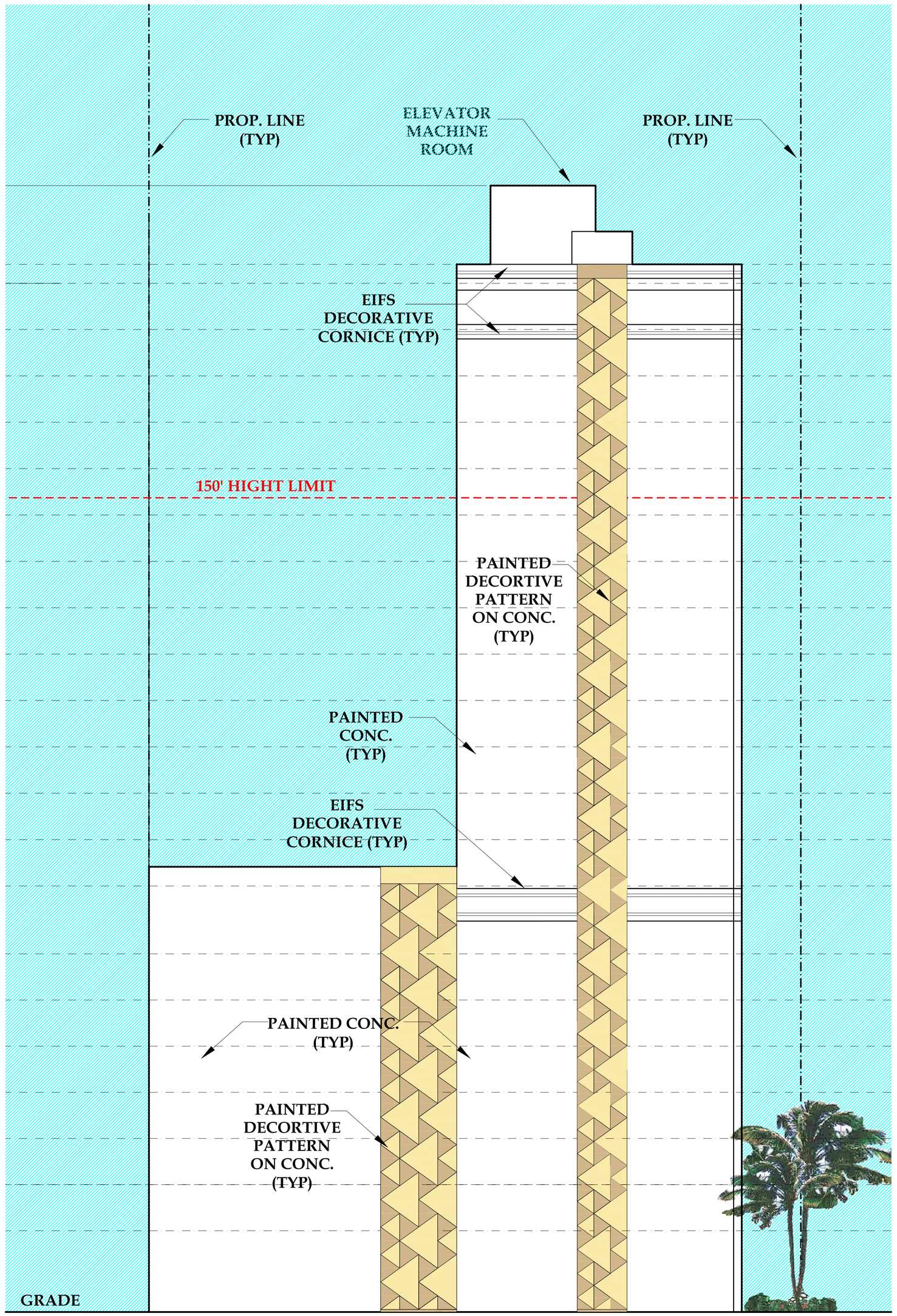
A-3.1

CONCEPTUAL PLANS

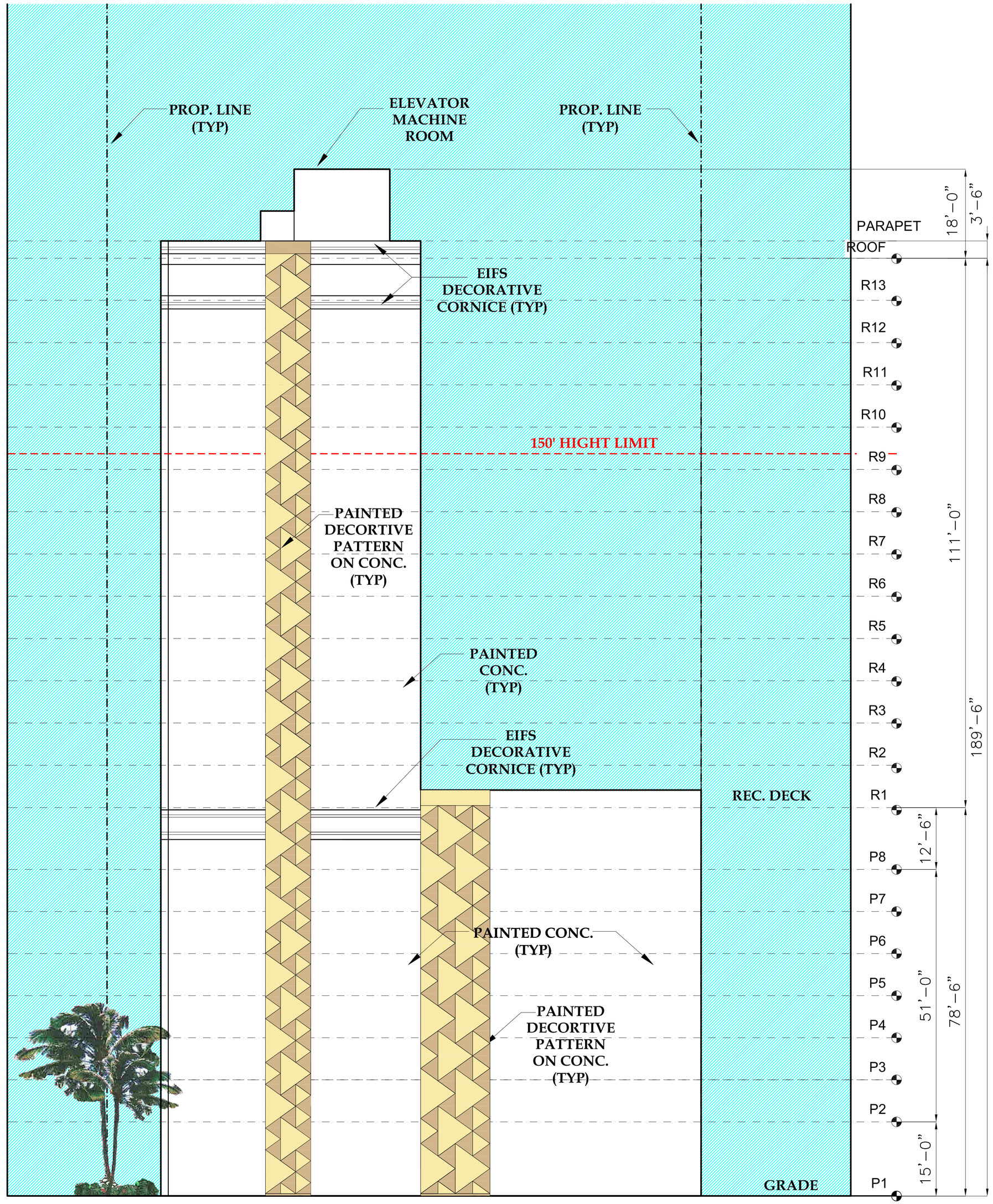
OF

DATE:

January 9, 2014



NORTH ELEVATION



REVISION

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MAUKA

N
EWA DH

MAKAI

GRAPHIC SCALE

0' 10' 20' 30'

SHEET TITLE:

EXTERIOR ELEVATIONS

SHEET NUMBER:

A-3.2

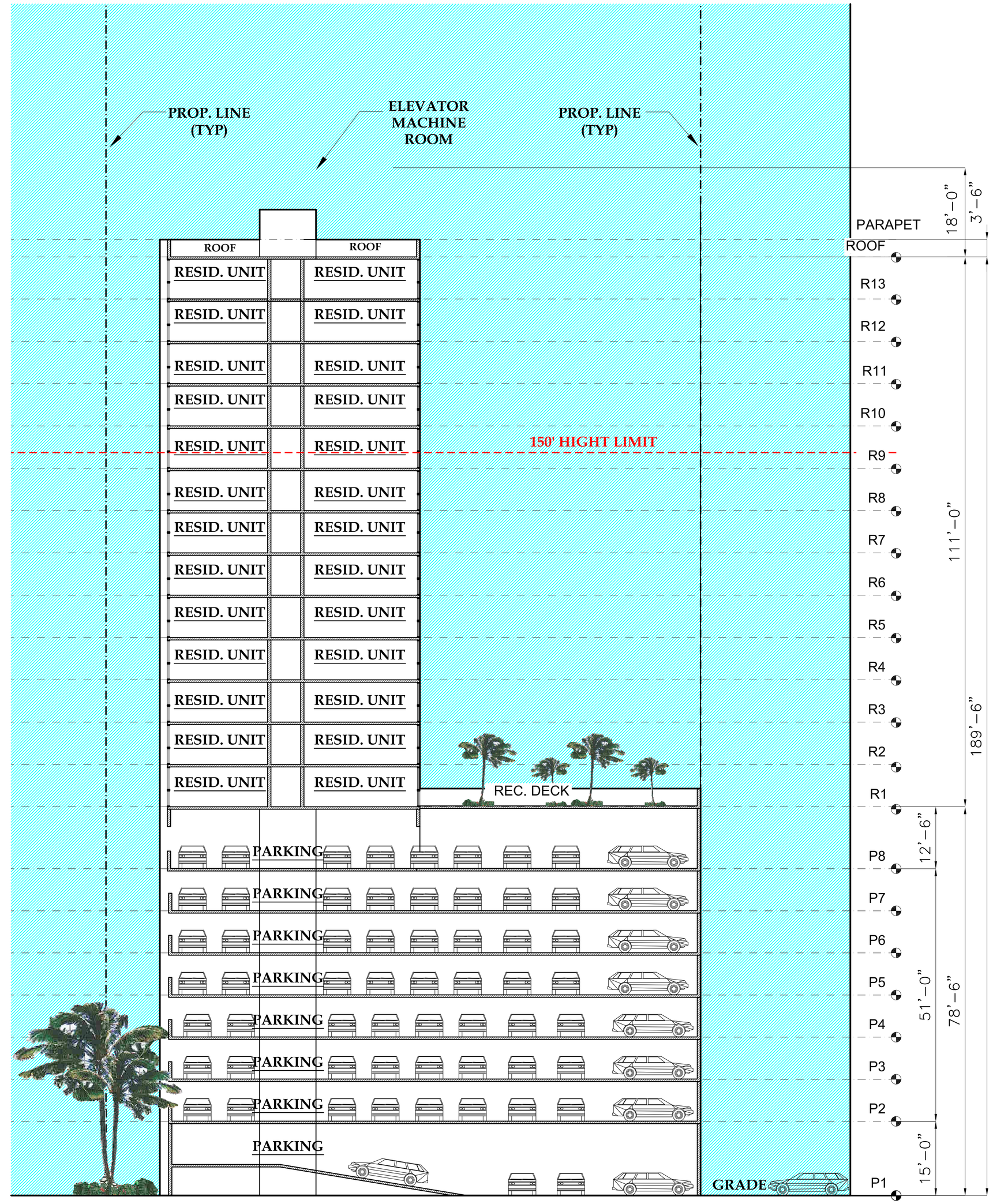
CONCEPTUAL PLANS

OF

DATE:

January 9, 2014

3D VIEW LOOKING MAUKA
SCALE: NTS



CROSS SECTION LOOKING MAUKA
SCALE: NTS

REVISION

ISSUE:		DATE:
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MAUKA

N
EWA DH

MAKAI

GRAPHIC SCALE

0' 10' 20' 30'

SHEET TITLE:

3D VIEW
&
CROSS SECTION

SHEET NUMBER:

A-4.1

CONCEPTUAL PLANS

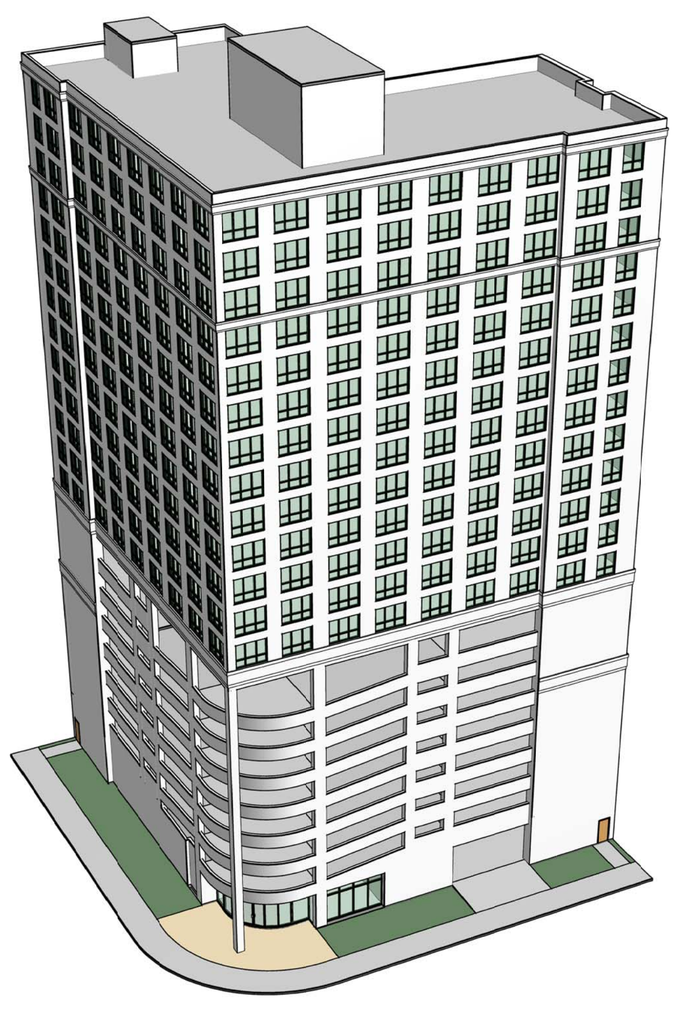
OF

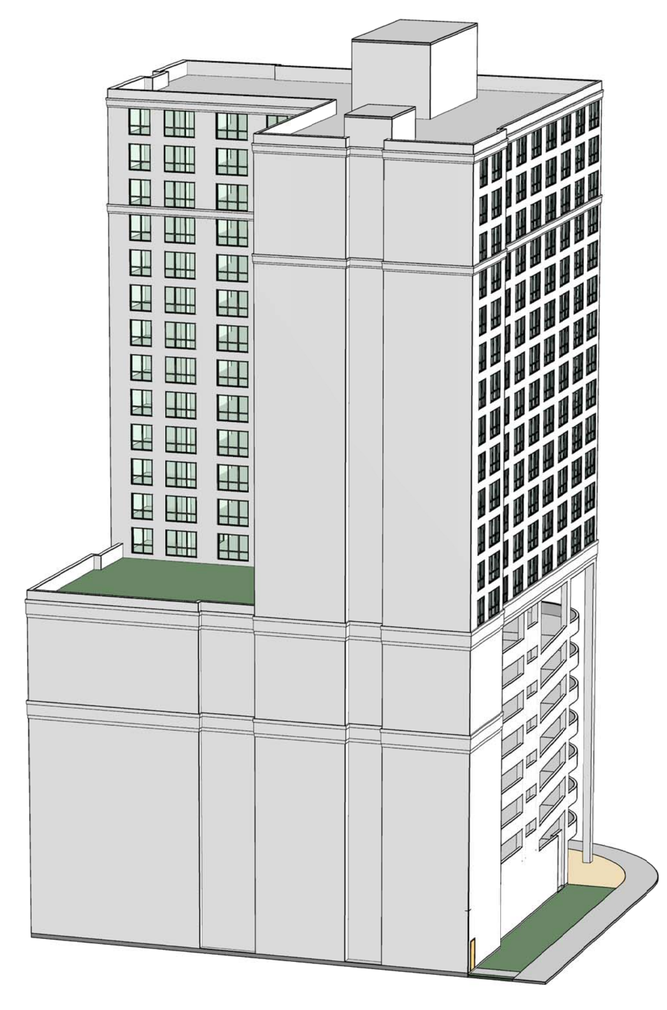
DATE:

January 9, 2014

3D VIEW LOOKING MAKAI

SCALE: NTS





3D MAUKA & MAKAI VIEWS

SCALE: NTS

REVISION

ISSUE:		DATE:
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MAUKA

N
EWA DH

MAKAI

GRAPHIC SCALE

0' 10' 20' 30'

SHEET TITLE:

3D VIEWS

SHEET NUMBER:

A-4.2

CONCEPTUAL PLANS

OF

DATE:

January 9, 2014

DECORATIVE PATTERN NARRATIVE

The Building code (IBC) does not allow any opening on both the Mauka and Diamond Head facades due to their proximity to the property line. Articulation of these identical facades is achieved by two, 30 inches deep vertical indentations, one from grade to the top of the residential superstructure on the outer wall of the stair shaft and the other from grade to the top of parking structures. The indentations are to be decorated with geometric patterns.

Execution of the design can be achieved simply by stencilling the exterior structural concrete with either paint or stain to avoid burdening the affordable project with unaffordable costs. Furthermore, because the decorative element on both facades cannot be touched or viewed up close, but only from a distance, and because future construction on neighboring properties may obscure its view in part or in total, the use of more noble materials will not further benefit its appreciation. The pattern and colors shown in this rendering are preliminary and will need to be further investigated.

3D VIEW LOOKING EWA
SCALE: NTS

3D VIEW LOOKING MAKAI
SCALE: NTS

REVISION

ISSUE:		DATE:
4	General coordination:	March 6, 2014
5	HHFDC comments:	May 29, 2014
6	HHFDC comments:	June 17, 2014
7	HHFDC comments :	June 24, 2014
8	HHFDC comments:	December 1, 2014

PROJECT:
OHANA HALE
929 Pumehana Street
Honolulu, HI

OWNER:
MJF DEVELOPMENT

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MAUKA

N
EWA DH

MAKAI

GRAPHIC SCALE

0' 10' 20' 30'

SHEET TITLE:
3D VIEWS
&
DECORATIVE PATTERN
NARRATIVE

SHEET NUMBER:
A-4.3
CONCEPTUAL
PLANS
OF

DATE:
January 9, 2014

PLANTS LEGEND

STREETSCAPE & ENTRY PLANTING

TREES & PALMS

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	QTY.	NOTES / SPACING
	BAUHINIA BLAKEANA	HONG KONG ORCHID TREE	36" BOX	4	
	COCOS PLUMOSA	COCONUT PALM	16-24' TALL	3	NATIVE, 24' - (2); 22' - (1); 18' - (2); 16' - (1)
	PRITCHARDIA HILLEBRANDII	LOULU PALM	12'-16'	2	NATIVE
	HARPULLIA PENDULA	TULIPWOOD	24" BOX	2	AS SHOWN WITH 5'X5' TREE GRATES

SCREENING & ACCENT SHRUBS

	PITTOSPORUM SP.	HOAWA	15 GAL	11	NATIVE
	HELECONIA PSITTACORUM	PARROT'S BEAK HELECONIA	1 GAL	20	NATIVE
PA	AECHMEA BLANCHETIANA	ORANGE AECHMEA OR LEMON AECHMEA	5 GAL		NATIVE
	CORDYLINE FRUTICOSA 'PETER BUCK'	TI	5 GAL		NATIVE
	GARDENIA BRIGHAMII	NANU	5 GAL		NATIVE
	HIBISCUS ARNOTTIANUS	KOKIO KE'O KE'O	5 GAL		NATIVE

GROUNDCOVERS

PA	WIKSTROEMIA UVAOURSI	AKIA	1 GAL		NATIVE
	VITEX ROTUNDIFOLIA	POHINAHINA	1 GAL		NATIVE
	NEPHROLEPSIS CORDIFOLIA	KUPUKUPU FERN	1 GAL		NATIVE

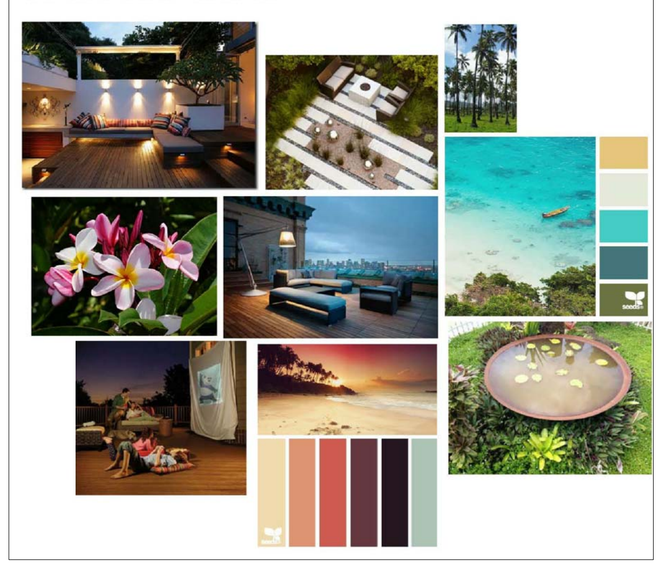
ROOF DECK PLANTING

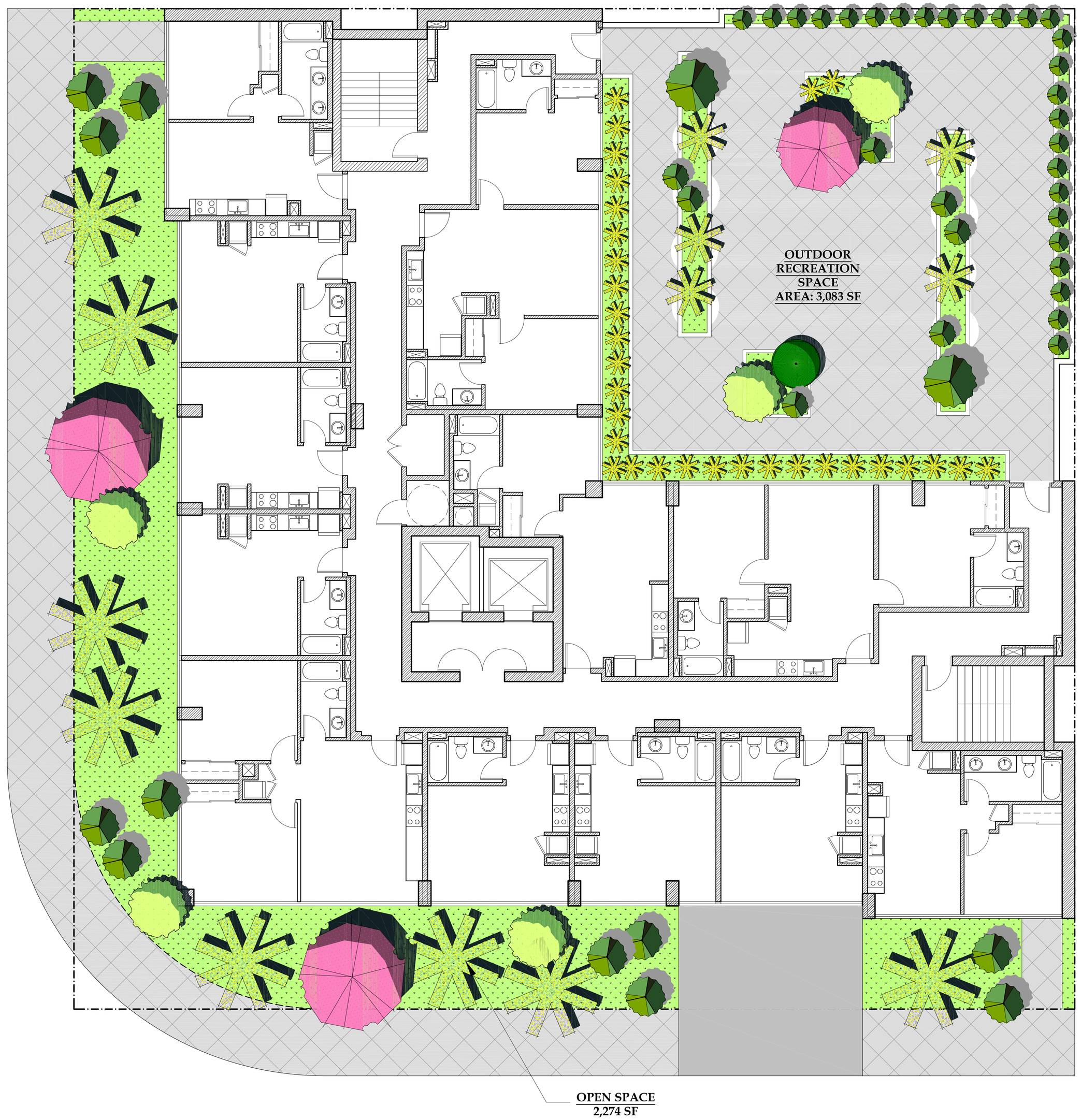
SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	QTY.	NOTES / SPACING
	COMMUNITY GARDEN				EDIBLE PLANTS IN 4" POTS OR FLATS, TBD
	LAWN				NATIVE GRASSES
	ZAMIA FURFURACEA	CARDBOARD PALM	15 GAL	10	PLANT IN POTS

SCREENING & ACCENT SHRUBS

PA	AECHMEA BLANCHETIANA	ORANGE OR LEMON AECHMEA	5 GAL		ORANGE & LEMON
	BOUGAINVILLEA 'RASPBERRY ICE' & 'SAN DIEGO RED' OR 'PURPLE'	BOUGAINVILLEA	5 GAL		PLANT 4' OC IN PLANTERS
	CARISSA MACROCARPA PROSTRATA	PROSTRATE NATAL PLUM	1 GAL		PLANT 4' OC
	DIANELLA SP. VARIEGATED	DIANELLA	1 GAL		PLANT 3' OC
	NEPHROLEPIS CORDIFOLIA	KUPUKUPU FERN	1 GAL		NATIVE
	RHOEO SPATHACEA	OYSTER PLANT	1 GAL		PLANT 2' OC

CONCEPTUAL IMAGES:





STREET & REC DECK LANDSCAPING PLAN

SCALE:NTS

REVISION

ISSUE:		DATE:
8	HHFDC comments:	December 1, 2014

PROJECT:

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MAUKA

N
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GRAPHIC SCALE

0' 4' 8' 12'

SHEET TITLE:

STREET & REC DECK LANDSCAPING PLAN

SHEET NUMBER:

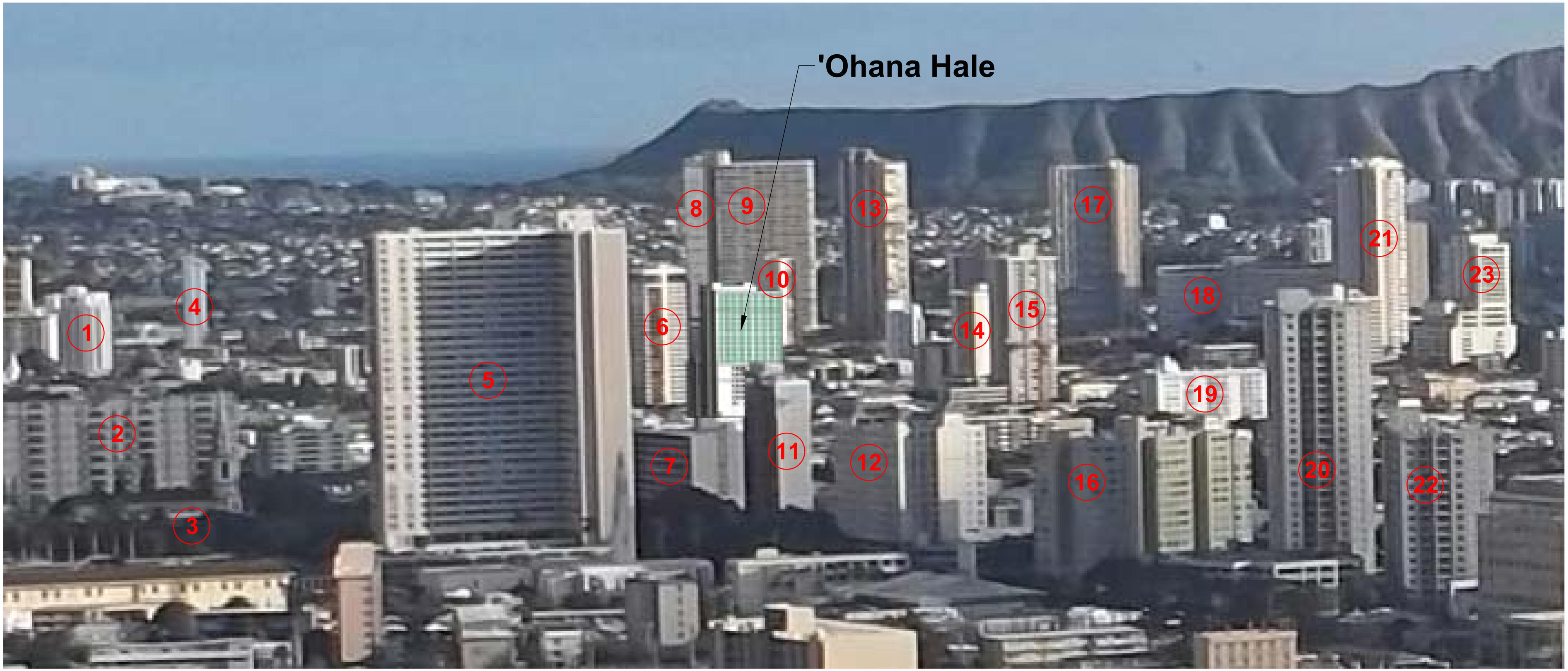
L-1

CONCEPTUAL PLANS

OF

DATE:

January 9, 2014



DETAIL VIEW FROM PUNCHBOWL LOOKOUT

1. 845 University Ave.
2. Courtyards at Punahou
3. Central Union Church
4. Plumeria Hale
5. Banyan Tree Plaza
6. Parkside Tower
7. Punahou Circle
8. Regency Tower
9. Iolani Court Plaza
10. Kapiolani Royale
11. Punahou Regency
12. Kulana Hale
13. Royal Iolani
14. H & M Apartments
15. Twenty One Hundred
16. One Kalakaua
17. Ala Wai Plaza Skyrise
18. Ala Wai Plaza
19. The Pumehana
20. 1450 Young St.
21. Marco Polo
22. 1448 Young St.
23. Tokai University

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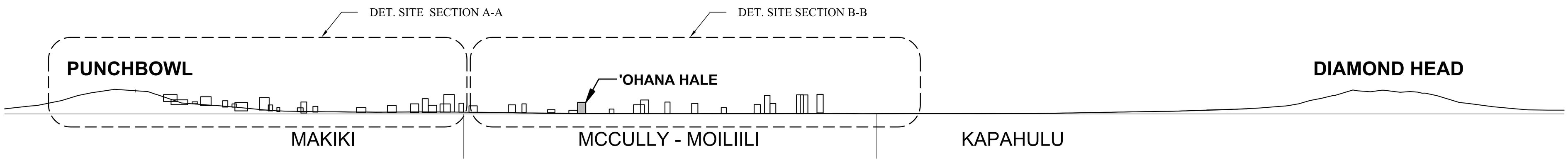
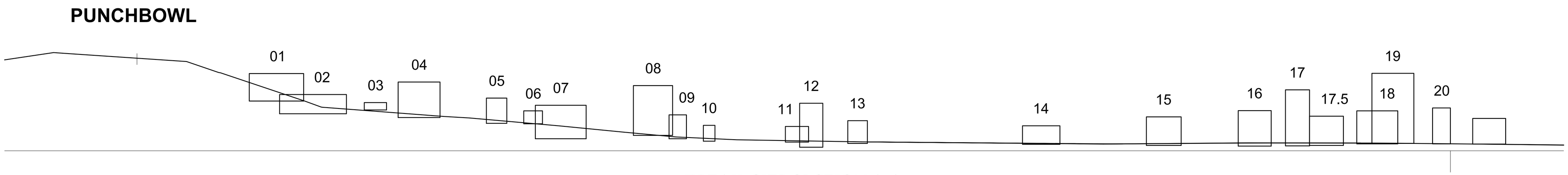
A-5

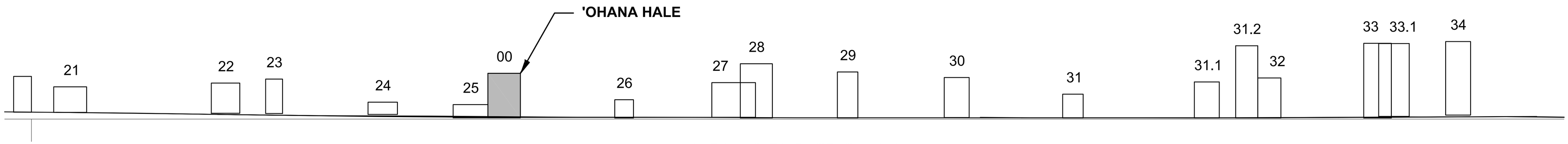
REVISIONS
6 HHFDC comments: June 17, 2014
8 HHFDC comments: December 1, 2014



SITE SECTION
SCALE: 1'-0" = 800'-0"



DETAIL SITE SECTION A-A
SCALE: 1'-0" = 200'-0"



DETAIL SITE SECTION B-B
SCALE: 1'-0" = 200'-0"

LEGEND

00	'Ohana Hale
01	Royal Vista
02	965 Prospect
03	Makiki Cliffs
04	Maunaihi Terrace
05	Makikilani Plaza
06	1556 Thurston
07	Barclay
08	Makiki Plaza
09	Village Maluhia
10	Hassinger Gardens
11	Piikoi Atrium
12	1212 Kinau - HPHA
13	Luna-Liho Towers
14	1326 Keeaumoku
15	1418 Young St
16	1448 Young St
17	1450 Young St
17.5	One Kalakaua
18	Kulana Hale
19	Banyan Tree Plaza
20	Punahou Regency
21	Punahou Circle
22	Courtyards at Punahou
23	1206 Alexander
24	1907 S. Beretania
25	The Pumehana
26	1919 Citron
27	McCully Villa
28	Twenty One Hundred
29	Parkside Tower
30	Scenic Tower
31	745 Isenberg
31.1	Ala Wai Plaza
31.2	Ala Wai Plaza Skyrise
32	Kapiolani Royale
33	Iolani Court Plaza
33.1	Royal Iolani
34	Regency Tower

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A-6

REVISIONS
6 HHFDC comments: June 24, 2014
8 HHFDC comments: December 1, 2014

Appendix E

Phase 1 Environmental Site Assessment

REVISED PHASE I
ENVIRONMENTAL SITE ASSESSMENT

TMK: (1) 2-3-028:004
929 PUMEHANA STREET
HONOLULU, HAWAII

Prepared For:

MJF Development c/o CB Richard Ellis
1003 Bishop Street, Suite 1800
Honolulu, Hawaii 96813

February 26, 2013

Prepared By:

Central Planet Repair, LLC.
236 Kuahiwi Avenue
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808/216-6555
www.geochemist.net

CPR PROJECT 13-8r1

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Phone: 808/216-6555

MJF Development c/o CB Richard Ellis
1003 Bishop Street, Suite 1800
Honolulu, Hawaii 96813

February 26, 2013

Attention: Mr. James C. Shipman

Subject: **Revised Phase I Environmental Site Assessment**
TMK: (1) 2-3-028:004
929 Pumehana Street
Honolulu, Hawaii
CPR Project: 13-8r1

Dear Mr. Shipman:

Central Planet Repair, LLC (CPR) has completed this Revised 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. This revised report supersedes our report dated February 25, 2013.

Our Revised Phase I ESA was conducted in accordance with the scope of work contained in our proposal dated December 6, 2012. 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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Appendix G	Interview Documentation
Appendix H	Qualifications of the Environmental Professionals

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
DLU	Department of Land Utilization
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
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

REVISED PHASE I
ENVIRONMENTAL SITE ASSESSMENT
TMK: (1) 2-3-028:004
929 PUMEHANA STREET
HONOLULU, HAWAII

1.0 EXECUTIVE SUMMARY

This revised report presents the results of Central Planet Repair, LLC's (CPR's) Phase I Environmental Site Assessment (ESA) of TMK: (1) 2-3-028:004, 929 Pumehana Street, Honolulu, Hawaii (the "subject property"). This revised report supersedes the report dated February 25, 2013. The report was revised to confirm the removal of regulated material from the subject property by the seller following issuance of our report dated February 25, 2013.

CPR has performed this Phase I Environmental Site Assessment in accordance with the scope and limitations of ASTM Practice E1527-05 (ASTM E1527-05) 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 were that the following recognized environmental conditions are present on the subject property:

- Containers of potentially hazardous materials, including the banned pesticide Chlordane, were observed stored in the Building No.1 storage area and in the shed. The two bottles of Chlordane identified in the storage area should be removed from the site under manifest for proper disposal by incineration at a permitted facility. The other potentially hazardous materials should be inventoried and used as appropriate or removed from the site for proper disposal.

This recognized environmental condition was resolved through the material being removed from the subject property as confirmed in an additional site visit on February 26, 2013. The February 26, 2013 site visit was performed solely to confirm the removal of the Chlordane from the storage area. The Seller did not provide

information regarding the removal of the Chlordane off site. Based on the removal of the Chlordane and other materials this revised report has been issued.

The following environmental conditions, which are not considered to be *recognized environmental condition*s, as defined by ASTM E1527-05, 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. Suspect ACM can include floor tiles (with associated mastics) and roofing materials.

- 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:

- *Continental Auto Service Inc. (Algaroba Auto Repair).* 1918 Algaroba St, S 0.017 mi. The site is RCRA Small Quantity generator (RCRA-CESQG) (generates less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month). No RCRA violations were reported for this site. The site will not affect the environmental condition of the subject property if operated and maintained in accordance with the Federal and State of Hawaii rules and regulations.

- The prior use of the north adjoining property the McCully Service Station, an auto repairing facility with filling station, as shown on the 1949 – 1991 Sanborn Maps, is considered a recognized environmental condition. The HDOH UST records shows that McCully Service Station located at this property (1901 S King Street, Honolulu) was demolished and four out of service underground storage tanks were removed from the ground. The environmental site assessment was not done during the UST removal. Documentation regarding closure of the former McCully Service Station USTs was submitted to DOH on 1 December 2012. The document confirms that sampling was not conducted at the time the USTs were removed from the site and also confirms the responsible parties for contamination that may be

present at the site and which may migrate offsite. Identification of the responsible party does not mitigate the REC associated with the former use of the site as a gas station. However, it does remove a significant portion of potential business risk for the adjacent property which is the subject of this report.

The RECs connected with the non-adjacent surrounding properties will not affect the environmental condition of the Subject Properties due to the distance to the Subject Properties and the regulatory status of the sites (mostly NFA).

Based on the findings of the February 25, 2013 Phase I ESA, additional environmental actions were warranted for the subject property at the date of the report:

- The two one-gallon bottles of Chlordane should be removed from the site under manifest for proper disposal by incineration at a licensed facility. The material was removed from the site by the Seller as confirmed during the February 26, 2013 site visit.

2.0 INTRODUCTION

2.1 OVERVIEW

This revised 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 December 6, 2012, which constitutes the contractual agreement between CPR and MJF Development c/o CB Richard Ellis 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 E1527-05) 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* (RECs) is 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. 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 revised 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 MJF Development c/o CB Richard Ellis. 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 E1527-05 Standard (ASTM E1527-05).

2.5 LIMITATIONS AND EXCEPTIONS OF ASSESSMENT

The report has been prepared in accordance with generally accepted environmental methodologies referred to in ASTM E1527-05, 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 MJF Development c/o CB Richard Ellis 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 E1527-05 and AAI.

CPR has made one exception to the Phase I ESA procedures specified by ASTM E1527-05. 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

MJF Development c/o CB Richard Ellis contracted CPR to perform this Phase I ESA. The ESA was conducted and this report was prepared for the sole use of MJF Development c/o CB Richard Ellis. 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 MJF Development c/o CB Richard Ellis. 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, 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) 2-3-028:004 parcel is located at 929 Pumehana Street, and contains an area of 14,400 square feet.

Site photographs are provided in Appendix D. Historical research documentation is provided in Appendix E.

3.2 CURRENT USES OF THE PROPERTY

Three residential buildings are located at TMK: (1) 2-3-028:004 parcel of land. The buildings are occupied by tenants.

3.3 STRUCTURES, ROADS, AND OTHER IMPROVEMENTS ON THE SITE

One 2-story concrete building (Building No.1), one 1-story wood building with basement (Building No.2), one 2-story building (Building No.3) with basement, and parking are located at the TMK: (1) 2-3-028:004 parcel (Appendix C, Figure 3). There is a backyard and a fish pond at the eastern side of the Building No.3. Material storage shed is located at the eastern boundary of the subject property.

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	Auto Pars Shop
Northeast	Apartments
East	Auto Repair Shop
South	Algaroba Street
West	Pumehana Street

4.0 USER PROVIDED INFORMATION

4.1 TITLE RECORDS

No title report was provided by the client to review 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 past uses of the property were obtained from interviews with the property owner and manager and from review of historical documents.

The property owner and manager do 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 Kawamura Family Partners (fee owner).

Units in the subject property buildings are reportedly occupied by tenants.

4.6 REASON FOR PERFORMING THIS PHASE I ASSESSMENT

The Phase I ESA was prepared by CPR at the request of MJF Development c/o CB Richard Ellis. This Phase I ESA was requested for the following reasons:

- Due diligence for purchase of the building and Fee Simple Interest.

4.7 OTHER USER PROVIDED INFORMATION

No other user provided information was available for the subject property.

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 E1527-05 (ASTM, 2005) 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	1.0
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 12/28/2011 has revealed that there is 1 CERC-NFRAP site within approximately 0.5 miles of the target property.

First Development Inc. 1777 Kapiolani Blvd, SW 0.423 mi.

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 09/11/2012 has revealed that there is 1 RCRA-SQG site within approximately 0.25 miles of the target property.

Texaco Service Station. 2105 S King and Wiliwili, E 0.153 mi. Violation Status: No violation 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 09/11/2012 has revealed that there are two RCRA-CESQG sites within approximately 0.25 miles of the target property.

Continental Auto Service Inc. 1918 Algaroba St, S 0.017 mi. Violation Status: No violation found.

McCully Shell. 1115 McCully St, NE 0.126 mi. Violation Status: No violation 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 SHWS list, as provided by EDR, and dated 03/13/2012 has revealed that there are 36 SHWS sites within approximately 1 mile of the target property.

Continental Auto Services. 1918 Algaroba St, S 0.017 mi. Hazard Priority: NFA (No Further Actions)

McCully Union Service. 2105 S King St, E 0.153 mi. Hazard Priority: NFA (No Further Actions)

McDonald's Restaurant Soil & Groundwater Contamination. 2121 S King St, E 0.162 mi. Hazard Priority: SOSC NFA (No Further Actions)

Wallys Garden Center. 1935 S Beretania St, NNE 0.163 mi. Hazard Priority: Medium

Kapiolani Women's & Children's Medical Center. 1319 Punahou St NNW 0.426 mi. Hazard Priority: NFA (No Further Actions)

Aloha/King Self Storage. 1414 Kalakaua Ave, WNW 0.430 mi. Hazard Priority: Low

7-11 Kalakaua. 1323 Kalakaua Ave, NW 0.465 mi. Hazard Priority: NFA (No Further Actions)

1800 Vancouver Drive. 1800 Vancouver Dr, NE 0.558 mi. Hazard Priority: Medium

Meadow Gold Dairies (Ice Cream Plant). 1418 Young St, WNW 0.609 mi. Hazard Priority: NFA (No Further Actions)

Punahou School - Maintenance Shop. 1601 Punahou St, N 0.645 mi. Hazard Priority: NFA (No Further Actions)

Like Like Plaza Petroleum Contamination. 745 Keeaumoku St, W 0.651 mi. Hazard Priority: NFA (No Further Actions)

Cartwright Neighborhood Park. Keeaumoku St & Matlock Ave, NW 0.691 mi. Hazard Priority: NFA (No Further Actions)

2700 South King Street. 2700 S King St, ESE 10.777 mi. Hazard Priority: NFA (No Further Actions)

UH Duke Kahanamoku Swimming Pool. Sodium Hypoclorite Release. 2500 Campus Rd, ENE 0.821 mi. Hazard Priority: NFA (No Further Actions)

Grace Otsuka Apartment Complex. 1233 Young St, WNW 0.834 mi. Hazard Priority: NFA (No Further Actions)

Schuman Carriage Motors, Ltd. 1234 S Beretania St, WNW 0.870 mi. Hazard Priority: Low

1012 Piikoi Street, Anin-Piikoi Building. 1012 Piikoi St, WNW 0.897 mi. Hazard Priority: NFA (No Further Actions)

Former Kalakaua Transmission Inc. 1665 Kalakaua Ave, WSW 0.375 mi. Hazard Priority: NFA (No Further Actions)

Roger's Repair Inc. 1687 Kalakaua Ave, WSW 0.380 mi. Hazard Priority: NFA (No Further Actions)

Hawaii Convention Center. 1801 Kalakaua Ave, SW 0.404 mi. Hazard Priority: NFA (No Further Actions)

The Pavillion. 1925 Kalakaua Ave, SSW 0.595 mi. Hazard Priority: NFA (No Further Actions)

New Office Lounge. 1551 Kapiolani Blvd, WSW 0.617 mi. Hazard Priority: Medium

HECO Substation: Makaloa Substation. 1544 Makaloa St, W 0.621 mi. Hazard Priority: Low. Site Closure Type: NFA Letter - Restricted Use

1609 Ala Wai Diesel Release. 1609 Ala Wai Blvd, SW 0.621 mi. Hazard Priority: NFA (No Further Actions)

Ala Wai Cove Condominium Apartmets. 509 University Ave SSE 0.658 mi. Hazard Priority: SOSC NFA (No Further Actions)

Chevron U.S.A., Inc. 2002 Kalakaua Ave, S 0.681 mi. Hazard Priority: NFA (No Further Actions)

Iolani School Petroleum Odor. 563 Kamoku St, SSE 0.716 mi. Hazard Priority: NFA (No Further Actions)

Yacht Harbor Towers. 1600 Ala Moana Blvd, SW 0.730 mi. Hazard Priority: NFA (No Further Actions)

Royal Gardens Hotel Diesel. 440 Olohana St, S 0.737 mi. Hazard Priority: NFA (No Further Actions)

Hobron Hotel. 1744 Kaioo Dr, SSW 0.752 mi. Hazard Priority: NFA (No Further Actions)

Hakuyosha International, Inc. 730 Sheridan Street, W 0.756 mi. Site Closure Type: NFA Letter - Restricted Use

Motor Supply. 726 Sheridan St, W 0.761 mi. Hazard Priority: NFA (No Further Actions)

Cutter Chevrolet-Geo-Pontiac. 1391 Kapiolani Blvd, W 0.807 mi. Hazard Priority: NFA (No Further Actions)

King Kalakaua Plaza. 2080 Kalakaua Ave, S 0.810 mi. Hazard Priority: NFA (No Further Actions)

Cenpac Properties - Office Building. 615 Piikoi St, W 0.956 mi. Hazard Priority: Low

Waikiki Bazaar. 2174 Kalakaua Ave, S 0.976 mi. Hazard Priority: NFA (No Further Actions)

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 LUST list, as provided by EDR, and dated 08/31/2012 has revealed that there are 21 LUST sites within approximately 0.5 miles of the target property.

University Of Hawaii Federal CRE. 2019 S King St, E 0.090 mi.
Facility Status: Site Cleanup Completed (NFA)

McCully Shell. 1115 McCully St, NE 0.126 mi.
Facility Status: Monitored Natural Attenuation

McCully Union Service. 2105 S King St, E 0.153 mi.
Facility Status: Monitored Natural Attenuation

Punahou Central Office. 2054 Young St, ENE 0.161 mi.
Facility Status: Site Cleanup Completed (NFA)

Alexander Tower. 1226 Alexander St, NNW 0.213 mi.
Facility Status: Site Cleanup Completed (NFA)

Tom Ishii's Union L-4462. 2114 S King St, E 0.214 mi.
Facility Status: Site Cleanup Completed (NFA)

Hironaka Service Station. 2105 S Beretania St, ENE 0.249 mi.
Facility Status: Site Cleanup Completed (NFA)

Tesoro Gas Express #61018. 1549 S King St, WNW 0.347 mi.
Facility Status: LUST Cleanup Initiated

Punahou Repair Shop. 1558 S King St, WNW 0.364 mi.
Facility Status: Site Cleanup Completed (NFA)

Shriners Hospitals for Crippled Children. 1310 Punahou St, NNW 0.418 mi.

Facility Status: Site Cleanup Completed (NFA)

7-Eleven Wilder.2028 Wilder Ave. NE 0.420 mi.
Facility Status: Site Cleanup Completed (NFA)

Gas Plus. 1524 S King St, WNW 0.421 mi.
Facility Status: Site Cleanup Completed (NFA)

Lindsey's Chevron Service. 2404 S Beretania St, E 0.426 mi.
Facility Status: Site Cleanup Completed (NFA)

Green Mill Food Manufacturer Ltd. 914 Coolidge St, ESE 0.443 mi.
Facility Status: Site Cleanup Completed (NFA)

Mid Pac Petroleum # 253943 (Prev: Lionel's Unocal). 1505 S. King St. WNW 0.466 mi.
Facility Status: Site Cleanup Completed (NFA)

Japanese Cultural Center of Hawaii. 2454 S Beretania St, E 0.472 mi.
Facility Status: Site Cleanup Completed (NFA)

Arcadia Retirement. 1434 Punahou St, NNW 0.482 mi.
Facility Status: Site Cleanup Completed (NFA)

Varsity Motors, Ltd. 2482 S Beretania St, E 0.500 mi.
Facility Status: Site Cleanup Completed (NFA)

Funai's Union Service L-5583. 1810 Kapiolani Blvd, SW 0.389 mi.
Facility Status: Site Cleanup Completed (NFA)

Aloha Motors. Kapiolani Blvd X Kalakaua Ave, SW 0.392 mi.
Facility Status: Site Cleanup Completed (NFA)

Gas 'N Glo Inc. 1670 Makaloa St, WSW 0.400 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 UST list, as provided by EDR, and dated 08/31/2012 has revealed that there are 11 UST sites within approximately 0.25 miles of the target property.

McCully Service Station. 1901 S King St, NNE 0.037 mi.

University Of Hawaii Federal CRE. 2019 S King St, E 0.090 mi.

McCully Shell. 1115 McCully St, NE 0.126 mi.

McCully Union Service. 2105 S King St, E 0.153 mi.

Punahou Central Office. 2054 Young St, ENE 0.161 mi.

Hawaiian Rent-All. 1946 S Beretania St, NNE 0.165 mi.

General Rustproofing. 1907 S Beretania St, N 0.169 mi.

Alexander Tower. 1226 Alexander St, NNW 0.213 mi.

Tom Ishii's Union L-4462. 2114 S King St, E 0.214 mi.

Hironaka Service Station. 2105 S Beretania St, ENE 0.249 mi.

McCully & Moiliili St. Mccully St X Moiliili St, SSE 0.115 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.

A review of the ENG CONTROLS list, as provided by EDR, and dated 03/13/2012 has revealed that there are 3 ENG CONTROLS sites within approximately 0.5 miles of the target property.

McCully Union Service. 2105 S King St, E 0.153 mi. Hazard Priority: NFA

Aloha/King Self Storage. 1414 Kalakaua Ave, WNW 0.430 mi. Hazard Priority: Low

Former Kalakaua Transmission Inc. 1665 Kalakaua Ave, WSW 0.375 mi. Hazard Priority: NFA

No adverse effect on the subject property is expected from the ENG CONTROL sites due to the site status (NFA) or/and distance to the subject property.

<u>Voluntary Remediation Program and Brownfields sites with institutional controls in place.</u>

A review of the INST CONTROL list, as provided by EDR, and dated 03/13/2012 has revealed that there are 3 INST CONTROL sites within approximately 0.5 miles of the target property.

McCully Union Service. 2105 S King St, E 0.153 mi. Hazard Priority: NFA

Aloha/King Self Storage. 1414 Kalakaua Ave, WNW 0.430 mi. Hazard Priority: Low

Former Kalakaua Transmission Inc. 1665 Kalakaua Ave, WSW 0.375 mi. Hazard Priority: NFA

No adverse effect on the subject property is expected from the INST CONTROL sites due to the site status (NFA) or/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 VCP list, as provided by EDR, and dated 03/13/2012 has revealed that there is 1 VCP site within approximately 0.5 miles of the target property.

Aloha/King Self Storage. 1414 Kalakaua Ave, WNW 0.430 mi. Hazard Priority: Low

No adverse effect on the subject property is expected from the VCP site due to the site 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 list, as provided by EDR, and dated 09/11/2012 has revealed that there are 3 RCRA-NonGen sites within approximately 0.25 miles of the target property.

930 McCully Bldg. 930 McCully St,SE 0.068 mi. Violation Status: No violations found

Kapiolani Med CTR Genetics Lab. 1946 Young St, Ste.400, NE 0.102 mi. Violation Status: No violations found

Precision Dental Laboratory Inc. 2104 S King St, E 0.206 mi. Violation Status: No violations found

The RCRA-NonGen 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.

5.2 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 7 feet above mean sea level (Appendix F). The center of the site is located at approximately 21° 17' 40.9" north latitude and 157° 49' 52.7" 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 site soils consist of gravelly sandy loam. The soil hydrologic group is Class C – slow infiltration rates (Appendix F).

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 shallow groundwater is basal, freshwater in contact with seawater, unconfined, and is hosted in sedimentary deposits. The shallow groundwater is classified as currently used, neither drinking nor ecologically important, moderate salinity (1,000 to 5,000 mg/L chloride), replaceable, 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 deeper groundwater is basal, confined, and is hosted in horizontally extensive lavas. The deeper groundwater is classified as currently used, drinking, fresh (<250 mg/L chloride), irreplaceable, and having a low vulnerability to contamination.

The site is located above (upradient of) the Underground Injection Control (UIC) line as shown on the UIC map of Oahu, HDOH (from the web site: http://hawaii.gov/health/environmental/water/sdwb/uic/pdf/oahuic.pdf). This typically indicates that the underlying aquifer is considered a drinking water source, limited types of injection wells are allowed, and injection wells need a UIC Permit or Permit Exemption.

EDR found one well (well ID: HI0000324) in the Federal FRDS public water supply system information database within 1/4 -1/2 mile of the subject property (Appendix

F). The nearest well listed in the state database is located on the northern adjoining property (well 1750-02). The well is sealed.

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 (1927, 1949, 1951, 1955, 1973, 1975, 1980, 1985, 1991, and 1993) and U.S. Geological Survey (USGS) topographic maps (USGS, 1928, 1954, 1969, 1970, 1983, and 1998) (Appendix E).

5.4.1 Sanborn Maps

The 1927 Sanborn Map shows the property as the residential area with four wood single family units. Pumehana Street and Algaroba Street are marked.

The 1949 - 1955 Sanborn Map appeared similar to the 1927 Sanborn Map.

The year 1973 map shows that two single family units previously located on the southwest half of the property were substituted with one two-level apartment building.

The 1975 – 1993 Sanborn Maps show that the property was not changed since 1973.

No readily apparent evidence of recognized environmental conditions at the subject property was noted on the Sanborn Maps reviewed.

5.4.2 USGS Maps

The subject site USGS maps are provided in Appendix E.

The 1928 USGS map shows the site area as the built-up area. Pumehana Street and Algaroba Street are marked.

The 1954 - 1998 USGS maps show no change from the 1928 map.

No readily apparent evidence of recognized environmental conditions at the subject property was noted on the topographic maps reviewed.

5.4.3 Prior Environmental Investigations

No documentation of prior environmental investigations was available for review for the subject property.

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 (1927, 1949, 1951, 1955, 1973, 1975, 1980, 1985, 1991, and 1993) and U.S. Geological Survey (USGS) topographic maps (USGS, 1928, 1954, 1969, 1970, 1983, and 1998) (Appendix E).

5.5.1 Sanborn Maps

The 1927 Sanborn Map shows the north adjoining area as vacant. The west, south and east adjoining areas are shown as the residential areas with single family units. The northeast adjoining area is shown as the area with two single family units on the south part of the property and structure marked as "CLO CLEANG" on the north of the property.

The 1949 Sanborn Map shows the north adjoining area as an auto repairing facility with oil station. The 8-apartment building is shown on the northeast adjoining area. The structure shown on the 1927 map as "CLO CLEANG" is not shown on the 1949 map.

The 1951 Sanborn Map is shows the facility marked as "MACH SHOP" on the north part of the northeast adjoining property.

The 1955 Sanborn Map appeared similar to the 1951 Sanborn Map.

The 1973 Sanborn Map shows the "GAS & OIL" facility on the north adjoining property and facility marked as "AUTO REP" on the east adjoining property.

The 1975 - 1980 Sanborn Maps appeared similar to the 1973 Sanborn Map.

The 1985 Sanborn Map appeared similar to the 1973 Sanborn Map except it does not show the facility marked as "MACH SHOP" on the north part of the northeast adjoining property.

The 1991 Sanborn Map shows that the auto repairing facility with filling station shown on previous maps is substituted with a two-level building and a parking lot.

The 1993 Sanborn Maps appeared similar to the 1991 Sanborn Map.

The prior use of the north adjoining property as an auto repairing facility with filling station, as shown on the 1949 – 1991 maps, is considered recognized environmental conditions and will require additional inquiry. This is addressed in Section 5.5.3 below.

The facility on the east adjoining property marked as "AUTO REP" and shown on the 1973-1993 maps is considered a recognized environmental condition. This facility is owned by Continental Auto Service Inc. and is operated as auto repairing station at the present time and environmental conditions of the facility is discussed in Sections 5.1.8 and 5.1.12 of the report.

5.5.2 USGS Maps

The USGS maps are provided in Appendix E.

The 1928 USGS map shows the area surrounding the property as the built-up area. Pumehana Street and Algaroba Street are marked.

The 1954 - 1998 USGS map show no change from the 1928 map.

No readily apparent evidence of recognized environmental conditions at the adjoining properties was noted on the topographic maps reviewed.

5.5.3 Prior Environmental Investigations

CPR reviewed Hawaii DOH records concerning the former McCully Service Station located at 1901 South King Street, Honolulu, Hawaii. The records showed that the property was owned by Lin Fong Kam and leased to McCully Service Station when the gas station was closed and the parcel sold on 24 June 1986 to Automotive Warehouse Inc. The following month, the new parcel owner, represented by Toshi Kaminaka, demolished the closed service station and removed from the ground four out of service underground storage tanks. Demolition Permit Number 226256 was issued by the City & County of Honolulu on 15 July 1986. Tajiri Lumber, Ltd. performed the structure demolition and UST removal and billed for their services on 31 July 1986. The environmental site check at closure was not done during the UST removal as it was not required prior to 1988. The listed tank capacities were two 1,000 gallon gasoline tanks, one 500 gasoline gallon tank, and one 200 gallon used oil tank.

Documentation regarding closure of the former McCully Service Station USTs was submitted to DOH on 1 December 2012. The document confirms that sampling was not conducted at the time the USTs were removed from the site and also confirms the responsible parties for contamination that may be present at the site and which may migrate offsite. Identification of the responsible party does not mitigate the REC associated with the former use of the site as a gas station. However, it does remove a significant portion of potential business risk for the adjacent property which is the subject of this report.

6.0 SITE RECONNAISSANCE

6.1 METHODOLOGY AND LIMITING CONDITIONS

The subject property was inspected by CPR personnel on January 7, 2013.

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 building units at the subject property are occupied by tenants.

6.2.2 Past Use(s) of the Property

The TMK: (1) 2-3-028:004 site was a residential area since the property development shown on the 1927 Sanborn Map (Section 5.4.1, above).

6.2.3 Current Use(s) of Adjoining Properties

The current uses of the adjoining properties are (Figure 3, Appendix C):

North	Auto Part Shop
Northeast	Apartments
East	Auto Repair
South	Algaroba Street
West	Pumehana Street

The utility poles with HECO pole mounted transformers are located across Pumehana Street and Algaroba Street from the subject property.

No adverse effect on the subject property is expected from the transformers due to the distance to the subject property.

6.2.4 Past Use(s) of Adjoining Properties

The prior use of the north adjoining property as an auto repairing facility with filling station, as shown on the 1949 – 1991 Sanborn Maps, is considered a recognized environmental condition. This is further discussed in Sections 5.5.3, above, and Sections 8.0 and 9.0, below.

The facility on the east adjoining property is owned by Continental Auto Service Inc. and shown on the 1973-1993 Sanborn maps is considered a recognized environmental condition. This facility is owned by Continental Auto Service Inc. and is operated as auto repairing station at the present time and environmental conditions of the facility is discussed in Sections 5.1.8 and 5.1.12 of the report. This is further discussed in Sections 5.5.3, above, and Sections 8.0 and 9.0, below.

6.2.5 Current or Past Uses in the Surrounding Area

The general area in the vicinity of the property is used for residential and commercial 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 buildings are located on the subject property:

Building	Construction Date (Age)	Number of Stories	Use	Construction
1- 3,190 ft^2	1962	2	Apartments 13 units (studio/1 bdrm/2 bdrm)	Masonry
2- 1,074 ft^2	1923	1	Apartments 3 units	Wood
3- 1,120 ft^2	1922	2	Family House	Wood

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.

6.3 EXTERIOR OBSERVATIONS

During the site reconnaissance conducted on January 7, 2013, 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

Containers of potentially household hazardous materials were observed stored in the Building No.1 storage area and in the shed (Appendix D, Photos 9 and 11). The

bottles of Chlordane should be removed from the site under manifest for proper disposal by incineration at a permitted facility.

CPR returned to the subject property on February 26, 2013 to confirm the removal of the Chlordane and other materials by the Seller (Appendix D, Photo 17). The Seller did not provide information regarding the removal of the subject material from the subject property.

6.3.2 Storage Tanks

None

6.3.3 Odors

No strong, pungent or noxious odors were observed.

6.3.4 Pools of Liquid

None

6.3.5 Drums

No drums with hazardous materials were observed.

6.3.6 Containers of Hazardous Materials and Petroleum Products

Multiple containers of paint and maintenance materials were identified stored on site during the January 7, 2013 site reconnaissance. Of specific concern are two one-gallon bottles of Chlordane which is a pesticide banned in 1988 by US EPA.

CPR recommended in the February 25, 2013 report that the Chlordane should be packaged and removed from the site under manifest for proper disposal by incineration at a permitted facility.

The remaining multiple containers of materials should be sorted and out of date or obsolete materials should be properly disposed in accordance with applicable regulations.

CPR returned to the subject property on February 26, 2013 to confirm the removal of the Chlordane and other materials by the Seller (Appendix D, Photo 17). The Seller did not provide information regarding the removal of the subject material from the subject property.

This is further discussed below in Sections 8.0 and 9.0.

6.3.7 Unidentified Substance Containers

The containers identified on site appeared to be labeled, however, the contents were not sampled to confirm that the labels match the contents.

All containers in the storage areas had been removed from the site at the time of the February 26, 2013 site visit.

6.3.8 Indications of PCBs

None

6.3.9 Pits, Ponds, or Lagoons

Pool was observed next to the eastern wall of Building No.3. Water in the pool is clean and used for aquarium fish production.

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

Trash was observed piled in a portion of the site. This should be removed.

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

This site assessment did not reveal information that would indicate the site may have been used for dry-cleaning operations.

6.4 INTERIOR OBSERVATIONS

6.4.1 Heating/Cooling

The buildings on the property are not heated.

6.4.2 Drains and Sumps

No drains and sumps were observed.

6.4.3 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 E1527-05.

Because the buildings on the subject property were built prior to 1980, ACM may be present. Suspect ACM can be included in floor tiles (with associated mastics) and roofing materials.

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.

6.4.4 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 E1527-05.

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.

6.4.5 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 2 sites were tested in the Honolulu zip code (96826) with all testing below the 4 pCi/L action level (Appendix F). Therefore, potential human health risks due to elevated radon concentrations are not anticipated to be an issue at the subject site.

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 SELLER INTERVIEW

CPR interviewed Mr. Greg Hedani on behalf of Kawamura Family Partners, LLC on February 2, 2013 (via e-mail). Mr. Hedani said that the currently the property is used as residential rental units. The owner of the property is Kawamura Family Partners, LLC.

7.2 PROPERTY MANAGER INTERVIEWS

CPR interviewed Ms. Mabel Kawamura on February 20, 2013 (via e-mail). Ms. Kawamura said that she has been the site manager of the property from January 2000 until the present. The property has a rental business. The past uses of the property were also for rental units. Ms. Kawamura does not know of specific chemicals that are present or once were present at the property or spills or other chemical releases that have taken place at the property. Ms. Kawamura does not know of any environmental cleanups that have taken place at the property.

8.0 FINDINGS

The findings of the Phase I ESA documented in the February 25, 2013 report were that the following recognized environmental conditions were present on the subject property:

- Containers of potentially hazardous materials, including the banned pesticide Chlordane, were observed stored in the Building No.1 storage area and in the shed. The material was removed from the site by the Seller as confirmed during the February 26, 2013 site visit.

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. Suspect ACM can include floor tiles (with associated mastics) and roofing materials.

- 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:

- *Continental Auto Service Inc. (Algaroba Auto Repair).* 1918 Algaroba St, S 0.017 mi. The site is RCRA Small Quantity generator (RCRA-CESQG) (generates less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month).

- The prior use of the north adjoining property as an auto repairing facility with filling station, as shown on the 1949 – 1991 Sanborn Maps, is considered a recognized environmental condition.

The RECs connected with the non-adjacent surrounding properties will not affect the environmental condition of the Subject Properties due to the distance to the Subject Properties and the regulatory status of the sites (mostly NFA).

9.0 OPINION

The findings of the Phase I ESA documented in the February 25, 2013 report were that the following recognized environmental conditions were present on the subject property:

- Containers of potentially hazardous materials, including the banned pesticide Chlordane, were observed stored in the Building No.1 storage area and in the shed. The two bottles of Chlordane identified in the storage area should be

removed from the site under manifest for proper disposal by incineration at a permitted facility. The other potentially hazardous materials should be inventoried and used as appropriate or removed from the site for proper disposal.

Removal of the Chlordane and other potentially hazardous materials from the site was confirmed during the site visit on February 26, 2013. The Seller did not provide documentation of the removal as of the date of this revised report.

The following environmental conditions, which are not considered to be *recognized environmental condition*s, as defined by ASTM E1527-05, were revealed during this assessment:

- Because the building on the subject property was built prior to 1980, suspect asbestos-containing materials (ACM) may be an issue at the subject property. Suspect ACM can include floor tiles (with associated mastics) and roofing materials.

- Because the building on the subject property was 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:

- *Continental Auto Service Inc. (Algaroba Auto Repair).* 1918 Algaroba St, S 0.017 mi. The site is RCRA Small Quantity generator (RCRA-CESQG) (generates less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month). No RCRA violations were reported for this site. The site will not affect the environmental condition of the subject property if operated and maintained in accordance with the Federal and State of Hawaii rules and regulations.

- The prior use of the north adjoining property the McCully Service Station, an auto repairing facility with filling station, as shown on the 1949 – 1991 Sanborn Maps, is considered a recognized environmental condition. The HDOH UST records shows that McCully Service Station located at this property (1901 S King Street, Honolulu) was demolished and four out of

service underground storage tanks were removed from the ground. The environmental site assessment was not done during the UST removal. Documentation regarding closure of the former McCully Service Station USTs was submitted to DOH on 1 December 2012. The document confirms that sampling was not conducted at the time the USTs were removed from the site and also confirms the responsible parties for contamination that may be present at the site and which may migrate offsite. Identification of the responsible party does not mitigate the REC associated with the former use of the site as a gas station. However, it does remove a significant portion of potential business risk for the adjacent property which is the subject of this report.

The RECs connected with the non-adjacent surrounding properties will not affect the environmental condition of the Subject Properties due to the distance to the Subject Properties and the regulatory status of the sites (mostly NFA).

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) 2-3-028:004, 929 Pumehana Street, Honolulu, Hawaii. CPR has performed this Phase I Environmental Site Assessment in accordance with the scope and limitations of ASTM Practice E1527-05 (ASTM E1527-05) and All Appropriate Inquiry (AAI). Any exceptions to, or deletions from, this practice are described in Section 2.5 of this report.

Based on the findings of the February 25, 2013 Phase I ESA, additional environmental action was warranted for the subject property at the date of the report.

- The two one-gallon bottles of Chlordane should be removed from the site under manifest for proper disposal by incineration at a licensed facility.

The material was removed from the site by the Seller as confirmed during the February 26, 2013 site visit. The Seller did not provide documentation regarding the removal of the Chlordane from the subject property.

11.0 DEVIATIONS

CPR has made one exception to the Phase I ESA procedures specified by ASTM E1527-05. 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, 2005. Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (ASTM Designation E1527-05). American Society for Testing and Materials (ASTM), Washington, 2005.

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:

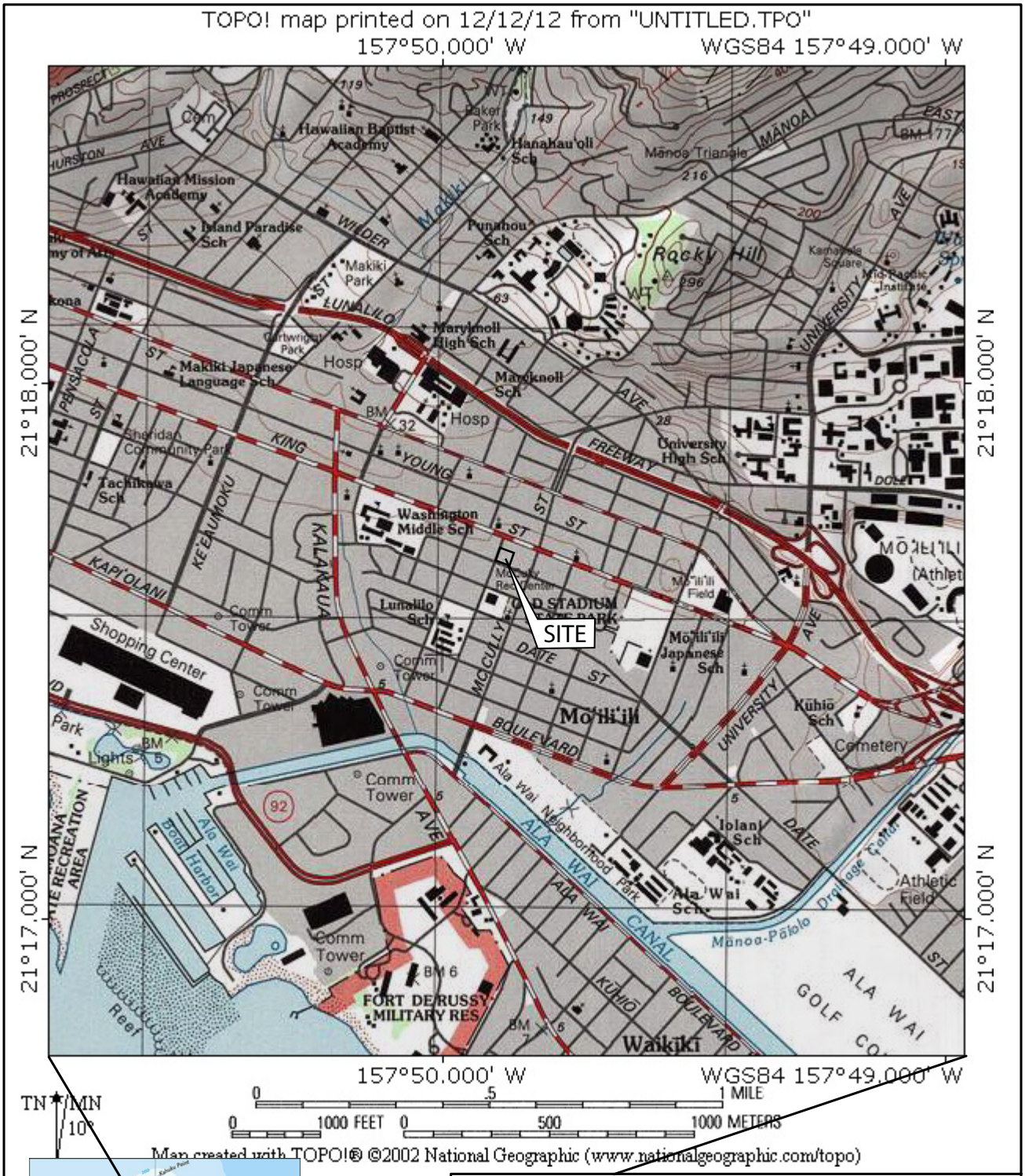
Alexander Grafchikov
Environmental Specialist

Reviewed by:

Ned Murphy
Consulting Geochemist

APPENDIX A

Figure 1 - Site Location Map



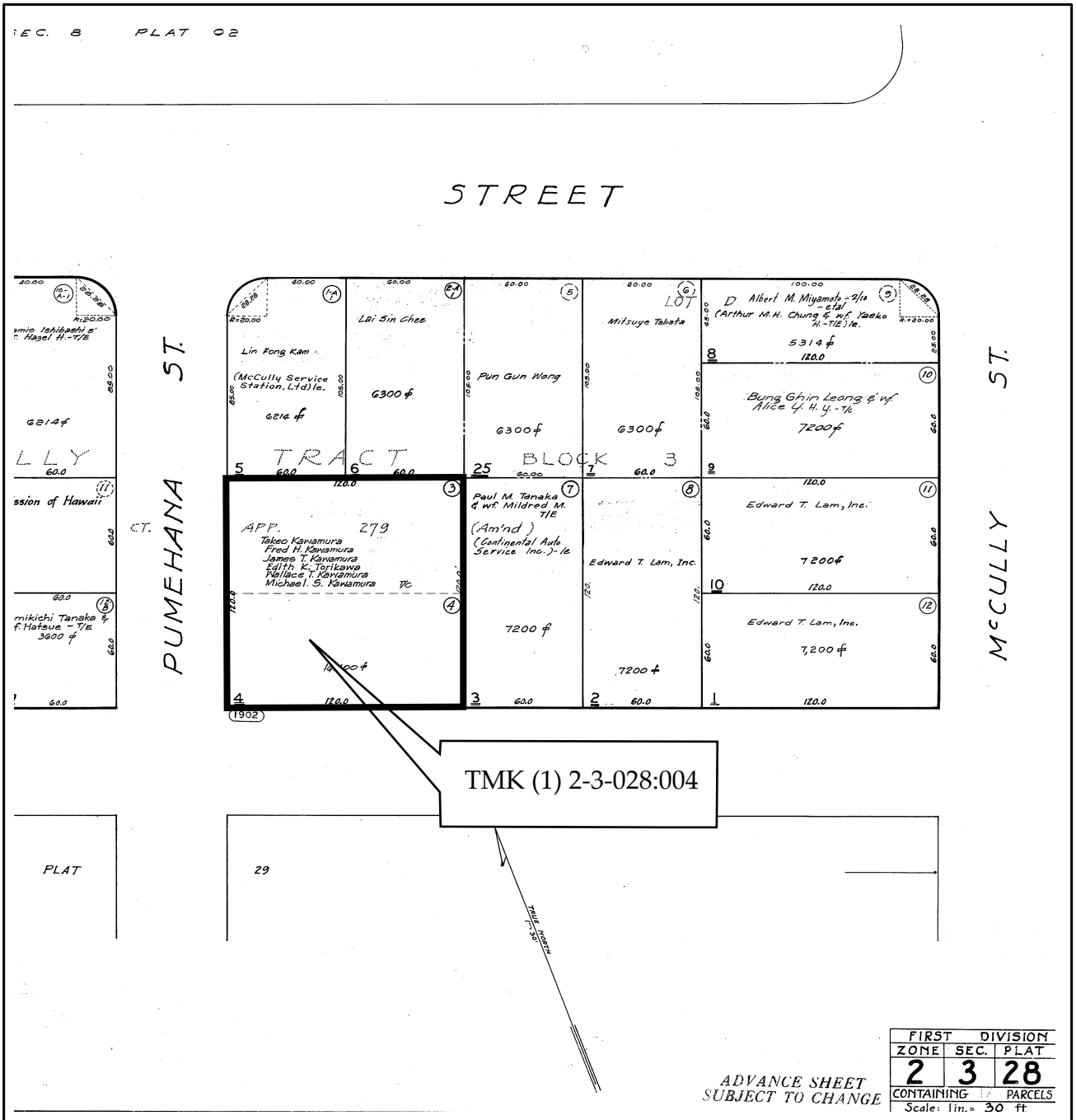
929 Pumehana Street
Honolulu, Oahu, Hawaii

FIGURE 1
SITE LOCATION MAP

Central Planet Repair, LLC

APPENDIX B

Figure 2 - Tax Map



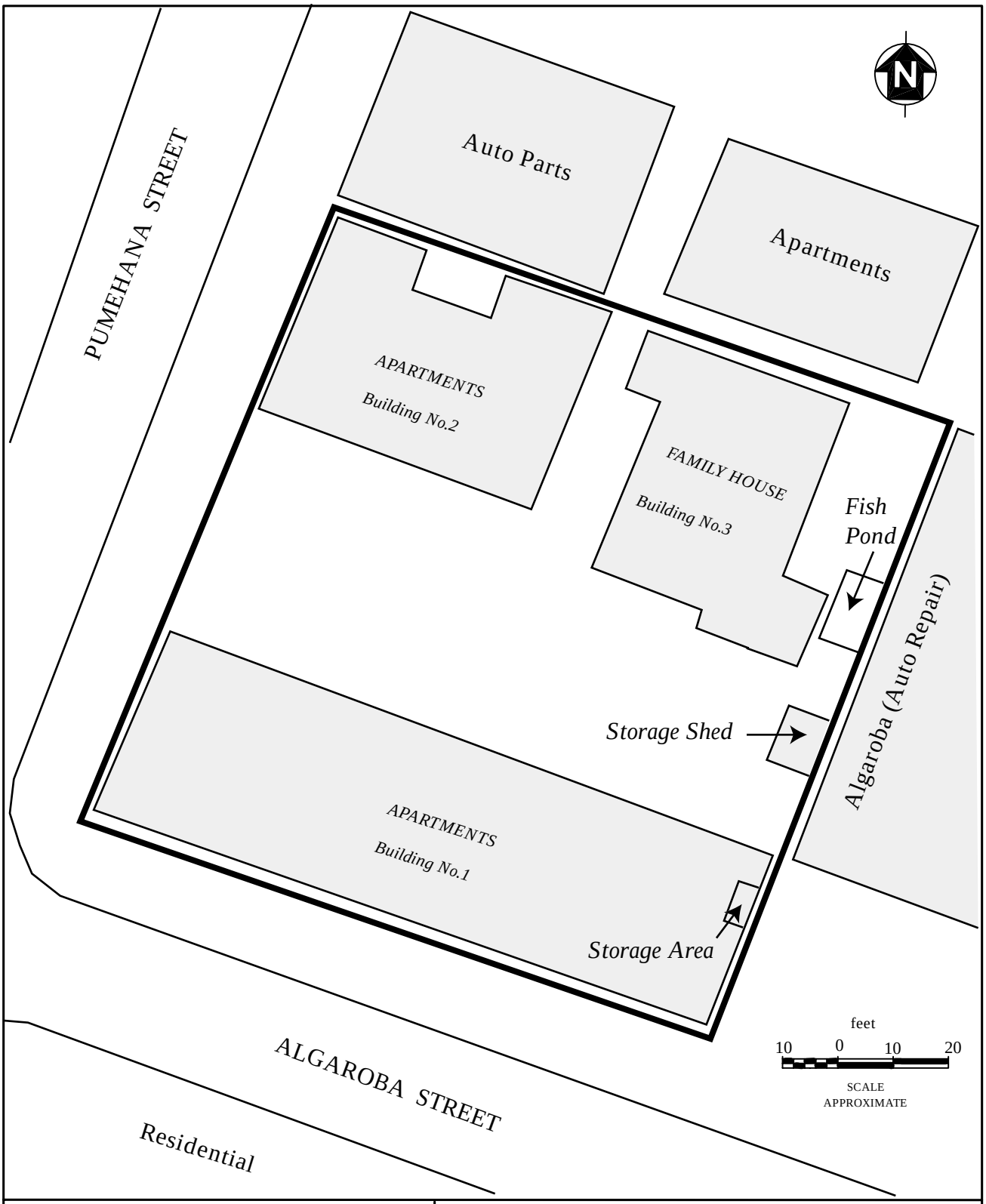
929 Pumehana Street
Honolulu, Oahu, Hawaii

FIGURE 2
TAX MAP

Central Planet Repair, LLC

APPENDIX C

Figure 3 - Site Plan



LEGEND:

Site Boundaries

Buildings

929 Pumehana Street
Honolulu, Oahu, Hawaii

FIGURE 3
SITE PLAN

Central Planet Repair, LLC

APPENDIX D

Site Photographs

Photo 1. View of Property from Pumehana Street.

Photo 2. View of Property from Algaroba Street. Building No.1.

Photo 3. Building No.1.

Photo 4. Building No.2.

Photo 5. Building No.3.

Photo 6. Backyard of Building No.3 (the east corner of the Property).

Photo 7. Looking Northwest along Northeastern Property Boundary.

Photo 8. Storage area at the Southeastern wall of the Building No.1.

Photo 9. Bottles with Chlordane in the Storage Area of Building No.1.

Photo 10. View of the Material Storage Shed.

Photo 11. Buckets, cans, and containers with paint and other household chemicals in the Shed.

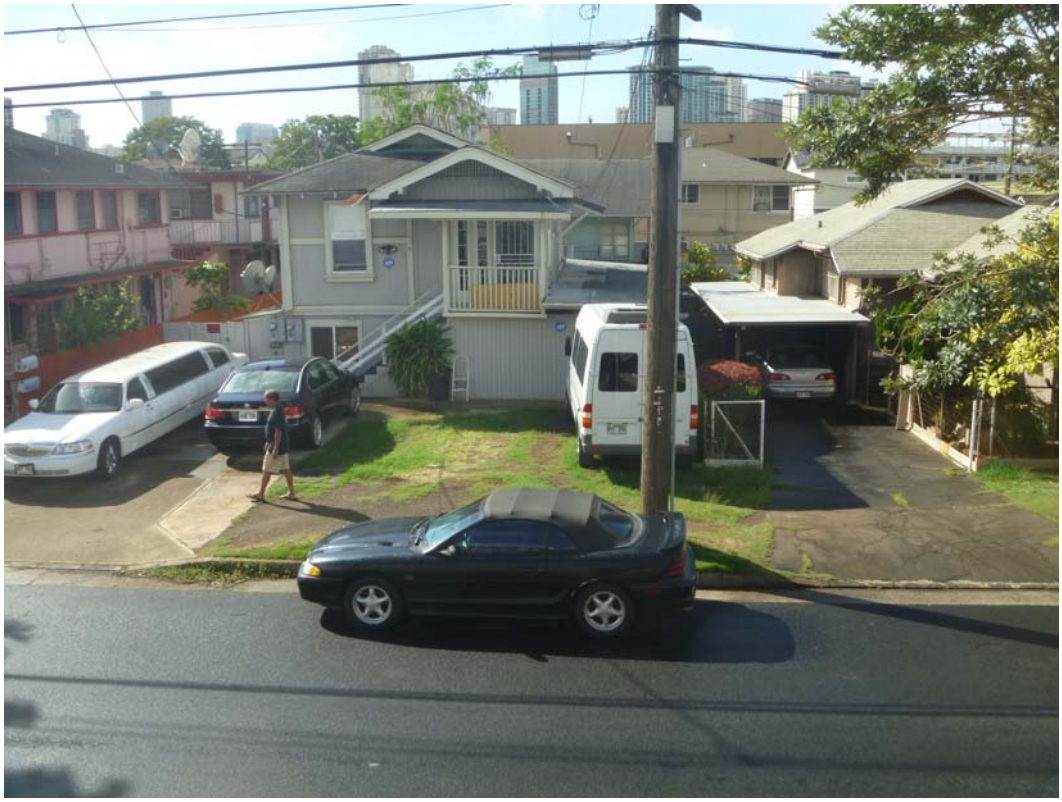


Photo 12. Looking South across Algaroba Street

Photo 13. Looking Northwest across Pumehana Street.

Photo 14. Auto Part Shop on the Northern Adjoining Area.

Photo 15. Apartments on the Northeastern Adjoining Area.

Photo 16. Auto Repair Facility on the Eastern Adjoining Area.

Photo 17. Storage Area after Chlordane Removal February 26, 2013.

APPENDIX E

Historical Research Documentation (Sanborn® Map Report and Historical USGS Maps)

929 Pumehana Street

929 Pumehana Street

Honolulu, HI 96826

Inquiry Number: 3475872.3

December 13, 2012

Certified Sanborn® Map Report

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

12/13/12

Site Name:
929 Pumehana Street
929 Pumehana Street
Honolulu, HI 96826

EDR Inquiry # 3475872.3

Client Name:
Central Planet Repair
236 Kuahiwi Avenue
Wahiawa, HI 96786

Contact: Ned Murphy

EDR® Environmental Data Resources Inc

The complete Sanborn Library collection has been searched by EDR, and fire insurance maps covering the target property location provided by Central Planet Repair were identified for the years listed below. The certified Sanborn Library search results in this report can be authenticated by visiting www.edrnet.com/sanborn and entering the certification number. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by Sanborn Library LLC, the copyright holder for the collection.

Certified Sanborn Results:

Site Name: 929 Pumehana Street
Address: 929 Pumehana Street
City, State, Zip: Honolulu, HI 96826
Cross Street:
P.O. # NA
Project: 13-8
Certification # ABBC-4703-B113

Maps Provided:

1993	1955
1991	1951
1985	1949
1980	1927
1975	1914
1973	

Sanborn® Library search results
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The Sanborn Library includes more than 1.2 million Sanborn fire insurance maps, which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ✔ Library of Congress
- ✔ University Publications of America
- ✔ EDR Private Collection

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Sanborn Sheet Thumbnails

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.

