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February 7, 2014

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Genevieve Salmonson, Interim Director
Office of Environmental Quality Control
Department of Health, State of Hawai'i
235 S. Beretania Street, Room 702
Honolulu, Hawai'i 96813

Dear Ms. Salmonson:

With this letter, the Department of Land and Natural Resources hereby transmits the final environmental assessment and finding of no significant impact (FEA-AFONSI) for the Waimānalo Health Center - Expanded Health Care Facility for publication in the next available edition of the Environmental Notice. The proposed project involves TMKs 4-1-009: 279 and 282 in Waimānalo on the island of O'ahu.

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 Steve Lau, Land Agent at (808) 587-0447 or via email at Stephen.T.Lau@hawaii.gov.

Sincerely,

William J. Aila, Jr.
Chairperson

Enclosures: Two (2) hard copies of FEA-FONSI
One (1) hard copy of OEQC Publication Form
One (1) CD containing the FEA, OEQC Publication Form and summary
cc: Applicant

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

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Project Name: Final Environmental Assessment for the Waimānalo Health Center – Expanded Health Care Facility, Waimānalo, Hawai'i

Island: Oahu

District: Ko'olau Poko

TMK: 4-1-009: 279 and 4-1-009: 282

Permits: City and County of Honolulu Building Permits, Grubbing/Grading/Stockpiling Permits, SMA Use Permit (Major), Industrial Wastewater Discharge Permit; State of Hawai'i National Pollutant Discharge Elimination System Permit, Community Noise Permit, Non-Covered and/or Covered Source Permit (Air Quality), Lane Use Permit for Construction Work, Oversized and Overweight Vehicles on State Highways Permit

Approving Agency: Dept. of Land and Natural Resources, Land Division, 1151 Punchbowl Street, Room 220, Honolulu, HI 96813. Contact: Steve Lau, Land Agent. Telephone: (808) 587-0447. Email: Stephen.T.Lau@hawaii.gov.

Applicant: Waimānalo Health Center, 41-1347 Kalaniana'ole Highway, Waimānalo, HI 96795. Contact: Kathleen Kravish, CFO. Telephone: (808) 954-7110.

Consultant: The Limtiaco Consulting Group, 1622 Kanakanui Street, Honolulu, HI 96817. Contact: Sandy Hamura, Project Manager. Telphone: (808) 596-7790.

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):

Waimānalo Health Center (WHC) proposes to construct a new two-story outpatient health care facility and parking lot on State of Hawai'i property identified as Tax Map Key (TMK) 4-1-009: 282 adjacent to the Waimānalo Fire Station and across from Waimānalo Elementary and Intermediate School. The new facility would house select health services that are currently offered at WHC's existing campus located at 41-1347 Kalaniana'ole Highway on TMK 4-1-009: 279. WHC is applying for a 65-year direct lease for both State-owned parcels.

Existing facilities utilized by WHC are inefficiently configured and inadequately sized based on modern standards for patient care. The repair and maintenance of old facilities continues to escalate, which adversely impacts the delivery of much-needed services. The 35-year direct lease (GL-5400) for the property containing the existing WHC campus expires on August 31, 2030.

WHC was granted a management right-of-entry for the triangular parcel where new construction would occur. The parcel contains an existing unimproved parking lot and overgrown vegetation. Construction of the new health care facility would allow WHC to relocate medical, behavioral health, vision, pharmacy, nutrition, outreach and eligibility services. GL-5400 is expected to be mutually terminated upon the issuance of a new 65-year lease.

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QUALITY CONTROL

Final Environmental Assessment for the Waimānalo Health Center Expanded Care Facility, Waimānalo, Hawai‘i

Prepared for:

WAIMĀNALO HEALTH CENTER

Approving Agency:

State of Hawai‘i
Department of Land and Natural Resources, Land Division

Prepared by:

THE LIMTIACO CONSULTING GROUP
CIVIL ENGINEERING AND ENVIRONMENTAL CONSULTANTS

February 2014

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Final Environmental Assessment

for the

WAIMĀNALO HEALTH CENTER

EXPANDED HEALTH CARE FACILITY

Waimānalo, O‘ahu, Hawai‘i

This environmental document has been prepared pursuant to
Chapter 343, Hawai‘i Revised Statutes and Chapter 25 of the Revised Ordinances of Honolulu

Prepared For The Applicant:

Waimānalo Health Center
41-1347 Kalaniana‘ole Highway
Waimānalo, Hawai‘i 96795

Approving Agency:

State of Hawai‘i
Department of Land and Natural Resources, Land Division

Prepared By:

The Limtiaco Consulting Group
Civil Engineering and Environmental Consultants
1622 Kanakanui Street
Honolulu, Hawai‘i 96817

February 2014

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TABLE OF CONTENTS

page

Table of Contents i
List of Figures ii
List of Appendices ii
List of Abbreviations iii
Project Summary v

1. Introduction 1-1
2. Setting and Project Description 2-1
   2.1. Project Need and Objectives 2-1
   2.2. Project Location 2-1
   2.3. Site Description 2-2
   2.4. Technical Characteristics 2-2
   2.5. Socio-Economic Setting 2-6
   2.6. Waimānalo Area Uses, Tenants, and Structures 2-7
   2.7. Environmental Characteristics 2-7
   2.8. Project Schedule and Cost 2-8
3. Description of Existing Environment, Project Impacts, and Mitigation 3-1
   3.1. Climate and Air Quality 3-1
   3.2. Geology and Soils 3-2
   3.3. Topography 3-5
   3.4. Water Resources 3-5
   3.5. Hazardous Materials and Solid Waste 3-7
   3.6. Natural Hazards 3-8
   3.7. Floral and Faunal Resources 3-11
   3.8. Archaeological and Cultural Resources 3-12
   3.9. Visual Resources 3-13
   3.10. Noise 3-14
   3.11. Circulation and Traffic 3-15
   3.12. Utilities (Water, Wastewater, Drainage) 3-16
   3.13. Power and Communications 3-18
   3.14. Socio-Economic Characteristics 3-19
   3.15. Emergency Service Facilities and Shelters 3-19
   3.16. Recreational Resources 3-20
4. Relationship to Plans, Policies, and Controls 4-1
   4.1. State Land Use District 4-1
   4.2. Hawai‘i State Plan 4-1
   4.3. City and County of Honolulu General Plan 4-2
   4.4. Ko‘olau Poko Sustainable Communities Plan 4-3
   4.5. City and County of Honolulu Land Use Ordinance 4-4
   4.6. State Coastal Zone Management Program 4-5

TABLE OF CONTENTS (continued)

page

5. Possible Alternatives 5-1
5.1. No-Action 5-1
5.2. Delayed Action (New Facility and Parking Lot) 5-1
5.3. Parking Lot Only 5-2
5.4. New Facility and Parking Lot (the Preferred Alternative) 5-2
6. Permits and Approvals 6-1
7. ~~Anticipated~~ Determination 7-1
8. Public Agency Review and Consultation 8-1
8.1. Pre-Assessment Consultation 8-1
8.2. Draft EA ~~Consultation~~ Public Comment Period 8-3
9. References 9-1

LIST OF FIGURES

Figure 1 Location Map 2-3
Figure 2 Vicinity Map 2-9
Figure 3 Soil Conditions and Topography 3-3
Figure 4 Flood Zone Designation Map 3-9

LIST OF APPENDICES

Appendix A Letter Report by EnviroServices and Training Center, LLC
Appendix B Traffic Impact Assessment Report by SSFM International
Appendix C Notification Letter from Marine Corps Base Hawai‘i
Appendix D Pre-Assessment Consultation
Appendix E Draft EA Comments and Responses

LIST OF ABBREVIATIONS

Abbreviation	Definition
ASYA	Aquifer System Area
BWS	City and County of Honolulu Board of Water Supply
CZM	Coastal Zone Management
dBA	A-weighted Decibel
DHHL	State of Hawai‘i Department of Hawaiian Home Lands
DLNR	State of Hawai‘i Department of Land and Natural Resources
DOH	State of Hawai‘i Department of Health
DOT	State of Hawai‘i Department of Transportation
DPP	City and County of Honolulu, Department of Planning and Permitting
DTS	City and County of Honolulu, Department of Transportation Services
EA	Environmental Assessment
EAI	Erskine Architects
EALs	environmental action levels
FONSI	Finding of No Significant Impact
FQHC	Federally-Qualified Health Center
HAR	Hawai‘i Administrative Rules
HECO	Hawaiian Electric Company, Inc.
HRS	Hawai‘i Revised Statutes
HRSA	Health Resources and Services Administration
IBC	International Building Code
IWDP	Industrial Wastewater Discharge Permit
LUO	City and County of Honolulu Land Use Ordinance
MCTAB	Marine Corps Training Area Bellows
MGD	million gallons per day
NAAQS	National Ambient Air Quality Standards
NFPA	National Fire Protection Association
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System

LIST OF ABBREVIATIONS (Continued)

Abbreviation	Definition
OEQC	~~State of Hawai'i,~~ Office of Environmental Quality Control
OHA	Office of Hawaiian Affairs
OTS	Oahu Transit Services, Inc.
PAHs	Polynuclear Aromatic Hyrdocarbons
PCBs	Polychlorinated Biphenyls
PCHCH	Patient-Centered Health Care Home-style
SAAQS	State (of Hawai'i) Ambient Air Quality Standards
SHPD	State of Hawai'i Department of Land and Natural Resources, Historic Preservation Division
SMA	Special Management Area
TIAR	Traffic Impact Assessment Report
TLCG	The Limtiaco Consulting Group
TMDL	Total Maximum Daily Load
TMK	Tax Map Key
TPH-D, TPH-O	Petroleum Hydrocarbons
UIC	Underground Injection Control
WHHA	Waimānalo Hawaiian Homes Association
WHC	Waimānalo Health Center
WWTP	Wastewater Treatment Plant

PROJECT SUMMARY

Applicant:	Waimānalo Health Center, a domestic non-profit and 501(c)(3) organization Contact: Kathleen Kravish, CFO
Approving Agency:	Department of Land and Natural Resources, Land Division Contact: Mr. Steve Lau, Land Agent
Location:	Waimānalo, Oʻahu, Hawaiʻi
Tax Map Keys:	4-1-009: 279 and 282
Land Area:	1.081 acres (Parcel 279) 1.085 acres (Parcel 282)
Recorded Fee Owner:	State of Hawaiʻi
Existing Use:	Waimānalo Health Center campus (Parcel 279) Parking lot for health center employees (Parcel 282)
Proposed Use:	Waimānalo Health Center campus (Parcel 279) New health care facility and parking lot (Parcel 282)
Development Plan Area:	Koʻolau Poko
Land Use Designations:	
State Land Use	Urban
Koʻolau Poko Sustainable Community Plan	Institutional and within Low-density Residential
County Zoning	R-5 and within the Special Management Area
Action Requested:	Waimānalo Health Center proposes to construct a new two-story outpatient health care facility on State land (Parcel 282) to house select services that are currently offered at its existing campus on Parcel 279. The domestic non-profit organization is applying for a 65-year direct lease for both parcels. The 35-year direct lease for Parcel 279 (GL-5400), which expires on August 31, 2030, is expected to be mutually terminated upon the issuance of a new 65-year lease.
Agency Determination:	Finding of No Significant Impact (FONSI)

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1. INTRODUCTION

Waimānalo Health Center (WHC), which celebrated its 20th anniversary in 2012, proposes to construct a new two-story outpatient health care facility on State of Hawaiʻi property identified as Tax Map Key (TMK) 4-1-009: 282 adjacent to the Waimānalo Fire Station and across from Waimānalo Elementary and Intermediate School. The triangular parcel (hereinafter referred to as "Parcel 282") where new construction would occur comprises approximately 1.085 acres and contains an existing unimproved parking lot and overgrown vegetation. WHC employees are authorized to utilize the parking lot on Parcel 282 pursuant to the standards and conditions of the management right-of-entry (PSF 12OD-087) granted by the Board of Land and Natural Resources at its meeting on August 24, 2012.

Construction of the new health care facility and additional patient parking spaces would allow WHC to relocate and expand clinical services from existing buildings located at 41-1347 Kalanianaʻole Highway on State of Hawaiʻi property identified as TMK 4-1-009: 279 adjacent to St. George Church. The demolition of select old structures on the 1.081 acre parcel (hereinafter referred to as "Parcel 279") would occur after WHC successfully transitions medical, behavioral health, vision, pharmacy, nutrition, outreach and eligibility services to the completed facility.

In 1966, pilot projects run by the State of Hawaiʻi Department of Health (DOH) brought maternal and child health services to Waimānalo. The DOH ran the combined Maternal and Infant Care/Children and Youth Project from its Waimānalo health clinic for twenty years. The decision to terminate those DOH services in Waimānalo led to the establishment of the community-based WHC, which was incorporated in January 1989. DOH facilities were transferred to WHC and renovated, which allowed WHC to accept its first patient in January 1992. In 1994, the WHC earned its designation as a Federally-Qualified Health Center (FQHC) that functions under the supervision of the Health Resources and Services Administration (HRSA), which is part of the U.S. Department of Health and Human Services. FQHCs that are community health centers provide comprehensive primary and preventive care to persons of all ages, regardless of their health insurance status or ability to pay. WHC operates within the geographic area of Waimānalo, which has a federal designation from the HRSA as a Medically Underserved Population and Health Professional Shortage Area.

WHC operates as a domestic non-profit and 501(c)(3) organization that qualifies for direct lease pursuant to Hawaiʻi Revised Statutes (HRS) Section 171-43.1. Its current 35-year lease, GL-5400, for Parcel 279 commenced on September 1, 1995 and expires on August 31, 2030. WHC is in compliance with the terms and conditions of GL-5400 and is seeking a new 65-year direct lease as part of the undertaking for the expanded health care facility. GL-5400 would be mutually terminated in the event the new 65-year lease is granted.

The project would use State of Hawai‘i lands and, therefore, requires the preparation of an EA pursuant to Chapter 343, HRS and associated Title 11, Chapter 200, Hawai‘i Administrative Rules (HAR). This Environmental Assessment (EA) was prepared to address environmental, social, and economic consequences of the project and to provide for public participation as required and defined in the statutes.

The City and County of Honolulu, Department of Planning and Permitting (DPP) provided the following comments pertaining to the expanded health care facility project in its letter dated October 2, 2013:

- The expanded care facility is a “public use and structure” because the WHC provides general health care services to the community under agreements with the DOH to fulfill specific functions for the public good as authorized by State law;
- Public uses and structures are permitted in the R-5 Residential District;
- There are no specific parking requirements for a public use and structure;
- Parking for a public use and structure will be determined by the DPP Director;
- The project site is located within the Special Management Area (SMA), and is therefore subject to the regulations of the SMA Ordinance found in Chapter 25 of the Revised Ordinances of Honolulu;
- The proposal will require approval of a SMA Use Permit (Major); and
- The first phase of the SMA Use Permit (Major) application process is the preparation and acceptance of an EA.

This EA was prepared to concurrently address the first phase of the SMA Use Permit (Major) application process pursuant to the regulations of the SMA Ordinance found in Chapter 25 of the Revised Ordinances of Honolulu. It is anticipated that the SMA Use Permit (Major) will be obtained during the design phase of the project.