1993 Source Sheets

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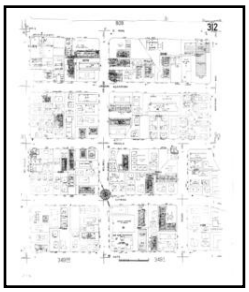
Volume 3, Sheet 308

Volume 3, Sheet 311



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1991 Source Sheets

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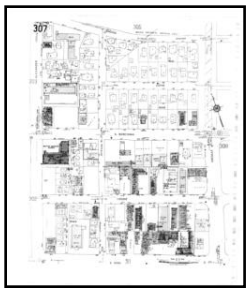
1985 Source Sheets

Volume 3, Sheet 311



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1980 Source Sheets

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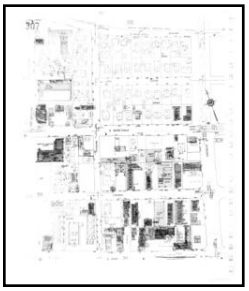

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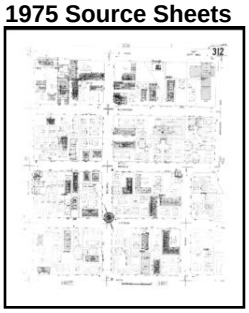
1975 Source Sheets



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1973 Source Sheets

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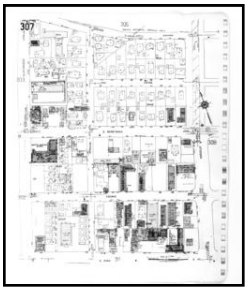
Volume 3, Sheet 311



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1955 Source Sheets

Volume 3, Sheet 312

Volume 3, Sheet 311

Volume 3, Sheet 307

Volume 3, Sheet 312

Volume 3, Sheet 311

Volume 3, Sheet 307

1951 Source Sheets

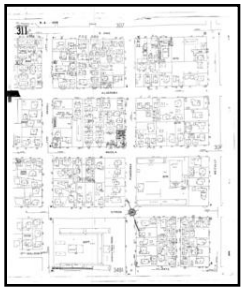
Volume 3, Sheet 312

Volume 3, Sheet 311

Volume 3, Sheet 307

1949 Source Sheets

Volume 3, Sheet 312



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1927 Source Sheets

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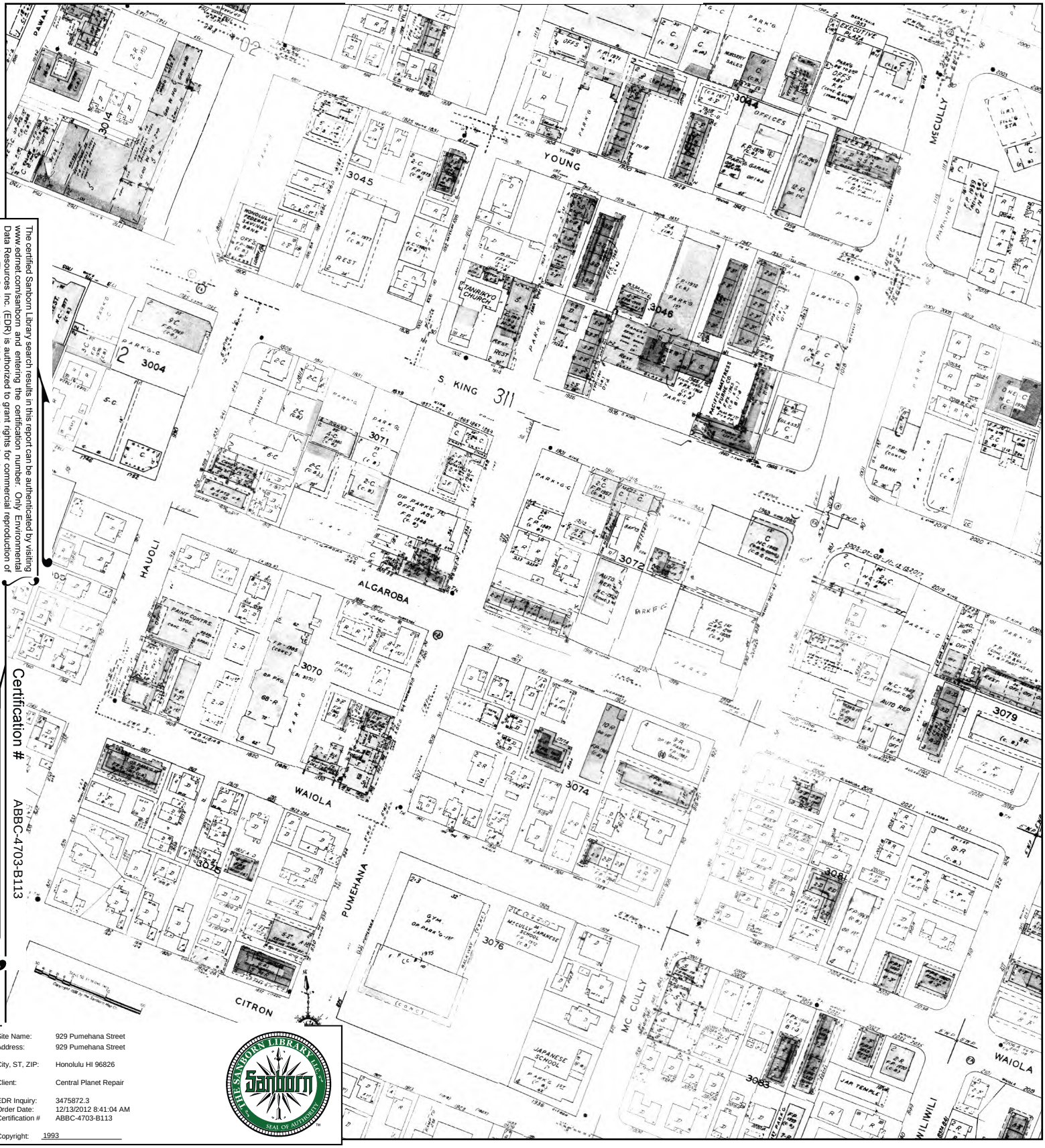
Volume 3, Sheet 307

1914 Source Sheets

Volume 1, Sheet 100

1993 Certified Sanborn Map



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Address:	929 Pumehana Street
City, ST, ZIP:	Honolulu HI 96826
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Certification #	ABBC-4703-B113
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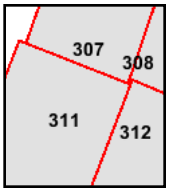

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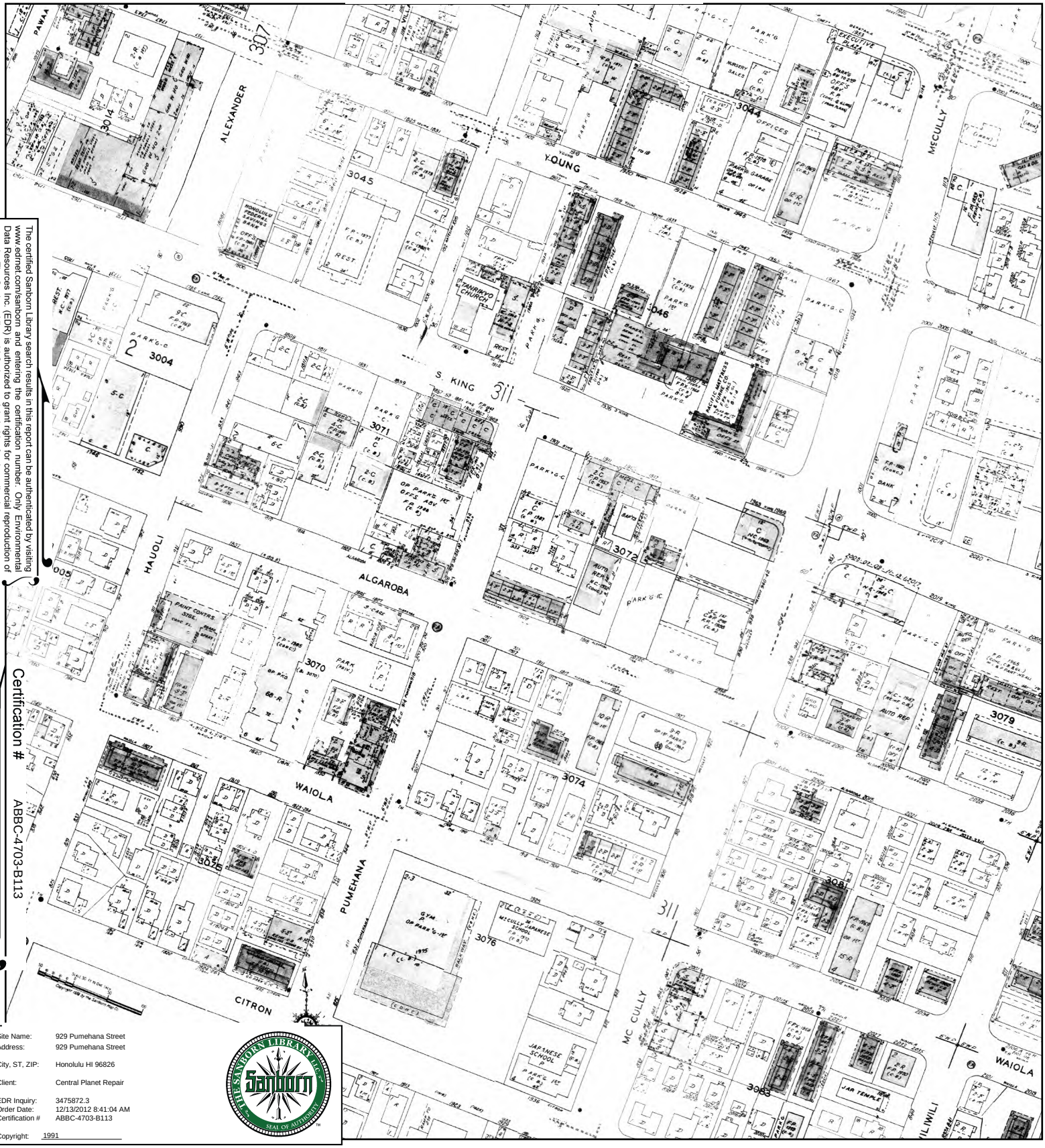
1991 Certified Sanborn Map



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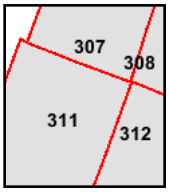

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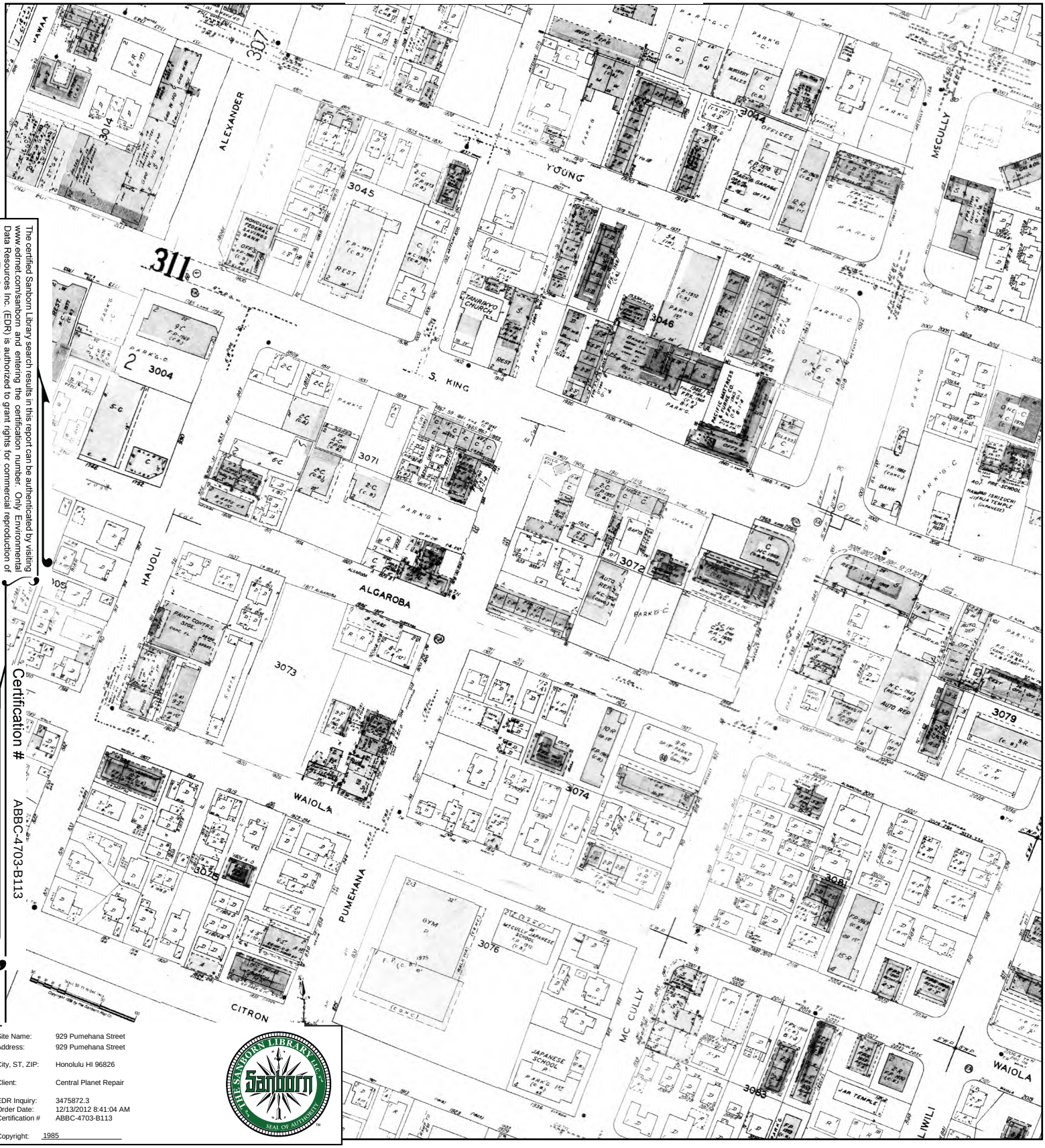
1985 Certified Sanborn Map



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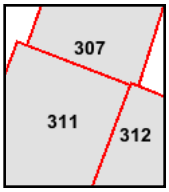

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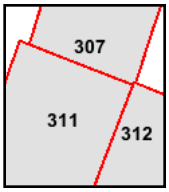

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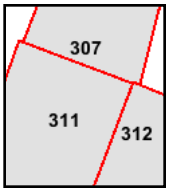

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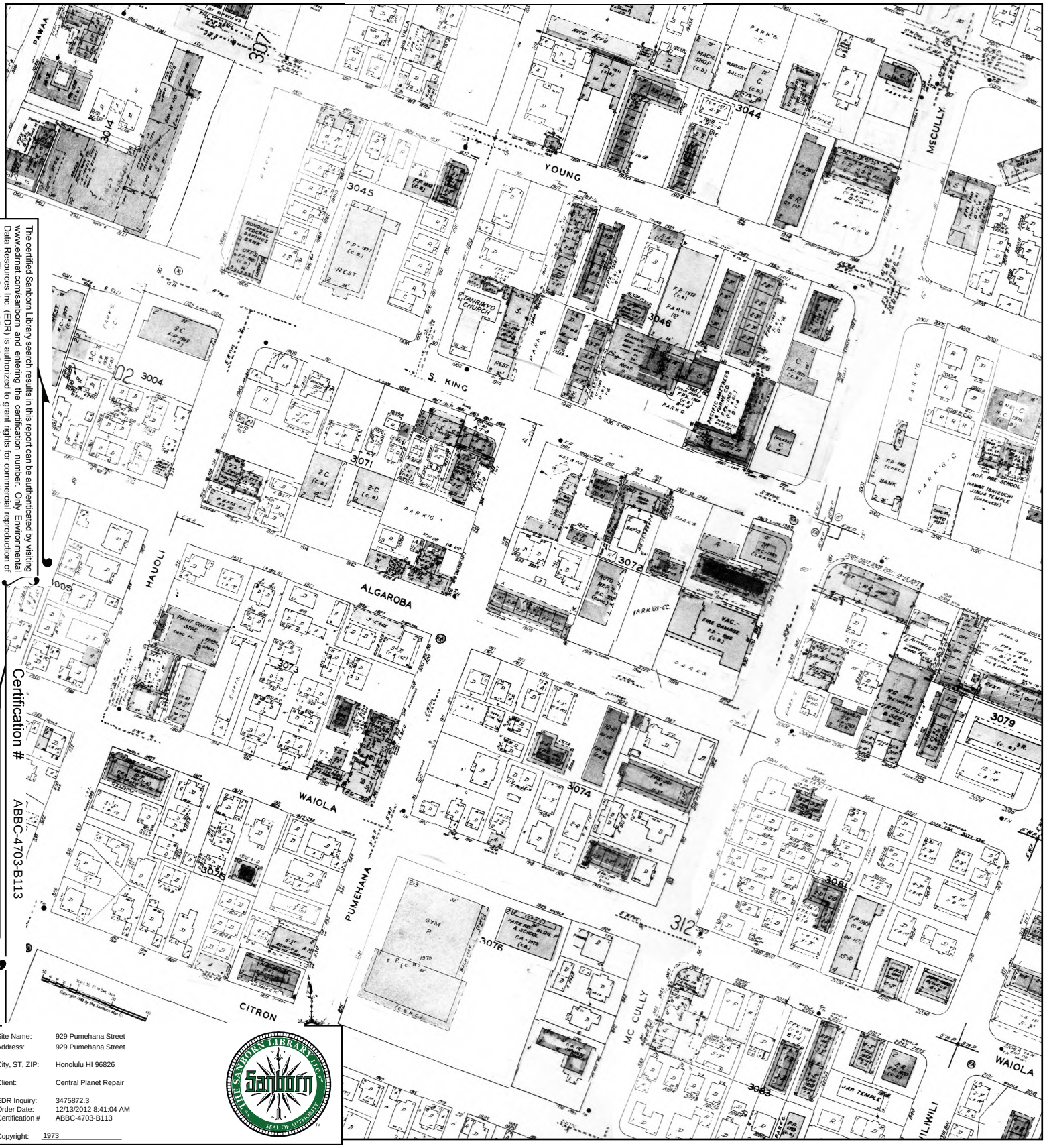
1973 Certified Sanborn Map



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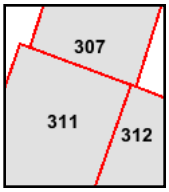

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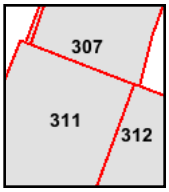

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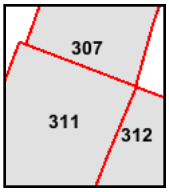

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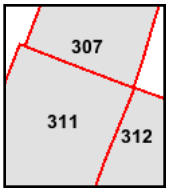

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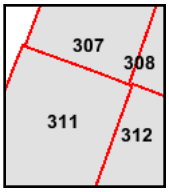

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0 Feet 150 300 600

N

929 Pumehana Street

929 Pumehana Street

Honolulu, HI 96826

Inquiry Number: 3475872.4

December 12, 2012

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Milford, CT 06461
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EDR Historical Topographic Map Report

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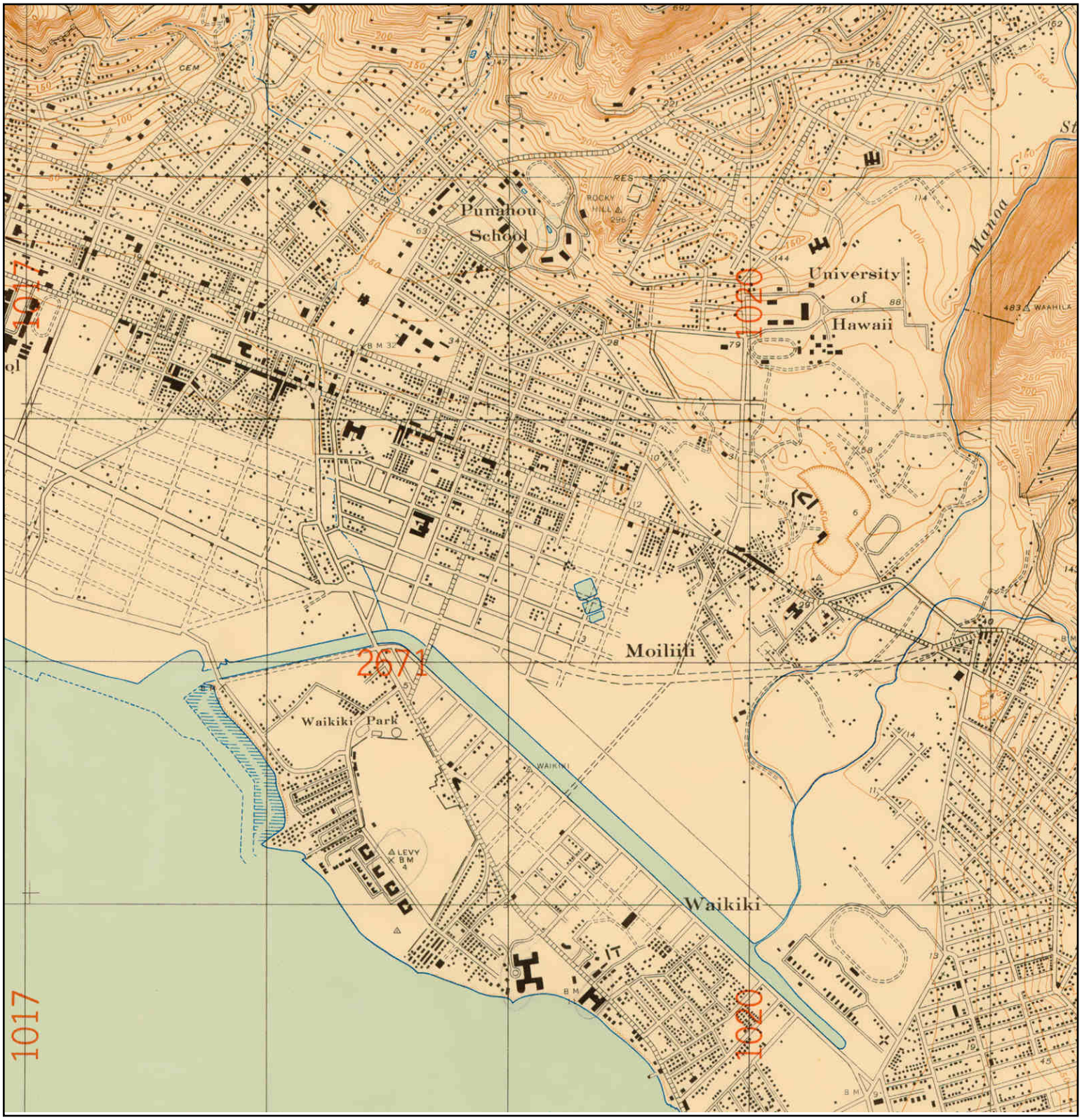
Historical Topographic Map



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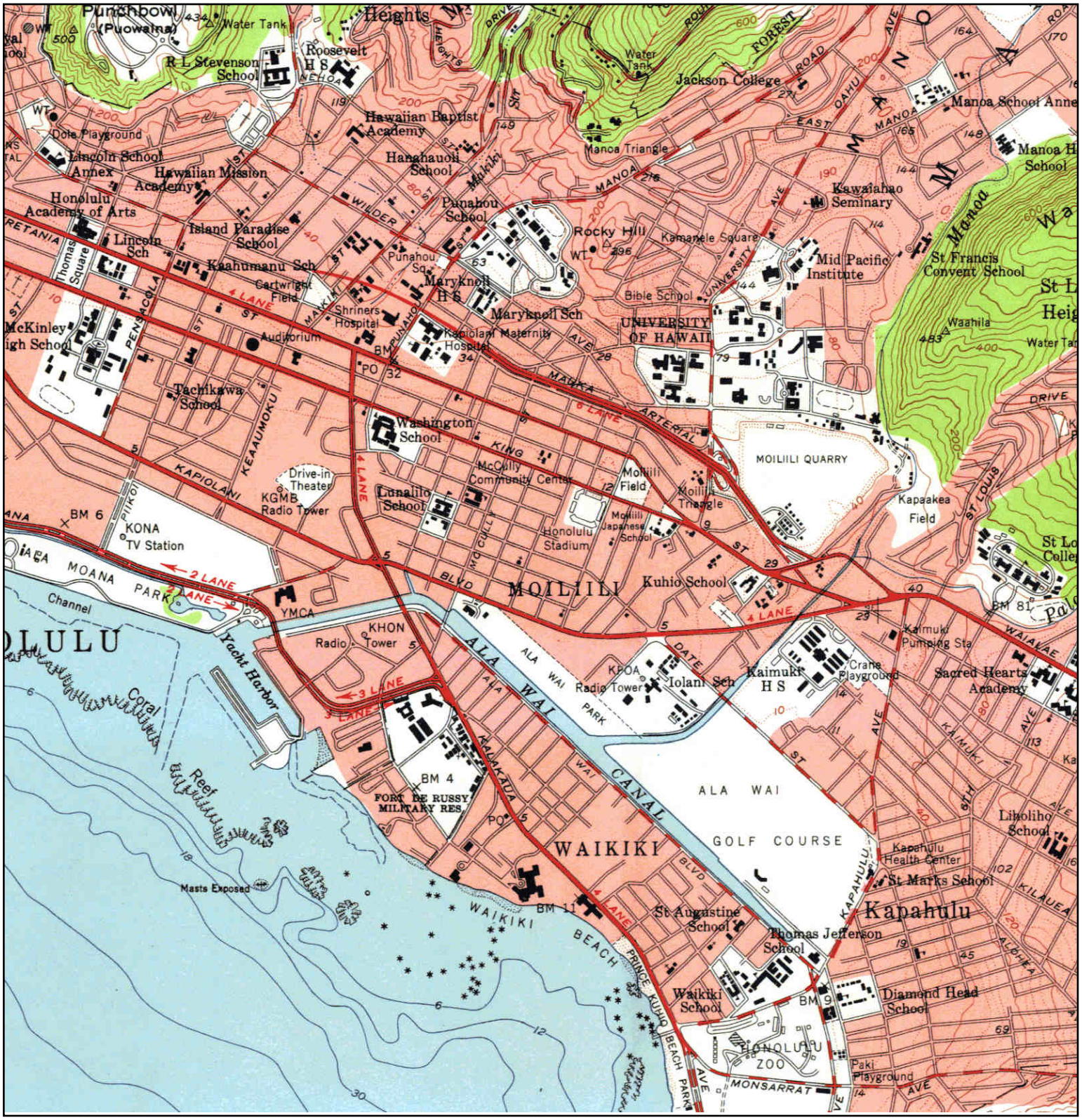
Historical Topographic Map



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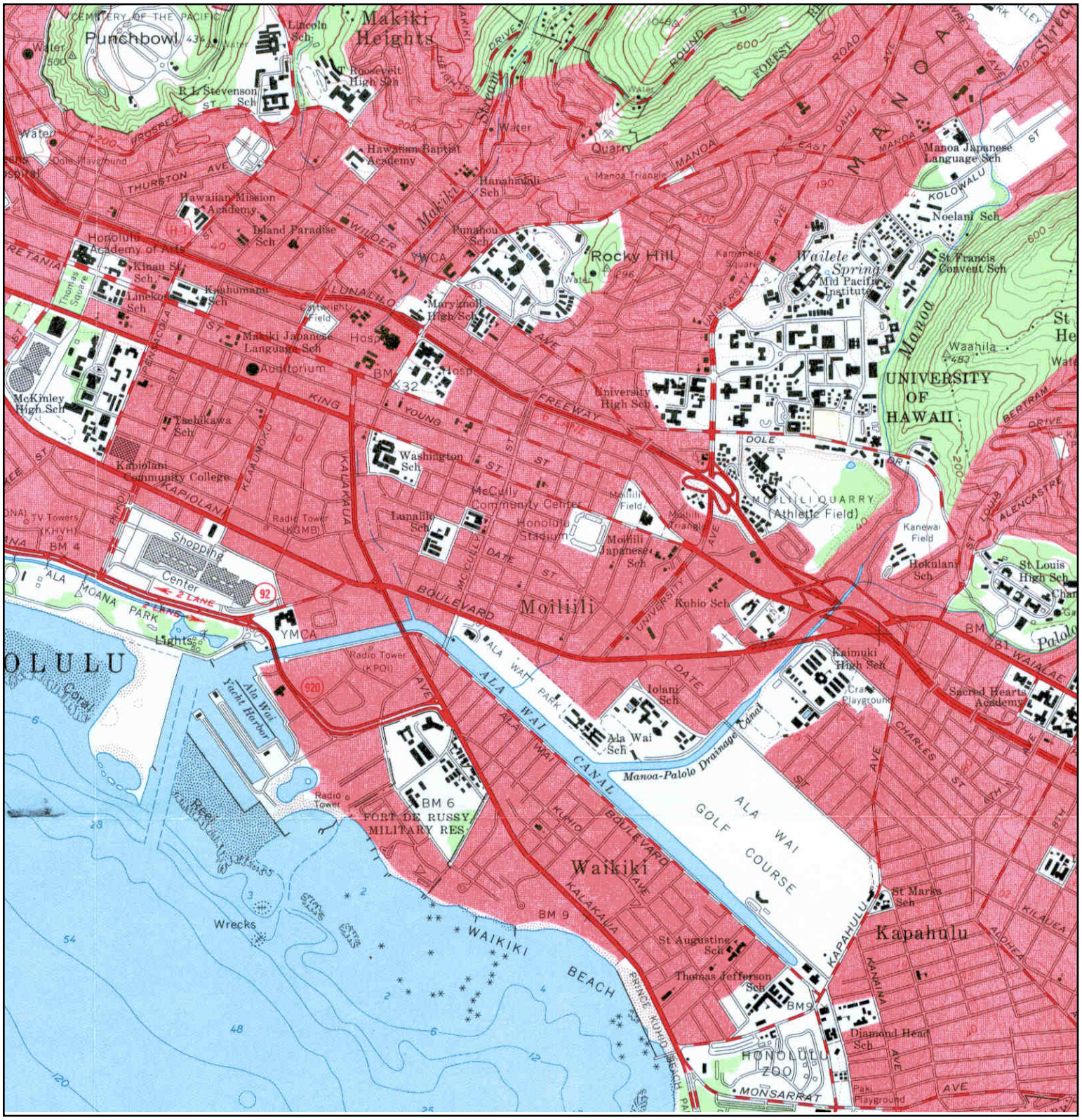
Historical Topographic Map



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Historical Topographic Map

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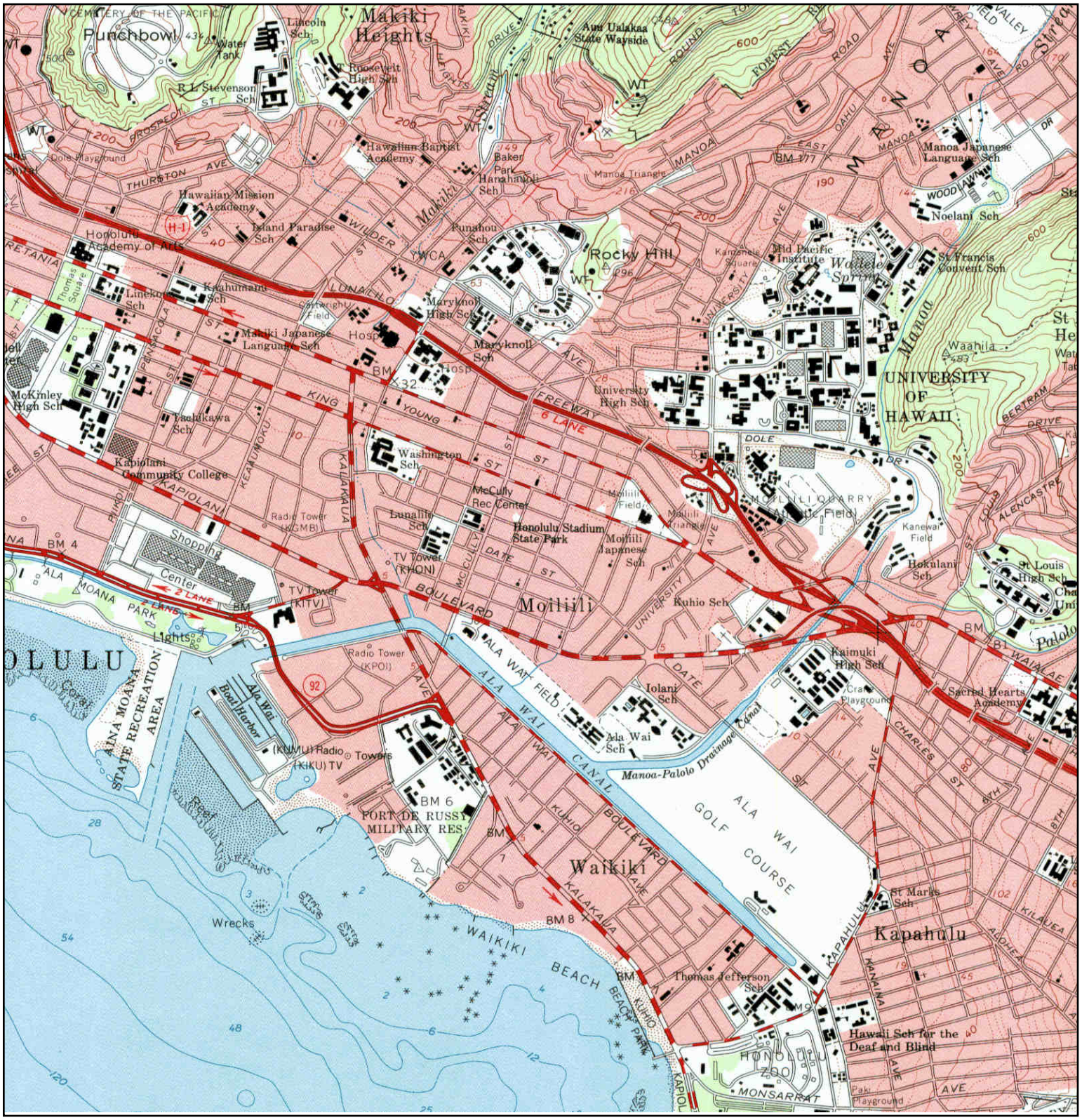

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Historical Topographic Map

N

TARGET QUAD
NAME: HONOLULU
MAP YEAR: 1983

SERIES: 15
SCALE: 1:50000

SITE NAME: 929 Pumehana Street
ADDRESS: 929 Pumehana Street
Honolulu, HI 96826
LAT/LONG: 21.2947 / -157.8313

CLIENT: Central Planet Repair
CONTACT: Ned Murphy
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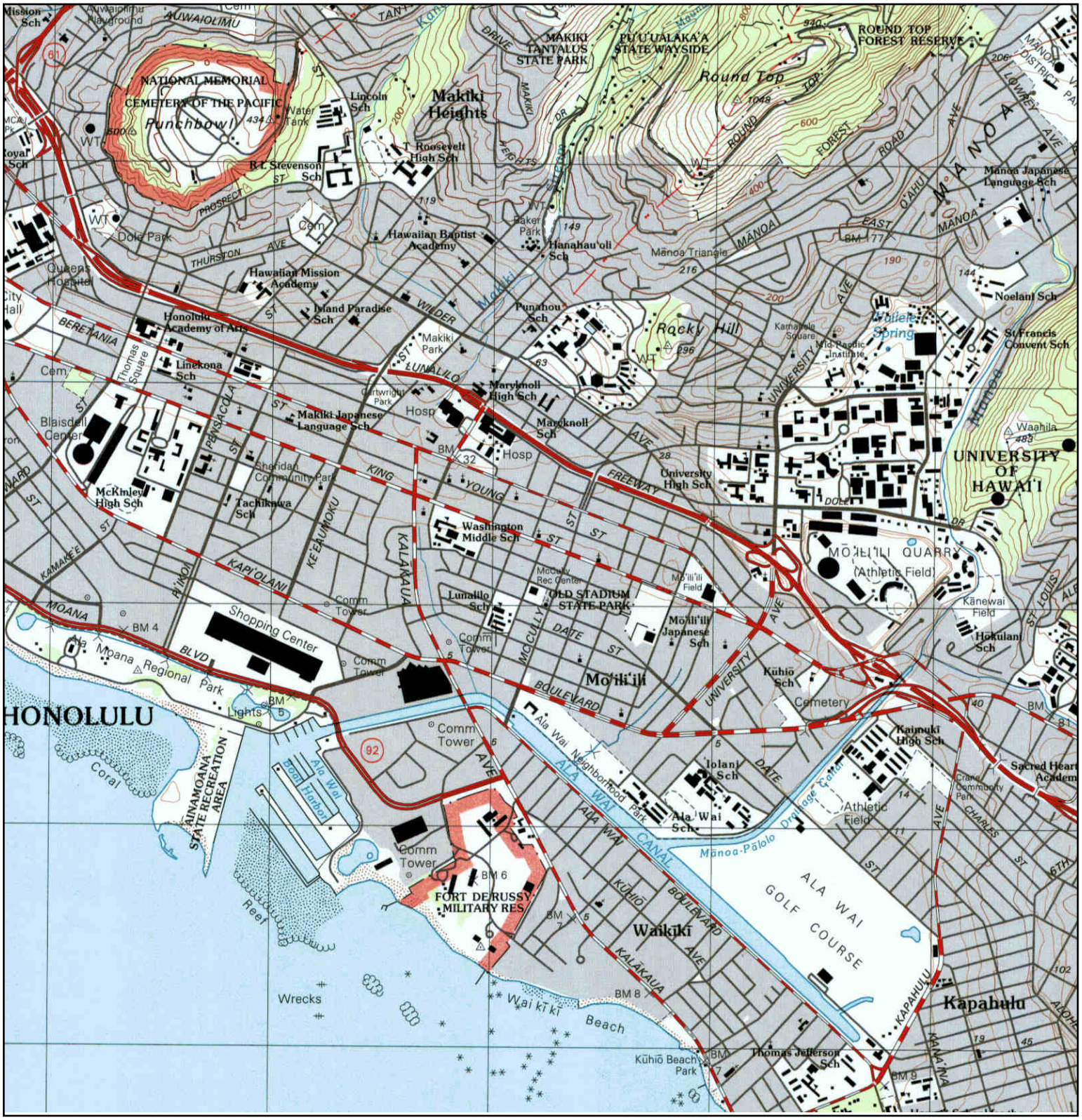
RESEARCH DATE: 12/12/2012

Historical Topographic Map



N	TARGET QUAD NAME: HONOLULU MAP YEAR: 1998 SERIES: 7.5 SCALE: 1:24000	SITE NAME: 929 Pumehana Street ADDRESS: 929 Pumehana Street Honolulu, HI 96826 LAT/LONG: 21.2947 / -157.8313	CLIENT: Central Planet Repair CONTACT: Ned Murphy INQUIRY#: 3475872.4 RESEARCH DATE: 12/12/2012

APPENDIX F

Environmental Data Resources, Inc. EDR Radius Map with GeoCheck®

929 Pumehana Street
929 Pumehana Street
Honolulu, HI 96826

Inquiry Number: 3475872.2s
December 12, 2012

The EDR Radius Map™ Report with GeoCheck®

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
Toll Free: 800.352.0050
www.edrnet.com

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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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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 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

929 PUMEHANA STREET
HONOLULU, HI 96826

COORDINATES

Latitude (North):	21.2947000 - 21˚ 17' 40.92''
Longitude (West):	157.8313000 - 157˚ 49' 52.68''
Universal Tranverse Mercator:	Zone 4
UTM X (Meters):	621229.8
UTM Y (Meters):	2355073.8
Elevation:	7 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

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

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
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
SPILLS	Release Notifications

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
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
FINDS	Facility Index System/Facility Registry System
RAATS	RCRA Administrative Action Tracking System
UIC	Underground Injection Wells Listing
DRYCLEANERS	Permitted Drycleaner Facility Listing
AIRS	List of Permitted Facilities
INDIAN RESERV	Indian Reservations
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
COAL ASH DOE	Steam-Electric Plant Operation Data
PCB TRANSFORMER	PCB Transformer Registration Database
US FIN ASSUR	Financial Assurance Information
EPA WATCH LIST	EPA WATCH LIST
2020 COR ACTION	2020 Corrective Action Program List
PRP	Potentially Responsible Parties

EXECUTIVE SUMMARY

FINANCIAL ASSURANCE---- Financial Assurance Information Listing

EDR PROPRIETARY RECORDS

EDR Proprietary Records

Manufactured Gas Plants----- EDR Proprietary Manufactured Gas Plants

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 12/28/2011 has revealed that there is 1 CERC-NFRAP site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
FIRST DEVELOPMENT INC	***1777 KAPIOLANI BLVD***	***SW 1/4 - 1/2 (0.423 mi.)***	***32***	***46***

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 09/11/2012 has revealed that there is 1

RCRA-SQG site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
TEXACO SERVICE STATION	***2105 S KING AND WILIWIL***	***E 1/8 - 1/4 (0.153 mi.)***	***C10***	***16***

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 09/11/2012 has revealed that there are 2 RCRA-CESQG sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CONTINENTAL AUTO SERVICE INC	***1918 ALGAROBA ST***	***S 0 - 1/8 (0.017 mi.)***	***A2***	***8***
MCCULLY SHELL	1115 MCCULLY ST	NE 1/8 - 1/4 (0.126 mi.)	B8	14

State- and tribal - equivalent CERCLIS

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 SHWS list, as provided by EDR, and dated 03/13/2012 has revealed that there are 36 SHWS sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CONTINENTAL AUTO SERVICES	***1918 ALGAROBA ST***	***S 0 - 1/8 (0.017 mi.)***	***A1***	***7***
MCCULLY UNION SERVICE	***2105 S KING ST***	***E 1/8 - 1/4 (0.153 mi.)***	***C11***	***18***
MCDONALD'S RESTAURANT SOIL & G	***2121 S KING ST***	***E 1/8 - 1/4 (0.162 mi.)***	***C13***	***25***
WALLYS GARDEN CENTER	***1935 S BERETANIA ST***	***NNE 1/8 - 1/4 (0.163 mi.)***	***D14***	***26***
KAPIOLANI WOMEN'S & CHILDREN'S	***1319 PUNAHOU ST***	***NNW 1/4 - 1/2 (0.426 mi.)***	***I34***	***49***
ALOHA/KING SELF STORAGE	***1414 KALAKAUA AVE***	***WNW 1/4 - 1/2 (0.430 mi.)***	***35***	***50***
7-11 KALAKAUA	***1323 KALAKAUA AVE***	***NW 1/4 - 1/2 (0.465 mi.)***	***37***	***52***
1800 VANCOUVER DRIVE	***1800 VANCOUVER DR***	***NE 1/2 - 1 (0.558 mi.)***	***42***	***59***
MEADOW GOLD DAIRIES (ICE CREAM	***1418 YOUNG ST***	***WNW 1/2 - 1 (0.609 mi.)***	***44***	***61***
PUNAHOU SCHOOL - MAINTENANCE S	***1601 PUNAHOU ST***	***N 1/2 - 1 (0.645 mi.)***	***48***	***68***
LIKE LIKE PLAZA PETROLEUM CONT	745 KEEAUMOKU ST	W 1/2 - 1 (0.651 mi.)	49	70
CARTWRIGHT NEIGHBORHOOD PARK	KEEAUMOKU ST & MATLOCK	NW 1/2 - 1 (0.691 mi.)	52	74
2700 SOUTH KING STREET	***2700 S KING ST***	***ESE 1/2 - 1 (0.777 mi.)***	***59***	***82***
UH DUKE KAHANAMOKU SWIMMING PO	***2500 CAMPUS RD***	***ENE 1/2 - 1 (0.821 mi.)***	***62***	***87***
GRACE OTSUKA APARTMENT COMPLEX	***1233 YOUNG ST***	***WNW 1/2 - 1 (0.834 mi.)***	***63***	***88***
SCHUMAN CARRIAGE MOTORS, LTD.	***1234 S BERETANIA ST***	***WNW 1/2 - 1 (0.870 mi.)***	***64***	***89***
1012 PIIKOI STREET, ANIN-PIIKO	***1012 PIIKOI ST***	***WNW 1/2 - 1 (0.897 mi.)***	***65***	***93***

Lower Elevation	Address	Direction / Distance	Map ID	Page
FORMER KALAKAUA TRANSMISSION I	***1665 KALAKAUA AVE***	***WSW 1/4 - 1/2 (0.375 mi.)***	***G23***	***35***
ROGER'S REPAIR INC	1687 KALAKAUA AVE	WSW 1/4 - 1/2 (0.380 mi.)	24	36
HAWAII CONVENTION CENTER	***1801 KALAKAUA AVE***	***SW 1/4 - 1/2 (0.404 mi.)***	***H28***	***40***

EXECUTIVE SUMMARY

Lower Elevation	Address	Direction / Distance	Map ID	Page
THE PAVILLION	***1925 KALAKAUA AVE***	***SSW 1/2 - 1 (0.595 mi.)***	***43***	***60***
NEW OFFICE LOUNGE	***1551 KAPIOLANI BLVD***	***WSW 1/2 - 1 (0.617 mi.)***	***45***	***64***
HECO SUBSTATION: MAKALOA SUBST	***1544 MAKALOA ST***	***W 1/2 - 1 (0.621 mi.)***	***46***	***65***
1609 ALA WAI DIESEL RELEASE	***1609 ALA WAI BLVD***	***SW 1/2 - 1 (0.621 mi.)***	***47***	***67***
ALA WAI COVE CONDOMINIUM APART	***509 UNIVERSITY AVE***	***SSE 1/2 - 1 (0.658 mi.)***	***50***	***71***
CHEVRON U.S.A., INC.	***2002 KALAKAUA AVE***	***S 1/2 - 1 (0.681 mi.)***	***51***	***72***
IOLANI SCHOOL PETROLEUM ODOR	***563 KAMOKU ST***	***SSE 1/2 - 1 (0.716 mi.)***	***53***	***74***
YACHT HARBOR TOWERS	***1600 ALA MOANA BLVD***	***SW 1/2 - 1 (0.730 mi.)***	***54***	***76***
ROYAL GARDENS HOTEL DIESEL	***440 OLOHANA ST***	***S 1/2 - 1 (0.737 mi.)***	***55***	***77***
HOBRON HOTEL	1744 KAIOO DR	SSW 1/2 - 1 (0.752 mi.)	56	78
HAKUYOSHA INTERNATIONAL, INC.	***730 SHERIDAN STREET***	***W 1/2 - 1 (0.756 mi.)***	***J57***	***79***
MOTOR SUPPLY	***726 SHERIDAN ST***	***W 1/2 - 1 (0.761 mi.)***	***J58***	***81***
CUTTER CHEVROLET-GEO-PONTIAC	***1391 KAPIOLANI BLVD***	***W 1/2 - 1 (0.807 mi.)***	***60***	***83***
KING KALAKAUA PLAZA	***2080 KALAKAUA AVE***	***S 1/2 - 1 (0.810 mi.)***	***61***	***85***
CENPAC PROPERTIES - OFFICE BUI	***615 PIIKOI ST***	***W 1/2 - 1 (0.956 mi.)***	***66***	***94***
WAIKIKI BAZAAR	***2174 KALAKAUA AVE***	***S 1/2 - 1 (0.976 mi.)***	***67***	***96***

State and tribal leaking storage tank lists

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 LUST list, as provided by EDR, and dated 08/31/2012 has revealed that there are 21 LUST sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
UNIVERSITY OF HAWAII FEDERAL C	***2019 S KING ST***	***E 0 - 1/8 (0.090 mi.)***	***5***	***11***
Facility Status: Site Cleanup Completed (NFA)				
MCCULLY SHELL	***1115 MCCULLY ST***	***NE 1/8 - 1/4 (0.126 mi.)***	***B9***	***15***
Facility Status: Monitored Natural Attenuation				
MCCULLY UNION SERVICE	***2105 S KING ST***	***E 1/8 - 1/4 (0.153 mi.)***	***C11***	***18***
Facility Status: Active Remediation				
Facility Status: Monitored Natural Attenuation				
PUNAHOU CENTRAL OFFICE	***2054 YOUNG ST***	***ENE 1/8 - 1/4 (0.161 mi.)***	***12***	***24***
Facility Status: Site Cleanup Completed (NFA)				
Facility Status: Site Cleanup Completed (NFA)				
ALEXANDER TOWER	***1226 ALEXANDER ST***	***NNW 1/8 - 1/4 (0.213 mi.)***	***18***	***30***
Facility Status: Site Cleanup Completed (NFA)				
TOM ISHII'S UNION L-4462	***2114 S KING ST***	***E 1/8 - 1/4 (0.214 mi.)***	***E19***	***30***
Facility Status: Site Cleanup Completed (NFA)				
HIRONAKA SERVICE STATION	***2105 S BERETANIA ST***	***ENE 1/8 - 1/4 (0.249 mi.)***	***20***	***31***
Facility Status: Site Cleanup Completed (NFA)				
TESORO GAS EXPRESS #61018	***1549 S KING ST***	***WNW 1/4 - 1/2 (0.347 mi.)***	***F21***	***32***
Facility Status: LUST Cleanup Initiated				
PUNAHOU REPAIR SHOP	***1558 S KING ST***	***WNW 1/4 - 1/2 (0.364 mi.)***	***F22***	***34***
Facility Status: Site Cleanup Completed (NFA)				
SHRINERS HOSPITALS FOR CRIPPLE	***1310 PUNAHOU ST***	***NNW 1/4 - 1/2 (0.418 mi.)***	***I29***	***42***
Facility Status: Site Cleanup Completed (NFA)				

EXECUTIVE SUMMARY

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
7-ELEVEN WILDER	***2028 WILDER AVE.***	***NE 1/4 - 1/2 (0.420 mi.)***	***30***	***44***
Facility Status: Site Cleanup Completed (NFA)				
GAS PLUS	***1524 S KING ST***	***WNW 1/4 - 1/2 (0.421 mi.)***	***31***	***45***
Facility Status: Site Cleanup Completed (NFA)				
LINDSEY'S CHEVRON SERVICE	***2404 S BERETANIA ST***	***E 1/4 - 1/2 (0.426 mi.)***	***33***	***48***
Facility Status: Site Cleanup Completed (NFA)				
GREEN MILL FOOD MANUFACTURER L	***914 COOLIDGE ST***	***ESE 1/4 - 1/2 (0.443 mi.)***	***36***	***52***
Facility Status: Site Cleanup Completed (NFA)				
MID PAC PETROLEUM # 253943 (PR	***1505 S. KING ST.***	***WNW 1/4 - 1/2 (0.466 mi.)***	***38***	***55***
Facility Status: Site Cleanup Completed (NFA)				
Facility Status: Site Cleanup Completed (NFA)				
**Additional key fields are available in the Map Findings section*				
JAPANESE CULTURAL CENTER OF HA	***2454 S BERETANIA ST***	***E 1/4 - 1/2 (0.472 mi.)***	***39***	***57***
Facility Status: Site Cleanup Completed (NFA)				
ARCADIA RETIREMENT	***1434 PUNAHOU ST***	***NNW 1/4 - 1/2 (0.482 mi.)***	***40***	***58***
Facility Status: Site Cleanup Completed (NFA)				
VARSITY MOTORS, LTD.	***2482 S BERETANIA ST***	***E 1/4 - 1/2 (0.500 mi.)***	***41***	***58***
Facility Status: Site Cleanup Completed (NFA)				

Lower Elevation	Address	Direction / Distance	Map ID	Page
FUNAI'S UNION SERVICE L-5583	***1810 KAPIOLANI BLVD***	***SW 1/4 - 1/2 (0.389 mi.)***	***H25***	***37***
Facility Status: Site Cleanup Completed (NFA)				
ALOHA MOTORS	***KAPIOLANI BLVD X KALAKA***	***SW 1/4 - 1/2 (0.392 mi.)***	***H26***	***38***
Facility Status: Site Cleanup Completed (NFA)				
GAS 'N GLO INC	***1670 MAKALOA ST***	***WSW 1/4 - 1/2 (0.400 mi.)***	***G27***	***39***
Facility Status: Site Cleanup Completed (NFA)				

State and tribal registered storage tank lists

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 UST list, as provided by EDR, and dated 08/31/2012 has revealed that there are 11 UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
MCCULLY SERVICE STATION	1901 S KING ST	NNE 0 - 1/8 (0.037 mi.)	3	9
UNIVERSITY OF HAWAII FEDERAL C	***2019 S KING ST***	***E 0 - 1/8 (0.090 mi.)***	***5***	***11***
MCCULLY SHELL	***1115 MCCULLY ST***	***NE 1/8 - 1/4 (0.126 mi.)***	***B9***	***15***
MCCULLY UNION SERVICE	***2105 S KING ST***	***E 1/8 - 1/4 (0.153 mi.)***	***C11***	***18***
PUNAHOU CENTRAL OFFICE	***2054 YOUNG ST***	***ENE 1/8 - 1/4 (0.161 mi.)***	***12***	***24***
HAWAIIAN RENT-ALL	1946 S BERETANIA ST	NNE 1/8 - 1/4 (0.165 mi.)	D15	28
GENERAL RUSTPROOFING	1907 S BERETANIA ST	N 1/8 - 1/4 (0.169 mi.)	D16	28
ALEXANDER TOWER	***1226 ALEXANDER ST***	***NNW 1/8 - 1/4 (0.213 mi.)***	***18***	***30***
TOM ISHII'S UNION L-4462	***2114 S KING ST***	***E 1/8 - 1/4 (0.214 mi.)***	***E19***	***30***
HIRONAKA SERVICE STATION	***2105 S BERETANIA ST***	***ENE 1/8 - 1/4 (0.249 mi.)***	***20***	***31***

Lower Elevation	Address	Direction / Distance	Map ID	Page
MCCULLY & MOILIILI ST	MCCULLY ST X MOILIILI S	SSE 0 - 1/8 (0.115 mi.)	7	13

EXECUTIVE SUMMARY

State and tribal institutional control / engineering control registries

ENG CONTROLS: A listing of sites with engineering controls in place.

A review of the ENG CONTROLS list, as provided by EDR, and dated 03/13/2012 has revealed that there are 3 ENG CONTROLS sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
MCCULLY UNION SERVICE	*2105 S KING ST*	*E 1/8 - 1/4 (0.153 mi.)*	*C11*	*18*
ALOHA/KING SELF STORAGE	*1414 KALAKAUA AVE*	*WNW 1/4 - 1/2 (0.430 mi.)*	*35*	*50*

Lower Elevation	Address	Direction / Distance	Map ID	Page
FORMER KALAKAUA TRANSMISSION I	*1665 KALAKAUA AVE*	*WSW 1/4 - 1/2 (0.375 mi.)*	*G23*	*35*

Voluntary Remediation Program and Brownfields sites with institutional controls in place.

A review of the INST CONTROL list, as provided by EDR, and dated 03/13/2012 has revealed that there are 3 INST CONTROL sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
MCCULLY UNION SERVICE	*2105 S KING ST*	*E 1/8 - 1/4 (0.153 mi.)*	*C11*	*18*
ALOHA/KING SELF STORAGE	*1414 KALAKAUA AVE*	*WNW 1/4 - 1/2 (0.430 mi.)*	*35*	*50*

Lower Elevation	Address	Direction / Distance	Map ID	Page
FORMER KALAKAUA TRANSMISSION I	*1665 KALAKAUA AVE*	*WSW 1/4 - 1/2 (0.375 mi.)*	*G23*	*35*

State and tribal voluntary cleanup sites

VCP: Voluntary Response Program Sites.

A review of the VCP list, as provided by EDR, and dated 03/13/2012 has revealed that there is 1 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*	*WNW 1/4 - 1/2 (0.430 mi.)*	*35*	*50*

ADDITIONAL ENVIRONMENTAL RECORDS

Other Ascertainable Records

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 list, as provided by EDR, and dated 09/11/2012 has revealed that there

are 3 RCRA-NonGen sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
930 MCCULLY BLDG	930 MCCULLY ST	SE 0 - 1/8 (0.068 mi.)	4	10
KAPIOLANI MED CTR GENETICS LAB	1946 YOUNG ST STE 400	NNE 0 - 1/8 (0.102 mi.)	6	12
PRECISION DENTAL LABORATORY IN	***2104 S KING ST***	***E 1/8 - 1/4 (0.206 mi.)***	***E17***	***28***

EXECUTIVE SUMMARY

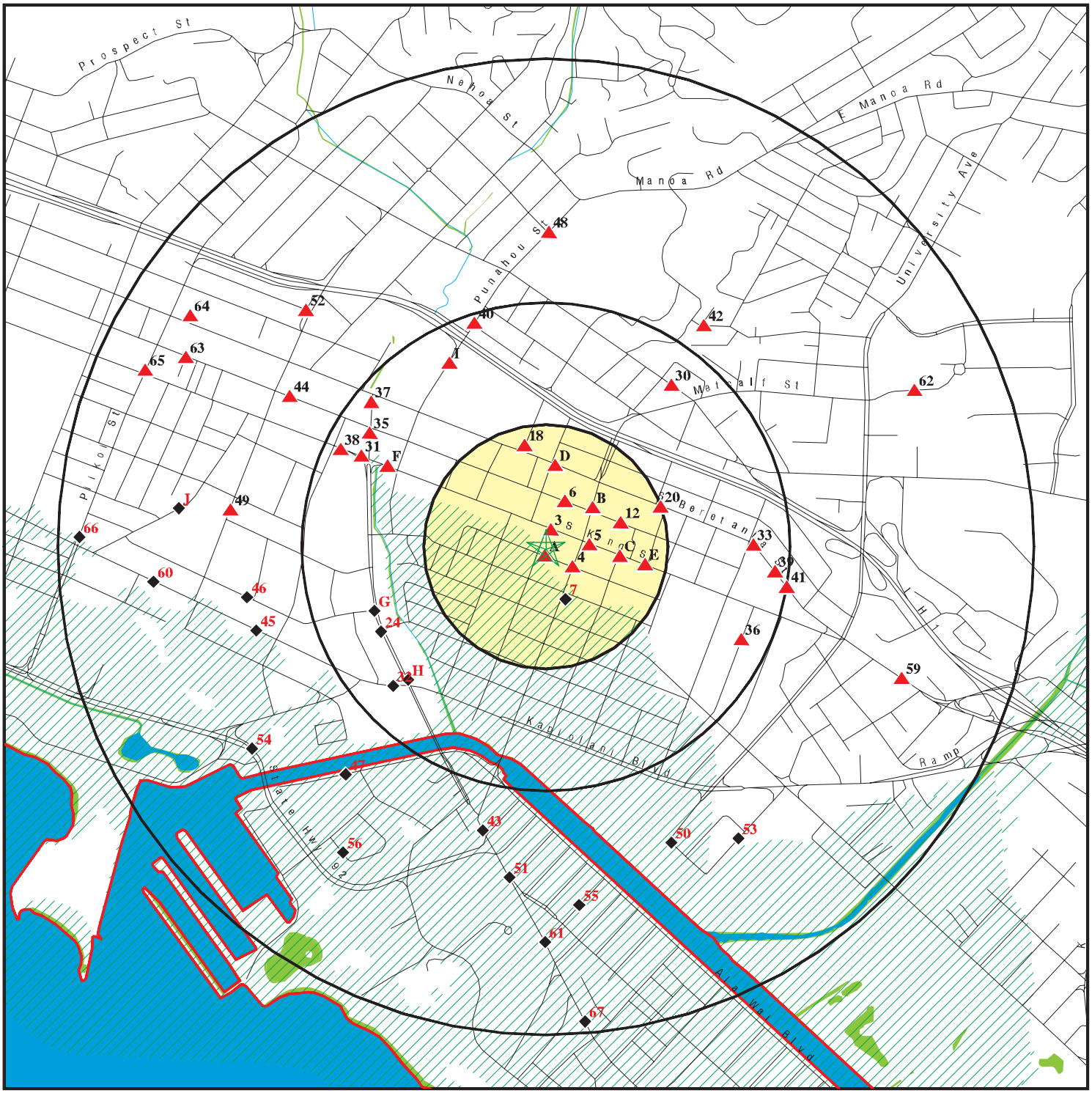
Due to poor or inadequate address information, the following sites were not mapped. Count: 89 records.

Site Name	Database(s)
KAKAAKO MAKAI DISTRICT PARKING GAR	SHWS, ENG CONTROLS, INST CONTROL
KAKAAKO BROWNFIELD PROJECT - UNIT	SHWS, ENG CONTROLS, BROWNFIELDS
KAKAAKO BROWNFIELD PROJECT - UNIT	SHWS, ENG CONTROLS, BROWNFIELDS
FORT RUGER FORMER FIRING RANGES	SHWS, ENG CONTROLS, INST CONTROL
KAKAAKO BROWNFIELD PROJECT - UNIT	SHWS, ENG CONTROLS, BROWNFIELDS
KAKAAKO BROWNFIELD PROJECT - UNIT	SHWS, ENG CONTROLS, BROWNFIELDS
CITIZENS ENERGY SERVICES PIER 38	SHWS, SPILLS, ENG CONTROLS, INST CONTROL
1703 BINGHAM STREET	FTTS, HIST FTTS
HALAWA STREAM CHANNEL PETROLEUM CO	SHWS
KAKAAKO MAKAI DISTRICT JOHN DOMINI	SHWS
ALA WAI HARBOR BOAT REPAIR YARD	SHWS
WAIKIKI BEACH WALK RESORT	SHWS, SPILLS, INST CONTROL
KAKAAKO MAKAI GATEWAY	SHWS
CANNON CLUB	SHWS, BROWNFIELDS
BIA - CONSTRUCTION TRAINING CENTER	SHWS
INTERISLAND MAINTENANCE FACILITY S	SHWS
HAWAIIAN BITUMULS PAVING & PRECAST	SHWS
ALOHA MOTORS 1777 KAPIOLANI BLVD	SHWS, SPILLS
KEEAUMOKU SUPERBLOCK PROJECT	SHWS, SPILLS
FORMER KAPALAMA MILITARY RESERVATI	SHWS
595 ALA MOANA BLACK OIL PIPELINE	SHWS, SPILLS
KOKUA KALIHI VALLEY ACTIVE LIVING	SHWS, BROWNFIELDS
RESERVE HOUSING TOWER SOIL CONTAMI	SHWS, SPILLS
HAWAII BITUMULS & PAVING CO.	CERC-NFRAP
JCRA INVESTMENTS	LUST
1 ELLIOTT STREET	HMIRS
DAMON BRIDGE ON KIKOWAENA STREET C	ERNS
HOIHOI KAA STREET	ERNS
ON JUDD STREET	ERNS
MINOHERA STREET	ERNS
NIMITZ STREET	ERNS
ON AN OPEN BEACH 1285 FRONT STREET	ERNS
HAUMEA STREET AND ALOHI KEA STREET	ERNS
91-325 KOMOHANA STREET	ERNS
OCEANSIDE OF LAGOON DRIVE ACROSS	ERNS
WAKIKI KAIULANI STREET	ERNS
AHUI STREET (YK DRILLING)	FINDS
YOUNG STREET PARK BOULEVARD	FINDS
BISHOP STREET	FINDS
ILALO STREET IMPROVEMENTS	FINDS
KAMAKEE STREET COMPLAINT	FINDS
KEALAHOU STREET	FINDS
INTERSTATE ROUTE H-1 KINAU STREET	FINDS
KING STREET CONSTRUCTION	FINDS
RECONSTRUCTION OF LUSITANA STREET	FINDS
BWS MAUNALANI STREET	FINDS
KINAU STREET SCHOOL	FINDS
RESURFACING OF VARIOUS STREET	FINDS
REHABILITATION OF STREET	FINDS
KAKAAKO COMMUNITY DEVELOPMENT DIST	FINDS
KAHANU STREET, SCHOOL STREET AND U	FINDS
ALA MOANA BOULEVARD & PUNCHBOWL ST	SPILLS
1439 ALLENCASTRE STREET, SEWAGE SP	SPILLS
AOLELE STREET SPILL	SPILLS
BERETANIA STREET PUBLIC RESTROOM	SPILLS
LETTER AT BETHEL STREET	SPILLS
CLARK STREET, PUNAHOU	SPILLS
COOK STREET B/W ILALO & ALA MOANA	SPILLS

EXECUTIVE SUMMARY

PAN PACIFIC BUILDING, FORT STREET	SPILLS
BASEMENT OF MOS BURGER AT FORT STR	SPILLS
HALAWA VALLEY STREET FUGITIVE DUMP	SPILLS
HAUSTEN STREET CANAL	SPILLS
COPPER CYANIDE CLEAN UP LEVELS AT	SPILLS
HECO TRANSFORMER ILALO STREET	SPILLS
JUDD STREET	SPILLS
KALANI STREET, DRUMS	SPILLS
KALIHI STREET, ABANDONED BOTTLES	SPILLS
KEALAHOU STREET, HAWAII KAI	SPILLS
KEWALO STREET ABANDONED DRUM	SPILLS
KILAUEA STREET SEWAGE SPILL	SPILLS
ABNDONED SHARPS AT KING STREET	SPILLS
KONA STREET, BEHIND ALA MOANA HOTE	SPILLS
KONA STREET, GREEN-COLORED LIQUID	SPILLS
KUKAHI STREET PIPELINE RELEASE CON	SPILLS
ALA WAI CANAL RUNOFF AT LEWERS STR	SPILLS
LUSITANA STREET APARTMENTS	SPILLS
PAOA STREAM NEAR LUSITANA STREET	SPILLS
MAKALEKA STREET ILLEGAL DUMPING	SPILLS
MAKALOA STREET, ACROSS KGMB NEWS-	SPILLS
MANELE STREET	SPILLS
MCCULLY STREET NITROGEN CYLINDER	SPILLS
MOKAUEA STREET	SPILLS
ABANDONED DRUMS AT MOKAUEA STREET	SPILLS
PAPU CIRCLE AT KALAMANU STREET	SPILLS
PAU STREET, UNKNOWN GREEN LIQUID R	SPILLS
POHUKAINA STREET, BY CHAIN LINK FE	SPILLS
VINEYARD STREET & SCHOOL STREET (N	SPILLS
WARD STREET STORM DRAIN	SPILLS
SAFEWAY STORE, YOUNG STREET	SPILLS

OVERVIEW MAP - 3475872.2s



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

N

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: 929 Pumehana Street	CLIENT: Central Planet Repair
ADDRESS: 929 Pumehana Street	CONTACT: Ned Murphy
Honolulu HI 96826	INQUIRY #: 3475872.2s
LAT/LONG: 21.2947 / 157.8313	DATE: December 12, 2012 3:45 pm

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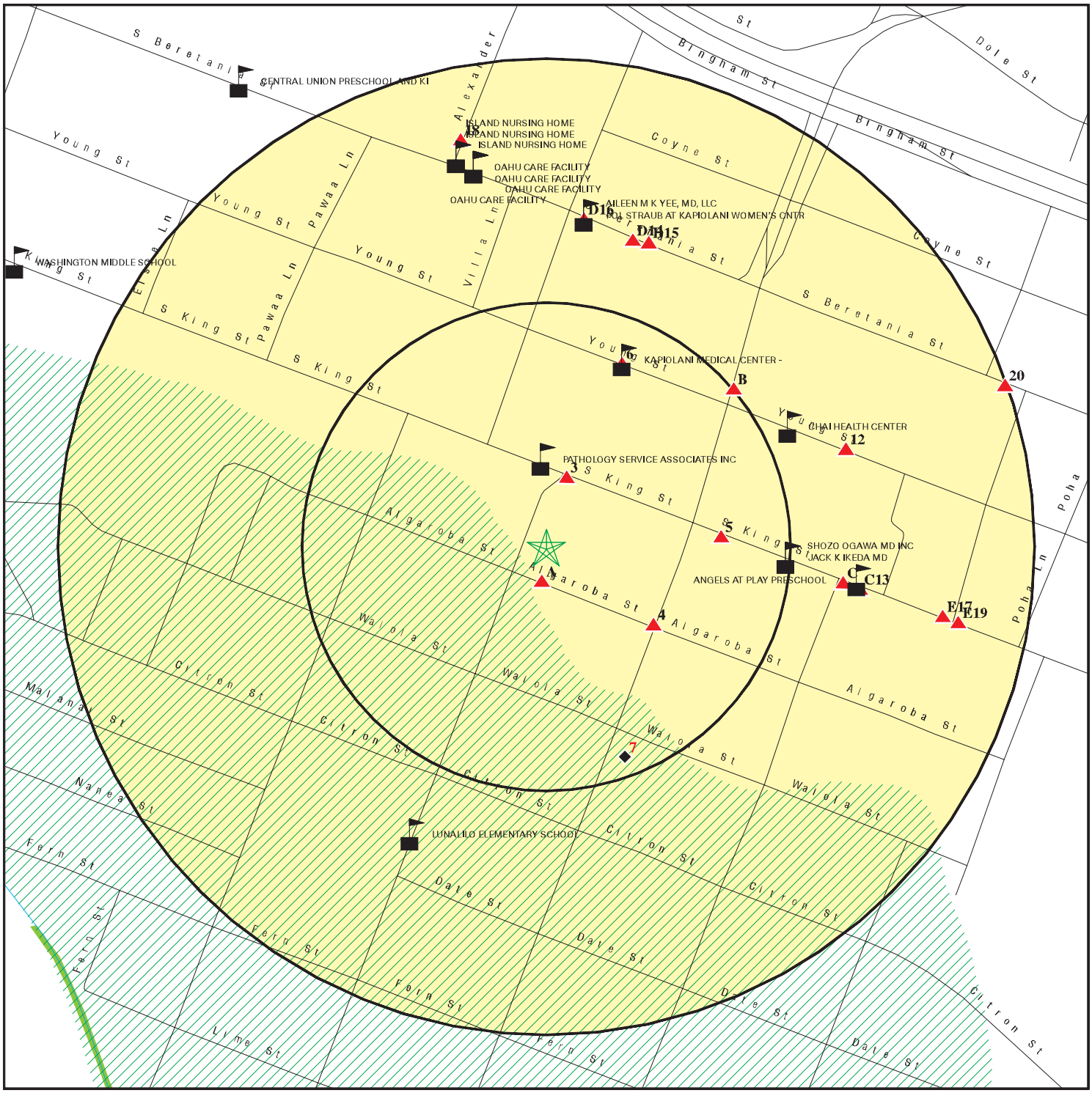
DETAIL MAP - 3475872.2s



0 1/16 1/8 1/4 Miles

- 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
- 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: 929 Pumehana Street	CLIENT: Central Planet Repair
ADDRESS: 929 Pumehana Street	CONTACT: Ned Murphy
Honolulu HI 96826	INQUIRY #: 3475872.2s
LAT/LONG: 21.2947 / 157.8313	DATE: December 12, 2012 3:46 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	0	1	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		0	1	NR	NR	NR	1
RCRA-CESQG	0.250		1	1	NR	NR	NR	2
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								
SHWS	1.000		1	3	6	26	NR	36
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST	0.500		1	6	14	NR	NR	21
INDIAN LUST	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
UST	0.250		3	8	NR	NR	NR	11

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								
ENG CONTROLS	0.500		0	1	2	NR	NR	3
INST CONTROL	0.500		0	1	2	NR	NR	3
State and tribal voluntary cleanup sites								
VCP	0.500		0	0	1	NR	NR	1
INDIAN VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
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
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
SPILLS	TP		NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA-NonGen	0.250		2	1	NR	NR	NR	3
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
MINES	0.250		0	0	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
TSCA	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
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
UIC	TP		NR	NR	NR	NR	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
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
COAL ASH EPA	0.500		0	0	0	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
FINANCIAL ASSURANCE	TP		NR	NR	NR	NR	NR	0
EDR PROPRIETARY RECORDS								
EDR Proprietary Records								
Manufactured Gas Plants	1.000		0	0	0	0	NR	0

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

A1 South < 1/8 0.017 mi. 92 ft. | **CONTINENTAL AUTO SERVICES**
1918 ALGAROBA ST
HONOLULU, HI 96826

Site 1 of 2 in cluster A

SHWS **S104534121**
SPILLS **N/A**

Relative: Higher

Actual: 7 ft.

SHWS:

Organization:	Continental Auto Services
Supplemental Location Text:	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:	Continental Auto Services
Island:	Oahu
Location Address Line 2:	Not reported
Location Zip Suffix:	Not reported
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:	NFA - 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
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

CONTINENTAL AUTO SERVICES (Continued) **S104534121**

Activity Type:	Response
Activity Lead:	Liz Galvez
Assignment End Date:	Not reported
Result:	Refer to ISST
File Under:	Continental Auto Services

A2 South < 1/8 0.017 mi. 92 ft. **CONTINENTAL AUTO SERVICE INC** **RCRA-CESQG** **1004688777**
1918 ALGAROBA ST **FINDS** **HID981613086**
HONOLULU, HI 96826

Site 2 of 2 in cluster A

Relative: Higher

Actual: 7 ft.

RCRA-CESQG:

Date form received by agency:	07/23/1993
Facility name:	CONTINENTAL AUTO SERVICE INC
Facility address:	1918 ALGAROBA ST HONOLULU, HI 96826
EPA ID:	HID981613086
Mailing address:	ALGAROBA ST HONOLULU, HI 96826
Contact:	MELVIN MATSANO
Contact address:	1918 ALGAROBA ST HONOLULU, HI 96826
Contact country:	US
Contact telephone:	(808) 949-1545
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:	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

Owner/operator name:	CONTINENTAL AUTO SERVICE
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999

CONTINENTAL AUTO SERVICE INC (Continued) **1004688777**

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

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: 110005723850

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.

---

3 NNE < 1/8 0.037 mi. 197 ft. | **MCCULLY SERVICE STATION** | **UST** | **U001235441**
1901 S KING ST | **N/A**
HONOLULU, HI 96826

Relative: Higher

Actual: 9 ft.

UST:
Facility ID: 9-101274
Owner: LIN F. KAM
Owner Address: 1616 KEWALO ST
Ownder City,St,Zip: Honolulu, 96826 96826

Tank ID: R-001
Date Installed: 04/26/1966
Tank Status: Permanently Out of Use
Date Closed: Not reported
Tank Capacity: Not reported
Substance: Not Listed

MCCULLY SERVICE STATION (Continued) **U001235441**

Tank ID:	R-002
Date Installed:	04/26/1966
Tank Status:	**Permanently Out of Use**
Date Closed:	Not reported
Tank Capacity:	Not reported
Substance:	Not Listed

Tank ID:	R-003
Date Installed:	04/26/1966
Tank Status:	**Permanently Out of Use**
Date Closed:	Not reported
Tank Capacity:	Not reported
Substance:	Not Listed

Tank ID:	R-004
Date Installed:	04/26/1966
Tank Status:	**Permanently Out of Use**
Date Closed:	Not reported
Tank Capacity:	Not reported
Substance:	Not Listed

---

4 **930 MCCULLY BLDG** **RCRA-NonGen** **1010316447**
SE **930 MCCULLY ST** **HIP000108506**
< 1/8 **HONOLULU, HI 96826**
0.068 mi.
357 ft.

Relative:
Higher

Actual:
7 ft.

RCRA-NonGen:

Date form received by agency:	05/29/2007
Facility name:	930 MCCULLY BLDG
Facility address:	930 MCCULLY ST HONOLULU, HI 96826
EPA ID:	HIP000108506
Mailing address:	1073 KINAU ST NO 1101 HONOLULU, HI 96814
Contact:	ROBERT K CHAR
Contact address:	1073 KINAU ST NO 1101 HONOLULU, HI 96814
Contact country:	US
Contact telephone:	(808) 531-2666
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:	ROBERT K CHAR
Owner/operator address:	1073 KINAU ST NO 1101 HONOLULU, HI 96814
Owner/operator country:	Not reported
Owner/operator telephone:	(808) 531-2666
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

930 MCCULLY BLDG (Continued) **1010316447**

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:	11/05/2001
Facility name:	930 MCCULLY BLDG
Classification:	Large Quantity Generator

Hazardous Waste Summary:

Waste code:	D000
Waste name:	Not Defined
Waste code:	D008
Waste name:	LEAD
Violation Status:	No violations found

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5 East < 1/8 0.090 mi. 474 ft. | **UNIVERSITY OF HAWAII FEDERAL CRE**
2019 S KING ST
HONOLULU, HI 96826 | **LUST** **U003154853**
UST **N/A**

Relative: Higher

Actual: 9 ft.

LUST:

Facility ID:	9-103157
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	01/30/1997
Release ID:	960056
Project Officer:	Jose Ruiz

UST:

Facility ID:	9-103157
Owner:	UNDETERMINED AT THIS TIME
Owner Address:	Address Unknown
Ownder City,St,Zip:	Honolulu, 96826 96826
Tank ID:	R-1
Date Installed:	Not reported
Tank Status:	**Permanently Out of Use**
Date Closed:	03/01/1996
Tank Capacity:	1000
Substance:	Not Listed

UNIVERSITY OF HAWAII FEDERAL CRE (Continued) **U003154853**

Tank ID: R-2
Date Installed: Not reported
Tank Status: Permanently Out of Use
Date Closed: 03/01/1996
Tank Capacity: 300
Substance: Not Listed

Tank ID: R-3
Date Installed: Not reported
Tank Status: Permanently Out of Use
Date Closed: 03/01/1996
Tank Capacity: 300
Substance: Not Listed

Tank ID: R-4
Date Installed: Not reported
Tank Status: Permanently Out of Use
Date Closed: 03/01/1996
Tank Capacity: 550
Substance: Not Listed

Tank ID: R-5
Date Installed: Not reported
Tank Status: Permanently Out of Use
Date Closed: 03/01/1996
Tank Capacity: 300
Substance: Not Listed

6
NNE
< 1/8
0.102 mi.
538 ft.

KAPIOLANI MED CTR GENETICS LAB **RCRA-NonGen** **1012178126**
1946 YOUNG ST STE 400 **HIP000043455**
HONOLULU, HI 96826

Relative:
Higher

Actual:
13 ft.

RCRA-NonGen:
Date form received by agency: 08/14/2009
Facility name: KAPIOLANI MED CTR GENETICS LAB
Facility address: 1946 YOUNG ST STE 400
HONOLULU, HI 96826
EPA ID: HIP000043455
Mailing address: 1319 PUNAHOU ST
HONOLULU, HI 96826
Contact: CATHY CAMP
Contact address: 1319 PUNAHOU ST
HONOLULU, HI 96826
Contact country: US
Contact telephone: (808) 983-8342
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: KAPIOLANI HEALTH HAWAII

KAPIOLANI MED CTR GENETICS LAB (Continued) **1012178126**

Owner/operator address: 55 MERCHANT ST 27TH
HONOLULU, HI 96813
Owner/operator country: Not reported
Owner/operator telephone: (808) 535-7401
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

Historical Generators:
Date form received by agency: 07/08/1998
Facility name: KAPIOLANI MED CTR GENETICS LAB
Classification: Conditionally Exempt Small Quantity Generator

Violation Status: No violations found

7
SSE
< 1/8
0.115 mi.
607 ft.

MCCULLY & MOILIILI ST **UST** **U001237375**
MCCULLY ST X MOILIILI ST **N/A**
HONOLULU, HI 96826

Relative:
Lower

Actual:
3 ft.

UST:
Facility ID: 9-102149
Owner: UNDETERMINED AT THIS TIME
Owner Address: Address Unknown
Ownder City,St,Zip: Honolulu, 96826 96826

Tank ID: 1
Date Installed: Not reported
Tank Status: **Permanently Out of Use**
Date Closed: Not reported
Tank Capacity: Not reported
Substance: Not Listed

B8
NE
1/8-1/4
0.126 mi.
664 ft.

MCCULLY SHELL
1115 MCCULLY ST
HONOLULU, HI 96826

Site 1 of 2 in cluster B

RCRA-CESQG **1009398533**
HIR000137406

Relative:
Higher

Actual:
12 ft.

RCRA-CESQG:

Date form received by agency:	03/01/2012
Facility name:	MCCULLY SHELL
Facility address:	1115 MCCULLY ST HONOLULU, HI 96826
EPA ID:	HIR000137406
Contact:	RICHARD L CONNER
Contact address:	1132 BISHOP ST, SUITE 1700 HONOLULU, HI 96813
Contact country:	US
Contact telephone:	(808) 522-9704
Contact email:	RCONNER@ALOHAGAS.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 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:	ALOHA PETROLEUM LTD
Owner/operator address:	1132 BISHOP ST, SUITE 1700 HONOLULU, HI 96813
Owner/operator country:	US
Owner/operator telephone:	(808) 522-9700
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	03/01/1999
Owner/Op end date:	Not reported

Owner/operator name:	ALOHA PETROLEUM LTD
Owner/operator address:	1132 BISHOP ST, SUITE 1700 HONOLULU, HI 96813
Owner/operator country:	US
Owner/operator telephone:	(808) 522-9700
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	03/01/1999
Owner/Op end date:	Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No

MCCULLY SHELL (Continued) **1009398533**

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: 02/27/2006
Facility name: MCCULLY SHELL
Site name: SHELL OIL PRODUCTS SAP 139548
Classification: Small Quantity Generator

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: D018
Waste name: BENZENE

Violation Status: No violations found

B9 **MCCULLY SHELL** **LUST** **U001235337**
NE **1115 MCCULLY ST** **UST** **N/A**
1/8-1/4 **HONOLULU, HI 96826** **FINANCIAL ASSURANCE**
0.126 mi.
664 ft. **Site 2 of 2 in cluster B**

Relative:
Higher

Actual:
12 ft.

LUST:
Facility ID: 9-101017
Facility Status: Monitored Natural Attenuation
Facility Status Date: 03/08/2010
Release ID: 080031
Project Officer: Shunsheng Fu

UST:
Facility ID: 9-101017
Owner: ALOHA PETROLEUM, LTD.
Owner Address: 1132 BISHOP STREET, SUITE 1700
Ownder City,St,Zip: Honolulu, 96826 96826

Tank ID: 87
Date Installed: 04/18/1985

MCCULLY SHELL (Continued) **U001235337**

Tank Status:	**Currently In Use**
Date Closed:	Not reported
Tank Capacity:	10000
Substance:	Gasoline

Tank ID:	89
Date Installed:	04/18/1985
Tank Status:	**Currently In Use**
Date Closed:	Not reported
Tank Capacity:	10000
Substance:	Diesel

Tank ID:	92
Date Installed:	04/18/1985
Tank Status:	**Currently In Use**
Date Closed:	Not reported
Tank Capacity:	10000
Substance:	Gasoline

HI FINANCIAL ASSURANCE:

Alt Facility ID:	9-101017
Tank Id:	87
Tank Status Desc:	Currently In Use
FRTYPE:	Insurance
Expiration Date:	04/01/2012

Alt Facility ID:	9-101017
Tank Id:	89
Tank Status Desc:	Currently In Use
FRTYPE:	Insurance
Expiration Date:	04/01/2012

Alt Facility ID:	9-101017
Tank Id:	92
Tank Status Desc:	Currently In Use
FRTYPE:	Insurance
Expiration Date:	04/01/2012

C10 **TEXACO SERVICE STATION** **RCRA-SQG** **1004689056**
East **2105 S KING AND WILIWILI** **FINDS** **HIR000105825**
1/8-1/4 **HONOLULU, HI 96826**
0.153 mi.
808 ft. **Site 1 of 3 in cluster C**

Relative:
Higher

Actual:
10 ft.

RCRA-SQG:

Date form received by agency:	09/18/2001
Facility name:	TEXACO SERVICE STATION
Facility address:	2105 S KING AND WILIWILI SAP 120879 HONOLULU, HI 96826
EPA ID:	HIR000105825
Mailing address:	P O BOX 2648 HOUSTON, TX 772522648
Contact:	SONDRA BIENVENU
Contact address:	P O BOX 2648

TEXACO SERVICE STATION (Continued) **1004689056**

	HOUSTON, TX 772522648
Contact country:	US
Contact telephone:	(713) 241-5036
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:	EQUILON ENTERPRISES L L C
Owner/operator address:	P O BOX 2648
	HOUSTON, TX 77252
Owner/operator country:	Not reported
Owner/operator telephone:	(713) 241-5036
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

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:	D018
Waste name:	BENZENE
Violation Status:	No violations found

FINDS:

TEXACO SERVICE STATION (Continued) **1004689056**

Registry ID: 110010627660

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.

ICIS (Integrated Compliance Information System) is the Integrated Compliance Information System and provides a database that, when complete, will contain integrated Enforcement and Compliance information across most of EPA's programs. The vision for ICIS is to replace EPA's independent databases that contain Enforcement data with a single repository for that information. Currently, ICIS contains all Federal Administrative and Judicial enforcement actions. This information is maintained in ICIS by EPA in the Regional offices and it Headquarters. A future release of ICIS will replace the Permit Compliance System (PCS) which supports the NPDES and will integrate that information with Federal actions already in the system. ICIS also has the capability to track other activities occurring in the Region that support Compliance and Enforcement programs. These include; Incident Tracking, Compliance Assistance, and Compliance Monitoring.

C11 **MCCULLY UNION SERVICE** **SHWS** **U001235168**
East **2105 S KING ST** **LUST** **N/A**
1/8-1/4 **HONOLULU, HI 96826** **UST**
0.153 mi. **ENG CONTROLS**
808 ft. **Site 2 of 3 in cluster C** **INST CONTROL**
FINANCIAL ASSURANCE

Relative:
Higher

Actual:
10 ft.

SHWS:

Organization:	ARCO AM/PM
Supplemental Location Text:	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:	ARCO AM/PM
Island:	Oahu
Location Address Line 2:	Not reported
Location Zip Suffix:	Not reported
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

MCCULLY UNION SERVICE (Continued) **U001235168**

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
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	NFA 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:	Active Remediation
Facility Status Date:	04/21/2004
Release ID:	940104
Project Officer:	Shunsheng Fu

Facility ID:	9-100341
Facility Status:	Monitored Natural Attenuation
Facility Status Date:	10/05/2006
Release ID:	020038
Project Officer:	Shunsheng Fu

UST:

Facility ID:	9-100341
Owner:	McCULLY Union Service
Owner Address:	2105 S. King St
Ownder City,St,Zip:	Honolulu, 96826 96826

Tank ID:	1
Date Installed:	04/21/2003
Tank Status:	**Currently In Use**
Date Closed:	Not reported
Tank Capacity:	15000
Substance:	Gasoline

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
Date Installed:	04/21/2003
Tank Status:	**Currently In Use**
Date Closed:	Not reported
Tank Capacity:	5000

MCCULLY UNION SERVICE (Continued) **U001235168**

Substance: Gasoline

Tank ID: R-2
Date Installed: 02/07/1983
Tank Status: Permanently Out of Use
Date Closed: 07/19/2002
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

MCCULLY UNION SERVICE (Continued) **U001235168**

Tank ID: R-A4
Date Installed: 01/01/1968
Tank Status: Permanently Out of Use
Date Closed: 01/01/1983
Tank Capacity: Not reported
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-3
Tank Status Desc: Permanently Out of Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-100341
Tank Id: R-I-1
Tank Status Desc: Permanently Out of Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-100341
Tank Id: R-A5
Tank Status Desc: Permanently Out of Use
FRTYPE: Other
Expiration Date: Not reported

MCCULLY UNION SERVICE (Continued) **U001235168**

Alt Facility ID: 9-100341
Tank Id: R-A4
Tank Status Desc: Permanently Out of Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-100341
Tank Id: R-A3
Tank Status Desc: Permanently Out of Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-100341
Tank Id: R-A1
Tank Status Desc: Permanently Out of Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-100341
Tank Id: R-A2
Tank Status Desc: Permanently Out of Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-100341
Tank Id: R-5
Tank Status Desc: Permanently Out of Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-100341
Tank Id: R-4
Tank Status Desc: Permanently Out of Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-100341
Tank Id: R-2
Tank Status Desc: Permanently Out of Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-100341
Tank Id: 1
Tank Status Desc: Currently In Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-100341
Tank Id: 2B
Tank Status Desc: Currently In Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-100341
Tank Id: 2A
Tank Status Desc: Currently In Use

MCCULLY UNION SERVICE (Continued) **U001235168**

FRTYPE:	Other
Expiration Date:	Not reported

Alt Facility ID:	9-100341
Tank Id:	R-I-1
Tank Status Desc:	Permanently Out of Use
FRTYPE:	Insurance
Expiration Date:	03/12/2012

Alt Facility ID:	9-100341
Tank Id:	R-3
Tank Status Desc:	Permanently Out of Use
FRTYPE:	Insurance
Expiration Date:	03/12/2012

Alt Facility ID:	9-100341
Tank Id:	1
Tank Status Desc:	Currently In Use
FRTYPE:	Insurance
Expiration Date:	03/12/2012

Alt Facility ID:	9-100341
Tank Id:	R-A5
Tank Status Desc:	Permanently Out of Use
FRTYPE:	Insurance
Expiration Date:	03/12/2012

Alt Facility ID:	9-100341
Tank Id:	2A
Tank Status Desc:	Currently In Use
FRTYPE:	Insurance
Expiration Date:	03/12/2012

Alt Facility ID:	9-100341
Tank Id:	R-A4
Tank Status Desc:	Permanently Out of Use
FRTYPE:	Insurance
Expiration Date:	03/12/2012

Alt Facility ID:	9-100341
Tank Id:	2B
Tank Status Desc:	Currently In Use
FRTYPE:	Insurance
Expiration Date:	03/12/2012

Alt Facility ID:	9-100341
Tank Id:	R-A2
Tank Status Desc:	Permanently Out of Use
FRTYPE:	Insurance
Expiration Date:	03/12/2012

Alt Facility ID:	9-100341
Tank Id:	R-A1
Tank Status Desc:	Permanently Out of Use
FRTYPE:	Insurance
Expiration Date:	03/12/2012

MCCULLY UNION SERVICE (Continued) **U001235168**

Alt Facility ID: 9-100341
Tank Id: R-2
Tank Status Desc: Permanently Out of Use
FRTYPE: Insurance
Expiration Date: 03/12/2012

Alt Facility ID: 9-100341
Tank Id: R-4
Tank Status Desc: Permanently Out of Use
FRTYPE: Insurance
Expiration Date: 03/12/2012

Alt Facility ID: 9-100341
Tank Id: R-5
Tank Status Desc: Permanently Out of Use
FRTYPE: Insurance
Expiration Date: 03/12/2012

Alt Facility ID: 9-100341
Tank Id: R-A3
Tank Status Desc: Permanently Out of Use
FRTYPE: Insurance
Expiration Date: 03/12/2012

12
ENE
1/8-1/4
0.161 mi.
852 ft.

PUNAHOU CENTRAL OFFICE **LUST** **U001235197**
2054 YOUNG ST **UST** **N/A**
HONOLULU, HI 96826 **FINANCIAL ASSURANCE**

Relative:
Higher

Actual:
10 ft.

LUST:
Facility ID: 9-100525
Facility Status: Site Cleanup Completed (NFA)
Facility Status Date: 12/27/1994
Release ID: 920006
Project Officer: Eric Sadoyama

Facility ID: 9-100525
Facility Status: Site Cleanup Completed (NFA)
Facility Status Date: 10/29/1997
Release ID: 960080
Project Officer: Eric Sadoyama

UST:
Facility ID: 9-100525
Owner: Hawaiian Telcom
Owner Address: P.O. Box 2200
Ownder City,St,Zip: Honolulu, 96826 96826

Tank ID: M-1
Date Installed: 11/01/1996
Tank Status: Currently In Use
Date Closed: Not reported
Tank Capacity: 2500
Substance: Diesel

PUNAHOU CENTRAL OFFICE (Continued) **U001235197**

Tank ID:	R-M-001
Date Installed:	05/07/1970
Tank Status:	**Permanently Out of Use**
Date Closed:	07/23/1996
Tank Capacity:	2500
Substance:	Diesel

HI FINANCIAL ASSURANCE:

Alt Facility ID:	9-100525
Tank Id:	M-1
Tank Status Desc:	Currently In Use
FRTYPE:	Insurance
Expiration Date:	05/02/2012

Alt Facility ID:	9-100525
Tank Id:	R-M-001
Tank Status Desc:	Permanently Out of Use
FRTYPE:	Insurance
Expiration Date:	05/02/2012

C13 **MCDONALD'S RESTAURANT SOIL & GROUNDWATER CONTAMINATION** **SHWS** **S105264711**
East **2121 S KING ST** **SPILLS** **N/A**
1/8-1/4 **HONOLULU, HI 96826**
0.162 mi.
856 ft. **Site 3 of 3 in cluster C**

Relative:
Higher

Actual:
10 ft.

SHWS:

Organization:	McDonald's Restaurants
Supplemental Location Text:	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:	McDonald's Restaurants
Island:	Oahu
Location Address Line 2:	Not reported
Location Zip Suffix:	Not reported
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

MCDONALD'S RESTAURANT SOIL & GROUNDWATER CONTAMINATION (Continued) **S105264711**

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:

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

D14 **WALLYS GARDEN CENTER** **SHWS** **S111678012**
NNE **1935 S BERETANIA ST** **SPILLS** **N/A**
1/8-1/4 **HONOLULU, HI**
0.163 mi.
863 ft. **Site 1 of 3 in cluster D**

Relative:
Higher

Actual:
20 ft.

SHWS:

Organization:	Asanoma Trust
Supplemental Location Text:	Not reported
Island:	Oahu
Environmental Interest:	Wallys Garden Center

WALLYS GARDEN CENTER (Continued) **S111678012**

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:	Asanoma Trust
Island:	Oahu
Location Address Line 2:	Not reported
Location Zip Suffix:	Not reported
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
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

D15 NNE 1/8-1/4 0.165 mi. 869 ft. — **HAWAIIAN RENT-ALL**, **1946 S BERETANIA ST**, **HONOLULU, HI 96826** — **UST** — **U003541702**, **N/A**

Site 2 of 3 in cluster D

Relative: Higher

Actual: 20 ft.

UST:

Facility ID:	9-100236
Owner:	GORDON LOUI
Owner Address:	HAWAIIAN RENT-ALL / 1946 S BERETANIA ST
Ownder City,St,Zip:	Honolulu, 96826 96826
Tank ID:	R-001
Date Installed:	03/17/1976
Tank Status:	**Permanently Out of Use**
Date Closed:	06/06/1991
Tank Capacity:	550
Substance:	Gasoline
Tank ID:	R-002
Date Installed:	03/17/1976
Tank Status:	**Permanently Out of Use**
Date Closed:	06/06/1991
Tank Capacity:	550
Substance:	Diesel

D16 North 1/8-1/4 0.169 mi. 893 ft. — **GENERAL RUSTPROOFING**, **1907 S BERETANIA ST**, **HONOLULU, HI 96826** — **UST** — **U003221658**, **N/A**

Site 3 of 3 in cluster D

Relative: Higher

Actual: 20 ft.

UST:

Facility ID:	9-101227
Owner:	CHEVRON PRODUCTS COMPANY
Owner Address:	91-480 MALAKOLE ST.
Ownder City,St,Zip:	Honolulu, 96826 96826
Tank ID:	R-1
Date Installed:	Not reported
Tank Status:	**Permanently Out of Use**
Date Closed:	Not reported
Tank Capacity:	Not reported
Substance:	Other

E17 East 1/8-1/4 0.206 mi. 1088 ft. — **PRECISION DENTAL LABORATORY INC**, **2104 S KING ST**, **HONOLULU, HI 96826** — **RCRA-NonGen FINDS** — **1000172404**, **HID033204231**

Site 1 of 2 in cluster E

Relative: Higher

Actual: 10 ft.

RCRA-NonGen:

Date form received by agency:	12/10/1993
Facility name:	PRECISION DENTAL LABORATORY INC
Facility address:	2104 S KING ST HONOLULU, HI 96826
EPA ID:	HID033204231

PRECISION DENTAL LABORATORY INC (Continued) **1000172404**

Mailing address: S KING ST
HONOLULU, HI 96826
Contact: R SHIGETA
Contact address: 2104 S KING ST
HONOLULU, HI 96826
Contact country: US
Contact telephone: Not reported
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: 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: 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: 110005284316

Environmental Interest/Information System

PRECISION DENTAL LABORATORY INC (Continued) **1000172404**

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.

18
NNW
1/8-1/4
0.213 mi.
1126 ft.

ALEXANDER TOWER
1226 ALEXANDER ST
HONOLULU, HI 96826

LUST **U003711696**
UST **N/A**

Relative:
Higher

Actual:
24 ft.

LUST:

Facility ID:	9-103531
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	06/13/2001
Release ID:	010007
Project Officer:	Jose Ruiz

UST:

Facility ID:	9-103531
Owner:	ALEXANDER TOWER
Owner Address:	1226 ALEXANDER ST, APT 302
Ownder City,St,Zip:	Honolulu, 96826 96826
Tank ID:	R-M-1
Date Installed:	Not reported
Tank Status:	**Permanently Out of Use**
Date Closed:	10/27/2000
Tank Capacity:	120
Substance:	Diesel

E19
East
1/8-1/4
0.214 mi.
1132 ft.

TOM ISHII'S UNION L-4462
2114 S KING ST
HONOLULU, HI 96826

LUST **U001235017**
UST **N/A**

Site 2 of 2 in cluster E

Relative:
Higher

Actual:
10 ft.

LUST:

Facility ID:	9-100042
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	07/24/2001
Release ID:	900023
Project Officer:	Shaobin Li

UST:

Facility ID:	9-100042
Owner:	UNOCAL CORPORATION
Owner Address:	3915 Mission Avenue #7416
Ownder City,St,Zip:	Honolulu, 96826 96826
Tank ID:	R-1
Date Installed:	03/26/1958

TOM ISHII'S UNION L-4462 (Continued) **U001235017**

Tank Status: **Permanently Out of Use**
Date Closed: 11/30/1989
Tank Capacity: 4000
Substance: Gasoline

Tank ID: R-1-2
Date Installed: 03/26/1958
Tank Status: **Permanently Out of Use**
Date Closed: 07/01/1992
Tank Capacity: 4000
Substance: Gasoline

Tank ID: R-2
Date Installed: 03/26/1958
Tank Status: **Permanently Out of Use**
Date Closed: 07/01/1992
Tank Capacity: 5000
Substance: Gasoline

Tank ID: R-4
Date Installed: 03/26/1958
Tank Status: **Permanently Out of Use**
Date Closed: 07/01/1992
Tank Capacity: 550
Substance: Used Oil

20
ENE
1/8-1/4
0.249 mi.
1315 ft.

HIRONAKA SERVICE STATION **LUST** **U003221653**
2105 S BERETANIA ST **UST** **N/A**
HONOLULU, HI 96826

Relative:
Higher

Actual:
13 ft.

LUST:
Facility ID: 9-101174
Facility Status: Site Cleanup Completed (NFA)
Facility Status Date: 05/13/2005
Release ID: 000067
Project Officer: Shaobin Li

UST:
Facility ID: 9-101174
Owner: UNKNOWN AT THIS TIME
Owner Address: UNK
Ownder City,St,Zip: Honolulu, 96826 96826

Tank ID: R-1
Date Installed: 04/04/1957
Tank Status: **Permanently Out of Use**
Date Closed: 11/08/2000
Tank Capacity: 4000
Substance: Gasoline

Tank ID: R-2

HIRONAKA SERVICE STATION (Continued) **U003221653**

Date Installed: 04/04/1957
Tank Status: Permanently Out of Use
Date Closed: 11/08/2000
Tank Capacity: 5000
Substance: Gasoline

Tank ID: R-3
Date Installed: 04/04/1974
Tank Status: Permanently Out of Use
Date Closed: 11/08/2000
Tank Capacity: 8000
Substance: Gasoline

Tank ID: R-4
Date Installed: 04/04/1970
Tank Status: Permanently Out of Use
Date Closed: 11/10/2000
Tank Capacity: 550
Substance: Used Oil

F21 **TESORO GAS EXPRESS #61018** **LUST** **U003402801**
WNW **1549 S KING ST** **UST** **N/A**
1/4-1/2 **HONOLULU, HI 96826** **FINANCIAL ASSURANCE**
0.347 mi.
1834 ft. **Site 1 of 2 in cluster F**

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: Tesoro Refining & Marketing Company
Owner Address: 3450 South 344th Way, suite 201
Ownder City,St,Zip: Honolulu, 96826 96826

Tank ID: 3
Date Installed: 01/25/1987
Tank Status: Currently In Use
Date Closed: Not reported
Tank Capacity: 10000
Substance: Gasoline

Tank ID: 87
Date Installed: 01/25/1987
Tank Status: Currently In Use
Date Closed: Not reported
Tank Capacity: 10000
Substance: Gasoline

TESORO GAS EXPRESS #61018 (Continued) **U003402801**

Tank ID: 92
Date Installed: 01/25/1987
Tank Status: Currently In Use
Date Closed: Not reported
Tank Capacity: 10000
Substance: Gasoline

HI FINANCIAL ASSURANCE:

Alt Facility ID: 9-100059
Tank Id: 87
Tank Status Desc: Currently In Use
FRTYPE: Trust Fund
Expiration Date: Not reported

Alt Facility ID: 9-100059
Tank Id: 3
Tank Status Desc: Currently In Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-100059
Tank Id: 92
Tank Status Desc: Currently In Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-100059
Tank Id: 3
Tank Status Desc: Currently In Use
FRTYPE: Trust Fund
Expiration Date: Not reported

Alt Facility ID: 9-100059
Tank Id: 92
Tank Status Desc: Currently In Use
FRTYPE: Trust Fund
Expiration Date: Not reported

Alt Facility ID: 9-100059
Tank Id: 87
Tank Status Desc: Currently In Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-100059
Tank Id: 92
Tank Status Desc: Currently In Use
FRTYPE: Self Insured
Expiration Date: 03/31/2010

Alt Facility ID: 9-100059
Tank Id: 3
Tank Status Desc: Currently In Use
FRTYPE: Self Insured
Expiration Date: 03/31/2010

Alt Facility ID: 9-100059

TESORO GAS EXPRESS #61018 (Continued) **U003402801**

Tank Id: 87
Tank Status Desc: Currently In Use
FRTYPE: Self Insured
Expiration Date: 03/31/2010

Alt Facility ID: 9-100059
Tank Id: 87
Tank Status Desc: Currently In Use
FRTYPE: Guarantee
Expiration Date: 03/31/2012

Alt Facility ID: 9-100059
Tank Id: 3
Tank Status Desc: Currently In Use
FRTYPE: Guarantee
Expiration Date: 03/31/2012

Alt Facility ID: 9-100059
Tank Id: 92
Tank Status Desc: Currently In Use
FRTYPE: Guarantee
Expiration Date: 03/31/2012

F22 **PUNAHOU REPAIR SHOP** **LUST** **1000146579**
WNW **1558 S KING ST** **UST** **N/A**
1/4-1/2 **HONOLULU, HI 96826**
0.364 mi.
1924 ft. **Site 2 of 2 in cluster F**

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

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

PUNAHOU REPAIR SHOP (Continued) **1000146579**

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

G23 **FORMER KALAKAUA TRANSMISSION INC** **SHWS** **S106817112**
WSW **1665 KALAKAUA AVE** **ENG CONTROLS** **N/A**
1/4-1/2 **HONOLULU, HI 96826** **INST CONTROL**
0.375 mi.
1981 ft. **Site 1 of 2 in cluster G**

Relative:
Lower

Actual:
3 ft.

SHWS:

Organization:	Imai Brothers Enterprises
Supplemental Location Text:	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:	Imai Brothers Enterprises
Island:	Oahu
Location Address Line 2:	Not reported
Location Zip Suffix:	Not reported
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:	NFA Letter - Restricted Use
Document Date:	03/28/2006
Document Number:	2006-185-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

FORMER KALAKAUA TRANSMISSION INC (Continued) **S106817112**

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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24
WSW
1/4-1/2
0.380 mi.
2007 ft.

ROGER'S REPAIR INC
1687 KALAKAUA AVE
HONOLULU, HI 96826

SHWS **S106820247**
N/A

Relative:
Lower

Actual:
3 ft.

SHWS:

Organization:	Roger's Repair Inc
Supplemental Location Text:	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
Potential Hazards And Controls:	Hazard Undetermined
Organization:	Roger's Repair Inc
Island:	Oahu
Location Address Line 2:	Not reported
Location Zip Suffix:	Not reported
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:	NFA - Type Undetermined
Document Date:	06/04/1999
Document Number:	Not reported
Document Subject:	Not reported

ROGER'S REPAIR INC (Continued) **S106820247**

Project Manager: Laura Young
Contact Information: (808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

H25 **FUNAI'S UNION SERVICE L-5583** **LUST** **U001235021**
SW **1810 KAPIOLANI BLVD** **UST** **N/A**
1/4-1/2 **HONOLULU, HI 96813** **FINANCIAL ASSURANCE**
0.389 mi.
2054 ft. **Site 1 of 3 in cluster H**

Relative:
Lower

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
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 Desc: Permanently Out of Use
FRTYPE: Risk Retention Group
Expiration Date: Not reported

Alt Facility ID: 9-100047
Tank Id: R-3
Tank Status Desc: Permanently Out of Use
FRTYPE: Not Listed
Expiration Date: Not reported

FUNAI'S UNION SERVICE L-5583 (Continued) **U001235021**

Alt Facility ID: 9-100047
Tank Id: R-2
Tank Status Desc: Permanently Out of Use
FRTYPE: Risk Retention Group
Expiration Date: Not reported

Alt Facility ID: 9-100047
Tank Id: R-1
Tank Status Desc: Permanently Out of Use
FRTYPE: Not Listed
Expiration Date: Not reported

Alt Facility ID: 9-100047
Tank Id: R-1
Tank Status Desc: Permanently Out of Use
FRTYPE: Risk Retention Group
Expiration Date: Not reported

Alt Facility ID: 9-100047
Tank Id: R-2
Tank Status Desc: Permanently Out of Use
FRTYPE: Not Listed
Expiration Date: Not reported

H26 **ALOHA MOTORS** **LUST** **U001235755**
SW **KAPIOLANI BLVD X KALAKAUA AVE** **UST** **N/A**
1/4-1/2 **HONOLULU, HI 96815**
0.392 mi.
2071 ft. **Site 2 of 3 in cluster H**

Relative:
Lower

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

ALOHA MOTORS (Continued) **U001235755**

Tank ID: R-3
Date Installed: Not reported
Tank Status: Permanently Out of Use
Date Closed: 08/24/1995
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

G27 **GAS 'N GLO INC** **LUST** **U001235256**
WSW **1670 MAKALOA ST** **UST** **N/A**
1/4-1/2 **HONOLULU, HI 96814**
0.400 mi.
2111 ft. **Site 2 of 2 in cluster G**

Relative:
Lower

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

GAS 'N GLO INC (Continued) **U001235256**

Tank ID:	R-3
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

H28 **HAWAII CONVENTION CENTER** **SHWS** **1006820847**
SW **1801 KALAKAUA AVE** **SPILLS** **N/A**
1/4-1/2 **HONOLULU, HI 96814**
0.404 mi.
2131 ft. **Site 3 of 3 in cluster H**

Relative:
Lower

Actual:
3 ft.

SHWS:

Organization:	State of Hawaii, Department of Business, Economic Development & Tourism, Convention C
Supplemental Location Text:	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:	State of Hawaii, Department of Business, Economic Development & Tourism, Convention C
Island:	Oahu
Location Address Line 2:	Not reported
Location Zip Suffix:	Not reported
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

HAWAII CONVENTION CENTER (Continued) **1006820847**

Engineering Control:	Not reported
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	NFA - 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, Hawaii
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:	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
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:	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

HAWAII CONVENTION CENTER (Continued) **1006820847**

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:	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
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

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I29 **SHRINERS HOSPITALS FOR CRIPPLED CHILDREN** **LUST** **U001235903**
NNW **1310 PUNAHOU ST** **UST** **N/A**
1/4-1/2 **HONOLULU, HI 96826** **FINANCIAL ASSURANCE**
0.418 mi.
2207 ft. **Site 1 of 2 in cluster I**

Relative:
Higher

Actual:
40 ft.

LUST:

Facility ID:	9-102410
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	09/11/1998
Release ID:	910069
Project Officer:	David Hodges

UST:

Facility ID:	9-102410
Owner:	KAUAI VETERANS' MEMORIAL Hospital
Owner Address:	4643 Waimea Canyon Dr.
Ownder City,St,Zip:	Honolulu, 96826 96826

Tank ID:	R-1
Date Installed:	02/28/1967
Tank Status:	**Permanently Out of Use**
Date Closed:	06/28/1991
Tank Capacity:	8500
Substance:	Other

SHRINERS HOSPITALS FOR CRIPPLED CHILDREN (Continued) **U001235903**

Tank ID: R-2
Date Installed: 02/28/1967
Tank Status: Permanently Out of Use
Date Closed: 06/28/1991
Tank Capacity: 550
Substance: Diesel

Tank ID: r-3
Date Installed: Not reported
Tank Status: Permanently out of Use
Date Closed: 08/10/2009
Tank Capacity: 550
Substance: Diesel

HI FINANCIAL ASSURANCE:

Alt Facility ID: 9-102410
Tank Id: R-1
Tank Status Desc: Permanently Out of Use
FRTYPE: Not reported
Expiration Date: Not reported

Alt Facility ID: 9-102410
Tank Id: R-2
Tank Status Desc: Permanently Out of Use
FRTYPE: Not reported
Expiration Date: Not reported

Alt Facility ID: 9-102410
Tank Id: r-3
Tank Status Desc: Permanently out of Use
FRTYPE: Not reported
Expiration Date: Not reported

Alt Facility ID: 9-102410
Tank Id: R-1
Tank Status Desc: Permanently Out of Use
FRTYPE: Self Insured
Expiration Date: 05/12/2010

Alt Facility ID: 9-102410
Tank Id: R-2
Tank Status Desc: Permanently Out of Use
FRTYPE: Self Insured
Expiration Date: 05/12/2010

Alt Facility ID: 9-102410
Tank Id: r-3
Tank Status Desc: Permanently out of Use
FRTYPE: Self Insured
Expiration Date: 05/12/2010

30 NE 1/4-1/2 0.420 mi. 2220 ft.

7-ELEVEN WILDER
2028 WILDER AVE.
HONOLULU, HI 96822

LUST **U003221699**
UST **N/A**
FINANCIAL ASSURANCE

Relative: Higher

Actual: 30 ft.

LUST:

Facility ID:	9-101866
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	10/20/1998
Release ID:	980152
Project Officer:	Jose Ruiz

UST:

Facility ID:	9-101866
Owner:	ALOHA PETROLEUM, LTD.
Owner Address:	1132 Bishop Street, Suite 1700
Ownder City,St,Zip:	Honolulu, 96822 96822
Tank ID:	87
Date Installed:	06/30/1989
Tank Status:	**Currently In Use**
Date Closed:	Not reported
Tank Capacity:	10000
Substance:	Gasoline
Tank ID:	89
Date Installed:	06/30/1989
Tank Status:	**Currently In Use**
Date Closed:	Not reported
Tank Capacity:	10000
Substance:	Gasoline
Tank ID:	92
Date Installed:	06/30/1989
Tank Status:	**Currently In Use**
Date Closed:	Not reported
Tank Capacity:	10000
Substance:	Gasoline

HI FINANCIAL ASSURANCE:

Alt Facility ID:	9-101866
Tank Id:	87
Tank Status Desc:	Currently In Use
FRTYPE:	Other
Expiration Date:	Not reported
Alt Facility ID:	9-101866
Tank Id:	92
Tank Status Desc:	Currently In Use
FRTYPE:	Other
Expiration Date:	Not reported
Alt Facility ID:	9-101866
Tank Id:	89
Tank Status Desc:	Currently In Use

7-ELEVEN WILDER (Continued) **U003221699**

FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-101866
Tank Id: 92
Tank Status Desc: Currently In Use
FRTYPE: Insurance
Expiration Date: 04/01/2013

Alt Facility ID: 9-101866
Tank Id: 87
Tank Status Desc: Currently In Use
FRTYPE: Insurance
Expiration Date: 04/01/2013

Alt Facility ID: 9-101866
Tank Id: 89
Tank Status Desc: Currently In Use
FRTYPE: Insurance
Expiration Date: 04/01/2013

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31 WNW 1/4-1/2 0.421 mi. 2225 ft. | **GAS PLUS** | **LUST** | **U001235103**
1524 S KING ST | **UST** | **N/A**
HONOLULU, HI 96826

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
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

GAS PLUS (Continued) **U001235103**

Date Installed: 05/16/1985
Tank Status: Permanently Out of Use
Date Closed: 07/21/1995
Tank Capacity: 12000
Substance: Gasoline

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32 SW 1/4-1/2 0.423 mi. 2234 ft.

FIRST DEVELOPMENT INC
1777 KAPIOLANI BLVD
HONOLULU, HI 96814

CERC-NFRAP 1003879446
RCRA-CESQG HID984466060
FINDS

Relative: Lower

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: DISCOVERY
Date Started: Not reported
Date Completed: 09/24/1990
Priority Level: Not reported

Action: PRELIMINARY ASSESSMENT
Date Started: Not reported
Date Completed: 04/22/1991
Priority Level: Higher priority for further assessment

Action: SITE INSPECTION
Date Started: Not reported
Date Completed: 03/23/1992
Priority Level: NFRAP-Site does not qualify for the NPL based on existing information

Action: ARCHIVE SITE
Date Started: Not reported
Date Completed: 03/23/1992
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

FIRST DEVELOPMENT INC (Continued) **1003879446**

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 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,

FIRST DEVELOPMENT INC (Continued) **1003879446**

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.

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33 East 1/4-1/2 0.426 mi. 2247 ft.

LINDSEY'S CHEVRON SERVICE
2404 S BERETANIA ST
HONOLULU, HI 96826

LUST U003221659
UST N/A

Relative: Higher

Actual: 10 ft.

LUST:

Facility ID:	9-101230
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	06/22/1993
Release ID:	910050
Project Officer:	Rhonda Goyke

UST:

Facility ID:	9-101230
Owner:	CHEVRON PRODUCTS COMPANY
Owner Address:	91-480 MALAKOLE ST.
Ownder City,St,Zip:	Honolulu, 96826 96826
Tank ID:	R-1
Date Installed:	11/30/1984
Tank Status:	**Permanently Out of Use**
Date Closed:	Not reported
Tank Capacity:	10000
Substance:	Gasoline
Tank ID:	R-2
Date Installed:	11/30/1984
Tank Status:	**Permanently Out of Use**
Date Closed:	Not reported
Tank Capacity:	10000
Substance:	Gasoline
Tank ID:	R-3
Date Installed:	11/30/1984
Tank Status:	**Permanently Out of Use**
Date Closed:	Not reported
Tank Capacity:	10000
Substance:	Gasoline
Tank ID:	R-4
Date Installed:	11/30/1984
Tank Status:	**Permanently Out of Use**
Date Closed:	Not reported
Tank Capacity:	1000
Substance:	Used Oil

I34 NNW 1/4-1/2 0.426 mi. 2250 ft. | **KAPIOLANI WOMEN'S & CHILDREN'S MEDICAL CENTER**
1319 PUNAHOU ST
HONOLULU, HI 96826
Site 2 of 2 in cluster I

SHWS **U001235208**
UST **N/A**
AIRS
FINANCIAL ASSURANCE

Relative: Higher

Actual: 43 ft.

SHWS:

Organization:	Kapiolani Health
Supplemental Location Text:	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:	Kapiolani Health
Island:	Oahu
Location Address Line 2:	Not reported
Location Zip Suffix:	Not reported
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:	NFA Letter - Unrestricted Residential Use
Document Date:	07/17/1997
Document Number:	1997-249-RK
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

KAPIOLANI WOMEN'S & CHILDREN'S MEDICAL CENTER (Continued) **U001235208**

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, Ha 96826
Business Phone:	808-983-6941
Contact Name:	Allen Easterday
Contact Title:	Director of Facilities
Description:	125 HP BoilerThis permit encompasses the following equipment:125 HP Cleaver-Brooks boiler (model no. CB 200-125-150ST, serial no. L88692, 5.23 MMBtu/hr, fired primarily on synthetic natural gas [SNG] and fuel oil no. 2 as back-up).

HI FINANCIAL ASSURANCE:

Alt Facility ID:	9-100740
Tank Id:	1
Tank Status Desc:	Currently in Use
FRTYPE:	Insurance
Expiration Date:	Not reported

Alt Facility ID:	9-100740
Tank Id:	1
Tank Status Desc:	Currently in Use
FRTYPE:	Other
Expiration Date:	Not reported

Alt Facility ID:	9-100740
Tank Id:	R-001
Tank Status Desc:	Permanently Out of Use
FRTYPE:	Insurance
Expiration Date:	Not reported

Alt Facility ID:	9-100740
Tank Id:	R-001
Tank Status Desc:	Permanently Out of Use
FRTYPE:	Other
Expiration Date:	Not reported

35
WNW
1/4-1/2
0.430 mi.
2271 ft.

ALOHA/KING SELF STORAGE
1414 KALAKAUA AVE
HONOLULU, HI

SHWS **S106816203**
ENG CONTROLS **N/A**
INST CONTROL
VCP

Relative:
Higher

Actual:
22 ft.

SHWS:

Organization:	Aloha/King LLC
Supplemental Location Text:	1524 S King St corner (property on both addresses)
Island:	Oahu
Environmental Interest:	1414 Kalakaua Avenue-Aloha/King LLC

ALOHA/KING SELF STORAGE (Continued) **S106816203**

HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Program:	Voluntary Response Program
Project Manager:	Cal Miyahara
Hazard Priority:	Low
Potential Hazards And Controls:	Hazard Managed With Controls
Organization:	Aloha/King LLC
Island:	Oahu
Location Address Line 2:	Not reported
Location Zip Suffix:	Not reported
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
Priority:	Low
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:	LOC - 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)

ALOHA/KING SELF STORAGE (Continued) **S106816203**

Island: Oahu

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36 ESE 1/4-1/2 0.443 mi. 2339 ft.

GREEN MILL FOOD MANUFACTURER LTD
914 COOLIDGE ST
HONOLULU, HI 96826

LUST U003154827
UST N/A

Relative: Higher

Actual: 10 ft.

LUST:
Facility ID: 9-103103
Facility Status: Site Cleanup Completed (NFA)
Facility Status Date: 12/28/1995
Release ID: 950127
Project Officer: Eric Sadoyama

UST:
Facility ID: 9-103103
Owner: GREEN MILL FOOD MANUFACTURER LTD
Owner Address: 732 WILIWILI ST
Ownder City,St,Zip: Honolulu, 96826 96826

Tank ID: R-1
Date Installed: Not reported
Tank Status: Permanently Out of Use
Date Closed: 08/04/1995
Tank Capacity: 250
Substance: Diesel

Tank ID: R-2
Date Installed: Not reported
Tank Status: Permanently Out of Use
Date Closed: 08/04/1995
Tank Capacity: 350
Substance: Diesel

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37 NW 1/4-1/2 0.465 mi. 2455 ft.

7-11 KALAKAUA
1323 KALAKAUA AVE
HONOLULU, HI 96826

SHWS U001235396
UST N/A
FINANCIAL ASSURANCE

Relative: Higher

Actual: 29 ft.

SHWS:
Organization: Aloha Petroleum, Ltd.
Supplemental Location Text: 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: Aloha Petroleum, Ltd.
Island: Oahu

7-11 KALAKAUA (Continued) **U001235396**

Location Address Line 2:	Not reported
Location Zip Suffix:	Not reported
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:	NFA 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

7-11 KALAKAUA (Continued) **U001235396**

Date Installed: 04/04/1985
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: r-87
Tank Status Desc: Permanently out of Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-101172
Tank Id: r-89
Tank Status Desc: Permanently out of Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-101172
Tank Id: 1a
Tank Status Desc: Currently in Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-101172
Tank Id: r-92
Tank Status Desc: Permanently out of Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-101172
Tank Id: 1b
Tank Status Desc: Currently In Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-101172
Tank Id: r-92
Tank Status Desc: Permanently out of Use
FRTYPE: Insurance
Expiration Date: 07/14/2011

Alt Facility ID: 9-101172
Tank Id: r-87
Tank Status Desc: Permanently out of Use
FRTYPE: Insurance
Expiration Date: 07/14/2011

7-11 KALAKAUA (Continued) **U001235396**

Alt Facility ID: 9-101172
Tank Id: 1a
Tank Status Desc: Currently in Use
FRTYPE: Insurance
Expiration Date: 07/14/2011

Alt Facility ID: 9-101172
Tank Id: 1b
Tank Status Desc: Currently In Use
FRTYPE: Insurance
Expiration Date: 07/14/2011

Alt Facility ID: 9-101172
Tank Id: r-89
Tank Status Desc: Permanently out of Use
FRTYPE: Insurance
Expiration Date: 07/14/2011

---

38 WNW 1/4-1/2 0.466 mi. 2460 ft.

MID PAC PETROLEUM # 253943 (PREV: LIONEL'S UNOCAL) **LUST** **U001235016**
1505 S. KING ST. **UST** **N/A**
HONOLULU, HI 96826 **FINANCIAL ASSURANCE**

Relative: Higher

Actual: 17 ft.

LUST:
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: 12/09/1998
Release ID: 960074
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
Substance: Gasoline

MID PAC PETROLEUM # 253943 (PREV: LIONEL'S UNOCAL) (Continued) **U001235016**

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 Desc: Permanently Out of Use
FRTYPE: Insurance
Expiration Date: Not reported

Alt Facility ID: 9-100041
Tank Id: r-92
Tank Status Desc: Permanently out of Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-100041
Tank Id: r-92
Tank Status Desc: Permanently out of Use
FRTYPE: Insurance
Expiration Date: Not reported

Alt Facility ID: 9-100041
Tank Id: r-87
Tank Status Desc: Permanently out of Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-100041

MID PAC PETROLEUM # 253943 (PREV: LIONEL'S UNOCAL) (Continued) **U001235016**

Tank Id: R-3943-4
Tank Status Desc: Permanently Out of Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-100041
Tank Id: R-3943-2
Tank Status Desc: Permanently Out of Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-100041
Tank Id: R-3943-2
Tank Status Desc: Permanently Out of Use
FRTYPE: Insurance
Expiration Date: Not reported

Alt Facility ID: 9-100041
Tank Id: R-3943-1
Tank Status Desc: Permanently Out of Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-100041
Tank Id: R-3943-1
Tank Status Desc: Permanently Out of Use
FRTYPE: Insurance
Expiration Date: Not reported

Alt Facility ID: 9-100041
Tank Id: r-87
Tank Status Desc: Permanently out of Use
FRTYPE: Insurance
Expiration Date: Not reported

39
East
1/4-1/2
0.472 mi.
2494 ft.

JAPANESE CULTURAL CENTER OF HAWAII **LUST** **U003221789**
2454 S BERETANIA ST **UST** **N/A**
HONOLULU, HI 96826

Relative:
Higher

Actual:
10 ft.

LUST:
Facility ID: 9-102721
Facility Status: Site Cleanup Completed (NFA)
Facility Status Date: 05/14/1996
Release ID: 930045
Project Officer: Jose Ruiz

UST:
Facility ID: 9-102721
Owner: JAPANESE CULTURAL CENTER OF HAWAII
Owner Address: 2454 S BERETANIA ST
Ownder City,St,Zip: Honolulu, 96826 96826

Tank ID: R-1
Date Installed: Not reported
Tank Status: Permanently Out of Use

JAPANESE CULTURAL CENTER OF HAWAII (Continued) **U003221789**

Date Closed: 01/26/1993
Tank Capacity: 1000
Substance: Used Oil

---

40 NNW 1/4-1/2 0.482 mi. 2545 ft.

ARCADIA RETIREMENT
1434 PUNAHOU ST
HONOLULU, HI 96822

LUST **U003402852**
UST **N/A**

Relative: Higher

Actual: 51 ft.

LUST:
Facility ID: 9-103458
Facility Status: Site Cleanup Completed (NFA)
Facility Status Date: 02/12/1999
Release ID: 990006
Project Officer: Jeffrey Ung

UST:
Facility ID: 9-103458
Owner: ARCADIA RETIREMENT
Owner Address: 1434 PUNAHOU ST
Ownder City,St,Zip: Honolulu, 96822 96822

Tank ID: R-M-1
Date Installed: 01/01/1981
Tank Status: Permanently Out of Use
Date Closed: 07/07/1998
Tank Capacity: 300
Substance: Diesel

Tank ID: R-M-1
Date Installed: 01/01/1981
Tank Status: Permanently Out of Use
Date Closed: 07/07/1998
Tank Capacity: 300
Substance: Diesel

---

41 East 1/4-1/2 0.500 mi. 2640 ft.

VARSITY MOTORS, LTD.
2482 S BERETANIA ST
HONOLULU, HI 96826

LUST **U003221620**
UST **N/A**

Relative: Higher

Actual: 9 ft.

LUST:
Facility ID: 9-100855
Facility Status: Site Cleanup Completed (NFA)
Facility Status Date: 09/17/1992
Release ID: 910020
Project Officer: Not Assigned

UST:
Facility ID: 9-100855
Owner: VARSITY MOTORS, LTD.
Owner Address: 2482 S BERETANIA ST

VARSITY MOTORS, LTD. (Continued) **U003221620**

Ownder City,St,Zip: Honolulu, 96826 96826

Tank ID: R-1
Date Installed: 05/06/1966
Tank Status: Permanently Out of Use
Date Closed: 10/23/1990
Tank Capacity: 8000
Substance: Gasoline

Tank ID: R-2
Date Installed: 05/06/1966
Tank Status: Permanently Out of Use
Date Closed: 10/23/1990
Tank Capacity: 6000
Substance: Gasoline

Tank ID: R-3
Date Installed: 05/06/1966
Tank Status: Permanently Out of Use
Date Closed: 10/23/1990
Tank Capacity: 550
Substance: Used Oil

---

42 **1800 VANCOUVER DRIVE** **SHWS** **S110526102**
NE **1800 VANCOUVER DR** **CDL** **N/A**
1/2-1 **HONOLULU, HI 96822**
0.558 mi.
2946 ft.

Relative:
Higher

Actual:
128 ft.

SHWS:

Organization:	1800 Vancouver Drive
Supplemental Location Text:	Not reported
Island:	Oahu
Environmental Interest:	1800 Vancouver Drive
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Program:	State
Project Manager:	Lynn Bailey
Hazard Priority:	Medium
Potential Hazards And Controls:	Hazard Undetermined
Organization:	1800 Vancouver Drive
Island:	Oahu
Location Address Line 2:	Not reported
Location Zip Suffix:	Not reported
Supplemental Location Text:	Not reported
SDAR Environmental Interest Name:	1800 Vancouver Drive
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Progran Name:	State
Potential Hazard And Controls:	Hazard Undetermined
Priority:	Medium
Assessment:	Assessment Ongoing
Response:	Not reported
Nature of Contamination:	Presumed: Suspected contamination associated with a clandestine meth

1800 VANCOUVER DRIVE (Continued) **S110526102**

	lab
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:	Lynn Bailey
Contact Information:	(808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

CDL:

Date Notified:	8/4/2010
Cleanup Status:	Ongoing

43
SSW
1/2-1
0.595 mi.
3143 ft.

THE PAVILLION
1925 KALAKAUA AVE
HONOLULU, HI 96815

SHWS **S106820617**
SPILLS **N/A**

Relative:
Lower

Actual:
3 ft.

SHWS:

Organization:	The Pavilion
Supplemental Location Text:	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
Hazard Priority:	NFA
Potential Hazards And Controls:	Hazard Undetermined
Organization:	The Pavilion
Island:	Oahu
Location Address Line 2:	Not reported
Location Zip Suffix:	Not reported
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

THE PAVILLION (Continued) **S106820617**

Site Closure Type:	NFA - 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

---

44 **MEADOW GOLD DAIRIES (ICE CREAM PLANT)** **SHWS** **S104657475**
WNW **1418 YOUNG ST** **SPILLS** **N/A**
1/2-1 **HONOLULU, HI 96814**
0.609 mi.
3217 ft.

Relative:
Higher

Actual:
20 ft.

SHWS:

Organization:	Meadow Gold Dairies, Division of Southern Foods Group, LP
Supplemental Location Text:	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:	Site Discovery
Project Manager:	Cal Miyahara
Hazard Priority:	NFA
Potential Hazards And Controls:	No Hazard
Organization:	Meadow Gold Dairies, Division of Southern Foods Group, LP
Island:	Oahu
Location Address Line 2:	Not reported
Location Zip Suffix:	Not reported
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:	Site Discovery
Potential Hazard And Controls:	No Hazard
Priority:	NFA
Assessment:	Response Necessary

MEADOW GOLD DAIRIES (ICE CREAM PLANT) (Continued) **S104657475**

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:	NFA 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 Street, Honolulu, Oahu, Hawaii
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:	20000407-1035
HID Number:	Not reported
Facility Registry Id:	110013767726
Lead and Program:	HEER EP&R
ER:	Not reported
Units:	Meadow Gold Ice Cream Plant-Ammonia release
Substances:	Ammonia
Less Or Greater Than:	Not reported
Numerical Quantity:	2
Units:	Pounds
Activity Type:	Response
Activity Lead:	Mike Cripps
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:	19970307-1540
HID Number:	Not reported
Facility Registry Id:	110013767726
Lead and Program:	HEER EP&R
ER:	No
Units:	Meadow Gold Ice Cream Plant Fuel Oil Spill
Substances:	Fuel Oil #6
Less Or Greater Than:	Not reported
Numerical Quantity:	500
Units:	Gallons
Activity Type:	Response
Activity Lead:	Liz Galvez
Assignment End Date:	Not reported
Result:	Refer to ISST
File Under:	Meadow Gold Dairies, Division of Southern Foods Group, LP

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	19900120

MEADOW GOLD DAIRIES (ICE CREAM PLANT) (Continued) **S104657475**

HID Number:	Not reported
Facility Registry Id:	110013767726
Lead and Program:	HEER EP&R
ER:	Not reported
Units:	Meadow Gold Ammonia Leak
Substances:	Ammonia
Less Or Greater Than:	<
Numerical Quantity:	100
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
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

Click this hyperlink while viewing on your computer to access
4 additional HI SPILLS: record(s) in the EDR Site Report.

45 WSW 1/2-1 0.617 mi. 3260 ft. | **NEW OFFICE LOUNGE**
1551 KAPIOLANI BLVD
HONOLULU, HI 96814 | **SHWS LUST UST** | **1006843573 N/A**

Relative: Lower

Actual: 3 ft.

SHWS:

Organization:	CEC Hawaii, Inc.
Supplemental Location Text:	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:	CEC Hawaii, Inc.
Island:	Oahu
Location Address Line 2:	Not reported
Location Zip Suffix:	Not reported
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)
Facility Status Date:	03/10/2008
Release ID:	060033
Project Officer:	Shunsheng Fu

Facility ID:	9-103517
Facility Status:	Site Cleanup Completed (NFA)
Facility Status Date:	03/10/2008
Release ID:	060012
Project Officer:	Shunsheng Fu

NEW OFFICE LOUNGE (Continued) **1006843573**

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

46
West
1/2-1
0.621 mi.
3278 ft.

HECO SUBSTATION: MAKALOA SUBSTATION **SHWS** **S106817457**
1544 MAKALOA ST **SPILLS** **N/A**
HONOLULU, HI 96814 **INST CONTROL**

Relative:
Lower

Actual:
3 ft.

SHWS:

Organization:	Hawaiian Electric Co., Inc. (HECO)
Supplemental Location Text:	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:	Hawaiian Electric Co., Inc. (HECO)
Island:	Oahu
Location Address Line 2:	Not reported
Location Zip Suffix:	Not reported
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

HECO SUBSTATION: MAKALOA SUBSTATION (Continued) **S106817457**

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
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:	NFA 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:	No
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:	Not reported
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:	Not reported

HECO SUBSTATION: MAKALOA SUBSTATION (Continued) **S106817457**

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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47
SW
1/2-1
0.621 mi.
3279 ft.

Relative:
Lower

Actual:
3 ft.

1609 ALA WAI DIESEL RELEASE **SHWS** **S108008656**
1609 ALA WAI BLVD **SPILLS** **N/A**
HONOLULU, HI

SHWS:

Organization:	Ala Wai Watermark Development , LLC
Supplemental Location Text:	Not reported
Island:	Oahu
Environmental Interest:	1609 Ala Wai Diesel Release
HID Number:	Not reported
Facility Registry Identifier:	Not reported
Lead Agency:	HEER
Program:	State
Project Manager:	Laura Young
Hazard Priority:	NFA
Potential Hazards And Controls:	No Hazard
Organization:	Ala Wai Watermark Development , LLC
Island:	Oahu
Location Address Line 2:	386, 372, 362, AND 352 HOBRON LN
Location Zip Suffix:	Not reported
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:	NFA 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

1609 ALA WAI DIESEL RELEASE (Continued) **S108008656**

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

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48 North 1/2-1 0.645 mi. 3406 ft.

PUNAHOU SCHOOL - MAINTENANCE SHOP
1601 PUNAHOU ST
HONOLULU, HI 96822

SHWS U003541737
LUST N/A
UST
FINANCIAL ASSURANCE

Relative: Higher

Actual: 76 ft.

SHWS:

Organization:	Punahou School1601 Punahou StHonolulu, HI 96822(808) 944-5711
Supplemental Location Text:	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:	Punahou School1601 Punahou StHonolulu, HI 96822(808) 944-5711
Island:	Oahu
Location Address Line 2:	Not reported
Location Zip Suffix:	Not reported
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
Description of Restrictions:	Not reported
Institutional Control:	Not reported
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	NFA 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

PUNAHOU SCHOOL - MAINTENANCE SHOP (Continued) **U003541737**

	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:	89
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:	Not reported
Tank Status:	**Permanently Out of Use**
Date Closed:	12/06/1990
Tank Capacity:	Not reported
Substance:	Not Listed

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-2
Date Installed:	Not reported
Tank Status:	**Permanently Out of Use**
Date Closed:	12/06/1990
Tank Capacity:	Not reported
Substance:	Not Listed

Tank ID:	diesel
Date Installed:	12/01/1985
Tank Status:	**Currently In Use**
Date Closed:	Not reported
Tank Capacity:	2000
Substance:	Diesel

PUNAHOU SCHOOL - MAINTENANCE SHOP (Continued) **U003541737**

HI FINANCIAL ASSURANCE:

Alt Facility ID:	9-101653
Tank Id:	diesel
Tank Status Desc:	Currently in Use
FRTYPE:	Other
Expiration Date:	10/15/2004
Alt Facility ID:	9-101653
Tank Id:	89
Tank Status Desc:	Currently in Use
FRTYPE:	Other
Expiration Date:	10/15/2004
Alt Facility ID:	9-101653
Tank Id:	diesel
Tank Status Desc:	Currently in Use
FRTYPE:	Insurance
Expiration Date:	10/15/2012
Alt Facility ID:	9-101653
Tank Id:	89
Tank Status Desc:	Currently in Use
FRTYPE:	Insurance
Expiration Date:	10/15/2012

49
West
1/2-1
0.651 mi.
3436 ft.

Relative:
Higher

Actual:
7 ft.

LIKE LIKE PLAZA PETROLEUM CONTAMINATION **SHWS** **1006819347**
745 KEEAUMOKU ST **N/A**
HONOLULU, HI 96814

SHWS:

Organization:	Like Like Plaza
Supplemental Location Text:	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:	Like Like Plaza
Island:	Oahu
Location Address Line 2:	Not reported
Location Zip Suffix:	Not reported
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

LIKE LIKE PLAZA PETROLEUM CONTAMINATION (Continued) **1006819347**

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:	NFA 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
SSE
1/2-1
0.658 mi.
3476 ft.

ALA WAI COVE CONDOMINIUM APARTMENTS **SHWS** **1006820430**
509 UNIVERSITY AVE **SPILLS** **N/A**
HONOLULU, HI 96815

Relative:
Lower

Actual:
3 ft.

SHWS:

Organization:	Ala Wai Cove Condominium Apartments
Supplemental Location Text:	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:	Ala Wai Cove Condominium Apartments
Island:	Oahu
Location Address Line 2:	Not reported
Location Zip Suffix:	Not reported
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

ALA WAI COVE CONDOMINIUM APARTMENTS (Continued) **1006820430**

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
Activity Type:	Response
Activity Lead:	Not reported
Assignment End Date:	Not reported
Result:	SOSC NFA
File Under:	Ala Wai Cove Condominium Apartments

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51 South 1/2-1 0.681 mi. 3596 ft. | **CHEVRON U.S.A., INC.** **2002 KALAKAUA AVE** **HONOLULU, HI 96815** | **SHWS LUST UST** | **U001235436 N/A**

Relative: Lower

Actual: 3 ft.

SHWS:

Organization:	Chevron USA Products Company
Supplemental Location Text:	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:	Chevron USA Products Company
Island:	Oahu
Location Address Line 2:	Not reported
Location Zip Suffix:	Not reported
Supplemental Location Text:	Not reported
SDAR Environmental Interest Name:	Chevron 2002 Kalakaua
HID Number:	Not reported
Facility Registry Identifier:	110013779045
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

CHEVRON U.S.A., INC. (Continued) **U001235436**

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

UST:

Facility ID:	9-101266
Owner:	DAIO USA CORP
Owner Address:	CENTURY CENTER, SUITE 705 / 1750 KALAKAUA AVE
Ownder City,St,Zip:	Honolulu, 96815 96815

Tank ID:	R-1
Date Installed:	Not reported
Tank Status:	**Permanently Out of Use**
Date Closed:	Not reported
Tank Capacity:	10000
Substance:	Gasoline

Tank ID:	R-2
Date Installed:	Not reported
Tank Status:	**Permanently Out of Use**
Date Closed:	Not reported
Tank Capacity:	10000
Substance:	Gasoline

Tank ID:	R-3
Date Installed:	Not reported
Tank Status:	**Permanently Out of Use**
Date Closed:	Not reported
Tank Capacity:	5000
Substance:	Gasoline

Tank ID:	R-4
Date Installed:	Not reported
Tank Status:	**Permanently Out of Use**
Date Closed:	Not reported
Tank Capacity:	1000
Substance:	Used Oil

52 NW 1/2-1 0.691 mi. 3647 ft. | **CARTWRIGHT NEIGHBORHOOD PARK**
KEEAUMOKU ST & MATLOCK AVE
HONOLULU, HI 96814 | **SHWS** | **1006820122**
N/A

Relative: Higher

Actual: 30 ft.

SHWS:

Organization:	City and County of Honolulu, Department of Parks and Recreation, Parks & Playgrounds
Supplemental Location Text:	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:	City and County of Honolulu, Department of Parks and Recreation, Parks & Playgrounds
Island:	Oahu
Location Address Line 2:	Not reported
Location Zip Suffix:	Not reported
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:	NFA 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

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53 SSE 1/2-1 0.716 mi. 3780 ft. | **IOLANI SCHOOL PETROLEUM ODOR**
563 KAMOKU ST
HONOLULU, HI 96826 | **SHWS**
SPILLS | **S106817948**
N/A

Relative: Lower

Actual: 3 ft.

SHWS:

Organization:	Iolani School
Supplemental Location Text:	Not reported
Island:	Oahu
Environmental Interest:	Iolani School Petroleum
HID Number:	Not reported
Facility Registry Identifier:	110005723208
Lead Agency:	HEER

IOLANI SCHOOL PETROLEUM ODOR (Continued) **S106817948**

Program:	State
Project Manager:	Liz Galvez
Hazard Priority:	NFA
Potential Hazards And Controls:	No Hazard
Organization:	Iolani School
Island:	Oahu
Location Address Line 2:	Not reported
Location Zip Suffix:	Not reported
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:	NFA 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

54 SW 1/2-1 0.730 mi. 3856 ft. | **YACHT HARBOR TOWERS**
1600 ALA MOANA BLVD
HONOLULU, HI 96815 | **SHWS**
SPILLS
ENG CONTROLS
INST CONTROL | **S106821166**
N/A

Relative:
Lower

Actual:
3 ft.

SHWS:

Organization:	Yacht Harbor Towers
Supplemental Location Text:	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:	Yacht Harbor Towers
Island:	Oahu
Location Address Line 2:	Not reported
Location Zip Suffix:	Not reported
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:	NFA 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 Gene
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

YACHT HARBOR TOWERS (Continued) **S106821166**

Substances:	Unknown
Less Or Greater Than:	Not reported
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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55 South 1/2-1 0.737 mi. 3891 ft. | **ROYAL GARDENS HOTEL DIESEL** | **SHWS** | **S110061800**
440 OLOHANA ST | **SPILLS** | **N/A**
HONOLULU, HI

Relative: Lower

Actual: 3 ft.

SHWS:

Organization:	Royal Gardens Hotel
Supplemental Location Text:	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:	Royal Gardens Hotel
Island:	Oahu
Location Address Line 2:	WAIKIKI
Location Zip Suffix:	Not reported
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

ROYAL GARDENS HOTEL DIESEL (Continued) **S110061800**

Nature of Residual Contamination:	Diesel in soil at less than 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 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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56 **HOBRON HOTEL** **SHWS** **S106817744**
SSW **1744 KAIOO DR** **N/A**
1/2-1 **HONOLULU, HI 96815**
0.752 mi.
3968 ft.

Relative:
Lower

Actual:
3 ft.

SHWS:

Organization:	Hobron Hotel, LLC
Supplemental Location Text:	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
Potential Hazards And Controls:	No Hazard
Organization:	Hobron Hotel, LLC
Island:	Oahu
Location Address Line 2:	Not reported
Location Zip Suffix:	Not reported
Supplemental Location Text:	Not reported
SDAR Environmental Interest Name:	Hobron Hotel
HID Number:	Not reported

HOBRON HOTEL (Continued) **S106817744**

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:	NFA 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 Drive, Honolulu, Hawii [TMK No. (1)2
Project Manager:	Clarence Callahan
Contact Information:	(808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

J57 **HAKUYOSHA INTERNATIONAL, INC.** **SHWS** **S106817254**
West **730 SHERIDAN STREET** **SPILLS** **N/A**
1/2-1 **HONOLULU, HI** **INST CONTROL**
0.756 mi. **AIRS**
3993 ft. **Site 1 of 2 in cluster J**

Relative:
Lower

Actual:
6 ft.

SHWS:

Organization:	Hakuyosha Hawaii Inc.
Supplemental Location Text:	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:	Hakuyosha Hawaii Inc.
Island:	Oahu
Location Address Line 2:	Not reported
Location Zip Suffix:	Not reported
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

HAKUYOSHA INTERNATIONAL, INC. (Continued) **S106817254**

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:	NFA 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

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:	0462-01-N
Island:	Oahu
Mailing Address:	730 Sheridan Street
Locale:	Not reported
Mailing City,St,Zip:	Honolulu, Ha 96814
Business Phone:	808-955-6116
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.

Facility ID:	0564-01-C
Island:	Oahu
Mailing Address:	730 Sheridan Street
Locale:	Not reported

HAKUYOSHA INTERNATIONAL, INC. (Continued) **S106817254**

Mailing City,St,Zip:	Honolulu, Ha 96814
Business Phone:	808-955-6116
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

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J58 **MOTOR SUPPLY** **SHWS** **S108008592**
West **726 SHERIDAN ST** **INST CONTROL** **N/A**
1/2-1 **HONOLULU, HI 96814**
0.761 mi.
4019 ft. **Site 2 of 2 in cluster J**

Relative:
Lower

Actual:
6 ft.

SHWS:

Organization:	Motor Supply, Limited
Supplemental Location Text:	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:	Motor Supply, Limited
Island:	Oahu
Location Address Line 2:	Not reported
Location Zip Suffix:	Not reported
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 Monitoring Systems
Institutional Control:	Government - Hawaii Dept. of Health Letter Issued
Within Designated Areawide Contamination:	Not reported
Site Closure Type:	NFA Letter - Restricted Use
Document Date:	03/30/2011
Document Number:	2011-184-SPM

MOTOR SUPPLY (Continued) **S108008592**

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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59
ESE
1/2-1
0.777 mi.
4102 ft.

2700 SOUTH KING STREET
2700 S KING ST
HONOLULU, HI 96826

SHWS **S106815419**
SPILLS **N/A**
ENG CONTROLS
INST CONTROL

Relative:
Higher

Actual:
10 ft.

SHWS:
Organization: AMM Family Patners, C/o Mr. Roy Sekiguchi
Supplemental Location Text: Not reported
Island: Oahu
Environmental Interest: 2700 South King Street
HID Number: Not reported
Facility Registry Identifier: Not reported
Lead Agency: Not reported
Program: State
Project Manager: Clarence Callahan
Hazard Priority: NFA
Potential Hazards And Controls: Hazard Managed With Controls
Organization: AMM Family Patners, C/o Mr. Roy Sekiguchi
Island: Oahu
Location Address Line 2: Not reported
Location Zip Suffix: Not reported
Supplemental Location Text: Not reported
SDAR Environmental Interest Name: 2700 South King Street
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 Not Necessary
Response: Not reported
Nature of Contamination: Not reported
Nature of Residual Contamination: Lead above industrial EALs is present under an asphalt cap.
Use Restrictions: Controls Required to Manage Contamination
Engineering Control: Engineering Control Required
Description of Restrictions: The Site is limited to commercial use. The parking lot cover (asphalt) must remain in place, otherwise the ash layer with lead contamination at 15 inches bgs must be removed.
Institutional Control: Government - Hawaii Dept. of Health Letter Issued
Within Designated Areawide Contamination: Not reported
Site Closure Type: NFA Letter - Restricted Use
Document Date: 02/03/2004
Document Number: 2004-039-CAC
Document Subject: No Further Characterization Required

2700 SOUTH KING STREET (Continued) **S106815419**

Project Manager: Clarence Callahan
Contact Information: (808) 586-4249 919 Ala Moana Blvd, Honolulu, HI 96814

HI SPILLS:

Island:	Oahu
Supplemental Loc. Text:	Not reported
Case Number:	20031126-0717
HID Number:	Not reported
Facility Registry Id:	Not reported
Lead and Program:	HEER EP&R
ER:	Not reported
Units:	Lead Above DOH Tier 1 Action Levels
Substances:	Lead
Less Or Greater Than:	Not reported
Numerical Quantity:	Not reported
Units:	Not reported
Activity Type:	Response
Activity Lead:	Liz Galvez
Assignment End Date:	2003-11-25 00:00:00
Result:	Refer to ISST
File Under:	AMM Family Patners, C/o Mr. Roy Sekiguchi

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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60 West 1/2-1 0.807 mi. 4263 ft. | **CUTTER CHEVROLET-GEO-PONTIAC** | **SHWS** | **U001235085**
1391 KAPIOLANI BLVD | **LUST** | **N/A**
HONOLULU, HI 96814 | **UST**
FINANCIAL ASSURANCE

Relative: Lower

Actual: 3 ft.

SHWS:

Organization:	Cutter Chevrolet
Supplemental Location Text:	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:	Cutter Chevrolet
Island:	Oahu

CUTTER CHEVROLET-GEO-PONTIAC (Continued) **U001235085**

Location Address Line 2:	Not reported
Location Zip Suffix:	Not reported
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:	NFA 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 Boulevard
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
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 Desc:	Permanently Out of Use
FRTYPE:	Not Listed
Expiration Date:	Not reported
Alt Facility ID:	9-100185
Tank Id:	R-1

CUTTER CHEVROLET-GEO-PONTIAC (Continued) **U001235085**

Tank Status Desc:	Permanently Out of Use
FRTYPE:	Self Insured
Expiration Date:	Not reported

---

61 South 1/2-1 0.810 mi. 4276 ft.

KING KALAKAUA PLAZA
2080 KALAKAUA AVE
HONOLULU, HI 96815

SHWS **U003154872**
LUST **N/A**
UST
SPILLS

Relative: Lower

Actual: 3 ft.

SHWS:

Organization:	K. Young-Kalakaua Partners
Supplemental Location Text:	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:	Not reported
Program:	State
Project Manager:	Greg Olmsted
Hazard Priority:	NFA
Potential Hazards And Controls:	Hazard Undetermined
Organization:	K. Young-Kalakaua Partners
Island:	Oahu
Location Address Line 2:	Not reported
Location Zip Suffix:	Not reported
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:	Not reported
Progran Name:	State
Potential Hazard And Controls:	Hazard Undetermined
Priority:	NFA
Assessment:	Assessment Ongoing
Response:	Not reported
Nature of Contamination:	Found: Petroleum hydrocarbons
Nature of Residual Contamination:	No contamination above HDOH EALs
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:	NFA - Type Undetermined
Document Date:	04/08/1996
Document Number:	Not reported
Document Subject:	Not reported
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

KING KALAKAUA PLAZA (Continued) **U003154872**

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
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

62 ENE 1/2-1 0.821 mi. 4336 ft. | **UH DUKE KAHANAMOKU SWIMMING POOL SODIUM HYPOCLORITE RELEASE 2500 CAMPUS RD HONOLULU, HI 96822** | **SHWS SPILLS** | **S111677953 N/A**

Relative: Higher

Actual: 83 ft.

SHWS:

Organization:	State of Hawaii, University of Hawaii
Supplemental Location Text:	Manoa Campus
Island:	Oahu
Environmental Interest:	Hawaii Hall Renovation
HID Number:	Not reported
Facility Registry Identifier:	110013789622
Lead Agency:	HEER
Program:	State
Project Manager:	Richard Palmer
Hazard Priority:	NFA
Potential Hazards And Controls:	Hazard Undetermined
Organization:	State of Hawaii, University of Hawaii
Island:	Oahu
Location Address Line 2:	VARNEY CIR
Location Zip Suffix:	Not reported
Supplemental Location Text:	Manoa Campus
SDAR Environmental Interest Name:	Hawaii Hall Renovation
HID Number:	Not reported
Facility Registry Identifier:	110013789622
Lead Agency:	HEER
Progran Name:	State
Potential Hazard And Controls:	Hazard Undetermined
Priority:	NFA
Assessment:	Response Necessary
Response:	Response Complete
Nature of Contamination:	Found: chlordane exposed during foundation work, and reburied onsite
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:	Historic NFA - Incomplete Documentation
Document Date:	09/02/2004
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:

Island:	Oahu
Supplemental Loc. Text:	UH Manoa Duke Kahanamoku Swimming pool
Case Number:	20091103-1755
HID Number:	Not reported
Facility Registry Id:	Not reported
Lead and Program:	HEER EP&R
ER:	Site Visit
Units:	UH Duke Kahanamoku Swimming Pool Sodium Hypoclorite Release
Substances:	Sodium Hypochlorite
Less Or Greater Than:	Not reported
Numerical Quantity:	600
Units:	Gallons

UH DUKE KAHANAMOKU SWIMMING POOL SODIUM HYPOCLORITE RELEASE (Continued) **S111677953**

Activity Type:	Response
Activity Lead:	Paul Chong
Assignment End Date:	2009-11-04 00:00:00
Result:	SOSC NFA
File Under:	Not reported

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63 WNW 1/2-1 0.834 mi. 4403 ft. | **GRACE OTSUKA APARTMENT COMPLEX** | **SHWS** | **S110061466**
1233 YOUNG ST | **ENG CONTROLS** | **N/A**
HONOLULU, HI 96814 | **INST CONTROL**

Relative: Higher

Actual: 17 ft.

SHWS:

Organization:	C & G Apartments
Supplemental Location Text:	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:	C & G Apartments
Island:	Oahu
Location Address Line 2:	Not reported
Location Zip Suffix:	Not reported
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
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:	NFA 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

GRACE OTSUKA APARTMENT COMPLEX (Continued) **S110061466**

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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64 WNW 1/2-1 0.870 mi. 4591 ft. | **SCHUMAN CARRIAGE MOTORS, LTD.** | **SHWS** | **U003221663**
1234 S BERETANIA ST | **LUST** | **N/A**
HONOLULU, HI 96814 | **UST**
SPILLS
INST CONTROL
FINANCIAL ASSURANCE

Relative: Higher

Actual: 20 ft.

SHWS:
Organization: Safeway, Inc.
Supplemental Location Text: 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
Project Manager: Kelton Otsuka
Hazard Priority: Low
Potential Hazards And Controls: Hazard Managed With Controls
Organization: Safeway, Inc.
Island: Oahu
Location Address Line 2: Not reported
Location Zip Suffix: Not reported
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: Low
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: NFA Letter - Restricted Use
Document Date: 08/26/2011
Document Number: 2011-492-KO
Document Subject: Review of Removal Action Report, Safeway #2944 (Former Schuman Carriage Property) dated April 22, 20
Project Manager: Kelton Otsuka

SCHUMAN CARRIAGE MOTORS, LTD. (Continued) **U003221663**

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: 04/19/2000
Release ID: 900058
Project Officer: Richard Takaba

Facility ID: 9-101276
Facility Status: Site Cleanup Completed (NFA)
Facility Status Date: 11/03/2005
Release ID: 060001
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

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

SCHUMAN CARRIAGE MOTORS, LTD. (Continued) **U003221663**

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.

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 Desc: Permanently Out of Use
FRTYPE: Insurance
Expiration Date: Not reported

Alt Facility ID: 9-101276
Tank Id: R-3
Tank Status Desc: Permanently Out of Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-101276
Tank Id: R-6
Tank Status Desc: Permanently Out of Use
FRTYPE: Other
Expiration Date: Not reported

SCHUMAN CARRIAGE MOTORS, LTD. (Continued) **U003221663**

Alt Facility ID: 9-101276
Tank Id: R-6
Tank Status Desc: Permanently Out of Use
FRTYPE: Insurance
Expiration Date: Not reported

Alt Facility ID: 9-101276
Tank Id: r-5
Tank Status Desc: Permanently Out of Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-101276
Tank Id: r-5
Tank Status Desc: Permanently Out of Use
FRTYPE: Insurance
Expiration Date: Not reported

Alt Facility ID: 9-101276
Tank Id: R-1
Tank Status Desc: Permanently Out of Use
FRTYPE: Insurance
Expiration Date: Not reported

Alt Facility ID: 9-101276
Tank Id: R-3
Tank Status Desc: Permanently Out of Use
FRTYPE: Insurance
Expiration Date: Not reported

Alt Facility ID: 9-101276
Tank Id: R-2
Tank Status Desc: Permanently Out of Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-101276
Tank Id: R-2
Tank Status Desc: Permanently Out of Use
FRTYPE: Insurance
Expiration Date: Not reported

Alt Facility ID: 9-101276
Tank Id: R-1
Tank Status Desc: Permanently Out of Use
FRTYPE: Other
Expiration Date: Not reported

Alt Facility ID: 9-101276
Tank Id: R-4
Tank Status Desc: Permanently Out of Use
FRTYPE: Other
Expiration Date: Not reported

65 WNW 1/2-1 0.897 mi. 4737 ft. | **1012 PIIKOI STREET, ANIN-PIIKOI BUILDING**
1012 PIIKOI ST
HONOLULU, HI 96814 | **SHWS** | **S106815117**
SPILLS | **N/A**

Relative: Higher

Actual: 13 ft.

SHWS:

Organization:	SCI Noel
Supplemental Location Text:	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:	SCI Noel
Island:	Oahu
Location Address Line 2:	Not reported
Location Zip Suffix:	Not reported
Supplemental Location Text:	Anin-Piikoi Building
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:	NFA 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

1012 PIIKOI STREET, ANIN-PIIKOI BUILDING (Continued) **S106815117**

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
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

66
West
1/2-1
0.956 mi.
5046 ft.

Relative:
Lower

Actual:
3 ft.

CENPAC PROPERTIES - OFFICE BUILDING
615 PIIKOI ST
HONOLULU, HI 96814

SHWS **U003402842**
LUST **N/A**
UST
SPILLS
ENG CONTROLS
INST CONTROL
FINANCIAL ASSURANCE

SHWS:

Organization:	Iwilei District Participating Parties, LLC
Supplemental Location Text:	Honolulu Harbor c/o URS Corporation 9th Floor
Island:	Oahu
Environmental Interest:	Honolulu Harbor Iwilei
HID Number:	Not reported
Facility Registry Identifier:	110013785868
Lead Agency:	HEER

CENPAC PROPERTIES - OFFICE BUILDING (Continued) **U003402842**

Program:	State
Project Manager:	Kelton Otsuka
Hazard Priority:	Low
Potential Hazards And Controls:	Hazard Managed With Controls
Organization:	Iwilei District Participating Parties, LLC
Island:	Oahu
Location Address Line 2:	Not reported
Location Zip Suffix:	3141
Supplemental Location Text:	Honolulu Harbor c/o URS Corporation 9th Floor
SDAR Environmental Interest Name:	Honolulu Harbor Iwilei
HID Number:	Not reported
Facility Registry Identifier:	110013785868
Lead Agency:	HEER
Progran Name:	State
Potential Hazard And Controls:	Hazard Managed With Controls
Priority:	Low
Assessment:	Assessment Ongoing
Response:	Response Ongoing
Nature of Contamination:	Presumed: Oils & lubricants
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:	Honolulu Harbor Iwilei Unit
Site Closure Type:	Not reported
Document Date:	Not reported
Document Number:	Not reported
Document Subject:	Not reported
Project Manager:	Kelton Otsuka
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 c/o URS Corporation 9th Floor
Case Number:	20101216-1230

CENPAC PROPERTIES - OFFICE BUILDING (Continued) **U003402842**

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

ENG CONTROLS:

Supplemental Location Text:	Honolulu Harbor c/o URS Corporation 9th Floor
Zip Suffix:	3141
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:	Honolulu Harbor c/o URS Corporation 9th Floor
Zip Suffix:	3141
Island:	Oahu
Institutional Control:	Government - Hawaii Dept. of Health Letter Issued

HI FINANCIAL ASSURANCE:

Alt Facility ID:	9-103438
Tank Id:	R-M-1
Tank Status Desc:	Permanently Out of Use
FRTYPE:	Insurance
Expiration Date:	Not reported

Alt Facility ID:	9-103438
Tank Id:	R-M-1
Tank Status Desc:	Permanently Out of Use
FRTYPE:	Surety Bond
Expiration Date:	Not reported

67
South
1/2-1
0.976 mi.
5152 ft.

WAIKIKI BAZAAR
2174 KALAKAUA AVE
HONOLULU, HI 96816

SHWS **1006819697**
SPILLS **N/A**

Relative:
Lower

Actual:
4 ft.

SHWS:

Organization:	Yoneoka and Associates
Supplemental Location Text:	2174/2190 Kalakaua Ave
Island:	Oahu
Environmental Interest:	Waikiki Bazaar
HID Number:	Not reported
Facility Registry Identifier:	110013775478
Lead Agency:	HEER

WAIKIKI BAZAAR (Continued) **1006819697**

Program:	State
Project Manager:	Diane England
Hazard Priority:	NFA
Potential Hazards And Controls:	No Hazard
Organization:	Yoneoka and Associates
Island:	Oahu
Location Address Line 2:	Not reported
Location Zip Suffix:	Not reported
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:	NFA Letter - Unrestricted Residential Use
Document Date:	11/09/2005
Document Number:	2005-573-DE
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

Count: 89 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
HONOLULU	S106817262	HALAWA STREAM CHANNEL PETROLEUM CO	3		SHWS
HONOLULU	1014696689	AHUI STREET (YK DRILLING)	AHUI ST	96814	FINDS
HONOLULU	S111704760	KAKAAKO MAKAI DISTRICT JOHN DOMINI	AHUI ST		SHWS
HONOLULU	S108859949	KAKAAKO MAKAI DISTRICT PARKING GAR	AHUI OHE ILALO AND OLOMEHANI S	96813	SHWS, ENG CONTROLS, INST CONT
HONOLULU	S108008546	KAKAAKO BROWNFIELD PROJECT - UNIT	AHUI ST	96814	SHWS, ENG CONTROLS, BROWNFIE
HONOLULU	S110061573	KAKAAKO BROWNFIELD PROJECT - UNIT	AHUI ST	96814	SHWS, ENG CONTROLS, BROWNFIE
HONOLULU	S107023279	ALA MOANA BOULEVARD & PUNCHBOWL ST	ALA MOANA BLVD AND PUNCHBOWL S	96813	SPILLS
HONOLULU	S111704669	ALA WAI HARBOR BOAT REPAIR YARD	ALA MOANA BLVD		SHWS
HONOLULU	S105263824	1439 ALLENCASTRE STREET, SEWAGE SP	1439 ALENCASTRE ST	96816	SPILLS
HONOLULU	1008173557	YOUNG STREET PARK BOULEVARD	ALONG KAMEHAMEHA HWY	96815	FINDS
HONOLULU	S108008717	AOLELE STREET SPILL	AOLELE ST		SPILLS
HONOLULU	S108859866	WAIKIKI BEACH WALK RESORT	205 BEACH WALK AVE		SHWS, SPILLS, INST CONTROL
HONOLULU	S110169118	BERETANIA STREET PUBLIC RESTROOM	BERETANIA ST	96816	SPILLS
HONOLULU	S106818759	LETTER AT BETHEL STREET	BETHEL ST	96813	SPILLS
HONOLULU	1009309196	1703 BINGHAM STREET	1703 BINGHAM ST		FTTS, HIST FTTS
HONOLULU	1014696688	BISHOP STREET	BISHOP ST	96813	FINDS
HONOLULU	S106816728	CLARK STREET, PUNAHOU	CLARK ST	96822	SPILLS
HONOLULU	S107023629	COOK STREET B/W ILALO & ALA MOANA	COOKE ST	96813	SPILLS
HONOLULU	1006820751	KAKAAKO MAKAI GATEWAY	COOKE ST & ILALO ST	96813	SHWS
HONOLULU	8863292	DAMON BRIDGE ON KIKOWAENA STREET C	DAMON BRIDGE ON KIKOWAENA STRE		ERNS
HONOLULU	S106708609	CANNON CLUB	DIAMOND HEAD RD		SHWS, BROWNFIELDS
HONOLULU	S106817122	FORT RUGER FORMER FIRING RANGES	DIAMOND HEAD RD	96816	SHWS, ENG CONTROLS, INST CONT
HONOLULU	S108859903	BIA - CONSTRUCTION TRAINING CENTER	2009 DILLIGHAM BLVD		SHWS
HONOLULU	S110061567	INTERISLAND MAINTENANCE FACILITY S	ELLIOT ST		SHWS
HONOLULU	2009048635	1 ELLIOTT STREET	1 ELLIOTT ST		HMIRS
HONOLULU	S106817395	HAWAIIAN BITUMULS PAVING & PRECAST	FARRINGTON HWY	96826	SHWS
HONOLULU	S107023322	PAN PACIFIC BUILDING, FORT STREET	FORT ST MALL	96813	SPILLS
HONOLULU	S107023071	BASEMENT OF MOS BURGER AT FORT STR	FORT ST MALL	96813	SPILLS
HONOLULU	S108008819	HALAWA VALLEY STREET FUGITIVE DUMP	HALAWA VALLEY ST		SPILLS
HONOLULU	S105263356	HAUSTEN STREET CANAL	HAUSTEN ST	96826	SPILLS
HONOLULU	2005607982	HOIHOI KAA STREET	HOIHOI KAA STREET		ERNS
HONOLULU	S107023029	COPPER CYANIDE CLEAN UP LEVELS AT	HOPAKA ST	96814	SPILLS
HONOLULU	1006821048	HECO TRANSFORMER ILALO STREET	ILALO ST	96814	SPILLS
HONOLULU	1008169449	ILALO STREET IMPROVEMENTS	ILALO ST	96813	FINDS
HONOLULU	91224000	ON JUDD STREET	ON JUDD STREET		ERNS
HONOLULU	S105262074	JUDD STREET	JUDD ST		SPILLS
HONOLULU	S106818092	KALANI STREET, DRUMS	KALANI ST	96813	SPILLS
HONOLULU	S107025016	KALIHI STREET, ABANDONED BOTTLES	KALIHI ST		SPILLS
HONOLULU	1008001944	KAMAKEE STREET COMPLAINT	KAMAKEE STREET	96814	FINDS
HONOLULU	S109096053	JCRA INVESTMENTS	1685 KAPIOLANI PROPERTY	96814	LUST
HONOLULU	1006820308	ALOHA MOTORS 1777 KAPIOLANI BLVD	1777 KAPIOLANI BLVD	96813	SHWS, SPILLS
HONOLULU	1008003206	KEALAHOU STREET	KEALAHOU ST		FINDS
HONOLULU	S106818318	KEALAHOU STREET, HAWAII KAI	KEALAHOU ST		SPILLS

City	EDR ID	Site Name	Site Address	Zip	Database(s)
HONOLULU	S106818337	KEEAUMOKU SUPERBLOCK PROJECT	KEEAUMOKU ST		SHWS, SPILLS
HONOLULU	S106818515	KEWALO STREET ABANDONED DRUM	KEWALO ST	96822	SPILLS
HONOLULU	S106818540	KILAUEA STREET SEWAGE SPILL	KILAUEA ST		SPILLS
HONOLULU	1011990317	INTERSTATE ROUTE H-1 KINAU STREET	I-H1 KINAU STREET OFF-RAMP	96813	FINDS
HONOLULU	S107026093	ABNDONED SHARPS AT KING STREET	KING ST		SPILLS
HONOLULU	1014884183	KING STREET CONSTRUCTION	N KING ST	96813	FINDS
HONOLULU	S107023628	KONA STREET, BEHIND ALA MOANA HOTE	KONA ST		SPILLS
HONOLULU	S107025044	KONA STREET, GREEN-COLORED LIQUID	KONA ST	96814	SPILLS
HONOLULU	S108859943	KAKAAKO BROWNFIELD PROJECT - UNIT	KOULA ST	96814	SHWS, ENG CONTROLS, BROWNFIE
HONOLULU	S110061572	KAKAAKO BROWNFIELD PROJECT - UNIT	KOULA ST	96814	SHWS, ENG CONTROLS, BROWNFIE
HONOLULU	S110169293	KUKAHI STREET PIPELINE RELEASE CON	KUKAHI ST		SPILLS
HONOLULU	S107023509	ALA WAI CANAL RUNOFF AT LEWERS STR	LEWERS ST	96815	SPILLS
HONOLULU	S106818815	LUSITANA STREET APARTMENTS	LUSITANA ST	96813	SPILLS
HONOLULU	S107022976	PAOA STREAM NEAR LUSITANA STREET	LUSITANA ST	96813	SPILLS
HONOLULU	1010683308	RECONSTRUCTION OF LUSITANA STREET	LUSITANA STREET FROM SCHOOL ST	96813	FINDS
HONOLULU	S111677541	MAKALEKA STREET ILLEGAL DUMPING	711 MAKALEKA ST		SPILLS
HONOLULU	S107023801	MAKALOA STREET, ACROSS KGMB NEWS-	MAKALOA ST	96814	SPILLS
HONOLULU	S108859771	MANELE STREET	MANELE ST		SPILLS
HONOLULU	1008003230	BWS MAUNALANI STREET	MAUNALANI CIR	96816	FINDS
HONOLULU	S107025628	MCCULLY STREET NITROGEN CYLINDER	MCCULLY ST	96826	SPILLS
HONOLULU	2003706302	MINOHERA STREET	MINOHERA STREET		ERNS
HONOLULU	S106819163	MOKAUEA STREET	MOKAUEA ST		SPILLS
HONOLULU	S107026120	ABANDONED DRUMS AT MOKAUEA STREET	MOKAUEA ST		SPILLS
HONOLULU	2002598476	NIMITZ STREET	NIMITZ STREET	0	ERNS
HONOLULU	S111704706	FORMER KAPALAMA MILITARY RESERVATI	NIMITZ HWY		SHWS
HONOLULU	S108008765	CITIZENS ENERGY SERVICES PIER 38	NIMITZ HWY		SHWS, SPILLS, ENG CONTROLS, IN: CONTROL
HONOLULU	1009687650	KINAU STREET SCHOOL	NOT GIVEN	96813	FINDS
HONOLULU	S106819595	PAPU CIRCLE AT KALAMANU STREET	PAPU CIR AT KALAMANU ST	96816	SPILLS
HONOLULU	S107025487	PAU STREET, UNKNOWN GREEN LIQUID R	PAU ST	96815	SPILLS
HONOLULU	1008171899	RESURFACING OF VARIOUS STREET	PAULALEA ST, MAKAIAU PLACE	96814	FINDS
HONOLULU	1010024762	REHABILITATION OF STREET	PIIKOISTFROM ALA MOANA	96815	FINDS
HONOLULU	S107022838	POHUKAINA STREET, BY CHAIN LINK FE	POHUKAINA ST	96813	SPILLS
HONOLULU	1012302913	KAKAAKO COMMUNITY DEVELOPMENT DIST	QUEEN STREET AT INTERSECTION W	96814	FINDS
HONOLULU	S107023062	VINEYARD STREET & SCHOOL STREET (N	SCHOOL ST & VINEYARD BLVD	96813	SPILLS
HONOLULU	S108859626	595 ALA MOANA BLACK OIL PIPELINE	595 STATE HIGHWAY 92	96813	SHWS, SPILLS
HONOLULU	S108859926	KOKUA KALIHI VALLEY ACTIVE LIVING	UPPER KALIHI ST		SHWS, BROWNFIELDS
HONOLULU	1014697053	KAHANU STREET, SCHOOL STREET AND U	VARIOUS STS	96813	FINDS
HONOLULU	1006819959	RESERVE HOUSING TOWER SOIL CONTAMI	1141 WAIMANU ST	96813	SHWS, SPILLS
HONOLULU	S106821111	WARD STREET STORM DRAIN	WARD AVE	96814	SPILLS
HONOLULU	S106820275	SAFEWAY STORE, YOUNG STREET	YOUNG ST		SPILLS
HONOLULU COUNTY	2011974555	ON AN OPEN BEACH 1285 FRONT STREET	ON AN OPEN BEACH 1285 FRONT ST		ERNS
HONOLULU COUNTY	2010959579	HAUMEA STREET AND ALOHI KEA STREET	HAUMEA STREET AND ALOHI KEA ST		ERNS
HONOLULU COUNTY	2011973998	91-325 KOMOHANA STREET	91-325 KOMOHANA STREET		ERNS
HONOLULU COUNTY	2011974330	OCEANSIDE OF LAGOON DRIVE ACROSS	OCEANSIDE OF LAGOON DRIVE ACRO		ERNS
HONOLULU COUNTY	2010928153	WAKIKI KAIULANI STREET	WAKIKI KAIULANI STREET		ERNS
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: 06/07/2012
Date Data Arrived at EDR: 07/05/2012
Date Made Active in Reports: 09/18/2012
Number of Days to Update: 75

Source: EPA
Telephone: N/A
Last EDR Contact: 10/11/2012
Next Scheduled EDR Contact: 01/21/2013
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: 06/07/2012
Date Data Arrived at EDR: 07/05/2012
Date Made Active in Reports: 09/18/2012
Number of Days to Update: 75

Source: EPA
Telephone: N/A
Last EDR Contact: 10/11/2012
Next Scheduled EDR Contact: 01/21/2013
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: 06/07/2012	Source: EPA
Date Data Arrived at EDR: 07/05/2012	Telephone: N/A
Date Made Active in Reports: 09/18/2012	Last EDR Contact: 10/11/2012
Number of Days to Update: 75	Next Scheduled EDR Contact: 01/21/2013
	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: 12/27/2011	Source: EPA
Date Data Arrived at EDR: 02/27/2012	Telephone: 703-412-9810
Date Made Active in Reports: 03/12/2012	Last EDR Contact: 11/28/2012
Number of Days to Update: 14	Next Scheduled EDR Contact: 03/11/2013
	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: 12/10/2010	Source: Environmental Protection Agency
Date Data Arrived at EDR: 01/11/2011	Telephone: 703-603-8704
Date Made Active in Reports: 02/16/2011	Last EDR Contact: 10/09/2012
Number of Days to Update: 36	Next Scheduled EDR Contact: 01/21/2013
	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: 12/28/2011	Source: EPA
Date Data Arrived at EDR: 02/27/2012	Telephone: 703-412-9810
Date Made Active in Reports: 03/12/2012	Last EDR Contact: 11/28/2012
Number of Days to Update: 14	Next Scheduled EDR Contact: 03/11/2013
	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: 08/19/2011
Date Data Arrived at EDR: 08/31/2011
Date Made Active in Reports: 01/10/2012
Number of Days to Update: 132

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 11/12/2012
Next Scheduled EDR Contact: 02/25/2013
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: 09/11/2012
Date Data Arrived at EDR: 10/04/2012
Date Made Active in Reports: 12/04/2012
Number of Days to Update: 61

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 11/29/2012
Next Scheduled EDR Contact: 01/14/2013
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: 09/11/2012
Date Data Arrived at EDR: 10/04/2012
Date Made Active in Reports: 12/04/2012
Number of Days to Update: 61

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 11/29/2012
Next Scheduled EDR Contact: 01/14/2013
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: 09/11/2012
Date Data Arrived at EDR: 10/04/2012
Date Made Active in Reports: 12/04/2012
Number of Days to Update: 61

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 11/29/2012
Next Scheduled EDR Contact: 01/14/2013
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: 09/11/2012
Date Data Arrived at EDR: 10/04/2012
Date Made Active in Reports: 12/04/2012
Number of Days to Update: 61

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 11/29/2012
Next Scheduled EDR Contact: 01/14/2013
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: 07/18/2012
Date Data Arrived at EDR: 07/24/2012
Date Made Active in Reports: 11/05/2012
Number of Days to Update: 104

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 12/10/2012
Next Scheduled EDR Contact: 03/25/2013
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: 07/18/2012
Date Data Arrived at EDR: 07/24/2012
Date Made Active in Reports: 11/05/2012
Number of Days to Update: 104

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 12/10/2012
Next Scheduled EDR Contact: 03/25/2013
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: 12/09/2005
Date Data Arrived at EDR: 12/11/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 31

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 11/15/2012
Next Scheduled EDR Contact: 03/04/2013
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: 04/02/2012
Date Data Arrived at EDR: 04/03/2012
Date Made Active in Reports: 06/14/2012
Number of Days to Update: 72

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 10/02/2012
Next Scheduled EDR Contact: 01/14/2013
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: 03/13/2012
Date Data Arrived at EDR: 04/05/2012
Date Made Active in Reports: 04/30/2012
Number of Days to Update: 25

Source: Department of Health
Telephone: 808-586-4249
Last EDR Contact: 08/31/2012
Next Scheduled EDR Contact: 12/10/2012
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: 04/01/2012
Date Data Arrived at EDR: 04/03/2012
Date Made Active in Reports: 05/01/2012
Number of Days to Update: 28

Source: Department of Health
Telephone: 808-586-4245
Last EDR Contact: 10/01/2012
Next Scheduled EDR Contact: 01/14/2013
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: 08/31/2012
Date Data Arrived at EDR: 09/04/2012
Date Made Active in Reports: 10/08/2012
Number of Days to Update: 34

Source: Department of Health
Telephone: 808-586-4228
Last EDR Contact: 12/12/2012
Next Scheduled EDR Contact: 03/18/2013
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: 04/12/2012
Date Data Arrived at EDR: 05/09/2012
Date Made Active in Reports: 07/10/2012
Number of Days to Update: 62

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 11/01/2012
Next Scheduled EDR Contact: 02/11/2013
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: 12/14/2011
Date Data Arrived at EDR: 12/15/2011
Date Made Active in Reports: 01/10/2012
Number of Days to Update: 26

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 07/26/2012
Next Scheduled EDR Contact: 02/11/2013
Data Release Frequency: Semi-Annually

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 09/12/2011
Date Data Arrived at EDR: 09/13/2011
Date Made Active in Reports: 11/11/2011
Number of Days to Update: 59

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 07/26/2012
Next Scheduled EDR Contact: 02/11/2013
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 08/17/2012
Date Data Arrived at EDR: 08/28/2012
Date Made Active in Reports: 10/16/2012
Number of Days to Update: 49

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 07/26/2012
Next Scheduled EDR Contact: 02/11/2013
Data Release Frequency: Varies

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: 08/27/2012
Date Data Arrived at EDR: 08/28/2012
Date Made Active in Reports: 10/16/2012
Number of Days to Update: 49

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 07/26/2012
Next Scheduled EDR Contact: 02/11/2013
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: 09/06/2012
Date Data Arrived at EDR: 09/07/2012
Date Made Active in Reports: 10/16/2012
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 07/26/2012
Next Scheduled EDR Contact: 02/11/2013
Data Release Frequency: Quarterly

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 08/01/2012
Date Data Arrived at EDR: 08/02/2012
Date Made Active in Reports: 10/16/2012
Number of Days to Update: 75

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 10/30/2012
Next Scheduled EDR Contact: 02/11/2013
Data Release Frequency: Quarterly

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: 08/31/2012
Date Data Arrived at EDR: 09/04/2012
Date Made Active in Reports: 10/08/2012
Number of Days to Update: 34

Source: Department of Health
Telephone: 808-586-4228
Last EDR Contact: 12/12/2012
Next Scheduled EDR Contact: 03/18/2013
Data Release Frequency: Semi-Annually

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: 08/27/2012
Date Data Arrived at EDR: 08/28/2012
Date Made Active in Reports: 10/16/2012
Number of Days to Update: 49

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 07/26/2012
Next Scheduled EDR Contact: 02/11/2013
Data Release Frequency: Quarterly

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: 08/17/2012
Date Data Arrived at EDR: 08/28/2012
Date Made Active in Reports: 10/16/2012
Number of Days to Update: 49

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 07/26/2012
Next Scheduled EDR Contact: 02/11/2013
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: 05/10/2011
Date Data Arrived at EDR: 05/11/2011
Date Made Active in Reports: 06/14/2011
Number of Days to Update: 34

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 07/26/2012
Next Scheduled EDR Contact: 02/11/2013
Data Release Frequency: Semi-Annually

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: 08/02/2012
Date Data Arrived at EDR: 08/03/2012
Date Made Active in Reports: 11/05/2012
Number of Days to Update: 94

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 07/26/2012
Next Scheduled EDR Contact: 02/11/2013
Data Release Frequency: Varies

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: 12/14/2011
Date Data Arrived at EDR: 12/15/2011
Date Made Active in Reports: 01/10/2012
Number of Days to Update: 26

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 07/26/2012
Next Scheduled EDR Contact: 02/11/2013
Data Release Frequency: Semi-Annually

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: 04/12/2012
Date Data Arrived at EDR: 05/02/2012
Date Made Active in Reports: 07/16/2012
Number of Days to Update: 75

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 11/01/2012
Next Scheduled EDR Contact: 02/11/2013
Data Release Frequency: Varies

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: 08/01/2012
Date Data Arrived at EDR: 08/02/2012
Date Made Active in Reports: 10/16/2012
Number of Days to Update: 75

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 07/26/2012
Next Scheduled EDR Contact: 02/11/2013
Data Release Frequency: Quarterly

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: 09/06/2012
Date Data Arrived at EDR: 09/07/2012
Date Made Active in Reports: 10/16/2012
Number of Days to Update: 39

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 07/26/2012
Next Scheduled EDR Contact: 02/11/2013
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: 10/15/2012
Next Scheduled EDR Contact: 01/28/2013
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: 03/13/2012
Date Data Arrived at EDR: 04/05/2012
Date Made Active in Reports: 04/30/2012
Number of Days to Update: 25

Source: Department of Health
Telephone: 404-586-4249
Last EDR Contact: 08/31/2012
Next Scheduled EDR Contact: 12/10/2012
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: 03/13/2012
Date Data Arrived at EDR: 04/05/2012
Date Made Active in Reports: 04/30/2012
Number of Days to Update: 25

Source: Department of Health
Telephone: 808-586-4249
Last EDR Contact: 08/31/2012
Next Scheduled EDR Contact: 12/10/2012
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: 03/13/2012
Date Data Arrived at EDR: 04/05/2012
Date Made Active in Reports: 04/30/2012
Number of Days to Update: 25

Source: Department of Health
Telephone: 808-586-4249
Last EDR Contact: 08/31/2012
Next Scheduled EDR Contact: 12/10/2012
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: 09/28/2012
Date Data Arrived at EDR: 10/02/2012
Date Made Active in Reports: 10/16/2012
Number of Days to Update: 14

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 10/02/2012
Next Scheduled EDR Contact: 01/14/2013
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: 03/13/2012
Date Data Arrived at EDR: 04/05/2012
Date Made Active in Reports: 04/30/2012
Number of Days to Update: 25

Source: Department of Health
Telephone: 808-586-4249
Last EDR Contact: 08/31/2012
Next Scheduled EDR Contact: 12/10/2012
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: 10/24/2012
Date Data Arrived at EDR: 10/26/2012
Date Made Active in Reports: 11/05/2012
Number of Days to Update: 10

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 12/11/2012
Next Scheduled EDR Contact: 01/07/2013
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

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: 07/03/2012
Next Scheduled EDR Contact: 02/11/2013
Data Release Frequency: No Update Planned

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

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: 11/05/2012
Next Scheduled EDR Contact: 02/18/2013
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: 07/11/2012
Date Data Arrived at EDR: 09/12/2012
Date Made Active in Reports: 11/05/2012
Number of Days to Update: 54

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 12/03/2012
Next Scheduled EDR Contact: 03/18/2013
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: 12/03/2012
Next Scheduled EDR Contact: 03/18/2013
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: 09/01/2007
Date Data Arrived at EDR: 11/19/2008
Date Made Active in Reports: 03/30/2009
Number of Days to Update: 131

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
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: 02/16/2012
Date Data Arrived at EDR: 03/26/2012
Date Made Active in Reports: 06/14/2012
Number of Days to Update: 80

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 11/01/2012
Next Scheduled EDR Contact: 02/11/2013
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: 04/01/2012
Date Data Arrived at EDR: 04/03/2012
Date Made Active in Reports: 06/14/2012
Number of Days to Update: 72

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 10/02/2012
Next Scheduled EDR Contact: 01/14/2013
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: 01/31/2012
Date Data Arrived at EDR: 02/28/2012
Date Made Active in Reports: 04/04/2012
Number of Days to Update: 36

Source: Department of Health
Telephone: 808-586-4249
Last EDR Contact: 08/31/2012
Next Scheduled EDR Contact: 12/10/2012
Data Release Frequency: Varies

Other Ascertainable Records

RCRA-NonGen: 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: 09/11/2012
Date Data Arrived at EDR: 10/04/2012
Date Made Active in Reports: 12/04/2012
Number of Days to Update: 61

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 11/29/2012
Next Scheduled EDR Contact: 01/14/2013
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: 11/06/2012
Next Scheduled EDR Contact: 02/18/2013
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: 10/18/2012
Next Scheduled EDR Contact: 01/28/2013
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: 12/31/2009
Date Data Arrived at EDR: 08/12/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 112

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 12/10/2012
Next Scheduled EDR Contact: 03/25/2013
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: 06/01/2012
Date Data Arrived at EDR: 07/24/2012
Date Made Active in Reports: 09/18/2012
Number of Days to Update: 56

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 10/01/2012
Next Scheduled EDR Contact: 01/14/2013
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: 02/27/2012
Date Data Arrived at EDR: 03/14/2012
Date Made Active in Reports: 06/14/2012
Number of Days to Update: 92

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 12/11/2012
Next Scheduled EDR Contact: 03/25/2013
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: 11/28/2012
Next Scheduled EDR Contact: 03/11/2013
Data Release Frequency: Varies

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: 08/18/2011
Date Data Arrived at EDR: 09/08/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 21

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 12/05/2012
Next Scheduled EDR Contact: 03/18/2013
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: 12/31/2009
Date Data Arrived at EDR: 09/01/2011
Date Made Active in Reports: 01/10/2012
Number of Days to Update: 131

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 11/28/2012
Next Scheduled EDR Contact: 03/11/2013
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: 06/29/2012
Next Scheduled EDR Contact: 01/07/2013
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: 11/26/2012
Next Scheduled EDR Contact: 03/11/2013
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: 11/26/2012
Next Scheduled EDR Contact: 03/11/2013
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: 11/01/2012
Next Scheduled EDR Contact: 02/11/2013
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: 07/20/2011
Date Data Arrived at EDR: 11/10/2011
Date Made Active in Reports: 01/10/2012
Number of Days to Update: 61

Source: Environmental Protection Agency
Telephone: 202-564-5088
Last EDR Contact: 10/19/2012
Next Scheduled EDR Contact: 01/28/2013
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: 11/01/2010
Date Data Arrived at EDR: 11/10/2010
Date Made Active in Reports: 02/16/2011
Number of Days to Update: 98

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 10/19/2012
Next Scheduled EDR Contact: 01/28/2013
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: 06/21/2011
Date Data Arrived at EDR: 07/15/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 60

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 12/10/2012
Next Scheduled EDR Contact: 03/25/2013
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: 10/02/2012
Date Data Arrived at EDR: 10/02/2012
Date Made Active in Reports: 11/05/2012
Number of Days to Update: 34

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 10/02/2012
Next Scheduled EDR Contact: 01/21/2013
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: 10/23/2011
Date Data Arrived at EDR: 12/13/2011
Date Made Active in Reports: 03/01/2012
Number of Days to Update: 79

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 12/11/2012
Next Scheduled EDR Contact: 03/25/2013
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

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: 12/31/2009
Date Data Arrived at EDR: 03/01/2011
Date Made Active in Reports: 05/02/2011
Number of Days to Update: 62

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 11/30/2012
Next Scheduled EDR Contact: 03/11/2013
Data Release Frequency: Biennially

UIC: Underground Injection Wells Listing
A listing of underground injection well locations.