2. SETTING AND PROJECT DESCRIPTION

2.1. Project Need and Objectives

The WHC is the only medical provider in the Koʻolau Poko area that serves the uninsured. Koʻolau Poko encompasses the windward coastal and valley areas from Makapuʻu Point to Kaoio Point at the northern end of Kāneʻohe Bay and includes the rural communities of Kahaluʻu, Waiāhole-Waikane, Kualoa, and Waimānalo and the urban fringe communities of Kāneʻohe and Kailua. Physicians and practitioners at the WHC accept MedQuest or Quest Expanded Access and offer a sliding fee discount for services. Medical personnel at WHC include physicians, nurse practitioners specializing in family medicine, a pediatrician, care coordinators, a dentist, a dental hygienist, dental assistants, licensed clinical psychologists in behavioral health, registered dieticians, and outreach and eligibility workers. Access to health care and social services would be severely limited if the WHC did not exist, whereby Waimānalo residents would need to travel beyond the community for services.

Existing facilities located within Parcel 279 are inefficiently configured and inadequately sized based on modern standards for patient care. The repair and maintenance of old facilities continues to escalate, which adversely impacts the delivery of much-needed services.

Completion of the project would allow WHC to achieve the following objectives:

- House medical, behavioral health, vision, pharmacy, nutrition, outreach and eligibility services in a modern health care facility that may incorporate solar energy and sustainable design concepts;
- Implement Patient-Centered Health Care Home-style (PCHCH) concepts with properly configured and adequately sized examination rooms and support areas;
- Improve the delivery of coordinated patient care services;
- Reduce barriers and increase access to health care; and
- Continue its mission of providing health services to the medically underserved population of Waimānalo which has a high concentration of Native Hawaiian and part-Hawaiian families.

2.2. Project Location

Parcels 279 and 282 are located along Kalanianaʻole Highway in Koʻolau Poko and adjacent to military lands on the windward side of the island of Oʻahu. The existing WHC campus on Parcel 279 is located at 41-1347 Kalanianaʻole Highway across from the Waimānalo Public Library and the Waimānalo Elementary and Intermediate

School (see Figure 1). WHC has a 35-year direct lease for Parcel 279 (GL-5400, which expires on August 31, 2030) from the State of Hawaiʻi, Department of Land and Natural Resources (DLNR). On August 24, 2012, the Board of Land and Natural Resources granted WHC a right-of-entry permit (PSF 12OD-087) for Parcel 282. WHC employees currently utilize Parcel 282 for parking. St. George Church and the Waimānalo Fire Station lie between the two state-owned parcels.

2.3. Site Description

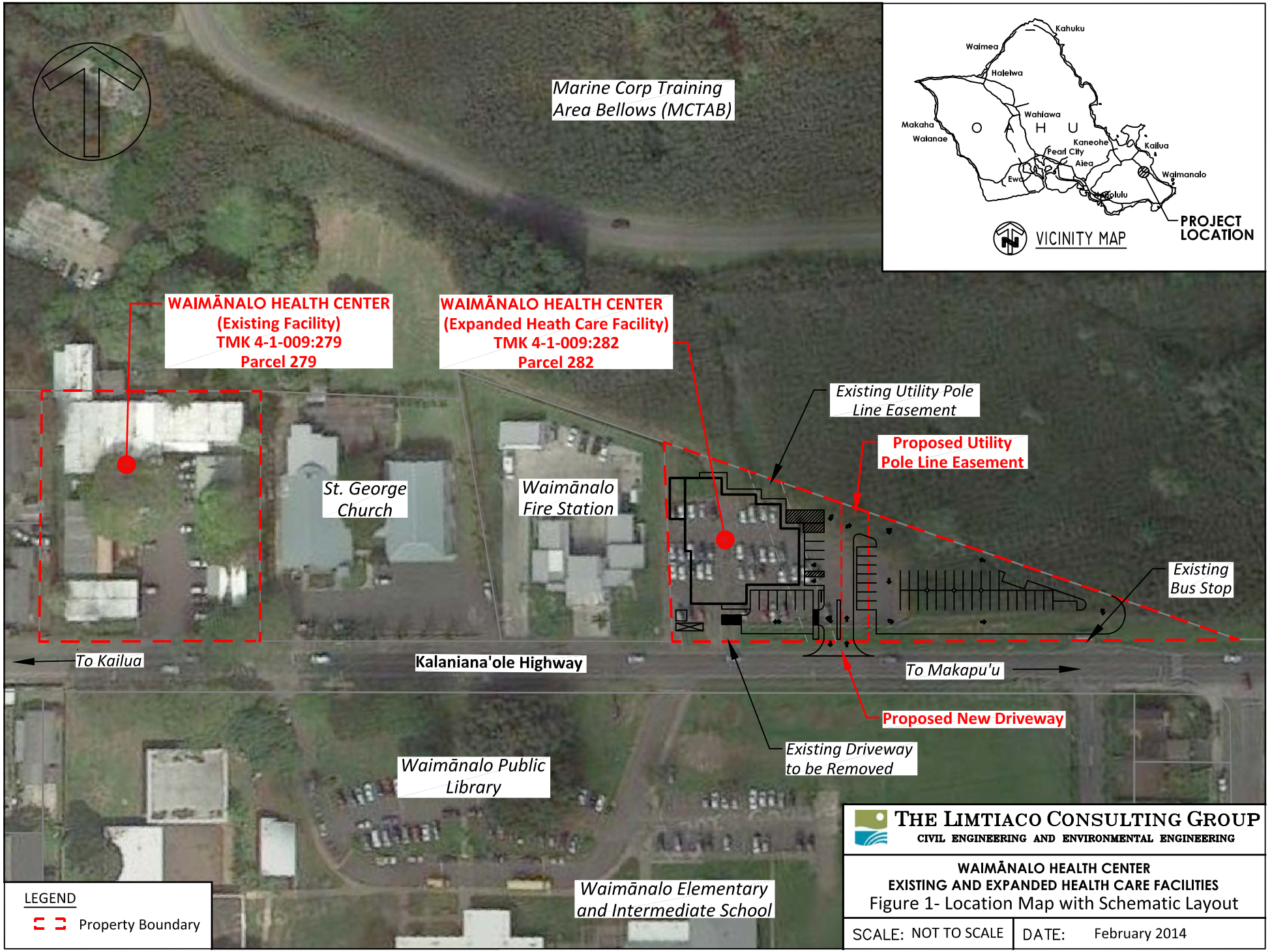
Parcel 279 is currently utilized by the WHC for the delivery of health care services to its patients. The 1.081-acre parcel is bounded by residential housing to the west, Marine Corps Training Area Bellows (MCTAB) land to the north, St. George Church to the east, and Kalanianaʻole Highway to the south. The existing WHC campus on Parcel 279 consists of old trailers and buildings arranged in a U-shaped configuration around a parking lot. Vehicular access to and egress from the WHC campus is via a driveway along Kalanianaʻole Highway.

Parcel 282 is currently utilized by the WHC as a parking lot for its employees. The triangular parcel is relatively flat, its western portion is undeveloped (mostly covered by gravel), and the eastern portion is overgrown with vegetation. Parcel 282 is bounded by the Waimānalo Fire Station to the west, MCTAB lands to the north and east, and Kalanianaʻole Highway to the south. Parcel 282 is 47,265 square feet in area. A 25-foot wide easement in favor of the Hawaiian Electric Company currently runs through the parcel. Vehicular access to and egress from the 1.085-acre parcel is via a driveway along Kalanianaʻole Highway. City and County of Honolulu zoning requirements for R-5 Residential include a 30-foot front yard setback, 15-foot side/rear yard setback requirements, and a 25-foot building height limit.

2.4. Technical Characteristics

The proposed two-story outpatient medical clinic facility will be designed to conform to the International Building Code (IBC), the applicable sections of the National Fire Protection Association (NFPA), the 2010 ADA Standards for Accessible Design, the Facilities Guidelines Institute and other similar codes, as well as amendments by the City and County of Honolulu. The building will be configured to include the following considerations and design elements:

- The proposed medical facility will house reception, pharmacy, medical clinic (consisting of family medicine, women's health, pediatrics and behavioral health), vision services, dietary services and support spaces.
- The two-story building will be approximately 19,600 square feet in total area. The floor area will be more or less equally divided between both floor levels. The building lot coverage will be approximately 9,800 square feet or 20 percent of the lot.



THE LIMTIACO CONSULTING GROUP
CIVIL ENGINEERING AND ENVIRONMENTAL ENGINEERING

WAIMĀNALO HEALTH CENTER
EXISTING AND EXPANDED HEALTH CARE FACILITIES
Figure 1- Location Map with Schematic Layout

SCALE: NOT TO SCALE | DATE: February 2014

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- In order for the building to fit within the designated yard setbacks and building height limit/envelope as required by the R-5 district, a combination of gently sloping hipped and flat roofs will be utilized.
- The building will be air conditioned throughout by a variable refrigerant flow split system. The building will also be protected throughout by an approved automatic fire sprinkler system.
- The new facility will include a backup generator for emergency power.
- Sustainable building design concepts will be utilized in the design and construction of the building.
- Most interior common spaces will be day lighted via indirect means. Spaces that border the perimeter of the building will be day lit by windows. Interior common areas removed from exterior windows will be day lit via a combination of skylights, light wells and/or sola-tubes.
- A total of approximately 49 ground level parking stalls, including two (2) accessible stalls for the physically disabled, will be provided. Two (2) additional loading stalls will also be provided.
- The portion of the lot that fronts Kalaniana‘ole Highway will be landscaped. Parking areas throughout the property will also be landscaped. Trees will be provided as required by the City and County of Honolulu Land Use Ordinance. Landscaping will consist of plants that grow naturally and are appropriate to the climate of Waimānalo. Landscaping will also include a small garden area that will be utilized by the dietary services program. Other plants specified in the overall landscaping may also be used for either medicinal or nutritional purposes by the WHC.

The building will meet IBC Type V-A construction with 1 hour rated exterior walls. The main structural components of the building will mostly be comprised of wood and/or metal stud or steel framing materials. The foundation system will consist of reinforced concrete. Building exteriors will include mostly wood and/or cementitious based materials that are consistent with residential and low impact commercial type construction. Exterior walls and roof assemblies will be insulated. Insulation will also be placed within interior partitions and between floors. Interior partitions will be either wood or metal stud framed and covered in drywall. Common areas (i.e. reception area, waiting areas, hallways, etc.) will include mostly resilient flooring materials. Clinical areas will include a combination of resilient and carpeted floors. Restrooms will include ceramic tile or other hard flooring surfaces. Most ceilings will consist of suspended acoustical panels and/or drywall systems. Lighting will primarily consist of 2x2, 2x4 and/or recessed fluorescent lighting fixtures. Exterior windows will be aluminum or fiberglass framed. Doors will mostly include metal framed solid wood

core (interior) and metal framed with hollow metal insulated door leafs at the exterior.

2.5. Socio-Economic Setting

Information pertaining to the socio-economic setting is hereby excerpted from the *Koʻolau Poko Watershed Management Plan* (Townscape, Inc., 2012), which examined the watershed planning district on windward Oʻahu from Kualoa in the north to Makapuʻu Point in the south. Summarized information that pertains to Waimānalo is from this plan unless otherwise indicated.

The earliest Hawaiians who settled on the windward coast of Oʻahu developed a food production system that utilized naturally occurring fresh water resources in the Koʻolau Poko area. The abundance of food contributed to the region's importance as one of the major population centers where several ruling chiefs (including Olopana, Kahekili, and Kamehameha the Great) resided during the pre-contact era of Hawaiʻi. Widespread epidemics and outbreaks that affected all of Hawaiʻi caused severe population declines in Koʻolau Poko during the 1800s. It is estimated that the population decreased by over 90 percent from 20,000 to 25,000 inhabitants in the late 18th century to slightly over 2,000 inhabitants in 1872.

The concepts of private land ownership led to vast changes in settlement patterns in Hawaiʻi. Large tracts of land in the Koʻolau Poko area were sold or leased for monocrop agricultural ventures (e.g., sugar, rice and pineapple) and livestock and ranching activities. The population of Koʻolau Poko began to grow again as immigrant laborers settled in the district. Waimānalo Sugar Plantation was one of nine sugar plantations in Koʻolau Poko. It operated for 70 years from 1878 to 1947 and encompassed roughly 3,000 acres of land extending six miles along the Waimānalo coast and four miles inland to the base of the Koʻolau Mountain Range. The plantation was founded in 1877 by John A. Cummins. In 1885, the plantation passed to W.G. Irwin who was instrumental in the construction of the ditch irrigation system that diverted water from streams and springs to plantation lands. The destructive effects of cattle and ranching activities on vegetation and forested areas in Koʻolau Poko eventually led to the establishment of forest reserve areas by the Territorial Government of Hawaiʻi. Waimānalo Forest Reserve includes 7,395 acres in the mauka portions of Waimānalo, Kailua and southern Kāneʻohe.

Residential population growth in Waimānalo followed the construction of the Kailua to Waimānalo Road in 1924. The first Hawaiian Homes development in Waimānalo began in 1925 and was followed by the Waimānalo beach lot homes in 1926.

The military, which had established Waimānalo Military Reservation in 1917, completed its facility in 1938 and later changed its name to Bellows Air Force Station to commemorate Second Lieutenant Franklin B. Bellows, who died in combat during

World War I. In 1999, the U.S. Marine Corps acquired 1,049 acres of land for a training area from the Air Force whereby MCTAB now falls under the jurisdiction of Marine Corps Base Hawaiʻi (State of Hawaiʻi, Department of Transportation, Airports Division, n.d.).

Waimānalo has mostly retained its rural character as compared to other urbanized areas of Koʻolau Poko, which experienced tremendous housing and population growth from the 1950s through the 1980s. Development in Waimānalo has occurred at a slower pace in part because much of the Waimānalo Sugar Plantation lands were passed to the Territorial and then the State government.

2.6. Waimānalo Area Uses, Tenants, and Structures

Waimānalo town is generally characterized as a rural residential community with small commercial businesses, recreational areas and agricultural uses. The area closest to Parcels 279 and 282 contains residential neighborhoods, commercial businesses, St. George Catholic Church, and public facilities including the Waimānalo Fire Station (Company 27), Waimānalo Public Library, Waimānalo Elementary and Intermediate School, and Waimānalo District Park (see Figure 2). MCTAB lands located *makai* or seaward of Parcels 279 and 282 are primarily utilized for recreation and for military training. Areas beyond Parcel 282 towards Makapuʻu comprise residential neighborhoods, agricultural lots used for plant nurseries, and recreational areas. Other nearby recreational uses that contribute to the rural character of the Waimānalo area include Bellows Field Beach Park (which is part of MCTAB), Waimānalo Bay Beach Park (which was formerly known as Waimānalo State Recreation Area), and a polo field with related facilities located on State land along Kalanianaʻole Highway.

2.7. Environmental Characteristics

The proposed project includes the following considerations:

- Determinations from the traffic impact analysis would be used to guide modifications to traffic and circulation patterns in the vicinity of Parcel 282 from improved access and egress for the expanded health care facility.
- The creation of additional patient parking on Parcel 282 would necessitate the removal of existing vegetation; however, the project includes landscaping with trees and other plants that are appropriate to the climate of Waimānalo.
- The expanded health care facility consisting of a new two-story structure on Parcel 282 would add a visual element along Kalanianaʻole Highway. The new facility will not exceed the 25-foot building height limitations.
- An electrical easement encumbered under GL-5366 to Hawaiian Electric Company, Inc. that expires on December 31, 2061 would be relocated

within Parcel 282. It is anticipated that WHC would be responsible for the total cost of relocating the electrical easement within Parcel 282.