Date of Government Version: 06/08/2012
Date Data Arrived at EDR: 06/12/2012
Date Made Active in Reports: 07/17/2012
Number of Days to Update: 35

Source: Department of Health
Telephone: 808-586-4258
Last EDR Contact: 12/03/2012
Next Scheduled EDR Contact: 03/18/2013
Data Release Frequency: Varies

DRYCLEANERS: Permitted Drycleaner Facility Listing
A listing of permitted drycleaner facilities in the state.

Date of Government Version: 08/24/2012
Date Data Arrived at EDR: 08/28/2012
Date Made Active in Reports: 09/28/2012
Number of Days to Update: 31

Source: Department of Health
Telephone: 808-586-4200
Last EDR Contact: 10/22/2012
Next Scheduled EDR Contact: 01/21/2013
Data Release Frequency: Varies

AIRS: List of Permitted Facilities
A listing of permitted facilities in the state.

Date of Government Version: 09/30/2012
Date Data Arrived at EDR: 10/23/2012
Date Made Active in Reports: 11/27/2012
Number of Days to Update: 35

Source: Department of Health
Telephone: 808-586-4200
Last EDR Contact: 10/22/2012
Next Scheduled EDR Contact: 01/21/2013
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: 10/18/2012
Next Scheduled EDR Contact: 01/28/2013
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: 10/22/2012
Next Scheduled EDR Contact: 02/04/2013
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: 09/17/2012
Date Data Arrived at EDR: 09/18/2012
Date Made Active in Reports: 10/08/2012
Number of Days to Update: 20

Source: Department of Health
Telephone: 808-586-4226
Last EDR Contact: 12/12/2012
Next Scheduled EDR Contact: 04/01/2013
Data Release Frequency: Varies

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: 08/17/2010
Date Data Arrived at EDR: 01/03/2011
Date Made Active in Reports: 03/21/2011
Number of Days to Update: 77

Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 12/11/2012
Next Scheduled EDR Contact: 03/25/2013
Data Release Frequency: Varies

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: 10/16/2012
Next Scheduled EDR Contact: 01/28/2013
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: 11/02/2012
Next Scheduled EDR Contact: 02/11/2013
Data Release Frequency: Varies

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: 08/16/2012
Next Scheduled EDR Contact: 11/26/2012
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: 07/31/2012
Date Data Arrived at EDR: 08/13/2012
Date Made Active in Reports: 09/18/2012
Number of Days to Update: 36

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 11/12/2012
Next Scheduled EDR Contact: 02/25/2013
Data Release Frequency: Quarterly

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: 10/18/2012
Next Scheduled EDR Contact: 01/28/2013
Data Release Frequency: N/A

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 10/01/2012
Date Data Arrived at EDR: 10/04/2012
Date Made Active in Reports: 11/05/2012
Number of Days to Update: 32

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 10/04/2012
Next Scheduled EDR Contact: 01/14/2013
Data Release Frequency: Quarterly

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: 08/20/2012
Date Data Arrived at EDR: 08/28/2012
Date Made Active in Reports: 11/05/2012
Number of Days to Update: 69

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 11/16/2012
Next Scheduled EDR Contact: 03/04/2013
Data Release Frequency: Quarterly

EDR PROPRIETARY RECORDS

EDR Proprietary Records

Manufactured Gas Plants: 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

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.

Electric Power Transmission Line Data
Source: Rextag Strategies Corp.
Telephone: (281) 769-2247
U.S. Electric Transmission and Power Plants Systems Digital GIS Data

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 and 2005 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

929 PUMEHANA STREET
929 PUMEHANA STREET
HONOLULU, HI 96826

TARGET PROPERTY COORDINATES

Latitude (North):	21.2947 - 21˚ 17' 40.92''
Longitude (West):	157.8313 - 157˚ 49' 52.68''
Universal Tranverse Mercator:	Zone 4
UTM X (Meters):	621229.8
UTM Y (Meters):	2355073.8
Elevation:	7 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).

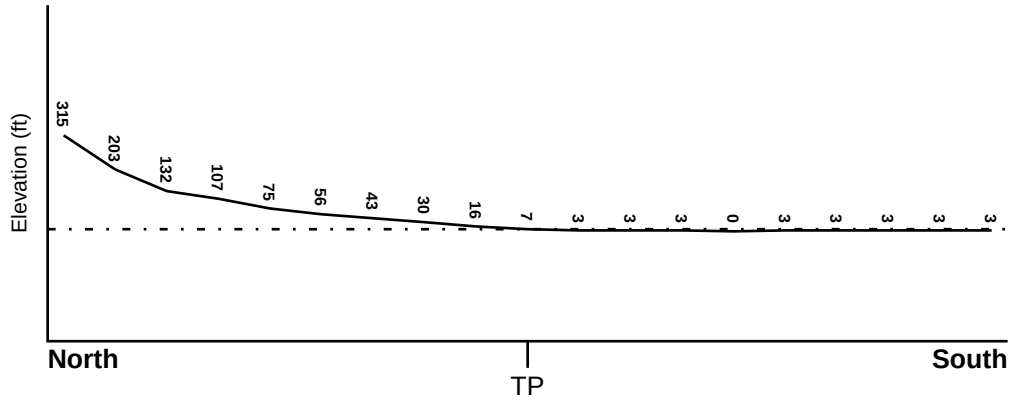
TOPOGRAPHIC INFORMATION

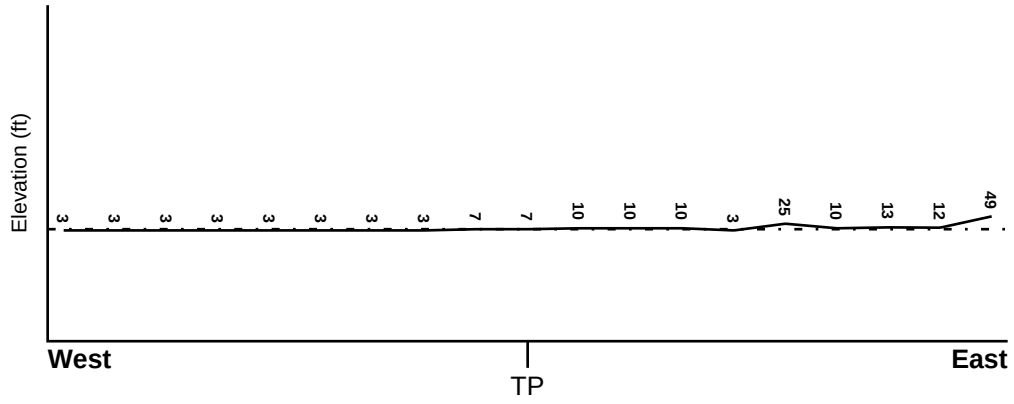
Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

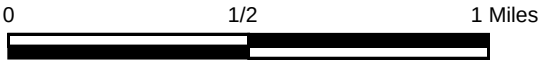
General Topographic Gradient: General South

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES





Target Property Elevation: 7 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

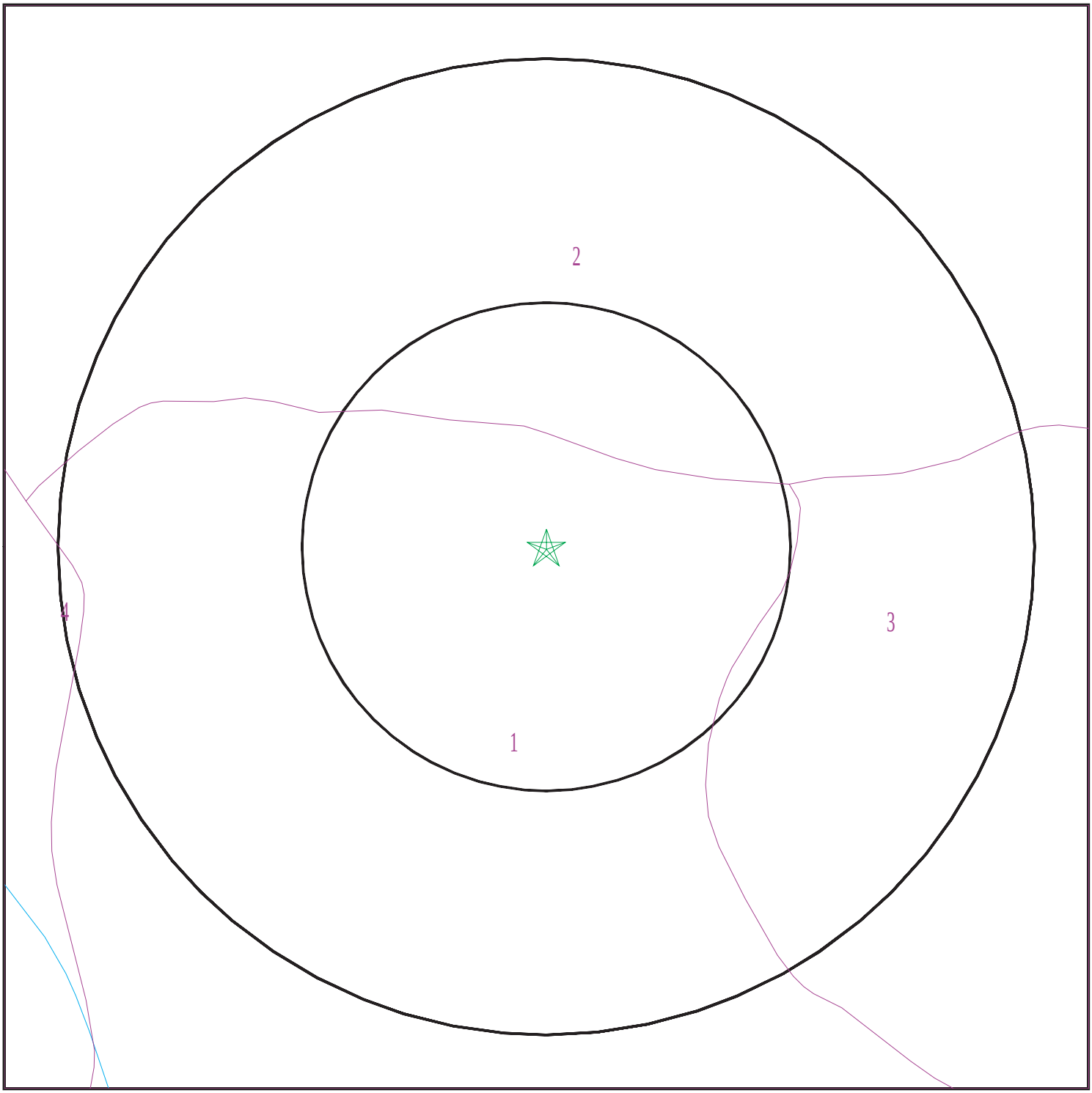
Era:	-
System:	-
Series:	-
Code:	N/A *(decoded above as Era, System & Series)*

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 - 3475872.2s



Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

SITE NAME:	929 Pumehana Street	CLIENT:	Central Planet Repair
ADDRESS:	929 Pumehana Street Honolulu HI 96826	CONTACT:	Ned Murphy
		INQUIRY #:	3475872.2s
LAT/LONG:	21.2947 / 157.8313	DATE:	December 12, 2012 3:46 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.	Not reported	Max: 0.42 Min: 0.02	Max: Min:
2	5 inches	59 inches	fine sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 0.42 Min: 0.02	Max: Min:
3	59 inches	70 inches	bedrock	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 0.42 Min: 0.02	Max: Min:

Soil Map ID: 2

Soil Component Name: Makiki

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

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	20 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141.14 Min: 14.11	Max: 6 Min: 5.6
2	20 inches	29 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141.14 Min: 14.11	Max: 6 Min: 5.6
3	29 inches	59 inches	paragravelly clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141.14 Min: 14.11	Max: 6 Min: 5.6

Soil Map ID: 3

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.	Not reported	Max: 42 Min: 1	Max: Min:
2	7 inches	29 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 42 Min: 1	Max: Min:
3	29 inches	38 inches	bedrock	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Not reported	Max: 42 Min: 1	Max: Min:

Soil Map ID: 4

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.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141.14 Min: 14.11	Max: 7.3 Min: 6.6
2	22 inches	31 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	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	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141.14 Min: 14.11	Max: 7.3 Min: 6.6

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.

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
No Wells Found		

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
F21	HI0000324	1/4 - 1/2 Mile NNE

Note: PWS System location is not always the same as well location.

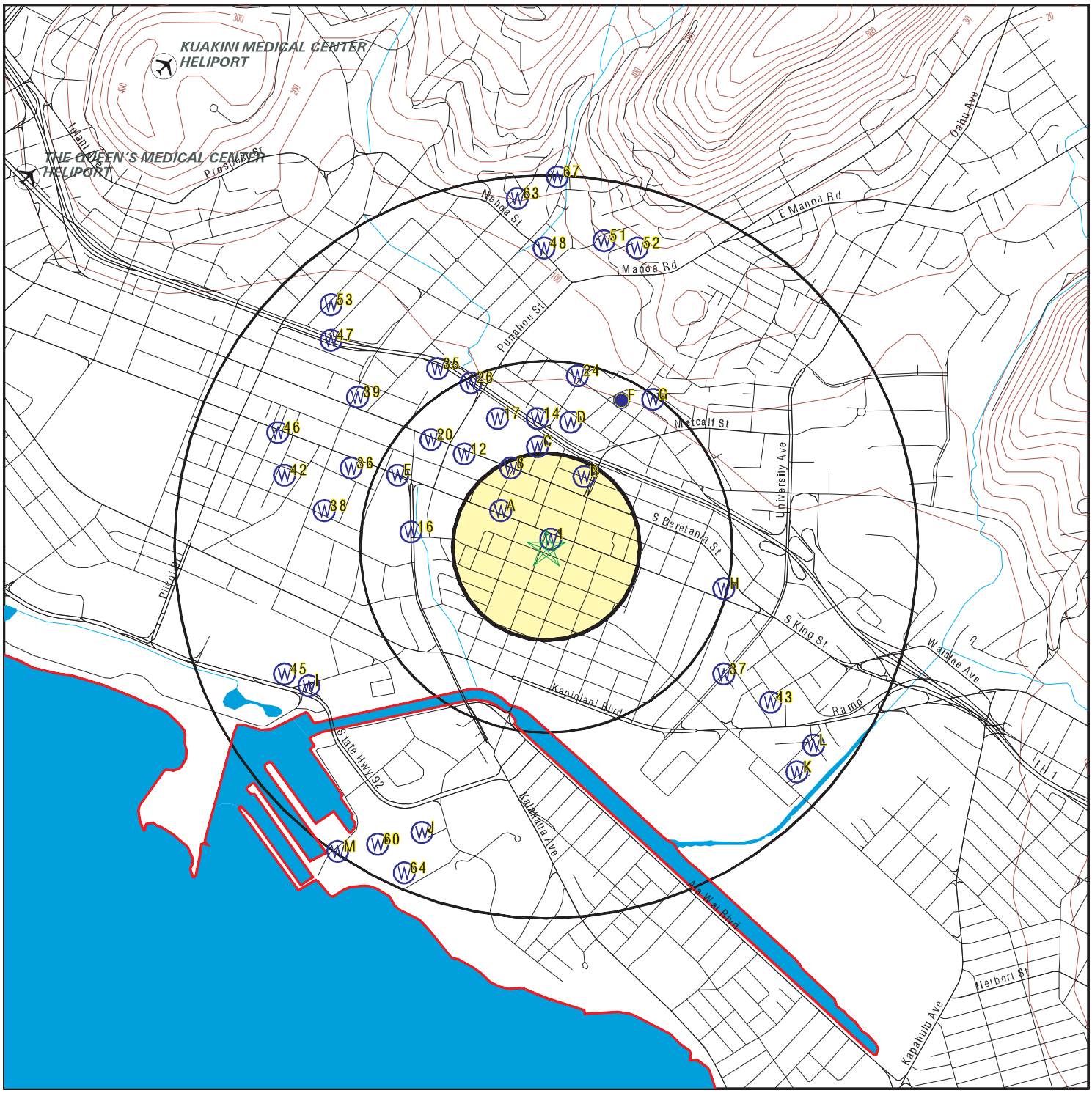
STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	HI7000000002054	0 - 1/8 Mile NNE
A2	HI7000000002062	1/8 - 1/4 Mile WNW
A3	HI7000000002065	1/8 - 1/4 Mile NW
B4	HI7000000002071	1/8 - 1/4 Mile NNE
B5	HI7000000002067	1/8 - 1/4 Mile NE
B6	HI7000000002068	1/8 - 1/4 Mile NE
C7	HI7000000002079	1/8 - 1/4 Mile North
8	HI7000000002078	1/8 - 1/4 Mile NNW
B9	HI7000000002080	1/8 - 1/4 Mile NNE
B10	HI7000000002081	1/8 - 1/4 Mile NNE
C11	HI7000000002089	1/4 - 1/2 Mile North
12	HI7000000002084	1/4 - 1/2 Mile NW
D13	HI7000000002094	1/4 - 1/2 Mile NNE
14	HI7000000002097	1/4 - 1/2 Mile North
D15	HI7000000002098	1/4 - 1/2 Mile North
16	HI7000000002057	1/4 - 1/2 Mile West
17	HI7000000002096	1/4 - 1/2 Mile NNW
E18	HI7000000002070	1/4 - 1/2 Mile WNW
E19	HI7000000002077	1/4 - 1/2 Mile WNW
20	HI7000000002086	1/4 - 1/2 Mile NW
F22	HI7000000002104	1/4 - 1/2 Mile NNE
F23	HI7000000002112	1/4 - 1/2 Mile NNE
24	HI7000000002123	1/4 - 1/2 Mile North
G25	HI7000000002105	1/4 - 1/2 Mile NE
26	HI7000000002119	1/4 - 1/2 Mile NNW
G27	HI7000000002106	1/4 - 1/2 Mile NE
H28	HI7000000002045	1/4 - 1/2 Mile ESE
H29	HI7000000002046	1/4 - 1/2 Mile ESE
G30	HI7000000002113	1/4 - 1/2 Mile NE
G31	HI7000000002115	1/4 - 1/2 Mile NE
G32	HI7000000002114	1/4 - 1/2 Mile NE
E33	HI7000000002074	1/4 - 1/2 Mile WNW
G34	HI7000000002116	1/2 - 1 Mile NE
35	HI7000000002128	1/2 - 1 Mile NNW
36	HI7000000002076	1/2 - 1 Mile WNW
37	HI7000000002032	1/2 - 1 Mile SE
38	HI7000000002063	1/2 - 1 Mile West
39	HI7000000002111	1/2 - 1 Mile NW
I40	HI7000000002028	1/2 - 1 Mile WSW
I41	HI7000000002029	1/2 - 1 Mile WSW
42	HI7000000002073	1/2 - 1 Mile WNW
43	HI7000000002025	1/2 - 1 Mile SE
I44	HI7000000002030	1/2 - 1 Mile WSW

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
45	HI7000000002031	1/2 - 1 Mile WSW
46	HI7000000002088	1/2 - 1 Mile WNW
47	HI7000000002153	1/2 - 1 Mile NW
48	HI7000000002193	1/2 - 1 Mile North
J49	HI7000000001993	1/2 - 1 Mile SSW
J50	HI7000000001994	1/2 - 1 Mile SSW
51	HI7000000002197	1/2 - 1 Mile North
52	HI7000000002194	1/2 - 1 Mile NNE
53	HI7000000002162	1/2 - 1 Mile NW
J54	HI7000000001989	1/2 - 1 Mile SSW
K55	HI7000000002005	1/2 - 1 Mile SE
K56	HI7000000002007	1/2 - 1 Mile SE
L57	HI7000000002012	1/2 - 1 Mile SE
L58	HI7000000002011	1/2 - 1 Mile SE
K59	HI7000000002009	1/2 - 1 Mile SE
60	HI7000000001991	1/2 - 1 Mile SSW
K61	HI7000000002006	1/2 - 1 Mile SE
K62	HI7000000001998	1/2 - 1 Mile SE
63	HI7000000002223	1/2 - 1 Mile North
64	HI7000000001980	1/2 - 1 Mile SSW
M65	HI7000000001987	1/2 - 1 Mile SW
M66	HI7000000001988	1/2 - 1 Mile SW
67	HI7000000002231	1/2 - 1 Mile North

PHYSICAL SETTING SOURCE MAP - 3475872.2s



County Boundary
Major Roads
Contour Lines
Airports
Earthquake epicenter, Richter 5 or greater
Water Wells
Public Water Supply Wells
Cluster of Multiple Icons

Groundwater Flow Direction
Indeterminate Groundwater Flow at Location
Groundwater Flow Varies at Location

SITE NAME: 929 Pumehana Street	CLIENT: Central Planet Repair
ADDRESS: 929 Pumehana Street Honolulu HI 96826	CONTACT: Ned Murphy INQUIRY #: 3475872.2s
LAT/LONG: 21.2947 / 157.8313	DATE: December 12, 2012 3:46 pm

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Map ID Direction Distance Elevation	Database	EDR ID Number
1 **NNE** **0 - 1/8 Mile** **Higher**	**HI WELLS**	**HI7000000002054**

Wid:	3-1750-002	Island:	3
Well no:	1750-02	Well name:	McCully
Old name:	Not Reported	Yr drilled:	1890
Driller:	Not Reported	Quad map:	13
Longitude2:	1575002	Latitude27:	211753
Longitude8:	1574952	Latitude83:	211742
Long83dd:	-157.83111		
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:	76		
Init water:	Not Reported		
Init head:	29.6		
Init chlor:	Not Reported		
Init cl:	75		
Test date:	01/31/1984	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp 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:	Not Reported
Draft yr:	Not Reported	Head yr:	Not Reported
Maxchl:	01/01/1987	Maxchl yr:	Not Reported
Minchl:	01/01/1987	Minchl yr:	Not Reported
Bot hole:	-407	Bot solid:	-354
Bot perf:	Not Reported	Spec capac:	Not Reported
Pump mgd:	Not Reported	Draft mgd:	Not Reported
Aquifer:	Not Reported	Tmk:	Not Reported
Old aqui:	Not Reported	Aqui code:	30102
Latest hd:	0		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1881
Pir:	01/01/1954	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000002054		

A2 **WNW** **1/8 - 1/4 Mile** **Higher**	**HI WELLS**	**HI7000000002062**

Wid:	3-1750-003	Island:	3
Well no:	1750-03	Well name:	McCully
Old name:	Not Reported	Yr drilled:	1890
Driller:	Not Reported	Quad map:	13
Longitude2:	1575010	Latitude27:	211756
Longitude8:	1575000	Latitude83:	211745
Long83dd:	-157.83333		
Lat83dd:	21.29583		
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:	29		
Init water:	Not Reported		
Init head:	28.2		
Init chlor:	Not Reported		
Init cl:	0		
Test date:	01/31/1984	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp 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:	Not Reported
Draft yr:	Not Reported	Head yr:	Not Reported
Maxchl:	01/01/1987	Maxchl yr:	Not Reported
Minchl:	01/01/1987	Minchl yr:	Not Reported
Bot hole:	-364	Bot solid:	-330
Bot perf:	Not Reported	Spec capac:	Not Reported
Pump mgd:	Not Reported	Draft mgd:	Not Reported
Aquifer:	Not Reported	Tmk:	Not Reported
Old aqui:	Not Reported	Aqui code:	30102
Latest hd:	0		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1881
Pir:	01/01/1954	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000002062		

A3
NW
1/8 - 1/4 Mile
Higher

HI WELLS **HI7000000002065**

Wid:	3-1750-005	Island:	3
Well no:	1750-05	Well name:	McCully
Old name:	Not Reported	Yr drilled:	1953
Driller:	Not Reported	Quad map:	13
Longitude2:	1575009	Latitude27:	211758
Longitude8:	1574959	Latitude83:	211747
Long83dd:	-157.83306		
Lat83dd:	21.29639		
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:	81		
Init water:	Not Reported		
Init head:	0		
Init chlor:	Not Reported		
Init cl:	0		
Test date:	01/31/1984	Test gpm:	50
Test ddown:	8.0	Test chlor:	Not Reported
Test temp:	Not Reported	Temp 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:	Not Reported
Draft yr:	Not Reported	Head yr:	Not Reported
Maxchl:	01/01/1987	Maxchl yr:	Not Reported
Minchl:	01/01/1987	Minchl yr:	Not Reported
Bot hole:	Not Reported	Bot solid:	Not Reported
Bot perf:	Not Reported	Spec capac:	Not Reported
Pump mgd:	Not Reported	Draft mgd:	Not Reported
Aquifer:	Not Reported	Tmk:	Not Reported
Old aqui:	Not Reported	Aqui code:	30102
Latest hd:	0		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1950
Pir:	01/01/1954	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000002065		

B4
NNE
1/8 - 1/4 Mile
Higher

HI WELLS **HI7000000002071**

Wid:	3-1849-008	Island:	3
Well no:	1849-08	Well name:	Manoa Valley
Old name:	Not Reported	Yr drilled:	1894
Driller:	Not Reported	Quad map:	13
Longitude2:	1574957	Latitude27:	211801
Longitude8:	1574947	Latitude83:	211750
Long83dd:	-157.82972		
Lat83dd:	21.29722		
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:	51		
Init water:	30.8		
Init head:	30.8		
Init chlor:	56		
Init cl:	56		
Test date:	07/12/1999	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported

Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	29.2
Max chlor:	69	Min chlor:	55
Geology:	Not Reported	Pump yr:	Not Reported
Draft yr:	Not Reported	Head yr:	Not Reported
Maxchl:	06/01/1993	Maxchl yr:	0
Minchl:	01/01/1987	Minchl yr:	0
Bot hole:	-377	Bot solid:	-317
Bot perf:	Not Reported	Spec capac:	Not Reported
Pump mgd:	Not Reported	Draft mgd:	Not Reported
Aquifer:	30102	Tmk:	Not Reported
Old aqui:	Not Reported	Aqui code:	30102
Latest hd:	29.2		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1894
Pir:	05/30/2008	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000002071		

B5
NE
1/8 - 1/4 Mile
Higher

HI WELLS **HI7000000002067**

Wid:	3-1849-007	Island:	3
Well no:	1849-07	Well name:	Manoa Valley
Old name:	Not Reported	Yr drilled:	1891
Driller:	MCCANDLESS	Quad map:	13
Longitude2:	1574955	Latitude27:	211800
Longitude8:	1574945	Latitude83:	211749
Long83dd:	-157.82917		
Lat83dd:	21.29694		
Gps:	0	Utm:	1
Owner user:	Land Proc Serv	Old number:	43-
Well type:	Not Reported	Casing dia:	8
Ground el:	18	Well depth:	Not Reported
Solid case:	Not Reported	Perf case:	Not Reported
Use:	UNU - Unused		
Use year:	Not Reported		
Init water:	30.0		
Init head:	30		
Init chlor:	55		
Init cl:	55		
Test date:	07/12/1999	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	0		
Draft mgy:	36	Head feet:	27.2
Max chlor:	58	Min chlor:	55
Geology:	Not Reported	Pump yr:	Not Reported
Draft yr:	Not Reported	Head yr:	Not Reported
Maxchl:	06/01/1993	Maxchl yr:	0
Minchl:	01/01/1987	Minchl yr:	0
Bot hole:	Not Reported	Bot solid:	Not Reported
Bot perf:	Not Reported	Spec capac:	Not Reported

Pump mgd:	Not Reported	Draft mgd:	0.1
Aquifer:	30102	Tmk:	2-8-009:078
Old aqui:	Not Reported	Aqui code:	30102
Latest hd:	27.2		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1891
Pir:	05/30/2008	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000002067		

B6
NE
1/8 - 1/4 Mile
Higher

HI WELLS **HI7000000002068**

Wid:	3-1849-006	Island:	3
Well no:	1849-06	Well name:	Manoa Valley
Old name:	Not Reported	Yr drilled:	1891
Driller:	MCCANDLESS	Quad map:	13
Longitude2:	1574954	Latitude27:	211800
Longitude8:	1574944	Latitude83:	211749
Long83dd:	-157.82889		
Lat83dd:	21.29694		
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 water:	30.6		
Init head:	30.6		
Init chlor:	54		
Init cl:	54		
Test date:	07/12/1999	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	0		
Draft mgy:	36	Head feet:	26.7
Max chlor:	62	Min chlor:	54
Geology:	Not Reported	Pump yr:	Not Reported
Draft yr:	Not Reported	Head yr:	Not Reported
Maxchl:	06/01/1993	Maxchl yr:	Not Reported
Minchl:	01/01/1987	Minchl yr:	Not Reported
Bot hole:	-143	Bot solid:	Not Reported
Bot perf:	Not Reported	Spec capac:	Not Reported
Pump mgd:	Not Reported	Draft mgd:	0.1
Aquifer:	30102	Tmk:	2-8-009:080
Old aqui:	Not Reported	Aqui code:	30102
Latest hd:	26.7		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1891
Pir:	05/30/2008	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000002068		

Map ID Direction Distance Elevation	Database	EDR ID Number
C7 **North** **1/8 - 1/4 Mile** **Higher**	**HI WELLS**	**HI7000000002079**

Wid:	3-1850-010	Island:	3
Well no:	1850-10	Well name:	Makiki
Old name:	Not Reported	Yr drilled:	1883
Driller:	Not Reported	Quad map:	13
Longitude2:	1575003	Latitude27:	211804
Longitude8:	1574953	Latitude83:	211753
Long83dd:	-157.83139		
Lat83dd:	21.29806		
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:	28		
Init water:	30.3		
Init head:	30.3		
Init chlor:	Not Reported		
Init cl:	0		
Test date:	11/30/1968	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	28.9
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	Not Reported	Pump yr:	Not Reported
Draft yr:	Not Reported	Head yr:	Not Reported
Maxchl:	01/01/1987	Maxchl yr:	Not Reported
Minchl:	01/01/1987	Minchl yr:	Not Reported
Bot hole:	-253	Bot solid:	-206
Bot perf:	Not Reported	Spec capac:	Not Reported
Pump mgd:	Not Reported	Draft mgd:	Not Reported
Aquifer:	30102	Tmk:	Not Reported
Old aqui:	Not Reported	Aqui code:	30102
Latest hd:	28.9		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1883
Pir:	11/12/2009	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000002079		

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8 **NNW** **1/8 - 1/4 Mile** **Higher**	**HI WELLS**	**HI7000000002078**

Wid:	3-1850-002	Island:	3
Well no:	1850-02	Well name:	Makiki
Old name:	Not Reported	Yr drilled:	1880
Driller:	PIERCE	Quad map:	13
Longitude2:	1575008	Latitude27:	211803
Longitude8:	1574958	Latitude83:	211752
Long83dd:	-157.83278		
Lat83dd:	21.29778		
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:	53		
Init water:	29.8		
Init head:	29.8		
Init chlor:	51		
Init cl:	51		
Test date:	11/30/1968	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	25.9
Max chlor:	51	Min chlor:	Not Reported
Geology:	TKB	Pump yr:	Not Reported
Draft yr:	Not Reported	Head yr:	Not Reported
Maxchl:	01/01/1987	Maxchl yr:	Not Reported
Minchl:	01/01/1987	Minchl yr:	Not Reported
Bot hole:	-450	Bot solid:	-322
Bot perf:	Not Reported	Spec capac:	Not Reported
Pump mgd:	Not Reported	Draft mgd:	Not Reported
Aquifer:	30102	Tmk:	3-9-010:001
Old aqui:	Not Reported	Aqui code:	30102
Latest hd:	25.9		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1880
Pir:	11/12/2009	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000002078		

B9
NNE **HI WELLS** **HI7000000002080**
1/8 - 1/4 Mile
Higher

Wid:	3-1850-012	Island:	3
Well no:	1850-12	Well name:	Makiki
Old name:	Not Reported	Yr drilled:	1884
Driller:	Not Reported	Quad map:	13
Longitude2:	1575000	Latitude27:	211804
Longitude8:	1574950	Latitude83:	211753
Long83dd:	-157.83056		
Lat83dd:	21.29806		
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:	43		
Init water:	30.7		
Init head:	30.7		
Init chlor:	60		
Init cl:	60		
Test date:	11/30/1968	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	24.0
Max chlor:	76	Min chlor:	60
Geology:	Not Reported	Pump yr:	Not Reported
Draft yr:	Not Reported	Head yr:	Not Reported
Maxchl:	01/01/1987	Maxchl yr:	0
Minchl:	01/01/1987	Minchl yr:	0
Bot hole:	-286	Bot solid:	-280
Bot perf:	Not Reported	Spec capac:	Not Reported
Pump mgd:	Not Reported	Draft mgd:	Not Reported
Aquifer:	30102	Tmk:	Not Reported
Old aqui:	Not Reported	Aqui code:	30102
Latest hd:	24		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1884
Pir:	11/12/2009	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000002080		

B10
NNE
1/8 - 1/4 Mile
Higher

HI WELLS **HI7000000002081**

Wid:	3-1849-002	Island:	3
Well no:	1849-02	Well name:	Manoa Valley
Old name:	Not Reported	Yr drilled:	1881
Driller:	FESSLER	Quad map:	13
Longitude2:	1574959	Latitude27:	211804
Longitude8:	1574949	Latitude83:	211753
Long83dd:	-157.83028		
Lat83dd:	21.29806		
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:	43		
Init water:	30.0		
Init head:	30		
Init chlor:	51		
Init cl:	51		
Test date:	07/12/1999	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported

Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	27.2
Max chlor:	67	Min chlor:	51
Geology:	Not Reported	Pump yr:	Not Reported
Draft yr:	Not Reported	Head yr:	Not Reported
Maxchl:	06/01/1993	Maxchl yr:	Not Reported
Minchl:	01/01/1987	Minchl yr:	Not Reported
Bot hole:	-333	Bot solid:	-281
Bot perf:	Not Reported	Spec capac:	Not Reported
Pump mgd:	Not Reported	Draft mgd:	Not Reported
Aquifer:	30102	Tmk:	Not Reported
Old aqui:	Not Reported	Aqui code:	30102
Latest hd:	27.2		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1881
Pir:	05/30/2008	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000002081		

C11
North
1/4 - 1/2 Mile
Higher

HI WELLS **HI7000000002089**

Wid:	3-1850-011	Island:	3
Well no:	1850-11	Well name:	Makiki
Old name:	Not Reported	Yr drilled:	1882
Driller:	Not Reported	Quad map:	13
Longitude2:	1575005	Latitude27:	211808
Longitude8:	1574955	Latitude83:	211757
Long83dd:	-157.83194		
Lat83dd:	21.29917		
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:	53		
Init water:	24.1		
Init head:	24.1		
Init chlor:	Not Reported		
Init cl:	0		
Test date:	11/30/1968	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	27.4
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	TKB	Pump yr:	Not Reported
Draft yr:	Not Reported	Head yr:	Not Reported
Maxchl:	01/01/1987	Maxchl yr:	Not Reported
Minchl:	01/01/1987	Minchl yr:	Not Reported
Bot hole:	-274	Bot solid:	-231
Bot perf:	Not Reported	Spec capac:	Not Reported

Pump mgd:	Not Reported	Draft mgd:	Not Reported
Aquifer:	30102	Tmk:	Not Reported
Old aqui:	Not Reported	Aqui code:	30102
Latest hd:	27.4		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1882
Pir:	11/12/2009	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000002089		

12
NW
1/4 - 1/2 Mile
Higher

HI WELLS **HI7000000002084**

Wid:	3-1850-018	Island:	3
Well no:	1850-18	Well name:	Makiki
Old name:	Not Reported	Yr drilled:	1890
Driller:	Not Reported	Quad map:	13
Longitude2:	1575015	Latitude27:	211805
Longitude8:	1575005	Latitude83:	211754
Long83dd:	-157.83472		
Lat83dd:	21.29833		
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:	28		
Init water:	26.4		
Init head:	26.4		
Init chlor:	Not Reported		
Init cl:	0		
Test date:	11/30/1968	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	29.5
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	Not Reported	Pump yr:	Not Reported
Draft yr:	Not Reported	Head yr:	Not Reported
Maxchl:	01/01/1987	Maxchl yr:	Not Reported
Minchl:	01/01/1987	Minchl yr:	Not Reported
Bot hole:	-354	Bot solid:	Not Reported
Bot perf:	Not Reported	Spec capac:	Not Reported
Pump mgd:	Not Reported	Draft mgd:	Not Reported
Aquifer:	30102	Tmk:	Not Reported
Old aqui:	Not Reported	Aqui code:	30102
Latest hd:	29.5		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1890
Pir:	11/12/2009	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000002084		

Map ID Direction Distance Elevation		Database	EDR ID Number
D13 **NNE** **1/4 - 1/2 Mile** **Higher**		**HI WELLS**	**HI7000000002094**

Wid:	3-1849-004	Island:	3
Well no:	1849-04	Well name:	Manoa Valley
Old name:	Not Reported	Yr drilled:	1885
Driller:	Not Reported	Quad map:	13
Longitude2:	1574958	Latitude27:	211809
Longitude8:	1574948	Latitude83:	211758
Long83dd:	-157.83		
Lat83dd:	21.29944		
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:	29		
Init water:	42.0		
Init head:	42		
Init chlor:	52		
Init cl:	52		
Test date:	07/12/1999	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	29.0
Max chlor:	52	Min chlor:	Not Reported
Geology:	TKB	Pump yr:	Not Reported
Draft yr:	Not Reported	Head yr:	Not Reported
Maxchl:	06/01/1993	Maxchl yr:	Not Reported
Minchl:	01/01/1987	Minchl yr:	Not Reported
Bot hole:	-230	Bot solid:	-151
Bot perf:	Not Reported	Spec capac:	Not Reported
Pump mgd:	Not Reported	Draft mgd:	Not Reported
Aquifer:	30102	Tmk:	Not Reported
Old aqui:	Not Reported	Aqui code:	30102
Latest hd:	29		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1885
Pir:	05/30/2008	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000002094		

14 **North** **1/4 - 1/2 Mile** **Higher**		**HI WELLS**	**HI7000000002097**

Wid:	3-1850-014	Island:	3
Well no:	1850-14	Well name:	Makiki
Old name:	Not Reported	Yr drilled:	1884
Driller:	Not Reported	Quad map:	13
Longitude2:	1575004	Latitude27:	211810
Longitude8:	1574954	Latitude83:	211759
Long83dd:	-157.83167		
Lat83dd:	21.29972		
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:	46		
Init water:	30.8		
Init head:	30.8		
Init chlor:	Not Reported		
Init cl:	0		
Test date:	11/30/1968	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	27.0
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	TKB	Pump yr:	Not Reported
Draft yr:	Not Reported	Head yr:	Not Reported
Maxchl:	01/01/1987	Maxchl yr:	Not Reported
Minchl:	01/01/1987	Minchl yr:	Not Reported
Bot hole:	-231	Bot solid:	-200
Bot perf:	Not Reported	Spec capac:	Not Reported
Pump mgd:	Not Reported	Draft mgd:	Not Reported
Aquifer:	30102	Tmk:	Not Reported
Old aqui:	Not Reported	Aqui code:	30102
Latest hd:	27		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1884
Pir:	11/12/2009	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000002097		

D15
North
1/4 - 1/2 Mile
Higher

HI WELLS **HI7000000002098**

Wid:	3-1850-013	Island:	3
Well no:	1850-13	Well name:	Makiki
Old name:	Not Reported	Yr drilled:	1884
Driller:	Not Reported	Quad map:	13
Longitude2:	1575000	Latitude27:	211810
Longitude8:	1574950	Latitude83:	211759
Long83dd:	-157.83056		
Lat83dd:	21.29972		
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:	52		
Init water:	42.9		
Init head:	42.9		
Init chlor:	54		
Init cl:	54		
Test date:	11/30/1968	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	16.5
Max chlor:	54	Min chlor:	Not Reported
Geology:	Not Reported	Pump yr:	Not Reported
Draft yr:	Not Reported	Head yr:	Not Reported
Maxchl:	01/01/1987	Maxchl yr:	Not Reported
Minchl:	01/01/1987	Minchl yr:	Not Reported
Bot hole:	-320	Bot solid:	-217
Bot perf:	Not Reported	Spec capac:	Not Reported
Pump mgd:	Not Reported	Draft mgd:	Not Reported
Aquifer:	30102	Tmk:	Not Reported
Old aqui:	Not Reported	Aqui code:	30102
Latest hd:	16.5		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1884
Pir:	11/12/2009	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000002098		

16
West
1/4 - 1/2 Mile
Higher

HI WELLS **HI7000000002057**

Wid:	3-1750-001	Island:	3
Well no:	1750-01	Well name:	McCully
Old name:	Not Reported	Yr drilled:	1881
Driller:	Not Reported	Quad map:	13
Longitude2:	1575023	Latitude27:	211754
Longitude8:	1575013	Latitude83:	211743
Long83dd:	-157.83694		
Lat83dd:	21.29528		
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:	32		
Init water:	29.9		
Init head:	29.9		
Init chlor:	42		
Init cl:	42		
Test date:	01/31/1984	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported

Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	26.1
Max chlor:	67	Min chlor:	42
Geology:	Not Reported	Pump yr:	Not Reported
Draft yr:	Not Reported	Head yr:	Not Reported
Maxchl:	01/01/1987	Maxchl yr:	0
Minchl:	01/01/1987	Minchl yr:	0
Bot hole:	-461	Bot solid:	Not Reported
Bot perf:	Not Reported	Spec capac:	Not Reported
Pump mgd:	Not Reported	Draft mgd:	Not Reported
Aquifer:	30102	Tmk:	Not Reported
Old aqui:	Not Reported	Aqui code:	30102
Latest hd:	26.1		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1881
Pir:	01/01/1954	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000002057		

17
NNW
1/4 - 1/2 Mile
Higher

HI WELLS **HI7000000002096**

Wid:	3-1850-004	Island:	3
Well no:	1850-04	Well name:	Makiki
Old name:	Not Reported	Yr drilled:	1882
Driller:	PIERCE	Quad map:	13
Longitude2:	1575010	Latitude27:	211810
Longitude8:	1575000	Latitude83:	211759
Long83dd:	-157.83333		
Lat83dd:	21.29972		
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:	32		
Init water:	30.0		
Init head:	30		
Init chlor:	Not Reported		
Init cl:	0		
Test date:	11/30/1968	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp 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:	Not Reported
Draft yr:	Not Reported	Head yr:	Not Reported
Maxchl:	01/01/1987	Maxchl yr:	Not Reported
Minchl:	01/01/1987	Minchl yr:	Not Reported
Bot hole:	-264	Bot solid:	Not Reported
Bot perf:	Not Reported	Spec capac:	Not Reported

Pump mgd:	Not Reported	Draft mgd:	Not Reported
Aquifer:	30102	Tmk:	3-9-010:001
Old aqui:	Not Reported	Aqui code:	30102
Latest hd:	0		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1882
Pir:	11/12/2009	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000002096		

E18
WNW
1/4 - 1/2 Mile
Higher

HI WELLS **HI7000000002070**

Wid:	3-1850-026	Island:	3
Well no:	1850-26	Well name:	Makiki
Old name:	Not Reported	Yr drilled:	1910
Driller:	MCCANDLESS	Quad map:	13
Longitude2:	1575024	Latitude27:	211801
Longitude8:	1575014	Latitude83:	211750
Long83dd:	-157.83722		
Lat83dd:	21.29722		
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:	40		
Init water:	27.7		
Init head:	27.7		
Init chlor:	57		
Init cl:	57		
Test date:	11/30/1968	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	26.7
Max chlor:	60	Min chlor:	57
Geology:	TKB	Pump yr:	Not Reported
Draft yr:	Not Reported	Head yr:	Not Reported
Maxchl:	01/01/1987	Maxchl yr:	Not Reported
Minchl:	01/01/1987	Minchl yr:	Not Reported
Bot hole:	-435	Bot solid:	-341
Bot perf:	Not Reported	Spec capac:	Not Reported
Pump mgd:	Not Reported	Draft mgd:	Not Reported
Aquifer:	30102	Tmk:	Not Reported
Old aqui:	Not Reported	Aqui code:	30102
Latest hd:	26.7		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1910
Pir:	11/12/2009	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000002070		

Map ID Direction Distance Elevation		Database	EDR ID Number
E19 **WNW** **1/4 - 1/2 Mile** **Higher**		**HI WELLS**	**HI7000000002077**

Wid:	3-1850-021	Island:	3
Well no:	1850-21	Well name:	Makiki
Old name:	Not Reported	Yr drilled:	1894
Driller:	MCCANDLESS	Quad map:	13
Longitude2:	1575023	Latitude27:	211803
Longitude8:	1575013	Latitude83:	211752
Long83dd:	-157.83694		
Lat83dd:	21.29778		
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:	73		
Init water:	29.8		
Init head:	29.8		
Init chlor:	62		
Init cl:	62		
Test date:	11/30/1968	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	20.3
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	Not Reported	Pump yr:	Not Reported
Draft yr:	Not Reported	Head yr:	Not Reported
Maxchl:	01/01/1987	Maxchl yr:	Not Reported
Minchl:	01/01/1987	Minchl yr:	Not Reported
Bot hole:	-389	Bot solid:	-292
Bot perf:	Not Reported	Spec capac:	Not Reported
Pump mgd:	Not Reported	Draft mgd:	Not Reported
Aquifer:	30102	Tmk:	Not Reported
Old aqui:	Not Reported	Aqui code:	30102
Latest hd:	20.3		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1894
Pir:	11/12/2009	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000002077		

20 **NW** **1/4 - 1/2 Mile** **Higher**		**HI WELLS**	**HI7000000002086**

Wid:	3-1850-005	Island:	3
Well no:	1850-05	Well name:	Makiki
Old name:	Not Reported	Yr drilled:	1882
Driller:	FESSLER	Quad map:	13
Longitude2:	1575020	Latitude27:	211807
Longitude8:	1575010	Latitude83:	211756
Long83dd:	-157.83611		
Lat83dd:	21.29889		
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:	28		
Init water:	29.7		
Init head:	29.7		
Init chlor:	61		
Init cl:	61		
Test date:	11/30/1968	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	24.1
Max chlor:	61	Min chlor:	Not Reported
Geology:	Not Reported	Pump yr:	Not Reported
Draft yr:	Not Reported	Head yr:	Not Reported
Maxchl:	01/01/1987	Maxchl yr:	Not Reported
Minchl:	01/01/1987	Minchl yr:	Not Reported
Bot hole:	-282	Bot solid:	-209
Bot perf:	Not Reported	Spec capac:	Not Reported
Pump mgd:	Not Reported	Draft mgd:	Not Reported
Aquifer:	30102	Tmk:	3-9-010:001
Old aqui:	Not Reported	Aqui code:	30102
Latest hd:	24.1		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1882
Pir:	11/12/2009	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000002086		

F21
NNE
1/4 - 1/2 Mile
Higher

FRDS PWS **HI0000324**

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		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

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

ENFORCEMENT INFORMATION:

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		

F22
NNE **HI WELLS** **HI7000000002104**
1/4 - 1/2 Mile
Higher

Wid:	3-1849-001	Island:	3
Well no:	1849-01	Well name:	Manoa Valley
Old name:	Not Reported	Yr drilled:	1880
Driller:	PIERCE	Quad map:	13
Longitude2:	1574950	Latitude27:	211812
Longitude8:	1574940	Latitude83:	211801
Long83dd:	-157.82778		
Lat83dd:	21.30028		
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:	38		
Init water:	43.5		
Init head:	43.5		
Init chlor:	49		
Init cl:	49		
Test date:	07/12/1999	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	26.2
Max chlor:	49	Min chlor:	48
Geology:	TKB	Pump yr:	Not Reported
Draft yr:	Not Reported	Head yr:	Not Reported
Maxchl:	06/01/1993	Maxchl yr:	Not Reported
Minchl:	01/01/1987	Minchl yr:	Not Reported
Bot hole:	-258	Bot solid:	-236
Bot perf:	Not Reported	Spec capac:	Not Reported

Pump mgd:	Not Reported	Draft mgd:	Not Reported
Aquifer:	30102	Tmk:	Not Reported
Old aqui:	Not Reported	Aqui code:	30102
Latest hd:	26.2		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1880
Pir:	05/30/2008	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000002104		

F23
NNE
1/4 - 1/2 Mile
Higher

HI WELLS **HI7000000002112**

Wid:	3-1849-010	Island:	3
Well no:	1849-10	Well name:	Punahou
Old name:	Not Reported	Yr drilled:	1909
Driller:	MCCANDLESS	Quad map:	13
Longitude2:	1574952	Latitude27:	211813
Longitude8:	1574942	Latitude83:	211802
Long83dd:	-157.82833		
Lat83dd:	21.30056		
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:	74		
Init water:	29.1		
Init head:	29.1		
Init chlor:	48		
Init cl:	48		
Test date:	07/12/1999	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	0		
Draft mgy:	57	Head feet:	25.0
Max chlor:	62	Min chlor:	18
Geology:	TKB	Pump yr:	Not Reported
Draft yr:	76	Head yr:	Not Reported
Maxchl:	06/01/1993	Maxchl yr:	0
Minchl:	01/01/1987	Minchl yr:	0
Bot hole:	-279	Bot solid:	-159
Bot perf:	Not Reported	Spec capac:	Not Reported
Pump mgd:	Not Reported	Draft mgd:	0.2
Aquifer:	30102	Tmk:	2-8-018:001
Old aqui:	Not Reported	Aqui code:	30102
Latest hd:	24.95		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1909
Pir:	05/30/2008	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000002112		

Map ID Direction Distance Elevation		Database	EDR ID Number
24 **North** **1/4 - 1/2 Mile** **Higher**		**HI WELLS**	**HI7000000002123**

Wid:	3-1849-005	Island:	3
Well no:	1849-05	Well name:	Manoa Valley
Old name:	Not Reported	Yr drilled:	1889
Driller:	Not Reported	Quad map:	13
Longitude2:	1574958	Latitude27:	211816
Longitude8:	1574948	Latitude83:	211805
Long83dd:	-157.83		
Lat83dd:	21.30139		
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:	29		
Init water:	35.8		
Init head:	35.8		
Init chlor:	55		
Init cl:	55		
Test date:	07/12/1999	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp 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:	Not Reported
Draft yr:	Not Reported	Head yr:	Not Reported
Maxchl:	06/01/1993	Maxchl yr:	0
Minchl:	01/01/1987	Minchl yr:	0
Bot hole:	-165	Bot solid:	-124
Bot perf:	Not Reported	Spec capac:	Not Reported
Pump mgd:	Not Reported	Draft mgd:	Not Reported
Aquifer:	30102	Tmk:	Not Reported
Old aqui:	Not Reported	Aqui code:	30102
Latest hd:	0		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1889
Pir:	05/30/2008	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000002123		

G25 **NE** **1/4 - 1/2 Mile** **Higher**		**HI WELLS**	**HI7000000002105**

Wid:	3-1849-015	Island:	3
Well no:	1849-15	Well name:	Wilder Ave. P4
Old name:	Not Reported	Yr drilled:	1962
Driller:	PACIFIC DRLG	Quad map:	13
Longitude2:	1574947	Latitude27:	211812
Longitude8:	1574937	Latitude83:	211801
Long83dd:	-157.82694		
Lat83dd:	21.30028		
Gps:	1	Utm:	0
Owner user:	Honolulu BWS	Old number:	36-C
Well type:	ROT	Casing dia:	10
Ground el:	47	Well depth:	445
Solid case:	321	Perf case:	Not Reported
Use:	MUN - County		
Use year:	74		
Init water:	Not Reported		
Init head:	0		
Init chlor:	Not Reported		
Init cl:	0		
Test date:	02/22/1995	Test gpm:	1141
Test ddown:	4.0	Test chlor:	Not Reported
Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	1750		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	TKB	Pump yr:	77
Draft yr:	76	Head yr:	Not Reported
Maxchl:	06/01/1993	Maxchl yr:	0
Minchl:	01/01/1987	Minchl yr:	0
Bot hole:	-398	Bot solid:	-274
Bot perf:	Not Reported	Spec capac:	285
Pump mgd:	2.520	Draft mgd:	Not Reported
Aquifer:	30102	Tmk:	2-8-017:029
Old aqui:	Not Reported	Aqui code:	30102
Latest hd:	22.2		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1962
Pir:	01/01/1961	Surveyor:	HONOLULU BWS
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000002105		

26
NNW
1/4 - 1/2 Mile
Higher

HI WELLS **HI7000000002119**

Wid:	3-1850-006	Island:	3
Well no:	1850-06	Well name:	Makiki
Old name:	Not Reported	Yr drilled:	1882
Driller:	Not Reported	Quad map:	13
Longitude2:	1575014	Latitude27:	211815
Longitude8:	1575004	Latitude83:	211804
Long83dd:	-157.83444		
Lat83dd:	21.30111		
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:	54		
Init water:	27.5		
Init head:	27.5		
Init chlor:	Not Reported		
Init cl:	0		
Test date:	11/30/1968	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	27.4
Max chlor:	50	Min chlor:	Not Reported
Geology:	Not Reported	Pump yr:	Not Reported
Draft yr:	Not Reported	Head yr:	Not Reported
Maxchl:	01/01/1987	Maxchl yr:	Not Reported
Minchl:	01/01/1987	Minchl yr:	Not Reported
Bot hole:	-372	Bot solid:	-130
Bot perf:	Not Reported	Spec capac:	Not Reported
Pump mgd:	Not Reported	Draft mgd:	Not Reported
Aquifer:	30102	Tmk:	3-9-010:001
Old aqui:	Not Reported	Aqui code:	30102
Latest hd:	27.4		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1882
Pir:	11/12/2009	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000002119		

G27
NE
1/4 - 1/2 Mile
Higher

HI WELLS **HI7000000002106**

Wid:	3-1849-013	Island:	3
Well no:	1849-13	Well name:	Wilder Ave. P3
Old name:	Not Reported	Yr drilled:	1961
Driller:	PACIFIC DRLG	Quad map:	13
Longitude2:	1574946	Latitude27:	211812
Longitude8:	1574936	Latitude83:	211801
Long83dd:	-157.82667		
Lat83dd:	21.30028		
Gps:	1	Utm:	0
Owner user:	Honolulu BWS	Old number:	36-D
Well type:	ROT	Casing dia:	10
Ground el:	53	Well depth:	475
Solid case:	354	Perf case:	Not Reported
Use:	MUN - County		
Use year:	74		
Init water:	Not Reported		
Init head:	0		
Init chlor:	Not Reported		
Init cl:	0		
Test date:	12/06/1996	Test gpm:	1438
Test ddown:	3.5	Test chlor:	71

Test temp:	21.6	Temp unit:	C
Pump gpm:	1750		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	TKB	Pump yr:	77
Draft yr:	76	Head yr:	Not Reported
Maxchl:	06/01/1993	Maxchl yr:	0
Minchl:	01/01/1987	Minchl yr:	0
Bot hole:	-422	Bot solid:	-301
Bot perf:	Not Reported	Spec capac:	411
Pump mgd:	2.520	Draft mgd:	Not Reported
Aquifer:	30102	Tmk:	2-8-017:029
Old aqui:	Not Reported	Aqui code:	30102
Latest hd:	20.46		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1961
Pir:	01/01/1961	Surveyor:	HONOLULU BWS
T:	0		
Pump elev:	-32	Pump depth:	85
Site id:	HI7000000002106		

H28
ESE
1/4 - 1/2 Mile
Higher

HI WELLS **HI7000000002045**

Wid:	3-1749-020	Island:	3
Well no:	1749-20	Well name:	Moiliili
Old name:	Not Reported	Yr drilled:	1954
Driller:	NAT WHITON	Quad map:	13
Longitude2:	1574936	Latitude27:	211746
Longitude8:	1574926	Latitude83:	211735
Long83dd:	-157.82389		
Lat83dd:	21.29306		
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:	82		
Init water:	Not Reported		
Init head:	0		
Init chlor:	Not Reported		
Init cl:	0		
Test date:	01/31/1984	Test gpm:	200
Test ddown:	2.4	Test chlor:	Not Reported
Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	18		
Draft mgy:	14	Head feet:	7.0
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	Not Reported	Pump yr:	Not Reported
Draft yr:	Not Reported	Head yr:	Not Reported
Maxchl:	01/01/1987	Maxchl yr:	0
Minchl:	01/01/1987	Minchl yr:	0
Bot hole:	Not Reported	Bot solid:	Not Reported
Bot perf:	Not Reported	Spec capac:	83

Pump mgd:	.025	Draft mgd:	0.0
Aquifer:	30101	Tmk:	2-8-005:002
Old aqui:	Not Reported	Aqui code:	30101
Latest hd:	7		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1954
Pir:	01/01/1954	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000002045		

H29
ESE
1/4 - 1/2 Mile
Higher

HI WELLS **HI7000000002046**

Wid:	3-1749-021	Island:	3
Well no:	1749-21	Well name:	Moiliili
Old name:	Not Reported	Yr drilled:	1954
Driller:	NAT WHITON	Quad map:	13
Longitude2:	1574936	Latitude27:	211746
Longitude8:	1574926	Latitude83:	211735
Long83dd:	-157.82389		
Lat83dd:	21.29306		
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:	82		
Init water:	Not Reported		
Init head:	0		
Init chlor:	Not Reported		
Init cl:	0		
Test date:	01/31/1984	Test gpm:	100
Test ddown:	1.0	Test chlor:	Not Reported
Test temp:	Not Reported	Temp 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:	Not Reported
Draft yr:	Not Reported	Head yr:	Not Reported
Maxchl:	01/01/1987	Maxchl yr:	0
Minchl:	01/01/1987	Minchl yr:	0
Bot hole:	Not Reported	Bot solid:	Not Reported
Bot perf:	Not Reported	Spec capac:	100
Pump mgd:	Not Reported	Draft mgd:	Not Reported
Aquifer:	30101	Tmk:	2-8-005:002
Old aqui:	Not Reported	Aqui code:	30101
Latest hd:	0		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1954
Pir:	01/01/1954	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000002046		

Map ID Direction Distance Elevation	Database	EDR ID Number
G30 **NE** **1/4 - 1/2 Mile** **Higher**	**HI WELLS**	**HI7000000002113**

Wid:	3-1849-011	Island:	3
Well no:	1849-11	Well name:	Wilder Ave
Old name:	Not Reported	Yr drilled:	1912
Driller:	MCCANDLESS	Quad map:	13
Longitude2:	1574947	Latitude27:	211813
Longitude8:	1574937	Latitude83:	211802
Long83dd:	-157.82694		
Lat83dd:	21.30056		
Gps:	0	Utm:	1
Owner user:	Honolulu BWS	Old number:	36-A
Well type:	ROT	Casing dia:	12
Ground el:	43	Well depth:	304
Solid case:	272	Perf case:	Not Reported
Use:	OBS - Observation		
Use year:	89		
Init water:	27.7		
Init head:	27.7		
Init chlor:	52		
Init cl:	52		
Test date:	07/12/1999	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	0		
Draft mgy:	2634	Head feet:	26.8
Max chlor:	106	Min chlor:	45
Geology:	QHB	Pump yr:	Not Reported
Draft yr:	76	Head yr:	Not Reported
Maxchl:	06/01/1993	Maxchl yr:	0
Minchl:	01/01/1987	Minchl yr:	0
Bot hole:	-261	Bot solid:	-229
Bot perf:	Not Reported	Spec capac:	Not Reported
Pump mgd:	Not Reported	Draft mgd:	7.2
Aquifer:	30102	Tmk:	2-8-017:029
Old aqui:	Not Reported	Aqui code:	30102
Latest hd:	26.8		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1912
Pir:	05/30/2008	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000002113		

G31 **NE** **1/4 - 1/2 Mile** **Higher**	**HI WELLS**	**HI7000000002115**

Wid:	3-1849-016	Island:	3
Well no:	1849-16	Well name:	Wilder Ave. P2
Old name:	Not Reported	Yr drilled:	1962
Driller:	PACIFIC DRLG	Quad map:	13
Longitude2:	1574947	Latitude27:	211813
Longitude8:	1574937	Latitude83:	211802
Long83dd:	-157.82694		
Lat83dd:	21.30056		
Gps:	1	Utm:	0
Owner user:	Honolulu BWS	Old number:	36-F
Well type:	ROT	Casing dia:	10
Ground el:	56	Well depth:	466
Solid case:	345	Perf case:	Not Reported
Use:	MUN - County		
Use year:	74		
Init water:	Not Reported		
Init head:	0		
Init chlor:	Not Reported		
Init cl:	0		
Test date:	06/03/1996	Test gpm:	1345
Test ddown:	7.0	Test chlor:	34
Test temp:	21.3	Temp unit:	C
Pump gpm:	1750		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	TKB	Pump yr:	77
Draft yr:	76	Head yr:	Not Reported
Maxchl:	06/01/1993	Maxchl yr:	0
Minchl:	01/01/1987	Minchl yr:	0
Bot hole:	-410	Bot solid:	-289
Bot perf:	Not Reported	Spec capac:	192
Pump mgd:	2.520	Draft mgd:	Not Reported
Aquifer:	30102	Tmk:	2-8-017:029
Old aqui:	Not Reported	Aqui code:	30102
Latest hd:	21.75		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1962
Pir:	01/01/1961	Surveyor:	HONOLULU BWS
T:	0		
Pump elev:	-49	Pump depth:	105
Site id:	HI7000000002115		

G32
NE
1/4 - 1/2 Mile
Higher

HI WELLS **HI7000000002114**

Wid:	3-1849-012	Island:	3
Well no:	1849-12	Well name:	Wilder Ave
Old name:	Not Reported	Yr drilled:	1912
Driller:	MCCANDLESS	Quad map:	13
Longitude2:	1574947	Latitude27:	211813
Longitude8:	1574937	Latitude83:	211802
Long83dd:	-157.82694		
Lat83dd:	21.30056		
Gps:	0	Utm:	1
Owner user:	Honolulu BWS	Old number:	36-B

Well type:	ROT	Casing dia:	12
Ground el:	43	Well depth:	430
Solid case:	300	Perf case:	Not Reported
Use:	OBS - Observation		
Use year:	89		
Init water:	Not Reported		
Init head:	0		
Init chlor:	Not Reported		
Init cl:	0		
Test date:	07/12/1999	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	QHB	Pump yr:	Not Reported
Draft yr:	76	Head yr:	Not Reported
Maxchl:	06/01/1993	Maxchl yr:	0
Minchl:	01/01/1987	Minchl yr:	0
Bot hole:	-387	Bot solid:	-257
Bot perf:	Not Reported	Spec capac:	Not Reported
Pump mgd:	Not Reported	Draft mgd:	Not Reported
Aquifer:	30102	Tmk:	2-8-017:029
Old aqui:	Not Reported	Aqui code:	30102
Latest hd:	0		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1912
Pir:	05/30/2008	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000002114		

E33
WNW
1/4 - 1/2 Mile
Higher

HI WELLS **HI7000000002074**

Wid:	3-1850-022	Island:	3
Well no:	1850-22	Well name:	Makiki
Old name:	Not Reported	Yr drilled:	1894
Driller:	AHANA	Quad map:	13
Longitude2:	1575028	Latitude27:	211802
Longitude8:	1575018	Latitude83:	211751
Long83dd:	-157.83833		
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:	32		
Init water:	27.6		
Init head:	27.6		
Init chlor:	61		
Init cl:	61		
Test date:	11/30/1968	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported

Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	27.4
Max chlor:	62	Min chlor:	60
Geology:	Not Reported	Pump yr:	Not Reported
Draft yr:	Not Reported	Head yr:	Not Reported
Maxchl:	01/01/1987	Maxchl yr:	Not Reported
Minchl:	01/01/1987	Minchl yr:	Not Reported
Bot hole:	-505	Bot solid:	-403
Bot perf:	Not Reported	Spec capac:	Not Reported
Pump mgd:	Not Reported	Draft mgd:	Not Reported
Aquifer:	30102	Tmk:	Not Reported
Old aqui:	Not Reported	Aqui code:	30102
Latest hd:	27.4		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1894
Pir:	11/12/2009	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000002074		

G34
NE
1/2 - 1 Mile
Higher

HI WELLS **HI7000000002116**

Wid:	3-1849-014	Island:	3
Well no:	1849-14	Well name:	Wilder Ave. P1
Old name:	Not Reported	Yr drilled:	1961
Driller:	PACIFIC DRLG	Quad map:	13
Longitude2:	1574946	Latitude27:	211813
Longitude8:	1574936	Latitude83:	211802
Long83dd:	-157.82667		
Lat83dd:	21.30056		
Gps:	1	Utm:	0
Owner user:	Honolulu BWS	Old number:	36-E
Well type:	ROT	Casing dia:	10
Ground el:	59	Well depth:	460
Solid case:	343	Perf case:	Not Reported
Use:	MUN - County		
Use year:	74		
Init water:	Not Reported		
Init head:	0		
Init chlor:	Not Reported		
Init cl:	0		
Test date:	06/23/1995	Test gpm:	1231
Test ddown:	4.6	Test chlor:	Not Reported
Test temp:	22.1	Temp unit:	Not Reported
Pump gpm:	1750		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	TKB	Pump yr:	77
Draft yr:	76	Head yr:	Not Reported
Maxchl:	06/01/1993	Maxchl yr:	0
Minchl:	01/01/1987	Minchl yr:	0
Bot hole:	-401	Bot solid:	-284
Bot perf:	Not Reported	Spec capac:	268

Pump mgd:	2.520	Draft mgd:	Not Reported
Aquifer:	30102	Tmk:	2-8-017:029
Old aqui:	Not Reported	Aqui code:	30102
Latest hd:	21.5		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1961
Pir:	01/01/1961	Surveyor:	HONOLULU BWS
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000002116		

35
NNW
1/2 - 1 Mile
Higher

HI WELLS **HI7000000002128**

Wid:	3-1850-019	Island:	3
Well no:	1850-19	Well name:	Makiki
Old name:	Not Reported	Yr drilled:	1890
Driller:	Not Reported	Quad map:	13
Longitude2:	1575019	Latitude27:	211817
Longitude8:	1575009	Latitude83:	211806
Long83dd:	-157.83583		
Lat83dd:	21.30167		
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:	28		
Init water:	30.6		
Init head:	30.6		
Init chlor:	Not Reported		
Init cl:	0		
Test date:	11/30/1968	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	23.6
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	Not Reported	Pump yr:	Not Reported
Draft yr:	Not Reported	Head yr:	Not Reported
Maxchl:	01/01/1987	Maxchl yr:	Not Reported
Minchl:	01/01/1987	Minchl yr:	Not Reported
Bot hole:	-236	Bot solid:	-179
Bot perf:	Not Reported	Spec capac:	Not Reported
Pump mgd:	Not Reported	Draft mgd:	Not Reported
Aquifer:	30102	Tmk:	Not Reported
Old aqui:	Not Reported	Aqui code:	30102
Latest hd:	23.6		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1890
Pir:	11/12/2009	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000002128		

Map ID Direction Distance Elevation		Database	EDR ID Number
36 **WNW** **1/2 - 1 Mile** **Higher**		**HI WELLS**	**HI7000000002076**

Wid:	3-1850-020	Island:	3
Well no:	1850-20	Well name:	Makiki
Old name:	Not Reported	Yr drilled:	1891
Driller:	MCCANDLESS	Quad map:	13
Longitude2:	1575032	Latitude27:	211803
Longitude8:	1575022	Latitude83:	211752
Long83dd:	-157.83944		
Lat83dd:	21.29778		
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:	53		
Init water:	31.0		
Init head:	31		
Init chlor:	56		
Init cl:	56		
Test date:	11/30/1968	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	26.0
Max chlor:	62	Min chlor:	56
Geology:	Not Reported	Pump yr:	Not Reported
Draft yr:	Not Reported	Head yr:	Not Reported
Maxchl:	01/01/1987	Maxchl yr:	Not Reported
Minchl:	01/01/1987	Minchl yr:	Not Reported
Bot hole:	-421	Bot solid:	-361
Bot perf:	Not Reported	Spec capac:	Not Reported
Pump mgd:	Not Reported	Draft mgd:	Not Reported
Aquifer:	30102	Tmk:	Not Reported
Old aqui:	Not Reported	Aqui code:	30102
Latest hd:	26		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1891
Pir:	11/12/2009	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000002076		

37 **SE** **1/2 - 1 Mile** **Lower**		**HI WELLS**	**HI7000000002032**

Wid:	3-1749-003	Island:	3
Well no:	1749-03	Well name:	Kapahulu
Old name:	Not Reported	Yr drilled:	1882
Driller:	COOKE-PEDDLER	Quad map:	13
Longitude2:	1574936	Latitude27:	211734
Longitude8:	1574926	Latitude83:	211723
Long83dd:	-157.82389		
Lat83dd:	21.28972		
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:	74		
Init water:	Not Reported		
Init head:	0		
Init chlor:	Not Reported		
Init cl:	0		
Test date:	01/31/1984	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp 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:	Not Reported
Draft yr:	Not Reported	Head yr:	Not Reported
Maxchl:	01/01/1987	Maxchl yr:	Not Reported
Minchl:	01/01/1987	Minchl yr:	Not Reported
Bot hole:	-720	Bot solid:	Not Reported
Bot perf:	Not Reported	Spec capac:	Not Reported
Pump mgd:	Not Reported	Draft mgd:	Not Reported
Aquifer:	30101	Tmk:	Not Reported
Old aqui:	Not Reported	Aqui code:	30101
Latest hd:	0		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1882
Pir:	01/01/1975	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000002032		

38
West
1/2 - 1 Mile
Higher

HI WELLS **HI7000000002063**

Wid:	3-1750-009	Island:	3
Well no:	1750-09	Well name:	Ala Moana
Old name:	Not Reported	Yr drilled:	1964
Driller:	NAT WHITON	Quad map:	13
Longitude2:	1575036	Latitude27:	211757
Longitude8:	1575026	Latitude83:	211746
Long83dd:	-157.84056		
Lat83dd:	21.29611		
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:	74		
Init water:	Not Reported		
Init head:	0		
Init chlor:	Not Reported		
Init cl:	0		
Test date:	01/31/1984	Test gpm:	550
Test ddown:	2.9	Test chlor:	Not Reported
Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	490	Min chlor:	Not Reported
Geology:	Not Reported	Pump yr:	Not Reported
Draft yr:	Not Reported	Head yr:	Not Reported
Maxchl:	01/01/1987	Maxchl yr:	0
Minchl:	01/01/1987	Minchl yr:	0
Bot hole:	-46	Bot solid:	-14
Bot perf:	Not Reported	Spec capac:	190
Pump mgd:	Not Reported	Draft mgd:	Not Reported
Aquifer:	30102	Tmk:	2-3-017:016
Old aqui:	Not Reported	Aqui code:	30102
Latest hd:	0		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	03/01/1964
Pir:	01/01/1954	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000002063		

39
NW
1/2 - 1 Mile
Higher

HI WELLS **HI7000000002111**

Wid:	3-1850-016	Island:	3
Well no:	1850-16	Well name:	Makiki
Old name:	Not Reported	Yr drilled:	1886
Driller:	Not Reported	Quad map:	13
Longitude2:	1575031	Latitude27:	211813
Longitude8:	1575021	Latitude83:	211802
Long83dd:	-157.83917		
Lat83dd:	21.30056		
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:	40		
Init water:	25.8		
Init head:	25.8		
Init chlor:	53		
Init cl:	53		
Test date:	11/30/1968	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported

Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	27.8
Max chlor:	53	Min chlor:	44
Geology:	Not Reported	Pump yr:	Not Reported
Draft yr:	Not Reported	Head yr:	Not Reported
Maxchl:	01/01/1987	Maxchl yr:	0
Minchl:	01/01/1987	Minchl yr:	0
Bot hole:	-420	Bot solid:	-378
Bot perf:	Not Reported	Spec capac:	Not Reported
Pump mgd:	Not Reported	Draft mgd:	Not Reported
Aquifer:	30102	Tmk:	Not Reported
Old aqui:	Not Reported	Aqui code:	30102
Latest hd:	27.8		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1886
Pir:	11/12/2009	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000002111		

I40
WSW
1/2 - 1 Mile
Lower

HI WELLS **HI7000000002028**

Wid:	3-1750-012	Island:	3
Well no:	1750-12	Well name:	Yacht Harbor 1
Old name:	Not Reported	Yr drilled:	1972
Driller:	Not Reported	Quad map:	13
Longitude2:	1575037	Latitude27:	211732
Longitude8:	1575027	Latitude83:	211721
Long83dd:	-157.84083		
Lat83dd:	21.28917		
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:	Not Reported
Solid case:	Not Reported	Perf case:	Not Reported
Use:	IND - Geothermal, Thermoelectric Cooling, Power De		
Use year:	72		
Init water:	Not Reported		
Init head:	0		
Init chlor:	Not Reported		
Init cl:	0		
Test date:	01/31/1984	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp 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:	Not Reported
Draft yr:	Not Reported	Head yr:	Not Reported
Maxchl:	01/01/1987	Maxchl yr:	Not Reported
Minchl:	01/01/1987	Minchl 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
Aquifer:	Not Reported	Tmk:	2-3-036:039
Old aqui:	Not Reported	Aqui code:	30102
Latest hd:	0		
Cur head:	Not Reported	Cur cl:	18750
Cur temp:	Not Reported	Wcr:	01/01/1967
Pir:	01/01/1954	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000002028		

I41
WSW
1/2 - 1 Mile
Lower

HI WELLS **HI7000000002029**

Wid:	3-1750-013	Island:	3
Well no:	1750-13	Well name:	Yacht Harbor 2
Old name:	Not Reported	Yr drilled:	1972
Driller:	Not Reported	Quad map:	13
Longitude2:	1575037	Latitude27:	211732
Longitude8:	1575027	Latitude83:	211721
Long83dd:	-157.84083		
Lat83dd:	21.28917		
Gps:	0	Utm:	1
Owner user:	Not Reported	Old number:	Not Reported
Well type:	Not Reported	Casing dia:	Not Reported
Ground el:	Not Reported	Well depth:	Not Reported
Solid case:	Not Reported	Perf case:	Not Reported
Use:	IND - Geothermal, Thermoelectric Cooling, Power De		
Use year:	72		
Init water:	Not Reported		
Init head:	0		
Init chlor:	Not Reported		
Init cl:	0		
Test date:	01/31/1984	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp 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:	Not Reported
Draft yr:	Not Reported	Head yr:	Not Reported
Maxchl:	01/01/1987	Maxchl yr:	Not Reported
Minchl:	01/01/1987	Minchl 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
Aquifer:	Not Reported	Tmk:	2-3-036:039
Old aqui:	Not Reported	Aqui code:	30102
Latest hd:	0		
Cur head:	Not Reported	Cur cl:	18750
Cur temp:	Not Reported	Wcr:	01/01/1967
Pir:	01/01/1954	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000002029		

Map ID Direction Distance Elevation		Database	EDR ID Number
42 **WNW** **1/2 - 1 Mile** **Higher**		**HI WELLS**	**HI7000000002073**

Wid:	3-1850-027	Island:	3
Well no:	1850-27	Well name:	Makiki
Old name:	Not Reported	Yr drilled:	1914
Driller:	Not Reported	Quad map:	13
Longitude2:	1575042	Latitude27:	211802
Longitude8:	1575032	Latitude83:	211751
Long83dd:	-157.84222		
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:	63		
Init water:	27.0		
Init head:	27		
Init chlor:	75		
Init cl:	75		
Test date:	11/30/1968	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	85	Min chlor:	52
Geology:	Not Reported	Pump yr:	Not Reported
Draft yr:	Not Reported	Head yr:	Not Reported
Maxchl:	01/01/1987	Maxchl yr:	Not Reported
Minchl:	01/01/1987	Minchl yr:	Not Reported
Bot hole:	-544	Bot solid:	-478
Bot perf:	Not Reported	Spec capac:	Not Reported
Pump mgd:	Not Reported	Draft mgd:	Not Reported
Aquifer:	30102	Tmk:	Not Reported
Old aqui:	Not Reported	Aqui code:	30102
Latest hd:	0		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1914
Pir:	11/12/2009	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000002073		

43 **SE** **1/2 - 1 Mile** **Higher**		**HI WELLS**	**HI7000000002025**

Wid:	3-1749-005	Island:	3
Well no:	1749-05	Well name:	Kapahulu
Old name:	Not Reported	Yr drilled:	1883
Driller:	Not Reported	Quad map:	13
Longitude2:	1574929	Latitude27:	211730
Longitude8:	1574919	Latitude83:	211719
Long83dd:	-157.82194		
Lat83dd:	21.28861		
Gps:	0	Utm:	1
Owner user:	Ung T Y	Old number:	35-
Well type:	Not Reported	Casing dia:	6
Ground el:	8	Well depth:	587
Solid case:	564	Perf case:	Not Reported
Use:	ABN - Sealed		
Use year:	45		
Init water:	24.8		
Init head:	24.8		
Init chlor:	37		
Init cl:	37		
Test date:	01/31/1984	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	24.8
Max chlor:	218	Min chlor:	37
Geology:	Not Reported	Pump yr:	Not Reported
Draft yr:	Not Reported	Head yr:	Not Reported
Maxchl:	01/01/1987	Maxchl yr:	Not Reported
Minchl:	01/01/1987	Minchl yr:	Not Reported
Bot hole:	-579	Bot solid:	-556
Bot perf:	Not Reported	Spec capac:	Not Reported
Pump mgd:	Not Reported	Draft mgd:	Not Reported
Aquifer:	30101	Tmk:	Not Reported
Old aqui:	Not Reported	Aqui code:	30101
Latest hd:	24.8		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1883
Pir:	01/01/1975	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000002025		

I44
WSW
1/2 - 1 Mile
Lower

HI WELLS **HI7000000002030**

Wid:	3-1750-010	Island:	3
Well no:	1750-10	Well name:	Ala Moana
Old name:	Not Reported	Yr drilled:	1967
Driller:	NAT WHITON	Quad map:	13
Longitude2:	1575041	Latitude27:	211733
Longitude8:	1575031	Latitude83:	211722
Long83dd:	-157.84194		
Lat83dd:	21.28944		
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:	74		
Init water:	2.8		
Init head:	2.8		
Init chlor:	13954		
Init cl:	13954		
Test date:	01/31/1984	Test gpm:	600
Test ddown:	0.8	Test chlor:	Not Reported
Test temp:	Not Reported	Temp 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:	Not Reported
Draft yr:	00	Head yr:	Not Reported
Maxchl:	01/01/1987	Maxchl yr:	Not Reported
Minchl:	01/01/1987	Minchl yr:	Not Reported
Bot hole:	-84	Bot solid:	-38
Bot perf:	Not Reported	Spec capac:	750
Pump mgd:	Not Reported	Draft mgd:	Not Reported
Aquifer:	30102	Tmk:	2-3-038:001
Old aqui:	Not Reported	Aqui code:	30102
Latest hd:	0		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1967
Pir:	01/01/1954	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000002030		

45
WSW **HI WELLS** **HI7000000002031**
1/2 - 1 Mile
Lower

Wid:	3-1750-011	Island:	3
Well no:	1750-11	Well name:	Ala Moana
Old name:	Not Reported	Yr drilled:	1967
Driller:	NAT WHITON	Quad map:	13
Longitude2:	1575042	Latitude27:	211734
Longitude8:	1575032	Latitude83:	211723
Long83dd:	-157.84222		
Lat83dd:	21.28972		
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:	74		
Init water:	2.9		
Init head:	2.9		
Init chlor:	13451		
Init cl:	13451		
Test date:	01/31/1984	Test gpm:	550
Test ddown:	0.5	Test chlor:	17680

Test temp:	Not Reported	Temp 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:	Not Reported
Draft yr:	00	Head yr:	Not Reported
Maxchl:	01/01/1987	Maxchl yr:	0
Minchl:	01/01/1987	Minchl yr:	0
Bot hole:	-50	Bot solid:	-32
Bot perf:	Not Reported	Spec capac:	1100
Pump mgd:	Not Reported	Draft mgd:	Not Reported
Aquifer:	30102	Tmk:	2-3-038:001
Old aqui:	Not Reported	Aqui code:	30102
Latest hd:	0		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1967
Pir:	01/01/1954	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000002031		

46
WNW
1/2 - 1 Mile
Higher

HI WELLS **HI7000000002088**

Wid:	3-1850-015	Island:	3
Well no:	1850-15	Well name:	Makiki
Old name:	Not Reported	Yr drilled:	1884
Driller:	MCCANDLESS	Quad map:	13
Longitude2:	1575043	Latitude27:	211808
Longitude8:	1575033	Latitude83:	211757
Long83dd:	-157.8425		
Lat83dd:	21.29917		
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:	27		
Init water:	19.0		
Init head:	19		
Init chlor:	Not Reported		
Init cl:	0		
Test date:	11/30/1968	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	8.0
Max chlor:	48	Min chlor:	Not Reported
Geology:	TKB	Pump yr:	Not Reported
Draft yr:	Not Reported	Head yr:	Not Reported
Maxchl:	01/01/1987	Maxchl yr:	Not Reported
Minchl:	01/01/1987	Minchl yr:	Not Reported
Bot hole:	-639	Bot solid:	-438
Bot perf:	Not Reported	Spec capac:	Not Reported

Pump mgd:	Not Reported	Draft mgd:	Not Reported
Aquifer:	30102	Tmk:	Not Reported
Old aqui:	Not Reported	Aqui code:	30102
Latest hd:	8		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1884
Pir:	11/12/2009	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000002088		

47
NW
1/2 - 1 Mile
Higher

HI WELLS **HI7000000002153**

Wid:	3-1850-008	Island:	3
Well no:	1850-08	Well name:	Makiki
Old name:	Not Reported	Yr drilled:	1882
Driller:	MCCANDLESS	Quad map:	13
Longitude2:	1575035	Latitude27:	211821
Longitude8:	1575025	Latitude83:	211810
Long83dd:	-157.84028		
Lat83dd:	21.30278		
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:	33		
Init water:	11.8		
Init head:	11.8		
Init chlor:	Not Reported		
Init cl:	0		
Test date:	11/30/1968	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	31.9
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	TKB	Pump yr:	Not Reported
Draft yr:	Not Reported	Head yr:	Not Reported
Maxchl:	01/01/1987	Maxchl yr:	Not Reported
Minchl:	01/01/1987	Minchl yr:	Not Reported
Bot hole:	-324	Bot solid:	Not Reported
Bot perf:	Not Reported	Spec capac:	Not Reported
Pump mgd:	Not Reported	Draft mgd:	Not Reported
Aquifer:	30102	Tmk:	Not Reported
Old aqui:	Not Reported	Aqui code:	30102
Latest hd:	31.9		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1882
Pir:	11/12/2009	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000002153		

Map ID Direction Distance Elevation		Database	EDR ID Number
48 **North** **1/2 - 1 Mile** **Higher**		**HI WELLS**	**HI7000000002193**

Wid:	3-1850-023	Island:	3
Well no:	1850-23	Well name:	Makiki
Old name:	Not Reported	Yr drilled:	1899
Driller:	MCCANDLESS	Quad map:	13
Longitude2:	1575003	Latitude27:	211834
Longitude8:	1574953	Latitude83:	211823
Long83dd:	-157.83139		
Lat83dd:	21.30639		
Gps:	0	Utm:	1
Owner user:	Condon M I	Old number:	67-
Well type:	Not Reported	Casing dia:	10
Ground el:	104	Well depth:	194
Solid case:	86	Perf case:	Not Reported
Use:	ABN - Sealed		
Use year:	28		
Init water:	33.0		
Init head:	33		
Init chlor:	47		
Init cl:	47		
Test date:	11/30/1968	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	29.3
Max chlor:	47	Min chlor:	Not Reported
Geology:	Not Reported	Pump yr:	Not Reported
Draft yr:	Not Reported	Head yr:	Not Reported
Maxchl:	01/01/1987	Maxchl yr:	Not Reported
Minchl:	01/01/1987	Minchl yr:	Not Reported
Bot hole:	-90	Bot solid:	18
Bot perf:	Not Reported	Spec capac:	Not Reported
Pump mgd:	Not Reported	Draft mgd:	Not Reported
Aquifer:	30102	Tmk:	Not Reported
Old aqui:	Not Reported	Aqui code:	30102
Latest hd:	29.3		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1899
Pir:	11/12/2009	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000002193		

J49 **SSW** **1/2 - 1 Mile** **Lower**		**HI WELLS**	**HI7000000001993**

Wid:	3-1750-007	Island:	3
Well no:	1750-07	Well name:	Waikiki
Old name:	Not Reported	Yr drilled:	1955
Driller:	SAMSON-SMOCK	Quad map:	13
Longitude2:	1575022	Latitude27:	211713
Longitude8:	1575012	Latitude83:	211702
Long83dd:	-157.83667		
Lat83dd:	21.28389		
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:	74		
Init water:	Not Reported		
Init head:	0		
Init chlor:	Not Reported		
Init cl:	0		
Test date:	01/31/1984	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp 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:	Not Reported
Draft yr:	00	Head yr:	Not Reported
Maxchl:	01/01/1987	Maxchl yr:	Not Reported
Minchl:	01/01/1987	Minchl yr:	Not Reported
Bot hole:	Not Reported	Bot solid:	Not Reported
Bot perf:	Not Reported	Spec capac:	Not Reported
Pump mgd:	Not Reported	Draft mgd:	Not Reported
Aquifer:	30101	Tmk:	2-6-009:009
Old aqui:	Not Reported	Aqui code:	30101
Latest hd:	0		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1955
Pir:	01/01/1954	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000001993		

J50
SSW
1/2 - 1 Mile
Lower

HI WELLS **HI7000000001994**

Wid:	3-1750-008	Island:	3
Well no:	1750-08	Well name:	Waikiki
Old name:	Not Reported	Yr drilled:	1955
Driller:	Not Reported	Quad map:	13
Longitude2:	1575022	Latitude27:	211713
Longitude8:	1575012	Latitude83:	211702
Long83dd:	-157.83667		
Lat83dd:	21.28389		
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:	74		
Init water:	Not Reported		
Init head:	0		
Init chlor:	Not Reported		
Init cl:	0		
Test date:	01/31/1984	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp 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:	Not Reported
Draft yr:	Not Reported	Head yr:	Not Reported
Maxchl:	01/01/1987	Maxchl yr:	Not Reported
Minchl:	01/01/1987	Minchl yr:	Not Reported
Bot hole:	Not Reported	Bot solid:	Not Reported
Bot perf:	Not Reported	Spec capac:	Not Reported
Pump mgd:	Not Reported	Draft mgd:	Not Reported
Aquifer:	Not Reported	Tmk:	Not Reported
Old aqui:	Not Reported	Aqui code:	30102
Latest hd:	0		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1955
Pir:	01/01/1954	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000001994		

51
North
1/2 - 1 Mile
Higher

HI WELLS **HI7000000002197**

Wid:	3-1849-009	Island:	3
Well no:	1849-09	Well name:	Manoa Valley
Old name:	Not Reported	Yr drilled:	1901
Driller:	Not Reported	Quad map:	13
Longitude2:	1574954	Latitude27:	211835
Longitude8:	1574944	Latitude83:	211824
Long83dd:	-157.82889		
Lat83dd:	21.30667		
Gps:	0	Utm:	1
Owner user:	Morgan R S	Old number:	66-
Well type:	Not Reported	Casing dia:	10
Ground el:	154	Well depth:	194
Solid case:	103	Perf case:	Not Reported
Use:	ABN - Sealed		
Use year:	47		
Init water:	37.0		
Init head:	37		
Init chlor:	55		
Init cl:	55		
Test date:	07/12/1999	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported

Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	24.0
Max chlor:	55	Min chlor:	15
Geology:	Not Reported	Pump yr:	Not Reported
Draft yr:	Not Reported	Head yr:	Not Reported
Maxchl:	06/01/1993	Maxchl yr:	Not Reported
Minchl:	01/01/1987	Minchl yr:	Not Reported
Bot hole:	-40	Bot solid:	51
Bot perf:	Not Reported	Spec capac:	Not Reported
Pump mgd:	Not Reported	Draft mgd:	Not Reported
Aquifer:	30102	Tmk:	Not Reported
Old aqui:	Not Reported	Aqui code:	30102
Latest hd:	24		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1901
Pir:	05/30/2008	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000002197		

52
NNE
1/2 - 1 Mile
Higher

HI WELLS **HI7000000002194**

Wid:	3-1849-003	Island:	3
Well no:	1849-03	Well name:	Manoa Valley
Old name:	Not Reported	Yr drilled:	1882
Driller:	Not Reported	Quad map:	13
Longitude2:	1574949	Latitude27:	211834
Longitude8:	1574939	Latitude83:	211823
Long83dd:	-157.8275		
Lat83dd:	21.30639		
Gps:	0	Utm:	1
Owner user:	Pietsch D & L	Old number:	60-
Well type:	Not Reported	Casing dia:	Not Reported
Ground el:	200	Well depth:	980
Solid case:	Not Reported	Perf case:	Not Reported
Use:	ABN - Sealed		
Use year:	53		
Init water:	Not Reported		
Init head:	0		
Init chlor:	Not Reported		
Init cl:	0		
Test date:	07/12/1999	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp 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:	Not Reported
Draft yr:	Not Reported	Head yr:	Not Reported
Maxchl:	06/01/1993	Maxchl yr:	Not Reported
Minchl:	01/01/1987	Minchl yr:	Not Reported
Bot hole:	-780	Bot solid:	Not Reported
Bot perf:	Not Reported	Spec capac:	Not Reported

Pump mgd:	Not Reported	Draft mgd:	Not Reported
Aquifer:	30102	Tmk:	Not Reported
Old aqui:	Not Reported	Aqui code:	30102
Latest hd:	0		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1882
Pir:	05/30/2008	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000002194		

53
NW
1/2 - 1 Mile
Higher

HI WELLS **HI7000000002162**

Wid:	3-1850-007	Island:	3
Well no:	1850-07	Well name:	Makiki
Old name:	Not Reported	Yr drilled:	1882
Driller:	FESSLER	Quad map:	13
Longitude2:	1575035	Latitude27:	211826
Longitude8:	1575025	Latitude83:	211815
Long83dd:	-157.84028		
Lat83dd:	21.30417		
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:	26		
Init water:	42.0		
Init head:	42		
Init chlor:	Not Reported		
Init cl:	0		
Test date:	11/30/1968	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	21.7
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	TKB	Pump yr:	Not Reported
Draft yr:	Not Reported	Head yr:	Not Reported
Maxchl:	01/01/1987	Maxchl yr:	0
Minchl:	01/01/1987	Minchl yr:	0
Bot hole:	-338	Bot solid:	Not Reported
Bot perf:	Not Reported	Spec capac:	Not Reported
Pump mgd:	Not Reported	Draft mgd:	Not Reported
Aquifer:	30102	Tmk:	3-9-010:001
Old aqui:	Not Reported	Aqui code:	30102
Latest hd:	21.7		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1882
Pir:	11/12/2009	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000002162		

Map ID Direction Distance Elevation	Database	EDR ID Number
J54 **SSW** **1/2 - 1 Mile** **Lower**	**HI WELLS**	**HI7000000001989**

Wid:	3-1750-006	Island:	3
Well no:	1750-06	Well name:	Waikiki
Old name:	Not Reported	Yr drilled:	1955
Driller:	SAMSON-SMOCK	Quad map:	13
Longitude2:	1575020	Latitude27:	211709
Longitude8:	1575010	Latitude83:	211658
Long83dd:	-157.83611		
Lat83dd:	21.28278		
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:	74		
Init water:	Not Reported		
Init head:	0		
Init chlor:	Not Reported		
Init cl:	0		
Test date:	01/31/1984	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp 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:	Not Reported
Draft yr:	00	Head yr:	Not Reported
Maxchl:	01/01/1987	Maxchl yr:	Not Reported
Minchl:	01/01/1987	Minchl yr:	Not Reported
Bot hole:	Not Reported	Bot solid:	Not Reported
Bot perf:	Not Reported	Spec capac:	Not Reported
Pump mgd:	Not Reported	Draft mgd:	Not Reported
Aquifer:	30101	Tmk:	2-6-008:034
Old aqui:	Not Reported	Aqui code:	30101
Latest hd:	0		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1955
Pir:	01/01/1954	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000001989		

K55 **SE** **1/2 - 1 Mile** **Higher**	**HI WELLS**	**HI7000000002005**

Wid:	3-1749-012	Island:	3
Well no:	1749-12	Well name:	Kapahulu
Old name:	Not Reported	Yr drilled:	1889
Driller:	Not Reported	Quad map:	13
Longitude2:	1574927	Latitude27:	211720
Longitude8:	1574917	Latitude83:	211709
Long83dd:	-157.82139		
Lat83dd:	21.28583		
Gps:	0	Utm:	1
Owner user:	Char Y T	Old number:	33-
Well type:	Not Reported	Casing dia:	6
Ground el:	12	Well depth:	521
Solid case:	418	Perf case:	Not Reported
Use:	ABN - Sealed		
Use year:	49		
Init water:	19.9		
Init head:	19.9		
Init chlor:	240		
Init cl:	240		
Test date:	01/31/1984	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	24.4
Max chlor:	810	Min chlor:	240
Geology:	Not Reported	Pump yr:	Not Reported
Draft yr:	Not Reported	Head yr:	Not Reported
Maxchl:	01/01/1987	Maxchl yr:	Not Reported
Minchl:	01/01/1987	Minchl yr:	Not Reported
Bot hole:	-509	Bot solid:	-406
Bot perf:	Not Reported	Spec capac:	Not Reported
Pump mgd:	Not Reported	Draft mgd:	Not Reported
Aquifer:	30101	Tmk:	Not Reported
Old aqui:	Not Reported	Aqui code:	30101
Latest hd:	24.4		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1889
Pir:	01/01/1975	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000002005		

K56
SE
1/2 - 1 Mile
Higher

HI WELLS **HI7000000002007**

Wid:	3-1749-013	Island:	3
Well no:	1749-13	Well name:	Kapahulu
Old name:	Not Reported	Yr drilled:	1889
Driller:	Not Reported	Quad map:	13
Longitude2:	1574926	Latitude27:	211721
Longitude8:	1574916	Latitude83:	211710
Long83dd:	-157.82111		
Lat83dd:	21.28611		
Gps:	0	Utm:	1
Owner user:	Whee L Y	Old number:	34-

Well type:	Not Reported	Casing dia:	8
Ground el:	14	Well depth:	500
Solid case:	430	Perf case:	Not Reported
Use:	ABN - Sealed		
Use year:	28		
Init water:	23.0		
Init head:	23		
Init chlor:	216		
Init cl:	216		
Test date:	01/31/1984	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	20.8
Max chlor:	270	Min chlor:	56
Geology:	Not Reported	Pump yr:	Not Reported
Draft yr:	Not Reported	Head yr:	Not Reported
Maxchl:	01/01/1987	Maxchl yr:	Not Reported
Minchl:	01/01/1987	Minchl yr:	Not Reported
Bot hole:	-486	Bot solid:	-416
Bot perf:	Not Reported	Spec capac:	Not Reported
Pump mgd:	Not Reported	Draft mgd:	Not Reported
Aquifer:	30101	Tmk:	Not Reported
Old aqui:	Not Reported	Aqui code:	30101
Latest hd:	20.8		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1889
Pir:	01/01/1975	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000002007		

L57
SE
1/2 - 1 Mile
Higher

HI WELLS **HI7000000002012**

Wid:	3-1749-001	Island:	3
Well no:	1749-01	Well name:	Kapahulu
Old name:	Not Reported	Yr drilled:	1881
Driller:	Not Reported	Quad map:	13
Longitude2:	1574922	Latitude27:	211725
Longitude8:	1574912	Latitude83:	211714
Long83dd:	-157.82		
Lat83dd:	21.28722		
Gps:	0	Utm:	1
Owner user:	Spencer C K	Old number:	27-
Well type:	Not Reported	Casing dia:	6
Ground el:	15	Well depth:	407
Solid case:	Not Reported	Perf case:	Not Reported
Use:	ABN - Sealed		
Use year:	72		
Init water:	22.7		
Init head:	22.7		
Init chlor:	28		
Init cl:	28		
Test date:	01/31/1984	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported

Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	22.9
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	TKB	Pump yr:	Not Reported
Draft yr:	Not Reported	Head yr:	Not Reported
Maxchl:	01/01/1987	Maxchl yr:	0
Minchl:	01/01/1987	Minchl yr:	0
Bot hole:	-392	Bot solid:	Not Reported
Bot perf:	Not Reported	Spec capac:	Not Reported
Pump mgd:	Not Reported	Draft mgd:	Not Reported
Aquifer:	30101	Tmk:	Not Reported
Old aqui:	Not Reported	Aqui code:	30101
Latest hd:	22.9		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1881
Pir:	01/01/1975	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000002012		

L58
SE
1/2 - 1 Mile
Higher

HI WELLS **HI7000000002011**

Wid:	3-1749-011	Island:	3
Well no:	1749-11	Well name:	Kapahulu
Old name:	Not Reported	Yr drilled:	1889
Driller:	Not Reported	Quad map:	13
Longitude2:	1574923	Latitude27:	211723
Longitude8:	1574913	Latitude83:	211712
Long83dd:	-157.82028		
Lat83dd:	21.28667		
Gps:	0	Utm:	1
Owner user:	Dumae S S	Old number:	32-
Well type:	Not Reported	Casing dia:	10
Ground el:	14	Well depth:	475
Solid case:	420	Perf case:	Not Reported
Use:	ABN - Sealed		
Use year:	45		
Init water:	24.0		
Init head:	24		
Init chlor:	47		
Init cl:	47		
Test date:	01/31/1984	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	24.8
Max chlor:	63	Min chlor:	30
Geology:	Not Reported	Pump yr:	Not Reported
Draft yr:	Not Reported	Head yr:	Not Reported
Maxchl:	01/01/1987	Maxchl yr:	Not Reported
Minchl:	01/01/1987	Minchl yr:	Not Reported
Bot hole:	-461	Bot solid:	-406
Bot perf:	Not Reported	Spec capac:	Not Reported

Pump mgd:	Not Reported	Draft mgd:	Not Reported
Aquifer:	30101	Tmk:	Not Reported
Old aqui:	Not Reported	Aqui code:	30101
Latest hd:	24.8		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1889
Pir:	01/01/1975	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000002011		

K59
SE
1/2 - 1 Mile
Higher

HI WELLS **HI7000000002009**

Wid:	3-1749-010	Island:	3
Well no:	1749-10	Well name:	Kapahulu
Old name:	Not Reported	Yr drilled:	1889
Driller:	Not Reported	Quad map:	13
Longitude2:	1574923	Latitude27:	211722
Longitude8:	1574913	Latitude83:	211711
Long83dd:	-157.82028		
Lat83dd:	21.28639		
Gps:	0	Utm:	1
Owner user:	Tsumoto F Y	Old number:	31-
Well type:	Not Reported	Casing dia:	12
Ground el:	13	Well depth:	463
Solid case:	424	Perf case:	Not Reported
Use:	ABN - Sealed		
Use year:	40		
Init water:	23.2		
Init head:	23.2		
Init chlor:	47		
Init cl:	47		
Test date:	01/31/1984	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	24.4
Max chlor:	47	Min chlor:	25
Geology:	Not Reported	Pump yr:	Not Reported
Draft yr:	Not Reported	Head yr:	Not Reported
Maxchl:	01/01/1987	Maxchl yr:	Not Reported
Minchl:	01/01/1987	Minchl yr:	Not Reported
Bot hole:	-450	Bot solid:	-411
Bot perf:	Not Reported	Spec capac:	Not Reported
Pump mgd:	Not Reported	Draft mgd:	Not Reported
Aquifer:	30101	Tmk:	Not Reported
Old aqui:	Not Reported	Aqui code:	30101
Latest hd:	24.4		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1889
Pir:	01/01/1975	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000002009		

Map ID Direction Distance Elevation	Database	EDR ID Number
60 **SSW** **1/2 - 1 Mile** **Lower**	**HI WELLS**	**HI7000000001991**

Wid:	3-1750-014	Island:	3
Well no:	1750-14	Well name:	Hilton Lagoon
Old name:	Not Reported	Yr drilled:	2003
Driller:	BEYLIK DRLG	Quad map:	13
Longitude2:	1575028	Latitude27:	211710
Longitude8:	1575018	Latitude83:	211659
Long83dd:	-157.83833		
Lat83dd:	21.28306		
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 water:	Not Reported		
Init head:	0		
Init chlor:	Not Reported		
Init cl:	18000		
Test date:	01/31/1984	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp 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:	Not Reported
Draft yr:	Not Reported	Head yr:	Not Reported
Maxchl:	01/01/1987	Maxchl yr:	Not Reported
Minchl:	01/01/1987	Minchl yr:	Not Reported
Bot hole:	Not Reported	Bot solid:	Not Reported
Bot perf:	Not Reported	Spec capac:	Not Reported
Pump mgd:	Not Reported	Draft mgd:	Not Reported
Aquifer:	Not Reported	Tmk:	2-6-009:010
Old aqui:	Not Reported	Aqui code:	30101
Latest hd:	0		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1967
Pir:	01/01/1954	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000001991		

K61 **SE** **1/2 - 1 Mile** **Higher**	**HI WELLS**	**HI7000000002006**

Wid:	3-1749-002	Island:	3
Well no:	1749-02	Well name:	Kapahulu
Old name:	Not Reported	Yr drilled:	1881
Driller:	Not Reported	Quad map:	13
Longitude2:	1574924	Latitude27:	211720
Longitude8:	1574914	Latitude83:	211709
Long83dd:	-157.82056		
Lat83dd:	21.28583		
Gps:	0	Utm:	1
Owner user:	Shee Y C	Old number:	28-
Well type:	Not Reported	Casing dia:	6
Ground el:	13	Well depth:	428
Solid case:	Not Reported	Perf case:	Not Reported
Use:	ABN - Sealed		
Use year:	38		
Init water:	Not Reported		
Init head:	0		
Init chlor:	Not Reported		
Init cl:	0		
Test date:	01/31/1984	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp 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:	Not Reported
Draft yr:	Not Reported	Head yr:	Not Reported
Maxchl:	01/01/1987	Maxchl yr:	Not Reported
Minchl:	01/01/1987	Minchl yr:	Not Reported
Bot hole:	-415	Bot solid:	Not Reported
Bot perf:	Not Reported	Spec capac:	Not Reported
Pump mgd:	Not Reported	Draft mgd:	Not Reported
Aquifer:	30101	Tmk:	Not Reported
Old aqui:	Not Reported	Aqui code:	30101
Latest hd:	0		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1881
Pir:	01/01/1975	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000002006		

K62
SE
1/2 - 1 Mile
Higher

HI WELLS **HI7000000001998**

Wid:	3-1749-017	Island:	3
Well no:	1749-17	Well name:	Kapahulu
Old name:	Not Reported	Yr drilled:	1917
Driller:	MCCANDLESS	Quad map:	13
Longitude2:	1574925	Latitude27:	211718
Longitude8:	1574915	Latitude83:	211707
Long83dd:	-157.82083		
Lat83dd:	21.28528		
Gps:	0	Utm:	1
Owner user:	Hawaiian Hotels	Old number:	29-

Well type:	Not Reported	Casing dia:	10
Ground el:	11	Well depth:	468
Solid case:	402	Perf case:	Not Reported
Use:	ABN - Sealed		
Use year:	71		
Init water:	18.5		
Init head:	18.5		
Init chlor:	83		
Init cl:	83		
Test date:	01/31/1984	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	12.7
Max chlor:	700	Min chlor:	83
Geology:	Not Reported	Pump yr:	Not Reported
Draft yr:	Not Reported	Head yr:	Not Reported
Maxchl:	01/01/1987	Maxchl yr:	Not Reported
Minchl:	01/01/1987	Minchl yr:	Not Reported
Bot hole:	-457	Bot solid:	-391
Bot perf:	Not Reported	Spec capac:	Not Reported
Pump mgd:	Not Reported	Draft mgd:	Not Reported
Aquifer:	30101	Tmk:	Not Reported
Old aqui:	Not Reported	Aqui code:	30101
Latest hd:	12.7		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1917
Pir:	01/01/1975	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000001998		

63
North
1/2 - 1 Mile
Higher

HI WELLS **HI7000000002223**

Wid:	3-1850-024	Island:	3
Well no:	1850-24	Well name:	Makiki
Old name:	Not Reported	Yr drilled:	1906
Driller:	Not Reported	Quad map:	13
Longitude2:	1575007	Latitude27:	211841
Longitude8:	1574957	Latitude83:	211830
Long83dd:	-157.8325		
Lat83dd:	21.30833		
Gps:	0	Utm:	1
Owner user:	Lowrey S M	Old number:	68-
Well type:	Not Reported	Casing dia:	10
Ground el:	137	Well depth:	302
Solid case:	256	Perf case:	Not Reported
Use:	ABN - Sealed		
Use year:	24		
Init water:	16.0		
Init head:	16		
Init chlor:	32		
Init cl:	32		
Test date:	11/30/1968	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported

Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	25.6
Max chlor:	50	Min chlor:	32
Geology:	Not Reported	Pump yr:	Not Reported
Draft yr:	Not Reported	Head yr:	Not Reported
Maxchl:	01/01/1987	Maxchl yr:	0
Minchl:	01/01/1987	Minchl yr:	0
Bot hole:	-165	Bot solid:	-119
Bot perf:	Not Reported	Spec capac:	Not Reported
Pump mgd:	Not Reported	Draft mgd:	Not Reported
Aquifer:	30102	Tmk:	Not Reported
Old aqui:	Not Reported	Aqui code:	30102
Latest hd:	25.6		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1906
Pir:	11/12/2009	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000002223		

64
SSW
1/2 - 1 Mile
Lower

HI WELLS **HI7000000001980**

Wid:	3-1750-004	Island:	3
Well no:	1750-04	Well name:	Waikiki
Old name:	Not Reported	Yr drilled:	1950
Driller:	SAMSON-SMOCK	Quad map:	13
Longitude2:	1575024	Latitude27:	211706
Longitude8:	1575014	Latitude83:	211655
Long83dd:	-157.83722		
Lat83dd:	21.28194		
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:	74		
Init water:	Not Reported		
Init head:	0		
Init chlor:	Not Reported		
Init cl:	0		
Test date:	01/31/1984	Test gpm:	230
Test ddown:	1.0	Test chlor:	Not Reported
Test temp:	Not Reported	Temp 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:	Not Reported
Draft yr:	Not Reported	Head yr:	Not Reported
Maxchl:	01/01/1987	Maxchl yr:	0
Minchl:	01/01/1987	Minchl yr:	0
Bot hole:	Not Reported	Bot solid:	Not Reported
Bot perf:	Not Reported	Spec capac:	230

Pump mgd:	Not Reported	Draft mgd:	Not Reported
Aquifer:	30101	Tmk:	2-6-008:034
Old aqui:	Not Reported	Aqui code:	30101
Latest hd:	0		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1950
Pir:	01/01/1954	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000001980		

M65
SW
1/2 - 1 Mile
Lower

HI WELLS **HI7000000001987**

Wid:	3-1750-015	Island:	3
Well no:	1750-15	Well name:	HHV 1
Old name:	Not Reported	Yr drilled:	2005
Driller:	Not Reported	Quad map:	13
Longitude2:	1575034	Latitude27:	211710
Longitude8:	1575024	Latitude83:	211658
Long83dd:	-157.84		
Lat83dd:	21.28278		
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:	05		
Init water:	Not Reported		
Init head:	0		
Init chlor:	Not Reported		
Init cl:	0		
Test date:	01/31/1984	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp 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:	Not Reported
Draft yr:	Not Reported	Head yr:	Not Reported
Maxchl:	01/01/1987	Maxchl yr:	Not Reported
Minchl:	01/01/1987	Minchl yr:	Not Reported
Bot hole:	Not Reported	Bot solid:	Not Reported
Bot perf:	Not Reported	Spec capac:	Not Reported
Pump mgd:	Not Reported	Draft mgd:	Not Reported
Aquifer:	Not Reported	Tmk:	2-3-037:012
Old aqui:	Not Reported	Aqui code:	30101
Latest hd:	0		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	06/03/2005
Pir:	01/01/1954	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000001987		

Map ID Direction Distance Elevation		Database	EDR ID Number
M66 **SW** **1/2 - 1 Mile** **Lower**		**HI WELLS**	**HI7000000001988**

Wid:	3-1750-016	Island:	3
Well no:	1750-16	Well name:	HHV 2
Old name:	Not Reported	Yr drilled:	2005
Driller:	Not Reported	Quad map:	13
Longitude2:	1572034	Latitude27:	211710
Longitude8:	1575024	Latitude83:	211658
Long83dd:	-157.84		
Lat83dd:	21.28278		
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:	05		
Init water:	Not Reported		
Init head:	0		
Init chlor:	Not Reported		
Init cl:	0		
Test date:	01/31/1984	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp 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:	Not Reported
Draft yr:	Not Reported	Head yr:	Not Reported
Maxchl:	01/01/1987	Maxchl yr:	Not Reported
Minchl:	01/01/1987	Minchl yr:	Not Reported
Bot hole:	Not Reported	Bot solid:	Not Reported
Bot perf:	Not Reported	Spec capac:	Not Reported
Pump mgd:	Not Reported	Draft mgd:	Not Reported
Aquifer:	Not Reported	Tmk:	2-3-037:012
Old aqui:	Not Reported	Aqui code:	30101
Latest hd:	0		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	06/03/2005
Pir:	01/01/1954	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000001988		

67 **North** **1/2 - 1 Mile** **Higher**		**HI WELLS**	**HI7000000002231**

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Wid:	3-1850-003	Island:	3
Well no:	1850-03	Well name:	Makiki
Old name:	Not Reported	Yr drilled:	1881
Driller:	Not Reported	Quad map:	13
Longitude2:	1575001	Latitude27:	211844
Longitude8:	1574951	Latitude83:	211833
Long83dd:	-157.83083		
Lat83dd:	21.30917		
Gps:	0	Utm:	1
Owner user:	Honolulu BWS	Old number:	70-
Well type:	Not Reported	Casing dia:	12
Ground el:	160	Well depth:	900
Solid case:	Not Reported	Perf case:	Not Reported
Use:	UNU - Unused		
Use year:	74		
Init water:	Not Reported		
Init head:	0		
Init chlor:	36		
Init cl:	36		
Test date:	11/30/1968	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Temp unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	44	Min chlor:	36
Geology:	Not Reported	Pump yr:	Not Reported
Draft yr:	Not Reported	Head yr:	Not Reported
Maxchl:	01/01/1987	Maxchl yr:	0
Minchl:	01/01/1987	Minchl yr:	0
Bot hole:	-740	Bot solid:	Not Reported
Bot perf:	Not Reported	Spec capac:	Not Reported
Pump mgd:	Not Reported	Draft mgd:	Not Reported
Aquifer:	30102	Tmk:	3-9-010:001
Old aqui:	Not Reported	Aqui code:	30102
Latest hd:	0		
Cur head:	Not Reported	Cur cl:	Not Reported
Cur temp:	Not Reported	Wcr:	01/01/1881
Pir:	11/12/2009	Surveyor:	Not Reported
T:	0		
Pump elev:	Not Reported	Pump depth:	Not Reported
Site id:	HI7000000002231		

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 Zip Code: 96826

Number of sites tested: 2

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	-0.200 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	0.100 pCi/L	100%	0%	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 and 2005 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

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STREET AND ADDRESS INFORMATION

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APPENDIX G

Interview Documentation

OWNER/CLIENT QUESTIONNAIRE

Date of Interview/Questionnaire Completion: February 2, 2013
Name: Greg Hedani on behalf of Kawamura Family Partners, LLC ("Seller")
Status:
Title:
Organization:

Property Location Questions

1. What is the address of the property?

929 Pumehana St.

2. What is the TMK of the property?

1-2-3-028-004-0000

3. If the property is on Maui or Kauai, please attach a TMK map.

General Questions

1. What is the reason why the Phase I is required?

This is a question that should be answered by MJF Development Corp. ("Buyer") as the party requesting the Phase I.

2. What is the current use of the property?

Residential rental units.

3. What type of property transaction is it (sale, purchase, exchange, etc.)?

Sale.

4. Have you engaged a title company or professional to review recorded land title records and lien records?

Yes.

5. What were the results of the title review?
This is a question that should be answered by Buyer since Buyer broker was provided with a copy of the status title report on November 19, 2012, and the Proforma Policy of title insurance on January 29, 2013.

6. Are any services beyond the requirements of Practice E1527 required?

This is a question that should be answered by Buyer.

7. Who is the site contact for the property?

Greg Hedani is Seller's contact person.

8. How can the site contact be reached?

630-6076 (cell)

9. Who is the owner of the property?

Kawamura Family Partners, LLC

10. Who are the occupants of the property?

Residential rental tenants.

11. Do any of the parties to the property transaction have a required standard scope of services?

This is a question that should be answered by Buyer.

12. Other than yourself, what other parties will rely on the Phase I report?

This is a question that should be answered by Buyer.

13. Are there any special terms and conditions that must be agreed upon by the environmental professional?

This is a question that should be answered by Buyer.

14. Do you have any other knowledge or experience with the property that may be pertinent to the environmental professional?

Not to my knowledge, without independent investigation or inquiry.

15) Do you know of any prior environmental investigations or inspections performed at the site or on adjacent properties?

Not to my knowledge, without independent investigation or inquiry.

Landowner Liability Protection Related Questions

(1.) Environmental cleanup liens that are filed or recorded against the site (40 CFR 312.25).

Are you aware of any environmental cleanup liens against the property that are filed or recorded under federal, tribal, state or local law?

Not to my knowledge, without independent investigation or inquiry.

(2) Activity and land use limitations (AULs) that are in place on the site or that have been filed or recorded in a registry (40 CFR 312.26).

Are you aware of any AULs, 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 under federal, tribal, state or local law?

Not to my knowledge, without independent investigation or inquiry.

(3.) Specialized knowledge or experience of the person seeking to qualify for the LLP (40 CFR 312.28).

As the user of this ESA do you have any specialized knowledge or experience related to the property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the property or an

adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?

This is a question that should be answered by Buyer as it will be the user of the ESA.

(4.) Relationship of the purchase price to the fair market value of the property if it were not contaminated (40 CFR 312.29).

Does the purchase price being paid for this property reasonably reflect the fair market value of the property? If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the property?

This is a question that should be answered by Buyer.

(5.) Commonly known or reasonably ascertainable information about the property (40 CFR 312.30).

(a) Do you know the past uses of the property?

No, not to my knowledge, without independent investigation or inquiry.

(b) Do you know of specific chemicals that are present or once were present at the property?

Not to my knowledge, without independent investigation or inquiry.

(c) Do you know of spills or other chemical releases that have taken place at the property?

Not to my knowledge, without independent investigation or inquiry.

(d) Do you know of any environmental cleanups that have taken place at the property?

Not to my knowledge, without independent investigation or inquiry.

(6.) The degree of obviousness of the presence or likely presence of contamination at the property, and the ability to detect the contamination by appropriate investigation (40 CFR 312.31).

As the user of the ESA, based on your knowledge and experience related to the property are there any indicators that point to the presence or likely presence of contamination at the property?

This is a question that should be answered by Buyer as it will be the user of the ESA.

SITE/PROPERTY MANAGER QUESTIONNAIRE

Date of Interview: February 20, 2013
Name: Mabel Kawamura
Status:
Title:
Organization: Kawamura Family Partners, LLC

Questions

1. During what time period were you the site manager of the property?

From January 2000 till present.

2. What type of business did you have at the property?

Rental units.

3. Do you know the past uses of the property?

Rental units.

4. Do you know of specific chemicals that are present or once were present at the property?

Don't know of any chemicals on the site.

5. Do you know of spills or other chemical releases that have taken place at the property?

Don't know of any spills or chemical issues.

6. Do you know of any environmental cleanups that have taken place at the property?

Unaware of any environmental cleanups on site.

7. Do you have any other knowledge or experience with the property that may be pertinent to the environmental professional?

No, no other knowledge or experience.

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.

Appendix F

Archaeological Assessment

T. S. Dye & Colleagues, Archaeologists, Inc.
735 Bishop St., Suite 315, Honolulu, Hawai'i 96813

Archaeological Assessment for the Proposed Pumehana Street Affordable Housing Project

Land of Waikīkī, Kona District, O'ahu Island*
TMK: (1) 2-3-028:004

Carl E. Sholin Nathan J. DiVito Thomas S. Dye, PhD

December 4, 2013

Abstract

At the request of Pumehana Hui LP, T. S. Dye & Colleagues, Archaeologists has completed an archaeological assessment for the proposed Pumehana Street Affordable Housing, located at Waikīkī, Kona District, O'ahu Island. The archaeological assessment included a review of historic documents and archaeological reports within 1 mi. of the proposed Pumehana Street Affordable Housing. Historic documents indicate that the location of the proposed Pumehana Street Affordable Housing was developed as early as 1913. Archaeological studies typically found fill materials overlying former wetlands. These studies yielded three finds of traditional Hawaiian and historic-era burials but generally failed to find habitation or other cultural deposits. Because the proposed Pumehana Street Affordable Housing is located in an area where the State Historic Preservation Division requires archaeological inventory survey, it is recommended that the inventory survey be carried out after demolition of the existing structures, when the full parcel can be investigated.

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2 Background **2**
2.1 Natural Setting 3
2.2 Traditional and Historic Land Use 4
2.3 Previous Archaeology 9
2.4 Nearby Historic Properties 12

3 Summary and Conclusions **14**

*Prepared for Pumehana Hui LP, 16601 Gothard St., Suite F, Huntington Beach, CA 92647.

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4 Previous archaeology map 10

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1 Introduction

At the request of Pumehana Hui LP, T. S. Dye & Colleagues, Archaeologists has completed an archaeological assessment for the proposed Pumehana Street Affordable Housing located at Waikīkī, Kona District, Oʻahu Island (fig. 1). The archaeological assessment included a review of historic documents and archaeological reports within 1 mi. of the proposed Pumehana Street Affordable Housing.

The Pumehana Street Affordable Housing is located at 929 Pumehana Street in the Honolulu neighborhood of Pāwaʻa. This parcel is identified on tax maps as TMK: (1) 2–3–028:004, and is approximately 0.3306 ac. The land is owned by Pumehana Hui LP.

The *project* parcel is currently improved with three structures, including two single-family dwellings and a two-story walk-up apartment building. It is bordered on the north by an automobile parts store, on the south by Algaroba Street, on the east by an automobile repair shop, and on the west by Pumehana Street. As the crow flies, the Pumehana Street Affordable Housing is located 1.3 km north of the Ala Wai Canal, and 3.3 km north of the coast.

2 Background

This archaeological assessment includes the review of historic documents, maps, and archaeological reports on file at the State Historic Preservation Division library, the Hawaii State Library, and the State Bureau of Conveyances. This section describes the physical environment of the project area, surveys what is known about the traditional Hawaiian

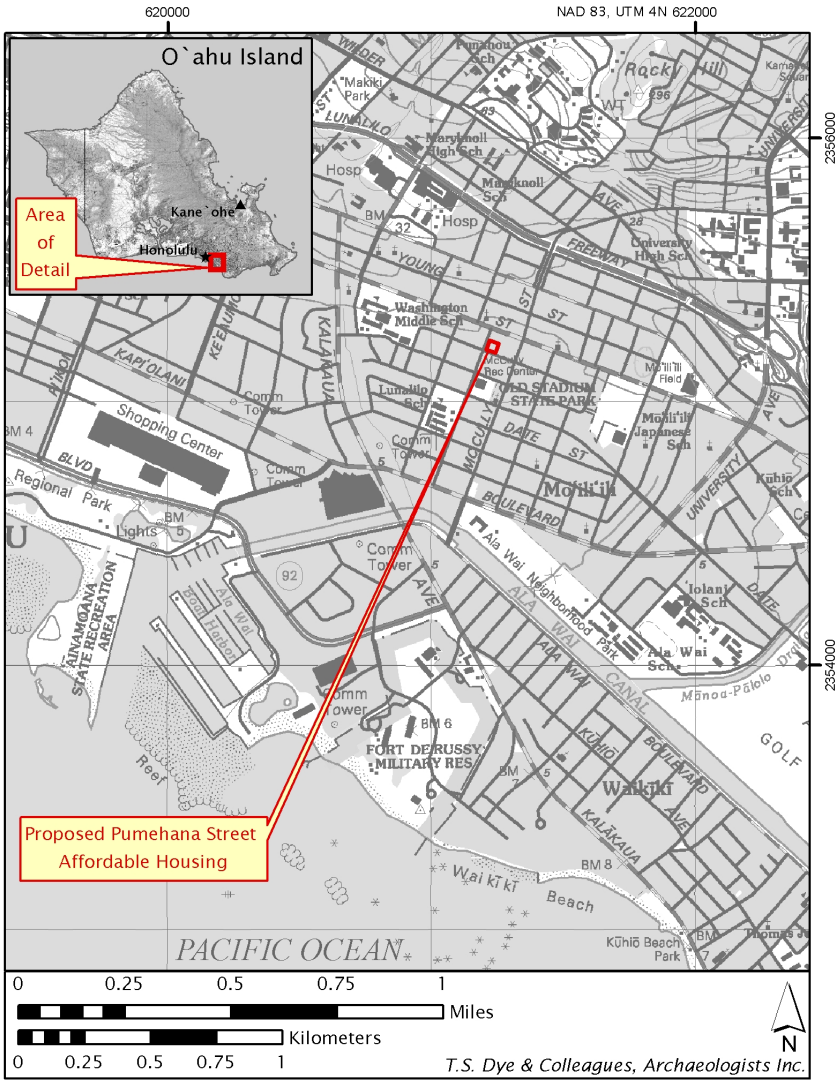

Figure 1: Location of the Pumehana Street Affordable Housing on a 1998 USGS Honolulu quadrangle map.

and early historic-period land use in this part of Waikīkī Ahupuaʻa, and reviews relevant archaeological reports from the region. A field inspection of the proposed site was conducted by T. S. Dye & Colleagues, Archaeologists on November 27, 2013.

2.1 Natural Setting

The proposed Pumehana Street Affordable Housing site lies at an elevation between 0 and 40 ft. above sea level in the *ahupuaʻa* of Waikīkī. The soils underlying the area are

classified as Fill Land, mixed (FL). This land type occurs mostly in Pearl Harbor and in Honolulu, adjacent to the ocean. It consists of areas filled with material dredged from the ocean or hauled from nearby areas, garbage, and general material from other sources.[1] The project area receives 20–30 in. of rain annually [11:56].

The project area presently consists of two historically developed lots containing two houses and a two-story walk-up apartment complex. The ground surface has been entirely modified. The terrain in the project area is flat, and the majority of the parcel is clear of vegetation, save a few trees and lawn grass fronting the houses and the apartment complex.

2.2 Traditional and Historic Land Use

The proposed Pumehana Street Affordable Housing is located at the corner of Pumehana Street and Algaroba Street in the northeast portion of the Pāwaʻa neighborhood. The literal meaning of *Pumehana* is "warmth," and the term *Algaroba* refers to the *kiawe* tree that was introduced to the Hawaiian Islands in the 1820s [22]. While these place names may or may not have any bearing on the historic condition of the area, the place name Pāwaʻa is more telling. Pāwaʻa currently refers to a wedge-shaped neighborhood bounded on the north by the H-1 freeway, on the south by Kapiʻolani Boulevard, on the east by McCully Street, and on the west by Keʻeaumoku Street.[2] According to Pukui et al. [22:182], *Pāwaʻa* literally means "canoe shed," and it has been suggested that canoes were brought to Pāwaʻa by canals and other inland waterways. These waterways are likely related to the mouth of Makiki Stream which is currently channelized parallel with Kalākaua Avenue.

The *ahupuaʻa* of Waikīkī has a long and colorful past, and was once the favored locale for the ruling chiefs of Oʻahu. This may have begun as early as the fourteenth century, when the *aliʻi nui* Maʻilikūkahi transferred the seat of government to Waikīkī [14]. It remained the seat of government until Kamehameha I briefly transferred the government, after unifying the islands, to Kailua-Kona on the island of Hawaiʻi. Much of early Waikīkī, through the time of Maʻilikūkahi in the fourteenth century, was a plantation of irrigated agricultural fields covered in taro and fishponds. This area extended as far inland as Makiki, Mānoa, and Pālolo Valleys. At the time of European *Contact*, Waikīkī was one of the richest and most densely populated areas on Oʻahu [8:8]. One of the first written accounts of Waikīkī comes from Captain George Vancouver who arrived in Hawaiʻi in 1792. He wrote,

> The situation occupied by us in this bay, which the natives call Whyteete [Waikīkī] seemed nearly as eligible as most of the anchoring places these islands are generally found to afford ... On the shores, the villages appeared numerous, large, and in good repair; and the surrounding country pleasingly deep ... with the plains near the sea-side, presented a high degree of cultivation and fertility ... Several portions of land were planted with eddo or taro

[1] USDA Web Soil Survey, accessed November 22, 2013, `http://websoilsurvey.nrcs.usda.gov`.

[2] Justin Fujioka, KITV Report, *Where You Live: Pawaʻa*, October 31, 2013. Accessed via the web on November 26, 2013, `http://www.kitv.com/page/search/htv-hon/news/hawaii/where-you-live/where-you-live-pawaa/-/22719250/22745044/-/1022wje/-/index.html`.

> root, in different stages of inundation; none being perfectly dry, and some under three to six or seven inches under water . . . In this excursion we found the land in a high state of cultivation, mostly under immediate crops of taro; and abounding with a variety of wild fowl, chiefly of the duck kind. [27:Vol. I]

Handy and Handy [14] say that there were 15 fishponds in use at the neighboring area of Kālia as late as 1901. Andrew Bloxam, who arrived in Hawai‘i in 1825 aboard the *HMS Blonde*, described the fishponds of Waikīkī. Bloxam wrote,

> The whole distance to the village of Whyteete [Waikīkī] is taken up with innumerable artificial fishponds extending a mile inland from the shore, in these fish taken by nets in the sea are put, and though most of the ponds are fresh water, yet the fish seem to thrive and fatten. Most of these fish belong to the chiefs, and are caught as wanted. [3:35]

Kanahele writes of the fishponds at Kālia:

> Like the inland ponds, the loko pu‘uone, most of which appear to have been located in the ‘ili of Kālia near the Pilinaio Stream and its estuary, were small enough for haku managers and ‘ohana farmers to handle on their own. The much larger Kālia ponds were not developed until later when the population had increased and chiefly rule had supplanted ‘ohana rule during the time of Kalamakua and Ma‘ilikukahi.

The traditional Hawaiian land use system shifted to private ownership during the *Māhele* which began in the 1840s. In the vicinity of the Pumehana Street Affordable Housing area, eleven Land Court Awards and two Royal Patent Land Grants were awarded (table 1). Royal Patent Land Grant 2870 is likely to have included the Pumehana Street Affordable Housing area. It originally contained 10 ac. of land in Pāwa‘a and was conveyed to L. McCully in 1862. In 1888, these 10 ac., along with other nearby lands, were leased by the Nin Fong Wai Company.[3] Provisions to this lease paint an interesting picture of Pāwa‘a in the late nineteenth century. The lease required Nin Fong Wai Co. to build and maintain a boundary fence and to control for noxious weeds, specifically *lantana*, as well as prohibiting the keeping of livestock and the stockpiling of manure.

The increased arrival of Europeans and Americans to Hawai‘i brought much change to Waikīkī. A growing population meant an increase in development, and new construction began in the area. The numerous ponds that once dotted the landscape soon fell out of cultivation and into disrepair as described by Levi Chamberlain in 1828:

> Our path led us along the borders of extensive plats of marshy ground, having raised banks on one or more sides, and which were once filled with water,

[3]The *Hawaiian Star* reported in 1893 that the Nin Fong Wai Co. paid over $10,000 in taxes; however, the newspaper didn't state what kind of enterprise Nin Fong Wai Co. ran. The newspaper report also stated that the company had an annexationist political leaning. Accessed Dec. 1, 2013, `http://evols.library.manoa.hawaii.edu/bitstream/handle/10524/22513/1893061701.pdf?sequence=1`.

Table 1: Nearby Land Court Awards

Land Court Award	Royal Patent	Grantee	Year
6716	5698	Haumea	1853
8245:05	–	John Ii Kauhaki	?
660	103	G. P. Judd	1847
2017:02	3344	Ohule	?
10479	3962	Naukana	1848
8441	–	G. L. Kapeau	?
8534	–	G. L. Kapeau	1848
6235	4391	C. Kapaakea	1848
8513	–	Keoni Ana	?
6489	4519	Kahihiwa	1862
3721:B2	–	Makuaole	1856

> and replenished abundantly with esculent fish; but now overgrown with tall rushes waving in the wind. The land all around for several miles has the appearance of having once been under cultivation. I entered into conversation with the natives respecting this present neglected state. They ascribed it to the decrease of population. [5]

The once beautiful and impressive system of irrigation had become what some in the community considered an eyesore and a possible health hazard. In the 1870s, the influence of westerners on Waikīkī was apparent. With the growing trade and tourism, a number of westerners saw the need and potential for the development of hotels and permanent residences [7].

Soon, it was argued that something had to be done about the condition of the old ponds. In 1896, Act 61 of the session Laws was passed; it required landowners of wetlands to create dry landscapes in the interest of public health [1:15]. Not long after, the idea of in-filling the ponds and fields of Waikīkī and surrounding neighborhoods began to take shape.

The twentieth century saw a new face put on Waikīkī. In 1921, the Waikīkī Reclamation Project began [19]. The Dillingham Construction Company worked on this project between 1921 and 1929. It consisted of dredging the entire length of the Ala Wai Canal. The dredged material was then used as *fill* over a large portion of Waikīkī but was mainly used to fill in the many ponds and terraces, thus making the previous "swamp land" usable. Filling during this time period is very likely to also have extended into the new residential areas of Pāwaʻa and Moʻiliʻili.

This shift in the land use of Pāwaʻa is reflected in the Land Court Application maps from the early twentieth century. The parcel first appears in its present configuration on the Territory of Hawaii Land Court Application 279, Map 1 (fig. 2). This map and its accompanying certificate of title defines the subject parcel as part of lands owned in fee-simple by the Guardian Trust Co. Ltd.[4] In addition to a description of Guardian Trust

[4] Land Court Application 279, Certificate of Title 593 on file at the Hawaiʻi State Bureau of Conveyances Land Court vault.

Co. holdings, the title also includes a table of 37 leases ranging in time from 1 to 5 years, and between 2 and 350 dollars. It also describes an easement which passed through the Lot 4 portion of the subject parcel:

> An easement for drainage for the adjoining lands owned by Agnes H. B. Judd, George R. Carter, S. G. Wilder, Mary H. S. Davis, Hawaiian Trust Company, Limited, Administrator with the will annexed of the estate of Charles W. Booth and Marjorie M. Booth, minors, through an unobstructed water course crossing course 45 of the premises described in said map 1 to the present culvert on Kalakaua Avenue said water course to have a width of not less than 5 feet and a depth not less than 3 feet. As mentioned in transfer certificate of title No. 3,362 to which reference is hereby made.[5]

The land court map also illustrates various physical characteristics of the parcel at this time. It is bordered on the west and south by two defined corridors that would later become Pumehana Street and Algaroba Street (fig. 2). Also, several line features crossed through Lots 3 and 4. One separates Lots 3 and 4, and is likely to be the drainage easement described above. Another crosses Lot 3 at an angle and appears to be a fence-line. A third crosses Lot 4 transversely, and appears to be a distribution canal for cultivated fields to the southwest.

In 1914, the title to the entire area of the subject parcel was transferred to Matsukichi Kawamura and his wife Tasuta Kawamura. Title to this land was transferred in two parts: Lot 3 and Lot 4.[6] Both lots were held by Matsukichi and Tasuta Kawamura until the mid-twentieth century. By the mid-1920s, the entire area of Pāwaʻa was developed as residential lots from what had formerly been agricultural lands. This change in land use is illustrated in Land Court Application 279, Map 4 (fig. 3). The two bordering easements on the earlier Land Court map became formalized as streets: C Street on the west, which would later be named Pumehana, and Algaroba Street on the south. These easements connected to other newly developed streets forming a residential grid. Also, the drainage easement that cut though the subject parcel was not illustrated on the map. The record is unclear as to whether or not the drainage canal was still present on the ground at this time. A later transfer of title, from 1952, explicitly described this easement as a legal right of access; however, it may or may not have corresponded to an existing geographic feature.

Development of the subject parcel occurred in 1922 when permits for four structures were issued.[7] These structures appear on a 1927 Sanborn fire insurance map from 1927. This map illustrates the two existing houses on Lot 3, as well as two houses on Lot 4 which no longer exist.

The neighborhood was affected during the 1941 Japanese attack on Oʻahu military

[5] Certificate of Title 593.

[6] Certificate of Title 1455 and 3362.

[7] City and County of Honolulu, Department of Planning and Permitting website, accessed November 18, 2013, `http://dppweb.honolulu.gov/DPPWeb/Default.aspx?PossePresentation=BuildingSignPermitSearch`.

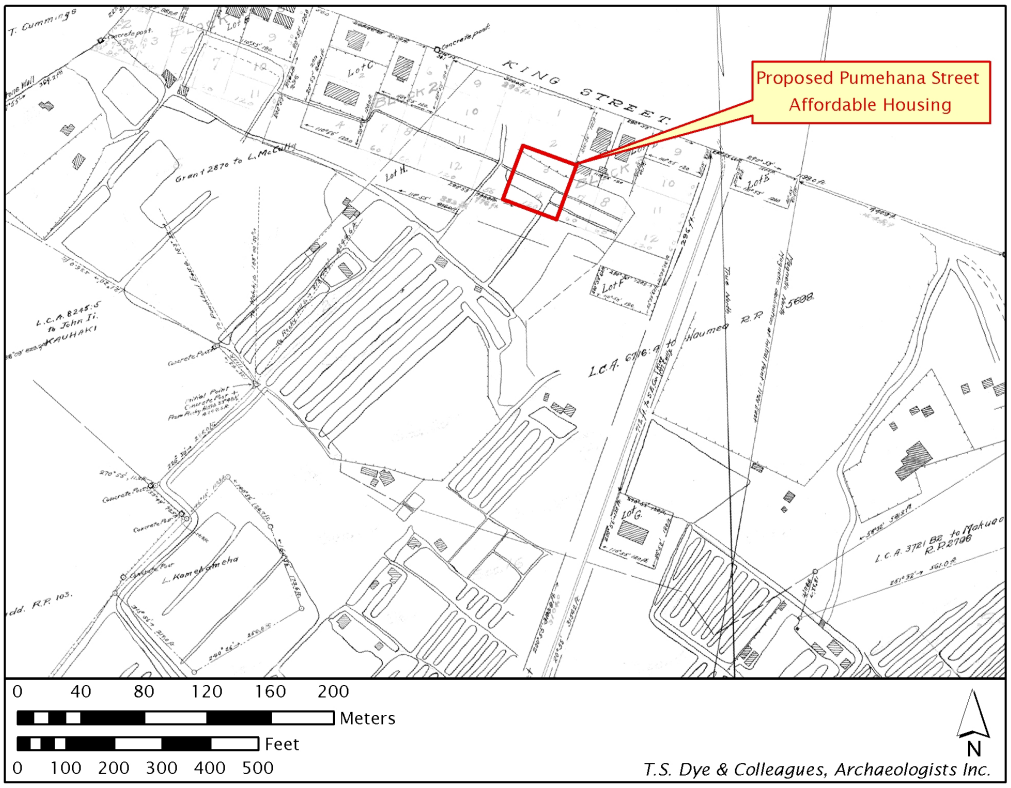

Figure 2: The Pumehana Street Affordable Housing area on a portion of the Land Court Application 279, Map 1, March 1913.

installations when an incendiary bomb was dropped on a house at 734 McCully Street. This event occurred only six blocks from the subject parcel.[8]

In February of 1952, both Lots 3 and 4 were deeded to ten persons under a single certificate of title: Takeo Kawamura and wife Elsie Okino, Fred Haruo Kawamura and wife Fumiko Segawa, James Tsutae Kawamura and wife Yoshie Sodetani, Edith Kawamura, Wallace Toshio Kawamura and wife Mabel Etsuko, and Michael Satoru Kawamura.[9] Presumably, these individuals are Matsukichi and Tasuta Kawamura's children and their spouses. A month later, another certificate of title was issued to the same ten people; this title referred specifically to Lot 3. It is unclear how the new title affected the arrangement between the parties. It is clear, however, that the entire Pumehana Street Affordable Housing area remained under the same ownership.

[8]Transcription of the *Honolulu Star-Bulletin 2nd Extra*, *Hawaiian Star*, Vol. XLVII, No. 15359, December 7, 1941. Accessed via the web on November 26, 2013, `http://freepages.history.rootsweb.ancestry.com/~keller/news/work/index.html`.

[9]Certificate of Title 51540.

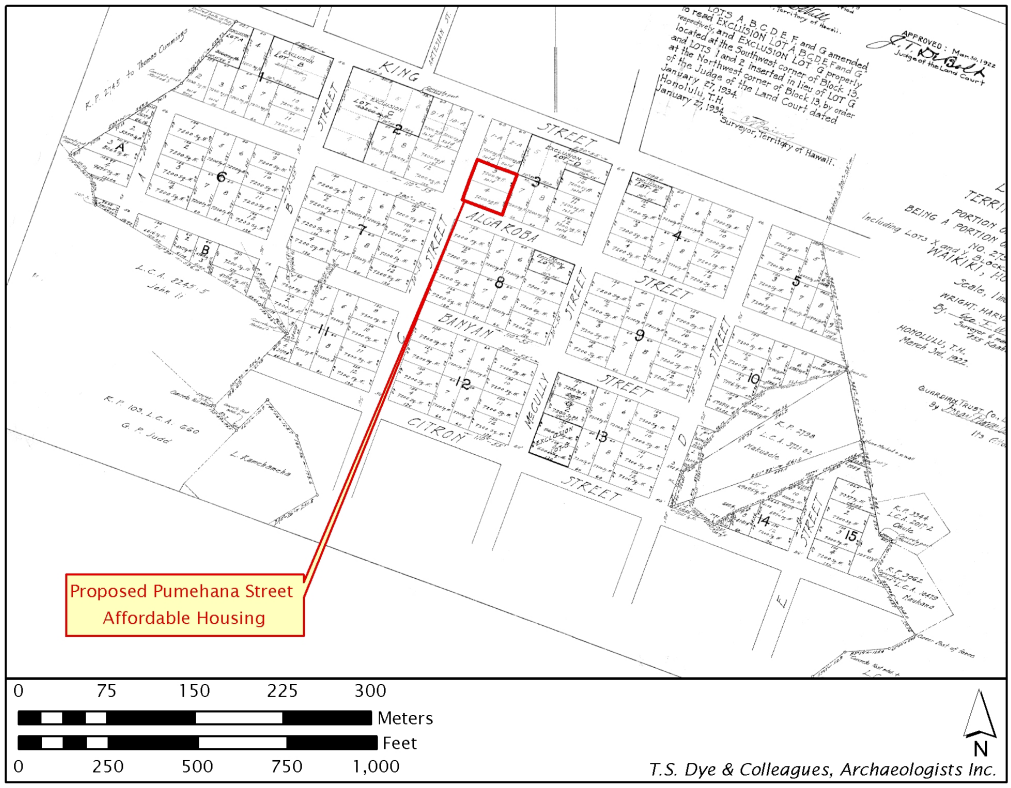

Figure 3: The Pumehana Street Affordable Housing area on a portion of the Land Court Application 279, Map 4, 1922.

Eight years later, in 1960, the two-story apartment complex was constructed on Lot 4. Presumably, the two houses on Lot 4 were demolished at that time.

The title to the property remained in the names of the ten members of the Kawamura clan who were granted it in 1952. In 1988, they transferred the title of this property to the entity *Kawamura Family Partners*. This entity became *Kawamura Family Partners LLC* in 2012. In 2013, the entire Pumehana Street Affordable Housing area was transferred to *Pumehana Hui Limited Partnership*, the current property owner.

2.3 Previous Archaeology

The majority of archaeological investigations undertaken in the Waikīkī area have occurred during the last 20 years. However, archaeological reports associated with Waikīkī Ahupuaʻa extend back to more than a century ago when human remains were discovered on the James B. Castle property in 1901 [10]. Given the extensive archaeological literature associated with the *ahupuaʻa* of Waikīkī, the following will only provide a summary of

archaeological investigations in the immediate vicinity of the project area. No archaeological reports have been found for the project parcel; however, several archaeological investigations have been conducted in the area.

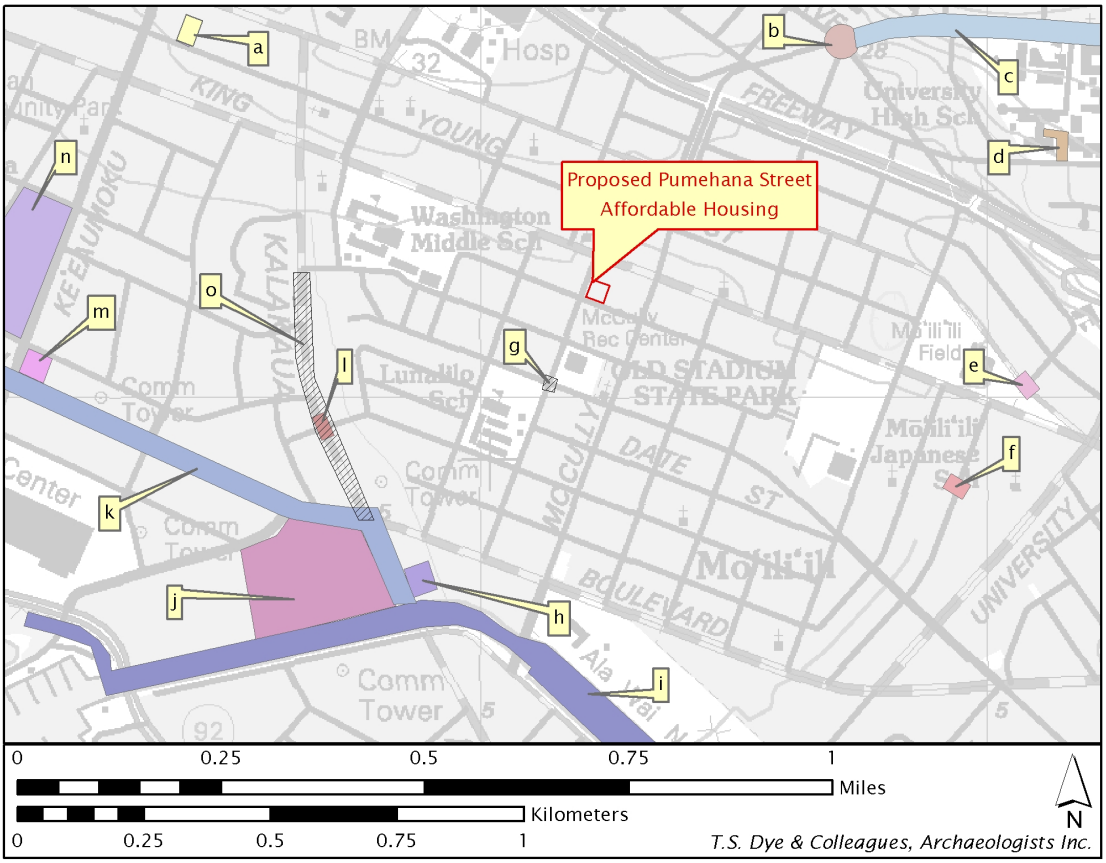

Figure 4: Previous archaeological investigations in the vicinity of the Pumehana Street Affordable Housing project area, on a portion of the 1998 USGS Honolulu Quadrangle: *a*, Chiogioji and Hammatt [6]; *b*, Bath [2]; *c*, Dey and Hammatt [9]; *d*, Yamasato et al. [29]; *e*, Runyon and Hammatt [23]; *f*, Chaffee and Spear [4]; *g*, Winieski [28]; *h*, Sholin and Dye [24]; *i*, Petrey et al. [21]; *j*, Hammatt and Shideler [12], and Hammatt and Shideler [13]; *k*, O'Leary and Hammatt [20]; *l*, Runyon and Hammatt [23]; *m*, Hunkin et al. [15]; *n*, Sinoto [25], and McElroy [18]; *o*, LaChance and Hammatt [16].

In December of 1988, State Archaeologist Joyce Bath recovered a single set of human skeletal remains unearthed during improvements to the Circle K at 2030 Wilder Avenue (fig. 4, *b*). The burial was interpreted as being *pre-contact* and the osteological analysis indicated that the remains were from a middle-aged female of Polynesian ancestry [2].

In 1994, an archaeological and historical assessment of the Hawaii Convention Center

(fig. 4, *j*) was conducted by Paul H. Rosendahl, Inc. and subsurface testing of the area was recommended [17]. Later, in 1995, Cultural Surveys Hawaii excavated a total of 10 backhoe trenches and 7 soil cores within the parcel and concluded that due to the swampy environment, the potential for finding intact deposits or human remains was low [12]. No traditional properties or artifacts were documented during the project. Possible fishpond sediments from Loko Kuwili, located west of the Convention Center, were encountered in the westernmost trench and data recovery was recommended to further determine the nature and *chronology* of the sediments. In 1996, during data recovery, another set of sediment samples were taken for paleoenvironmental analysis and indicated that the sediments observed were not from Loko Kuwili, but rather represented a marshland environment [13]. Following the findings no further work was conducted.

Also in 1994, Scientific Consulting Services conducted an archaeological assessment and field inspection of four lots on Hausten Street in the Moʻiliʻili neighborhood [4] (fig. 4, *f*). No historic properties were identified during the project.

In 1998, while conducting excavations for a water main installation, human remains were inadvertently discovered at the intersection of Citron and Pumehana Street, which is located two blocks south of the current project area [28] (fig. 4, *g*). The remains consisted of scattered disarticulated bone fragments and no burial pit was observed. No coffin remains, artifacts of cultural patrimony, or any other artifacts were observed or collected during the project.

Aki Sinoto Consulting conducted an archaeological assessment for the Walmart/Sam's Club development area located along Keʻeaumoku Street in 2000 [25] (fig. 4, *n*). In 2002, an archaeological monitoring plan was developed for the project [26]. Archaeological monitoring was conducted from 2002 to 2004 [18]. A total of 64 sets of human remains were recovered from six different areas within the parcel and represent sites 50–80–14–6516, –6661, and –6662. The burials are believed to be from the pre-contact and early historic periods. This is the largest burial complex in the surrounding area of the project parcel.

In 2004, archaeological monitoring was conducted for emergency sewer line repairs along Kapiʻolani Boulevard [20] (fig. 4, *k*). A total of five 60 cm deep trench excavations were monitored. Only fill materials were encountered and no cultural materials were collected during the project.

Cultural Surveys Hawaii conducted a literature review and field inspection of a parcel located at 1426 Young Street in 2005 [6] (fig. 4, *a*). No historic properties were identified during the project.

In 2007, Cultural Surveys Hawaii conducted archaeological monitoring for traffic control signal excavations at the intersection of Beretania and Kaialiu street [23] (fig. 4, *e*). No cultural deposits or historic properties were identified during the project.

Also in 2007, Cultural Surveys Hawaii conducted archaeological monitoring for traffic control signal work at the intersection of Kalakaua Avenue and Fern Street [23]. Stratigraphic profiles from trenches excavated showed that historic and/or modern fill deposits extended between 77 and 90 cm below surface in the electrical trenches and were underlain by natural sediments when exposed. Two deeper trenches, extending to 1.8 m below

surface, exposed similar fill deposits overlying a natural sediment of sandy *clay* loam near the *water table*. No cultural deposits were identified in any of the natural sediments found.

In 2008, Cultural Surveys Hawaii conducted archaeological monitoring for an emergency sewer bypass within the Ala Wai Canal, *site* 50–80–14–9757 [21] (fig. 4, *i*). Only disturbed sediments and fill materials were observed. No cultural deposits or historic properties were identified during the project.

Also in 2008, archaeological monitoring of the Punahou Water Systems Improvements project was conducted by Cultural Surveys Hawaii [9] (fig. 4, *c*). No cultural deposits or historic properties were identified during the project due to previous disturbance caused by utility installation and general grading of the area.

In 2009, archaeological monitoring of electrical upgrades for Castle Memorial Hall at University High School was conducted by Pacific Consulting Services [29] (fig. 4, *d*). A total of four backhoe trenches were monitored and no significant cultural deposits or historic properties were identified during the project.

T. S. Dye & Colleagues, Archaeologists conducted an archaeological assessment for the Plaza at Waikiki Assisted Living Center in 2012 [24] (fig. 4, *h*). A pedestrian survey of the project area was conducted and five backhoe trenches were excavated. No cultural deposits or historic properties were identified during the project.

In May of 2013, Cultural Surveys Hawaii conducted archaeological monitoring for the Kalakaua Avenue Sewer Rehabilitation project [16] (fig. 4, *o*). Fill soils were observed in most of the project area and no cultural deposits or historic properties were identified during the project.

In June of 2013, Cultural Surveys Hawaii conducted an archaeological inventory survey of the Walgreens Kapiʻolani Redevelopment project [15] (fig. 4, *m*). A total of 15 backhoe trenches were excavated during the project and two historic properties were identified. The first *historic property*, an addition to site 50–80–14–6636, a remnant wetland deposit, was identified in all 15 backhoe trenches. The second historic property, site 50–80–14–7431, was the structural remnants of a 1950s-era building and was documented in four of the backhoe trenches excavated. No significant cultural deposits or native Hawaiian artifacts were collected or documented during the project.

2.4 Nearby Historic Properties

The proposed Pumehana Street Affordable Housing complex is not located within an historic district, but is located near a number of historic properties listed on the Hawaiʻi Register of Historic Places. The *significance* of these properties is summarized below.

Ala Wai Canal, site 50–80–14–9757 is listed on the Hawaiʻi Register of Historic Places (7/17/1992) under Criterion A for its contribution to the history of Waikīkī. The canal is a 2 mi. long waterway that forms the boundary between Moʻiliʻili and Waikīkī. It is significant for the pivotal role it played in the development of the Waikīkī District. The dredging of the canal, which began in 1921 and completed in 1928, made a significant contribution to the development of the state's tourism-based economy. The project parcel is located approximately one-half mile *mauka* of

the Ala Wai Canal.

Ala Wai Clubhouse, site 50-80-14-1388 is located at the corner of McCully Street and Kapiʻolani Boulevard less than one-half mile south of the project parcel. The clubhouse is listed on the Hawaiʻi Register of Historic Places under Criterion A for its association with the development of the City and County of Honolulu parks in the 1930s. The building, built in 1937, is architecturally significant as its design is typical of the period and reflects the work of Harry Sims Bent, a prominent Honolulu architect. It is one of several buildings included in the City and County of Honolulu Art Deco Parks and Playgrounds.

Sacred Heart Church, site 50-80-14-1377 is located at 1701 Wilder Avenue *mauka* of the project parcel. The church is listed on the Hawaiʻi and National Registers of Historic Places. It is significant under Criteria A and C as an example of a gothic revival church and for its use of concrete block which mimetically perpetuates the look of rusticated stone. Also, it is significant for its association with the development of the Roman Catholic Church in the Makiki area and its stained glass windows. The church was designed by architect E. A. P. Newcomb and built in 1913. It is a two-story church with a cruciform plan dominated by an outset, rectangular bell tower. The chancel end terminates with an octagonal apse.

Central Union Church, site 50-80-14-9024 is located at 1660 South Beretania Street, northwest of the project parcel. The church is listed on the Hawaiʻi Register of Historic Places. Part of the church complex, the Preschool Nursery Court Building, is significant under Criterion B for its association with the Dillingham family, who purchased the property in 1879 and had the building as part of their residence until Central Union Church purchased the property in 1922. The Sanctuary Building (the main church; dedicated in 1924) and the Atherton Chapel (dedicated in 1949) are significant under Criteria A and C as exceptional examples of Colonial Revival church architecture adapted to the local tropical region of Honolulu. Cram & Ferguson and Emory & Webb designed the Sanctuary Building, and Mark Potter designed the Atherton Chapel. The architecture was intended to recall the church's New England heritage. The church has two stories with a clerestory level and is rectangular in plan. It features a front-facing gable roof, portico with four rounded columns topped by Ionic capitals, and a centered bell tower and steeple above the narthex. The chapel is in a similar style. Also, the site is significant for its connection with the Congregational Church's influence in Hawaiʻi.

Church of the Crossroads, site 50-80-14-9749 is located at 1212 University Avenue, east of the project parcel. The church is listed on the Hawaiʻi and National Registers of Historic Places. It is significant under Criteria A and C for its historic associations and as a building complex representative of the search for a regional architectural style in Hawaiʻi in the 1930s. It is also a significant design of architect Claude Stiehl. The church features patterned concrete blocks and three monkey pod wood doors and it is cruciform in plan.

Castle Memorial Hall, site 50-80-14-9753 is located at 1776 University Avenue as part of the University Laboratory School (a.k.a. UH Lab) complex. In that block it is located just *mauka* of Dole Street, northeast of the project parcel. Castle Memorial

Hall is listed on the Hawai'i Register of Historic Places under Criteria A and C as a good example of a building adapted to the Hawaiian climate, and as a successful adaptation of a primarily domestic style of architecture used for a school building. The building was designed by Mark Potter and constructed in 1941. It consists of one story and is H-shaped in plan, with a high roof and overhanging eaves.

The residence at 1519 Oliver St., site 50-80-14-9835 is located *mauka* of the project parcel at TMK: (1) 2-8-013:082. The house is listed on the Hawai'i Register of Historic Places under Criterion C as a typical example of the Craftsman Bungalow style in this area. The Craftsman Bungalow style was once very prevalent in Honolulu because of its ease of construction, aesthetic appeal, and appropriateness to Hawaiian weather. The residence at 1519 Oliver St. was constructed in 1926 and is one of few remaining examples of this style of architecture.

The Kohatsu Residence, a.k.a. the Taira Residence, site 50-80-14-9003 is located at 1651 Young St., northwest of the project parcel. The residence is listed on the Hawai'i Register of Historic Places. It is significant under Criterion C because it is one of few historic homes built before 1920 that still exists in the area; it gives a glimpse of the Pāwa'a area as a small residential community of settlers and immigrants. The house was constructed in 1912 and designed in the Craftsman Bungalow style, with a slight Victorian influence. This single-story residence is elevated on perimeter rock walls and has a single-pitch hip roof with overhanging eaves.

3 Summary and Conclusions

A review of historic documents and archaeological reports within 1 mi. of the proposed Pumehana Street Affordable Housing indicates that the project location is likely to have been peripheral to wetland agricultural fields in traditional Hawaiian times. During the historic era, drainage canals were found here. Houses were built on the project parcel in the 1920s. In the 1960s, two of these homes were demolished to make way for a small apartment complex. The project parcel remained under the ownership of the Kawamura family for a century before they granted it to Pumehana Hui LP in 2013.

Fifteen archaeological studies have been conducted within 1 mi. of the proposed Pumehana Street Affordable Housing. These studies have typically found fill sediments overlying natural wetland sediment deposits. Traditional Hawaiian and historic-era human remains were discovered in three locations, the closest of which is two blocks south at the corner of Citron and Pumehana Streets, where disarticulated and secondarily deposited human remains were inadvertently discovered in 1998. Archaeological investigations in the vicinity of the proposed Pumehana Street Affordable Housing have generally failed to identify habitation or other cultural deposits.

The proposed Pumehana Street Affordable Housing is located in an area where the State Historic Preservation Division requires archaeological inventory survey. The archaeological assessment indicates that the likelihood of finding significant subsurface

historic properties at the proposed Pumehana Street Affordable Housing is relatively low. However, the type of historic property most likely to be found is human remains. It is recommended that the archaeological inventory survey be carried out after demolition of the existing structures. In this way, the foundations of the proposed Pumehana Street Affordable Housing can be fully investigated to determine the presence or absence of human remains and potentially significant cultural deposits.

Glossary

chronology The assigning of dates to given events, objects or, by inference, to units of stratification.

clay Fine earth particles less than 0.002 mm.

Contact A period in Hawaiian history marked by the arrival of Captain James Cook in 1778 and characterized by the social changes that eventually brought about the end of traditional Hawaiʻi.

fill Any sediment deposited by any agent so as to fill or partly fill a valley, sink, or other depression.

historic property According to Hawaiʻi Administrative Rules §13-198-2, an "historic property" is any building, structure, object, district, area, or site, including underwater site, that is significant in the history, architecture, archaeology, or culture of the state of Hawaiʻi, its communities, or the nation.

lantana A historically introduced shrub, *Lantana camara*.

pre-contact Prior to AD 1778 and the first written records of the Hawaiian Islands made by Captain James Cook and his crew.

project The archaeological investigation, including laboratory analyses and report preparation. See also *undertaking*.

significance A quality of a historic property that possesses integrity of location, design, setting, materials, workmanship, feeling, and association. The qualities are set out in SHPD administrative rule §13-275-6, *Evaluations of Significance*.

site The fundamental unit of archaeological investigation, a location that exhibits material evidence of past human activity.

undertaking Any action with the potential for an adverse effect on significant historic properties. See also project.

water table Locus of points in soil water at which the pressure is equal to atmospheric pressure.

Hawaiian Terms

ahupuaʻa Traditional Hawaiian land division, usually extending from the uplands to the sea.

aliʻi nui Principal chief.

ʻili A land section, next in importance to *ahupuaʻa*, and usually a subdivision of an *ahupuaʻa*.

kiawe The algaroba tree, *Prosopis* sp., a legume from tropical America, first planted in Hawaiʻi in 1828.

loko Pond, lake, pool.

loko puʻuone A fishpond formed at least partially by a sand bar.

Māhele The mid-nineteenth century land division responsible for the introduction of fee simple land title in Hawaiʻi.

mauka Inland, upland, toward the mountain.

ʻohana Family, relative, kin group.

Abbreviations

ac. A unit of land area equal to 4,840 square yards (0.405 hectare).

cm The centimeter, a derived unit of length in the International System of Units, equal to 10^{-2} m. See also m.

in. A unit of linear measure equal to one twelfth of a foot (2.54 cm).

km The kilometer, a derived unit of length in the International System of Units, equal to 10^{3} m. See also m.

m The meter, a base unit of length in the International System of Units, equal to the length of the path traveled by light in vacuum during a time interval of 1/299,792,458 of a second.

USDA A federal government agency whose mission is to provide leadership on food, agriculture, natural resources, and related issues based on sound public policy, the best available science, and efficient management. Archaeologists in Hawaiʻi typically describe sediments according to standards established by the agency.

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Appendix G

Traffic Impact Analysis Report (TIAR)

OHANA HALE APARTMENTS

HONOLULU, HAWAII

TRAFFIC IMPACT ANALYSIS

Final Report

Prepared For

Coastal Rim Properties, Inc.
Honolulu, Hawaii

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EXECUTIVE SUMMARY

This traffic impact analysis report identifies the potential transportation impacts associated with the proposed Ohana Hale apartment project, to be located at the corner of Pumehana and Algaroba Streets in Honolulu, Hawaii. The project site currently contains 17 apartments. The proposed project would construct a 180-unit multi-story apartment building, including a parking garage built into the bottom floors of the building.

Scope of Work:

In total, this traffic study includes a traffic impact analysis of operations at five intersections during typical weekday AM and PM peak hours. The following intersections were analyzed in this study:

1. McCully Street / Beretania Street;
2. McCully Street / Young Street;
3. Pumehana Street / King Street;
4. McCully Street / King Street; and
5. McCully Street / Algaroba Street.

The traffic scenarios evaluated as part of this traffic study are:

- Existing Traffic Conditions;
- Future without Project Conditions (Year 2020); and
- Future with Project Traffic Conditions (Year 2020).

An evaluation of potentially significant project impacts has also been performed for all modes of travel (vehicle, pedestrian, bicycle and transit).

Analysis Assumptions:

The traffic analysis is based upon the methodologies within the 2010 *Highway Capacity Manual*. The software package Synchro (version 8) was used to perform the intersection analysis within this report.

A few adjustments were made to the lane configurations of some study intersections, due to either unique intersection configurations that were not able to be analyzed due to limitations within the analysis methodologies under the *2010 Highway Capacity Manual* (*HCM*) or to better reflect observed traffic operations. See Section 2.4 of this report for more information about these adjustments.

Existing Conditions:

Existing conditions utilize existing traffic volumes at the study intersections. Existing traffic volume data was collected in November 2013.

Traffic Operations:

The four signalized intersections were found to operate at either LOS B or LOS C, while operations of the lone stop-controlled intersection (Pumehana / King) were at an overall LOS A with side-street operations of LOS D (AM) and LOS F (PM).

Note: It must be emphasized that the *2010 HCM* level of service methodology assumes random arrivals of King Street traffic at Pumehana Street. It does not give credit for the gaps in traffic created by the upstream traffic signals at Kalakaua Avenue, Punahau Street and Pawaa Lane. Observations of traffic at the Pumehana / King intersection in November 2013 indicate much less delay than the calculated values. Also, the *2010 HCM* can only analyze up to a three-lane approach. King has four lanes. The analysis therefore conservatively increases the traffic per lane on King, thus reducing the capacity of the right turn movement

Future without Project Conditions:

Future Growth Forecasts:

Future growth (Year 2020) was forecasted using a growth rate of 1% per year over 7 years. This growth rate was applied to all traffic movements at the study intersections.

Traffic Operations:

Traffic operations under Future without Project conditions at the four signalized intersections remained at either LOS B or LOS C. Levels of service at the lone stop-controlled intersection remained unchanged from Existing Conditions.

Future with Project Conditions:

Scenario Definition:

Future with Project Condition volumes are the sum of the Future without Project Condition volumes with the net new project traffic.

Project Definition:

The project consists of 180 new affordable apartments on a site that currently has 17 apartments. The project driveway would be located off of Algaroba Street near Pumehana Street, and would lead to an internal parking garage.

Project Trip Generation:

The project would generate an estimated 921 daily trips, with 70 trips during the AM peak hour (13 in, 57 out) and 86 trips during the PM peak hour (57 in, 29 out). This estimate incorporates credit for the existing 17 apartments on the project site, a 10% reduction for walking/bicycling, a 5% reduction for use of transit, and use of conservative trip generation rates for an apartment.

Project Trip Distribution and Assignment:

Trip distribution for the project has been derived based upon the relative level of existing traffic on the surrounding street network. The project trips were then assigned along the study street network using that distribution. See Section 4.3 for more details regarding the project trip distribution.

Traffic Operations:

Traffic operations under Future without Project conditions at the four signalized intersections remained at either LOS B or LOS C. Levels of service at the lone stop-controlled intersection would remain at an overall LOS A but side-street operations would be LOS E (AM) and LOS F (PM). Again, the calculated side street level of service is conservative.

Project Impacts and Recommended Improvements:

Intersections:

There are no project impacts at the study intersections. No improvements are recommended at the study intersections.

No improvements are recommended at the intersection of Pumehana and Algaroba Streets, i.e. adjacent to the project site. Traffic volumes at this intersection would not meet the Manual on Uniform Traffic Control Devices (MUTCD) traffic signal warrants.

Pedestrian:

Sidewalks are recommended to be added along the project frontages of both Pumehana and Algaroba Streets, including an Americans With Disabilities (ADA) curb ramp at the intersection corner, in order to facilitate anticipated pedestrian activity generated by the project. When combined with the existing sidewalk along the eastern frontage of Pumehana Street near King Street, this additional sidewalk would create a continuous sidewalk on the eastern side of the entire block between Algaroba and King Streets. Implementation of this recommendation would be the responsibility of the project.

In the long-term, the City and County of Honolulu should consider completing the sidewalk discontinuity along Algaroba Street, specifically along the northern frontage of the roadway between Pumehana and McCully Streets. The project's proposed sidewalk along its frontage of Algaroba Street would constitute its contribution towards the elimination of the discontinuity.

A new crosswalk is recommended across the northern Pumehana Street approach to its intersection with Algaroba Street for use by children walking to/from King William Lunalilo Elementary School, which is located three blocks south of this intersection.

Due to its distance from the school, no new school crossing signs would be necessary at this crosswalk. The Manual on Uniform Traffic Control Devices (MUTCD), 9th Edition, only requires such signs adjacent to a school or along established school pedestrian routes.

Bicycle:

There are no project impacts upon the area bicycle network. No new on-street bicycle infrastructure is recommended.

Bicycle racks (or equivalent) should be installed, either in front of or inside the project building (the latter within either the parking garage or the first-floor lobby), consistent with City standards.

Transit:

The project would not represent an impact upon the area transit system. No transit improvements are recommended.

On-Site Parking:

The proposed project parking garage would provide 197 parking spaces, one space fewer than required by city standards. This is not considered an impact for two reasons: 1) many residents and visitors would walk, bicycle or take transit to access the project site; and 2) the project parking garage will also provide two additional loading spaces for use by residents and maintenance/repair vehicles.

On-Street Parking:

On-street parking is currently prohibited in the westbound direction of Algaroba Street (including the project frontage). Although on-street parking is currently allowed in the eastbound direction, its presence – combined with the narrowness of the street – results in through traffic operations similar to a "yield street." Yet, the addition of the project traffic to the relatively low traffic volumes along Algaroba Street would not rise to the level that would require any prohibition of eastbound on-street parking. In addition, the project site's internal parking garage and the residents and visitors that use non-automotive transportation to access the project site would minimize on-street parking demand. Therefore, the project would not impact on-street parking in the surrounding neighborhood.

Project Access:

The project access onto Algaroba Street would operate within acceptable levels. As a very low number of vehicles would turn left into the project site, on-street vehicle queuing at the project access will be minimized and not impact traffic operations along the project frontage.

It is recommended that adequate sight distance be provided at the project driveway. Assurance of this situation is the responsibility of the project applicant.

Category	Potential Impact	Recommendation	Responsibility
Vehicular Transportation	None	None	None
Pedestrian Circulation	Discontinuous sidewalks near project site	Add sidewalks along project frontage of Pumehana and Algaroba Streets	Project Applicant
	Lack of ADA curb ramp at project intersection	Add an ADA curb ramp at the corner of Pumehana / Algaroba fronting the project site	Project Applicant
	Lack of crosswalk striping across Pumehana St.	Add crosswalk striping across north approach of Pumehana / Algaroba intersection	Project Applicant
Bicycle Circulation	Lack of project bicycle racks	Add bicycle racks to either parking garage or inside lobby	Project Applicant
Transit Usage	None	None	None
On-Site Parking	None	None	None
On-Street Parking	None	None	None
Project Access	Sight Distance at Project Access	Ensure adequate sight distance is provided at project access	Project Applicant

EXHIBIT ES-1
Summary of Recommended Improvements

1 INTRODUCTION

The proposed Ohana Hale apartment project would be located in Honolulu, Hawaii, at the corner of Pumehana and Algaroba Streets. The project site currently contains 17 apartments. The proposed project would construct a 180-unit multi-story apartment building, including a parking garage built into the bottom floors of the building. **Exhibit 1** shows the location of the study project, while **Exhibit 2** shows the proposed project site plan.

The purpose of this Traffic Impact Analysis (TIA) is to evaluate the potential traffic impacts that may result from the study project; this includes potential impacts to multiple modes of transportation – vehicular travel, pedestrian, bicycle, and transit. The TIA presents the results from a series of analyses performed to determine the existing traffic conditions and how traffic conditions would change with the implementation the study project and future traffic growth.

1.1 Project Description

The project would include 180 affordable apartment units within a single multi-story building. On-site parking would be included within a parking garage comprising the lower stories of the building, with the apartments on the upper stories.

Project access to the on-site parking garage would be via a single driveway off of Algaroba Street, which borders the project site to the south.

1.2 Project Area

The project site is located one block west of McCully Street and one block south of King Street. The Interstate H1 freeway is located approximately one-quarter mile to the north of the project site. The nearest H1 interchanges to the project site are at Punahau Street and University Avenue. Refer to **Exhibit 2** for details of the local access road network serving the study project site.

1.3 Scope of Work

The scope of work for this traffic study was developed in conjunction with staff at the City and County of Honolulu Department of Planning and Permitting to identify the potential traffic impacts that may be associated with the development of the study project. Intersections were selected for analysis based on the potential for the project to impact the facility. The purpose of this analysis is therefore to verify if the project would represent a significant impact upon any of the study intersections, and if so, what level of improvement would be required to mitigate that impact.

The intersections comprising the analyzed study area were identified in conjunction with staff at the City and County of Honolulu. Beyond the limits of the study area, the project trips disperse onto multiple local streets. As the distance from the project increases the number of trips considered reduces and the distribution assumptions are less reliable.

In total, this traffic study includes a traffic impact analysis of operations at five intersections during typical weekday AM and PM peak hours. Recommendations for improvements have been made where warranted by identified potential transportation-related impacts.

The following intersections were analyzed in this study:

1. McCully Street / S. Beretania Street;
2. McCully Street / Young Street;
3. Pumehana Street / S. King Street;
4. McCully Street / S. King Street; and
5. McCully Street / Algaroba Street.

The traffic scenarios evaluated in this traffic study were selected to test the potential traffic impacts from the project itself. These evaluations also include projected future traffic growth from local and regional sources within Honolulu that would add traffic to the study intersections. See Chapter 3 for more information regarding the derivation of the future traffic growth within the study area.

The specific traffic scenarios evaluated as part of this traffic study are:

- Existing Traffic Conditions;
- Future without Project Conditions (Year 2020);
- Future with Project Conditions (Year 2020).

Traffic forecasts for this study were developed based upon the study area street system, including the location of the project access points upon the street system and the prevalence of impediments to quick and efficient vehicle travel (including stop signs and other traffic controls, posted speed limits, and conflicting pedestrian and bicycle traffic). Peak hour trips generated by each of the projects are estimated using trip generation rates published by the Institute of Transportation Engineers (ITE), 9th Edition.

1.4 Traffic Operation Evaluation Methodologies

The following paragraphs describe the methodologies utilized in this analysis to evaluate the operations of all of the study intersections and roadway segments. All of the analysis is based upon the *2010 Highway Capacity Manual* methodologies.

1.4.1 Intersection Operational Analysis

Intersection traffic operations were evaluated based on the Level of Service (LOS) concept. LOS is a qualitative description of an intersection and roadway's operation, ranging from LOS A to LOS F. Level of service "A" represents free flow un-congested traffic conditions. Level of service "F" represents highly congested traffic conditions with what is commonly considered unacceptable delay to vehicles on the road segments and at intersections. The intermediate levels of service represent incremental levels of congestion and delay between these two extremes.

Intersection operations were evaluated using technical procedures documented in the *2010 Highway Capacity Manual (HCM*). These procedures vary, depending upon the type of intersection control (traffic signal, all-way stop, one- and two-way stop, etc.) For signalized intersections, average control delay per vehicle is utilized to define intersection level of service. Delay is dependent on a number of factors including the signal cycle length, the roadway capacity (number of travel lanes) provided on each intersection approach and the traffic demand. **Appendix A1** shows the relationship between vehicle delay and the signalized intersection level of service categories. The Synchro software program (version 8) was utilized to model the traffic impact of the different development scenarios and to calculate signalized and un-signalized intersection levels of service.

At one-way stop controlled intersections, the operating efficiency of vehicle movements that must yield to through movements are analyzed. The level of service for vehicle movement on the controlled approaches is based on the distribution of gaps in the major street traffic stream and driver judgment in selecting gaps. The methodology assumes the frequency and size of these gaps is random; no credit is provided for gaps created by the operations of upstream traffic signals. **Appendix A2** shows the relationship between the vehicle delay and level of service for two-way stop controlled intersections. The *2010 HCM* calculates the level of service of the minor street approaches. Using this data, an overall intersection level of service was calculated. Both are reported in this study because traffic on the minor street approaches has the lowest priority of right-of-way at the intersection and are the most critical in terms of delay.

Note that some of the lane configurations at the study intersections were modified to reflect observed operations and/or configurations that are more compatible with the *2010 HCM*. More specific information about these adjustments can be found within Section 2.4 of this report.

1.4.2 Modeling of Right Turns

All of the signalized study intersections allow right turns on red (RTOR), and these right turns can have an effect on the intersection LOS calculations. However, the *2010 HCM* methodologies do not directly incorporate RTOR operations. Therefore, to be conservative, this analysis does not include any RTOR at any of the signalized study intersections. The results of the intersection analyses can thus be seen as reflecting a "worst case" scenario, as the effect of vehicles turning right on red on the intersection operations were not directly accounted for.

2 EXISTING TRAFFIC CONDITIONS

This chapter presents a description of the existing road network, existing traffic volumes, intersection levels of service, and an overview of traffic flow conditions within the study area under existing traffic conditions.

2.1 Existing Traffic Network

Regional access to the study project site is provided by Interstate H1, South King Street, South Beretania Street, and McCully Street. Other area streets include Young Street, Pumehana Street, and Algaroba Street. A brief description of each street in the study road network follows, with Interstate H1 first, and then the remaining roadways in alphabetical order.

Interstate H1 is an east-west state freeway within the island of Oahu and the City and County of Honolulu, connecting the eastern and western ends of the island via downtown Honolulu and Honolulu International Airport. In the vicinity of the project, Interstate H1 is a six-lane freeway with a speed limit of 45 miles per hour (MPH).

Algaroba Street is a two-lane, east-west street within a residential neighborhood south of King Street. No bicycle lanes are provided along this street, and sidewalks are only provided near McCully Street. Parking is allowed only in the eastbound direction; parking is prohibited in the westbound direction. There is no posted speed limit on Algaroba Street; the speed limit is presumed to be is 25 MPH.

South Beretania Street is a one-way, east-west arterial street within Honolulu. In the vicinity of the project site, Beretania is three lanes in width, with parking prohibited on both sides of the street. Sidewalks are present along both sides of the street, but no bike lanes are present. The speed limit on Beretania Street is 30 MPH.

South King Street is a one-way, east-west arterial street within Honolulu. In the vicinity of the project site, King Street is four lanes in width, with on-street parking along both side of the street. Sidewalks are also present along both sides of the street, but no bicycle lanes are present. The speed limit on King Street is 30 MPH.

McCully Street is a north-south arterial roadway in Honolulu. In the vicinity of the project, sidewalks are present along the roadway. Although no bicycle lanes are present along McCully Street, it is signed as a bicycle route. The speed limit on McCully Street is 25 MPH.

Pumehana Street is a one-way, one-lane, north-south street within a residential neighborhood south of King Street. Parking is allowed along the eastern side of the street. Sidewalks are discontinuous along much of the street, and no bicycle lanes are present. There is no posted speed limit on Pumehana Street; it is presumed that the speed limit is 25 MPH.

Young Street is a two-lane roadway in Honolulu. It is located between Beretania and King Streets. Sidewalks are discontinuous along the street. Although it is signed as a bicycle route, Young Street does not have any striped bicycle lanes. Parking is allowed on both sides of the street. The speed limit on Young Street is 25 MPH.

2.2 Existing Transit Systems

The City and County of Honolulu, in conjunction with Oahu Transit Services, Inc., operates TheBus, the public transit system within the city. A number of local and regional bus routes traverse the study area.

Bus stops within the study area include the following locations:

- Westbound Beretania Street, just east of McCully Street – Routes 1, 1L 6
- Eastbound King Street, just east of McCully Street – Routes 1, 1L, 6

Routes 1 and 1L have a joint frequency of between roughly 5-15 minutes on weekdays and roughly 15-30 minutes on weekends. Route 6 has a frequency of between roughly 15-30 minutes on weekdays and approximately every 30 minutes on weekends.

2.3 Existing Traffic Data

To establish existing traffic flow conditions, new traffic counts were conducted at the five study intersections on Tuesday, November 19, 2013 during the weekday AM (i.e. 6:30 – 8:30 am) and PM (i.e. 3:30 – 5:30 pm) peak hours. From the peak period traffic counts, the AM and PM peak hour turning movement volumes were identified. Each intersection was analyzed at its individual peak hour. The intersection traffic volumes were then balanced between adjacent intersections along the arterial corridors, to account for variations in the count volumes caused by on-street parking, mid-block driveways and other minor variations in traffic. The existing peak hour traffic volumes are presented on **Exhibit 3**.

The following discussion provides an evaluation of operating conditions for the study intersections under existing traffic conditions.

2.4 Adjustments to Intersection Lane Configurations

Three different types of adjustments have been made to the lane configurations of the study intersections, each for varying reasons. These adjustments are described below.

2.4.1 Adjustments due to Intersection Configuration

The first set of adjustments was made at the McCully Street / Beretania Street intersection. The north leg of the study intersection is comprised of three separate approaches – two one-way frontage roads and the two-way mainline approach of McCully Street, the latter of which is a bridge over Interstate H1. In the northbound direction of the intersection, traffic in the leftmost through lane proceeds onto the bridge, while the rightmost through lane must proceed onto the rightmost frontage road. Observations in November 2013 at the intersection found that virtually no traffic proceeded onto the frontage road, and that northbound drivers in the rightmost through

lane would merge into the leftmost through lane within the block preceding the intersection. This led to no traffic utilizing the rightmost through lane and all through traffic using the leftmost through lane. To better reflect these operations, the McCully / Beretania intersection has been analyzed as having only a single northbound through lane.