- The expanded health care facility would require new connections and/or extensions for basic infrastructure services and systems (i.e., water, wastewater, power and communications).
- Construction-related activities affecting Parcel 282 and demolition of old structures on Parcel 279 would generate short-term effects such as erosion, surface runoff, fugitive dust, noise, intermittent traffic, solid waste, and potential disruptions to utility services that would cease upon project completion.

2.8. Project Schedule and Cost

The design phase of the proposed project is projected to continue through July 2014. Completion of the environmental review process in March 2014 may allow construction of the new facility to commence in January 2015 with project completion in 2017. The estimated total project cost is $13 million.

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WAIMĀNALO HEALTH CENTER
EXISTING AND EXPANDED HEALTH CARE FACILITIES
Figure 2 - Vicinity Map

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

3.1. Climate and Air Quality

Parcels 279 and 282 are located on the windward portion of Oʻahu, which is characterized by mild temperatures and abundant rainfall, especially during the wetter months of November through February. Between 1969 and 2013, the recorded monthly average temperatures in Waimānalo ranged from 64 degrees to 85 degrees Fahrenheit and the average rainfall was 43 inches per year (Western Regional Climate Center, n.d.). Trade winds in the project vicinity are generally from the northeast. Strong winds are known to occur in connection with storm systems that disrupt climatic patterns.

Air quality in the State of Hawaiʻi consistently meets National Ambient Air Quality Standards (NAAQS) established by the U.S. Environmental Protection Agency per requirements of the Clean Air Act and State Ambient Air Quality Standards (SAAQS) established by the DOH. The State standards for select parameters are more stringent than their Federal counterparts. The NAAQS and SAAQS are periodically exceeded due to volcanic activity and exceptional events such as New Year's fireworks celebrations.

The ambient air quality at Parcels 279 and 282 may be affected by activities near the project site, such as automobile traffic along Kalanianaʻole Highway. The project site is located in a rural area that is positively influenced by northeast trade winds that disperse emissions and other air quality pollutants.

Impacts and Mitigation Measures

The demolition of older buildings on Parcel 279 and the construction of the expanded health care facility on Parcel 282 will have no effect on climatic conditions such that no mitigation measures are necessary.

The proposed project is expected to generate short-term construction-related impacts on air quality such as fugitive dust and emissions from construction vehicles and equipment. The contractor will be responsible for complying with HAR Title 11, Chapter 60, "Air Pollution Control." The contractor will be responsible for the implementation of adequate dust control measures during all phases of development and construction activities.

Construction equipment and vehicles shall be properly maintained in order to control vehicular emissions. Exhaust emissions from construction equipment and vehicles are anticipated to have negligible impacts on air quality in the project vicinity since the carbon monoxide and nitrogen oxide emissions would be intermittent and readily dissipated.

Overall, air quality impacts during construction will be temporary in nature and will cease upon completion of the construction. No significant adverse air quality is anticipated upon completion and during operation of the proposed project.

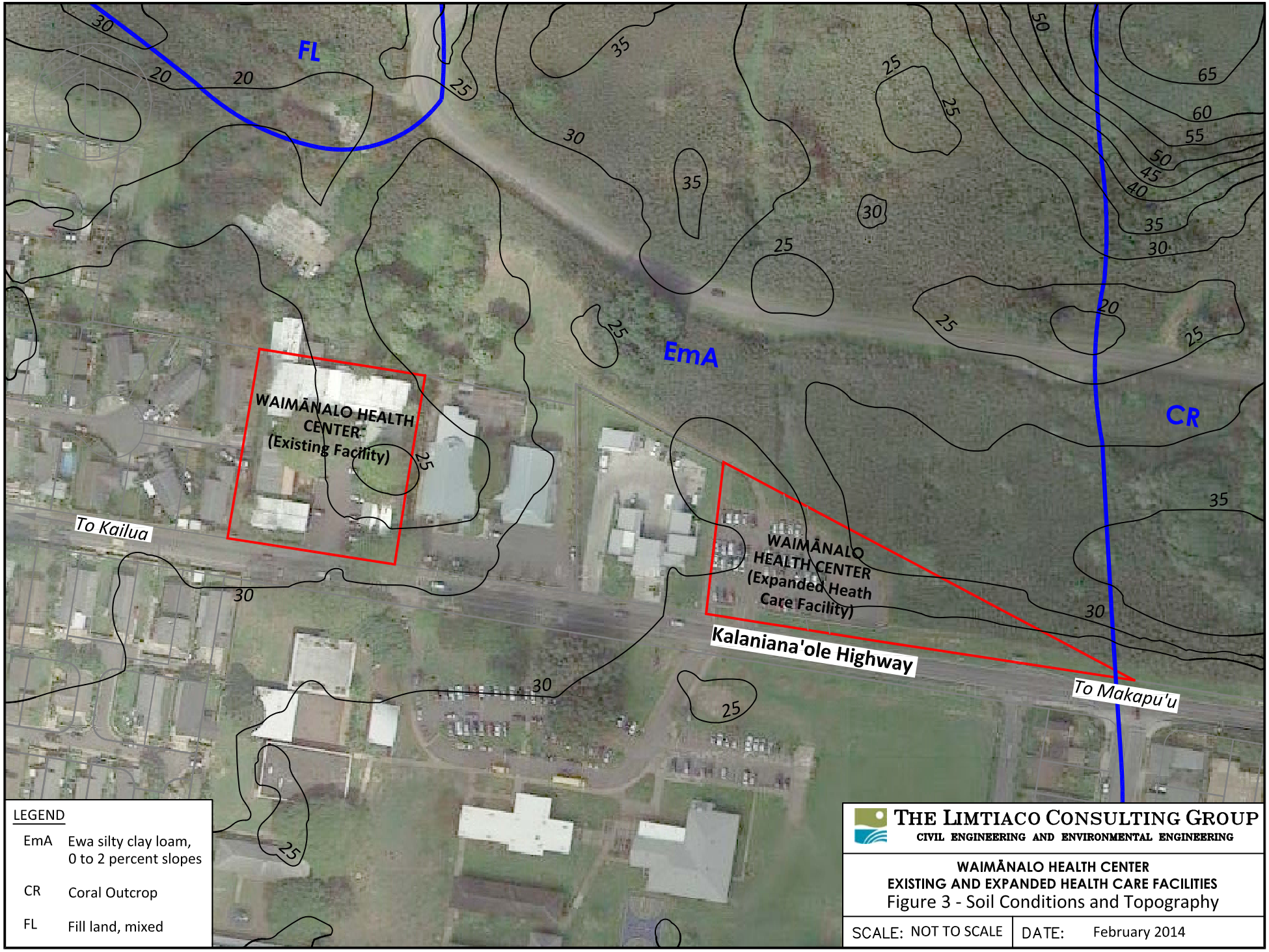
3.2. Geology and Soils

Information pertaining to the general geology of the Waimānalo area is hereby excerpted from the geology discussion in the *Final Supplemental Environmental Impact Statement for the Waimanalo Wastewater Facilities Plan, Koolaupoko, Oahu, Hawaii* (Hawaii Pacific Engineers, Inc., 1998). Basaltic bedrock, alluvium, and coralline deposits are the three main geological units found in the Waimānalo area. Coastal plain sediments in the vicinity of Parcels 279 and 282 include an uppermost layer of sand and coral limestone that may extend to depths of approximately 20 to 30 feet below the surface. The near-surface sand layer is generally very permeable and capable of transmitting large amounts of water. An impermeable subsurface layer of clay and alluvium lies beneath the sand stratum and may extend to depths varying between 35 feet and 100 feet. The alluvium and impermeable sediments are underlain by over 200 feet of calcareous sediments (e.g., sand, coral and limestone) that form a permeable zone for the unconfined aquifer stratum. Another layer of alluvium and impermeable sediments lies below the unconfined aquifer stratum and serves as a basal confining layer to the caprock aquifer.

According to the *Soil Survey of the Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii* (U.S. Department of Agriculture, Soil Conservation Service, 1972) and available soil surveys (U.S. Department of Agriculture, Natural Resources Conservation Service, n.d.), the predominant soil type in the vicinity of Parcels 279 and 282 is classified as Ewa silty clay loam, moderately shallow, 0 to 2 percent slopes (EmA). The EmA soil type has moderate permeability and very slow runoff with a slight erosion hazard. The easternmost tip of Parcel 282 is classified as Coral outcrop (CR), which consists of coral or cemented calcareous sand. The soil conditions are shown in Figure 3.

Impacts and Mitigation Measures

No adverse effects on the underlying geology and soils are anticipated from project actions associated with demolition on Parcel 279 and construction on Parcel 282. Geotechnical investigations will be performed at specific locations targeted for structural improvements (e.g., the building pad) in support of the design phase for the expanded two-story health care facility on Parcel 282. The findings will be utilized to ensure proper structural design of the new building and parking lot with respect to subsurface conditions within the footprint of new construction.


FL
EmA
CR
WAIMĀNALO HEALTH CENTER (Existing Facility)
WAIMĀNALO HEALTH CENTER (Expanded Heath Care Facility)
Kalaniana'ole Highway
To Kailua
To Makapu'u
30
20
25
35
50
65
60
55
45
40
LEGEND
EmA Ewa silty clay loam, 0 to 2 percent slopes
CR Coral Outcrop
FL Fill land, mixed
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EXISTING AND EXPANDED HEALTH CARE FACILITIES
Figure 3 - Soil Conditions and Topography
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DATE: February 2014

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3.3. Topography

Parcels 279 and 282 contain relatively flat and level terrain (refer to Figure 3). Five existing one-story structures that house existing WHC functions lie within the boundaries of Parcel 279. Elevations for Parcel 279 range from 29 feet to 32 feet above sea level. The western portion of Parcel 282 consists of an unpaved area with no topographical obstructions that is utilized for parking. The eastern portion of Parcel 282 is undeveloped and overgrown with vegetation. Elevations for Parcel 282 range from 24 feet to 28 feet above sea level.

Impacts and Mitigation Measures

Project actions are anticipated to retain the overall topographic profile of affected areas. The demolition of older buildings on Parcel 279 would return more of the site to flat open space. Areas that will be affected by construction and demolition will be finished and paved to match existing grades to the maximum extent possible.

The western portion of Parcel 282 contains no topographical features that would obstruct site preparation activities associated with the building pad for a new two-story health care facility. Minor topographical alterations to the site would occur from construction activities such as grading. The eastern portion of Parcel 282 would be cleared of vegetation and improved for parking. The final grading design for Parcel 282 will be based on geotechnical survey results that assess soil data and provide recommendations for grading and maximum slopes.

3.4. Water Resources

The project area is within the Waimānalo Aquifer System Area (ASYA) that is part of the Windward Aquifer Sector Area. The City and County of Honolulu Board of Water Supply (BWS) has issued Water Use Permits for ground water withdrawals totaling 1.956 million gallons per day (MGD) from the Waimānalo ASYA, which is well below the 10 MGD *sustainable yield* for this aquifer system (Townscape, Inc., 2012). *Sustainable yield* refers to “the quantity of water that can be extracted from an aquifer indefinitely without diminishing the quantity or quality of the water withdrawn” (State of Hawai‘i, Department of Land and Natural Resources, Commission on Water Resource Management, 2008).

The Underground Injection Control (UIC) line as determined by the DOH Safe Drinking Water Branch demarcates the boundary between non-drinking water aquifers and underground sources of drinking water. Parcels 279 and 282 are *makai* of the UIC line, which indicates that the underlying groundwater is not considered a potential source of drinking water.

The Waimānalo Stream and its tributary, Kahawai Stream, are perennial freshwater resources in the project area. Sediments, nutrients, chemicals and debris enter the stream course as it flows from conservation lands at the base of the Koʻolau Mountain Range through agricultural lots to residential areas and military property before entering Waimānalo Bay (Townscape, Inc., 2012). There are no freshwater streams, rivers, ponds or other open water bodies located within or immediately adjacent to Parcels 279 and 282. Kalanianaʻole Highway crosses over Kahawai Stream approximately 0.4 miles west of Parcel 279. The intermittent portion of Inoaole Stream flows under Kalanianaʻole Highway via the concrete bridge structure located approximately 0.2 miles east of Parcel 282 in the vicinity of Hale Aupuni Village. "Inoaole Stream is not a natural stream, but rather a drainage that was constructed as a result of sugarcane cultivation in the area" (Group 70 International, 2011). Waimānalo Bay is no less than 0.6 miles *makai* or seaward of Parcels 279 and 282.

There are no wetlands (or marshes, swamps, bogs, etc.) located within or immediately adjacent to Parcels 279 and 282. There are designated wetlands at least 0.2 miles east of Parcel 282 along Inoaole Stream (U.S. Fish and Widlife Service, 2013).

Impacts and Mitigation Measures

The new health care facility on Parcel 282 does not involve the development of new potable water sources. Parcel 282 is located within an area served by existing municipal systems for potable water and wastewater disposal (refer to the discussion in Section 3.12 Utilities). The long-term use of Parcels 279 and 282 is not anticipated to result in contamination of the underlying aquifer and groundwater sources in the Waimānalo ASYA.

No significant increase in water consumption is anticipated since project actions would primarily relocate personnel who are already drawing from the same water source. Staffing projections for the WHC suggest that providing primary and preventive health services to the community could result in the need for approximately fourteen (14) additional employees in the future.

Project actions are not anticipated to have any impact on surface water resources since Parcels 279 and 282 are devoid of such resources. A short-term and temporary impact of the project would occur from ~~dewatering activities and~~ the generation of additional surface runoff during construction and demolition work, especially if heavy rains coincide with ground disturbance such as excavation or trenching. Erosion control Best Management Practices will be used to mitigate stormwater runoff from entering the State waters.

A National Pollutant Discharge Elimination System (NPDES) Permit for discharges of ~~pollutants, including~~ storm water runoff associated with ~~(e.g.,~~ construction activity ~~dewatering effluent)~~ will be required pursuant to HAR Title 11, Chapter 55, "Water Pollution Control~~.~~" effective December 6, 2013. A Storm Water Pollution Prevention Plan must be submitted to the DOH Clean Water Branch in advance of a Notice of Intent (NOI) to be covered by the NPDES General Permit. The applicant is responsible for submitting the NOI at least 30 days before the commencement of construction activities. ~~The NPDES General Permit coverage for discharges to State waters (HAR §11-55, Appendices B through L) expired at midnight on October 21, 2012 and DOH is currently going through the rule change process to re-adopt these NPDES General Permits. Activities and discharges that require NPDES permit coverage during the rule change process are required to apply for the NPDES Individual Permit, which must be submitted at least 180 calendar days before the commencement of the discharge. Consultation with DOH will occur prior to the submittal of the appropriate NPDES Permit application (i.e., General or Individual).~~

The long-term impact of the new facility and parking lot on Parcel 282 is the creation of more impermeable surface area. Completion of the new two-story facility and parking lot will likely improve surface runoff conditions due to the installation of proper drainage features and swales.

3.5. Hazardous Materials and Solid Waste

The terms and conditions of GL-5400, which are applicable to Parcel 279, restrict WHC from allowing the escape, disposal or release of any hazardous materials except as permitted by law. WHC may not store or use such materials in an unlawful manner and must seek consent from DLNR prior to bringing hazardous materials onto the premises. The right-of-entry permit PSF No. 12OD-087 for Parcel 282 includes the same terms and conditions with respect to hazardous materials.

The surface soils on Parcel 282 were sampled and analyzed for the following potential contaminants in accordance with DOH environmental action levels (EALs): Petroleum Hydrocarbons (TPH-D and TPH-O), Polynuclear Aromatic Hyrdocarbons (PAHs), Polychlorinated Biphenyls (PCBs), Organochlorine Pesticides and Total Metals (refer to Appendix A). "With the exception of TPH-O, analytical data indicated that TPH-D, PAHs, PCBs, pesticides, and total metals in the existing surface soils were either not detected above method detection limits and/or below their corresponding DOH EALs" (EnviroServices and Training Center, LLC, 2013). The findings of the initial screening report indicate that Parcel 282 has not been significantly impacted by the identified contaminants except for TPH-O. Gross contamination concerns are described as nuisance concerns (e.g., odors, aesthetics, etc.). The detected levels of TPH-O are not considered to be significant

concerns for Parcel 282 and did not exceed DOH EALs that pertain to the current parking lot use.

Solid waste generated by WHC is currently collected twice a week by Honolulu Disposal Service.

Impacts and Mitigation Measures

The concentrations of TPH-O in the soils at Parcel 282 are not anticipated to be a significant concern. Additional management practices may be implemented as warranted in response to development and construction activities. WHC is expected to coordinate proposed activities including the demolition of select facilities on Parcel 279 and construction of the new facility on Parcel 282 with DLNR to ensure that hazardous materials do not jeopardize public health and environmental safety. WHC is expected to abide by the terms and conditions of its lease and right-of-entry permit.

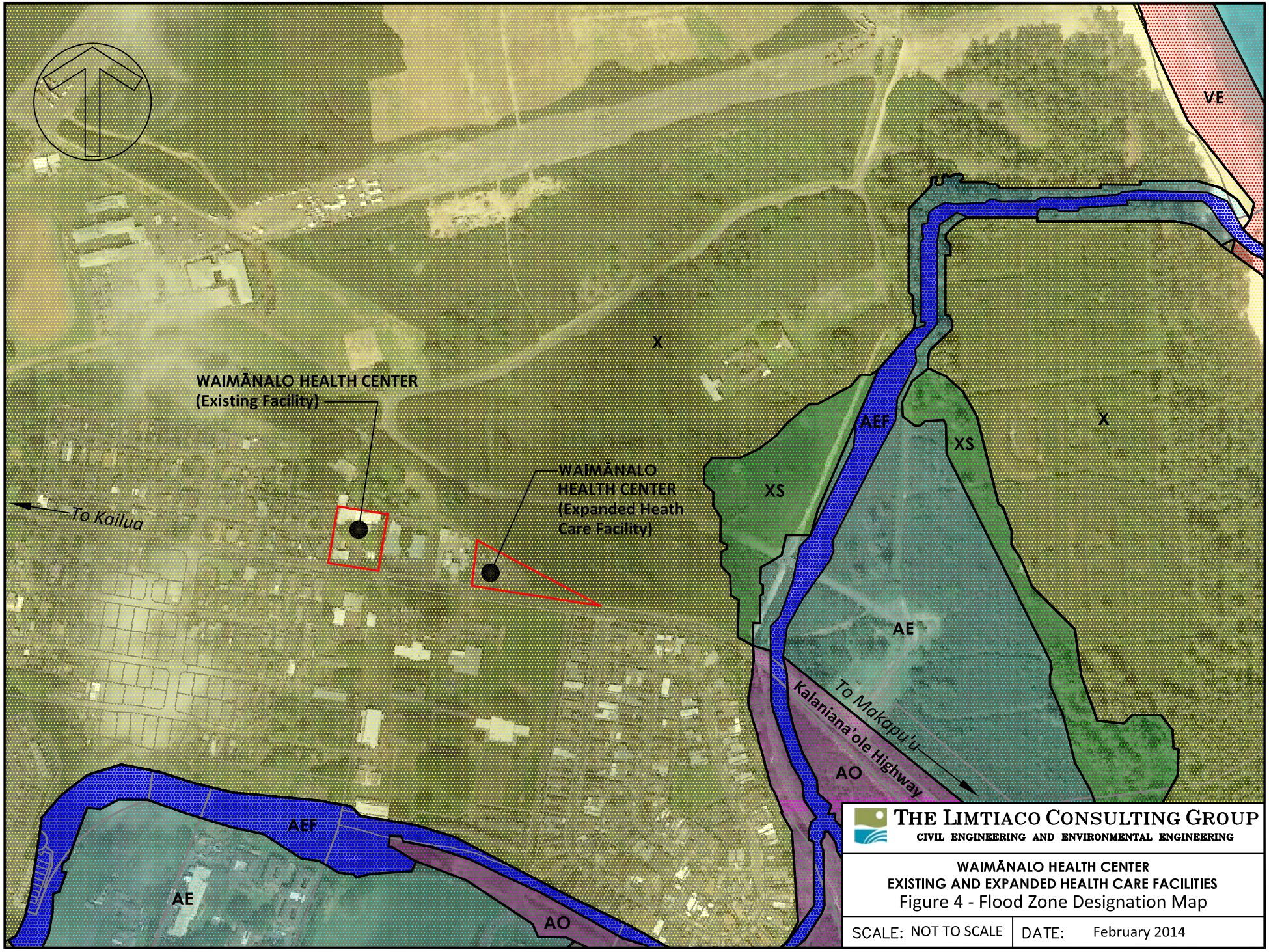
Demolition and construction activities are expected to temporarily increase the volume of solid waste including construction debris that is generated by WHC; however, the long-term activities on Parcel 279 and 282 may generate a small increase in solid waste over current levels. Domestic solid waste would continue to be collected by a private contractor and no adverse impacts are anticipated.

3.6. Natural Hazards

Natural hazards that pose potential island wide effects are floods, tsunami inundation, tropical cyclones and earthquakes. In general, the exposure to natural hazards from unpredictable events is no greater at Parcels 279 and 282 than other locations on Oʻahu. Rockfalls and wildfires on Oʻahu that have caused loss of life or damage to property were localized hazards. Many wildfires are caused by human actions of an intentional nature or as a result of negligence.

Parcels 279 and 282 fall within Zone X according to the Flood Insurance Rate Map Panel No. 15003C 0380G for Hawaiʻi (effective date January 19, 2011) prepared by the Federal Emergency Management Agency. The Zone X designation refers to inundation areas of low-to-moderate risk that are outside the 0.2 percent annual chance (or 500-year) floods. Flood zone designations are shown in Figure 4.

Tsunami evacuation zone maps for the State of Hawaiʻi identify low lying areas where excavation is recommended since extensive damage to life and property may occur from seismic sea waves. The City and County of Honolulu Department of Emergency Management updated the tsunami evacuation zone maps in 2010 by taking tsunami inundation data and incorporating a public safety buffer that provides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WAIMĀNALO HEALTH CENTER
(Existing Facility)
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HEALTH CENTER
(Expanded Heath
Care Facility)
To Kailua
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X
AE
To Makapu'u
Kalaniana'ole Highway
AO
AEF
AE
AO
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Figure 4 - Flood Zone Designation Map
SCALE: NOT TO SCALE
DATE: February 2014

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better zone recognition. Parcels 279 and 282 are outside the tsunami evacuation zone (Hawai‘i State Civil Defense, n.d.).

Many tropical cyclones have passed close enough to affect the State of Hawai‘i since the recording of such events began in the 1950s. Hurricane Iwa in 1982 and Hurricane Iniki in 1992 both brought destructive winds and torrential rains that resulted in significant property damage. Hurricane Iniki was connected to six deaths.

The most recent earthquakes to have statewide impacts occurred on October 15, 2006. The earthquakes, which occurred off the Kona coast of Hawai‘i, had magnitudes of 6.7 and 6.0. The event caused property damage and triggered an island-wide electrical blackout on O‘ahu.

There are no apparent rockfall hazards in the vicinity of Parcels 279 and 282, which consist of relatively flat terrain that is far from steep cliffs and slopes. Threats from wildfires are unlikely but possible since there is abundant vegetation along the northern boundary of Parcel 279 and along the northern and eastern boundaries of Parcel 282. Drought conditions and high winds could exacerbate the fire hazard.

Impacts and Mitigation Measures

The proposed project would not significantly increase the risks to human health or property. The threats to humans and property from unpredictable natural events such as floods, tsunami inundation, tropical cyclones and earthquakes will always be present. The likelihood of a fire originating in the overgrown vegetation on Parcel 282 would be reduced since the area would be cleared for the parking lot. WHC is expected to have an evacuation plan that addresses the safety of staff and visitors in the event of man-made and natural disasters. Parcels 279 and 282 are near Waimānalo Fire Station and within walking distance of Waimānalo Elementary and Intermediate School, which is a designated hurricane evacuation shelter that can accommodate persons with special health needs and caged household pets.

3.7. Floral and Faunal Resources

The following excerpt is from the *Final Watershed Plan and Environmental Impact Statement for the Waimanalo Watershed, City and County of Honolulu, Hawaii* (U.S. Department of Agriculture Soil Conservation Service, 1981). “An interagency survey determined that the fish and wildlife habitat in the area is not unique, and the species observed, other than endangered birds, are common introduced species. There is no critical habitat for the endangered species within the watershed.”

Parcels 279 and 282 are within a larger geographic area that has experienced a long history of significant land-disturbing activities including large-scale agriculture,

livestock and ranching activities that altered the natural environment. The U.S. Fish and Wildlife Service in its letter dated September 25, 2013 indicated that it reviewed pertinent information in its files (including data compiled by the Hawaiʻi Biodiversity and Mapping Program) and concluded that no federally designated or proposed critical habitat occurs within the proposed project footprint.

Impacts and Mitigation Measures

No species listed by the U.S. Fish and Wildlife Service or in the Endangered Species Act are expected to be affected by demolition activities on Parcel 279 and construction of the new health care facility on Parcel 282. Project actions include the necessary removal of overgrown vegetation consisting of introduced, non-native floral species on Parcel 282 that currently provides the visual effect of green space. The proposed project includes new landscaping with trees and native plants that are adapted to the local environment.

3.8. Archaeological and Cultural Resources

Parcels 279 and 282 are not listed on the State or National Register of Historic Places and are part of the geographic area that has experienced a long history of significant land disturbance from large-scale agriculture, livestock and ranching activities. Both parcels are adjacent to military lands that were in use from 1917. Parcels 279 and 282 are also near Bellows Field Archaeological Area (State Site Number 80-15-0511), which is formally listed on the National Register of Historic Places. The Bellows Field complex contains a very early habitation and burial site documented by the Bishop Museum as Site 018. “It is accepted that the Bellows Field Archaeological Area was intended to primarily protect Site 018 and that the boundary of Bellows Field Archaeological Area was arbitrarily drawn when the extent of the archaeological resources were not known” (PBR Hawaii and Associates, Inc., 2012). Parcels 279 and 282 are away from other Waimānalo properties on the State and National Register of Historic Places:

State Site Number	Site Name
80-15-0382	Pohakunui Heiau
80-15-0489 and 0490	Koa (Rabbit Island)
80-15-0516	Waimānalo Taro Terraces
80-15-1031	Pueo Heiau
80-15-1037	Pahonu Turtle Pond
80-15-1355	U.S. Coast Guard Makapuʻu
80-15-9072	Hawaiian Trail and Mountain Club
80-15-9012	Alfred Hocking Beach House

Consultation was sought from several agencies and organizations: the State Historic Preservation Division (SHPD), Oʻahu Burial Council, Office of Hawaiian Affairs (OHA),

Department of Hawaiian Home Lands, Waimānalo Village Residents' Corporation, Waimānalo Hawaiian Homes Association (WHHA), Native Hawaiian Chamber of Commerce, and Onipaa Na Kupuna O Waimānalo. OHA indicated that it is unaware of traditional and cultural practices at Parcel 282. WHHA expressed its full support for the project and recommended five long-time residents as additional contacts. WHC consulted twelve (12) community individuals, including four (4) suggested by the WHHA, who were long-time residents of Waimānalo (40+ years). Their collective knowledge suggests that Parcel 282 has not been utilized for traditional and cultural practices within recent times.

Impacts and Mitigation Measures

There are no known archaeological and cultural resources that would be endangered by the demolition of select buildings on Parcel 279 and construction of a new facility on Parcel 282. Unanticipated discoveries of archaeological and cultural resources may occur during the various phases of construction (e.g., excavation and trenching). The following terms and conditions pertaining to subsurface resources are stated in the right-of-entry permit for Parcel 282 (PSF No. 12OD-087): "In the event any unanticipated sites or remains such as bone or charcoal deposits, human burials, rock or coral alignments, pavings or walls are encountered the WHC shall stop work and contact the SHPD in Kapolei at (808) 692-8015 immediately."

The available knowledge suggests that the exercise of native Hawaiian rights or any ethnic group related to gathering, access or other customary activities will not be impacted by construction of a new facility on Parcel 282.

3.9. Visual Resources

Waimānalo is a rural community that is characterized by residential communities, small businesses and agricultural lots interspersed with green space. Mature canopy trees help to soften the effect of low-density buildings and structures. The existing WHC facilities on Parcel 279 contribute to a line of adjacent building elements along the *makai* portion of Kalaniana'ole Highway. Vegetation on the eastern portion of Parcel 282 provides the visual element of green space.

Impacts and Mitigation Measures

The proposed project will not significantly alter the visual character of the Waimānalo area. The new health care facility will not exceed the 25-foot building height limitations. The vegetated area of Parcel 282 will be necessarily cleared for a parking lot; however, the proposed project will include landscaping with trees and other plants that grow naturally and are appropriate to the climate of Waimānalo. Landscaping is expected to include

a small garden area. The demolition of select buildings on Parcel 279 will return more of the site to open space.

3.10. Noise

The project site is located in a rural community where the primary noise source is related to vehicular traffic along Kalaniana‘ole Highway. There are low traffic volumes on this main arterial through Waimānalo except during peak travel periods in the morning and late afternoon. Siren noise generated by the Waimānalo Fire Station also contributes to the background noise environment. In general, there is low background noise in the vicinity of Parcels 279 and 282.

Impacts and Mitigation Measures

Audible noise from demolition and construction activities is expected to be intermittent and unavoidable. The mitigation of noisy activities to inaudible levels will not be practical in all cases due to the intensity and exterior nature of the work. Ambient noise levels in the vicinity of Parcels 279 and 282 will increase due to the movement of construction vehicles and heavy equipment. Quieter construction activities, such as building erection and equipment installation, may not be audible. Construction noise is temporary in nature and will cease upon completion of the project.

Project activities shall comply with the provisions of HAR Title 11, Chapter 46, “Community Noise Control.” The noise regulations require a noise permit if the noise level from construction activity is expected to exceed allowable levels stated in the Chapter 11-46 rules. It shall be the contractor’s responsibility to minimize noise by properly maintaining noise mufflers and other noise-attenuating equipment and to maintain noise levels within regulatory limits. If construction activities occur outside of the allowable timeframes designated for the noise permit (i.e., nighttime, Sunday, holiday) and exceed allowable noise levels, a noise variance must be obtained prior to commencement of construction activities, as required.

Potential noise impacts will also be mitigated by performing the majority of construction work during daytime hours (as opposed to night work). Daytime work will ensure minimal impacts to existing users adjacent to and in the vicinity of the project site, including reducing the inconvenience of construction noise impacts during nighttime hours.