As to the southbound approach, traffic proceeding off of the McCully Street bridge is allowed to proceed both through and to the right. Traffic on the southbound frontage road is only allowed to turn right once it reaches the intersection; however, traffic on the frontage road can use a short connector to merge into the southbound McCully Street bridge traffic and thus proceed southbound on McCully. To model this approach, it has been analyzed by consolidating the southbound traffic from both the bridge and frontage road into a single approach and placing that traffic into separate through and right turn lanes.

2.4.2 Adjustment for Compatibility with 2010 Highway Capacity Manual

The second adjustment was made at the Pumehana Street / King Street intersection, whose traffic control is one-way stop control (i.e. stop sign on Pumehana Street and free-flow conditions on King Street). The King Street approach to this intersection has a total of four through lanes. The *2010 HCM* methodologies do not support analysis of one-way stop controlled intersections where any approach has more than three lanes, as is the case with the Pumehana / King intersection. Therefore, the intersection has been analyzed as having only three through lanes on King Street. Also, per the *2010 HCM* methodologies, this analysis assumes random arrivals for traffic entering this intersection, with no credit given for gaps created by upstream traffic signals. The resulting delays and levels of service would therefore reflect a conservative analysis of intersection operations.

2.4.3 Adjustments for Observed Right-Turn Operations

The final set of adjustments was made to the Young and Algaroba intersection approaches to McCully Street, which each have a single through lane on each approach. Observations at both intersections in November 2013 found that, on both approaches to Young Street and the westbound approach to Algaroba Street, the single lane was essentially functioning as two lanes, allowing vehicles to make concurrent right turns while adjacent traffic was making left and through movements. Therefore, on these approaches, the operational analysis includes an exclusive right turn lane along with the current striped single lane. This adjustment thus better reflects current operations at these intersections.

2.5 Existing Conditions Intersection Operations

Existing conditions AM and PM intersection levels of service are summarized on **Exhibit 4**. The LOS calculation sheets for existing traffic conditions can be found in **Appendix B**.

Four of the five study intersections are currently signalized, while one intersections is one-way stop-controlled. Please refer to **Exhibit 4A** for detail of the type of traffic control at each intersection.

The four signalized study intersections currently operate at either LOS B or C under Existing conditions. The Pumehana / King intersection operates at an overall LOS A with side street operations conservatively estimated at LOS D and LOS F.

3 FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2020)

This section describes the analysis results of the study intersection operations under Future traffic conditions without the study project developed. The Future without Project traffic condition is defined as traffic conditions roughly seven years beyond existing conditions, or the Year 2020.

3.1 Derivation of Future Traffic Volumes

Traffic projections for the Future without Project Condition were developed using a growth rate above existing volumes of 1% per year over seven years (i.e. 1% per year for the seven years between 2013 and 2020), or 7% total, as approved by City staff. Therefore, a 7% total growth in existing volumes was added to the existing volumes to create Future without Project Condition volumes.

Exhibit 5 contains the Future without Project traffic volumes at the study intersections.

3.2 Future without Project Traffic Conditions

Exhibit 4 tabulates corresponding morning and evening peak hour levels of service, the details of which are presented in **Appendix C**.

All of the signalized study intersections would continue to operate at LOS B or LOS C under Future without Project conditions. The Pumehana / King intersection would continue to operate at the same levels of service as under Existing conditions.

4 FUTURE WITH PROJECT CONDITIONS (YEAR 2020)

This section describes the analysis results of the study intersection operations under Future with Project traffic conditions. The Future with Project scenario is defined as traffic conditions roughly seven years beyond existing conditions, or the Year 2020, and includes trips from the study project.

4.1 Derivation of Cumulative Plus Project Traffic Volumes

Future with Project volumes include both the future growth projected under Future Without Project conditions (see Chapter 3 for more information), plus the trips generated by the study project (see below).

4.2 Project Trip Generation

The project includes 180 new apartment units in a multi-story building. The project would replace the existing 17 apartments currently located on the project site. Project access would be via a single driveway off of Algaroba Street just east of Pumehana Street, which would connect into a parking garage internal to the site.

Exhibit 6 summarizes the estimated project trip generation. This estimate uses trip rates published in 2012 by the Institute of Transportation Engineers in *Trip Generation Manual*, 9th Edition. Credit has been taken for the existing apartment units on the site and the likely walking and transit trips by residents, all of which would reduce the potential overall vehicular trip generation of the project. This includes a 10% overall reduction for walking trips and 5% overall reduction for transit trips.

As cited within **Exhibit 6**, the project is estimated to generate a net 921 daily vehicle trips, with 70 trips (13 in, 57 out) during the AM peak hour and 86 trips (57 in, 29 out) during the PM peak hour.

Note: This trip generation estimate uses the more general trip generation rates for apartments versus lower rates that are more typically used for multi-story apartment buildings such as the project. Therefore, this estimate represents a somewhat conservative estimate of the potential trip generating characteristics of the project.

4.3 Project Trip Distribution and Assignment

Trip distribution defines the origins and destinations of all trips to and from a project site. Trip distribution for the project has been derived based upon the relative level of existing traffic on the surrounding street network.

The trip distribution for the project is shown on **Exhibit 7**, alongside the project trip assignment, and is also repeated on the following page:

The project trip distribution would be as follows:

To/From North:	15%
McCully Street – 15%	
To/From South:	15% (inbound);
McCully Street – 13%	13% (outbound)
Pumehana Street – 2% (inbound only)	
To/From East:	33%
Beretania Street – 33% (inbound only)	
King Street – 33% (outbound only)	
To/From West:	35% (inbound);
Beretania Street – 25% (outbound only)	37% (outbound)
King Street – 25% (inbound only)	
Algaroba Street – 5% inbound, 7% outbound	
Young Street – 5%	
TOTAL:	100%

Note that as many of the streets in the project vicinity are one-way – e.g. King, Beretania and Pumehana Streets – direct access to the site is slightly circuitous. The project trip assignment within **Exhibit 7** reflects this circuitousness.

4.4 Future with Project Traffic Conditions

The traffic that would be generated by the study project was added to the Future without Project volumes to create Future with Project traffic conditions. Future with Project morning and evening peak hour turning volumes are illustrated on **Exhibit 8**. **Exhibit 4** tabulates corresponding morning and evening peak hour levels of service, the details of which are presented in **Appendix D**.

As under Future without Project Conditions, operations of the four signalized study intersections under Future with Project Conditions would continue to operate at LOS B and LOS C. The Pumehana / King intersection would operate at LOS E (AM) and LOS F (PM), again, a conservative estimate.

5 PROJECT IMPACTS AND RECOMMENDED IMPROVEMENTS

The following sections summarize the potential project impacts to the area circulation system and the corresponding recommended improvements.

5.1 Potential Project Impacts and Recommended Improvements – Intersections

As summarized in the preceding sections of this report, operations of the four signalized study intersections – McCully Street at Beretania, Young, King and Algaroba Streets – would remain at LOS B and LOS C both with and without the projected project traffic. The project would thus not represent a significant impact upon the operations of these intersections.

The Pumehana / King intersection would continue to operate at an overall LOS A both with and without the project. Side-street operations at the intersection (i.e. the Pumehana Street approach) would be LOS E (AM) and LOS F (PM) under Future with Project Conditions, compared to LOS D (AM) and LOS F (PM) under Future without Project Conditions. As noted previously, these results are conservative due to the fact that the operations include only three of the four through lanes on King Street (so that intersection operations can be quantified per the *2010 HCM* methodologies), as well as no credit being given for gaps in traffic created by upstream signals. Although average vehicle delays on the Pumehana Street approach will likely increase with the opening of the study project, the increase may not be as large as predicted under this analysis. Also, observations of the intersection in November 2013 found that King Street traffic does flow in distinct platoons, with sizable gaps between streams of traffic into which traffic on Pumehana Street can turn. This situation is not expected to change in the future, given the level of future traffic increase along the corridor. Therefore, the project would not represent a significant impact upon the operations of the Pumehana / King intersection. No improvements are needed at the study intersections.

No traffic control improvements are recommended at the intersection of Pumehana and Algaroba Streets, i.e. adjacent to the project site. Based upon the traffic volumes at the adjacent study intersections of Pumehana / King and McCully / Algaroba, the traffic volumes at Pumehana / Algaroba are and would continue to be much less than is required to meet the Manual on Uniform Traffic Control Devices (MUTCD) traffic signal warrants. (See **Appendix E** for the traffic signal warrant worksheet.)

5.2 Potential Project Impacts and Recommended Improvements – Pedestrian Facilities

Neither Pumehana nor Algaroba Streets currently have sidewalks on the project site of the street. This would create an impediment for pedestrians to access the project site. It is recommended that sidewalks be added along the entire project frontage of both streets, along with an Americans With Disabilities Act (ADA) curb ramp at the intersection corner, in order to facilitate expected pedestrian activity generated by the project. When combined with the existing sidewalk along the eastern frontage of Pumehana Street near King Street, this additional sidewalk would create a continuous sidewalk on the eastern

side of the entire block between Algaroba and King Streets. Implementation of this improvement would be the responsibility of the project applicant.

In the long-term, the City and County of Honolulu should consider completing the sidewalk discontinuity along Algaroba Street, specifically along the northern frontage of the roadway between Pumehana and McCully Streets. The project's proposed sidewalk along its frontage of Algaroba Street would constitute the project's contribution towards eliminating this discontinuity.

All of the study intersections currently have pedestrian crosswalks across at least two of its approaches, and many have crosswalks across all four approaches. No crosswalk improvements are necessary at any of the study intersections. However, a new crosswalk is recommended across the northern Pumehana Street approach to its intersection with Algaroba Street. This crosswalk would benefit children walking towards King William Lunalilo Elementary School, which is located three blocks to the south of the project site along the western frontage of Pumehana Street.

Due to its distance from the school, no school crossing signs would be necessary at this crosswalk. The Manual on Uniform Traffic Control Devices (MUTCD), 9th Edition, only requires such signs adjacent to a school or along established school pedestrian routes.

5.3 Potential Project Impacts and Recommended Improvements – Bicycle Facilities

The level of bicycle activity generated by the project would not be sufficient enough to necessitate any new bicycle lanes, paths or routes in the project vicinity.

Bicycle racks (or equivalent) should also be installed, either in front of the project building or inside the building (the latter within either the parking garage or the first-floor lobby), consistent with City standards.

5.4 Potential Project Impacts and Recommended Improvements – Transit

The three transit routes nearest the project site – Routes 1, 1L and 6 – provide regular transit service to the area throughout most of the day on weekdays and weekends. The level of transit demand added by project residents and visitors would not rise to the level that would require any increase in transit service to the area or any additional transit infrastructure. No transit improvements are needed within the study area.

5.5 Potential Project Impacts and Recommended Improvements – On-Site Parking

The proposed project garage would provide a total of 197 parking spaces. This is one space less than required by the City and County of Honolulu's parking standards. However, due to two mitigating circumstances, this issue is not considered an impact. First, the close proximity of transit and retail to the project site will lead many of the residents and visitors to walk, bicycle, or take transit to access the project site. In addition, the first floor of the parking garage would include two additional spaces reserved for either resident loading (e.g. during move-in and move-out) or maintenance-repair trucks (e.g. for repairs to air conditioning or other mechanical systems). This will further lessen effect of the parking discrepancy.

5.6 Potential Project Impacts and Recommended Improvements – On-Street Parking

As noted within Section 2.1 of this report, parking is prohibited in the westbound direction of Algaroba Street (which is also the side of Algaroba Street that fronts the project frontage). Parking is allowed in the eastbound direction. As Algaroba Street is only approximately 26 feet wide near the project site, the street in this area functions equivalent to a "yield street," whereby opposing lanes of traffic must take turns traveling over a shared portion of the roadway. Current traffic volumes along Algaroba Street are approximately 1,500 vehicles per day, and are projected to rise to approximately 2,500 vehicles per day by 2020, including traffic from the study project. This is equivalent to an average of just under one vehicle per minute traversing Algaroba Street in each direction. Thus, the incidence of conflicting vehicles would remain a relatively infrequent occurrence, and would not require the prohibition of eastbound on-street parking along Algaroba Street. In addition, the proposed on-site parking supply, combined with the residents and visitors who will walk, bicycle, and take transit (and thus not contribute to project parking demand) will minimize the project's off-site parking demand within the surrounding neighborhood. The study project would therefore not represent an impact upon on-street parking supply or demand.

5.7 Potential Project Impacts and Recommended Improvements – Project Access

The sole vehicular access to the project site would be via a new driveway on Algaroba Street just east of Pumehana Street. **Exhibit 7** depicts the projected project traffic at this driveway during the AM and PM peak hours. As the level of existing traffic on Algaroba Street is relatively low, operations of the project driveway are expected to be acceptable.

Vehicle queuing along Algaroba Street near the project driveway is anticipated to be infrequent due to the very low number of vehicles that would be turning left into the project site; per **Exhibit 7**, only one AM and four PM peak hour vehicles would attempt to enter the project driveway via a left turn. This will minimize vehicle queuing along eastbound Algaroba Street. As right turns into the project driveway will frequently only require vehicles to reduce speed rather than coming to a complete stop, little vehicle queuing is anticipated in the westbound direction of Algaroba Street. The project driveway is not anticipated to affect traffic operations of the Pumehana / Algaroba intersection, and thus would not represent an impact to said operations.

The design of the project driveway should ensure that there is adequate sight distance for cross traffic (including vehicles, pedestrians and bicyclists) on Algaroba Street. Assurance of this situation would be the responsibility of the project applicant.

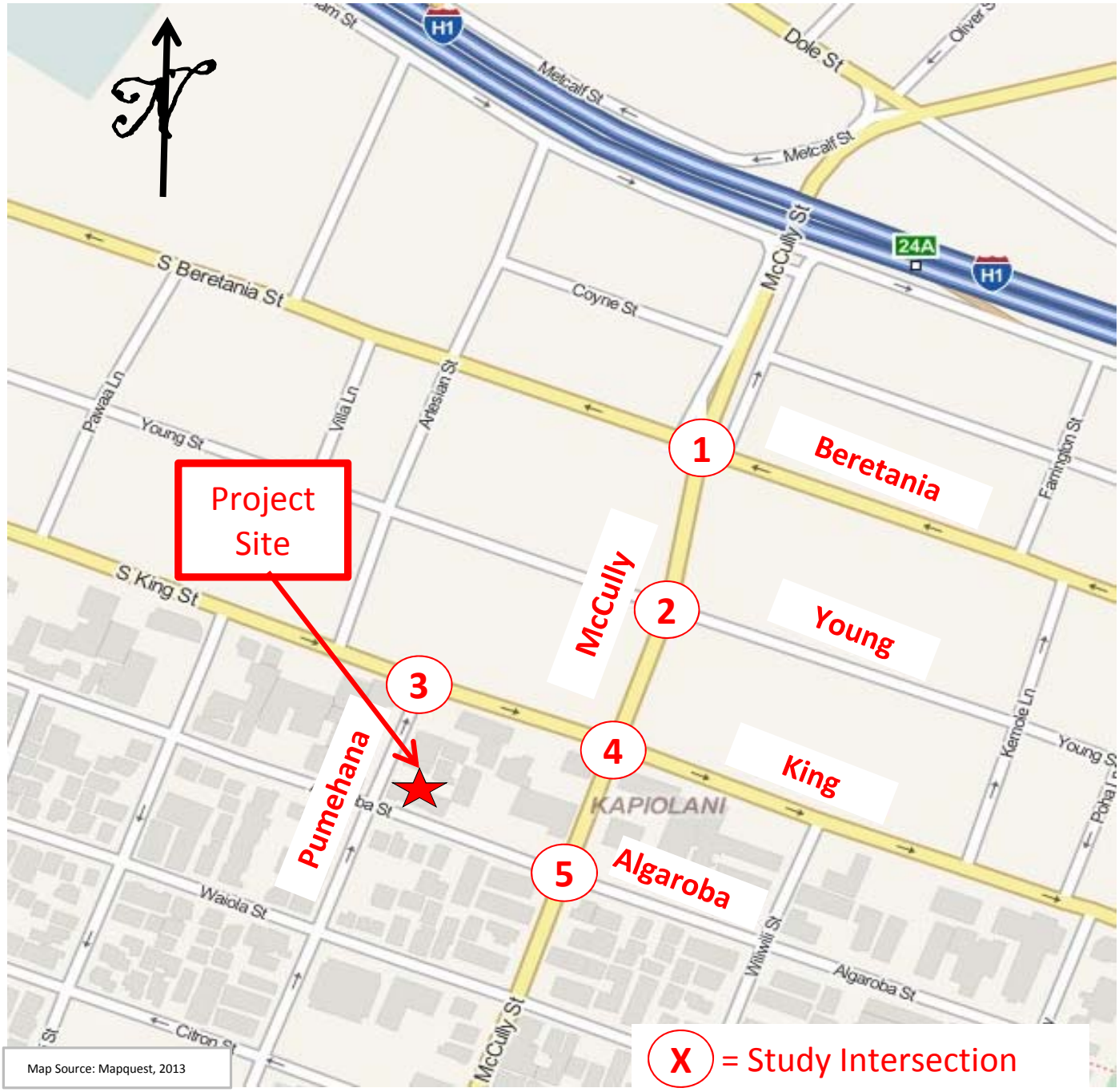
6 REFERENCES

6.1 List of References

1. TheBus web site, www.thebus.org. Accessed November 25, 2013.
2. Institute of Transportation Engineers, *Trip Generation Manual*, 9th Edition, 2012.
3. United States Department of Transportation, Federal Highway Administration, *Manual on Uniform Traffic Control Devices*, 2009 Edition, December 2009.

6.2 List of Contacts

1. Dennis Silva, Jr., AICP, Hawaii Planning LLC, Honolulu, Hawaii.
2. Zen Sawyer, Zen Sawyer Consulting, LLC, Fairfax, California.
3. Franco Mola, Coastal Rim Properties, Honolulu, Hawaii.
4. Lance Watanabe, City and County of Honolulu Department of Planning and Permitting, Honolulu, Hawaii.
5. Warren Yamamoto, City and County of Honolulu Department of Transportation Services, Honolulu, Hawaii.



Map Source: Mapquest, 2013

EXHIBIT 1
Project Location Map

PUMEHANA ST. AFFORDABLE HOUSING

TMK: 23028004
FRONT YARD SETBACK = 10 FT
SIDE & REAR YARD SETBACK = 10 FT
HEIGHT
ALLOWED = 150'-0"
PROPOSED = 224'-6"

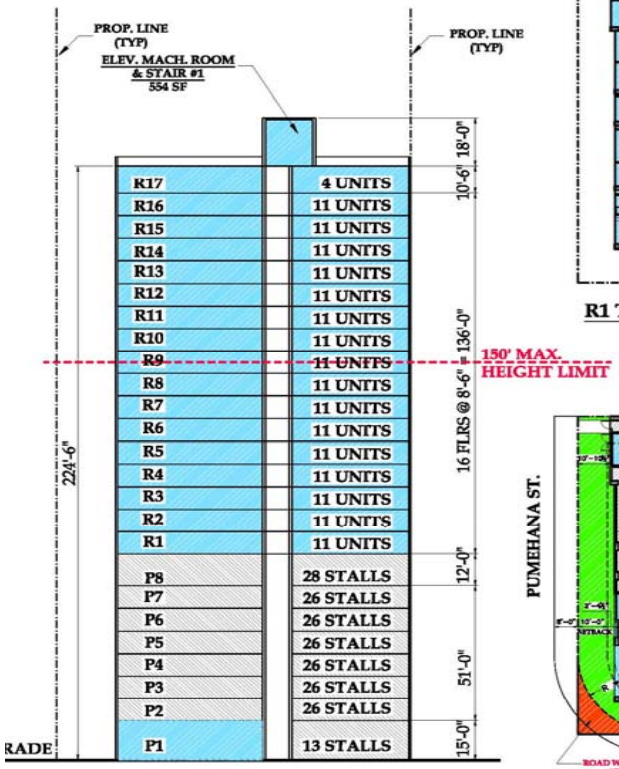
AREA CALCULATIONS:
LOT AREA = 14, 400 SF
MAX FAR: 3.5
ALLOWABLE FLOOR AREA = 50, 400 SF
PROPOSED FLOOR AREA = 145,000 SF SF (10 FAR)
(FOR AREA CALCS REFER TO DWG. A-2.2)

PARKING CALCULATIONS:
TOTAL UNITS: 180 @ 1 STALL / UNIT = 180 STALLS
GUEST PARKING: 180/10 = 18

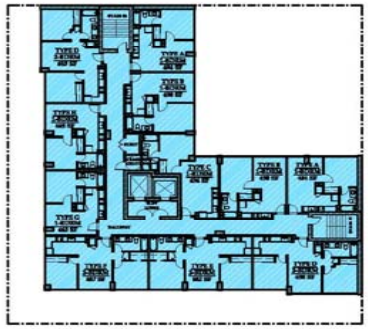
STALLS REQUIRED = 198
STALLS PROVIDED = 197

LOADING CALCULATIONS:
STALLS REQUIRED = 2 (1 @ 13 x 35 & 1 @ 8.5 x 19)
STALLS PROVIDED = 2 @ 8.5 x 19

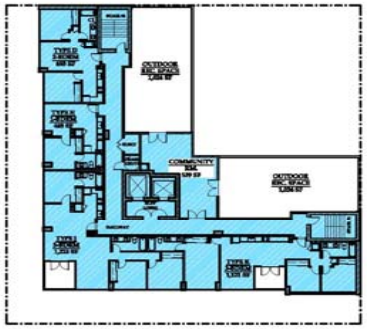
LEGEND:
- VEHICULAR CIRCULATION
- PEDESTRIAN CIRCULATION
- PARKING
- FLOOR AREA
- OPEN SPACE



SCHEMATIC SECTION



R1 THRU R16 TYP. FLOOR PLAN
FLOOR AREA: 135,200 SF (8,450 x 16)
CIRC. & MISC : 2,301 SF
EFFICIENCY: 73%
UNITS / FLR: 11



R 17 FLOOR PLAN
FLOOR AREA = 6,014 SF
CIRC. & MISC : 1,592 SF
EFFICIENCY: 20%
UNITS / FLR: 9

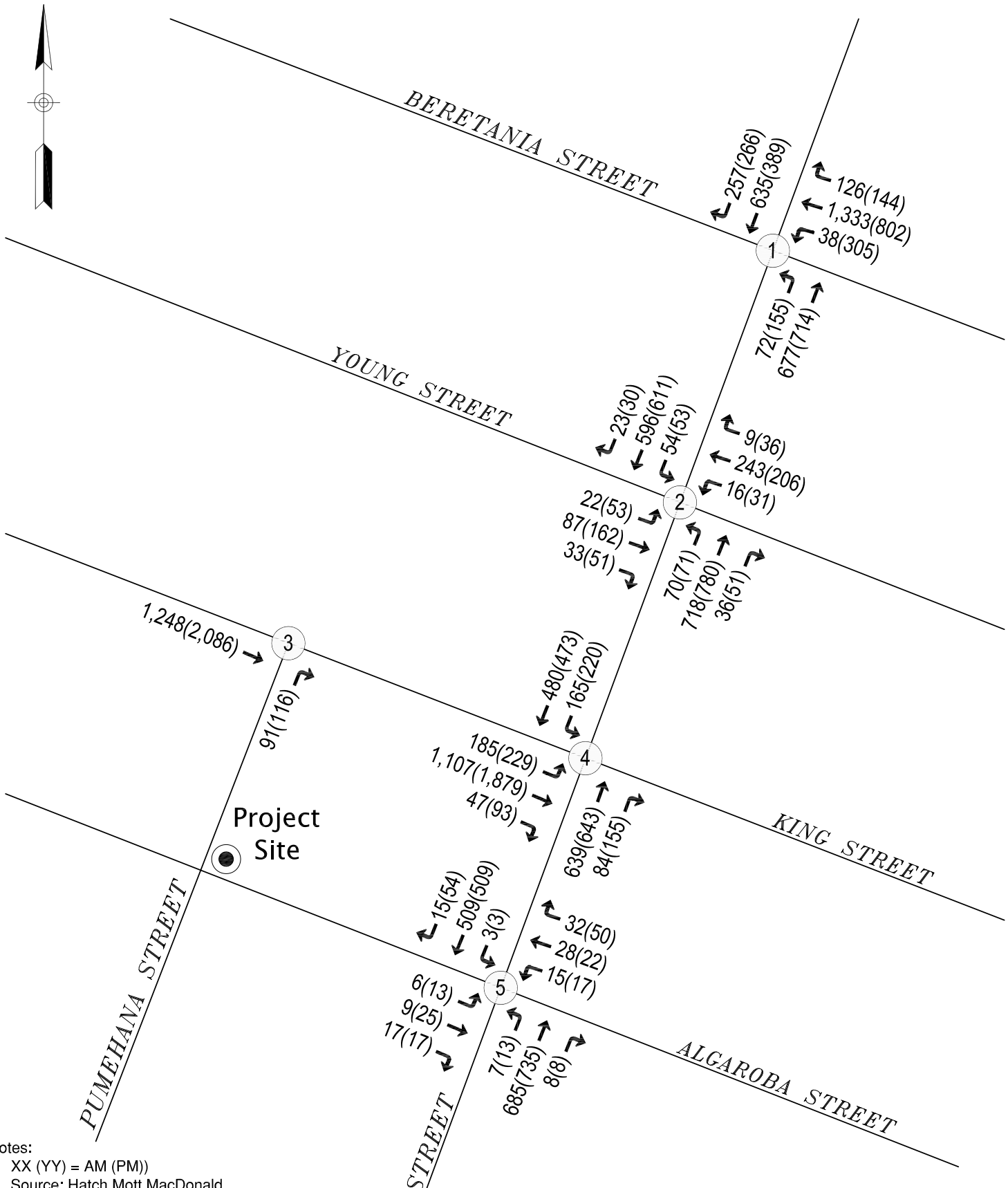
ROOF PLAN
FLOOR AREA: 526 SF

P1 LEVEL
FLOOR AREA: 3,164
13 STALLS (10 S + 3 COMPACT - INCLUDED 2 HC)
PARKING AREA: 8,510 SF
EFFICIENCY = 652 SF / STALL

P2, P3, P4, P5, P6, P7 LEVEL
26 STALLS (13 S + 13 C - INCLUDED 1 HC)
TOTAL STALS = 156
AREA = 11,597 SF
EFFICIENCY = 446 SF / STALL

P8 LEVEL
28 STALLS (13 S + 15 C - INCLUDED 1 HC))
AREA = 11,597 SF
EFFICIENCY = 414 SF / STALL

Source: Pacific Atelier International, July 2013.



Notes:
1. XX (YY) = AM (PM))
2. Source: Hatch Mott MacDonald traffic counts collected on Tuesday, November 19, 2013.

Hatch Mott MacDonald

EXHIBIT 3
Existing Conditions
AM & PM Peak Hour Volumes

I:\2013\Jobs\332498 - Pumehana Street\332498 - Volume Diagrams.dwg Existing 11/26/2013 3:31 PM OAT49256

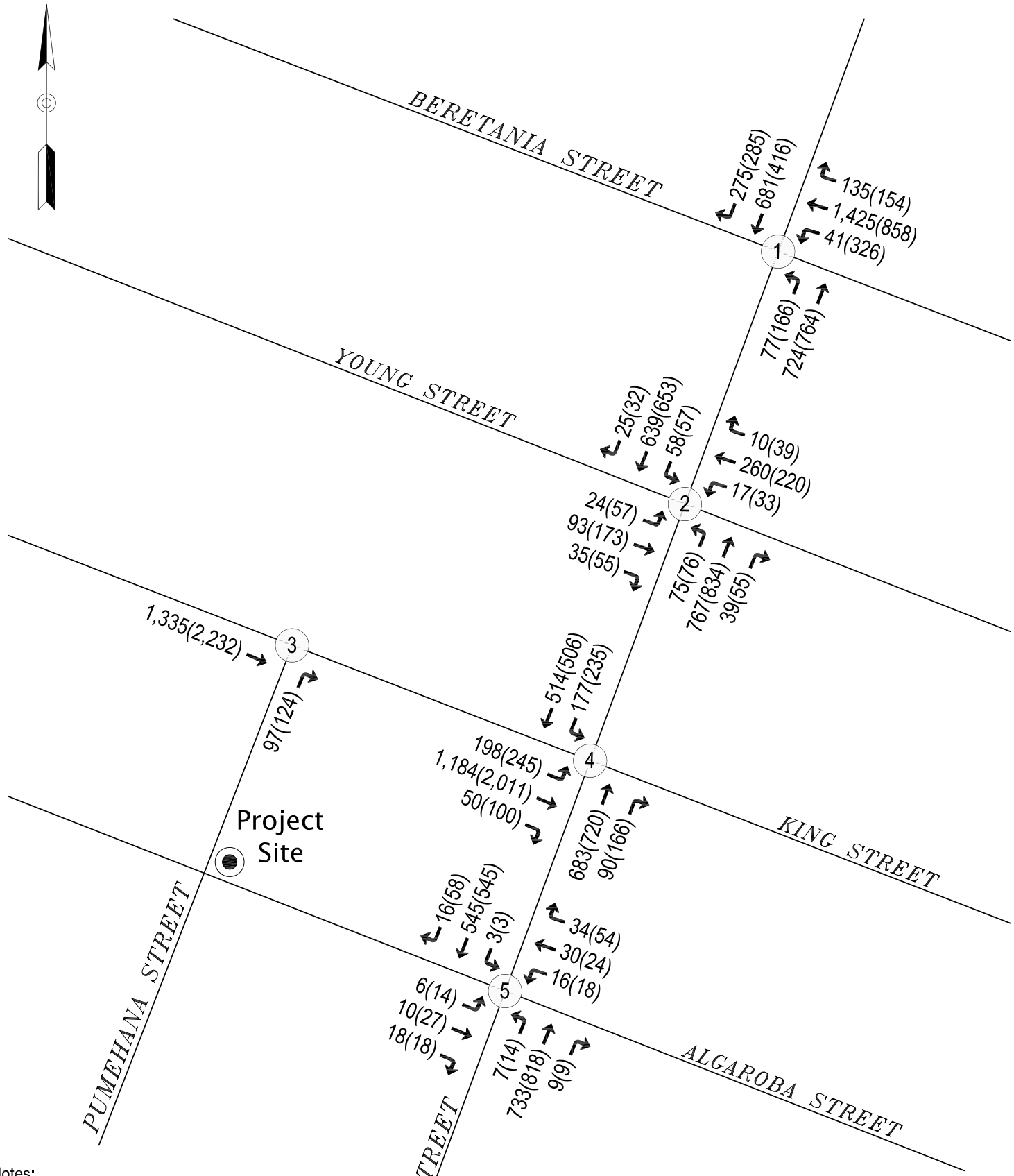
	N-S Street	E-W Street	Existing Lane Configuration	Existing Intersection Control	Existing Conditions				Future without Project Conditions				Future with Project Conditions			
					AM Peak Hr		PM Peak Hr		AM Peak Hr		PM Peak Hr		AM Peak Hr		PM Peak Hr	
					Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
1	McCully Street	Beretania Street	NB 1-L, 1-T[4] SB 1-T, 1-R[4] WB 1-L, 2-T, 1-T/R	Signal	22.7	C	16.5	B	27.3	C	18.4	B	28.5	C	18.5	B
2	McCully Street	Young Street	NB 1-L, 1-T, 1-T/R SB 1-L, 1-T, 1-T/R EB 1-L/T, 1-R[5] WB 1-L/T, 1-R[5]	Signal	16.8	B	28.1	C	31.6	C	34.1	C	31.6	C	33.5	C
3	Pumehana Street	King Street	NB 1-R EB 4-T[6]	On-Way Stop (Side Street)	2.0 29.5	A D	4.1 78.0	A F	2.4 34.9	A D	6.1 116.0	A F	3.3 41.1	A E	7.5 135.9	A F
4	McCully Street	King Street	NB 2-T, 1-R SB 1-L, 2-T EB 1-L, 4-T, 1-T/R	Signal	15.4	B	11.1	B	16.9	B	11.6	B	17.1	B	11.8	B
5	McCully Street	Algaroba Street	NB 1-L/T, 1-T/R SB 1-L/T, 1-T/R EB 1-L/T/R WB 1-L/T, 1-R[5]	Signal	12.4	B	14.2	B	13.3	B	14.8	B	16.1	B	16.0	B

NOTES:
1. L, T, R = Left, Through, Right.
2. NB, SB, EB, WB = Northbound, Southbound, Eastbound, Westbound.
3. Analysis performed using 2010 Highway Capacity Manual methodologies.
4. Northbound and Southbound approaches of McCully Street at Beretania Street cannot be directly analyzed using standard 2010 Highway Capacity Manual methodologies. Analyzed lane configurations reflect observed traffic operations that are also compatible with 2010 Highway Capacity Manual methodologies.
5. Analyzed lane configurations reflect actual observed operations. Although this approach is striped as a single lane, right turning vehicles were observed turning concurrently with adjacent through and left-turning vehicles.
6. 2010 Highway Capacity Manual does not support operational analysis of one-way stop controlled intersections with approaches of more than three lanes. Results therefore reflect operations with only three eastbound lanes, which represents a more conservative level of operations than observed in the field.

Hatch Mott MacDonald

332498 LOS1.xlsx - LOS

EXHIBIT 4
Intersection
Levels of Service



Notes:
1. XX (YY) = AM (PM))

Hatch Mott MacDonald

EXHIBIT 5
Future without Project Conditions
AM & PM Peak Hour Volumes

I:\2013\Jobs\332498 - Pumehana Street\332498 - Volume Diagrams.dwg Future Without Project 11/26/2013 10:07 AM OAT49256

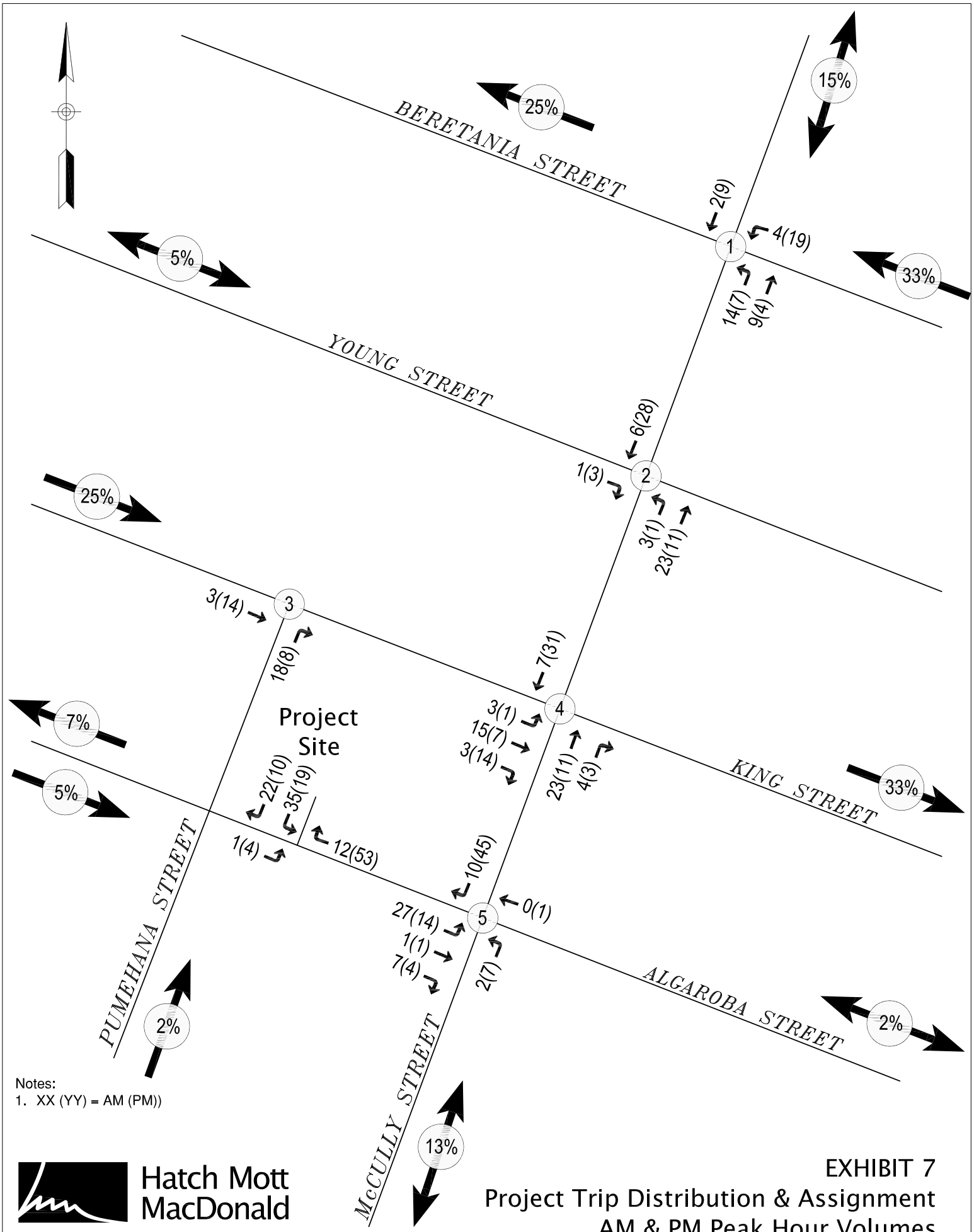
Net Project Trip Generation

TRIP GENERATION RATES	ITE LAND USE CODE	DAILY TRIP RATE	AM PEAK HOUR PEAK HOUR RATE	AM PEAK HOUR % OF ADT	AM PEAK HOUR % IN	AM PEAK HOUR % OUT	PM PEAK HOUR PEAK HOUR RATE	PM PEAK HOUR % OF ADT	PM PEAK HOUR % IN	PM PEAK HOUR % OUT
Apartment (per dwelling unit)	220	6.65	0.51	8%	20%	80%	0.62	9%	65%	35%

GENERATED TRIPS	PROJECT SIZE	DAILY TRIPS	AM PEAK HOUR PEAK HOUR TRIPS	AM PEAK HOUR % OF ADT	AM PEAK HOUR TRIPS IN	AM PEAK HOUR TRIPS OUT	PM PEAK HOUR PEAK HOUR TRIPS	PM PEAK HOUR % OF ADT	PM PEAK HOUR TRIPS IN	PM PEAK HOUR TRIPS OUT
Proposed Use										
Apartments	180 Units	1,197	92	8%	18	74	112	9%	73	39
Pedestrian/Bicycle Trip Reduction (10%):[2]		-120	-9		-2	-7	-11		-7	-4
Transit Trip Reduction (5%):[3]		-60	-5		-1	-4	-6		-4	-2
Net Total (Proposed Uses):		**1,017**	**78**		**15**	**63**	**95**		**62**	**33**
Existing Uses										
Apartments	17 Units	113	9	8%	2	7	11	10%	7	4
Pedestrian/Bicycle Trip Reduction (10%):[2]		-11	-1		0	-1	-1		-1	0
Transit Trip Reduction (5%):[3]		-6	0		0	0	-1		-1	0
Net Total (Proposed Uses):		**96**	**8**		**2**	**6**	**9**		**5**	**4**
Total Net New Project Trip Generation:		**921**	**70**		**13**	**57**	**86**		**57**	**29**

Notes:
1. Trip generation rates from Institute of Transportation Engineers, "Trip Generation Manual," 9th Edition, 2012, unless otherwise noted.
2. Pedestrian/Bicycle Trip Reduction accounts for the estimated portion of project site traffic being made on foot or on a bicycle (10%).
3. Transit Trip Reduction accounts for the estimated portion of project site traffic being made via mass transit (5%).

EXHIBIT 6
Net Project
Trip Generation

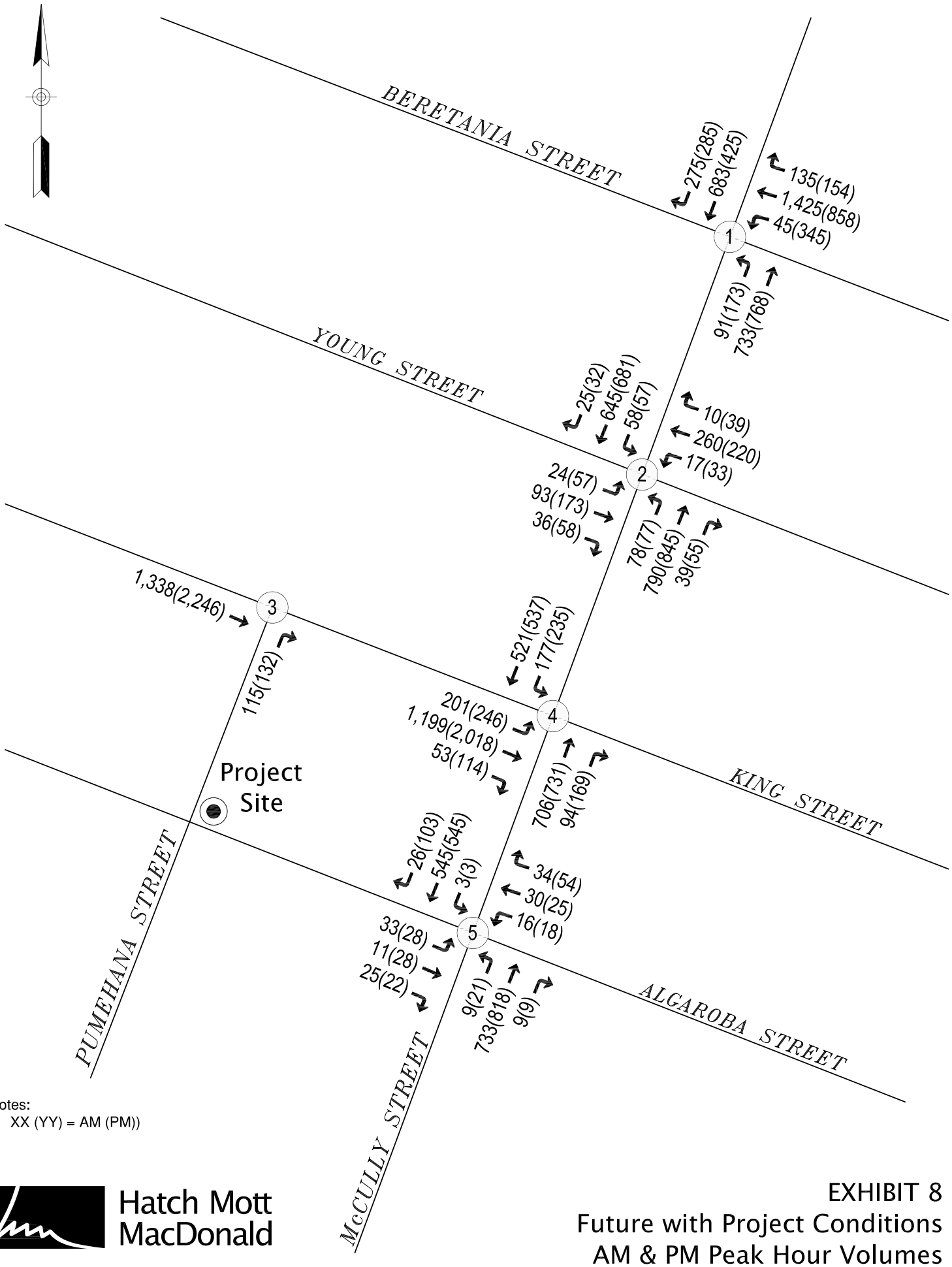


Notes:
1. XX (YY) = AM (PM))

Hatch Mott MacDonald

EXHIBIT 7
Project Trip Distribution & Assignment
AM & PM Peak Hour Volumes

I:\2013\Jobs\332498 - Pumehana Street\332498 - Volume Diagrams.dwg Project Trip Dist & Assign 11/26/2013 8:31 AM OAT49256



Notes:
1. XX (YY) = AM (PM))

Hatch Mott MacDonald

EXHIBIT 8
Future with Project Conditions
AM & PM Peak Hour Volumes

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Appendix A

A1. Level of Service Description – Signalized Intersections

A2. Level of Service Description – Unsignalized Intersection with Two-Way Stop Control

APPENDIX A2

LEVEL OF SERVICE (LOS) DESCRIPTION
UNSIGNALIZED INTERSECTIONS WITH TWO-WAY STOP CONTROL (TWSC)

TWSC intersections are widely used and stop signs are used to control vehicle movements at such intersections. At TWSC intersections, the stop-controlled approaches are referred to as the minor street approaches; they can be either public streets or private driveways. The intersection approaches that are not controlled by stop signs are referred to as the major street approaches. A three-leg intersection is considered to be a standard type of TWSC intersection if the single minor street approach (i.e. the stem of the T configuration) is controlled by a stop sign. Three-leg intersections where two of the three approaches are controlled by stop signs are a special form of unsignalized intersection control.

At TWSC intersections, drivers on the controlled approaches are required to select gaps in the major street flow through which to execute crossing or turning maneuvers on the basis of judgment. In the presence of a queue, each driver on the controlled approach must use some time to move into the front-of-queue position and prepare to evaluate gaps in the major street flow. Capacity analysis at TWSC intersections depends on a clear description and understanding of the interaction of drivers on the minor or stop-controlled approach with drivers on the major street. Both gap acceptance and empirical models have been developed to describe this interaction.

Thus, the capacity of the controlled legs is based on three factors:

- the distribution of gaps in the major street traffic stream;
- driver judgment in selecting gaps through which to execute the desired maneuvers; and
- the follow-up time required by each driver in a queue.

The delay experienced by a motorist is made up of a number of factors that relate to control, geometrics, traffic and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during base conditions, in the absence of incident, control, traffic or geometric delay. Average control delay for any particular minor movement is a function of the capacity of the approach and the degree of saturation and referred to as level of service.

LEVEL OF SERVICE (LOS) CRITERIA FOR TWSC INTERSECTIONS

(Reference 2010 Highway Capacity Manual)

Level of Service	Control Delay (seconds / vehicle)
A	**0 - 10**
B	**>10 - 15**
C	**>15 - 25**
D	**>25 - 35**
E	**>35 - 50**
F	**>50**

APPENDIX A1

LEVEL OF SERVICE (LOS) DESCRIPTION
SIGNALIZED INTERSECTIONS

The capacity of an urban street is related primarily to the signal timing and the geometric characteristics of the facility as well as to the composition of traffic on the facility. Geometrics are a fixed characteristic of a facility. Thus, while traffic composition may vary somewhat over time, the capacity of a facility is generally a stable value that can be significantly improved only by initiating geometric improvements. A traffic signal essentially allocates time among conflicting traffic movements that seek to use the same space. The way in which time is allocated significantly affects the operation and the capacity of the intersection and its approaches.

The methodology for signalized intersection is designed to consider individual intersection approaches and individual lane groups within approaches. A lane group consists of one or more lanes on an intersection approach. The outputs from application of the method described in the HCM 2010 are reported on the basis of each lane. For a given lane group at a signalized intersection, three indications are displayed: green, yellow and red. The red indication may include a short period during which all indications are red, referred to as an all-red interval and the yellow indication forms the change and clearance interval between two green phases.

The methodology for analyzing the capacity and level of service must consider a wide variety of prevailing conditions, including the amount and distribution of traffic movements, traffic composition, geometric characteristics, and details of intersection signalization. The methodology addresses the capacity, LOS, and other performance measures for lane groups and the intersection approaches and the LOS for the intersection as a whole.

Capacity is evaluated in terms of the ratio of demand flow rate to capacity (v/c ratio), whereas LOS is evaluated on the basis of control delay per vehicle (in seconds per vehicle). The methodology does not take into account the potential impact of downstream congestion on intersection operation, nor does the methodology detect and adjust for the impacts of turn-pocket overflows on through traffic and intersection operation.

LEVEL OF SERVICE (LOS) CRITERIA FOR SIGNALIZED INTERSECTIONS

(Reference 2010 Highway Capacity Manual)

Level of Service	Control Delay (seconds / vehicle)
A	**<10**
B	**>10 - 20**
C	**>20 - 35**
D	**>35 - 55**
E	**>55 - 80**
F	**>80**

Appendix B

Intersection
Level of Service
Calculations

Existing
Traffic Conditions

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	38	1332	126	72	677	0	0	635	257
Number				5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.97	1.00		1.00	1.00		0.99
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln				186.3	186.3	186.3	186.3	186.3	0.0	0.0	186.3	186.3
Lanes				1	3	0	1	1	0	0	1	1
Cap, veh/h				788	2095	197	144	828	0	0	828	694
Arrive On Green				0.44	0.44	0.44	0.89	0.89	0.00	0.00	0.44	0.44
Sat Flow, veh/h				1774	4713	444	570	1863	0	0	1863	1561
Grp Volume(v), veh/h				42	1053	549	79	744	0	0	698	282
Grp Sat Flow(s),veh/h/ln				1774	1695	1767	570	1863	0	0	1863	1561
Q Serve(g_s), s				1.2	22.5	22.5	10.0	19.9	0.0	0.0	30.0	11.0
Cycle Q Clear(g_c), s				1.2	22.5	22.5	40.0	19.9	0.0	0.0	30.0	11.0
Prop In Lane				1.00		0.25	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				788	1507	785	144	828	0	0	828	694
V/C Ratio(X)				0.05	0.70	0.70	0.55	0.90	0.00	0.00	0.84	0.41
Avail Cap(c_a), veh/h				788	1507	785	144	828	0	0	828	694
HCM Platoon Ratio				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Upstream Filter(I)				1.00	1.00	1.00	0.95	0.95	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				14.2	20.1	20.1	21.0	3.9	0.0	0.0	22.2	17.0
Incr Delay (d2), s/veh				0.1	2.7	5.1	4.2	12.2	0.0	0.0	7.9	0.4
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln				0.5	9.2	10.1	1.8	4.7	0.0	0.0	15.0	4.1
Lane Grp Delay (d), s/veh				14.4	22.9	25.3	25.2	16.1	0.0	0.0	30.1	17.3
Lane Grp LOS				B	C	C	C	B			C	B
Approach Vol, veh/h					1644			823			980	
Approach Delay, s/veh					23.5			16.9			26.5	
Approach LOS					C			B			C	

Timer			
Assigned Phs	2	4	8
Phs Duration (G+Y+Rc), s	45.0	45.0	45.0
Change Period (Y+Rc), s	5.0	5.0	5.0
Max Green Setting (Gmax), s	40.0	40.0	40.0
Max Q Clear Time (g_c+I1), s	24.5	42.0	32.0
Green Ext Time (p_c), s	9.6	0.0	6.0

Intersection Summary	
HCM 2010 Ctrl Delay	22.7
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	22	87	33	16	243	9	70	718	36	54	596	23
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.98		0.96	0.99		0.96
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Lanes	0	1	1	0	1	1	1	2	0	1	2	0
Cap, veh/h	48	161	522	42	344	522	502	1902	95	320	1929	73
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.18	0.18	0.18	1.00	1.00	1.00
Sat Flow, veh/h	0	484	1566	0	1031	1566	760	3424	170	668	3471	131
Grp Volume(v), veh/h	116	0	35	276	0	10	74	395	407	57	323	335
Grp Sat Flow(s),veh/h/ln	484	0	1566	1031	0	1566	760	1770	1824	668	1770	1833
Q Serve(g_s), s	0.0	0.0	1.4	0.0	0.0	0.4	7.4	17.7	17.7	3.2	0.0	0.0
Cycle Q Clear(g_c), s	30.0	0.0	1.4	30.0	0.0	0.4	7.4	17.7	17.7	20.9	0.0	0.0
Prop In Lane	0.20		1.00	0.06		1.00	1.00		0.09	1.00		0.07
Lane Grp Cap(c), veh/h	209	0	522	386	0	522	502	983	1013	320	983	1018
V/C Ratio(X)	0.55	0.00	0.07	0.71	0.00	0.02	0.15	0.40	0.40	0.18	0.33	0.33
Avail Cap(c_a), veh/h	209	0	522	386	0	522	502	983	1013	320	983	1018
HCM Platoon Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.76	0.76	0.76	0.46	0.46	0.46
Uniform Delay (d), s/veh	24.1	0.0	20.5	24.5	0.0	20.1	19.4	23.6	23.6	3.7	0.0	0.0
Incr Delay (d2), s/veh	3.2	0.0	0.1	6.2	0.0	0.0	0.5	0.9	0.9	0.6	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.0	0.0	0.5	5.4	0.0	0.1	1.6	8.7	8.9	0.4	0.1	0.1
Lane Grp Delay (d), s/veh	27.2	0.0	20.5	30.6	0.0	20.1	19.8	24.5	24.5	4.3	0.4	0.4
Lane Grp LOS	C		C	C		C	B	C	C	A	A	A
Approach Vol, veh/h		151			286			876			715	
Approach Delay, s/veh		25.7			30.3			24.1			0.7	
Approach LOS		C			C			C			A	

Timer				
Assigned Phs	4	8	2	6
Phs Duration (G+Y+Rc), s	35.0	35.0	55.0	55.0
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	30.0	30.0	50.0	50.0
Max Q Clear Time (g_c+I1), s	32.0	32.0	19.7	22.9
Green Ext Time (p_c), s	0.0	0.0	20.9	19.2

Intersection Summary	
HCM 2010 Ctrl Delay	16.8
HCM 2010 LOS	B

Notes

Intersection	
Intersection Delay, s/veh	2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	1248	0	0	0	0	91
Conflicting Peds, #/hr	0	0	0	0	0	50
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	None	None	None	None	None	None
Storage Length		0	0		0	0
Median Width	12			12	0	
Grade, %	0%			0%	0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1560	0	0	0	0	114
Number of Lanes	3	0	0	0	0	1

Major/Minor	Major 1					
Conflicting Flow All	0	0			1610	829
Stage 1	-	-			1610	-
Stage 2	-	-			0	-
Follow-up Headway	-	-			3.82	3.92
Pot Capacity-1 Maneuver	-	-			110	269
Stage 1	-	-			74	-
Stage 2	-	-			-	-
Time blocked-Platoon, %	-	-			0	0
Mov Capacity-1 Maneuver	-	-			105	258
Mov Capacity-2 Maneuver	-	-			105	-
Stage 1	-	-			71	-
Stage 2	-	-			-	-

Approach	EB	NB
HCM Control Delay, s	0	29.5
HCM LOS	-	D

Minor Lane / Major Mvmt	NBLn1	EBT	EBR
Cap, veh/h	258	-	-
HCM Control Delay, s	29.5	-	-
HCM Lane V/C Ratio	0.44	-	-
HCM Lane LOS	D	-	-
HCM 95th-tile Q, veh	2.1	-	-

Notes

~ : Volume Exceeds Capacity; $: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	185	1107	47	0	0	0	0	639	84	165	480	0
Number	5	2	12				3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97				1.00		0.98	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	186.3	186.3	186.3				0.0	186.3	186.3	186.3	186.3	0.0
Lanes	1	5	0				0	2	1	1	2	0
Cap, veh/h	966	4094	172				0	1141	502	0	1141	0
Arrive On Green	0.54	0.54	0.54				0.00	0.43	0.43	0.00	0.11	0.00
Sat Flow, veh/h	1774	7515	316				0	3632	1557		3632	0
Grp Volume(v), veh/h	201	965	289				0	695	91		522	0
Grp Sat Flow(s),veh/h/ln	1774	1509	1796				0	1770	1557		1770	0
Q Serve(g_s), s	4.4	6.5	6.6				0.0	11.4	2.7		10.4	0.0
Cycle Q Clear(g_c), s	4.4	6.5	6.6				0.0	11.4	2.7		10.4	0.0
Prop In Lane	1.00		0.18				0.00		1.00			0.00
Lane Grp Cap(c), veh/h	966	3288	979				0	1141	502		1141	0
V/C Ratio(X)	0.21	0.29	0.30				0.00	0.61	0.18		0.46	0.00
Avail Cap(c_a), veh/h	966	3288	979				0	1364	600		1834	0
HCM Platoon Ratio	0.00	0.00	0.00				0.00	0.00	0.00		0.00	0.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	0.96	0.96		0.97	0.00
Uniform Delay (d), s/veh	8.8	9.3	9.3				0.0	17.8	15.3		27.4	0.0
Incr Delay (d2), s/veh	0.5	0.2	0.8				0.0	0.5	0.2		0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0		0.0	0.0
%ile Back of Q (50%), veh/ln	1.8	2.1	2.6				0.0	4.4	1.0		5.0	0.0
Lane Grp Delay (d), s/veh	9.3	9.5	10.1				0.0	18.4	15.5		27.7	0.0
Lane Grp LOS	A	A	B					B	B		C	
Approach Vol, veh/h		1455						786			522	
Approach Delay, s/veh		9.6						18.0			27.7	
Approach LOS		A						B			C	
Timer												
Assigned Phs		2						8			4	
Phs Duration (G+Y+Rc), s		46.0						29.3			29.3	
Change Period (Y+Rc), s		5.0						5.0			5.0	
Max Green Setting (Gmax), s		41.0						29.0			39.0	
Max Q Clear Time (g_c+I1), s		8.6						13.4			12.4	
Green Ext Time (p_c), s		11.2						7.7			10.1	
Intersection Summary												
HCM 2010 Ctrl Delay			15.4									
HCM 2010 LOS			B									

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	6	9	17	15	28	32	7	685	8	4	509	15
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.99	0.99		0.99	0.99		0.99	1.00		0.99
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Lanes	0	1	0	0	1	1	0	2	0	0	2	0
Cap, veh/h	58	90	111	163	274	469	47	1963	22	45	1923	57
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.56	0.56	0.56	0.56	0.56	0.56
Sat Flow, veh/h	31	301	369	356	914	1564	9	3490	39	6	3419	102
Grp Volume(v), veh/h	38	0	0	51	0	38	431	0	392	327	0	295
Grp Sat Flow(s),veh/h/ln	701	0	0	1270	0	1564	1850	0	1688	1852	0	1675
Q Serve(g_s), s	0.4	0.0	0.0	8.6	0.0	1.5	0.0	0.0	11.6	0.0	0.0	8.2
Cycle Q Clear(g_c), s	23.7	0.0	0.0	26.1	0.0	1.5	11.5	0.0	11.6	8.1	0.0	8.2
Prop In Lane	0.18		0.53	0.35		1.00	0.02		0.02	0.02		0.06
Lane Grp Cap(c), veh/h	259	0	0	437	0	469	1083	0	949	1084	0	942
V/C Ratio(X)	0.15	0.00	0.00	0.12	0.00	0.08	0.40	0.00	0.41	0.30	0.00	0.31
Avail Cap(c_a), veh/h	311	0	0	437	0	521	1083	0	949	1084	0	942
HCM Platoon Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	0.93	0.00	0.93
Uniform Delay (d), s/veh	23.2	0.0	0.0	22.4	0.0	21.9	10.8	0.0	10.9	10.1	0.0	10.1
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.1	0.0	0.1	1.1	0.0	1.3	0.7	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.6	0.0	0.0	0.8	0.0	0.6	5.2	0.0	4.9	3.6	0.0	3.4
Lane Grp Delay (d), s/veh	23.5	0.0	0.0	22.5	0.0	22.0	11.9	0.0	12.2	10.8	0.0	10.9
Lane Grp LOS	C			C		C	B		B	B		B
Approach Vol, veh/h		38			89			823			622	
Approach Delay, s/veh		23.5			22.3			12.1			10.9	
Approach LOS		C			C			B			B	

Timer								
Assigned Phs		4			8			2			6	
Phs Duration (G+Y+Rc), s		32.7			32.7			55.0			55.0	
Change Period (Y+Rc), s		6.0			6.0			6.0			6.0	
Max Green Setting (Gmax), s		29.0			29.0			49.0			49.0	
Max Q Clear Time (g_c+I1), s		25.7			28.1			13.6			10.2	
Green Ext Time (p_c), s		0.1			0.0			11.8			12.1	

Intersection Summary												
HCM 2010 Ctrl Delay			12.4									
HCM 2010 LOS			B									

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	305	802	144	155	714	0	0	389	266
Number				5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.96	0.99		1.00	1.00		0.98
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln				186.3	186.3	186.3	186.3	186.3	0.0	0.0	186.3	186.3
Lanes				1	3	0	1	1	0	0	1	1
Cap, veh/h				737	1789	319	305	868	0	0	868	725
Arrive On Green				0.42	0.42	0.42	0.93	0.93	0.00	0.00	0.47	0.47
Sat Flow, veh/h				1774	4306	769	720	1863	0	0	1863	1557
Grp Volume(v), veh/h				339	700	351	172	793	0	0	432	296
Grp Sat Flow(s),veh/h/ln				1774	1695	1685	720	1863	0	0	1863	1557
Q Serve(g_s), s				11.6	12.8	12.9	15.1	16.5	0.0	0.0	13.6	10.6
Cycle Q Clear(g_c), s				11.6	12.8	12.9	28.6	16.5	0.0	0.0	13.6	10.6
Prop In Lane				1.00		0.46	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				737	1409	700	305	868	0	0	868	725
V/C Ratio(X)				0.46	0.50	0.50	0.56	0.91	0.00	0.00	0.50	0.41
Avail Cap(c_a), veh/h				737	1409	700	354	995	0	0	995	832
HCM Platoon Ratio				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Upstream Filter(I)				1.00	1.00	1.00	0.94	0.94	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				17.8	18.1	18.2	7.6	2.1	0.0	0.0	15.6	14.8
Incr Delay (d2), s/veh				2.1	1.3	2.6	1.5	11.0	0.0	0.0	0.4	0.4
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln				5.1	5.2	5.5	1.9	3.8	0.0	0.0	6.0	3.9
Lane Grp Delay (d), s/veh				19.8	19.4	20.7	9.1	13.1	0.0	0.0	16.1	15.2
Lane Grp LOS				B	B	C	A	B			B	B
Approach Vol, veh/h					1390			965			728	
Approach Delay, s/veh					19.8			12.4			15.7	
Approach LOS					B			B			B	

Timer												
Assigned Phs					2			4			8	
Phs Duration (G+Y+Rc), s					40.0			44.2			44.2	
Change Period (Y+Rc), s					5.0			5.0			5.0	
Max Green Setting (Gmax), s					35.0			45.0			45.0	
Max Q Clear Time (g_c+I1), s					14.9			30.6			15.6	
Green Ext Time (p_c), s					8.2			8.6			12.8	

Intersection Summary		
HCM 2010 Ctrl Delay		16.5
HCM 2010 LOS		B

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	53	162	51	31	206	36	71	780	51	53	611	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.96	0.98		0.95	0.99		0.95
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Lanes	0	1	1	0	1	1	1	2	0	1	2	0
Cap, veh/h	50	125	516	45	244	509	489	1866	122	419	1903	93
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	0	374	1549	0	731	1526	736	3359	220	611	3426	167
Grp Volume(v), veh/h	231	0	55	255	0	39	76	442	452	57	339	350
Grp Sat Flow(s),veh/h/ln	374	0	1549	731	0	1526	736	1770	1810	611	1770	1823
Q Serve(g_s), s	0.0	0.0	2.2	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	30.0	0.0	2.2	30.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.25		1.00	0.13		1.00	1.00		0.12	1.00		0.09
Lane Grp Cap(c), veh/h	174	0	516	289	0	509	489	983	1005	419	983	1013
V/C Ratio(X)	1.32	0.00	0.11	0.88	0.00	0.08	0.16	0.45	0.45	0.14	0.34	0.35
Avail Cap(c_a), veh/h	174	0	516	289	0	509	489	983	1005	419	983	1013
HCM Platoon Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.76	0.76	0.76	0.87	0.87	0.87
Uniform Delay (d), s/veh	25.7	0.0	20.7	26.8	0.0	20.5	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	180.1	0.0	0.1	25.8	0.0	0.1	0.5	1.1	1.1	0.6	0.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	11.5	0.0	0.8	6.5	0.0	0.6	0.1	0.3	0.3	0.1	0.2	0.2
Lane Grp Delay (d), s/veh	205.8	0.0	20.8	52.6	0.0	20.6	0.5	1.1	1.1	0.6	0.8	0.8
Lane Grp LOS	F		C	D		C	A	A	A	A	A	A
Approach Vol, veh/h		286			294			970			746	
Approach Delay, s/veh		170.2			48.3			1.1			0.8	
Approach LOS		F			D			A			A	

Timer												
Assigned Phs		4			8			2			6	
Phs Duration (G+Y+Rc), s		35.0			35.0			55.0			55.0	
Change Period (Y+Rc), s		5.0			5.0			5.0			5.0	
Max Green Setting (Gmax), s		30.0			30.0			50.0			50.0	
Max Q Clear Time (g_c+I1), s		32.0			32.0			2.0			2.0	
Green Ext Time (p_c), s		0.0			0.0			31.0			31.0	

Intersection Summary												
HCM 2010 Ctrl Delay			28.1									
HCM 2010 LOS			C									

Notes

Intersection	
Intersection Delay, s/veh	4.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	2086	0	0	0	0	116
Conflicting Peds, #/hr	0	0	0	0	0	58
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	None	None	None	None	None	None
Storage Length		0	0		0	0
Median Width	12			12	0	
Grade, %	0%			0%	0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2173	0	0	0	0	121
Number of Lanes	3	0	0	0	0	1

Major/Minor	Major 1					
Conflicting Flow All	0	0			2231	1143
Stage 1	-	-			2231	-
Stage 2	-	-			0	-
Follow-up Headway	-	-			3.82	3.92
Pot Capacity-1 Maneuver	-	-			45	166
Stage 1	-	-			26	-
Stage 2	-	-			-	-
Time blocked-Platoon, %	-	-			0	0
Mov Capacity-1 Maneuver	-	-			43	158
Mov Capacity-2 Maneuver	-	-			43	-
Stage 1	-	-			25	-
Stage 2	-	-			-	-

Approach	EB	NB
HCM Control Delay, s	0	78
HCM LOS	-	F

Minor Lane / Major Mvmt	NBLn1	EBT	EBR
Cap, veh/h	158	-	-
HCM Control Delay, s	78	-	-
HCM Lane V/C Ratio	0.77	-	-
HCM Lane LOS	F	-	-
HCM 95th-tile Q, veh	4.8	-	-

Notes

~ : Volume Exceeds Capacity; $: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	229	1879	93	0	0	0	0	643	155	220	473	0
Number	5	2	12				3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97				1.00		0.98	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	186.3	186.3	186.3				0.0	186.3	186.3	186.3	186.3	0.0
Lanes	1	5	0				0	2	1	1	2	0
Cap, veh/h	984	4130	204				0	1098	482	0	1098	0
Arrive On Green	0.55	0.55	0.55				0.00	0.62	0.62	0.00	0.62	0.00
Sat Flow, veh/h	1774	7450	368				0	3632	1554		3632	0
Grp Volume(v), veh/h	252	1673	494				0	707	170		520	0
Grp Sat Flow(s),veh/h/ln	1774	1509	1783				0	1770	1554		1770	0
Q Serve(g_s), s	5.5	12.6	12.6				0.0	9.3	3.9		5.8	0.0
Cycle Q Clear(g_c), s	5.5	12.6	12.6				0.0	9.3	3.9		5.8	0.0
Prop In Lane	1.00		0.21				0.00		1.00			0.00
Lane Grp Cap(c), veh/h	984	3346	988				0	1098	482		1098	0
V/C Ratio(X)	0.26	0.50	0.50				0.00	0.64	0.35		0.47	0.00
Avail Cap(c_a), veh/h	984	3346	988				0	1388	609		1866	0
HCM Platoon Ratio	0.00	0.00	0.00				0.00	0.00	0.00		0.00	0.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	0.96	0.96		0.97	0.00
Uniform Delay (d), s/veh	8.6	10.2	10.2				0.0	11.4	10.4		10.8	0.0
Incr Delay (d2), s/veh	0.6	0.5	1.8				0.0	0.7	0.4		0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0		0.0	0.0
%ile Back of Q (50%), veh/ln	2.1	4.0	5.0				0.0	2.7	1.3		1.9	0.0
Lane Grp Delay (d), s/veh	9.2	10.7	12.0				0.0	12.1	10.8		11.1	0.0
Lane Grp LOS	A	B	B					B	B		B	
Approach Vol, veh/h		2419						877			520	
Approach Delay, s/veh		10.8						11.8			11.1	
Approach LOS		B						B			B	

Timer												
Assigned Phs		2						8			4	
Phs Duration (G+Y+Rc), s		46.0						28.0			28.0	
Change Period (Y+Rc), s		5.0						5.0			5.0	
Max Green Setting (Gmax), s		41.0						29.0			39.0	
Max Q Clear Time (g_c+I1), s		14.6						11.3			7.8	
Green Ext Time (p_c), s		19.0						8.7			11.2	

Intersection Summary												
HCM 2010 Ctrl Delay			11.1									
HCM 2010 LOS			B									

Notes

Appendix C

Intersection
Level of Service
Calculations

Future without Project
Traffic Conditions

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	41	1425	135	77	724	0	0	681	275
Number				5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.97	1.00		1.00	1.00		0.99
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln				186.3	186.3	186.3	186.3	186.3	0.0	0.0	186.3	186.3
Lanes				1	3	0	1	1	0	0	1	1
Cap, veh/h				788	2094	198	118	828	0	0	828	694
Arrive On Green				0.44	0.44	0.44	0.89	0.89	0.00	0.00	0.44	0.44
Sat Flow, veh/h				1774	4713	445	534	1863	0	0	1863	1561
Grp Volume(v), veh/h				45	1126	588	85	796	0	0	748	302
Grp Sat Flow(s),veh/h/ln				1774	1695	1767	534	1863	0	0	1863	1561
Q Serve(g_s), s				1.3	24.9	24.9	6.4	29.4	0.0	0.0	33.6	12.0
Cycle Q Clear(g_c), s				1.3	24.9	24.9	40.0	29.4	0.0	0.0	33.6	12.0
Prop In Lane				1.00		0.25	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				788	1507	785	118	828	0	0	828	694
V/C Ratio(X)				0.06	0.75	0.75	0.72	0.96	0.00	0.00	0.90	0.44
Avail Cap(c_a), veh/h				788	1507	785	118	828	0	0	828	694
HCM Platoon Ratio				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Upstream Filter(I)				1.00	1.00	1.00	0.94	0.94	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				14.3	20.8	20.8	23.5	4.4	0.0	0.0	23.2	17.2
Incr Delay (d2), s/veh				0.1	3.4	6.5	17.9	21.4	0.0	0.0	13.2	0.4
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln				0.6	10.3	11.4	2.3	7.0	0.0	0.0	17.8	4.5
Lane Grp Delay (d), s/veh				14.4	24.2	27.3	41.4	25.8	0.0	0.0	36.4	17.7
Lane Grp LOS				B	C	C	D	C			D	B
Approach Vol, veh/h					1759			881			1050	
Approach Delay, s/veh					25.0			27.3			31.0	
Approach LOS					C			C			C	

Timer			
Assigned Phs	2	4	8
Phs Duration (G+Y+Rc), s	45.0	45.0	45.0
Change Period (Y+Rc), s	5.0	5.0	5.0
Max Green Setting (Gmax), s	40.0	40.0	40.0
Max Q Clear Time (g_c+I1), s	26.9	42.0	35.6
Green Ext Time (p_c), s	9.0	0.0	3.7

Intersection Summary	
HCM 2010 Ctrl Delay	27.3
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	24	93	35	17	260	10	75	767	39	58	639	25
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.98		0.96	0.99		0.96
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Lanes	0	1	1	0	1	1	1	2	0	1	2	0
Cap, veh/h	48	153	522	42	336	522	484	1901	95	299	1924	76
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.18	0.18	0.18	1.00	1.00	1.00
Sat Flow, veh/h	0	459	1566	0	1008	1566	727	3422	172	635	3464	137
Grp Volume(v), veh/h	125	0	37	295	0	11	80	422	435	62	347	360
Grp Sat Flow(s),veh/h/ln	459	0	1566	1008	0	1566	727	1770	1824	635	1770	1832
Q Serve(g_s), s	0.0	0.0	1.5	0.0	0.0	0.4	8.4	19.0	19.0	4.1	0.0	0.0
Cycle Q Clear(g_c), s	30.0	0.0	1.5	30.0	0.0	0.4	8.4	19.0	19.0	23.1	0.0	0.0
Prop In Lane	0.21		1.00	0.06		1.00	1.00		0.09	1.00		0.08
Lane Grp Cap(c), veh/h	201	0	522	379	0	522	484	983	1013	299	983	1018
V/C Ratio(X)	0.62	0.00	0.07	0.78	0.00	0.02	0.17	0.43	0.43	0.21	0.35	0.35
Avail Cap(c_a), veh/h	201	0	522	379	0	522	484	983	1013	299	983	1018
HCM Platoon Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.73	0.73	0.73	0.40	0.40	0.40
Uniform Delay (d), s/veh	24.3	0.0	20.5	25.5	0.0	20.1	19.8	24.1	24.1	4.4	0.0	0.0
Incr Delay (d2), s/veh	5.8	0.0	0.1	10.0	0.0	0.0	0.5	1.0	1.0	0.6	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.3	0.0	0.6	6.2	0.0	0.2	1.7	9.3	9.6	0.5	0.1	0.1
Lane Grp Delay (d), s/veh	30.1	0.0	20.5	35.4	0.0	20.2	20.3	25.1	25.1	5.0	0.4	0.4
Lane Grp LOS	C		C	D		C	C	C	C	A	A	A
Approach Vol, veh/h		162			306			937			769	
Approach Delay, s/veh		27.9			34.9			24.7			0.8	
Approach LOS		C			C			C			A	

Timer												
Assigned Phs		4			8			2			6	
Phs Duration (G+Y+Rc), s		35.0			35.0			55.0			55.0	
Change Period (Y+Rc), s		5.0			5.0			5.0			5.0	
Max Green Setting (Gmax), s		30.0			30.0			50.0			50.0	
Max Q Clear Time (g_c+I1), s		32.0			32.0			21.0			25.1	
Green Ext Time (p_c), s		0.0			0.0			21.5			19.1	

Intersection Summary			
HCM 2010 Ctrl Delay		17.9	
HCM 2010 LOS		B	

Notes

Intersection	
Intersection Delay, s/veh	2.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	1335	0	0	0	0	97
Conflicting Peds, #/hr	0	0	0	0	0	50
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	None	None	None	None	None	None
Storage Length		0	0		0	0
Median Width	12			12	0	
Grade, %	0%			0%	0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1669	0	0	0	0	121
Number of Lanes	3	0	0	0	0	1

Major/Minor	Major 1					
Conflicting Flow All	0	0			1719	883
Stage 1	-	-			1719	-
Stage 2	-	-			0	-
Follow-up Headway	-	-			3.82	3.92
Pot Capacity-1 Maneuver	-	-			95	248
Stage 1	-	-			62	-
Stage 2	-	-			-	-
Time blocked-Platoon, %	-	-			0	0
Mov Capacity-1 Maneuver	-	-			91	238
Mov Capacity-2 Maneuver	-	-			91	-
Stage 1	-	-			59	-
Stage 2	-	-			-	-

Approach	EB	NB
HCM Control Delay, s	0	34.9
HCM LOS	-	D

Minor Lane / Major Mvmt	NBLn1	EBT	EBR
Cap, veh/h	238	-	-
HCM Control Delay, s	34.9	-	-
HCM Lane V/C Ratio	0.51	-	-
HCM Lane LOS	D	-	-
HCM 95th-tile Q, veh	2.6	-	-

Notes

~ : Volume Exceeds Capacity; $: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	198	1184	50	0	0	0	0	683	90	177	514	0
Number	5	2	12				3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97				1.00		0.98	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	186.3	186.3	186.3				0.0	186.3	186.3	186.3	186.3	0.0
Lanes	1	5	0				0	2	1	1	2	0
Cap, veh/h	952	4037	168				0	1176	517	0	1176	0
Arrive On Green	0.54	0.54	0.54				0.00	0.33	0.33	0.00	0.11	0.00
Sat Flow, veh/h	1774	7518	314				0	3632	1558		3632	0
Grp Volume(v), veh/h	215	1032	309				0	742	98		559	0
Grp Sat Flow(s),veh/h/ln	1774	1509	1797				0	1770	1558		1770	0
Q Serve(g_s), s	4.9	7.3	7.4				0.0	13.5	3.4		11.3	0.0
Cycle Q Clear(g_c), s	4.9	7.3	7.4				0.0	13.5	3.4		11.3	0.0
Prop In Lane	1.00		0.17				0.00		1.00			0.00
Lane Grp Cap(c), veh/h	952	3240	965				0	1176	517		1176	0
V/C Ratio(X)	0.23	0.32	0.32				0.00	0.63	0.19		0.48	0.00
Avail Cap(c_a), veh/h	952	3240	965				0	1344	592		1808	0
HCM Platoon Ratio	0.00	0.00	0.00				0.00	0.00	0.00		0.00	0.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	0.96	0.96		0.97	0.00
Uniform Delay (d), s/veh	9.3	9.9	9.9				0.0	21.5	18.2		27.7	0.0
Incr Delay (d2), s/veh	0.6	0.3	0.9				0.0	0.7	0.2		0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0		0.0	0.0
%ile Back of Q (50%), veh/ln	1.9	2.4	3.0				0.0	5.8	1.3		5.4	0.0
Lane Grp Delay (d), s/veh	9.9	10.1	10.8				0.0	22.3	18.3		28.0	0.0
Lane Grp LOS	A	B	B					C	B		C	
Approach Vol, veh/h		1556						840			559	
Approach Delay, s/veh		10.2						21.8			28.0	
Approach LOS		B						C			C	
Timer												
Assigned Phs		2						8			4	
Phs Duration (G+Y+Rc), s		46.0						30.4			30.4	
Change Period (Y+Rc), s		5.0						5.0			5.0	
Max Green Setting (Gmax), s		41.0						29.0			39.0	
Max Q Clear Time (g_c+I1), s		9.4						15.5			13.3	
Green Ext Time (p_c), s		12.1						7.5			10.8	
Intersection Summary												
HCM 2010 Ctrl Delay			16.9									
HCM 2010 LOS			B									
Notes												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	6	10	18	16	30	34	7	733	9	3	545	16
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.99	0.99		0.99	1.00		0.99	1.00		0.99
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Lanes	0	1	0	0	1	1	0	2	0	0	2	0
Cap, veh/h	51	86	99	143	239	487	46	1927	24	43	1894	56
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.55	0.55	0.55	0.55	0.55	0.55
Sat Flow, veh/h	12	275	317	281	766	1565	9	3484	44	4	3425	101
Grp Volume(v), veh/h	40	0	0	54	0	40	461	0	420	349	0	315
Grp Sat Flow(s),veh/h/ln	604	0	0	1048	0	1565	1850	0	1687	1855	0	1676
Q Serve(g_s), s	0.5	0.0	0.0	3.9	0.0	1.6	0.0	0.0	13.1	0.0	0.0	9.2
Cycle Q Clear(g_c), s	26.9	0.0	0.0	27.6	0.0	1.6	13.0	0.0	13.1	9.1	0.0	9.2
Prop In Lane	0.17		0.52	0.35		1.00	0.02		0.03	0.01		0.06
Lane Grp Cap(c), veh/h	236	0	0	381	0	487	1065	0	933	1067	0	927
V/C Ratio(X)	0.17	0.00	0.00	0.14	0.00	0.08	0.43	0.00	0.45	0.33	0.00	0.34
Avail Cap(c_a), veh/h	261	0	0	381	0	512	1065	0	933	1067	0	927
HCM Platoon Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	0.93	0.00	0.93
Uniform Delay (d), s/veh	23.3	0.0	0.0	21.7	0.0	21.6	11.8	0.0	11.8	10.9	0.0	10.9
Incr Delay (d2), s/veh	0.4	0.0	0.0	0.2	0.0	0.1	1.3	0.0	1.6	0.8	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.6	0.0	0.0	0.8	0.0	0.6	5.9	0.0	5.7	4.1	0.0	3.8
Lane Grp Delay (d), s/veh	23.7	0.0	0.0	21.9	0.0	21.6	13.0	0.0	13.4	11.6	0.0	11.8
Lane Grp LOS	C			C		C	B		B	B		B
Approach Vol, veh/h		40			94			881			664	
Approach Delay, s/veh		23.7			21.8			13.2			11.7	
Approach LOS		C			C			B			B	

Timer												
Assigned Phs		4			8			2			6	
Phs Duration (G+Y+Rc), s		34.2			34.2			55.0			55.0	
Change Period (Y+Rc), s		6.0			6.0			6.0			6.0	
Max Green Setting (Gmax), s		29.0			29.0			49.0			49.0	
Max Q Clear Time (g_c+I1), s		28.9			29.6			15.1			11.2	
Green Ext Time (p_c), s		0.0			0.0			12.8			13.3	

Intersection Summary	
HCM 2010 Ctrl Delay	13.3
HCM 2010 LOS	B

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	326	858	154	166	764	0	0	416	285
Number				5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.95	1.00		1.00	1.00		0.98
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln				186.3	186.3	186.3	186.3	186.3	0.0	0.0	186.3	186.3
Lanes				1	3	0	1	1	0	0	1	1
Cap, veh/h				712	1727	309	298	902	0	0	902	754
Arrive On Green				0.40	0.40	0.40	0.97	0.97	0.00	0.00	0.48	0.48
Sat Flow, veh/h				1774	4304	769	687	1863	0	0	1863	1558
Grp Volume(v), veh/h				362	750	374	184	849	0	0	462	317
Grp Sat Flow(s),veh/h/ln				1774	1695	1683	687	1863	0	0	1863	1558
Q Serve(g_s), s				13.4	14.8	14.9	18.7	14.2	0.0	0.0	14.8	11.5
Cycle Q Clear(g_c), s				13.4	14.8	14.9	33.5	14.2	0.0	0.0	14.8	11.5
Prop In Lane				1.00		0.46	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				712	1360	675	298	902	0	0	902	754
V/C Ratio(X)				0.51	0.55	0.55	0.62	0.94	0.00	0.00	0.51	0.42
Avail Cap(c_a), veh/h				712	1360	675	320	961	0	0	961	803
HCM Platoon Ratio				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Upstream Filter(I)				1.00	1.00	1.00	0.92	0.92	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				19.7	20.1	20.1	7.2	0.9	0.0	0.0	15.4	14.6
Incr Delay (d2), s/veh				2.6	1.6	3.3	2.9	15.3	0.0	0.0	0.5	0.4
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln				6.0	6.1	6.4	2.2	4.4	0.0	0.0	6.5	4.2
Lane Grp Delay (d), s/veh				22.2	21.7	23.4	10.1	16.2	0.0	0.0	15.9	14.9
Lane Grp LOS				C	C	C	B	B			B	B
Approach Vol, veh/h					1486			1033			779	
Approach Delay, s/veh					22.3			15.1			15.5	
Approach LOS					C			B			B	

Timer	
Assigned Phs	2 4 8
Phs Duration (G+Y+Rc), s	40.0 47.3 47.3
Change Period (Y+Rc), s	5.0 5.0 5.0
Max Green Setting (Gmax), s	35.0 45.0 45.0
Max Q Clear Time (g_c+I1), s	16.9 35.5 16.8
Green Ext Time (p_c), s	8.4 6.7 13.9

Intersection Summary	
HCM 2010 Ctrl Delay	18.4
HCM 2010 LOS	B

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	57	173	55	33	220	39	76	834	55	57	653	32
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.96	0.98		0.95	0.99		0.95
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Lanes	0	1	1	0	1	1	1	2	0	1	2	0
Cap, veh/h	50	124	516	45	237	509	472	1866	123	400	1904	92
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	0	373	1549	0	712	1526	705	3358	221	577	3427	166
Grp Volume(v), veh/h	247	0	59	272	0	42	82	473	483	61	362	374
Grp Sat Flow(s),veh/h/ln	373	0	1549	712	0	1526	705	1770	1810	577	1770	1823
Q Serve(g_s), s	0.0	0.0	2.4	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	30.0	0.0	2.4	30.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.25		1.00	0.13		1.00	1.00		0.12	1.00		0.09
Lane Grp Cap(c), veh/h	174	0	516	282	0	509	472	983	1005	400	983	1013
V/C Ratio(X)	1.42	0.00	0.11	0.96	0.00	0.08	0.17	0.48	0.48	0.15	0.37	0.37
Avail Cap(c_a), veh/h	174	0	516	282	0	509	472	983	1005	400	983	1013
HCM Platoon Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.71	0.71	0.71	0.85	0.85	0.85
Uniform Delay (d), s/veh	25.7	0.0	20.8	28.2	0.0	20.6	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	217.9	0.0	0.1	43.5	0.0	0.1	0.6	1.2	1.2	0.7	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	13.4	0.0	0.9	8.3	0.0	0.6	0.1	0.3	0.3	0.1	0.2	0.2
Lane Grp Delay (d), s/veh	243.6	0.0	20.9	71.6	0.0	20.6	0.6	1.2	1.2	0.7	0.9	0.9
Lane Grp LOS	F		C	E		C	A	A	A	A	A	A
Approach Vol, veh/h		306			314			1038			797	
Approach Delay, s/veh		200.7			64.8			1.1			0.9	
Approach LOS		F			E			A			A	

Timer												
Assigned Phs		4			8			2			6	
Phs Duration (G+Y+Rc), s		35.0			35.0			55.0			55.0	
Change Period (Y+Rc), s		5.0			5.0			5.0			5.0	
Max Green Setting (Gmax), s		30.0			30.0			50.0			50.0	
Max Q Clear Time (g_c+I1), s		32.0			32.0			2.0			2.0	
Green Ext Time (p_c), s		0.0			0.0			33.4			33.4	

Intersection Summary												
HCM 2010 Ctrl Delay			34.1									
HCM 2010 LOS			C									

Notes

Intersection	
Intersection Delay, s/veh	6.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	2232	0	0	0	0	124
Conflicting Peds, #/hr	0	0	0	0	0	58
Sign Control	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	None	None	None	None	None	None
Storage Length		0	0		0	0
Median Width	12			12	0	
Grade, %	0%			0%	0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2325	0	0	0	0	129
Number of Lanes	3	0	0	0	0	1

Major/Minor	Major 1					
Conflicting Flow All	0	0			2383	1220
Stage 1	-	-			2383	-
Stage 2	-	-			0	-
Follow-up Headway	-	-			3.82	3.92
Pot Capacity-1 Maneuver	-	-			36	148
Stage 1	-	-			20	-
Stage 2	-	-			-	-
Time blocked-Platoon, %	-	-			0	0
Mov Capacity-1 Maneuver	-	-			34	141
Mov Capacity-2 Maneuver	-	-			34	-
Stage 1	-	-			19	-
Stage 2	-	-			-	-

Approach	EB	NB
HCM Control Delay, s	0	116
HCM LOS	-	F

Minor Lane / Major Mvmt	NBLn1	EBT	EBR
Cap, veh/h	141	-	-
HCM Control Delay, s	116	-	-
HCM Lane V/C Ratio	0.92	-	-
HCM Lane LOS	F	-	-
HCM 95th-tile Q, veh	6.3	-	-

Notes

~ : Volume Exceeds Capacity; $: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	245	2011	100	0	0	0	0	720	166	235	506	0
Number	5	2	12				3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97				1.00		0.98	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	186.3	186.3	186.3				0.0	186.3	186.3	186.3	186.3	0.0
Lanes	1	5	0				0	2	1	1	2	0
Cap, veh/h	967	4059	202				0	1140	501	0	1140	0
Arrive On Green	0.55	0.55	0.55				0.00	0.64	0.64	0.00	0.64	0.00
Sat Flow, veh/h	1774	7446	371				0	3632	1555		3632	0
Grp Volume(v), veh/h	269	1791	529				0	791	182		556	0
Grp Sat Flow(s),veh/h/ln	1774	1509	1782				0	1770	1555		1770	0
Q Serve(g_s), s	6.1	14.4	14.4				0.0	10.8	4.1		6.1	0.0
Cycle Q Clear(g_c), s	6.1	14.4	14.4				0.0	10.8	4.1		6.1	0.0
Prop In Lane	1.00		0.21				0.00		1.00			0.00
Lane Grp Cap(c), veh/h	967	3290	971				0	1140	501		1140	0
V/C Ratio(X)	0.28	0.54	0.54				0.00	0.69	0.36		0.49	0.00
Avail Cap(c_a), veh/h	967	3290	971				0	1364	600		1835	0
HCM Platoon Ratio	0.00	0.00	0.00				0.00	0.00	0.00		0.00	0.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	0.94	0.94		0.96	0.00
Uniform Delay (d), s/veh	9.2	11.1	11.1				0.0	11.0	9.8		10.2	0.0
Incr Delay (d2), s/veh	0.7	0.7	2.2				0.0	1.1	0.4		0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0		0.0	0.0
%ile Back of Q (50%), veh/ln	2.4	4.6	5.9				0.0	3.0	1.3		2.0	0.0
Lane Grp Delay (d), s/veh	9.9	11.7	13.3				0.0	12.1	10.2		10.5	0.0
Lane Grp LOS	A	B	B					B	B		B	
Approach Vol, veh/h		2589						973			556	
Approach Delay, s/veh		11.8						11.8			10.5	
Approach LOS		B						B			B	

Timer												
Assigned Phs		2						8			4	
Phs Duration (G+Y+Rc), s		46.0						29.2			29.2	
Change Period (Y+Rc), s		5.0						5.0			5.0	
Max Green Setting (Gmax), s		41.0						29.0			39.0	
Max Q Clear Time (g_c+I1), s		16.4						12.8			8.1	
Green Ext Time (p_c), s		19.1						9.0			12.6	