The new health care facility on Parcel 282 is not expected to be a significant source of background noise. The backup generator is expected to be isolated in an appropriate manner that avoids or minimizes significant noise.

3.11. Circulation and Traffic

Vehicular access to Parcels 279 and 282 is via driveways along Kalaniana‘ole Highway (State Route 72), which is the primary arterial route connecting Waimānalo to Kailua and to Makapu‘u. The section of highway in front of Parcels 279 and 282 is two lanes wide with limited shoulder space. The posted speed limit is 25 miles per hour in the vicinity of Parcels 279 and 282.

The City and County of Honolulu provides bus services to the Waimānalo area via Kalaniana‘ole Highway. Routes 57, 77 and 89 provide service from Kailua to Waimānalo to Sea Life Park, from Waimānalo to Kailua, and from Waimānalo to downtown Honolulu, respectively. There are four bus stops in each direction along the east and west bound lanes of Kalaniana‘ole Highway between Poalima Street and Inoaole Street.

The traffic impact assessment report (TIAR), which is found in Appendix B, included a review of Waimānalo Neighborhood Board No. 32 meeting minutes from 2008 through 2013 and the study of nearby intersections. The community has expressed concerns with respect to vehicular, bicycle and pedestrian traffic in the surrounding area. There is poor level-of-service during peak traffic periods at the intersections of Kalaniana‘ole Highway with Poalima Street, Moole Street and Inoaole Street. Future background traffic volume increases that may warrant traffic signals at the Moole Street and Inoaole Street intersections are not related to the proposed WHC project. A separate left-turn lane for the northbound and southbound approaches of the Moole Street intersection would allow for an improvement over poor level-of-service conditions that already exist. The TIAR also noted that “the community has preferred to retain a rural feel along Kalaniana‘ole Highway and not include additional turn lanes or traffic signals” (SSFM International, 2013).

Impacts and Mitigation Measures

Disruptions to vehicular, bicycle and pedestrian traffic during the various phases of construction will be intermittent and temporary in nature. Appropriate traffic control devices and warning signs will be installed and the traffic flow will be directed by construction personnel or by law enforcement personnel, when necessary. No traffic lane closures or traffic detours are expected in conjunction with the construction activities; however, a State-approved traffic control plan shall be prepared prior to the construction of the proposed project if lane closures or traffic detours are deemed necessary. The bus routes, bus stops, and paratransit operations are not expected to be impacted by demolition or construction activities within Parcels 279 and 282. Coordination with the City and County of Honolulu, Department of Transportation Services (DTS) and Oahu Transit Services, Inc. (OTS) will be accomplished as necessary to ensure minimal inconvenience to motorists

and public transportation service. The contractor would be responsible for notifying the necessary DTS and OTS personnel of pertinent project details (such as the construction schedule) at least two weeks prior to the commencement construction activities.

The majority of construction work will be scheduled during daytime hours (as opposed to night work) when traffic volumes are generally low within the residential neighborhoods nearest to the project site. At night and when work is not occurring, all associated construction equipment will be secured and located within Parcels 279 and 282 to prevent obstructions to traffic.

It will be determined during the design phase whether the operation or transportation of any oversized and/or overweight vehicles and loads will be required during construction of the new health care facility. If required, these activities will be coordinated with all applicable Federal, State, and County agencies and all necessary permits/approvals will be acquired.

Appropriate setbacks and sight distances will be incorporated into the project design. The new driveway for Parcel 282, which will be further east and farther away from the Waimānalo Fire Station driveway, must be approved by the State of Hawaiʻi Department of Transportation (DOT). Coordination and consultation with the DOT Highways Division Traffic Review Branch is expected to be conducted by the project representative and/or the construction contractor as a requirement for acquiring the necessary project approvals and permits. The findings in the TIAR indicate that there would be a minimal change to the level-of-service at nearby intersections as a result of project-related traffic such that signals are not warranted at the driveways for Parcels 279 and 282. Coordination with the Waimānalo Fire Station is recommended to ensure that the existing flashing beacon on the *makai* side of Kalanianaʻole Highway is maintained or relocated and is visible to oncoming traffic.

3.12. Utilities (Water, Wastewater, Drainage)

Parcels 279 and 282 are located *makai* or seaward and down gradient from two BWS potable water supply wells and four tunnels that feed the domestic water supply system in Waimānalo, which also includes three reservoirs and one booster station (Townscape, Inc., 2012). The project area is served by the Windward 272-foot Water System, which is reportedly adequate to accommodate the domestic and off-site fire protection requirements for the new health care facility. Potable water service to Parcel 282 is available from an existing 12-inch water main along Kalanianaʻole Highway. A final decision by BWS with regards to the availability of water will be confirmed when the building permit application is submitted for approval.

The DOH Wastewater Branch indicates that the proposed action will occur in the critical wastewater disposal area as determined by the Oʻahu Wastewater Advisory Committee; however, domestic wastewater will be handled by the City's sewer system. The Waimānalo Wastewater Treatment Plant (WWTP) currently services the windward coast of Oʻahu from Makapuʻu to Waimānalo. Wastewater flows within the vicinity of the project site are conveyed to the WWTP via a 15-inch diameter vitrified clay pipe along Kalanianaʻole Highway. The DPP has conditionally approved the sewer connection for Parcel 282.

There are currently no City, State or privately-owned drainage structures located within or adjacent to Parcels 279 and 282. The City owns and maintains a municipal stormwater drainage system within the surrounding City-owned streets but there are no State-owned drainage structures along Kalanianaʻole Highway in the vicinity of the project sites. Stormwater runoff from Parcel 282 generally sheet flows from the site into the grassed area in front of the property along the roadway. Runoff then continues within the grassed swale along the westbound lane of Kalanianaʻole Highway and into the streambed at Inoaole Bridge.

Impacts and Mitigation Measures

The new health care facility on Parcel 282 will require a new water service connection to the existing 12-inch water main along Kalanianaʻole Highway since it currently does not receive water service. The tie-in represents a negligible impact to the water system. The final decision on the availability of water will be confirmed when the building permit application is submitted for approval. The civil drawings will also be submitted to the Honolulu Fire Department for review and approval to ensure that on-site fire protection requirements are met.

Parcel 282 will require a new lateral connection to the existing 15-inch sewer main along Kalanianaʻole Highway. The tie-in represents a negligible impact to the sewer system. The new sewer connection is subject to review and approval by DPP. An Industrial Wastewater Discharge Permit (IWDP) may be required for the project. The contractor must notify the City's Department of Environmental Services, Collection System Maintenance one week prior to the start of construction.

A short-term and temporary impact of the project would occur from the generation of additional surface runoff during construction and demolition work. 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 applicable Federal, State and County regulations and rules for erosion control as previously discussed in Section 3.4 Water Resources. Construction of the new facility and parking lot on

Parcel 282 will increase impervious areas, thereby increasing stormwater runoff. The anticipated impact will be offset by the installation of on-site drainage infiltration systems. The on-site drainage system will control excess sheet flow from the new parking lot. The proposed project will be designed to maintain the existing drainage patterns.

3.13. Power and Communications

Electrical power in the project area is provided by Hawaiian Electric Company, Inc. (HECO). There is a 25-foot HECO easement through Parcel 282. HECO requires continued access to its easement for maintenance of its facilities. Hawaiʻi Gas indicates that it has no facilities (e.g., gas lines) in the project area.

Telephone service in the project area is available from the Hawaiian Telephone Company. Other communication services are provided by Oceanic Time Warner Cable. The overhead communications lines are co-located on utility poles along Kalanianaʻole Highway.

Impacts and Mitigation Measures

Proposed construction and demolition work has the potential to disrupt power and communication systems but these effects are expected to be short-term and temporary. The new health care facility on Parcel 282 is not anticipated to consume substantial amounts of energy since it represents a continuation of existing functions on Parcel 279. Select buildings on Parcel 279 will be demolished after the relocation of services to a modern facility on Parcel 282 that incorporates sustainable building design concepts and energy saving measures. There are no long-term impacts associated with establishing new service connections.

The proposed project will be coordinated with HECO because there will be a realignment of the 25-foot easement through Parcel 282. The site design for the new facility accommodates HECO's need for continued access to its easement. HECO indicates that it has no objections to the project and is therefore agreeable to relocation of the easement. It is anticipated that WHC would be responsible for the total cost of relocating the electrical easement within Parcel 282.

Oceanic Time Warner Cable indicates that its trunking cables can be run on proposed utility poles on the makai side of Kalanianaʻole Highway. The establishment of communication services will be coordinated with the appropriate service provider.

3.14. Socio-Economic Characteristics

The rural community of Waimānalo as roughly covered by the boundaries of the Waimānalo Neighborhood Board No. 32 has a resident population of 11,141 persons according to the *2012 State of Hawai'i Data Book* (State of Hawai'i Department of Business, Economic Development and Tourism, 2013). WHC indicates that its community-based efforts focus on the large Native Hawaiian population of Waimānalo, which includes 6,488 Waimānalo residents who are Native Hawaiian or part-Hawaiian (Office of Hawaiian Affairs, 2011).

The State of Hawai'i Department of Hawaiian Home Lands (DHHL) owns approximately 2,000 acres in Waimānalo (Group 70, 2011). There are several DHHL housing areas in the surrounding vicinity of Parcels 279 and 282.

WHC operates within the geographic area of Waimānalo, which has a HRSA designation as a Medically Underserved Population and Health Professional Shortage Area. Physicians and practitioners at WHC serve the uninsured, accept MedQuest or Quest Expanded Access, and offer a sliding fee discount for services. It is estimated that the WHC currently provides services to an average of 80 patients per day. In 2012, 30 percent of WHC's patients were uninsured and 66 percent are at or below 100 percent of the federal poverty level. The WHC currently has 68 employees (39 for medical services and 28 for administration and programs).

Impacts and Mitigation Measures

The proposed project, which will increase the service capabilities of WHC, will not affect population levels or housing. The various phases of construction will create short-term jobs for people in design and construction. In the long-term, there will be approximately fourteen (14) additional health-related employment opportunities at the WHC.

3.15. Emergency Service Facilities and Shelters

Emergency service providers include law enforcement, fire departments and critical care providers such as hospitals and clinics. Evacuation centers provide shelter in the event of man-made or natural disasters.

Law enforcement is provided by the City and County of Honolulu, Honolulu Police Department. The nearest police station relative to the project area is the Kāne'ohe District Station in Kāne'ohe.

Fire protection services are provided by the Honolulu Fire Department. The Waimānalo Fire Department is located directly adjacent to Parcel 282.

WHC provides primary and preventive health care services. The nearest emergency care facility relative to the project area is Castle Medical Center in Kailua.

The Waimānalo Elementary and Intermediate School located across Kalaniana‘ole Highway from Parcels 279 and 282 is a designated hurricane evacuation shelter. It is noted that this shelter can accommodate persons with special health needs and caged household pets.

Impacts and Mitigation Measures

No significant adverse impacts to police, fire, medical, or emergency shelter services will occur from the completion of the new health care facility. The proposed project includes relocating the driveway for Parcel 282 further east and farther away from the driveway for the adjacent Waimānalo Fire Station. The new driveway for Parcel 282 will also be further east and away from the one-way exit for the Waimānalo Public Library and Waimānalo Elementary and Intermediate School across Kalaniana‘ole Highway.

3.16. Recreational Resources

The recreational resources closest to Parcels 279 and 282 are Waimānalo District Park, Bellows Field Beach Park, Waimānalo Bay Beach Park and Waimānalo Polo Field. Other opportunities for shared-use facilities (e.g., a high school with a football field, track or swimming pool) and non-profit recreation centers (e.g., a YMCA or YWCA) are not present within the rural community of Waimānalo.

Impacts and Mitigation Measures

Project actions will have no adverse impact on recreational facilities.

4. RELATIONSHIP TO PLANS, POLICIES, AND CONTROLS

4.1. State Land Use District

The State Land Use Law (Chapter 205, HRS) is intended to preserve, protect, and encourage the development of lands in the State for uses which are best suited to the public health and welfare for Hawaiʻi's people. All lands in the State are classified into four land use districts by the State of Hawaiʻi, Land Use Commission: Urban, Agricultural, Conservation, and Rural. Urban areas are characterized by residential neighborhoods, commercial enterprises, industrial development, and community facilities including public buildings. Parcels 279 and 282 are entirely located within the Urban District. The health care facility is a permitted use within the Urban District.

4.2. Hawaiʻi State Plan

The Hawaiʻi State Plan (Chapter 226, HRS) outlines broad goals, policies and objectives to serve as guidelines for the future growth and development of the State. The excerpts below are Hawaiʻi State Plan objectives, policies, and priority guidelines that pertain to the proposed project in Waimanalo. The new health care facility on Parcel 282 will be near other existing public use structures and facilities.

> *§226-13 Objectives and policies for the physical environment--land, air, and water quality.*
>
> *(a) Planning for the State's physical environment with regard to land, air, and water quality shall be directed towards achievement of the following objectives:*
>
> *(1) Maintenance and pursuit of improved quality in Hawaii's land, air, and water resources.*
>
> *(b) To achieve the land, air, and water quality objectives, it shall be the policy of this State to:*
>
> *(7) Encourage urban developments in close proximity to existing services and facilities.*
>
> *§226-20 Objectives and policies for socio-cultural advancement – health.*
>
> *(a) Planning for the State's socio-cultural advancement with regard to health shall be directed towards the achievement of the following objectives:*
>
> *(1) Fulfillment of basic individual health needs of the general public.*
>
> *(b) To achieve the health objectives, it shall be the policy of this State to:*
>
> *(1) Provide adequate and accessible services and facilities for prevention and treatment of physical and mental health problems, including substance abuse.*

§226-27 Objectives and policies for socio cultural advancement – government.

(a) Planning the State's socio-cultural advancement with regard to government shall be directed towards the achievement of the following objectives:

(1) Efficient, effective, and responsive government services at all levels in the State.

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

(1) Provide for necessary public goods and services not assumed by the private sector.

(5) Assure that government attitudes, actions, and services are sensitive to community needs and concerns.

4.3. City and County of Honolulu General Plan

The General Plan of the City and County of Honolulu sets forth broad statements of social, economic, environmental, and design objectives and policies which are desired over the long-term. The excerpts below are General Plan policies and objectives that pertain to the proposed project, which is an extension of the urban development that already exists in Waimanalo along Kalaniana‘ole Highway. The new health care facility on Parcel 282 allows for the convenient delivery of needed services to the surrounding community. The two-story facility is expected to be designed with due consideration to the rural setting and character of Waimanalo.

VII. <u>Physical Development and Urban Design</u>

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 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 8: Locate community facilities on sites that will be convenient to the people they are intended to serve.

Objective D: To maintain those development characteristics in the urban-fringe and rural areas which make them desirable places to live.

Policy 4: Maintain rural areas as areas which are intended to provide environments supportive of lifestyle choices which are dependent on the availability of land suitable for small to moderate size agricultural pursuits, a relatively open and scenic setting, and/or a small town, country atmosphere consisting of communities which are small in size, very low density and low rise in character, and may contain a mixture of uses.

Objective E: To create and maintain attractive, meaningful, and stimulating environments throughout Oahu.
Policy 5: Require new developments in stable, established communities and rural areas to be compatible with the existing communities and areas.