Intersection Summary												
HCM 2010 Ctrl Delay			11.6									
HCM 2010 LOS			B									

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	14	27	18	18	24	54	14	818	9	3	545	58
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.98	1.00		0.99	1.00		0.99
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Lanes	0	1	0	0	1	1	0	2	0	0	2	0
Cap, veh/h	50	86	39	157	189	500	54	1883	20	42	1718	181
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.54	0.54	0.54	0.54	0.54	0.54
Sat Flow, veh/h	1	268	120	311	585	1551	23	3458	36	2	3155	332
Grp Volume(v), veh/h	68	0	0	49	0	63	508	0	469	374	0	330
Grp Sat Flow(s),veh/h/ln	390	0	0	896	0	1551	1828	0	1688	1857	0	1632
Q Serve(g_s), s	0.1	0.0	0.0	0.2	0.0	2.6	0.0	0.0	15.8	0.0	0.0	10.4
Cycle Q Clear(g_c), s	29.0	0.0	0.0	29.0	0.0	2.6	15.4	0.0	15.8	10.3	0.0	10.4
Prop In Lane	0.24		0.31	0.43		1.00	0.03		0.02	0.01		0.20
Lane Grp Cap(c), veh/h	175	0	0	346	0	500	1037	0	919	1052	0	889
V/C Ratio(X)	0.39	0.00	0.00	0.14	0.00	0.13	0.49	0.00	0.51	0.36	0.00	0.37
Avail Cap(c_a), veh/h	175	0	0	346	0	500	1037	0	919	1052	0	889
HCM Platoon Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	0.94	0.00	0.94
Uniform Delay (d), s/veh	24.4	0.0	0.0	21.2	0.0	21.6	12.8	0.0	12.9	11.7	0.0	11.7
Incr Delay (d2), s/veh	1.5	0.0	0.0	0.2	0.0	0.1	1.7	0.0	2.0	0.9	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.1	0.0	0.0	0.8	0.0	1.0	7.0	0.0	6.8	4.6	0.0	4.2
Lane Grp Delay (d), s/veh	25.9	0.0	0.0	21.4	0.0	21.7	14.5	0.0	14.9	12.6	0.0	12.8
Lane Grp LOS	C			C		C	B		B	B		B
Approach Vol, veh/h		68			112			977			704	
Approach Delay, s/veh		25.9			21.6			14.7			12.7	
Approach LOS		C			C			B			B	

Timer												
Assigned Phs		4			8			2			6	
Phs Duration (G+Y+Rc), s		35.0			35.0			55.0			55.0	
Change Period (Y+Rc), s		6.0			6.0			6.0			6.0	
Max Green Setting (Gmax), s		29.0			29.0			49.0			49.0	
Max Q Clear Time (g_c+I1), s		31.0			31.0			17.8			12.4	
Green Ext Time (p_c), s		0.0			0.0			14.0			15.0	

Intersection Summary												
HCM 2010 Ctrl Delay			14.8									
HCM 2010 LOS			B									

Notes

Appendix D

Intersection
Level of Service
Calculations

Future with Project
Traffic Conditions

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT[2]	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	45	1425	135	91	733	0	0	683	275
Number				5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.97	1.00		1.00	1.00		0.99
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln				186.3	186.3	186.3	186.3	186.3	0.0	0.0	186.3	186.3
Lanes				1	3	0	1	1	0	0	1	1
Cap, veh/h				788	2094	198	117	828	0	0	828	694
Arrive On Green				0.44	0.44	0.44	0.89	0.89	0.00	0.00	0.44	0.44
Sat Flow, veh/h				1774	4713	445	533	1863	0	0	1863	1561
Grp Volume(v), veh/h				49	1126	588	100	805	0	0	751	302
Grp Sat Flow(s),veh/h/ln				1774	1695	1767	533	1863	0	0	1863	1561
Q Serve(g_s), s				1.4	24.9	24.9	6.2	31.9	0.0	0.0	33.8	12.0
Cycle Q Clear(g_c), s				1.4	24.9	24.9	40.0	31.9	0.0	0.0	33.8	12.0
Prop In Lane				1.00		0.25	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				788	1507	785	117	828	0	0	828	694
V/C Ratio(X)				0.06	0.75	0.75	0.86	0.97	0.00	0.00	0.91	0.44
Avail Cap(c_a), veh/h				788	1507	785	117	828	0	0	828	694
HCM Platoon Ratio				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Upstream Filter(I)				1.00	1.00	1.00	0.94	0.94	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				14.3	20.8	20.8	23.9	4.5	0.0	0.0	23.3	17.2
Incr Delay (d2), s/veh				0.2	3.4	6.5	40.7	23.6	0.0	0.0	13.7	0.4
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln				0.6	10.3	11.4	3.4	7.5	0.0	0.0	18.2	4.5
Lane Grp Delay (d), s/veh				14.4	24.2	27.3	64.6	28.2	0.0	0.0	36.9	17.7
Lane Grp LOS				B	C	C	E	C			D	B
Approach Vol, veh/h					1763			905			1053	
Approach Delay, s/veh					25.0			32.2			31.4	
Approach LOS					C			C			C	

Timer	
Assigned Phs	2 4 8
Phs Duration (G+Y+Rc), s	45.0 45.0 45.0
Change Period (Y+Rc), s	5.0 5.0 5.0
Max Green Setting (Gmax), s	40.0 40.0 40.0
Max Q Clear Time (g_c+I1), s	26.9 42.0 35.8
Green Ext Time (p_c), s	9.0 0.0 3.6

Intersection Summary	
HCM 2010 Ctrl Delay	28.5
HCM 2010 LOS	C

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	24	93	36	17	260	10	78	790	39	58	645	25
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.98		0.96	0.99		0.96
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Lanes	0	1	1	0	1	1	1	2	0	1	2	0
Cap, veh/h	48	153	522	42	336	522	482	1904	93	290	1925	76
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.18	0.18	0.18	1.00	1.00	1.00
Sat Flow, veh/h	0	459	1566	0	1008	1566	723	3427	167	621	3465	136
Grp Volume(v), veh/h	125	0	38	295	0	11	83	434	447	62	350	363
Grp Sat Flow(s),veh/h/ln	459	0	1566	1008	0	1566	723	1770	1825	621	1770	1832
Q Serve(g_s), s	0.0	0.0	1.5	0.0	0.0	0.4	8.8	19.6	19.6	4.3	0.0	0.0
Cycle Q Clear(g_c), s	30.0	0.0	1.5	30.0	0.0	0.4	8.8	19.6	19.6	23.9	0.0	0.0
Prop In Lane	0.21		1.00	0.06		1.00	1.00		0.09	1.00		0.07
Lane Grp Cap(c), veh/h	201	0	522	379	0	522	482	983	1014	290	983	1018
V/C Ratio(X)	0.62	0.00	0.07	0.78	0.00	0.02	0.17	0.44	0.44	0.21	0.36	0.36
Avail Cap(c_a), veh/h	201	0	522	379	0	522	482	983	1014	290	983	1018
HCM Platoon Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.72	0.72	0.72	0.40	0.40	0.40
Uniform Delay (d), s/veh	24.3	0.0	20.5	25.5	0.0	20.1	19.9	24.3	24.3	4.7	0.0	0.0
Incr Delay (d2), s/veh	5.8	0.0	0.1	10.0	0.0	0.0	0.6	1.0	1.0	0.7	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.3	0.0	0.6	6.2	0.0	0.2	1.8	9.6	9.9	0.5	0.1	0.1
Lane Grp Delay (d), s/veh	30.1	0.0	20.6	35.4	0.0	20.2	20.5	25.4	25.3	5.4	0.4	0.4
Lane Grp LOS	C		C	D		C	C	C	C	A	A	A
Approach Vol, veh/h		163			306			964			775	
Approach Delay, s/veh		27.8			34.9			24.9			0.8	
Approach LOS		C			C			C			A	

Timer				
Assigned Phs	4	8	2	6
Phs Duration (G+Y+Rc), s	35.0	35.0	55.0	55.0
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	30.0	30.0	50.0	50.0
Max Q Clear Time (g_c+I1), s	32.0	32.0	21.6	25.9
Green Ext Time (p_c), s	0.0	0.0	21.5	18.8

Intersection Summary	
HCM 2010 Ctrl Delay	18.1
HCM 2010 LOS	B

Notes

Intersection	
Intersection Delay, s/veh	3.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	1338	0	0	0	0	115
Conflicting Peds, #/hr	0	0	0	0	0	50
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	None	None	None	None	None	None
Storage Length		0	0		0	0
Median Width	12			12	0	
Grade, %	0%			0%	0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1672	0	0	0	0	144
Number of Lanes	3	0	0	0	0	1

Major/Minor	Major 1					
Conflicting Flow All	0	0			1723	885
Stage 1	-	-			1723	-
Stage 2	-	-			0	-
Follow-up Headway	-	-			3.82	3.92
Pot Capacity-1 Maneuver	-	-			94	247
Stage 1	-	-			61	-
Stage 2	-	-			-	-
Time blocked-Platoon, %	-	-			0	0
Mov Capacity-1 Maneuver	-	-			90	237
Mov Capacity-2 Maneuver	-	-			90	-
Stage 1	-	-			58	-
Stage 2	-	-			-	-

Approach	EB	NB
HCM Control Delay, s	0	41.1
HCM LOS	-	E

Minor Lane / Major Mvmt	NBLn1	EBT	EBR
Cap, veh/h	237	-	-
HCM Control Delay, s	41.1	-	-
HCM Lane V/C Ratio	0.61	-	-
HCM Lane LOS	E	-	-
HCM 95th-tile Q, veh	3.5	-	-

Notes

~ : Volume Exceeds Capacity; $: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	201	1199	53	0	0	0	0	706	94	177	521	0
Number	5	2	12				3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97				1.00		0.98	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	186.3	186.3	186.3				0.0	186.3	186.3	186.3	186.3	0.0
Lanes	1	5	0				0	2	1	1	2	0
Cap, veh/h	948	4008	177				0	1186	522	0	1186	0
Arrive On Green	0.53	0.53	0.53				0.00	0.34	0.34	0.00	0.11	0.00
Sat Flow, veh/h	1774	7496	332				0	3632	1558		3632	0
Grp Volume(v), veh/h	218	1048	313				0	767	102		566	0
Grp Sat Flow(s),veh/h/ln	1774	1509	1793				0	1770	1558		1770	0
Q Serve(g_s), s	5.0	7.5	7.6				0.0	14.1	3.6		11.5	0.0
Cycle Q Clear(g_c), s	5.0	7.5	7.6				0.0	14.1	3.6		11.5	0.0
Prop In Lane	1.00		0.19				0.00		1.00			0.00
Lane Grp Cap(c), veh/h	948	3226	958				0	1186	522		1186	0
V/C Ratio(X)	0.23	0.32	0.33				0.00	0.65	0.20		0.48	0.00
Avail Cap(c_a), veh/h	948	3226	958				0	1338	589		1800	0
HCM Platoon Ratio	0.00	0.00	0.00				0.00	0.00	0.00		0.00	0.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	0.96	0.96		0.97	0.00
Uniform Delay (d), s/veh	9.5	10.1	10.1				0.0	21.6	18.1		27.8	0.0
Incr Delay (d2), s/veh	0.6	0.3	0.9				0.0	0.9	0.2		0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0		0.0	0.0
%ile Back of Q (50%), veh/ln	2.0	2.4	3.0				0.0	6.2	1.4		5.6	0.0
Lane Grp Delay (d), s/veh	10.0	10.3	11.0				0.0	22.5	18.3		28.1	0.0
Lane Grp LOS	B	B	B					C	B		C	
Approach Vol, veh/h		1579						869			566	
Approach Delay, s/veh		10.4						22.0			28.1	
Approach LOS		B						C			C	

Timer												
Assigned Phs		2						8			4	
Phs Duration (G+Y+Rc), s		46.0						30.7			30.7	
Change Period (Y+Rc), s		5.0						5.0			5.0	
Max Green Setting (Gmax), s		41.0						29.0			39.0	
Max Q Clear Time (g_c+I1), s		9.6						16.1			13.5	
Green Ext Time (p_c), s		12.3						7.5			11.1	

Intersection Summary												
HCM 2010 Ctrl Delay			17.1									
HCM 2010 LOS			B									

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	33	11	25	16	30	34	9	733	9	3	545	26
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.99	0.99		0.99	1.00		0.99	1.00		0.99
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Lanes	0	1	0	0	1	1	0	2	0	0	2	0
Cap, veh/h	60	27	16	188	322	504	49	1890	24	43	1826	88
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.54	0.54	0.54	0.54	0.54	0.54
Sat Flow, veh/h	2	84	48	415	1000	1566	14	3470	44	4	3354	161
Grp Volume(v), veh/h	81	0	0	54	0	40	462	0	422	356	0	320
Grp Sat Flow(s),veh/h/ln	135	0	0	1414	0	1566	1842	0	1687	1855	0	1664
Q Serve(g_s), s	0.1	0.0	0.0	0.2	0.0	1.6	0.0	0.0	13.7	0.0	0.0	9.8
Cycle Q Clear(g_c), s	29.0	0.0	0.0	29.0	0.0	1.6	13.5	0.0	13.7	9.7	0.0	9.8
Prop In Lane	0.48		0.36	0.35		1.00	0.02		0.03	0.01		0.10
Lane Grp Cap(c), veh/h	103	0	0	510	0	504	1044	0	918	1051	0	906
V/C Ratio(X)	0.79	0.00	0.00	0.11	0.00	0.08	0.44	0.00	0.46	0.34	0.00	0.35
Avail Cap(c_a), veh/h	103	0	0	510	0	505	1044	0	918	1051	0	906
HCM Platoon Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	0.93	0.00	0.93
Uniform Delay (d), s/veh	30.6	0.0	0.0	21.3	0.0	21.2	12.4	0.0	12.5	11.5	0.0	11.6
Incr Delay (d2), s/veh	32.8	0.0	0.0	0.1	0.0	0.1	1.4	0.0	1.7	0.8	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.2	0.0	0.0	0.8	0.0	0.6	6.2	0.0	5.8	4.4	0.0	4.1
Lane Grp Delay (d), s/veh	63.4	0.0	0.0	21.4	0.0	21.3	13.8	0.0	14.1	12.4	0.0	12.6
Lane Grp LOS	E			C		C	B		B	B		B
Approach Vol, veh/h		81			94			884			676	
Approach Delay, s/veh		63.4			21.3			13.9			12.4	
Approach LOS		E			C			B			B	

Timer				
Assigned Phs	4	8	2	6
Phs Duration (G+Y+Rc), s	35.0	35.0	55.0	55.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	29.0	29.0	49.0	49.0
Max Q Clear Time (g_c+I1), s	31.0	31.0	15.7	11.8
Green Ext Time (p_c), s	0.0	0.0	12.9	13.4

Intersection Summary	
HCM 2010 Ctrl Delay	16.1
HCM 2010 LOS	B

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	345	858	154	173	768	0	0	425	285
Number				5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		0.95	1.00		1.00	1.00		0.98
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln				186.3	186.3	186.3	186.3	186.3	0.0	0.0	186.3	186.3
Lanes				1	3	0	1	1	0	0	1	1
Cap, veh/h				703	1706	305	298	914	0	0	914	764
Arrive On Green				0.40	0.40	0.40	0.98	0.98	0.00	0.00	0.49	0.49
Sat Flow, veh/h				1774	4304	769	681	1863	0	0	1863	1558
Grp Volume(v), veh/h				383	750	374	192	853	0	0	472	317
Grp Sat Flow(s),veh/h/ln				1774	1695	1683	681	1863	0	0	1863	1558
Q Serve(g_s), s				14.7	15.1	15.2	20.8	9.2	0.0	0.0	15.3	11.5
Cycle Q Clear(g_c), s				14.7	15.1	15.2	36.1	9.2	0.0	0.0	15.3	11.5
Prop In Lane				1.00		0.46	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				703	1344	667	298	914	0	0	914	764
V/C Ratio(X)				0.54	0.56	0.56	0.64	0.93	0.00	0.00	0.52	0.41
Avail Cap(c_a), veh/h				703	1344	667	311	949	0	0	949	794
HCM Platoon Ratio				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Upstream Filter(I)				1.00	1.00	1.00	0.92	0.92	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				20.5	20.7	20.7	7.2	0.5	0.0	0.0	15.4	14.4
Incr Delay (d2), s/veh				3.0	1.7	3.4	4.0	14.5	0.0	0.0	0.5	0.4
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln				6.7	6.2	6.6	2.7	4.0	0.0	0.0	6.7	4.2
Lane Grp Delay (d), s/veh				23.5	22.3	24.1	11.1	15.0	0.0	0.0	15.8	14.8
Lane Grp LOS				C	C	C	B	B			B	B
Approach Vol, veh/h					1507			1045			789	
Approach Delay, s/veh					23.1			14.3			15.4	
Approach LOS					C			B			B	

Timer	
Assigned Phs	2 4 8
Phs Duration (G+Y+Rc), s	40.0 48.3 48.3
Change Period (Y+Rc), s	5.0 5.0 5.0
Max Green Setting (Gmax), s	35.0 45.0 45.0
Max Q Clear Time (g_c+I1), s	17.2 38.1 17.3
Green Ext Time (p_c), s	8.4 5.2 14.0

Intersection Summary	
HCM 2010 Ctrl Delay	18.5
HCM 2010 LOS	B

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	57	173	58	33	220	39	77	845	55	57	681	32
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.96	0.98		0.95	0.99		0.95
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Lanes	0	1	1	0	1	1	1	2	0	1	2	0
Cap, veh/h	50	124	516	45	237	509	461	1868	121	397	1908	89
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	0	373	1549	0	712	1526	686	3362	218	570	3435	159
Grp Volume(v), veh/h	247	0	62	272	0	42	83	478	490	61	377	389
Grp Sat Flow(s),veh/h/ln	373	0	1549	712	0	1526	686	1770	1810	570	1770	1824
Q Serve(g_s), s	0.0	0.0	2.5	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	30.0	0.0	2.5	30.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.25		1.00	0.13		1.00	1.00		0.12	1.00		0.09
Lane Grp Cap(c), veh/h	174	0	516	282	0	509	461	983	1006	397	983	1014
V/C Ratio(X)	1.42	0.00	0.12	0.96	0.00	0.08	0.18	0.49	0.49	0.15	0.38	0.38
Avail Cap(c_a), veh/h	174	0	516	282	0	509	461	983	1006	397	983	1014
HCM Platoon Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.70	0.70	0.70	0.83	0.83	0.83
Uniform Delay (d), s/veh	25.7	0.0	20.8	28.2	0.0	20.6	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	217.9	0.0	0.1	43.5	0.0	0.1	0.6	1.2	1.2	0.7	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	13.4	0.0	1.0	8.3	0.0	0.6	0.1	0.3	0.3	0.1	0.3	0.3
Lane Grp Delay (d), s/veh	243.6	0.0	20.9	71.6	0.0	20.6	0.6	1.2	1.2	0.7	0.9	0.9
Lane Grp LOS	F		C	E		C	A	A	A	A	A	A
Approach Vol, veh/h		309			314			1051			827	
Approach Delay, s/veh		198.9			64.8			1.2			0.9	
Approach LOS		F			E			A			A	

Timer												
Assigned Phs		4			8			2			6	
Phs Duration (G+Y+Rc), s		35.0			35.0			55.0			55.0	
Change Period (Y+Rc), s		5.0			5.0			5.0			5.0	
Max Green Setting (Gmax), s		30.0			30.0			50.0			50.0	
Max Q Clear Time (g_c+I1), s		32.0			32.0			2.0			2.0	
Green Ext Time (p_c), s		0.0			0.0			34.2			34.2	

Intersection Summary			
HCM 2010 Ctrl Delay		33.5	
HCM 2010 LOS		C	

Notes

Intersection	
Intersection Delay, s/veh	7.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	2246	0	0	0	0	132
Conflicting Peds, #/hr	0	0	0	0	0	58
Sign Control	Free	Free	Stop	Stop	Stop	Stop
RT Channelized	None	None	None	None	None	None
Storage Length		0	0		0	0
Median Width	12			12	0	
Grade, %	0%			0%	0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2340	0	0	0	0	138
Number of Lanes	3	0	0	0	0	1

Major/Minor	Major 1					
Conflicting Flow All	0	0			2398	1227
Stage 1	-	-			2398	-
Stage 2	-	-			0	-
Follow-up Headway	-	-			3.82	3.92
Pot Capacity-1 Maneuver	-	-			36	146
Stage 1	-	-			20	-
Stage 2	-	-			-	-
Time blocked-Platoon, %	-	-			0	0
Mov Capacity-1 Maneuver	-	-			34	139
Mov Capacity-2 Maneuver	-	-			34	-
Stage 1	-	-			19	-
Stage 2	-	-			-	-

Approach	EB	NB
HCM Control Delay, s	0	135.9
HCM LOS	-	F

Minor Lane / Major Mvmt	NBLn1	EBT	EBR
Cap, veh/h	139	-	-
HCM Control Delay, s	135.9	-	-
HCM Lane V/C Ratio	0.99	-	-
HCM Lane LOS	F	-	-
HCM 95th-tile Q, veh	7.1	-	-

Notes

~ : Volume Exceeds Capacity; $: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	246	2018	114	0	0	0	0	731	169	235	537	0
Number	5	2	12				3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97				1.00		0.98	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	186.3	186.3	186.3				0.0	186.3	186.3	186.3	186.3	0.0
Lanes	1	5	0				0	2	1	1	2	0
Cap, veh/h	963	4014	226				0	1148	505	0	1148	0
Arrive On Green	0.54	0.54	0.54				0.00	0.65	0.65	0.00	0.65	0.00
Sat Flow, veh/h	1774	7390	416				0	3632	1556		3632	0
Grp Volume(v), veh/h	270	1811	532				0	803	186		590	0
Grp Sat Flow(s),veh/h/ln	1774	1509	1772				0	1770	1556		1770	0
Q Serve(g_s), s	6.2	14.8	14.8				0.0	11.0	4.2		6.6	0.0
Cycle Q Clear(g_c), s	6.2	14.8	14.8				0.0	11.0	4.2		6.6	0.0
Prop In Lane	1.00		0.24				0.00		1.00			0.00
Lane Grp Cap(c), veh/h	963	3278	962				0	1148	505		1148	0
V/C Ratio(X)	0.28	0.55	0.55				0.00	0.70	0.37		0.51	0.00
Avail Cap(c_a), veh/h	963	3278	962				0	1359	598		1828	0
HCM Platoon Ratio	0.00	0.00	0.00				0.00	0.00	0.00		0.00	0.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	0.94	0.94		0.96	0.00
Uniform Delay (d), s/veh	9.3	11.3	11.3				0.0	10.9	9.7		10.1	0.0
Incr Delay (d2), s/veh	0.7	0.7	2.3				0.0	1.2	0.4		0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0		0.0	0.0
%ile Back of Q (50%), veh/ln	2.4	4.8	6.1				0.0	3.0	1.3		2.1	0.0
Lane Grp Delay (d), s/veh	10.0	11.9	13.5				0.0	12.1	10.1		10.5	0.0
Lane Grp LOS	B	B	B					B	B		B	
Approach Vol, veh/h		2613						989			590	
Approach Delay, s/veh		12.1						11.7			10.5	
Approach LOS		B						B			B	

Timer												
Assigned Phs		2						8			4	
Phs Duration (G+Y+Rc), s		46.0						29.5			29.5	
Change Period (Y+Rc), s		5.0						5.0			5.0	
Max Green Setting (Gmax), s		41.0						29.0			39.0	
Max Q Clear Time (g_c+I1), s		16.8						13.0			8.6	
Green Ext Time (p_c), s		19.0						9.2			13.1	

Intersection Summary			
HCM 2010 Ctrl Delay			11.8
HCM 2010 LOS			B

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	28	28	22	18	25	54	21	818	9	3	545	103
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.98	1.00		0.99	1.00		0.99
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Lanes	0	1	0	0	1	1	0	2	0	0	2	0
Cap, veh/h	55	51	20	187	237	500	64	1856	19	42	1580	297
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.54	0.54	0.54	0.54	0.54	0.54
Sat Flow, veh/h	2	157	63	404	735	1551	41	3408	35	2	2901	546
Grp Volume(v), veh/h	92	0	0	50	0	63	508	0	477	407	0	350
Grp Sat Flow(s),veh/h/ln	221	0	0	1139	0	1551	1796	0	1688	1858	0	1592
Q Serve(g_s), s	0.1	0.0	0.0	0.2	0.0	2.6	0.0	0.0	16.1	0.0	0.0	11.5
Cycle Q Clear(g_c), s	29.0	0.0	0.0	29.0	0.0	2.6	15.4	0.0	16.1	11.5	0.0	11.5
Prop In Lane	0.36		0.28	0.42		1.00	0.05		0.02	0.01		0.34
Lane Grp Cap(c), veh/h	126	0	0	424	0	500	1020	0	919	1052	0	867
V/C Ratio(X)	0.73	0.00	0.00	0.12	0.00	0.13	0.50	0.00	0.52	0.39	0.00	0.40
Avail Cap(c_a), veh/h	126	0	0	424	0	500	1020	0	919	1052	0	867
HCM Platoon Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	0.93	0.00	0.93
Uniform Delay (d), s/veh	25.4	0.0	0.0	21.2	0.0	21.6	12.8	0.0	13.0	11.9	0.0	12.0
Incr Delay (d2), s/veh	19.8	0.0	0.0	0.1	0.0	0.1	1.7	0.0	2.1	1.0	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.1	0.0	0.0	0.8	0.0	1.0	7.0	0.0	7.0	5.2	0.0	4.6
Lane Grp Delay (d), s/veh	45.2	0.0	0.0	21.4	0.0	21.7	14.6	0.0	15.1	12.9	0.0	13.3
Lane Grp LOS	D			C		C	B		B	B		B
Approach Vol, veh/h		92			113			985			757	
Approach Delay, s/veh		45.2			21.5			14.8			13.1	
Approach LOS		D			C			B			B	

Timer				
Assigned Phs	4	8	2	6
Phs Duration (G+Y+Rc), s	35.0	35.0	55.0	55.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	29.0	29.0	49.0	49.0
Max Q Clear Time (g_c+I1), s	31.0	31.0	18.1	13.5
Green Ext Time (p_c), s	0.0	0.0	14.7	15.6

Intersection Summary	
HCM 2010 Ctrl Delay	16.0
HCM 2010 LOS	B

Notes

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	13	25	17	17	22	50	13	735	8	3	509	54
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.98	1.00		0.99	1.00		0.99
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3
Lanes	0	1	0	0	1	1	0	2	0	0	2	0
Cap, veh/h	50	86	39	158	185	500	54	1884	20	42	1717	182
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.54	0.54	0.54	0.54	0.54	0.54
Sat Flow, veh/h	1	268	122	313	573	1551	23	3459	36	3	3153	334
Grp Volume(v), veh/h	64	0	0	46	0	58	458	0	421	350	0	308
Grp Sat Flow(s),veh/h/ln	392	0	0	886	0	1551	1830	0	1688	1858	0	1632
Q Serve(g_s), s	0.1	0.0	0.0	0.2	0.0	2.4	0.0	0.0	13.6	0.0	0.0	9.5
Cycle Q Clear(g_c), s	29.0	0.0	0.0	29.0	0.0	2.4	13.3	0.0	13.6	9.5	0.0	9.5
Prop In Lane	0.23		0.31	0.43		1.00	0.03		0.02	0.01		0.20
Lane Grp Cap(c), veh/h	176	0	0	343	0	500	1038	0	919	1052	0	889
V/C Ratio(X)	0.36	0.00	0.00	0.13	0.00	0.12	0.44	0.00	0.46	0.33	0.00	0.35
Avail Cap(c_a), veh/h	176	0	0	343	0	500	1038	0	919	1052	0	889
HCM Platoon Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	0.94	0.00	0.94
Uniform Delay (d), s/veh	24.3	0.0	0.0	21.2	0.0	21.5	12.4	0.0	12.4	11.5	0.0	11.5
Incr Delay (d2), s/veh	1.4	0.0	0.0	0.2	0.0	0.1	1.4	0.0	1.6	0.8	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.1	0.0	0.0	0.7	0.0	0.9	6.1	0.0	5.8	4.2	0.0	3.8
Lane Grp Delay (d), s/veh	25.7	0.0	0.0	21.4	0.0	21.6	13.7	0.0	14.1	12.3	0.0	12.5
Lane Grp LOS	C			C		C	B		B	B		B
Approach Vol, veh/h		64			104			879			658	
Approach Delay, s/veh		25.7			21.5			13.9			12.4	
Approach LOS		C			C			B			B	

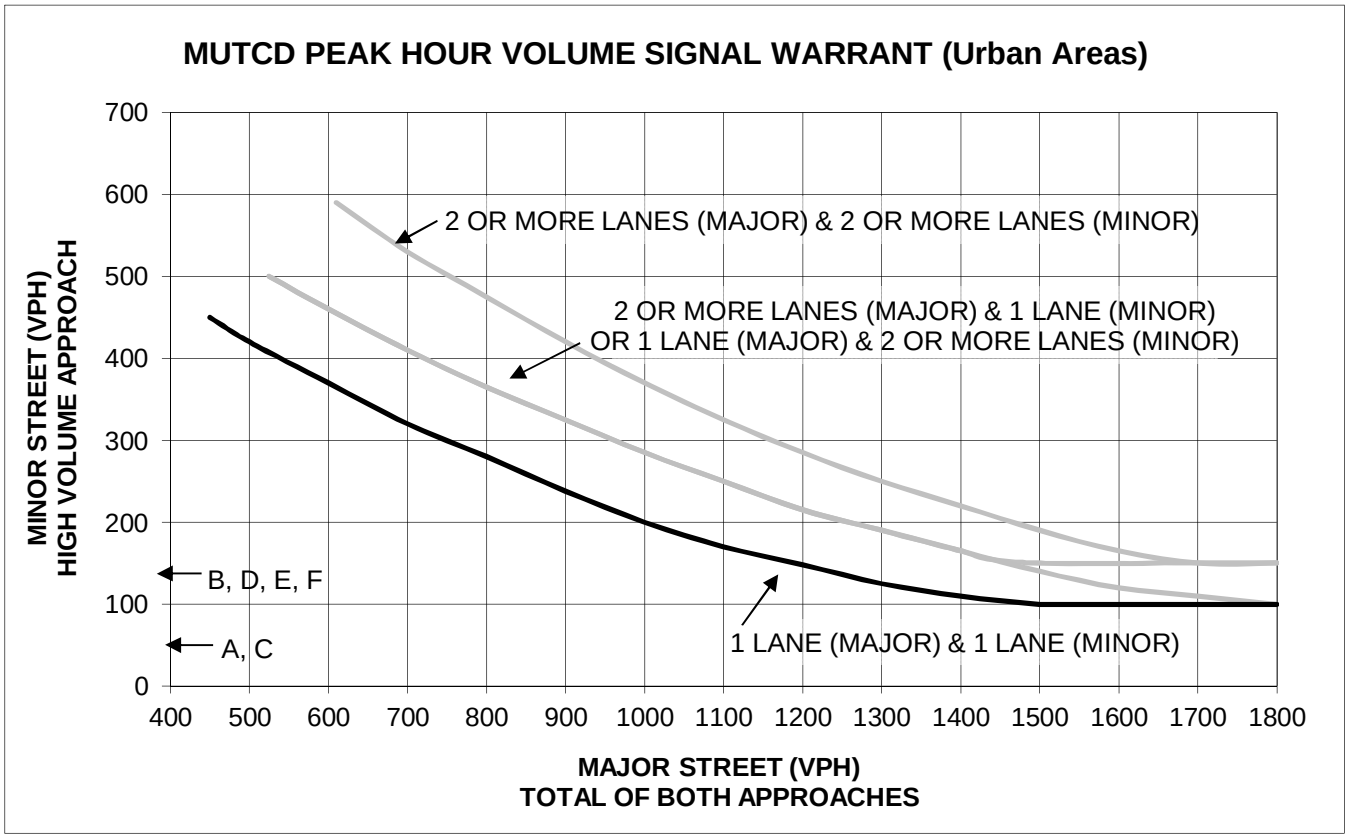
Timer				
Assigned Phs	4	8	2	6
Phs Duration (G+Y+Rc), s	35.0	35.0	55.0	55.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	29.0	29.0	49.0	49.0
Max Q Clear Time (g_c+I1), s	31.0	31.0	15.6	11.5
Green Ext Time (p_c), s	0.0	0.0	12.7	13.2

Intersection Summary	
HCM 2010 Ctrl Delay	14.2
HCM 2010 LOS	B

Notes

Appendix E

Signal Warrant
Worksheet



Scenario	Algaroba East/West	Pumehana North/South	Warrant Met?
A. Exist AM	82	91	No
B. Exist PM	144	116	No
C. FutureNoPro AM	87	97	No
D. FutureNoPro PM	155	124	No
E. FutureYesPro AM	134	115	No
F. FutureYesPro PM	227	132	No

Notes:

1. 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 approaching with one lane.

2. Bold line applies to intersection geometry.

Appendix H

Site Infrastructure Assessment Report

SITE INFRASTRUCTURE ASSESSMENT REPORT

FOR

‘OHANA HALE

HONOLULU, OAHU, HAWAII
Tax Map Key: 2-3-028:004

Prepared By:

The Limtiaco Consulting Group
1622 Kanakanui Street
Honolulu, Hawaii 96817
(808) 596-7790

July 2014

JASON H. LAU
LICENSED PROFESSIONAL ENGINEER
NO. 9360-C
HAWAII USA

4/30/16
EXP. DATE

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

1. INTRODUCTION

1.1. PURPOSE

The purpose of this report is to evaluate the impacts to the existing infrastructure and identify possible mitigative measures for the proposed ‘Ohana Hale Affordable Housing project, hereafter referred to as “Project”.

1.2. GENERAL BACKGROUND

The proposed Project is located at 929 Pumehana Street in Honolulu, Oahu, Hawaii (TMK: 2-3-028:004). The existing parcel consists of a two-story apartment complex and two multi-family dwellings. The Project proposes to demolish the existing structures and construct an affordable housing high-rise building. The new development will tentatively consist of 96 studio units, 79 1-bedroom units and 5 2-bedroom units.

2. INFRASTRUCTURE

2.1. WATER

2.1.1. Existing Water Infrastructure

The City and County of Honolulu (City), Board of Water Supply (BWS) currently provides potable water to the site from the Metro 180’ Reservoir via existing 8-inch waterlines along Algaroba Street and Pumehana Street. The property is currently serviced by two lateral connections: one to an 8-inch waterline along Algaroba Street and the second to an 8-inch waterline along Pumehana Street.

Three (3) existing fire hydrants are located in close proximity to the Project site. A hydrant (#M07603) is located along Algaroba Street approximately 32 feet east of the property nearest the apartment building. The second hydrant (#M00974) is located at the makai/Ewa corner of the intersection of Pumehana Street and South King Street. The third hydrant (#M00975) is located at the makai/Diamond Head corner of the intersection of Pumehana Street and Algaroba Street.

In a letter dated December 17, 2013, the BWS provided the following calculated flow data for hydrant #M00975:

Static Pressure:	75 psi
Residual Pressure:	78 psi
Flow:	4,000 gpm

2.1.2. Potential Impacts and Mitigation Measures

Based on the Board of Water Supply, “Water System Standards”, dated 2002 (hereafter referred to as “BWS Standards”), the proposed domestic water consumption flows are as follows:

Table 1. Domestic Water Consumption

Flow Demand	Proposed Domestic Water Consumption (gallons/day)
Average Daily Demand	54,000 gpd
Maximum Daily Demand	81,000 gpd
Peak Hour Flow	162,000 gpd

Water consumption was based on an average daily demand of 300 gallons/unit as indicated in Table 100-18 of the “BWS Standards”.

In a letter dated December 17, 2013, the BWS indicated that the existing water system is adequate to accommodate the proposed development based upon current data at the time. The final decision on the availability of water will be confirmed when the building permit application is submitted for approval.

A new water lateral connection will be required to either the existing 8-inch waterline located along Algaroba Street or Pumehana Street. A new FM meter will also be required to provide both domestic and fire protection services. The actual meter size and type will be determined based upon further consultation with BWS.

In accordance with BWS’ cross-connection control and backflow prevention program, a backflow preventer assembly will be required to prevent cross contamination of the City’s water supply system.

Fire protection for ‘Ohana Hale will be provided by an on-site fire sprinkler system and supplemented by the existing BWS fire hydrants. A water supply approved by the BWS, capable of supplying the required fire flow and meeting the requirements of the Fire Prevention Bureau of the Honolulu Fire Department, will be provided to all constructed facilities or buildings.

2.2. WASTEWATER

2.2.1. Existing Wastewater Infrastructure

Wastewater generated by the existing parcel is conveyed to the City’s existing wastewater collection system via two (2) 6-inch service laterals to the 6-inch sewer main along Algaroba Street and two (2) 6-inch service laterals to the 8-inch sewer main located along Pumehana Street. Sewage flows are then conveyed to the Ala Moana Wastewater Pump Station and then to the Sand Island Wastewater Treatment Plant for treatment and disposal.

2.2.2. Potential Impacts and Mitigation Measures

Based on the City and County of Honolulu, Department of Wastewater Management, “Design Standards of the Department of Wastewater

Management, dated July 1993 (hereafter referred to as "City Sewer Standards"), the proposed wastewater flows are as follows:

Table 2. Proposed Wastewater Flows

Flow Demand	Proposed Wastewater Flow (gallons/day)
Average Wastewater Flow	40,320 gpd
Maximum Flow	201,600 gpd
Design Average Flow	57,960 gpd
Design Maximum Flow	219,240 gpd
Design Peak Flow	228,394 gpd

Wastewater flows were based on an average flow of 80 gallons per capita per day as indicated in Section 22.2.1 of the "City Sewer Standards". A factor of 2.8 capita per unit was used for estimation purposes. The design flow rates are inclusive of dry weather and wet weather infiltration/inflow rates assuming that sewers are located below the groundwater table.

On December 18, 2012, the Department of Planning and Permitting (DPP) conditionally approved a Sewer Connection Application for connection to the existing sewer system (Application #2012/SCA-0785) based upon the initial 'Ohana Hale unit mix.

The proposed unit mix was subsequently amended and a revised Sewer Connection Application (Application #2014/SCA-0193) was submitted and approved by DPP on March 25, 2014. On August 21, 2014, DPP revised the conditions to the sewer connection approval to require that the new sewer lateral connection be made to the existing sewer manhole (ID #386374) at the intersection of Pumehana Street and Algaroba Street. Approval of the sewer connection is contingent upon submittal and approval of construction plans by DPP. DPP estimates the Wastewater System Facility Charge to be $710,316.60.

2.3. DRAINAGE

2.3.1. Existing Drainage Infrastructure

The existing property currently consists of three existing structures, a paved driveway and parking lot, and landscaped areas along Pumehana Street and Algaroba Street. Stormwater runoff from the project site generally sheet flows off the property and onto Pumehana Street. Runoff then enters the City's municipal stormwater drainage system via a catch basin located at the mauka/Diamond Head corner of the intersection of Pumehana Street and Algaroba Street. Runoff is conveyed through the stormwater system and eventually outfalls into the Ala Wai Canal near Kalakaua Avenue.

2.3.2. Potential Impacts and Mitigation Measures

In general, the Project will maintain the existing drainage pattern. The proposed layout is not anticipated to increase the amount of stormwater runoff from the site as the existing site is predominantly paved. Landscaped areas along Pumehana Street and Algaroba Street will be incorporated into the site layout to reduce the amount of stormwater runoff into the City's drainage system. The Project will meet the water quality design criteria outlined in the Rules Related to Storm Drainage Standards as recommended by DPP.

During construction, appropriate erosion control BMPs will be used to minimize the amount of soil transported in stormwater runoff during construction activities. All construction activities will comply with the applicable Federal, State and County regulations and rules for erosion control.

2.4. ELECTRICAL AND TELECOMMUNICATIONS

2.4.1. Existing Electrical and Telecommunications Infrastructure

Existing Hawaiian Electric Company (HECO) overhead power lines, Hawaiian Telcom (HT) overhead telephone lines and Oceanic Time Warner Cable (OTWC) overhead CATV lines are located across Pumehana Street and Algaroba Street from the subject parcel.

2.4.2. Potential Impacts and Mitigation Measures

New underground ductlines will run across Pumehana Street and/or Algaroba Street from new and/or existing poles that support these overhead systems to serve the new housing facility.

Handholes for HECO cables, HT cables and OTWC cables may be required on the property in order to pull service cables into the building.

It is anticipated that the proposed building will be provided with a HECO vault, so space for a HECO pad-mounted transformer on the property will not be required.

Further consultation with the respective utility companies will be conducted to verify required upgrades for the proposed development.

2.5. REFERENCES

City and County of Honolulu, Board of Water Supply. “Water System Standards”, 2002.

City and County of Honolulu, Department of Planning and Permitting. Honolulu Land Information System. Accessed: November 14, 2013. Available at: http://honoluludpp.org/gis/

City and County of Honolulu, Department of Wastewater Management. “Design Standards of the Department of Wastewater Management, Volume 1”, July 1993.

Appendix I

Draft Environmental Assessment Pre-Consultation

Appendix I: Pre-Consultation Letters

AGENCY	REQUEST SENT	COMMENT RECEIVED
STATE OF HAWAII		
Department of Education	11/13/2013	11/22/2013 (Email)
Department of Land and Natural Resources	11/13/2013	
Hawaii Housing Finance & Development Corporation	11/13/2013	
Office of Environmental Quality Control	11/13/2013	12/2/2013
Department of Health - Environmental Health Administration	11/13/2013	11/26/2013
Department of Health - Wastewater Branch	11/13/2013	12/3/2013
CITY & COUNTY OF HONOLULU		
Board of Water Supply	11/13/2013	
Department of Community Services	11/13/2013	11/29/2013
Department of Design and Construction	11/13/2013	11/29/2013
Department of Environmental Services	11/13/2013	
Department of Facility Maintenance	11/13/2013	11/25/2013
Department of Parks and Recreation	11/13/2013	11/26/2013
Department of Transportation Services	11/13/2013	12/10 & 12/20/2013
Department of Planning and Permitting	11/13/2013	11/25/2013
DPP - Land Use Approval Branch	11/13/2013	
DPP - Traffic Review Branch	11/13/2013	11/20/2013
DPP - Zoning Plan Review Branch	11/13/2013	
DPP - Civil Engineering Branch	11/13/2013	11/20/2013
DPP - Subdivision Branch	11/13/2013	
DPP - Wastewater Branch	11/13/2013	11/14/2013 (phone)
Fire Department	11/13/2013	12/2/2013
Police Department	11/13/2013	12/2/2013
PRIVATE ORGANIZATIONS & INDIVIDUALS		
Councilmember Ann Kobayashi	11/13/2013	
Representative Scott Saiki	11/13/2013	
Senator Brickwood Galuteria	11/13/2013	

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

November 20, 2013

Mr. Dennis Silva, Jr., AICP
Hawaii Planning LLC
American Savings Bank Tower
1001 Bishop Street, Suite 2755
Honolulu, Hawaii 96813

Subject: Pre-Assessment Consultation for Draft EA
Ohana Hale – 929 Pumehana Street
TMK: 2-3-028: 004

This is in response to your letter of November 12, 2013, requesting comments on the subject project. Based on our review, we have the following comments:

1. Please provide the following information with future submittals:

   - The number of parking stalls to be provided, and
   - A site plan showing proposed driveway locations and loading/trash pickup areas.

2. Vehicular access locations should be placed as far from the intersection of Pumehana and Algaroba Street as possible. They should be constructed as standard City dropped driveways, and adequate vehicular sight distance should be provided and maintained to pedestrians and other vehicles.

3. Driveway grades should not exceed 5% for a minimum distance of 25 feet from the back of the pedestrian sidewalk.

4. Any gates/card readers should be recessed a minimum of 20-feet from the property line. All loading and unloading activities should be conducted on-site. The internal parking area and driveways should be designed to accommodate the turning of large trucks.

5. A 30-foot property line radius and 28-foot curb radius should be provided at the Pumehana/Algaroba Street corner.

6. The Traffic Impact Analysis Report (TIAR) should be submitted to our office for review and acceptance.

7. Frontage improvements along Pumehana Street should be provided. The curb line and sidewalk width should match up with the already widened adjacent lot north of the project site.

8. Improvements along Algaroba Street should be provided. An 8-foot sidewalk and widening of the road should be provided along the project frontage.

9. The TIAR should be submitted to our office for review and acceptance.

10. A Construction Management Plan (CMP) should be submitted prior to the issuance of any grading or demolition permits.

11. Construction plans for all work within or affecting public streets should be submitted for review and approval.

Should you have any questions, please contact Lance Watanabe of the Traffic Review Branch at 768-8079.

Sincerely,

for Mel J. Hirayama, Chief
Traffic Review Branch
Department of Planning and Permitting

HAWAII
PLANNING LLC

December 2, 2013

Mr. Mel Hirayama, Chief
Traffic Review Branch
City & County of Honolulu
Department of Planning & Permitting
650 S. King Street, 8th Floor
Honolulu, HI 96813

Subject: Pre-Consultation - Draft Environmental Assessment
'Ohana Hale – 929 Pumehana Street
TMK: 2-3-028: 004

Dear Mr. Hirayama,

Thank you for your letter dated November 20, 2013 regarding the above-referenced project. The comments you provided will be incorporated into the Traffic Impact Analysis Administrative Draft Report prepared as an Appendix to the Draft EA.

A Construction Management Plan will be submitted prior to the issuance of any grading or demolition permits. In addition, construction plans for all work within affected public streets will be submitted for review and approval.

A copy of the Draft EA will be provided to the Traffic Review Branch, Department of Planning and Permitting.

We appreciate your participation in this process.

Sincerely,

Hawai'i Planning LLC

Dennis Silva, Jr., AICP
Principal

American Savings Bank Tower • 1001 Bishop Street, Suite 2755 • Honolulu HI 96813 • (808)521-9418 Ext. 1005 • hawaiiplanningllc@gmail.com

From: Heidi_Meeker/FacilDev/HIDOE@notes.k12.hi.us
To: hawaiiplanningllc@gmail.com
Subject: impact fees in the McCully area
Date: Friday, November 22, 2013 1:58:57 PM

Dennis,

The DOE currently is not collecting any school impact fees in the urban Honolulu core. We would not be requesting an agreement with the developers of your project. It is possible sometime in the future that we would propose a Downtown/Kakaako/Ala Moana district for the Board of Education's approval. In that case we would most likely include the service area of Lunalilo Elementary School as part of the district.

Look forward to reading your EA.

Heidi Meeker - heidi_meeker@notes.k12.hi.us
Planning Section
Department of Education/Facilities Development Branch
Kalani High School TB1B
4680 Kalanianaole Highway
Honolulu, 96821
Ph.808-377-8301

HAWAII
PLANNING LLC

December 2, 2013

Ms. Heidi Meeker
Planning Section
State of Hawai'i
Department of Education
Facilities Development Branch
Kalani High School TB1B
4680 Kalanianaole Highway
Honolulu, HI 96821

Subject: Pre-Consultation - Draft Environmental Assessment
'Ohana Hale – 929 Pumehana Street
TMK: 2-3-028: 004

Dear Ms. Meeker,

Thank you for your consultation and emails dated November 22, 2013 regarding the above-referenced project. Your comments will be incorporated into the Draft EA. We appreciate the enrollment data and projections you provided.

A copy of the Draft EA will be provided to the Planning Section, Department of Education.

We appreciate your participation in this process.

Sincerely,

Hawai'i Planning LLC

Dennis Silva, Jr., AICP
Principal

American Savings Bank Tower • 1001 Bishop Street, Suite 2755 • Honolulu HI 96813 • (808)521-9418 Ext. 1005 • hawaiiplanningllc@gmail.com

DEPARTMENT OF FACILITY MAINTENANCE

CITY AND COUNTY OF HONOLULU

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

KIRK CALDWELL
MAYOR

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

EDUARDO P. MANGLALLAN
DEPUTY DIRECTOR

IN REPLY REFER TO:
DRM 13-1023

November 25, 2013

Mr. Dennis Silva, Jr., AICP
Hawaii Planning LLC
American Savings Bank Tower
1001 Bishop Street, Suite 2755
Honolulu, Hawaii 96813

Dear Mr. Silva, Jr., AICP:

SUBJECT: Pre-Assessment Consultation for Draft Environmental Assessment
Ohana Hale – Affordable Housing, 929 Pumehana Street, Honolulu
TMK: 2-3-028:004

Thank you for the opportunity to review and comment on the subject "Pre-Assessment Consultation for Draft Environmental Assessment Ohana Hale – Affordable Housing, 929 Pumehana Street, Tax Map Key: 2-3-028:004, Honolulu, Oahu, Hawaii" document dated November 12, 2013.

Our only comment(s) at this time are:

1. Provide necessary BMP's for the project site including the catch basin located on the Pumehana Street side of the subject property.

2. All work to be performed within the City's Pumehana Street and Algaroba Street Right-of-ways (includes the unimproved sidewalk area), shall require the proper City permits (Street Usage Permit and Grading/Trenching Permit).

3. All work within the City Road's Right-of-ways shall be to City Standards.

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

Sincerely,

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

HAWAII
PLANNING LLC

December 2, 2013

Mr. Ross Sasamura, P.E.
Director and Chief Engineer
Department of Facility Maintenance
City & County of Honolulu
1000 Ulu'ohia Street, Suite 215
Kapolei, HI 96707

Subject: Pre-Consultation - Draft Environmental Assessment
'Ohana Hale – 929 Pumehana Street
TMK: 2-3-028: 004

Dear Mr. Sasamura,

Thank you for your letter dated November 25, 2013 regarding the above-referenced project. Your comments will be incorporated into the Draft EA. In addition, we will address and comply with the permitting requirements you list in your letter as the 'Ohana Hale project moves forward.

A copy of the Draft EA will be provided to the Division of Road Maintenance, Department of Facility Maintenance.

We appreciate your participation in this process.

Sincerely,

Hawai'i Planning LLC

Dennis Silva, Jr., AICP
Principal

American Savings Bank Tower • 1001 Bishop Street, Suite 2755 • Honolulu HI 96813 • (808)521-9418 Ext. 1005 • hawaiiplanningllc@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

2013/ELOG-2189 (JP)

November 25, 2013

Mr. Dennis Silva, Jr., AICP
Hawaii Planning, LLC
American Savings Bank Tower
1001 Bishop Street, Suite 2755
Honolulu, Hawaii 96813

Dear Mr. Silva:

SUBJECT: Ohana Hale Affordable Housing Project
929 Pumehana Street - Waikiki Mauka
Tax Map Key 2-3-28: 4

This responds to your request, received November 14, 2013, for comments regarding a proposed affordable housing project on the subject site, which is in the BMX-3 Community Business Mixed Use District with a 150-foot zoning height limit. We understand that the project will involve 180 multi-family dwelling units, which are permitted uses in the BMX-3 District.

Our records indicate that there may be structures on the site which are more than 50 years old; therefore, we advise you to contact the State Historic Preservation Division for its consultation concerning the plans for the site. However, since we do not have much other knowledge concerning this project, we have no further comments at this time. We will be happy to review the Draft Environmental Assessment when it is available, and will provide any comments we may have then.

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

GIA:nw

HAWAII
PLANNING LLC

December 2, 2013

Mr. George I. Atta, FAICP
Director
Department of Planning and Permitting
City & County of Honolulu
650 S. King Street, 7th Floor
Honolulu, HI 96813

Subject: Pre-Consultation - Draft Environmental Assessment
'Ohana Hale – 929 Pumehana Street
TMK: 2-3-028: 004

Dear Mr. Atta,

Thank you for your letter dated November 25, 2013 regarding the above-referenced project. We acknowledge your comment regarding consulting with the Department of Land and Natural Resources (DLNR), State Historic Preservation Division (SHPD) during the Draft EA process. The DLNR, SHPD will receive a copy of the Draft EA for review and comment.

A copy of the Draft EA will be provided to the Department of Planning and Permitting.

We appreciate your participation in this process.

Sincerely,

Hawai'i Planning LLC

Dennis Silva, Jr., AICP
Principal

American Savings Bank Tower • 1001 Bishop Street, Suite 2755 • Honolulu HI 96813 • (808)521-9418 Ext. 1005 • hawaiiplanningllc@gmail.com

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

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

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

In reply, please refer to:
File:
13-220
Ohana Hale

November 26, 2013

Mr. Dennis Silva, Jr., AICP
Hawaii Planning LLC
1001 Bishop Street, Suite 2755
Honolulu, Hawaii 96813

Dear Mr. Silva:

SUBJECT: Pre-Assessment Consultation for Draft Environmental Assessment Ohana Hale – Affordable Housing, 929 Pumehana Street Tax Map Key: (1) 2-3-028: 004, Honolulu, Oahu, Hawaii

The Department of Health (DOH), Environmental Planning Office (EPO), acknowledges receipt of your letter dated November 12, 2013. Thank you for allowing us to review and comment on the subject document. The document was routed to the Wastewater Branch. They will provide specific comments to you if necessary. EPO recommends that you review the standard comments at: http://health.hawaii.gov/epo/home/landuse-planning-review-program/.
You are required to adhere to all standard comments specifically applicable to this application.

EPO suggests the applicant examine the many sources available on strategies to support the sustainable design of communities, including the:
State of Hawaii, Office of Planning: www.planning.hawaii.gov and the new 2013 ORMP;
U.H., School of Ocean and Earth Science and Technology: www.soest.hawaii.edu;
U.S. Environmental Protection Agency's sustainability programs: www.epa.gov/sustainability; and
U.S. Green Building Council's LEED program: www.usgbc.org/leed.

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

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

Mahalo,

Laura Leialoha Phillips McIntyre, AICP
Manager, Environmental Planning Office

From: Dennis Silva, Jr.
To: "epo@doh.hawaii.gov"
Subject: Ohana Hale - Affordable Housing, 929 Pumehana Street, TMK: 2-3-028: 004
Date: Monday, December 02, 2013 12:27:00 PM

Aloha,

I received your Pre-Consultation memo, dated November 26, 2013. I appreciate your comments and will research the suggested websites listed in your memorandum. The valuable information provided in these websites will be implemented into the Draft EA where relevant. We are targeting a December submittal to OEQC.

Question: How many copies of the Draft EA does DOH require? Hard copies or CDs? I'm hoping CDs…

Mahalo,
Dennis

Dennis Silva, Jr., AICP
Principal
Hawaii Planning LLC
American Savings Bank Tower
1001 Bishop Street, Suite 2755
Honolulu, Hawaii 96813
Phone: (808)521-9418, ext. 1005

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

TONI P. ROBINSON
DIRECTOR

JEANNE C. ISHIKAWA
DEPUTY DIRECTOR

November 26, 2013

Mr. Dennis Silva, Jr., AICP
Hawaii Planning LLC
American Savings Bank Tower
1001 Bishop Street, Suite 2755
Honolulu, Hawaii 96813

Dear Mr. Silva:

SUBJECT: Pre-Assessment Consultation for Draft Environmental Assessment Ohana Hale-Affordable Housing, 929 Pumehana Street, Tax Map Key: 2-3-028: 004, Honolulu, Oahu, Hawaii

Thank you for the opportunity to review and comment at the Pre-Consultation stage of the proposed Ohana Hale-Affordable Housing Project.

Please advise the Department of Parks and Recreation how the project will address its requirements under the Park Dedication Ordinance and/or if the project developers will be requesting an exemption from this and/or any other land use ordinance such as parking.

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

Sincerely,

Toni P. Robinson

Toni P. Robinson
Director

TPR:jr
(538648)

HAWAII
PLANNING LLC

December 2, 2013

Ms. Toni P. Robinson
Director
Department of Parks & Recreation
City & County of Honolulu
1000 Uluohia Street, Suite 309
Kapolei, HI 96707

Subject: Pre-Consultation - Draft Environmental Assessment
'Ohana Hale – 929 Pumehana Street
TMK: 2-3-028: 004

Dear Ms. Robinson,

Thank you for your letter dated November 26, 2013 regarding the above-referenced project. Due to the project's proximity to the McCully District Park and other recreational facilities in the neighborhood, and to keep the proposed 108 or 60% of the180 units in the affordable range, the developer will be requesting an exemption to the park dedication requirements.

A copy of the Draft EA will be provided to the Department of Parks and Recreation.

We appreciate your participation in this process.

Sincerely,

Hawai'i Planning LLC

Dennis Silva, Jr., AICP
Principal

American Savings Bank Tower • 1001 Bishop Street, Suite 2755 • Honolulu HI 96813 • (808)521-9418 Ext. 1005 • hawaiiplanningllc@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

CHRIS T. TAKASHIGE, P.E., CCM
DIRECTOR

MARK YONAMINE, P.E.
DEPUTY DIRECTOR

November 29, 2013

Hawaii Planning LLC
American Savings Bank Tower
1001 Bishop Street, Suite 2755
Honolulu, Hawaii 96813

Attn: Dennis Silva, Jr., AICP

Dear Mr. Silva:

Subject: Pre-Assessment Consultation for Draft Environmental Assessment
Ohana Hale – Affordable Housing, 929 Pumehana Street,
Tax Map Key: 2-3-028:004, Honolulu, Oahu, Hawaii

In response to your November 12, 2013 letter requesting review and comments on the pre-assessment consultation, the Department of Design and Construction has the following comment:

We respectfully request that your DEA report address how the proposed project fulfills the park dedication requirements contained within the City's subdivision ordinance.

Thank you for the opportunity to review and comment. Should there be any questions, please contact Clifford Lau, Chief, Facilities Division at 768-8483.

Sincerely,

for Chris T. Takashige, P.E., CCM
Director

CTT: cf (538521)

HAWAII
PLANNING LLC

December 2, 2013

Mr. Chris T. Takashige, P.E., CCM
Director
Department of Design and Construction
City & County of Honolulu
650 S. King Street, 11th Floor
Honolulu, HI 96813

Subject: Pre-Consultation - Draft Environmental Assessment
'Ohana Hale – 929 Pumehana Street
TMK: 2-3-028: 004

Dear Mr. Takashige,

Thank you for your letter dated November 29, 2013 regarding the above-referenced project. Due to the project's proximity to the McCully District Park and other recreational facilities in the neighborhood, and to keep the proposed 108 or 60% of the180 units in the affordable range, the developer will be requesting an exemption to the park dedication requirements.

A copy of the Draft EA will be provided to the Department of Design and Construction.

We appreciate your participation in this process.

Sincerely,

Hawai'i Planning LLC

Dennis Silva, Jr., AICP
Principal

American Savings Bank Tower • 1001 Bishop Street, Suite 2755 • Honolulu HI 96813 • (808)521-9418 Ext. 1005 • hawaiiplanningllc@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

PAMELA A. WITTY-OAKLAND
DIRECTOR

GARY K. NAKATA
DEPUTY DIRECTOR

November 29, 2013

Mr. Dennis Silva, Jr., AICP
Principal
Hawaii Planning LLC
American Savings Bank Tower
1001 Bishop Street, Suite 2755
Honolulu, Hawaii 96813

Dear Mr. Silva:

SUBJECT: Pre-Assessment Consultation for Draft Environmental Assessment
Ohana Hale – Affordable Housing, 929 Pumehana Street
Tax Map Key: 203-028:004, Honolulu, Oahu, Hawaii

We have reviewed your letter dated November 12, 2013, and the information provided for the pre-assessment consultation for the Draft Environmental Assessment (DEA) for the Ohana Hale proposed affordable housing project located at 929 Pumehana Street, Honolulu, Hawaii.

Our review of the information provided 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,

Pamela A. Witty-Oakland
Director

PAW:sk

HAWAII
PLANNING LLC

December 6, 2013

Ms. Pamela A. Witty-Oakland
Director
Department of Community Services
City & County of Honolulu
715 S. King Street, Suite 311
Honolulu, HI 96813

Subject: Pre-Consultation - Draft Environmental Assessment
`Ohana Hale – 929 Pumehana Street
TMK: 2-3-028: 004

Dear Ms. Witty-Oakland,

Thank you for your letter dated November 29, 2013 regarding the above-referenced project. A copy of the Draft EA will be provided to the Department of Community Services.

We appreciate your participation in this process.

Sincerely,

Hawai'i Planning LLC

Dennis Silva, Jr., AICP
Principal

American Savings Bank Tower • 1001 Bishop Street, Suite 2755 • Honolulu HI 96813 • (808)521-9418 Ext. 1005 • hawaiiplanningllc@gmail.com

NEIL ABERCROMBIE
GOVERNOR

Vacant
DIRECTOR

STATE OF HAWAI'I
OFFICE OF ENVIRONMENTAL QUALITY CONTROL
Department of Health
235 South Beretania Street, Suite 702
Honolulu, Hawai'i 96813
Telephone (808) 586-4185
Facsimile (808) 586-4186
Email: oeqchawaii@doh.hawaii.gov

December 2, 2013

Mr. Dennis Silva, Jr., AICP
Hawai'i Planning LLC
American Savings Bank Tower
1001 Bishop Street, Suite 2755
Honolulu, Hawai'i 96813

Subject: Pre-Assessment Consultation for Draft Environmental Assessment, Ohana Hale – Affordable Housing, 929 Pumehana Street, Tax Map Key: 2-3-028: 004, Honolulu, Oahu, Hawai'i

Dear Mr. Silva:

The Office of Environmental Quality Control is in receipt of your November 12, 2013 letter to Ms. Genevieve Salmonson, requesting comments for the planned affordable housing and draft environmental assessment. OEQC staff has reviewed your proposed project and offer these comments:

1. Refer to Section 11-200-10, Hawai'i Administrative Rules, for the contents requirements of an environmental assessment.
2. Please provide a discussion on the following issues: (a) potable water supply; (b) wastewater disposal; (c) solid waste disposal; (d) projected energy use; (e) number of adequate parking spaces; (f) impact on traffic circulation in the area; (g) impact on pedestrian traffic; and (h) impact on area services such as schools, emergency services, social services, etc.
3. Upon attainment of all necessary construction permits, please observe and implement all identified mitigations that become conditions of the permits.

Thank you very much for the opportunity review and comment on your project. Please feel free to contact me at (808) 351-8518, if you have any questions.

Sincerely,

HERMAN TUIOLOSEGA
Senior Planner

HAWAII
PLANNING LLC

December 6, 2013

Mr. Herman Tuiolosega
Senior Planner
Office of Environmental Quality Control
State of Hawai'i
235 S. Beretania Street, Suite 702
Honolulu, HI 96813

Subject: Pre-Consultation - Draft Environmental Assessment
'Ohana Hale – 929 Pumehana Street
TMK: 2-3-028: 004

Dear Mr. Tuiolosega,

Thank you for your letter dated December 2, 2013 regarding the above-referenced project. We reviewed the content requirements for environmental assessments (EA) as required by Section 11-200-10, Hawai'i Administrative Rules. The Draft EA will also provide discussions of the issues you mention in your comment letter. We will also ensure that all mitigations that become conditions to the required permits will be implemented during the construction phase of 'Ohana Hale.

Copies of the Draft EA will be provided to the Office of Environmental Quality Control.

We appreciate your participation in this process.

Sincerely,

Hawai'i Planning LLC

Dennis Silva, Jr., AICP
Principal

American Savings Bank Tower • 1001 Bishop Street, Suite 2755 • Honolulu HI 96813 • (808)521-9418 Ext. 1005 • hawaiiplanningllc@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 KN-WS

December 2, 2013

Mr. Dennis Silva, Jr., AICP
Principal
Hawaii Planning LLC
American Savings Bank Tower
1001 Bishop Street, Suite 2755
Honolulu, Hawaii 96813

Dear Mr. Silva:

This is in response to your letter dated November 12, 2013, requesting comments on the Pre-Consultation, Draft Environmental Assessment, for the proposed affordable housing project at 929 Pumehana Street.

The Honolulu Police Department has no concerns at this time. Please keep our department informed as the project progresses.

If there are any questions, please call Major Raymond Ancheta of District 7 (East Honolulu) at 723-3369.

Sincerely,

LOUIS M. KEALOHA
Chief of Police

By for
RANDAL K. MACADANGDANG
Assistant Chief
Support Services Bureau

HAWAII
PLANNING LLC

December 6, 2013

Mr. Randal K. Macadangdang
Assistant Chief
Support Services Bureau
Honolulu Police Department
City & County of Honolulu
801 S. Beretania Street
Honolulu, HI 96813

Subject: Pre-Consultation - Draft Environmental Assessment
'Ohana Hale – 929 Pumehana Street
TMK: 2-3-028: 004

Dear Mr. Macadangdang,

Thank you for your letter dated December 2, 2013 regarding the above-referenced project. A copy of the Draft EA will be provided to the Honolulu Police Department.

We appreciate your participation in this process.

Sincerely,

Hawai'i Planning LLC

Dennis Silva, Jr., AICP
Principal

American Savings Bank Tower • 1001 Bishop Street, Suite 2755 • Honolulu HI 96813 • (808)521-9418 Ext. 1005 • hawaiiplanningllc@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 2, 2013

Mr. Dennis Silva, Jr., AICP
Principal
Hawaii Planning LLC
American Savings Bank Tower
1001 Bishop Street, Suite 2755
Honolulu, Hawaii 96813

Dear Mr. Silva:

Subject: Preassessment Consultation for Draft Environmental Assessment
Ohana Hale - Affordable Housing
929 Pumehana Street
Tax Map Key: 2-3-028: 004

In response to your letter of November 12, 2013, regarding the above-mentioned subject, the Honolulu Fire Department (HFD) reviewed the material provided and requires that the following be complied with:

1. Fire department access roads shall be provided such that any portion of the facility or any portion of an exterior wall of the first story of the building is located not more than 150 feet (46 m) from fire department access roads as measured by an approved route around the exterior of the building or facility. (National Fire Protection Association [NFPA] 1; Uniform Fire Code [UFC]™, 2006 Edition, Section 18.2.3.2.2.)

   A fire department access road shall extend to within 50 ft (15 m) of at least one exterior door that can be opened from the outside and that provides access to the interior of the building. (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 (45 720 mm) 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. Submit civil drawings to the HFD for review and approval.

Should you have questions, please contact Battalion Chief Socrates Bratakos of our Fire Prevention Bureau at 723-7151 or sbratakos@honolulu.gov.

Sincerely,

ROLLAND J. HARVEST
Assistant Chief

RJH/SY:jl

HAWAII
PLANNING LLC

December 6, 2013

Mr. Rolland J. Harvest
Assistant Chief
Honolulu Fire Department
City & County of Honolulu
636 South Street
Honolulu, HI 96813

Subject: Pre-Consultation - Draft Environmental Assessment
'Ohana Hale – 929 Pumehana Street
TMK: 2-3-028: 004

Dear Mr. Harvest,

Thank you for your letter dated December 2, 2013 regarding the above-referenced project. The project will adhere to fire department access road requirement as stated in your comment memorandum. The project will also comply with water supply issues related to supplying the required fire flow for fire protection. Civil drawings will be submitted to HFD for review and approval.

A copy of the Draft EA will be provided to the Honolulu Fire Department.

We appreciate your participation in this process.

Sincerely,

Hawai'i Planning LLC

Dennis Silva, Jr., AICP
Principal

American Savings Bank Tower • 1001 Bishop Street, Suite 2755 • Honolulu HI 96813 • (808)521-9418 Ext. 1005 • hawaiiplanningllc@gmail.com

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

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

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

In reply, please refer to:
File:

LUD-1 2 3 028 004-ID1528
PreAsmnt Cons DEA Ohana Hale

December 3, 2013

Mr. Dennis Silva, Jr., AICP
Hawaii Planning LLC
American Savings Bank Tower
1001 Bishop Street Suite 2755
Honolulu, Hawaii 96813

Dear Mr. Silva:

Subject: Pre-Assessment Consultation for Draft Environmental Assessment
Ohana Hale Affordable Housing
929 Pumehana Street, Honolulu, Hawaii 96826
TMK (1) 2-3-028: 004

Thank you for allowing us the opportunity to review the above subject project which requests comments on the Pre-Assessment Consultation for Draft Environmental Assessment for the Ohana Hale Affordable Housing.

The subject project is located in the critical wastewater disposal area as determined by the Oahu Wastewater Advisory Committee. We have no comments to offer at this time as domestic wastewater from the project will be handled by the City and County of Honolulu's sewer system.

Should you have any questions, please contact Mr. Mark Tomomitsu of my staff at 586-4294 or fax 586-4300.

Sincerely,

SINA PRUDER, P.E., CHIEF
Wastewater Branch

LM/MST:lmj

c: Ms. Laura McIntyre, DOH-Environmental Planning Office (13-220)
Mr. George I. Atta, C&C of Honolulu, Dept. of Planning & Permitting 7th Floor

HAWAII
PLANNING LLC

December 10, 2013

Ms. Sina Pruder, Chief
Wastewater Branch
Department of Health
State of Hawaii
P.O. Box 3378
Honolulu, HI 96801

Subject: Pre-Consultation - Draft Environmental Assessment
'Ohana Hale – 929 Pumehana Street
TMK: 2-3-028: 004

Dear Ms. Pruder,

Thank you for your letter dated December 3, 2013 regarding the above-referenced project. We are also in consultation with the City and County of Honolulu's Wastewater Branch. 'Ohana Hale has an approved Sewer Connection Application, 2012/SCA-0785.

A copy of the Draft EA will be provided to the Department of Health, Wastewater Branch.

We appreciate your participation in this process.

Sincerely,

Hawai'i Planning LLC

Dennis Silva, Jr., AICP
Principal

American Savings Bank Tower • 1001 Bishop Street, Suite 2755 • Honolulu HI 96813 • (808)521-9418 Ext. 1005 • hawaiiplanningllc@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

TP11/13-538593R

December 10, 2013

Mr. Dennis Silva, Jr., AICP
Hawaii Planning LLC
American Savings Bank Tower
1001 Bishop Street, Suite 2755
Honolulu, Hawaii 96813

Dear Mr. Silva:

SUBJECT: Pre-Consultation for Draft Environmental Assessment (DEA) Ohana Hale – Affordable Housing, 929 Pumehana Street; Tax Map Key (TMK): 2-3-028: 004; Honolulu, Oahu, Hawaii

In response to your letter dated November 12, 2013, we have the following comments:

- The DEA should include a traffic impact assessment report (TIAR). The TIAR should discuss the traffic and pedestrian impacts on the surrounding City roadways as a result of the project, including short-term impacts during construction and any proposed traffic mitigating measures.

- The area Neighborhood Board, as well as the area residents, businesses, etc., should be kept apprised of the details of the proposed project and the impacts, particularly during construction, the project may have on the adjoining local street area network.

- The DEA should include a description of Public Transit and the impact of your project on TheBus and paratransit operations during construction. There are several bus stops along this segment of South King Street that serve Routes 1, 1L, and 6. Basic information is available on our websites: www.thebus.org and www.honolulu.gov/dts. For more details, you may contact our staff at 768-8370.

- The construction materials and equipment should be transferred to and from the site during off-peak traffic hours (8:30 a.m. to 3:30 p.m.) to minimize congestion on the local streets.

We reserve further comment pending submission of the DEA.

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

Very truly yours,

Michael D. Formby
Director

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

TP11/13-538593R

December 20, 2013

Mr. Dennis Silva, Jr., AICP
Hawaii Planning LLC
American Savings Bank Tower
1001 Bishop Street, Suite 2755
Honolulu, Hawaii 96813

Dear Mr. Silva:

SUBJECT: Pre-Consultation for Draft Environmental Assessment (DEA) Ohana Hale – Affordable Housing, 929 Pumehana Street; Tax Map Key (TMK): 2-3-028: 004; Honolulu, Oahu, Hawaii

Subsequent to our letter dated December 10, 2013, our Traffic Engineering Division (TED) provided the following additional comments:

1. Provide adequate sidewalk space for the increase in pedestrian activity.

2. Check the crosswalk/signal warrants at the intersection of Pumehana and Algaroba Streets due to the increase in vehicular and pedestrian volumes.

3. Provide bike facilities on-site.

4. Provide adequate parking stalls.

5. Evaluate vehicular ingress into the parking structure/entrance to the property to prevent and/or minimize vehicle queuing onto Algaroba and Pumehana Streets.

6. Check if school zone/crossing signs and pavement markings are needed.

7. Check if on-street parking should be modified adjacent to the property or across the street to accommodate the increase in vehicular volumes.

8. Proposed mitigation measures should be consistent with the City's Complete Streets policy.

We still reserve further comment pending submission of the DEA.

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

Very truly yours,

Michael D. Formby
Director

HAWAII
PLANNING LLC

March 12, 2014

Mr. Michael D. Formby
Director
Department Transportation Services
City & County of Honolulu
650 S. King Street, 3rd Floor
Honolulu, HI 96813

Subject: Pre-Consultation - Draft Environmental Assessment
'Ohana Hale – 929 Pumehana Street
TMK: 2-3-028: 004

Dear Mr. Formby,

Thank you for your letters dated December 10th and 20th, 2013 regarding the above-referenced project. A Traffic Impact Analysis Report (TIAR) will be enclosed as Appendix G in the Draft Environmental Assessment (EA). The consultant who prepared the TIAR received your two (2) letters and incorporated your comments into the revised TIAR that was completed on February 10, 2014.

We consulted and presented to the McCully-Moiliili Neighborhood Board #8 on three (3) separate occasions; August 1, 2013, November 7, 2013, and February 6, 2014.

We are cognizant of the movement of construction materials and equipment as related to off-peak traffic hours (8:30am to 3:30pm).

A copy of the Draft EA will be provided to the Department of Transportation Services.

We appreciate your participation in this process.

Sincerely,

Hawai'i Planning LLC

Dennis Silva, Jr., AICP
Principal

American Savings Bank Tower • 1001 Bishop Street, Suite 2755 • Honolulu HI 96813 • (808)521-9418 Ext. 1005 • hawaiiplanningllc@gmail.com

Appendix J

Letters of Support

CITY COUNCIL
CITY AND COUNTY OF HONOLULU
530 SOUTH KING STREET, ROOM 202
HONOLULU, HAWAII 96813-3065
TELEPHONE: (808) 768-5010 • FAX: (808) 768-5011

ANN H. KOBAYASHI
COUNCILMEMBER, DISTRICT 5
CHAIR, COMMITTEE ON BUDGET
TELEPHONE: (808) 768-5005
FAX: (808) 768-1227
EMAIL: akobayashi@honolulu.gov

March 20, 2014

To Whom It May Concern,

Over the years, I have always been a strong proponent of affordable housing projects. These developments have contributed in a major way towards lessening the issue of homelessness in municipalities across the world. By providing affordable units, homeless individuals and families are able to work towards a sustainable lifestyle.

The Pumehana Street affordable housing project will provide 180 units at 60% below market rate. In today's market, it is very difficult to find a developer who is willing to build a housing complex at such an inexpensive level. Additionally, this project will have very limited amenities in order to keep the monthly maintenance fee low for tenants. Such a project will grant more local residents the chance to live, work and attend school in urban Honolulu.

Thank you for allowing me the opportunity to provide comments on this project. Should you have any questions, please feel free to contact me at 768-5005.

Sincerely,

Ann H. Kobayashi

Ann H. Kobayashi
Councilmember, District V

CITY COUNCIL

CITY AND COUNTY OF HONOLULU
530 SOUTH KING STREET, ROOM 202
HONOLULU, HAWAII 96813-3065
TELEPHONE: (808) 768-5010 • FAX: (808) 768-5011

ERNEST Y. MARTIN
CHAIR and PRESIDING OFFICER
HONOLULU CITY COUNCIL
DISTRICT 2
TELEPHONE: (808)768-5002
FAX: (808) 768-1222
EMAIL: emartin@honolulu.gov

May 21, 2014

To whom it may concern,

The City and County of Honolulu would be well served by devoting more attention and resources toward stable, affordable housing for needy families and the working poor. Well-planned development projects such as 'Ohana Hale can fill a serious housing gap in urban Honolulu for lower and moderate-income residents on Oahu.

With decent housing, children of lower and moderate-income families may have the means to improve their quality of life and break the cycle of poverty. Affordable housing for low income families is quite possibly the most significant assistance government can offer, both short and long term. The 'Ohana Hale project will price 108 of the 180-unit residential condominium at 100% to 120% of the area median income, providing additional inventory to a very limited housing market.

The 'Ohana Hale Affordable proposed mixed-income housing project would benefit the people of Honolulu and it has my full support. Thank you for this opportunity to comment on this project. If you have any questions, please do not hesitate to call me at 768-5002.

Respectfully,

Ernest Y. Martin
Chair & Presiding Officer
Honolulu City Council

EYM: ms

Appendix K

Draft Environmental Assessment Comments and Responses

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

LINDA ROSEN, M.D., M.P.H.
DIRECTOR OF HEALTH

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

In reply, please refer to:
File:
[EPO 14-057]
[DEA Ohana Hale
14:DEV/0028]

April 8, 2014

Mr. Dennis Silva, Jr., AICP
Hawaii Planning, LLC
1001 Bishop Street
American Savings Bank Tower, Suite 2755
Honolulu, HI 96813

Dear Sir:

SUBJECT: Draft Environmental Assessment for Ohana Hale, Oahu

The Department of Health (DOH), Environmental Planning Office (EPO), has not yet received a specific letter seeking comments from our office. However, we would like to comment on the subject document. EPO recommends that you review the standard comments at: http://health.hawaii.gov/epo/home/landuse-planning-review-program/. You are required to adhere to all applicable standard comments.

The EPO recommends that you review the Clean Water Branch website and more specifically information on NPDES permits. This information is available at: http://health.hawaii.gov/cwb/ The EPO also recommends that you review the DOH electronic permitting portal https://eha-cloud.doh.hawaii.gov/epermit/View/home.aspx

The EPO suggests that you examine the many sources available on strategies to support the sustainable and healthy design of communities and buildings, including:
U.S. Green Building Council's LEED program: www.usgbc.org/leed
Smart Growth America: www.smartgrowthamerica.org
International Well Building Standard: http://delosliving.com

The DOH encourages everyone to apply these sustainability strategies and principles early in the planning and review of projects. We also request that for future projects you consider conducting a Health Impact Assessment (HIA). More information is available at:
www.cdc.gov/healthyplaces/hia.htm
www.epa.gov/research/healthscience/health-impact-assessment.htm

We request you share all of this information with others to increase community awareness on sustainable, innovative, inspirational, and healthy community design.
Mahalo,

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

cc. Alec Wong, Clean Water Branch Chief

July 9, 2014

Ms. Laura Leialoha Phillips McIntyre, AICP
Program Manager
Environmental Planning Office
Department of Health
State of Hawaii
P.O. Box 3378
Honolulu, HI 96801-3378

Subject: Draft Environmental Assessment
'Ohana Hale – 929 Pumehana Street
TMK: 2-3-028: 004

Dear Ms. Phillips McIntyre,

Thank you for your letter dated April 8, 2014 regarding the above-referenced project. We downloaded and reviewed the standard comments from the Department of Health (DOH), Land Use Planning and Review Program: Clean Air Branch; Clean Water Branch (NPDES permit requirements); Hazard Evaluation and Emergency Response Office; Noise, Radiation and Indoor Air Quality Branch; Safe Drinking Water Branch; Solid and Hazardous Waste Branch; and Wastewater Branch and will incorporate the applicable standard comments to the 'Ohana Hale Final EA.

While 'Ohana Hale will not be applying for U.S. Green Building Council's LEED certification for Building Design & Construction (BD & C – New Construction); there will be discussion in the Final EA on 'Ohana Hale's consistency with LEED certification standards, such as surrounding density and diverse uses, access to quality transit, walkable project site, and other relevant standards.

Chapter 4 in the Draft EA has discussion on smart growth principles as it relates to the City and County of Honolulu, General Plan. This discussion relates and complies with your comments on strategies to support the sustainable and healthy design of communities and buildings.

We acknowledge your comment on Health Impact Assessments (HIA). Our discussions in the Draft and Final EAs are consistent with the strategies and principles in HIAs as it relates to sustainability strategies and smart growth principles.

Thank you for your comments. Your comments will be included in the Final EA.

Sincerely,

Hawai'i Planning LLC

Dennis Silva, Jr., AICP
Principal

American Savings Bank Tower • 1001 Bishop Street, Suite 2755 • Honolulu HI 96813 • (808)521-9418 Ext. 1005 • hawaiiplanningllc@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 DESIGNATE

JEANNE C. ISHIKAWA
DEPUTY DIRECTOR

April 10, 2014

Mr. Dennis Silva, Jr., AICP, Principal
Hawaii Planning LLC
American Savings Bank Tower
1001 Bishop Street, Suite 2755
Honolulu, Hawaii 96813

Dear Mr. Silva:

SUBJECT: Draft Environmental Assessment
Ohana Hale, 929 Pumehana Street
TMK: 2-3-028:004 201H & DURF Project

Thank you for the opportunity to review and comment on the Draft Environmental Assessment for the proposed 180 unit Ohana Hale affordable housing project.

The Department of Parks and Recreation does not object to the requested exemption to the City's Park Dedication Ordinance pursuant to Chapter 201H, Hawaii Revised Statutes for the proposed 108 affordable units, but does not support the requested exemption for the remaining 72 market units.

The Park Dedication Ordinance requires a dedication of 110 square feet per apartment unit. The 72 market rate apartments would be required to dedicate a 7,920 square foot grassed and irrigated park. In lieu of dedicating property of that size, the Park Dedication Ordinance allows the developer the alternative to pay the equivalent value to the City. The City in turn will use the funds to improve parks in or around the project's community. As the Draft Environmental Assessment notes, there are older City parks and recreation facilities within a half mile radius of the proposed project. The subject fee would be used to improve those parks.

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

Sincerely,

Michele K. Nekota
Director Designate

MKN:jr
(557448)

cc: Mario Siu-Li, Department of Planning and Permitting
Craig K. Hirai, Executive Director, State of Hawaii, Hawaii Housing Finance and Development Corporation

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

October 22, 2014

SENT VIA EMAIL

Mr. Dennis Silva
Plan Pacific
hawaiiplanningllc@gmail.com

Dear Mr. Silva:

Thank you for meeting with the Department of Parks and Recreation on September 4, 2014, regarding the proposed Ohana Hale Condominium / Hawaii Housing Finance and Development Corporation 201H Application.

After careful consideration and discussion I concur with the Department of Planning and Permitting to not grant an exemption from the Park Dedication Ordinance. These park dedication funds are very important in providing improvements for existing park facilities in the area for the community in general and the new occupants of your building.

Thank you for your time and best wishes.

Sincerely,

Michele K. Nekota
Director

MKN:pe
(578093)

HAWAII
PLANNING LLC

November 4, 2014

Ms. Michele K. Nekota
Director
Department of Parks & Recreation
City and County of Honolulu
1000 Uluohia Street, Suite 309
Kapolei, HI 96707

Subject: Draft Environmental Assessment
'Ohana Hale – 929 Pumehana Street
TMK: 2-3-028: 004

Dear Ms. Nekota,

Thank you for your letters dated April 10, 2014 and October 22, 2014 regarding the above-referenced project. We acknowledge your comments on supporting the exemption of park dedication fees for the 108 affordable units, but not supporting the exemption of the 72 market units.

We understand that the park dedication fees are used for improvements and maintenance of existing parks in the neighborhood.

'Ohana Hale will be situated in proximity to an abundance of recreational opportunities within walking distance or a short commute by public transportation or car. The current building design includes a community space for residents of 'Ohana Hale.

Thank you for your comments. Your comments will be included in the Final EA.

Sincerely,

Hawai'i Planning LLC

Dennis Silva, Jr., AICP
Principal

American Savings Bank Tower • 1001 Bishop Street, Suite 2755 • Honolulu HI 96813 • (808)521-9418 Ext. 1005 • hawaiiplanningllc@gmail.com

DISABILITY AND COMMUNICATION ACCESS BOARD

919 Ala Moana Boulevard, Room 101 • Honolulu, Hawaii 96814
Ph. (808) 586-8121 (V/TDD) • Fax (808) 586-8129

April 14, 2014

Mr. Dennis Silva, Jr., AICP
Principal
Hawaii Planning, LLC
American Savings Bank Tower
1001 Bishop Street
Suite 2755
Honolulu, HI 96813

Regarding: `Ohana Hale - Draft Environmental Assessment

Dear Mr. Silva,

The Disability and Communication Access Board (DCAB) would like to thank you for the opportunity to review the `Ohana Hale Draft Environmental Assessment. The purpose of this review is to ensure that this project will take into account accessibility design requirements for persons with disabilities.

The proposed project is new construction under the financing auspices of the Hawaii Housing Finance and Development Corporation (HHFDC). We note that the Plan lists the Disability and Communication Access Board on page 55 as an entity from which an approval and permit is required. Per agreement with HHFDC, DCAB will be reviewing all HHFDC-financed projects, we note that our review is not, per se, either an approval or permit

However, we note that the chart on page 55 references the Americans with Disabilities Act Accessibility Requirements and the summary on page 12 references the Americans with Disabilities Act of 1990. As a multi-family dwelling unit that is new construction, the requirements of the Federal Fair Housing Act also apply. The Plan should reference both the Americans with Disabilities Act Accessibility Guidelines and the Fair Housing Accessibility Guidelines. We also suggest that page 12 reference Hawaii Revised Statutes §103-50, the enabling legislation for the DCAB review process. This would also encompass the interpretive opinions that DCAB has adopted for our review process.

The above reflects DCAB's advice and recommendations for the `Ohana Hale Draft Environmental Assessment.

Should you have any further questions, feel free to contact Nyree Oshiro, Facility Access Specialist or Mona Higa, Facility Access Coordinator at (808) 586-8121.

Sincerely,

Francine Wai

FRANCINE WAI
Executive Director

c: Craig Hirai
Hawaii Housing Finance and
Development Corporation

HAWAII
PLANNING LLC

June 25, 2014

Ms. Francine Wai
Executive Director
Disability & Communications Access Board
State of Hawaii
919 Ala Moana Blvd., Room 101
Honolulu, HI 96814

Subject: Draft Environmental Assessment
'Ohana Hale – 929 Pumehana Street
TMK: 2-3-028: 004

Dear Ms. Wai,

Thank you for your letter dated April 14, 2014 regarding the above-referenced project. We acknowledge your comments that the Federal Fair Housing Act applies to 'Ohana Hale.

The Final Environmental Assessment (EA) will reference both the American with Disabilities Act Guidelines and the Fair Housing Accessibility Guidelines. In addition, the Final EA will reference Hawaii Revised Statutes §103-50, the enabling legislation for the DCAB review process.

Thank you for your comments. Your comments will be included in the Final EA.

Sincerely,

Hawai'i Planning LLC

Dennis Silva, Jr., AICP
Principal

American Savings Bank Tower • 1001 Bishop Street, Suite 2755 • Honolulu HI 96813 • (808)521-9418 Ext. 1005 • hawaiiplanningllc@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

14WWB022 (TC)
2014/SCA-0193

April 15, 2014

Mr. Dennis Silva, Jr., AICP
Principal
Hawaii Planning, LLC
American Savings Bank Tower
1001 Bishop Street, Suite 2755
Honolulu, Hawaii 96813

Dear Mr. Silva:

This is in response to your letter of April 3, 2014, requesting review and comment to the Draft Environmental Assessment for the 180-unit 'Ohana Hale condominium, at 929 Pumehana Street, Tax Map Key: 2-3-028:004. These comments are provided by the Wastewater Branch of the Site Development Division. Other areas of the department may be providing their review separately.

Sewer Connection Application No. 2014/SCA-0193 was reviewed and approved on March 25, 2014. A copy of that form is attached.

Should you have any questions, please contact Tessa Ching of our Wastewater Branch at 768-8199.

Very truly yours,

for George I. Atta, FAICP
Director

GIA:dl
[1136045]

Attachment

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-0193** STATUS: **Approved with conditions**

DATE RECEIVED: **03/10/2014** IWDP APP. NO.:

PROJECT NAME: **2014/SCA-0193 Ohana Hale**

$689,664.50
Estimated Wastewater System Facility Charge*

LOCATION:

Zone	Section	Plat	Parcel
2	3	028	004

929 PUMEHANA ST Honolulu / Mak **14,400** Sq. Ft.

SPECIFIC LOCATION: **929 Pumehana St**

APPLICANT: **MEDOSI, Fabrizio**
810 Richards St Suite 350
Honolulu, Hawaii 96813

DEVELOPMENT TYPE: **Dwelling, Multi-family** SEWER CONNECTION WORK DESIRED:

OTHER USES:

NON-RESIDENTIAL AREA: s.f. APPROXIMATE DATE OF CONNECTION: **11/15/2015**

PROPOSED UNITS		EXISTING UNITS		UNITS TO BE DEMOLISHED	
No. of New Units:	**180**	No. of Existing Units:	**17**	No. of Units to be Demolished:	**17**
Studios:	**96**	Studios:		Studios:	
1-Bedroom:	**79**	1-Bedroom:		1-Bedroom:	
2-Bedroom:	**5**	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 **Project must divert all wastewater flow to the 6-inch sewer main on Algaroba St.**

APPROVAL DATE: **03/25/2014**

EXPIRATION DATE: **03/24/2016**

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

ExternalID: **051723995-001** JobId: **51723995**

HAWAII
PLANNING LLC

June 25, 2014

Mr. George I. Atta, FAICP
Director
Department of Planning & Permitting
City & County of Honolulu
650 S. King Street, 7th Floor
Honolulu, HI 96813

Subject: Draft Environmental Assessment
'Ohana Hale – 929 Pumehana Street
TMK: 2-3-028: 004

Dear Mr. Atta,

Thank you for your letter dated April 15, 2014 regarding the above-referenced project. We acknowledge your comments that Sewer Connection Application No. 2014/SCA-0193 was reviewed and approved on March 25, 2014.