IX. Health and Education
Objective A: To protect the health of the people of Oahu.
Policy 1: Encourage the provisions of health-care facilities that are accessible to employment and residential centers.
Policy 3: Coordinate City and County health codes and other regulations with State and Federal health codes to facilitate the enforcement of air-, water-,and noise-pollution controls.

4.4. Ko‘olau Poko Sustainable Communities Plan

The Island of O‘ahu is divided into eight Development Plan areas as required by a 1973 City Charter; the plans for six of these areas have been designated as “Sustainable Communities Plans” to highlight the intent that these areas are not to be heavily developed, and that existing communities and special qualities of each region should be sustained and improved. Each Development Plan and Sustainable Communities Plan implements the objectives and policies of the General Plan and serves as a guide for public policy, investment, and decision making within each respective region. Together with the General Plan, these documents guide population and land use growth over a 20- to 25-year time span.

Parcels 279 and 282 are located within the region encompassed by the Ko‘olau Poko Sustainable Communities Plan, which establishes policies to shape the growth and development of the Ko‘olau Poko region. The plan was adopted in August 2000 and seeks to preserve Ko‘olau Poko’s natural, scenic, cultural, historical and agricultural resources, and to protect the residential environment of its neighborhoods. The Plan calls for adaptation of the traditional *ahupua‘a* concept as a basis for land use and natural resources management. The public review draft of the revised Plan is expected to be circulated for public review and comment in the late fall or winter of 2013. The following excerpts are the vision, policies, principles and guidelines that are applicable to the proposed project.

VISION:
Protect the community’s natural, scenic, cultural, historic and agricultural resources.

THEMES:
Maintain the predominantly low-rise, low-density, single family character of the urban fringe and rural communities.

IMPLEMENTATION TOOLS:

Ko'olau Poko consists of natural resource elements and man-made expressions. The tools we use to protect its rural character include: ahupua'a divisions, rural community boundaries, village centers and rural development standards.

Chapter 3: Land Use Policies, Principles and Guidelines

3.8 INSTITUTIONAL USES

3.8.1. General Policies

Existing institutions may expand facilities and programs within the campuses they presently occupy. However, because the major institutions are located adjacent to significant scenic resources, the campuses should retain an open space character and buildings and facilities on the campus should be sited and designed to respect the scenic context.

3.8.2. Planning Principles

Appropriate Scale and Architectural Style. The architectural character of institutional buildings and structures should respect the surrounding urban and natural features, particularly when located adjacent to a residential area or significant natural or historic feature.

Environmental Compatibility. Encourage energy efficient features, such as the use of solar panels for heating water, and passive solar design, such as the use of window recesses and overhangs and orientation of openings to allow natural cross-ventilation.

3.8.3. Guidelines

Architectural Character and Building Massing. Building heights should not exceed two to three stories or 40 feet, including the roof form. Height setback transitions should be provided from street frontages, the shoreline, and adjacent residential areas.

4.5. City and County of Honolulu Land Use Ordinance

The City and County of Honolulu Land Use Ordinance regulates land use in accordance with adopted land use policies, including the City and County of Honolulu General Plan and the Development/Sustainable Community Plans. The zoning for Parcels 279 and 282 is R-5 Residential District. The DPP lists several considerations pertaining to the R-5 zoning in its letter dated October 2, 2013:

- The expanded care facility is a "public use and structure" because the WHC provides general health care services to the community under agreements with the DOH to fulfill specific functions for the public good as authorized by State law;
- Public uses and structures are permitted in the R-5 Residential District.

- There are no specific parking requirements for a public use and structure; and
- Parking for a public use and structure will be determined by the DPP Director.

4.6. State Coastal Zone Management Program

Hawai‘i’s Coastal Zone Management (CZM) program, established pursuant to Chapter 205A, HRS, as amended, is administered by the State of Hawai‘i, Office of Planning and provides for the beneficial use, protection, and development of the State’s coastal zone. Through the CZM program and pursuant to the Hawai‘i Coastal Zone Management Act (Chapter 205A, HRS, as amended), all counties have enacted ordinances establishing Special Management Areas (SMAs). Development within the SMA, including most development proposed by the State, requires a SMA permit from the appropriate County. On O‘ahu, the SMA permit is administered by the DPP and acted upon by the City Council pursuant to Chapter 25, Revised Ordinances of Honolulu.

Parcel 282 is located within the City’s SMA and requires approval of a SMA Use Permit (Major). The first phase of the SMA permit application process is the preparation and acceptance of an EA. This EA was prepared to concurrently address the first phase of the SMA permit application process. It is anticipated that the SMA Use Permit (Major) will be obtained during the design phase of the project.

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5. POSSIBLE ALTERNATIVES

5.1. No-Action

As a result of no action, no construction-related activities would occur on Parcel 282 and there would be no demolition of any trailers or buildings on Parcel 279. WHC would not pursue a new 65-year lease for Parcels 279 and 282 and would instead remain at its current campus on Parcel 279 and in its current configuration until August 31, 2030 when its current lease expires. WHC employees would continue to utilize Parcel 282 for parking according to the terms and conditions of the management right-of-entry (PSF 12OD-087). The HECO easement could remain in its current alignment as a result of no action.

No action implies that there would be no commitment of funding or capital improvement costs for new construction. In the long term, the no action alternative may still result in the need for funding and financial expenditures as existing older buildings on Parcel 279 continue to age. Financial resources that are expended for increased repair and maintenance costs would therefore be unavailable for health care programs and services.

5.2. Delayed Action (New Facility and Parking Lot)

Delaying the construction of the expanded health care facility would not significantly alter the environmental consequences of the project unless a new site with different characteristics becomes available for consideration. A delayed action is expected to result in increased construction costs due to inflation, changes in economic conditions, or the labor supply. Building materials and labor costs tend to increase with time; therefore, a delayed action may require a greater funding commitment for a two-story facility or a reduction in the scope and size of the facility.

On September 23, 2013, MCTAB notified community leaders and adjacent property owners of an environmental due diligence survey for Parcel 5C, which is located immediately north and adjacent to the WHC campus on Parcel 279 (refer to Appendix C). Parcel 5C comprises approximately 1.5 acres of land that abuts the neighboring residential subdivision along its western border. Several residential lots, the WHC campus, and St. George Church abut Parcel 5C along its southern border. Vehicular access to and egress from Parcel 5C appears to be non-existent or extremely limited. The survey of the triangular-shaped parcel will provide a background check for environmental hazards such as metallic items that may be military munitions. MCTAB may eventually declare Parcel 5C as excess property that could be transferred to a new property owner sometime in the future after the survey results are known. At this time, the environmental conditions of Parcel 5C are unknown and its transfer from military ownership is not assured.

5.3. Parking Lot Only

This alternative is for a parking lot on Parcel 282 with no new health care facility. The development of a permanent, at-grade parking lot on Parcel 282 would involve short-term construction activities associated with grading, curbing and landscaping. Utility connections for water service and wastewater disposal would not be needed. On-site drainage infiltration systems would be implemented and a permanent drainage system would be installed to control excess sheet flow from the new parking lot. Vehicular access to and egress from Parcel 282 would be improved in consideration of the HECO easement and impacts to circulation and traffic along Kalaniana‘ole Highway. The footprint of the permanent parking lot would comprise the existing unpaved parking area on the western portion of Parcel 282. The overgrown vegetation on the eastern portion of Parcel 282 would presumably remain as green space. Portions of the improved parking lot would be landscaped. Landscaping would consist of trees and plants that are appropriate to the climate of Waimānalo. The landscaped area would include a small garden area that would be utilized by the dietary services program. Other plants specified in the overall landscaping may also be used for medicinal or nutritional purposes by the WHC.

The development of a permanent parking lot on Parcel 282 requires less funding as compared to the option for new construction of a two-story facility with parking on Parcel 282. There would be no demolition of trailers or buildings on Parcel 279 since the WHC would continue to utilize its existing campus until such time that its lease expires. In the long-term, the parking lot alternative may still result in the need for future funding and financial expenditures as existing older buildings on Parcel 279 continue to age. Financial resources that are expended for increased repair and maintenance costs would therefore be unavailable for health care programs and services. The existing WHC facility on Parcel 279 would continue to be inadequately sized and inefficiently configured.

5.4. New Facility and Parking Lot (the Preferred Alternative)

The concept for the expanded health care facility on Parcel 282 balances existing site constraints such as the HECO easement and traffic considerations with the WHC’s goals for improving the delivery of much-needed health care services. The proposed alternative incorporates the design concepts that are based on preliminary discussions and coordination efforts.

The utility easement that currently transects Parcel 282 will be moved east and slightly realigned to maximize the building footprint for the new facility while providing HECO with full access to its easement for maintenance of its facilities. The WHC continues to coordinate its proposed project with HECO, which stated in its letter dated October 9, 2013 that it has no objections to the project as currently proposed with the easement realignment.

Traffic and circulation impacts from the new facility were evaluated in the TIAR. There are known community concerns with respect to vehicular, bicycle and pedestrian traffic in the surrounding vicinity of Parcels 279 and 282. The new driveway for Parcel 282 will be further east from its current location due to several geometric considerations. The current driveway is approximately 120 feet from the main driveway to the Waimānalo Fire Station and about 50 feet away and across from the one-way exit for the Waimānalo Elementary and Intermediate School and Waimānalo Public Library. The option to keep the existing driveway for Parcel 282 in its current location would have reduced the buildable area and frontage for the new facility along Kalaniana‘ole Highway due to the turning radius that is needed to allow vehicles (including delivery trucks and paratransit vans) to simultaneously exit and enter the site.

A new driveway toward the eastern end of Parcel 282 and near the intersection of Kalaniana‘ole Highway with Inoaole Street would have been problematic for two main reasons. First, this option would have compromised the access and egress for residents of the Hale Aupuni subdivision and those living in the complex behind the Waimānalo Elementary and Intermediate School. Second, a new driveway at this location would have required the permanent relocation of a bus stop that serves Routes 57, 77 and 89.

A significant reduction or elimination of the parking component of the new health care facility would have allowed more or all of the overgrown vegetation on the eastern portion of Parcel 282 to remain as green space. It is projected that the number of WHC employees and patrons would increase over time; therefore, the reduction or elimination of available parking would cause WHC employees or patrons to park their vehicles at off-site locations within Waimānalo when the parking lot at Parcel 279 is full.

The site design for the new facility that includes a slight realignment of the utility easement, a new driveway further east and farther away from other driveways, and additional on-site parking was selected as the preferred alternative. Completion of the new facility as currently designed and configured will allow WHC to house medical, behavioral health, vision, pharmacy, nutrition, outreach and eligibility services in a modern health care facility with properly configured and adequately sized examination rooms and support areas. The two-story health care facility will add to the line of development along Kalaniana‘ole Highway; however, proposed landscaping will include trees, plants and a small garden area. The demolition of select buildings on Parcel 279 will return more of the site to open space. The completed health care facility and successful award of a new 65-year lease for Parcels 279 and 282 represents an extended commitment from WHC to provide primary and preventive health care services in Waimānalo in fulfillment of its mission.

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6. PERMITS AND APPROVALS

Although exact permitting and approval requirements will be determined during the design phase, the following list contains permits and approvals that may be required for the proposed project:

State of Hawai‘i

- National Pollutant Discharge Elimination System Permit
- Community Noise Permit
- Community Noise Variance
- Non-Covered and/or Covered Source Permit (Air Quality)
- Lane Use Permit for Construction Work
- Oversized and Overweight Vehicles on State Highways Permit

City and County of Honolulu

- Building Permit
- Grubbing, Grading, and Stockpiling Permit
- Erosion Control Plan/Best Management Practices
- SMA Use Permit (Major)
- Industrial Wastewater Discharge Permit

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7. ~~ANTICIPATED~~ DETERMINATION

The recommended preliminary determination is a ~~A~~ Finding of No Significant Impact (FONSI) ~~determination is anticipated for~~ because the proposed project~~, which~~ is not expected to have a significant impact on the physical or human environment. The supporting rationale for this ~~finding~~ determination as set forth in HAR Title 11, Chapter 200, Section 12 is discussed below.

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

The proposed project involves no irrevocable commitment to loss or destruction of natural resources. An improved parking lot will replace the vegetated areas of Parcel 282; however, new landscaping is proposed to include trees and native plants that are adapted to the local environment. The demolition of older structures on Parcel 279 and construction of the expanded health care facility on Parcel 282 will not endanger any known cultural resources. The terms and conditions of right-of-entry permit for Parcel 282 (PSF No. 12OD-087) explicitly state that the WHC shall stop work and contact SHPD immediately in the event any unanticipated sites or remains such as bone or charcoal deposits, human burials, rock or coral alignments, pavings or walls are encountered.

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

No beneficial uses of the environment will be curtailed as a result of the proposed project, which represents the continued presence of WHC in Waimānalo. Completion of the expanded health care facility ensures the beneficial use of Parcels 279 and 282 for health care purposes for a longer period of time with the successful award of a new 65-year lease.

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

The proposed project would be in conformance with State Environmental Policy, inclusive of its individual policies, goals, and guidelines for population growth; natural resources; biological resources; transportation; energy; and culture, as discussed in the individual resource categories throughout this EA.

(4) Substantially affects the economic welfare, social welfare, and cultural practices of the community or State;

The proposed project does not substantially affect the economic or social welfare of the community or State. The project creates short-term jobs for people in design and construction. Completion of the expanded health care facility would allow WHC to continue to provide comprehensive primary and preventive care to

persons of all ages, regardless of their health insurance status or ability to pay. In the long-term, there is potential for a minimal increase in mostly health-related occupations at the WHC. The proposed project is not expected to negatively affect the cultural practices of the community or State.

(5) Substantially affects public health;

Public health will not be adversely affected during the construction and demolition phases of the proposed project. Short-term and temporary effects such as erosion, surface runoff, fugitive dust, noise, intermittent traffic, solid waste, and potential disruptions to utility services are expected to cease upon project completion. The implementation of construction Best Management Practices will minimize temporary impacts. In the long-term, ambient noise levels associated with the new facility are expected to be similar to other public use facilities in the area. Completion of the project would allow for the transition of much-needed patient care services from older clinics that are inefficiently configured and inadequately sized to properly configured and adequately sized examination rooms and support areas in the modern health care facility.

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

No substantial secondary impacts such as population shifts are anticipated from the proposed project. In the long-term, there is potential for a minimal increase in mostly health-related occupations at WHC. Utility demands for potable water, wastewater disposal, solid waste disposal and power are expected to minimally increase since the new facility on Parcel 282 represents a continuation of the current health care functions on Parcel 279. Traffic circulation patterns will change once the new health care facility opens but overall traffic volumes in the project area are not expected to change significantly from the relocation of services from Parcel 279 to Parcel 282.

(7) Involves a substantial degradation of environmental quality;

The proposed project is not expected to degrade environmental quality. Environmental impacts that may occur during the various phases of construction will be mitigated through the implementation of construction Best Management Practices, as appropriate. Appropriate mitigation measures have been identified throughout this EA.

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

The proposed project is expected to accommodate the existing and future health care needs of the uninsured and the medically underserved population of Waimānalo. The expanded health care facility represents a 65-year commitment

from WHC to the community. WHC's project is not part of or associated with a supplemental future action.

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

No species listed by the U.S. Fish and Wildlife Service or in the Endangered Species Act are expected to be affected by the proposed project. Parcels 279 and 282 do not contain habitat for proposed, candidate, or listed threatened or endangered species.