We understand that other Branches in the Department of Planning and Permitting may be providing their review and comments separately.

Thank you for your comments. Your comments will be included in the Final EA.

Sincerely,

Hawai'i Planning LLC

Dennis Silva, Jr., AICP
Principal

American Savings Bank Tower • 1001 Bishop Street, Suite 2755 • Honolulu HI 96813 • (808)521-9418 Ext. 1005 • hawaiiplanningllc@gmail.com

NEIL ABERCROMBIE
GOVERNOR

KATHRYN S. MATAYOSHI
SUPERINTENDENT

STATE OF HAWAI`I
DEPARTMENT OF EDUCATION
P.O. BOX 2360
HONOLULU, HAWAI`I 96804

OFFICE OF SCHOOL FACILITIES AND SUPPORT SERVICES

April 17, 2014

Mr. Dennis Silva, Jr.
Hawaii Planning LLC
1001 Bishop Street, Suite 2755
Honolulu, Hawaii 96813

Dear Mr. Silva,

Subject: Draft Environmental Assessment for 'Ohana Hale, Honolulu, TMK: 2-3-028: 004

The Department of Education (DOE) has reviewed the Draft Environmental Assessment (DEA) for the proposed `Ohana Hale (Project).

There may have been some minor misinterpretation of the definitions for the enrollment data which the DOE provided you in preparation of the DEA. The Annual Room Tracking Survey (ARTS) is not an enrollment projection, but rather a measure of the number of classrooms in a school and the estimated classroom capacity of a school. The DEA did not contain any ARTS data and the reference should be removed from the Table 5 column heading.

The DOE does make annual enrollment projections. The DEA listed the projected enrollment figures released in the spring of 2013 for the 2018-2019 school year. The DEA is correct that based on the most current enrollment projections, the enrollment of Lunalilo Elementary is expected to decline slightly over the next five years (an average of 6 pupils per year). Enrollment has been stable the past five years.

The DEA is also correct that enrollments are expected to increase at Washington Middle and Kaimuki High. The increase is a little more than the DEA's "slightly increase", with an expected annual increase of 11 students per year for Washington and 20 students per year at Kaimuki. The projected enrollment increase is a reversal of a long term decline in enrollment at Washington and Kaimuki.

It may seem reasonable to conclude that if enrollment figures projected for 2018 are smaller than enrollment figures in 2004 then there would be adequate facility capacity. The more accurate way to make that conclusion is by making sure the classroom capacity of the schools has been unchanged since 2004.

The DOE estimates that the eventual number of DOE students residing in the Project, at the Project's maturity, would be approximately 22 students, kindergarten through the 12th grade. That may be high considering the large percentage of Project units that are studios.

Thank you for this opportunity to offer our comments. Should you have any questions, please call Heidi Meeker of the Facilities Development Branch at 377-8301.

Respectfully,

Kenneth G. Masden II
Public Works Manager
Planning Section

KGM:jmb

HAWAII
PLANNING LLC

July 9, 2014

Mr. Kenneth G. Masden II
Public Works Manager, Planning Section
Department of Education
State of Hawaii
P.O. Box 2360
Honolulu, HI 96804

Subject: Draft Environmental Assessment
'Ohana Hale – 929 Pumehana Street
TMK: 2-3-028: 004

Dear Mr. Masden,

Thank you for your letter dated April 17, 2014 regarding the above-referenced project. We acknowledge your comments that the Annual Room Tracking Survey (ARTS) is not an enrollment projection, and Table 5 – Kaimuki Complex – Enrollment and Enrollment Projections will be revised in the Final Environmental Assessment (EA).

We received your edits in the enrollment projections and these revisions will be noted in the Final EA. The word "slightly" in reference to the increase in enrollment in Washington Middle School and Kaimuki High School will be removed in the Final EA.

We also note your comment that the DOE estimate residing at 'Ohana Hale will be approximately 22 students. However, given the large percentage of studios at 'Ohana Hale, this projection may be on the high side.

Thank you for your comments. Your comments will be included in the Final EA.

Sincerely,

Hawai'i Planning LLC

Dennis Silva, Jr., AICP
Principal

American Savings Bank Tower • 1001 Bishop Street, Suite 2755 • Honolulu HI 96813 • (808)521-9418 Ext. 1005 • hawaiiplanningllc@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

April 23, 2014

Mr. Dennis Silva, Jr., AICP
Principal
Hawaii Planning LLC
American Savings Bank Tower
1001 Bishop Street, Suite 2755
Honolulu, Hawaii 96813

Dear Mr. Silva:

Subject: Draft Environmental Assessment
Ohana Hale - 929 Pumehana Street
Tax Map Key: 2-3-028: 004

In response to your letter of April 3, 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 (46 m) from fire department access roads as measured by an approved route around the exterior of the building or facility. (National Fire Protection Association [NFPA] 1, Uniform Fire Code [UFC]™, 2006 Edition, Section 18.2.3.2.2.)

   A fire department access road shall extend to within 50 ft (15 m) of at least one exterior door that can be opened from the outside and that provides access to the interior of the building. (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 Acting Battalion Chief Terry Seelig of our Fire Prevention Bureau at 723-7151 or tseelig@honolulu.gov.

Sincerely,

SOCRATES D. BRATAKOS
Assistant Chief

SDB/SY:bh

HAWAII
PLANNING LLC

June 26, 2014

Mr. Socrates D. Bratakos
Assistant Chief
Honolulu Fire Department
City & County of Honolulu
636 South Street
Honolulu, HI 96813

Subject: Draft Environmental Assessment
'Ohana Hale – 929 Pumehana Street
TMK: 2-3-028: 004

Dear Mr. Bratakos,

Thank you for your letter dated April 23, 2014 regarding the above-referenced project.

1. We acknowledge your comment on the fire department access road. Note that the 'Ohana Hale site is a 120-feet x 120-feet corner lot resulting in compliance with the 150-foot maximum distance required as stated in your comment #1. During the engineering and construction phase of the project, we will ensure compliance with applicable codes.
2. Your comment is noted on water supply capable of supplying the required fire flow for fire protection. There is no on-site fire hydrant, but there is an existing fire hydrant across the street from 'Ohana Hale (see attached site photograph).
3. We will ensure that the unobstructed width and unobstructed vertical clearance of a fire apparatus access road is complied with during the engineering and construction phase of this project.
4. Civil drawings will be submitted to HFD for review and approval.

Thank you for your comments. Your comments will be included in the Final EA.

Sincerely,

Hawai'i Planning LLC

Dennis Silva, Jr., AICP
Principal

American Savings Bank Tower • 1001 Bishop Street, Suite 2755 • Honolulu HI 96813 • (808)521-9418 Ext. 1005 • hawaiiplanningllc@gmail.com

Project Site
Fire
Hydrant
STOP
STOP

Project Site
Fire
Hydrant
STOP
STOP

DEPARTMENT OF FACILITY MAINTENANCE

CITY AND COUNTY OF HONOLULU

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

KIRK CALDWELL
MAYOR

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

EDUARDO P. MANGLALLAN
DEPUTY DIRECTOR

IN REPLY REFER TO:
DRM 14-325

April 24, 2014

Ms. Dennis Silva, Jr., AICP, Principal
Hawaii Planning LLC
American Savings Bank Tower
1001 Bishop Street, Suite 2755
Honolulu, Hawaii 96813

Dear Mr. Silva:

SUBJECT: Ohana Hale – 929 Pumehana Street
TMK: 2-3-028:004, 201H & DURF Project
Draft Environmental Assessment (EA)

Thank you for the opportunity to review and to give our input regarding the subject Draft Environmental Assessment (DEA) dated April 3, 2014.

Our comments are as follows:

- Provide necessary Best Management Practices for the project site, including the catch basin located on the Pumehana Street side of the subject property.
- All work to be performed within the City's Pumehana Street and Algaroba Street right-of-ways (includes the unimproved sidewalk area), shall require the proper City permits (Street Usage Permit and Grading/Trenching Permit).
- All work within the City road's right-of-ways shall be to City standards.

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

HAWAII
PLANNING LLC

June 26, 2014

Mr. Ross S. Sasamura, P.E.
Director and Chief Engineer
Department of Facility Maintenance
City & County of Honolulu
1000 Uluohia Street, Suite 215
Kapolei, HI 96707

Subject: Draft Environmental Assessment
'Ohana Hale – 929 Pumehana Street
TMK: 2-3-028: 004

Dear Mr. Sasamura,

Thank you for your letter dated April 24, 2014 regarding the above-referenced project. Necessary Best Management Practices will be implemented for this project. A Street Usage Permit and a Grading/Trenching Permit will be applied for during the construction phase of this project. All work within the City road's right-of-ways will be completed to City standards.

Thank you for your comments. Your comments will be included in the Final EA.

Sincerely,

Hawai'i Planning LLC

Dennis Silva, Jr., AICP
Principal

American Savings Bank Tower • 1001 Bishop Street, Suite 2755 • Honolulu HI 96813 • (808)521-9418 Ext. 1005 • hawaiiplanningllc@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

PAMELA A. WITTY-OAKLAND
DIRECTOR

GARY K. NAKATA
DEPUTY DIRECTOR

April 24, 2014

Mr. Dennis Silva Jr., AICP
Principal
Hawaii Planning LLC
American Savings Bank Tower, Suite 2755
1001 Bishop Street
Honolulu, Hawaii 96813

Dear Mr. Silva:

SUBJECT: Ohana Hale – 929 Pumehana Street
TMK: 2-3-028:004, 201H & DURF Project
Draft Environmental Assessment (EA)

We have reviewed your letter dated April 3, 2014, and the draft environmental review for the subject project.

Our review of the information provided indicates that the proposed Ohana Hale project will have no adverse impacts on any Department of Community Services' activities or projects at this time.

Thank you again for providing us with the opportunity to comment on this matter.

Sincerely,

Pamela A. Witty-Oakland
Director

PAW:sgk

HAWAII
PLANNING LLC

June 26, 2014

Ms. Pamela Witty-Oakland
Director
Department of Community Services
City & County of Honolulu
715 S. King Street, Suite 311
Honolulu, HI 96813

Subject: Draft Environmental Assessment
'Ohana Hale – 929 Pumehana Street
TMK: 2-3-028: 004

Dear Ms. Witty-Oakland,

Thank you for your letter dated April 24, 2014 regarding the above-referenced project. You stated in the comment letter that 'Ohana Hale will have no adverse impacts on the Department of Community Services' activities or projects at this time.

Thank you for your comments. Your comments will be included in the Final EA.

Sincerely,

Hawai'i Planning LLC

Dennis Silva, Jr., AICP
Principal

American Savings Bank Tower • 1001 Bishop Street, Suite 2755 • Honolulu HI 96813 • (808)521-9418 Ext. 1005 • hawaiiplanningllc@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

TP4/14-538593R

April 30, 2014

Mr. Dennis Silva, Jr., AICP
Principal
Hawaii Planning LLC
1001 Bishop Street, Suite 2755
Honolulu, Hawaii 96813

Dear Mr. Silva:

SUBJECT: Draft Environmental Assessment (DEA) and Anticipated Finding of No Significant Impact (FONSI) Ohana Hale Project; Tax Map Key (TMK): 2-3-028: 004; Honolulu, Oahu, Hawaii

In response to your letter dated April 3, 2014, we have the following comments:

1. We recommend keeping the McCully/Moiliili Neighborhood Board No. 8 (as well as the area residents, businesses, emergency personnel, bus personnel, etc.) updated about the details of the proposed project and its impacts on the surrounding local area street network.

2. We restate our recommendation that 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.

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

Very truly yours,

Michael D. Formby
Director

July 9, 2014

Mr. Michael D. Formby
Director
Department of Transportation Services
City & County of Honolulu
650 S. King Street, 3rd Floor
Honolulu, HI 96813

Subject: Draft Environmental Assessment
`Ohana Hale – 929 Pumehana Street
TMK: 2-3-028: 004

Dear Mr. Formby,

Thank you for your letter dated April 30, 2014 regarding the above-referenced project. We will update the McCully-Moiliili Neighborhood Board No. 8 on the progress of this project. We also will comply with your recommendation on the transport of construction materials and equipment being conducted during off-peak traffic hours (8:30a.m. to 3:30p.m.) to minimize traffic disruptions.

Thank you for your comments. Your comments will be included in the Final EA.

Sincerely,

Hawai'i Planning LLC

Dennis Silva, Jr., AICP
Principal

American Savings Bank Tower • 1001 Bishop Street, Suite 2755 • Honolulu HI 96813 • (808)521-9418 Ext. 1005 • hawaiiplanningllc@gmail.com

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843

April 29, 2014

KIRK CALDWELL, MAYOR

DUANE R. MIYASHIRO, Chair
MAHEALANI CYPHER, Vice Chair
THERESIA C. McMURDO
ADAM C. WONG
DAVID C. HULIHEE

ROSS S. SASAMURA, Ex-Officio
GLENN M. OKIMOTO, Ex-Officio

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

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

Mr. Dennis Silva, Jr., AICP
Hawaii Planning LLC
American Savings Bank Tower
1001 Bishop Street, Suite 2755
Honolulu, Hawaii 96813

Dear Mr. Silva:

Subject: Your Letter Dated April 3, 2014 Regarding the Draft Environmental Assessment for Ohana Hale – Affordable Housing – Tax Map Key: 2-3-028: 004

Thank you for the opportunity to comment on the proposed 180-unit high-rise housing development.

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

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.

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

Very truly yours,

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

HAWAII PLANNING LLC

July 9, 2014

Mr. Ernest Y. W. Lau, P.E.
Manager and Chief Engineer
Board of Water Supply
City & County of Honolulu
630 S. Beretania Street
Honolulu, HI 96843

Subject: Draft Environmental Assessment
'Ohana Hale – 929 Pumehana Street
TMK: 2-3-028: 004

Dear Mr. Lau,

Thank you for your letter dated April 29, 2014 regarding the above-referenced project. Your letter states that the existing water system is adequate to accommodate the proposed development. We understand that the final decision on the availability of water will be confirmed when the building permit is submitted for approval.

We understand from our consultation with BWS that potential fees include the Water System Facilities Charge and Installation Charge. However, these fees are not determined until review of construction plans, building plans, and building permit application. Construction plans, building plans, and the building permit application will be submitted for review and approval following the Final EA phase of the project. We also understand that if this project is subject to BWS charges, the applicant is required to request a deferral of payment.

All water conservation measures requirements will be met.

Thank you for your comments. Your comments will be included in the Final EA.

Sincerely,

Hawai'i Planning LLC

Dennis Silva, Jr., AICP
Principal

American Savings Bank Tower • 1001 Bishop Street, Suite 2755 • Honolulu HI 96813 • (808)521-9418 Ext. 1005 • hawaiiplanningllc@gmail.com

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

May 7, 2014

Hawaii Planning LLC
Attn: Dennis Silva, Jr., Principal
1001 Bishop Street, Suite 2755
Honolulu, HI 96813

via email: hawaiiplanningllc@gmail.com

Dear Mr. Silva,

SUBJECT: `Ohana Hale – 929 Pumehana Street, TMK: 2-3-028: 004, 201H & DURF Project Draft Environmental Assessment (EA)

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; and (2) Engineering Division. No other comments were received as of our suspense date. Should you have any questions, please feel free to call Supervising Land Agent Steve Molmen at 587-0439. Thank you.

Sincerely,

Russell Y. Tsuji
Land Administrator

Enclosure(s)

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

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

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

April 9, 2014

MEMORANDUM

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

FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: `Ohana Hale – 929 Pumehana Street, TMK: 2-3-028: 004, 201H & DURF Project Draft Environmental Assessment (EA)
LOCATION: 929 Pumehana Street, TMK: 2-3-028: 004
APPLICANT: MJF Development Corporation by its consultant Hawaii Planning LLC

Transmitted for your review and comment on the above-referenced document. We would appreciate your comments on this document which can be found here:

1. Go to: https://sp01.ld.dlnr.hawaii.gov/LD
2. Login: Username: LD\Visitor Password: 0pa$$word0 (first and last characters are zeros)
3. Click on: Requests for Comments
4. Click on the subject file "`Ohana Hale – 929 Pumehana Street, TMK: 2-3-028: 004, 201H & DURF Project Draft Environmental Assessment (EA)" then click on "Files" and "Download a copy". (Any issues accessing the document should be directed to Jonathan Real, Applications/Systems Analyst at 587-0427 or Jonathan.C.Real@hawaii.gov)

Please submit any comments by May 7, 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: T Chee
Print Name: Trung Chee
Date: 4/11/14

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

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

RECEIVED
LAND DIVISION
2014 APR 14 PM 2:56
DEPT. OF LAND & NATURAL RESOURCES
STATE OF HAWAII

'14 APR 10 AM 10:06 ENGINEERING

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

April 9, 2014

MEMORANDUM

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

TO:
FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: `Ohana Hale – 929 Pumehana Street, TMK: 2-3-028: 004, 201H & DURF Project Draft Environmental Assessment (EA)
LOCATION: 929 Pumehana Street, TMK: 2-3-028: 004
APPLICANT: MJF Development Corporation by its consultant Hawaii Planning LLC

Transmitted for your review and comment on the above-referenced document. We would appreciate your comments on this document which can be found here:

1. Go to: https://sp01.ld.dlnr.hawaii.gov/LD
2. Login: Username: LD\Visitor Password: 0pa$$word0 (first and last characters are zeros)
3. Click on: Requests for Comments
4. Click on the subject file "`Ohana Hale – 929 Pumehana Street, TMK: 2-3-028: 004, 201H & DURF Project Draft Environmental Assessment (EA)" then click on "Files" and "Download a copy". (Any issues accessing the document should be directed to Jonathan Real, Applications/Systems Analyst at 587-0427 or Jonathan.C.Real@hawaii.gov)

Please submit any comments by May 7, 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: 4/11/14

DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION

LD/ Russell Y. Tsuji
REF: DEA for 'Ohana Hale – 929 Pumehana Street, TMK: (1) 2-3-028: 004, 201H & DURF Project Oahu.024

COMMENTS

(X) **We confirm that the project site, according to the Flood Insurance Rate Map (FIRM), is located in Flood Zones AO and X. The National Flood Insurance Program regulates developments within Zone AO as indicated in bold letters below, but not within Zone X.**

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

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

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

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

(X) **Mr. Mario Siu Li at (808) 768-8098 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.

(X) **The applicant should include water demands and infrastructure required to meet project needs. Please note that State sponsored projects requiring water service from the Honolulu Board of Water Supply system will be required to pay a resource development charge, in addition to Water Facilities Charges for transmission and daily storage.**

(X) **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: _____

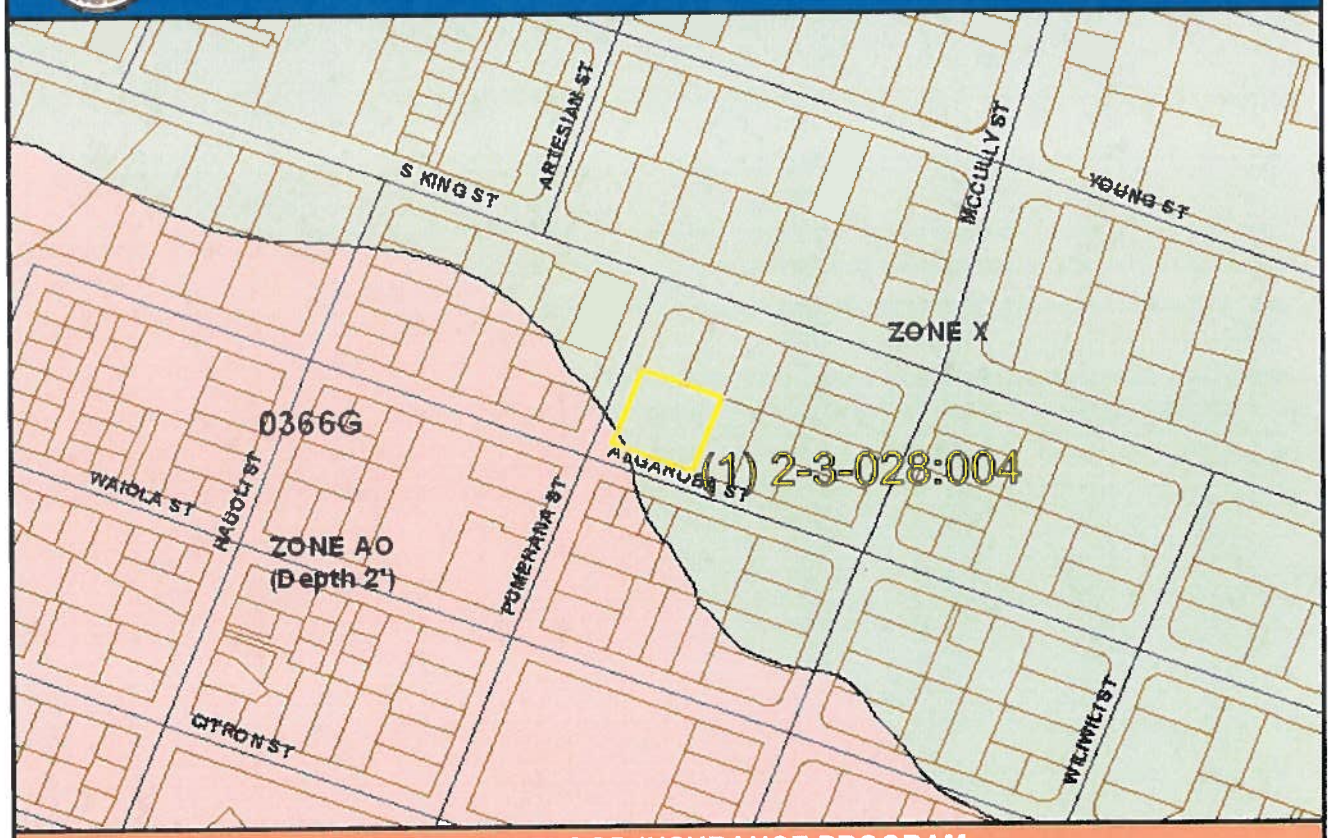
Should you have any questions, please call Mr. Dennis Imada of the Planning Branch at 587-0257.

Signed: _____
CARTY S. CHANG, CHIEF ENGINEER

Date: 4/11/14

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) 2-3-028-004
PARCEL ADDRESS:	933 PUMEHANA ST HONOLULU, HI 96826
FIRM INDEX DATE:	JANUARY 19, 2011
LETTER OF MAP CHANGE(S):	NONE
FEMA FIRM PANEL(S):	15003C0366G
PANEL EFFECTIVE DATE:	JANUARY 19, 2011

PARCEL DATA FROM:	APRIL 2013
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.

HAWAII PLANNING LLC

July 7, 2014

Mr. Russell Y. Tsuji
Land Administrator
Department of Land & Natural Resources
State of Hawaii
P.O. Box 621
Honolulu, HI 96809

Subject: Draft Environmental Assessment
'Ohana Hale – 929 Pumehana Street
TMK: 2-3-028: 004

Dear Mr. Tsuji,

Thank you for your letter dated May 7, 2014 regarding the above-referenced project. Based on the comments from the DLNR – Engineering Division, we consulted with the County National Flood Insurance Program (NFIP) Coordinator at the City and County of Honolulu, DPP. The proposed building will not encroach into the AO Flood Zone, which complies with the County NFIP Coordinator's consultation. The Final EA narrative will be revised to state this requirement.

The 'Ohana Hale Draft EA, Appendix H – Site Infrastructure Report, prepared by The Limtiaco Consulting Group, provides water demand and calculations based on the Board of Water Supply (BWS) "Water System Standards." The Site Infrastructure Report - Table 1 – Domestic Water Consumption is displayed below:

Table 1 - Domestic Water Consumption

Flow Demand	Proposed Domestic Water Consumption (gallons/day)
Average Daily Demand	54,000 gpd
Maximum Daily Demand	81,000 gpd
Peak Hour Flow	162,000 gpd

American Savings Bank Tower • 1001 Bishop Street, Suite 2755 • Honolulu HI 96813 • (808)521-9418 Ext. 1005 • hawaiiplanningllc@gmail.com

The Site Infrastructure Report, Section 2.1 – Water, provides more elaboration on the existing water infrastructure and potential impacts and mitigation measures pertaining to water supply and demand. The Final EA will also include the Site Infrastructure Report as Appendix H.

Thank you for your comments. Your comments will be included in the Final EA.

Sincerely,

Hawai'i Planning LLC

Dennis Silva, Jr., AICP
Principal

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-590(JY)

May 8, 2014

Mr. Dennis Silva, Jr.
Hawaii Planning, LLC
1001 Bishop Street, Suite 2755
Honolulu, Hawaii 96813

Dear Mr. Silva:

SUBJECT: Request for Comments
Draft Environmental Assessment
Ohana Hale - Affordable Housing - 180 Units
929 Pumehana Street - McCully
Tax Map Key 2-3-28: 4

Thank you for the opportunity to comment on the above Draft Environmental Assessment (DEA) pursuant to Chapter 201H-38, Hawaii Revised Statutes (received April 7, 2014). The developer of the proposed 21-story, 180-unit condominium project (identified as "Ohana Hale") will be seeking exemptions from various planning, zoning, and construction standards pursuant to Chapter 201H, HRS. The application for exemptions is being processed by the Hawaii Housing and Finance Development Corporation (HHFDC) because the proposed project does not meet City eligibility requirements for processing of a 201H housing project through the Department of Planning and Permitting (DPP). After the State completes its review process, the request for exemptions will be submitted directly to the City Council for action.

In the DPP letter to Plan Pacific dated September 11, 2013, we stated that this Ohana Hale project is not eligible for DPP processing because it did not meet the eligibility requirements for the minimum percentage of units for certain target income groups. It did not meet the minimum 10% of the total units (i.e.,18 units) for households earning annual incomes less than 80% of the median income and a minimum of 20% of the total units (i.e., 36 units) for households earning between 81 to 120% of the median income. Instead, this project will have a minimum of 60 percent of the total units (108 units) for households earning 100 to 120% of the median income and does not address the need for households earning less than 100% of the median income.

The following DPP branches provided review comments. They include:

1. Planning Division, Community Planning Branch

   a. While the proposed height of 189 feet is not an excessive request, it may be out of context with the surrounding buildings which consist of two- and three-story buildings. The maximum height for the area is 150 feet. The

proposed building height exceeds the maximum by nearly 40 feet and represents a significant 21% increase. The PUC's policies and guidelines on protection of important views limits buildings which may have an impact on important views, especially the view from Punchbowl to Diamond Head, in which the building is located in that line of sight. Yet, the view analysis provided did not provide a graphic demonstration of this view. In fact, other view analyses included in the DEA based its originating view point not at ground level but appear to be from a vantage point several stories above ground level, providing a false view of the building's impact on important views. The view study should be revised to provide a more realistic view analysis from the standpoint of a pedestrian located at street level.

b. A proposed FAR of 7.5 is triple the standard FAR of 2.5 for the zoning area. A maximum FAR of 3.5 is only allowed as an open space bonus, which is not provided for the subject project.

c. The request for no yards defeats the purpose of having a yard, to allow light and air access. While it is understandable to accommodate vehicle turns in the parking structure, having no front yard changes the neighborhood's character. We recommend design revisions to mitigate privacy impacts.

d. In lieu of eliminating the side yards, the project should be moved up to the street property lines (encroach into the front yards) with proper ground level uses and treatment along Algaroba Street and Pumehana Street. Street trees/landscape strip located next to the curb. Highly encourage integration of small commercial space(s) to help activate the ground level and improve pedestrian realm. The use of eyebrows, canopies, etc. would help provide a sense of human scale along both streets. Just the provision of sidewalks alone, does not suffice.

e. There are no objections in the reduction of the required 204 parking stalls by seven stalls to 197 stalls. However, the project should consider a greater reduction in number of parking spaces, as the site is close to King Street and major bus routes. To maintain affordability, consider unbundling parking from the condo unit with the option to buy a stall, and build fewer stalls. The current proposal has 8 floors of parking to 13 floors of dwelling units. A reduction in stalls would help with reducing building height and increasing yard setbacks. Also, provide bike parking in convenient, prominent place - both outside for visitors and then a wire cage that takes up a few spaces on ground floor of garage near entrance.

f. The DEA should also contain a performa showing the economic feasibility of various building scenarios to document the Applicant's contention that if various exemptions are not granted then it would make the project unfeasible.

2. Site Development Division, Subdivision Branch

   a. We disagree with the full exemption requested from the Park Dedication Ordinance. According to the applicant's calculations, this exemption will be worth over two million dollars as a fee not paid to the City. Even if a fraction of that amount is paid, it will serve to provide or upgrade facilities for the existing public park sites the project's residents may use.

3. Land Use Permits Division, Urban Design Branch

   a. The proposed density or floor area ratio (FAR) of 7.5 is excessive. It is three times the maximum allowable FAR of 2.5 without open space bonuses and more than two times the maximum allowable FAR of 3.5 with open space bonuses, but no open space is provided. Some open space should be provided to help justify such a high floor area ratio.

   b. The tall blank concrete walls on the north and south elevations will be a major visual impact onto the adjacent community, especially when most of the surrounding buildings are two to three stories in heights. Discuss and show the visual impact of the proposed building on adjacent structures. Other alternatives to the exterior building design, architectural elements, materials, and finishes should be considered rather than just the painted concrete.

   c. With the site in close proximity to public transportation along King Street, the number of parking stalls and levels could be reduced which would lower the overall building height.

   d. Provide more landscaping in the required front yards and planting strips along the sidewalk. Encourage pedestrian movement along the street and enhance the walking experience by providing shade or canopy-form trees.

   e. The parking structure should be adequately screened from street view. Light fixtures and vehicle headlights should be adequately screened to minimize light and glare impacts onto surrounding areas. This could be accomplished with landscaping, planter boxes, and/or architectural design elements.

   f. The parking structure layout is very inefficient (only 19 stalls per parking level). On a typical parking level, there is more vehicular circulation area than actual parking area. Examine other alternative the parking plans.

   g. With the required corner rounding, the corner of the building will be in the required 10-foot front yard.

h. The rooftop mechanical equipment should be adequately screened from view.

i. The alternative site development concepts should be illustrated diagrammatically. As a comparison or baseline, there should be at least one alternative that shows what could be developed by meeting the minimum development standards and off-street parking requirements of the BMX-3 District (i.e., without requiring zoning exemptions).

Should you have any further questions on this matter, please contact Joette Yago of our staff at 768-8034 or jyago@honolulu.gov.

Very truly yours,

Anthony X. Ching

FOR George I. Atta, FAICP
Director

Doc1142179_1

HAWAII PLANNING LLC

October 8, 2014

Mr. George I. Atta, FAICP
Director
Department of Planning & Permitting
City & County of Honolulu
650 S. King Street, 7th Floor
Honolulu, HI 96813

Subject: Draft Environmental Assessment
'Ohana Hale – 929 Pumehana Street
TMK: 2-3-028: 004

Dear Mr. Atta,

Thank you for your letter dated May 8, 2014 regarding the above-referenced project.

1. Planning Division, Community Planning Branch
    a. *While the proposed height of 189 feet is not an excessive request, it may be out of context with the surrounding buildings which consist of two- and three-story buildings. The maximum height for the area is 150 feet. The proposed building height exceeds the maximum by nearly 40 feet and represents a significant 21 % increase. The PUC's policies and guidelines on protection of important views limits buildings which may have an impact on important views, especially the view from Punchbowl to Diamond Head, in which the building is located in that line of sight. Yet, the view analysis provided did not provide a graphic demonstration of this view. In fact, other view analyses included in the DEA based its originating view point not at ground level but appear to be from a vantage point several stories above ground level, providing a false view of the building's impact on important views. The view study should be revised to provide a more realistic view analysis from the standpoint of a pedestrian located at street level.*

Discussion: The original proposal to HHFDC in December 2013 included a 224-foot tall building with 10.1 FAR. Based on our discussions with HHFDC from December 2013 to March 2014, we scaled the height down to the current design of 189-feet and 7.5 FAR. As illustrated in Appendix D - Architectural Drawings, from the Draft EA, we are providing 180 units, 108 or 60% of which are below market rate; 100% to 120% AMI. The remaining 72 units will be market rate.

December 2013: 'Ohana Hale consisted of a 224-foot building, with 10.1 FAR (145,000 sf of floor area / 14,400sf parcel), eight (8) floors of parking, and 17 floors of residential units, with a total of 25 floors. 108 or 60% of the units were proposed to be restricted at 140% AMI. The unit mix is illustrated in the table below:

'Ohana Hale Building Summary (December 2013)

Bedroom/Bath	Number of Units	Unit Size (square feet)
1/1	113	463 - 496
2/1	65	667 - 695
3/2	2	1,121 – 1,223
Total Units	180	

We submitted a Draft EA to HHFDC for their acceptance to publish with OEQC in the Environmental Notice. Negotiations with HHFDC commenced on issues related to Height, FAR, and affordability mix (AMI % ranges). We conducted meetings with HHFDC on December 27, 2013, January 9, February 5, March 3, and March 20, 2014.

March 2014: 'Ohana Hale currently consists of a 189-foot building, with 7.5 FAR (107,999 sf of floor area / 14,400sf parcel), eight (8) floors of parking, and 13 floors of residential units, with a total of 21-floors. 108 units are restricted at 100%-120% AMI. The current unit mix is illustrated in the table below:

'Ohana Hale Building Summary (March 2014)

Bedroom/Bath	Number of Units	Unit Size (square feet)
Studio/1	96	335 - 387
1/1	79	454 - 494
2/1	5	986 – 1,082
Total Units	180	

We acknowledge your comment on providing a viewshed from Punchbowl to Diamond Head, in which the building is located within that line of sight. We also note that the view study should include a view analysis from the standpoint of the pedestrian. The Final EA will be amended to include these viewsheds.

b. *A proposed FAR of 7.5 is triple the standard FAR of 2.5 for the zoning area. A maximum FAR of 3.5 is only allowed as an open space bonus, which is not provided for the subject project.*

Discussion: See response to comment 1a.

c. *The request for no yards defeats the purpose of having a yard, to allow light and air access. While it is understandable to accommodate vehicle turns in the parking structure, having no front yard changes the neighborhood's character. We recommend design revisions to mitigate privacy impacts.*

Discussion: Refer to Appendix D – Architectural Drawings, sheet 4, Site Plan, P1 Level, in the Draft EA. This Site Plan illustrates that there are two front yard setbacks along Pumehana Street and Algaroba Street. DPP determines corner lots in commercial and mixed-use zoning districts as having two front setbacks. We are requesting an exemption from the two side setbacks. Moreover, if we were to provide the two side yard setbacks between properties it would create two 10-foot wide alleys, which from a Crime Prevention Through Environmental Design (CPTED) perspective is not a safe design for residents in the area. This is a brief definition of CPTED, "principles of design affect elements of the built environment ranging from the small-scale (such as the strategic use of shrubbery and other vegetation) to the overarching, including building form of an entire urban neighborhood and the amount of opportunity for "eyes on the street"". By creating two 10-foot wide alleyways, there are no "eyes on the street" and by design essentially creates a place for potential crime.

d. *In lieu of eliminating the side yards, the project should be moved up to the street property lines (encroach into the front yards) with proper ground level uses and treatment along Algaroba Street and Pumehana Street. Street trees/landscape strip located next to the curb. Highly encourage integration of small commercial space(s) to help activate the ground level and improve pedestrian realm. The use of eyebrows, canopies, etc. would help provide a sense of human scale along both streets. Just the provision of sidewalks alone, does not suffice.*

Discussion: Refer to Appendix D – Architectural Drawings, sheet 4, Site Plan, P1 Level, in the Draft EA. Regarding comments 1.c and 1.d, we respectfully disagree that moving the project up to the street property lines and providing a rear/side yard setback would be a desirable outcome for the following reasons: 1) DPP Traffic Branch would most certainly object for safety reasons as the building would restrict visibility of the intersection; 2) an "L" shaped, 10 ft wide, 240 ft long space between the property lines and a 65 ft high parking structure would provide little benefit to anyone, creating instead an unsafe and undesirable alleyway as discussed in the prior comment. Also addressed in comment 3.d, your comment is noted on the additional planting of street trees and landscaping in the setbacks along Pumehana Street and Algaroba Street. Regarding the integration of small commercial space to activate the street and improve the pedestrian realm, there is a convenience store located down the street

from 'Ohana Hale in addition to other services within walking distance. While we appreciate the urban design goal of an activated streetscape, the hypothetical introduction of a commercial condo on the ground floor introduces a host of problems: the market for commercial condos is small to start with; any such condo would have a tiny floor area and would be isolated in the neighborhood context, further diminishing marketability; and a transition of the ground level to commercial space would push the existing proposed units up in the design, further exacerbating the height issue. Therefore we do not consider inclusion of a commercial condo feasible in this case.

e. *There are no objections in the reduction of the required 204 parking stalls by seven stalls to 197 stalls. However, the project should consider a greater reduction in number of parking spaces, as the site is close to King Street and major bus routes. To maintain affordability, consider unbundling parking from the condo unit with the option to buy a stall, and build fewer stalls. The current proposal has 8 floors of parking to 13 floors of dwelling units. A reduction in stalls would help with reducing building height and increasing yard setbacks. Also, provide bike parking in convenient, prominent place - both outside for visitors and then a wire cage that takes up a few spaces on ground floor of garage near entrance.*

Discussion: As previously stated, in our discussions with HHFDC, we scaled down the building height and FAR and have reduced parking from the LUO requirement. From our experience in the market, further reduction in parking would pose marketability problems. The proposed units are targeted to middle income and higher income buyers, who generally require a designated off-street parking stall. Access to bus routes to offset parking is more effective for lower income brackets.

f. *The DEA should also contain a pro forma showing the economic feasibility of various building scenarios to document the Applicant's contention that if various exemptions are not granted then it would make the project unfeasible.*

Discussion: A pro forma was completed as part of the DURF application which is currently under process and review by HHFDC. There are no statutory provisions that require EAs to include pro formas as part of the discussion and disclosure of information. As you know, the EA process is to provide a full disclosure of the impacts of the proposed development on the surrounding environment. Thus, we feel this comment is beyond the scope and requirements of an EA to provide a financial feasibility analysis in the document and report. As a courtesy, we would be glad to share with DPP the pro forma submitted to HHFDC for the proposed project, which shows the impacts of the requested exemptions and also shows a relatively thin profit margin. Elimination of

the exemptions would eliminate the profit margin altogether and render the project infeasible. We feel that running pro formas for other hypothetical scenarios (eg. an office tower) without thorough design development, research, and analysis would be more misleading than informative.

2. Site Development Division, Subdivision Branch
    a. *We disagree with the full exemption requested from the Park Dedication Ordinance. According to the applicant's calculations, this exemption will be worth over two million dollars as a fee not paid to the City. Even if a fraction of that amount is paid, it will serve to provide or upgrade facilities for the existing public park sites the project's residents may use.*

Discussion: We received a letter from the Department of Parks and Recreation (DPR) and they support park dedication fee exemption of the 108 affordable units, but did not support the park dedication fee exemption for the 72 market rate units. The estimated park dedication fee for the 72 market rate units is $1,485,000. We will continue to request exemption from this fee. We have been in consultation and correspondence with DPR since June 25, 2014 and this remains an unresolved issue. The Final EA, Chapter 5 provides elaboration on the continued consultation with DPR.

3. Land Use Permits Division, Urban Design Branch
    a. *The proposed density or floor area ratio (FAR) of 7.5 is excessive. It is three times the maximum allowable FAR of 2.5 without open space bonuses and more than two times the maximum allowable FAR of 3.5 with open space bonuses, but no open space is provided. Some open space should be provided to help justify such a high floor area ratio.*

Discussion: Please see Comment #1 for discussion of FAR/height concessions to date. The proposed project is near a substantial amount of public open space, including McCully District Park. The proposed height, FAR, and lack of integrated open space serve the purpose of subsidizing the affordable units. We discussed with HHFDC the concept of a deck space for residents on floor R1, which would likely involve the conversion of a unit to additional community space. HHFDC has supported this concept.

    b. *The tall blank concrete walls on the north and south elevations will be a major visual impact onto the adjacent community, especially when most of the surrounding buildings are two to three stories in heights. Discuss and*

show the visual impact of the proposed building on adjacent structures. Other alternatives to the exterior building design, architectural elements, materials, and finishes should be considered rather than just the painted concrete.

Discussion: We already revised the design to accommodate HHFDC's request for articulation of North and South facades w/ indentations in the concrete. Refer to 'Ohana Hale Architectural Drawings – Appendix D in the Final EA for an illustration the blank wall mitigation.

c. *With the site in close proximity to public transportation along King Street, the number of parking stalls and levels could be reduced which would lower the overall building height.*

Discussion: Please see comment 1 e.

d. *Provide more landscaping in the required front yards and planting strips along the sidewalk. Encourage pedestrian movement along the street and enhance the walking experience by providing shade or canopy-form trees.*

Discussion: Please see comment 1d.

e. *The parking structure should be adequately screened from street view. Light fixtures and vehicle headlights should be adequately screened to minimize light and glare impacts onto surrounding areas. This could be accomplished with landscaping, planter boxes, and/or architectural design elements.*

Discussion: The present design includes 42" high solid parapets at all typical floors that will prevent headlights from impacting surrounding areas.

f. *The parking structure layout is very inefficient (only 19 stalls per parking level). On a typical parking level, there is more vehicular circulation area than actual parking area. Examine other alternative the parking plans.*

Discussion: There are 26 stalls per typical floor, not 19 (see sheet A-2.1), and this produces an average of 442 sf/stall. Parking efficiency varies depending on the area of the floor plate, its geometrics and its width and/or length dimension. The larger, the more rectangular and one dimension of at least 120 ft, the higher the efficiency. Parking structures with 300 to 350 sf/stall, are considered very efficient, but 400 sf/stall and over is not uncommon. The subject site is 120 ft by 120 ft. If a parking structure were to cover the entire site without stairs or elevators it would yield 44 stalls per typical level or 327 sf/stall. With stairs and elevators the count would be reduced to about 38 or 379 sf/stall. However, because of the 10 ft setbacks, neither width nor depth has the critical 120 ft dimension. Theoretically a 110 ft x 110 ft parking structure w/ stairs and elevators but no superstructure could yield about 28 stalls per level or 432 sf/stall. Given the design constraints, the proposed 442 sf/stall or 26 stalls per typical level is actually excellent.

g. *With the required corner rounding, the corner of the building will be in the required 10-foot front yard.*

Discussion: The encroachment into the 10 ft setbacks, caused by the required Street Widening is mitigated by the fact that at ground level and for the entire podium height only one column encroaches in the 10 ft setback. If during the construction document phase, the structural engineer finds a way to cantilever the corner of the residential superstructure, the column may be deleted and only the corner of the superstructure will be encroaching.

h. *The rooftop mechanical equipment should be adequately screened from view.*

Discussion: The impact of the elevator mechanical equipment, usually allowed to extend 18 ft over the allowable building envelope, is minimized as it will only extend by about 9 ft over the requested height of 189'-6". There is no other anticipated mechanical equipment on the roof, but if there is it will be screened appropriately.

i. *The alternative site development concepts should be illustrated diagrammatically. As a comparison or baseline, there should be at least one alternative that shows what could be developed by meeting the minimum development standards and off-street parking requirements of the BMX-3 District (i.e., without requiring zoning exemptions).*

Discussion: Please see the enclosed alternative site development concept including 62 units and parking per the LUO, which will be included as Reduced Height Alternative - Appendix L in the Final EA per your comment. Section 6.2 – Alternative Site Development Concepts in the Final EA includes discussion and rationale on this reduced height alternative.

Thank you for your comments. Your comment letter will be included in the Final EA.

Sincerely,

Hawai'i Planning LLC

Dennis Silva, Jr., AICP
Principal

Enclosure – Reduced Height Alternative: Appendix L
(Email to Joette Yago, DPP on October 8, 2014)

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 EO-WS

May 9, 2014

Mr. Dennis Silva, Jr., AICP
Principal
Hawaii Planning LLC
American Savings Bank Tower
1001 Bishop Street, Suite 2755
Honolulu, Hawaii 96813

Dear Mr. Silva:

This is in response to your letter dated April 3, 2014, requesting comments on the Draft Environmental Assessment for the proposed Ohana Hale project.

The Honolulu Police Department recommends that the necessary road closures on Pumehana and Algaroba Streets be conducted during off-peak traffic hours. We also recommend that the contractor allow local traffic ingress and egress for the 926 and 934 Pumehana Street residents and visitors during construction hours.

If there are any questions, please call Major Calvin Tong of District 7 (East Honolulu) at 723-3369 or via e-mail at ctong@honolulu.gov.

Sincerely,

LOUIS M. KEALOHA
Chief of Police

By Randal K. Macadangdang
RANDAL K. MACADANGDANG
Assistant Chief
Support Services Bureau

June 27, 2014

Mr. Louis M. Kealoha
Chief of Police
Honolulu Police Department
City & County of Honolulu
801 S. Beretania Street
Honolulu, HI 96813

Subject: Draft Environmental Assessment
'Ohana Hale – 929 Pumehana Street
TMK: 2-3-028: 004

Dear Mr. Kealoha,

Thank you for your letter dated May 9, 2014 regarding the above-referenced project. We acknowledge your recommendation that road closures on Pumehana and Algaroba Streets be conducted during off-peak traffic hours to minimize traffic disruptions. We also acknowledge your recommendation that ingress and egress for 926 and 934 Pumehana Street residents and visitors are not blocked during construction hours.

Thank you for your comments. Your comments will be included in the Final EA.

Sincerely,

Hawai'i Planning LLC

Dennis Silva, Jr., AICP
Principal

American Savings Bank Tower • 1001 Bishop Street, Suite 2755 • Honolulu HI 96813 • (808)521-9418 Ext. 1005 • hawaiiplanningllc@gmail.com

NEIL ABERCROMBIE
GOVERNOR

JESSICA E. WOOLEY
DIRECTOR

STATE OF HAWAI'I
OFFICE OF ENVIRONMENTAL QUALITY CONTROL
Department of Health
235 South Beretania Street, Suite 702
Honolulu, Hawai'i 96813
Telephone (808) 586-4185
Facsimile (808) 586-4186
Email: oeqchawaii@doh.hawaii.gov

May 8, 2014

Craig K. Hirai, Executive Director
Hawaii Housing Finance and Development Corporation
Department of Business, Economic Development & Tourism
677 Queen Street, Suite 300
Honolulu, Hawai'i 96813

Subject: Draft Environmental Assessment, 'Ohana Hale Project, Honolulu, Oahu, Hawai'i transmittal, TMK (1) 2-3-028:004

Aloha Mr. Hirai:

This is in response to your March 27, 2014 letter, transmitting the 'Ohana Hale Draft Environmental Assessment (DEA) for publication in the April 8, 2014 issue in The Environmental Notice. The Office of Environmental Quality Control (OEQC) staff reviewed the subject DEA and offer these comments:

1. In Section 2.2.2 Affordability, bottom of pages 12 to 14 (pp. 27 to 29, PDF reader), the price range for the affordable units is discussed. We recommend that you provide the actual dollar value of the affordable range for households earning between 100% and 120% of the HUD AMI for Honolulu.

   The purpose of the DEA is to provide full disclosure of a project. Therefore, it would be helpful to the reviewer if the dollar amount of affordable unit price range is listed in the final EA.

2. The following passage is the last sentence in the second paragraph on page 13 (p. 28, PDF reader): "While HHDFC will be processing the 201H application, the City and County of Honolulu City Council must approve the request for exemptions."

   For purposes of Chapter 343, Hawai'i Revised Statutes and Chapter 11-200, Hawaii Administrative Rules, the sentence is confusing and doesn't make sense. The approving agency for an environmental assessment oversees the Chapter 343 process from start to finish. The mention of "request for exemptions" in the sentence implies that the decision by the approving agency will not fully address

all the impacts from the project and the applicant intends to request exemptions from the City and County of Honolulu in the future.

We recommend that you delete any reference to exemptions in the final EA; it is inappropriate and does not comply with Chapter 343, HRS requirements. If the exemption is for something else then clarify what it is.

3. The paragraph following the paragraph referenced above and on the same page 13 (p. 28, PDF reader) again discusses the "Draft EA and requested exemptions." Again, this is redundant, doesn't make sense, and confusing. Once a project is issued a finding of no significant impact (FONSI), which is anticipated for this draft EA, all environmental concerns for a project should have been addressed and there should not be any more issues to be exempted from the process.

   We therefore recommend that you delete any further mention of exemptions in the final EA, unless the exemption is for an approval besides the Chapter 343 requirements.

4. Pages 14 and 15 (pp. 29 & 30, PDF reader) discusses parking and the intention to request reduced parking by seven spaces.

   Developments should provide the required parking and should not ask for reduction; residents of a planned development should not have to look for street parking. This would be a direct impact on public thoroughfares and should be addressed on-site by the applicant.

   While there are opportunities to reduce trips by cars and possibly minimize the need for a car, the applicant cannot know for certain if this is true.

5. Page 17 (p. 32, PDF reader) discusses natural hazards, potential impacts and mitigation. Only flooding is mentioned under this section. Potential natural hazards not included in the discussion are hurricanes and earthquakes.

   The mitigation addresses erosion control. Please include a discussion to address the 1 to 3 feet of AO FIRM designation at the southwest corner of the site.

6. The second sentence of the bullet point on page 26 (p. 45, PDF reader) is incomplete, with respect to the "four out of service underground storage tanks were removed from the ground" statement. Please edit the sentence to show the total number of USTs in the final EA.

7. Table 6 on page 55 (p. 78, PDF reader) is inaccurate. OEQC is not responsible for Permit/Approval of Chapter 343; HHFDC is the responsible agency in determining the project significance. Please revise the table to show this correction.

   OEQC's role in the Chapter 343 process is to ensure that agencies and applicants follow the correct procedures.

Thank you for the opportunity to review and offer comments about the 'Ohana Hale Project. Please feel free to contact Herman Tuiolosega at (808) 586-4185 if you have any questions.

OR me 586-4185

Sincerely,

Jessica

JESSICA WOOLEY
Director

c: MJF Development Corporation

HAWAII PLANNING LLC

July 7, 2014

Ms. Jessica Wooley
Director
Office of Environmental Quality Control
State of Hawai'i
235 S. Beretania Street, Suite 702
Honolulu, HI 96813

Subject: Draft Environmental Assessment
`Ohana Hale – 929 Pumehana Street
TMK: 2-3-028: 004

Dear Ms. Wooley,

Thank you for your letter dated May 8, 2014 regarding the above-referenced project. This memo is in response to your comment letter.

1. *In Section 2.2.2 Affordability, bottom of pages 12 to 14 (pp. 27 to 29, PDF reader), the price range for the affordable units is discussed. We recommend that you provide the actual dollar value of the affordable range for households earning between 100% and 120% of the HUD AMI for Honolulu.*

   The purpose of the DEA is to provide full disclosure of a project. Therefore, it would be helpful to the reviewer if the dollar amount of affordable unit price range is listed in the final EA.

Discussion: We will include the following table in the final EA. It shows the actual dollar value price range of the affordable units as well as how these prices compare to affordable price limits.

UNIT TYPE	NUMBER OF UNITS	RESTRICTED UNITS	RESTRICTED PRICE LOW	RESTRICTED PRICE HIGH	100% AMI PRICE LIMIT PER 2014 HHFDC GUIDANCE	120% AMI PRICE LIMIT PER 2014 HHFDC GUIDANCE
0-BR	96	64	$236,250	$311,187	$324,500	$389,300
1-BR	79	44	$329,150	$370,046	$370,900	$445,000
2BR	5	0	NA	NA	NA	NA
Total	180	108				

*Assumes 4.5% homebuyer interest rate; 5% down payment; 28% maximum cost of housing; 1 person per studio and 2 persons per 1-BR

2. *The following passage is the last sentence in the second paragraph on page 13 (p. 28, PDF reader): "While HHDFC will be processing the 201 H application, the City and County of Honolulu City Council must approve the request for exemptions."*

   For purposes of Chapter 343, Hawai'i Revised Statutes and Chapter 11-200, Hawaii Administrative Rules, the sentence is confusing and doesn't make sense. The approving agency for an environmental assessment oversees the Chapter 343 process from start to finish. The mention of "request for exemptions" in the sentence implies that the decision by the approving agency will not fully address all the impacts from the project and the applicant intends to request exemptions from the City and County of Honolulu in the future.

   We recommend that you delete any reference to exemptions in the final EA; it is inappropriate and does not comply with Chapter 343, HRS requirements. If the exemption is for something else then clarify what it is.

Discussion: We acknowledge your comment on deleting the reference to "exemptions" and "request for exemptions" in the Final EA. We will make the necessary amendments in the Final EA to clarify that the requested exemptions are related to development standards through the HRS Chapter 201H affordable housing provisions and processes, not HRS Chapter 343. We will also provide more clarification in the introductory Chapters of the Final EA that exemptions are for City and County of Honolulu's Land Use Ordinance and the Primary Urban Center (PUC) Development Plan, pursuant to HRS Section 201H-38, not exemptions to HRS Chapter 343 requirements.

3. *The paragraph following the paragraph referenced above and on the same page 13 (p. 28, PDF reader) again discusses the "Draft EA and requested exemptions." Again, this is redundant, doesn't make sense, and confusing. Once a project is issued a finding of no significant impact (FONSI), which is anticipated for this draft EA, all environmental concerns for a project should have been addressed and there should not be any more issues to be exempted from the process.*

   We therefore recommend that you delete any further mention of exemptions in the final EA, unless the exemption is for an approval besides the Chapter 343 requirements.

Discussion: We will provide more clarification in the introductory Chapters of the Final EA that exemptions are for City and County of Honolulu's Land Use Ordinance and the Primary Urban Center (PUC) Development Plan, pursuant to HRS Section 201H-38, not exemptions to HRS Chapter 343 requirements.

4. *Pages 14 and 15 (pp. 29 & 30, PDF reader) discusses parking and the intention to request reduced parking by seven spaces.*

   Developments should provide the required parking and should not ask for reduction; residents of a planned development should not have to look for street parking. This would be a direct impact on public thoroughfares and should be addressed on-site by the applicant.

   While there are opportunities to reduce trips by cars and possibly minimize the need for a car, the applicant cannot know for certain if this is true.

Discussion: Your comment on providing an adequate amount of parking is noted. The City and County of Honolulu, Department of Planning and Permitting (DPP) stated in their comment letter on this project that we should further reduce the number of parking stalls in order to lower the height of the building and encourage walking and more use of public transport. At this phase of the process, we will adhere to the current design of 197 parking stalls with a request for a HRS Chapter 201H exemption from the Land Use Ordinance of 7 parking stalls. The City Council will vote on the request for HRS Chapter 201H exemptions as will be stated in Chapter 5 of the Final EA.

5. *Page 17 (p. 32, PDF reader) discusses natural hazards, potential impacts and mitigation. Only flooding is mentioned under this section. Potential natural hazards not included in the discussion are hurricanes and earthquakes.*

   The mitigation addresses erosion control. Please include a discussion to address the 1 to 3 feet of AO FIRM designation at the southwest corner of the site.

Discussion: The Final EA will include a discussion of hurricanes and earthquakes in the section of natural hazards. The southwest corner of the site is designated AO flood district. This corner is designated as a corner rounding section by the DPP, Traffic

Review Branch (TRB). We will consult with DPP – TRB on this issue of the future corner rounding within an AO flood district.

6. *The second sentence of the bullet point on page 26 (p. 45, PDF reader) is incomplete, with respect to the "four out of service underground storage tanks were removed from the ground" statement. Please edit the sentence to show the total number of USTs in the final EA.*

Discussion: This comment is noted and the sentence will be edited in the Final EA to show there were four (4) out of service USTs. Appendix E – Phase 1 Environmental Site Assessment, Executive Summary, Page 2, states that there were four (4) USTs that were removed from the ground.

7. *Table 6 on page 55 (p. 78, PDF reader) is inaccurate. OEQC is not responsible for Permit/Approval of Chapter 343; HHFDC is the responsible agency in determining the project significance. Please revise the table to show this correction.*
   OEQC's role in the Chapter 343 process is to ensure that agencies and applicants follow the correct procedures.

Discussion: This comment is noted and we will amend the Table on Approvals and Permits Summary in the Final EA to reflect the above-referenced correction.

Thank you for your comments. Your comment letter will be included in the Final EA.

Sincerely,

Hawai'i Planning LLC

Dennis Silva, Jr., AICP
Principal

DEPARTMENT OF ENVIRONMENTAL SERVICES
CITY AND COUNTY OF HONOLULU
1000 ULUOHIA STREET, SUITE 308, KAPOLEI, HAWAII 96707
TELEPHONE: (808) 768-3486 • FAX: (808) 768-3487 • WEBSITE: http://envhonolulu.org

KIRK CALDWELL
MAYOR

LORI M.K. KAHIKINA, P.E.
DIRECTOR

TIMOTHY A. HOUGHTON
DEPUTY DIRECTOR

ROSS S. TANIMOTO, P.E.
DEPUTY DIRECTOR

IN REPLY REFER TO
PRO 14-076

June 20, 2014

Mr. Dennis Silva, Jr., AICP
Hawaii Planning LLC
American Savings Bank Tower
1001 Bishop Street, Suite 2755
Honolulu, Hawaii 96813

Dear Mr. Silva:

SUBJECT: Draft Environmental Assessment for 'Ohana Hale, 929 Pumehana Street, TMK: 2-3-028:004, 201H & DURF Project, Honolulu, O'ahu, Hawai'i

We have reviewed the subject document as transmitted to us by your letter dated April 3, 2014. We have the following comments:

1. The Department of Planning and Permitting (DPP), Wastewater Branch has the lead role in issuing sewer connection permits.

2. The sewer laterals from the project connect to sewer lines that convey the wastewater to the Ala Moana Wastewater Pump Station, not the Beachwalk Wastewater Pump Station.

Should you have any questions, please call Lisa Kimura, Civil Engineer, at 768-3455.

Sincerely,

Ross S. Tanimoto

for Lori M.K. Kahikina, P.E.
Director

Attachment

cc: Department of Planning and Permitting, SDD, WWB

July 9, 2014

Ms. Lori M.K. Kahikina, P.E.
Director
Department of Environmental Services
City & County of Honolulu
1000 Uluohia Street, Suite 308
Kapolei, HI 96707

Subject: Draft Environmental Assessment
'Ohana Hale – 929 Pumehana Street
TMK: 2-3-028: 004

Dear Ms. Kahikina,

Thank you for your letter dated June 20, 2014 regarding the above-referenced project.

In response to comment 1 from your letter, DPP – Wastewater Branch approved Sewer Connection Application No. 2014/SCA-0193 on March 25, 2014.

Appendix H – Site Infrastructure Report and the narrative within the Final EA will be revised to state that the sewer laterals from the project connect to sewer lines that convey the wastewater to the Ala Moana Wastewater Pump Station.

Thank you for your comments. Your comments will be included in the Final EA.

Sincerely,

Hawai'i Planning LLC

Dennis Silva, Jr., AICP
Principal

American Savings Bank Tower • 1001 Bishop Street, Suite 2755 • Honolulu HI 96813 • (808)521-9418 Ext. 1005 • hawaiiplanningllc@gmail.com

Appendix L

Reduced Height Alternative

PUMEHANA STREET RESIDENTIAL PROJECT

REVISION
ISSUE: DATE:

LEGEND:

- VEHICULAR CIRCULATION
- PEDESTRIAN CIRCULATION
- PARKING
- FLOOR AREA
- PUBLIC OPEN SPACE

PARKING CALCULATIONS:

TOTAL UNITS: 70
(32@1.5 + 30@1 + 6 GUESTS)
STALLS REQUIRED = 84
STALLS PROVIDED = 84
(FOR CALCS. REFER TO SHT. A-2.1 & A-2.2)
LOADING CALCULATIONS:
STALLS REQUIRED = 1 (1 @ 12 x 35)
STALLS PROVIDED = 1 (1 @ 12 x 35)

PROPOSED

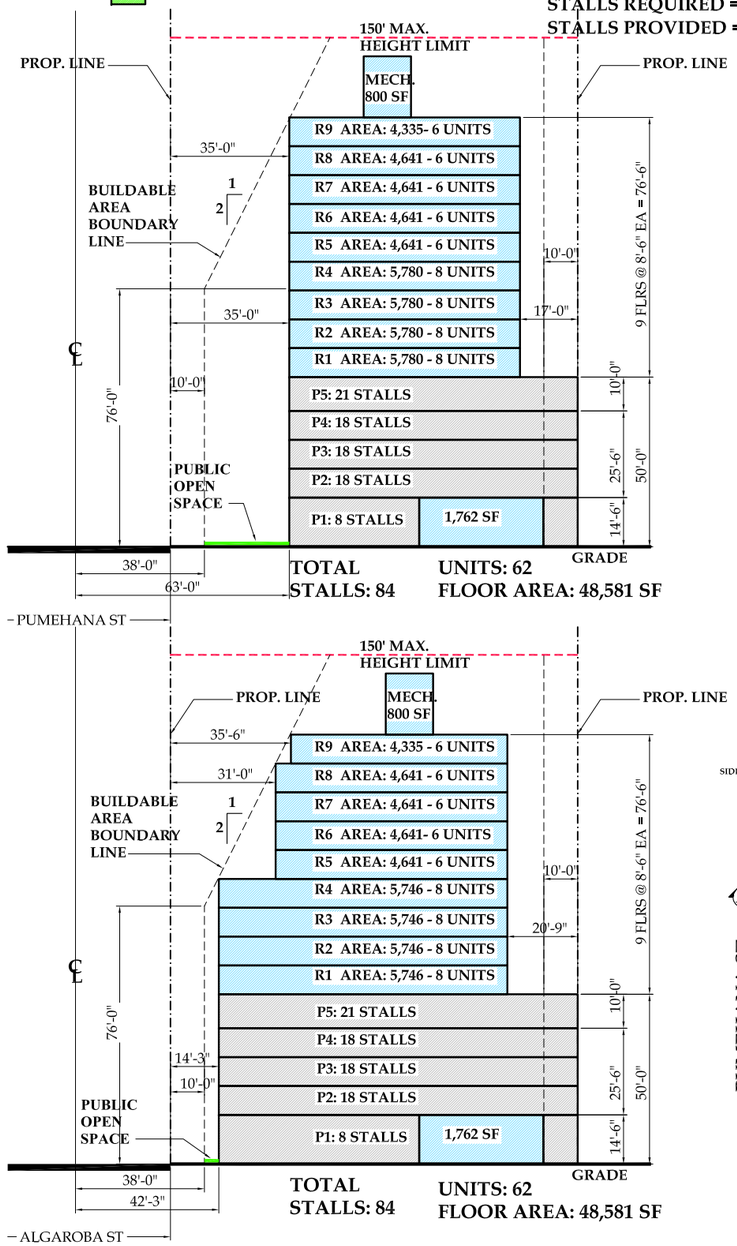
PUBLIC OPEN SPACE: 2,631 SF (2,593+38)
ALLOWABLE FLOOR AREA = 49,155 SF
MAX FAR: 3.41
FLOOR AREA: 48,581 SF
FAR: 3.37
FRONT YARD SETBACK: 10 FT
SIDE & REAR YARD SETBACK: 10 FT
HEIGHT: 126'-6"
TOTAL RESIDETIAL UNITS : 62

ALLOWABLE / REQUIRED

BASE FLOOR AREA: 36,000 (@2.5 FAR)
PUBLIC OPEN SPACE BONUS: 5 SF/1 SF
MAX FAR: 3.5 FAR
MAX. FLOOR AREA: 50,400 SF
FRONT YARD SETBACK: 10 FT
SIDE & REAR YARD SETBACK: 10 FT
HEIGHT: 150'-0"

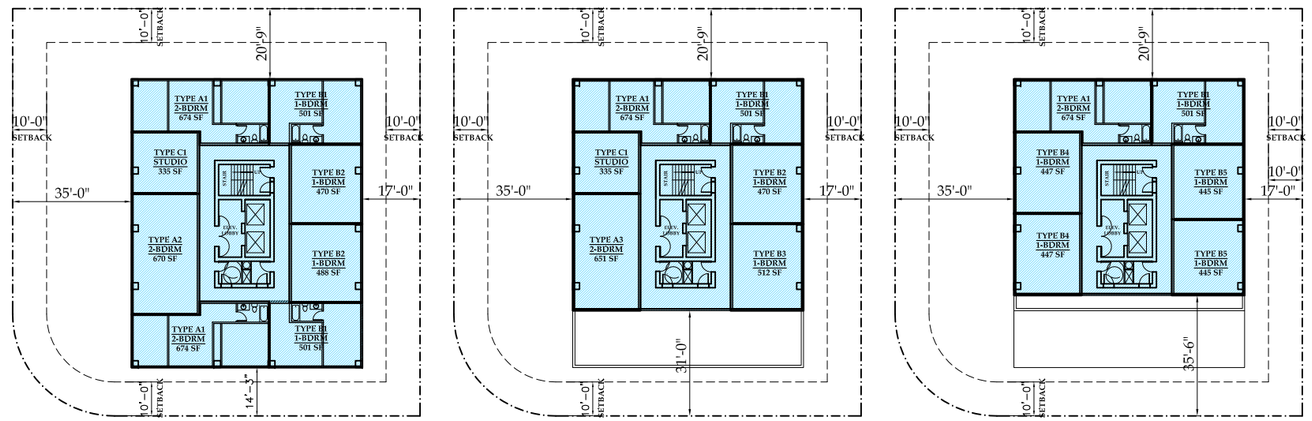
PROJECT DATA

TMK: 2-3-028: 004
ZONING: BMX-3
ROAD WIDENING: 30 FT RADIUS AT CORNER OF PUMEHANA AND ALGAROBA
LOT AREA: 14,400 SF
FAR : 2.5
MAX FAR: 3.5
HEIGHT LIMIT: 150 FT



TOTAL STALLS: 84
UNITS: 62
FLOOR AREA: 48,581 SF

SCHEMATIC SECTION BB



R1, R2, R3, R4 TYP. FLOOR

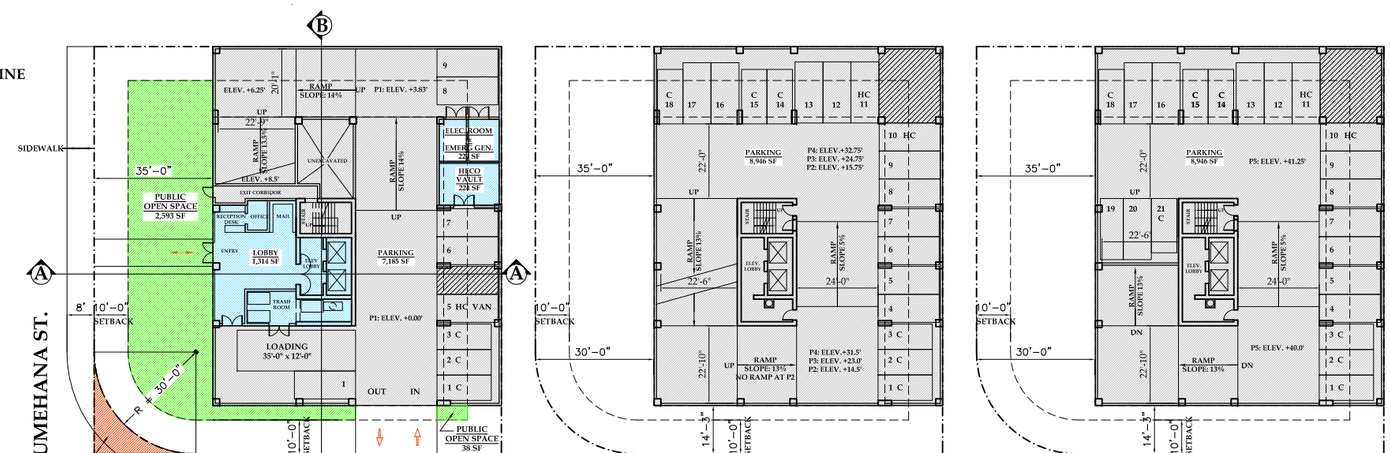
FLOOR AREA: 5,780 SF (x4)
CIRC. & MISC : X sf
EFFICIENCY: X%
UNITS / FLR: 8

R5, R6, R7, R8 TYP. FLOOR

FLOOR AREA: 4,641 SF (x 4)
CIRC. & MISC : XSF
EFFICIENCY: X%
UNITS / FLR: 6

R9 FLOOR

FLOOR AREA: 4,335 SF
CIRC. & MISC : X SF
EFFICIENCY: X%
UNITS / FLR: 6



P1 LEVEL

9 STALLS (6S + 3C - INCLUDED 1 HC)
FLOOR AREA: 2,041 SF
GARAGE AREA: 7,675 SF
EFFICIENCY = 852 SF / STALL

P2, P3, P4 LEVEL

18 STALLS (12S + 6C - INCLUDED 2 HC)
GARAGE AREA = 8,989 SF
EFFICIENCY = 499 SF / STALL

P5 LEVEL

21 STALLS (14S + 7C - INCLUDED 2 HC))
GARAGE AREA = 8,989 SF
EFFICIENCY = 436 SF / STALL

DIAGRAMATIC PLANS

GRAPHIC SCALE
0 10' 20' 30' 40'

PROJECT:
PUMEHANA DEVELOPMENT

OWNER:

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INTERNATIONAL, INC.
ARCHITECTURE
INTERIORS + PLANNING
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SHEET TITLE:
PROJECT DATA
DIGRAMATIC PLANS
&
SCHEMATIC SECTION

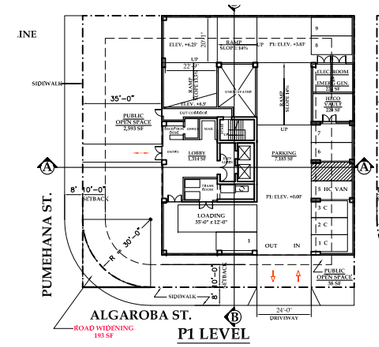
SHEET NUMBER:
A-1.2
CONCEPTUAL PLANS
OF

DATE:
January 21, 20113
REVISED: April 4, 2013

PARKING CALCULATIONS

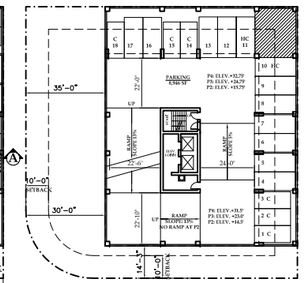
REFER TO SHT. A-2.2

SF/STALL	LEVEL	AREA (SF)	STAND. STALLS	COMP. STALLS	TOTAL STALLS	HC STALLS
499	P5	8,989	14	7	21	2
499	P4	8,989	12	6	18	2
499	P3	8,989	12	6	18	2
499	P2	8,989	12	6	18	2
803	P1	7,227	6	3	9	1
514	STALLS		56	28	84	9
	TOTAL AREA	43,183				



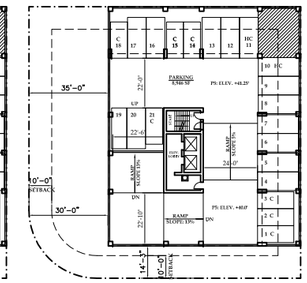
P1 LEVEL

9 STALLS (6S + 3C - INCLUDED 1 HC)
FLOOR AREA: 2,041 SF
GARAGE AREA: 7,675 SF
EFFICIENCY = 852 SF / STALL



P2, P3, P4 LEVEL

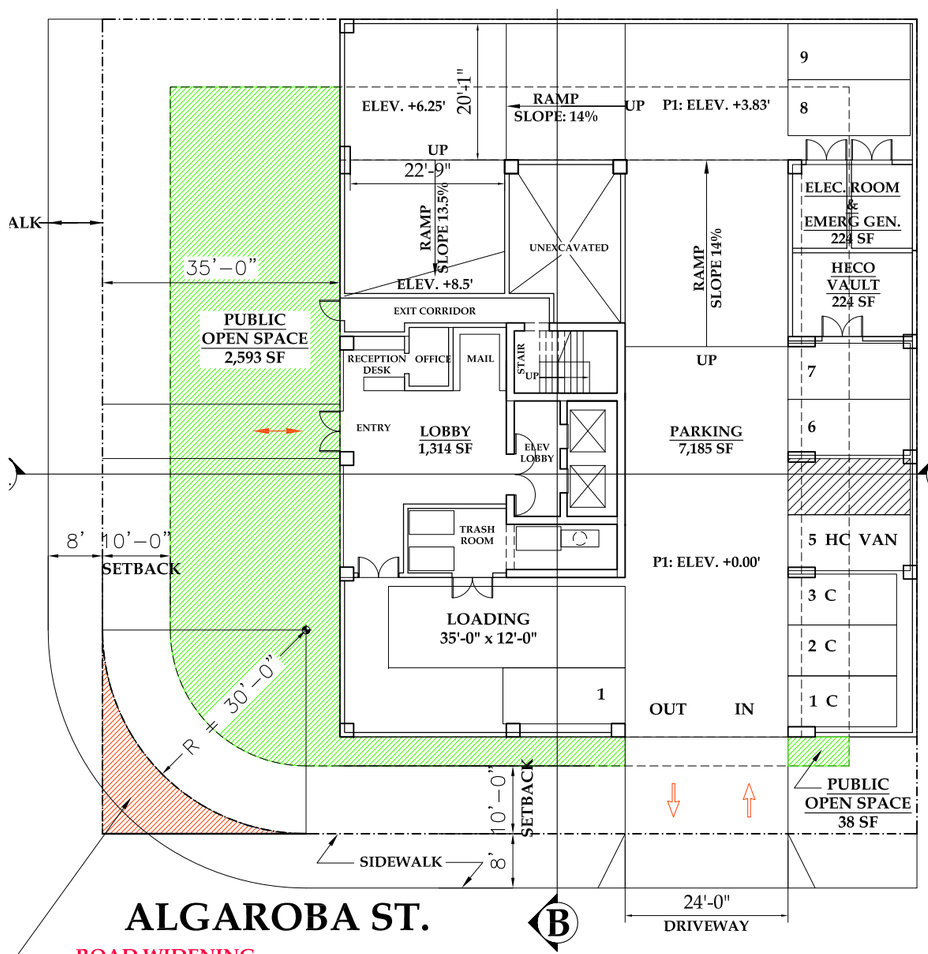
18 STALLS (12S + 6C - INCLUDED 2 HC)
GARAGE AREA = 8,989 SF
EFFICIENCY = 499 SF / STALL



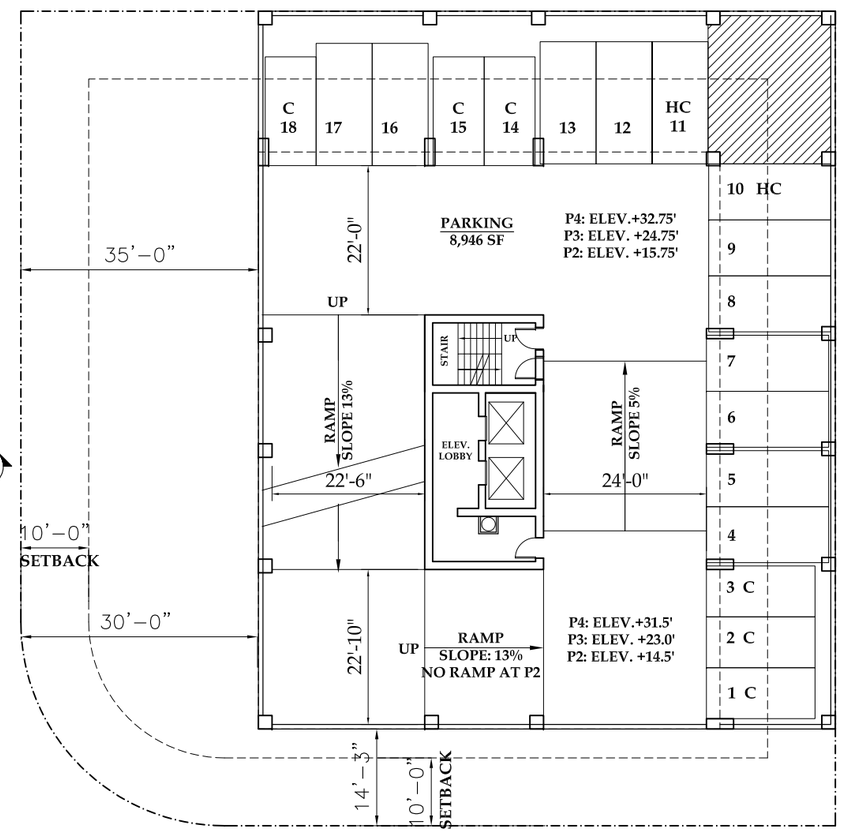
P5 LEVEL

21 STALLS (14S + 7C - INCLUDED 2 HC))
GARAGE AREA = 8,989 SF
EFFICIENCY = 436 SF / STALL

PARKING AREA DIAGRAMS



P1 LEVEL



P2, P3, P4 LEVEL

PARKING PLANS

GRAPHIC SCALE
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PROJECT:
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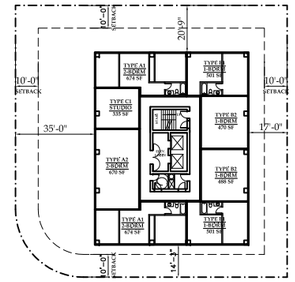
PARKING FLOOR PLANS & CALCULATIONS

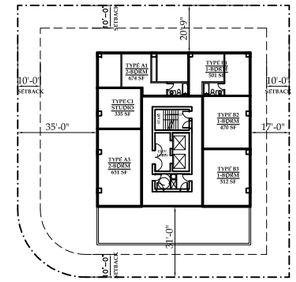
SHEET NUMBER:
A-2.1
CONCEPTUAL PLANS
OF

DATE:
January 21, 20113
REVISED: April 4, 2013



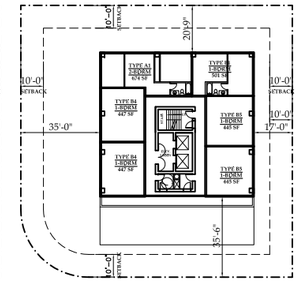
R1, R2, R3, R4 TYP. FLOOR

FLOOR AREA: 5,780 SF (x4)
CIRC. & MISC : X sf
EFFICIENCY: X%
UNITS / FLR: 8



R5, R6, R7, R8 TYP. FLOOR

FLOOR AREA: 4,641 SF (x 4)
CIRC. & MISC : XSF
EFFICIENCY: X%
UNITS / FLR: 6



R9 FLOOR

FLOOR AREA: 4,335 SF
CIRC. & MISC : X SF
EFFICIENCY: X%
UNITS / FLR: 6

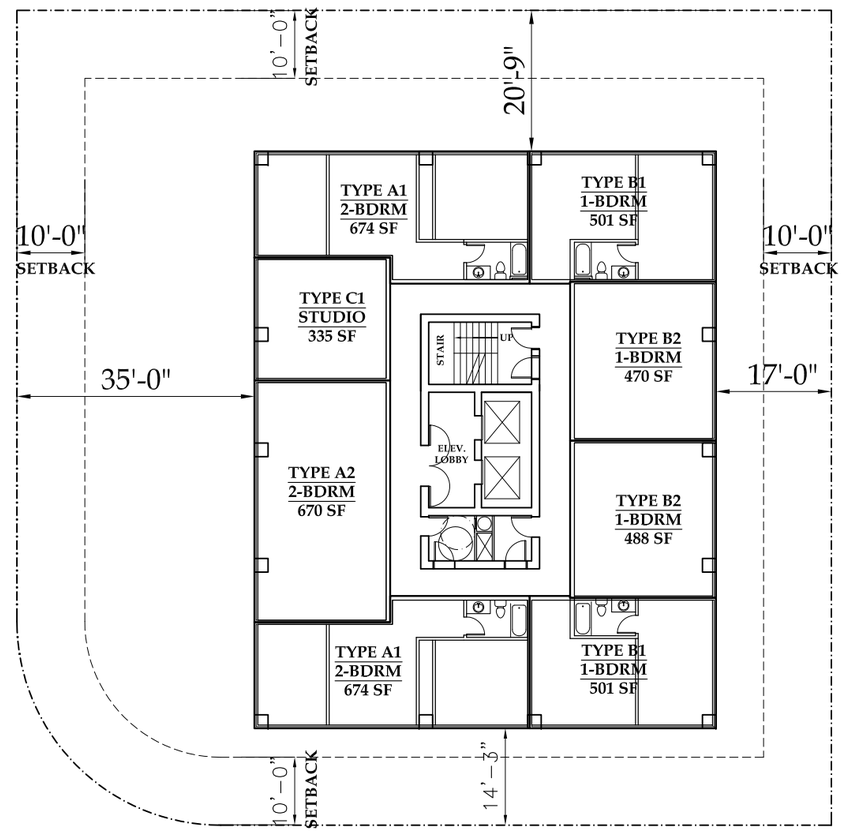
ROOF

FLOOR AREA: 712 SF

RESIDENTIAL DIAGRAMS

RESIDENTIAL SELLABLE AREA, GROSS AREA, UNITS TABULATIONS, FLOOR AREA											
										Date: March 26, 2014	
Unit Type	A1	A2	A3	B1	B2	B3	B4	B5	C1	TOTAL SELLABLE AREA (SF)	FLOOR AREA (SF)
Sellable Area (SF)	674	670	651	501	470	512	447	445	335		
Gross Area (SF)	713	712	690	528	504	551	631	479	362		
ROOF	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	800
9TH	1	0	0	1	0	0	2	2	0	6	
	674	0	0	501	0	0	894	890	0	2,959	
	713	0	0	528	0	0	1,262	958	0	3,461	4,335
8TH	1	0	1	1	1	1	0	0	1	6	
	674	0	651	501	470	512	0	0	335	3,143	
	713	0	690	528	504	551	0	0	362	3,348	4,641
7TH	1	0	1	1	1	1	0	0	1	6	
	674	0	651	501	470	512	0	0	335	3,143	
	713	0	690	528	504	551	0	0	362	3,348	4,641
6TH	1	0	1	1	1	1	0	0	1	6	
	674	0	651	501	470	512	0	0	335	3,143	
	713	0	690	528	504	551	0	0	362	3,348	4,641
5TH	1	0	1	1	1	1	0	0	1	6	
	674	0	651	501	470	512	0	0	335	3,143	
	713	0	690	528	504	551	0	0	362	3,348	4,641
4TH	2	1	0	2	2	0	0	0	1	8	
	1,348	670	0	1,002	940	0	0	0	335	4,295	
	1,426	712	0	1,056	1,008	0	0	0	362	4,564	5,780
3RD	2	1	0	2	2	0	0	0	1	8	
	1,348	670	0	1,002	940	0	0	0	335	4,295	
	1,426	712	0	1,056	1,008	0	0	0	362	4,564	5,780
2ND	2	1	0	2	2	0	0	0	1	8	
	1,348	670	0	1,002	940	0	0	0	335	4,295	
	1,426	712	0	1,056	1,008	0	0	0	362	4,564	5,780
1ST	2	1	0	2	2	0	0	0	1	8	
	1,348	670	0	1,002	940	0	0	0	335	4,295	
	1,426	712	0	1,056	1,008	0	0	0	362	4,564	5,780
R1	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	1,762
Total Units	13	4	4	13	12	4	2	2	8	62	
Sellable Area	8,762	2,680	2,604	6,513	5,640	2,048	894	890	2,680	32,711	
Gross Area	9,269	2,848	2,760	6,864	6,048	2,204	1,262	958	2,896	35,109	48,581
PARKING CALCULATIONS	A1	A2	A3	B1	B2	B3	B4	B5	C1	GUEST STALLS	
	674	670	651	501	470	512	447	445	335		
	1.5	1.5	1.5	1	1	1	1	1	1		
TOTAL STALLS	19.5	6	6	13	12	4	2	2	8	6	79

NOTE:
1. SEE DWG A-2.3 FOR BALANCE OF RESID. FLOOR PLANS
2. SEE DWG A-2.4 FOR UNIT PLANS



R1, R2, R3, R4 TYP. FLOOR

RESIDENTIAL FLOOR PLANS

GRAPHIC SCALE
0 10' 20' 30' 40'

REVISION
ISSUE: DATE:

PROJECT:
PUMEHANA DEVELOPMENT

OWNER:

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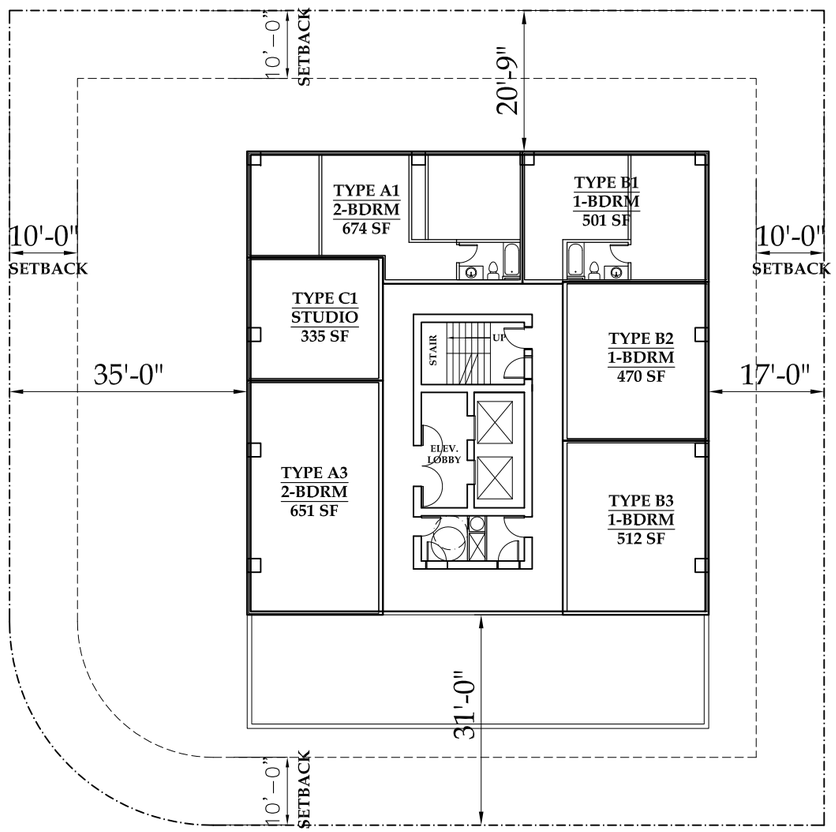
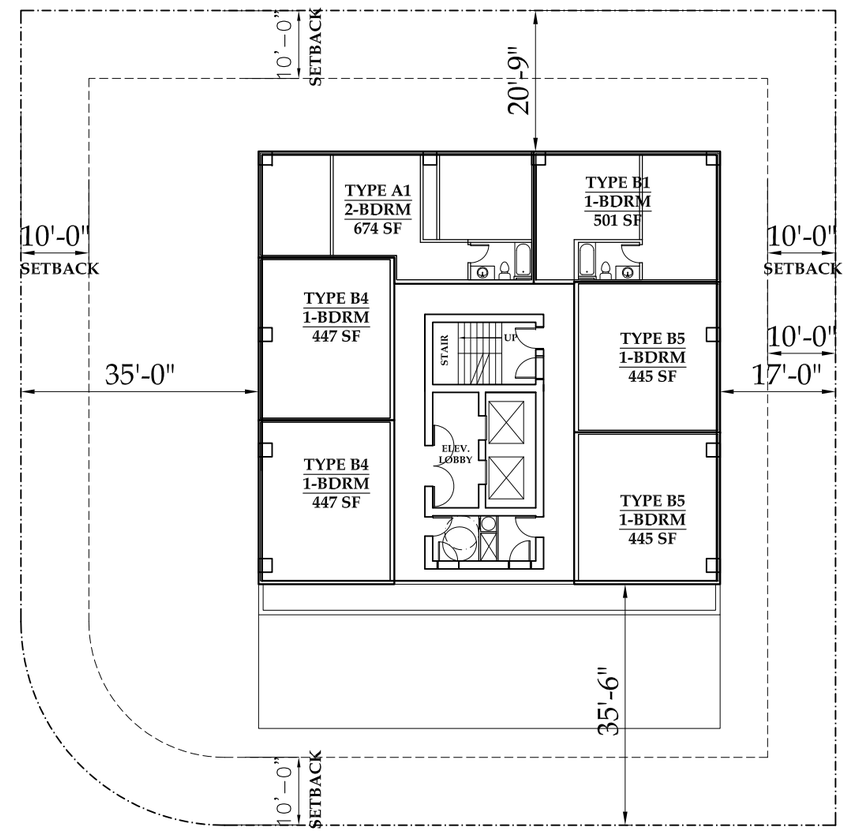
SHEET TITLE:
RESIDENTIAL FLOOR PLANS & CALCULATIONS

SHEET NUMBER:
A-2.2
CONCEPTUAL PLANS
OF

DATE:
January 21, 20113
REVISED: April 4, 2013



R5, R6, R7, R8 TYP. FLOOR



R9 FLOOR

RESIDENTIAL FLOOR PLANS

NOTE:

1. SEE DWG A-2.2 FOR BALANCE OF RESID. FLOOR PLANS
2. SEE DWG A-2.4 FOR UNIT PLANS

GRAPHIC SCALE

0 10' 20' 30' 40'

REVISION

ISSUE: DATE:

PROJECT:

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0' 10' 20' 30'

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Construction of this project will be under my supervision as defined in sect 1.2 (n). Rules and regulations, of the Board of Professional Engineers, Architects & Surveyors of the State of Hawaii.

SIGNATURE: _____

SHEET TITLE:

RESIDENTIAL FLOOR PLANS & CALCULATIONS

SHEET NUMBER:

A-2.3

CONCEPTUAL PLANS

OF

DATE:

January 21, 20113

REVISED: April 4, 2013