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

Short-term impacts to air quality, water quality or ambient noise levels may occur during construction and demolition. No State or Federal air quality or water quality standards should be violated during or after construction and demolition. Environmental impacts will be mitigated through proper construction techniques and compliance with applicable DOH rules and regulations. In the long-term, ambient noise levels associated with the new facility are expected to be similar to other public use facilities in the area.

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

Parcels 279 and 282 are not situated within an environmentally sensitive area and are not anticipated to affect such areas.

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

The new two-story facility on Parcel 282 will not exceed City and County height limits. The building will not obstruct or affect scenic vistas and view planes identified in State or County plans and studies. Landscaping around the new health care facility is expected to further reduce the visual impact.

(13) Requires substantial energy consumption.

The expanded health care facility on Parcel 282 is not anticipated to consume substantial amounts of energy since it represents a continuation of the current health care functions on Parcel 279. The new facility will incorporate sustainable building design concepts and energy saving measures.

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8. PUBLIC AGENCY REVIEW AND CONSULTATION

8.1. Pre-Assessment Consultation

The consulted agencies, organizations, and individuals are listed below. There were twenty one (21) formal responses to the pre-assessment consultation letter, as indicated by the ✓ below. WHC consulted twelve (12) community individuals including long-time residents of Waimānalo (40+ years), as indicated by the ● below. Comments and responses are included in Appendix D.

Federal Agencies

✓ U.S. Fish and Wildlife Service
U.S. Air Force, Bellows Air Force Station
Marine Corps Base Hawai‘i

State of Hawai‘i

Department of Land and Natural Resources
- Commission on Water Resource Management
- State Historic Preservation Division
- O‘ahu Burial Council
- ✓ Land Division
- ✓ Engineering Division

Department of Health
- ✓ Office of Environmental Quality Control
- ✓ Indoor and Radiological Health Branch
- ✓ Environmental Planning Office
- ✓ Clean Air Branch
- ✓ Clean Water Branch
- ✓ Safe Drinking Water Branch
- Solid and Hazardous Waste Branch
- ✓ Wastewater Branch
- Environmental Health Services Division
- Environmental Management Division

✓ Office of Hawaiian Affairs
Department of Hawaiian Home Lands
✓ Department of Transportation
Department of Education
- Windward O‘ahu District Office
- Waimānalo Elementary and Intermediate School

Hawai‘i State Public Library System
- Hawai‘i Documents Center
- Waimānalo Public and School Library

Senator Laura H. Thielen (District 25)
Representative Chris Lee (District 51)

City and County of Honolulu

- ✓ Department of Planning and Permitting
- ✓ Department of Design and Construction
- ✓ Department of Transportation Services
- Department of Environmental Services
- Board of Water Supply
- ✓ Honolulu Police Department
- ✓ Honolulu Fire Department
- Councilman Ikaika Anderson
- Neighborhood Commission Office
- Waimānalo Neighborhood Board

Utilities

- ✓ Oceanic Time Warner Cable
- ✓ Hawai‘i Gas
- ✓ Hawaiian Electric Company Inc.
- Hawaiian Telcom

Organizations, Associations and Community Members

- The Native Hawaiian Chamber of Commerce
- Onipaa Na Kupuna O Waimānalo
- ✓ Waimānalo Hawaiian Homes Association
- Waimānalo Village Residents' Corporation
- Heine Aruda
- Grace Adviento
- Henry Kassebeer
- Herbert Omizo
- Maluhia Sorgent
- James Kaonohi
- Anna Kassebeer
- Kuulei Fuller
- Jenny Karlbaum
- Genevieve Kama‘u
- Leiana Woodside
- Nani Barboza

Neighboring or Nearby Property Owners and Recorded Lessees

St. George Church
4-1-012:161
4-1-012:162
4-1-012:163
4-1-012:164
4-1-012:165
4-1-012:166
4-1-034:091
4-1-034:094
4-1-034:095
4-1-034:096

WHC, Erskine Architects (EAI) and The Limtiaco Consulting Group (TLCG) presented background information and briefly described the proposed project at the November 4, 2013 meeting of the Waimānalo Neighborhood Board No. 32. WHC, EAI and TLCG responded to questions from the Board and attendees. ~~A copy of t~~The meeting agenda and minutes are ~~is~~ included in Appendix D. ~~The minutes for the meeting were not available for inclusion in the Draft EA.~~

8.2. Draft EA ~~Consultation~~ Public Comment Period

~~WHC, EAI and TLCG will continue to coordinate and consult with governmental agencies that will review the Draft EA. Agency review comments and responses will be published in the Final EA. Public comments received from organizations and interested parties during the 30-day statutorily mandated comment period will also be responded to and published in the Final EA.~~

The notice of availability that appeared in the December 23, 2013 issue of OEQC's semi-monthly bulletin, *The Environmental Notice*, initiated the statutory 30-day public review and comment period. Copies of the Draft EA were available for review during the comment period at the Hawai‘i Documents Center located at the Hawai‘i State Library and at the Waimānalo Public and School Library. An article that summarized the project and Draft EA posted on January 2, 2014 in the *Pacific Business News* and was shared via Twitter.

WHC shared the availability of the Draft EA at the January 13, 2014 meeting of the Waimānalo Neighborhood Board No. 32. A copy of the meeting agenda is included in Appendix E. The minutes for the meeting were not available for inclusion in the Final EA.

The public review and comment period ended on January 22, 2014. Two formal responses to the Draft EA were received and are included in Appendix E.

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APPENDIX A

Letter Report by EnviroServices and Training Center, LLC

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July 16, 2013

Erskine Architects, Inc.
540 Lagoon Drive, Suite 4
Honolulu, Hawaii 96819

Attention: Mr. Fred Erskine

Reference: Limited Site Screening Activities
Waimanalo Health Center Project
Kalanianaole Highway, Waimanalo, Hawaii
TMK (1) 4-1-009: Parcel 282

EnviroServices & Training Center (ETC), LLC has completed this Limited Site Screening Activities letter report to evaluate potential impacts in surface soil at the project site (referred to herein as the "Property").

1.0 BACKGROUND

The Property is identified as Tax Map Key (TMK) (1) 4-1-009: Parcel 282, and consists of approximately 47,265 square feet of partially improved land located north of Kalanianaole Highway, east of the Waimanalo Fire Station in Waimanalo, Hawaii. Specifically, the west portion of the Property is currently used as a parking lot. The remaining areas of the Property were observed to be vacant and undeveloped. Since no historical information was available for the Property activities detailed in this report are considered to be an initial screening of surface soils.

2.0 DATA OBJECTIVES AND SCREENING CRITERIA

The objective of the limited site screening activities was to identify potential contaminants in the surface soil of the Property. Guidance provided in the November 2009 Hawaii Department of Health (DOH) Hazard Evaluation and Emergency Response (HEER) Office's Interim Final *Technical Guidance Manual for the Implementation of the Hawaii State Contingency Plan*, herein referred to as the HEER TGM; and the DOH's Fall 2011 (Updated January 2012) *Evaluation of Environmental Hazards at Sites with Contaminated Soil and Groundwater*, herein referred to as the EHE Document was used for this project. The EHE Document included environmental action levels (EALs) as guidance for environmental investigations in the State of Hawaii. In general, the presence of a chemical at concentrations below the corresponding DOH EAL is assumed to pose an insignificant risk to human health and the environment. Further investigation is typically not necessary for concentrations below this level. However, concentrations found above the DOH EALs indicate that additional investigation and/or evaluation may be warranted. For the purposes of this Limited Site Screening activities, the laboratory results were compared to the default (lowest) DOH EALs for unrestricted land use in areas where a drinking water source is not threatened and the nearest surface water body is greater than 150-meters from the Property.

The population of interest for the limited site screening activities is the existing surface soil on the Property, defined as the top 4- to 6- inches. For the gravel covered parking lot areas, the surface soil is defined as the top 4- to 6- inches below the existing gravel and rock groundcover. For the purposes of the sampling activities, four approximate 12,000-square foot decision units were established across the Property.

3.0 FIELD ACTIVITIES

On June 4, 2013, ETC personnel mobilized to the Property to perform limited soil screening activities. Based on the information provided in the Client provided survey map, the Property boundaries were identified and marked. The four decision units (DUs) were subsequently demarcated using survey flags. One multi-incremental sample was collected from each of the four DUs, indentified as 13-2011.DU1, 13-2011.DU2, 13-2011.DU3, and 13-2011.DU4. In addition, two replicate multi-incremental samples were collected from DU4 (13-2011.DU5 and 13-2011.DU6). Each multi-incremental sample consisted of 50 soil increments collected directly from the existing surface soils on the Property. ETC collected each soil increment using a pre-cleaned stainless steel trowel. The soil increments from each sample were consolidated in a new, 1-gallon Ziploc® bag (i.e., one bag per multi-increment sample). Each bag was labeled with the project name, the sample identification, and the date/time of collection.

4.0 SAMPLE ANALYSIS

The six multi-incremental soil samples (four primary and two replicate samples) were hand-delivered to Accutest Laboratories (AL) – Honolulu Services Center located in Honolulu, Hawaii with chain of custody documentation. ETC instructed AL to perform multi-incremental subsample processing in accordance with the HEER TGM. AL was also instructed to analyze the processed samples for total petroleum hydrocarbons (TPH) as diesel (TPH-D), and TPH as oil (TPH-O) via EPA Method 8015 modified (or equivalent); polynuclear aromatic hydrocarbons (PAHs) via EPA Method 8270; polychlorinated biphenyls (PCBs) via EPA Method 8082, organochlorine pesticides via EPA Method 8081; and total RCRA 8 Metals via EPA Method 6000s/7000s on a standard 10- to 15- working day turnaround time. The chain-of-custody and final laboratory package is included as an attachment to this letter report. The samples were extracted and analyzed within the recommended maximum allowable holding time.

5.0 FINDINGS

Laboratory reports were received via electronic mail on June 18, 2013. Data are summarized in the table below and laboratory reports have been attached.

Table 1: Analytical Results - Soil

Sample ID	13-2011. DU1	13-2011. DU2	13-2011. DU3	13-2011. DU4	13-2011. DU5	13-2011. DU6	DOH EAL
Total Petroleum Hydrocarbons							
TPH-D	144	163	213	*<57*	19.5	50	**500**
TPH-O	**1690**	**1750**	**2250**	486	151	387	**500**
Polynuclear Aromatic Hyrdocarbons (PAHs)							
Acenaphthene	*<0.17*	*<0.17*	*<0.17*	*<0.0033*	*<0.0083*	*<0.0083*	**120**
Acenaphthylene	*<0.17*	*<0.17*	*<0.17*	*<0.0033*	*<0.0083*	*<0.0083*	**130**
Anthracene	*<0.17*	*<0.17*	*<0.17*	*<0.0033*	*<0.0083*	*<0.0083*	**4.3**
Benzo(a)anthracene	*<0.083*	*<0.083*	*<0.083*	0.0155	0.0164	0.0195	**1.5**
Benzo(a)pyrene	*<0.056*	*<0.057*	*<0.057*	0.0213	0.0216	0.0270	**0.15**
Benzo(b)fluoranthene	*<0.066*	*<0.067*	*<0.067*	0.0342	0.0382	0.0410	**1.5**
Benzo(g,h,i)perylene	0.106	0.0986	0.113	0.0241	0.0311	0.0378	**35**
Benzo(k)fluoranthene	*<0.076*	*<0.077*	*<0.076*	0.0237	0.0191	0.0313	**15**
Chrysene	*<0.066*	*<0.067*	*<0.067*	0.0329	0.0300	0.0423	**30**
Dibenzo(a,h)anthracene	*<0.093*	*<0.093*	*<0.093*	0.0062	0.006	0.0072	**0.15**

Sample ID	13-2011. DU1	13-2011. DU2	13-2011. DU3	13-2011. DU4	13-2011. DU5	13-2011. DU6	DOH EAL
Fluoranthene	*<0.17*	*<0.17*	*<0.17*	0.0347	0.0484	0.0694	**460**
Fluorene	*<0.17*	*<0.17*	*<0.17*	*<0.0033*	*<0.0083*	*<0.0083*	**100**
Indeno(1,2,3-cd)pyrene	*<0.083*	*<0.083*	*<0.083*	0.0175	0.0235	0.0274	**1.5**
1-Methylnaphthalene	*<0.33*	*<0.33*	*<0.33*	*<0.0067*	*<0.017*	*<0.017*	**26**
2-Methylnaphthalene	*<0.33*	*<0.33*	*<0.33*	*<0.0067*	*<0.017*	*<0.017*	**28**
Naphthalene	*<0.33*	*<0.33*	*<0.33*	*<0.0067*	*<0.017*	*<0.017*	**4.5**
Phenanthrene	*<0.17*	*<0.17*	*<0.17*	0.007	0.0116	0.018	**440**
Pyrene	*<0.17*	*<0.17*	*<0.17*	0.0295	0.0388	0.0527	**44**
Polychlorinated Biphenyls (PCBs)							
Total PCBs	0.0705	0.0389	0.067	*<0.017*	*<0.017*	*<0.017*	**1.1**
Organochlorine Pesticides							
Aldrin	*<0.0012*	*<0.0012*	*<0.0012*	*<0.0004*	*<0.0004*	*<0.0004*	**0.92**
alpha-BHC	*<0.0011*	*<0.0011*	*<0.0011*	*<0.00037*	*<0.00037*	*<0.00037*	**NS**
beta-BHC	*<0.0024*	*<0.0024*	*<0.0024*	*<0.0008*	*<0.0008*	*<0.0008*	**NS**
delta-BHC	*<0.0012*	*<0.0012*	*<0.0012*	*<0.0004*	*<0.0004*	*<0.0004*	**NS**
gamma-BHC	*<0.0012*	*<0.0012*	*<0.0012*	*<0.0004*	*<0.0004*	*<0.0004*	**0.075**
Chlordane	0.193	0.0267	0.0205	*<0.0033*	*<0.0033*	*<0.0033*	**16**
Dieldrin	*<0.0018*	*<0.0018*	*<0.0018*	*<0.0006*	*<0.0006*	*<0.0006*	**1.5**
4,4'-DDD	0.0081	*<0.0021*	*<0.0021*	*<0.0007*	*<0.0007*	0.0012	**2**
4,4'-DDE	0.002	*<0.0018*	*<0.0018*	0.00084	0.00088	0.0011	**1.4**
4,4'-DDT	0.0045	*<0.0015*	0.0046	*<0.0005*	0.00061	0.00066	**1.7**
Endrin	*<0.0018*	*<0.0018*	*<0.0018*	*<0.0006*	*<0.0006*	*<0.0006*	**3.7**
Endrin aldehyde	*<0.0018*	*<0.0018*	*<0.0018*	*<0.0006*	*<0.0006*	*<0.0006*	**NS**
Endosulfan-I	*<0.0017*	*<0.0017*	*<0.0017*	*<0.00057*	*<0.00057*	*<0.00057*	**NS**
Endosulfan-II	*<0.0018*	*<0.0018*	*<0.0018*	*<0.0006*	*<0.0006*	*<0.0006*	**NS**
Endosulfan sulfate	*<0.0017*	*<0.0017*	*<0.0017*	*<0.00057*	*<0.00057*	*<0.00057*	**NS**
Heptachlor	*<0.0014*	*<0.0014*	*<0.0014*	*<0.00047*	*<0.00047*	*<0.00047*	**0.11**
Heptachlor epoxide	*<0.0015*	*<0.0015*	*<0.0015*	*<0.0005*	*<0.0005*	*<0.0005*	**0.053**
Methoxychlor	*<0.0016*	*<0.0016*	*<0.0016*	*<0.00053*	*<0.00053*	*<0.00053*	**16**
Toxaphene	*<0.02*	*<0.02*	*<0.02*	*<0.0067*	*<0.0067*	*<0.0067*	**0.44**
Total Metals							
Arsenic	2.7	*<2.0*	*<2.0*	*<1.0*	*<1.0*	*<1.0*	**24**
Barium	38.7	25.9	33.8	21.2	12.5	17.4	**1000**
Cadmium	*<1.0*	*<1.0*	*<1.0*	*<0.5*	*<0.5*	*<0.5*	14
Chromium	57.0	19.6	22.4	9.5	4.6	5.3	**1100**
Lead	32.7	21.5	28.7	16.2	13.7	17.4	**200**
Mercury	*<0.042*	*<0.041*	*<0.0041*	*<0.0041*	*<0.0041*	*<0.0042*	**4.7**
Selenium	*<2.0*	*<2.0*	*<2.0*	*<1.0*	*<1.0*	*<1.0*	**78**
Silver	1.0	*<1.0*	*<1.0*	*<0.5*	*<0.5*	*<0.5*	**78**

All results in mg/kg.
DOH EAL = Default (lowest) DOH EAL for unrestricted land use in areas where a drinking water source is not threatened and where the nearest surface water body is located greater than 150-meters from the site.
Italicized Values = Not detected at the MDL, MDL value listed.
Boldfaced, Shaded Values = Value exceeds default DOH EAL.

With the exception of TPH-O, analytical data indicated that TPH-D, PAHs, PCBs, pesticides, and total metals in the existing surface soils were either not detected above method detection limits and/or below their corresponding DOH EALs. TPH-O was detected in samples 13-2011.DU1, 13-2011.DU2 and 13-2011.DU3 at 1,690 mg/kg, 1,750 mg/kg, and 2,250 mg/kg, respectively. Note that these concentrations exceeded the DOH EAL associated with gross contamination concerns.

6.0 CONCLUSIONS

Based on the analytical data, ETC concludes that with the exception of TPH-O, the surface soils at the Property has not been significantly impacted by TPH-D, PAHs, PCBs, organochlorine pesticides, and total metals. TPH-O concentrations exceeded the DOH EAL associated with gross contamination concerns for unrestricted land use. Note that TPH-O concentrations did not exceed the EAL of 5,000 mg/kg pertaining to leaching concerns, the unrestricted land use EAL of 9,400 mg/kg pertaining to direct exposure concerns or the commercial/industrial land use EAL pertaining to gross contamination concerns of 2,500 mg/kg.

Gross contamination concerns primarily pertain to nuisance concerns (i.e. odors, aesthetics, etc.). Based on the current usage of the Property as a parking lot, the TPH-O concentrations are not considered significant concerns for the Property; therefore, ETC believes that no further action is necessary in response the reported findings. Note that if future commercial/industrial development is planned, specific development plans and construction activities may require implementation of additional management practices (i.e. Environmental Hazard Management Plan, etc.) and/or investigation activities.

If unrestricted land use (i.e. residential development) is anticipated for the site, ETC recommends that gross contamination concerns be addressed by:

- Placing a soil cap across the Property prior to development;
- Relocating the top layer of soil under impermeable surfaces (i.e. under parking areas, structures, roadways, etc.); and/or
- Excavate/dispose of the impacted soil.

Note that if relocation or disposal options are selected, confirmation sampling should also be performed to quantify residual TPH-O concentrations.

7.0 CONDITIONS AND LIMITATIONS

EnviroServices & Training Center, LLC has completed the limited site screening activities at the project site. ETC's findings presented in this letter report are professional opinions based solely upon visual observations of the work area and upon interpretation of the laboratory data gathered at the time and location of the field activities.

This report is intended for the sole use of ETC's Client, exclusively for the work area indicated. The scope of services performed in the execution of this project may not be appropriate for satisfying the needs of other users, and any use or reuse of this report or the findings and conclusions presented herein is unauthorized and at the sole risk of said user.

ETC makes no guarantee or warranty; either expressed or implied, except that our services are consistent with good commercial or customary practices designed to conform to acceptable industry standards and governmental regulations. No warranty or representation, expressed or implied, is included or intended in its proposal, contracts, or reports. Opinions stated in this report apply only to the site as outlined and apply to the conditions present at the time of the limited site screening activities. Moreover, these opinions do not apply to site changes that occur after ETC's services were performed.

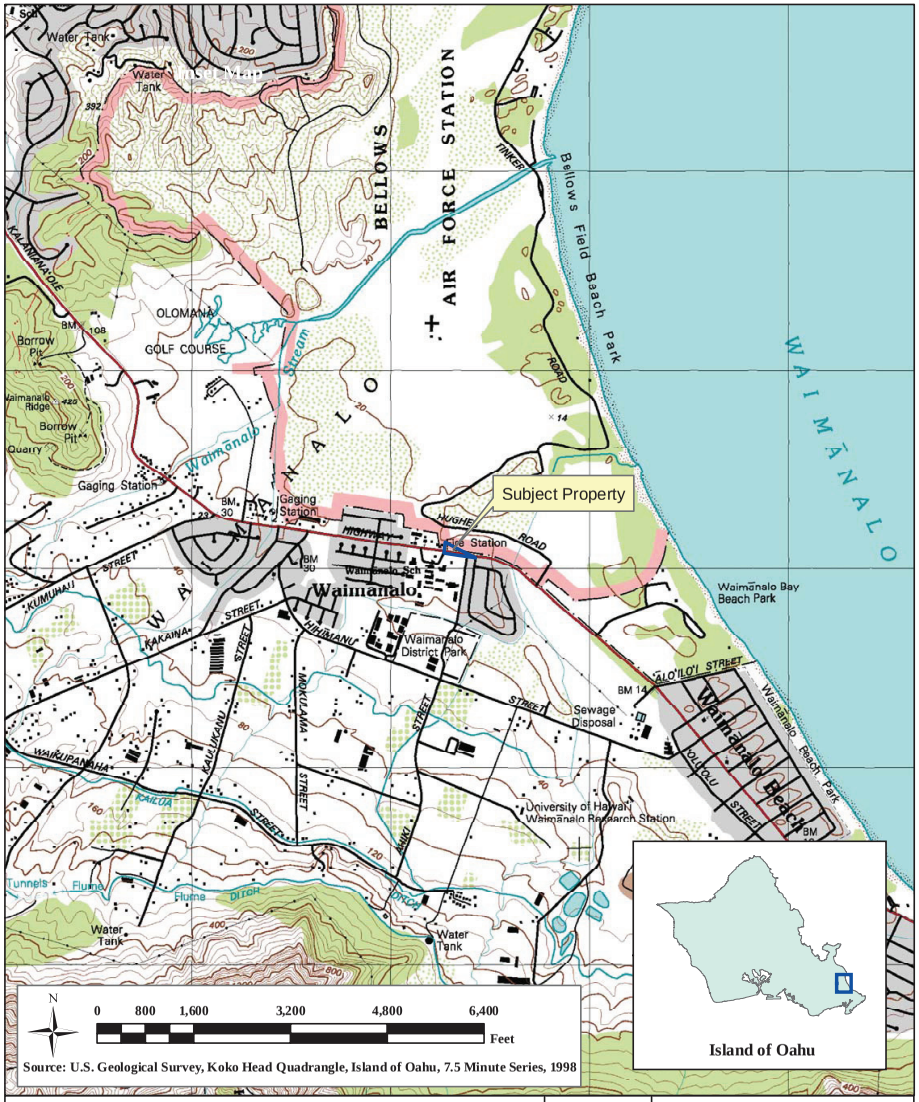
If there are any questions regarding this report, please do not hesitate to contact me at 839-7222.

Respectfully,

ENVIROSERVICES & TRAINING CENTER, LLC

Sharla Nakashima
Project Manager

Attachments: Figure 1 – Site Location Map
Figure 2 – Project Site Map
Laboratory Reports



Source: U.S. Geological Survey, Koko Head Quadrangle, Island of Oahu, 7.5 Minute Series, 1998

	Project No. 13-2011	**Figure 1** **Site Location Map**
	July 2013	Waimanalo Health Center Waimanalo, Hawaii TMK (1) 4-1-009: Parcel 282

e-Hardcopy 2.0
Automated Report

Northern California
ACCUTEST
LABORATORIES

06/18/13

Technical Report for

EnviroServices and Traning Center

WHC-Site Sampling

13-2011

Accutest Job Number: C28092

Sampling Date: 06/04/13

Report to:

Enviroservices & Training Center
505 Ward Ave Suite 202
Honolulu, HI 96814
sharla@gotoetc.com

ATTN: Sharla Nakashima

Total number of pages in report: 69

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

James J. Rhudy
Lab Director

Client Service contact: Nutan Kabir 408-588-0200

Certifications: CA (08236CA) AZ (AZ0762) DoD/ISO/IEC 17025:2005 (L2242)

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.
Test results relate only to samples analyzed.

Accutest Laboratories is the sole authority for authorizing edits or modifications to this document. Unauthorized modification of this report is strictly prohibited.

Source: Client Provide Topographic Survey of the Waimanalo Health Cneter, dated June 2013, prepared by Imata & Associates

Project No. 13-2011

Approximate Scale
1 inch = 60 feet

July 2013

Figure 2 - Decision Unit Layout
Limited Site Screening Activities
Waimanalo Health Center
Kalanianaole Highway, Waimanalo, Hawaii
TMK (1) 4-1-009: Parcel 282

Table of Contents

-1-

Sections: 1 2 3 4 5 6 7

Section 1: Sample Summary 3
Section 2: Summary of Hits 4
Section 3: Sample Results 7
3.1: C28092-1: 13-2011.DU1 8
3.2: C28092-1A: 13-2011.DU1 12
3.3: C28092-2: 13-2011.DU2 14
3.4: C28092-2A: 13-2011.DU2 18
3.5: C28092-3: 13-2011.DU3 20
3.6: C28092-3A: 13-2011.DU3 24
3.7: C28092-4: 13-2011.DU4 26
3.8: C28092-4A: 13-2011.DU4 30
3.9: C28092-5: 13-2011.DU5 32
3.10: C28092-5A: 13-2011.DU5 36
3.11: C28092-6: 13-2011.DU6 38
3.12: C28092-6A: 13-2011.DU6 42
Section 4: Misc. Forms 44
4.1: Chain of Custody 45
Section 5: GC/MS Semi-volatiles - QC Data Summaries 47
5.1: Method Blank Summary 48
5.2: Blank Spike/Blank Spike Duplicate Summary 49
Section 6: GC Semi-volatiles - QC Data Summaries 50
6.1: Method Blank Summary 51
6.2: Blank Spike/Blank Spike Duplicate Summary 54
6.3: Matrix Spike/Matrix Spike Duplicate Summary 57
Section 7: Metals Analysis - QC Data Summaries 60
7.1: Prep QC MP6321: As,Ba,Cd,Cr,Pb,Se,Ag 61
7.2: Prep QC MP6336: Hg 66

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Sample Summary

EnviroServices and Traning Center

Job No: C28092

WHC-Site Sampling
Project No: 13-2011

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
C28092-1	06/04/13	08:30 BSCG	06/06/13	SO	Soil	13-2011.DU1
C28092-1A	06/04/13	08:30 BSCG	06/06/13	SO	Soil	13-2011.DU1
C28092-2	06/04/13	09:20 BSCG	06/06/13	SO	Soil	13-2011.DU2
C28092-2A	06/04/13	09:20 BSCG	06/06/13	SO	Soil	13-2011.DU2
C28092-3	06/04/13	10:30 BSCG	06/06/13	SO	Soil	13-2011.DU3
C28092-3A	06/04/13	10:30 BSCG	06/06/13	SO	Soil	13-2011.DU3
C28092-4	06/04/13	12:00 BSCG	06/06/13	SO	Soil	13-2011.DU4
C28092-4A	06/04/13	12:00 BSCG	06/06/13	SO	Soil	13-2011.DU4
C28092-5	06/04/13	12:00 BSCG	06/06/13	SO	Soil	13-2011.DU5
C28092-5A	06/04/13	12:00 BSCG	06/06/13	SO	Soil	13-2011.DU5
C28092-6	06/04/13	13:00 BSCG	06/06/13	SO	Soil	13-2011.DU6
C28092-6A	06/04/13	13:00 BSCG	06/06/13	SO	Soil	13-2011.DU6

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Summary of Hits

Job Number: C28092
Account: EnviroServices and Traning Center
Project: WHC-Site Sampling
Collected: 06/04/13

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
C28092-1	**13-2011.DU1**					
Benzo(g,h,i)perylene		106 J	330	73	ug/kg	SW846 8270C BY SIM
Chlordane		193	100	10	ug/kg	SW846 8081A
4,4'-DDD		8.1 J	10	2.1	ug/kg	SW846 8081A
4,4'-DDE		2.0 J	10	1.8	ug/kg	SW846 8081A
4,4'-DDT		4.5 J	10	1.5	ug/kg	SW846 8081A
Aroclor 1260		70.5	33	6.7	ug/kg	SW846 8082
Arsenic		2.7	2.0		mg/kg	SW846 6010B
Barium		38.7	20		mg/kg	SW846 6010B
Chromium		57.0	1.0		mg/kg	SW846 6010B
Lead		32.7	2.0		mg/kg	SW846 6010B
Silver		1.0	1.0		mg/kg	SW846 6010B
C28092-1A	**13-2011.DU1**					
TPH (C10-C28)		144 J	550	140	mg/kg	SW846 8015B M
TPH (> C28-C40)		1690	1100	280	mg/kg	SW846 8015B M
C28092-2	**13-2011.DU2**					
Benzo(g,h,i)perylene [a]		98.6 J	330	73	ug/kg	SW846 8270C BY SIM
Chlordane		26.7 J	100	10	ug/kg	SW846 8081A
Aroclor 1260		38.9	33	6.7	ug/kg	SW846 8082
Barium		25.9	20		mg/kg	SW846 6010B
Chromium		19.6	1.0		mg/kg	SW846 6010B
Lead		21.5	2.0		mg/kg	SW846 6010B
C28092-2A	**13-2011.DU2**					
TPH (C10-C28)		163 J	570	140	mg/kg	SW846 8015B M
TPH (> C28-C40)		1750	1100	290	mg/kg	SW846 8015B M
C28092-3	**13-2011.DU3**					
Benzo(g,h,i)perylene [a]		113 J	330	73	ug/kg	SW846 8270C BY SIM
Chlordane [b]		20.5 J	100	10	ug/kg	SW846 8081A
4,4'-DDT		4.6 J	10	1.5	ug/kg	SW846 8081A
Aroclor 1260		67.0	33	6.7	ug/kg	SW846 8082
Barium		33.8	20		mg/kg	SW846 6010B
Chromium		22.4	1.0		mg/kg	SW846 6010B
Lead		28.7	2.0		mg/kg	SW846 6010B

Summary of Hits

Job Number: C28092
Account: EnviroServices and Traning Center
Project: WHC-Site Sampling
Collected: 06/04/13

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
C28092-3A	**13-2011.DU3**					
TPH (C10-C28)		213 J	550	140	mg/kg	SW846 8015B M
TPH (> C28-C40)		2250	1100	280	mg/kg	SW846 8015B M
C28092-4	**13-2011.DU4**					
Benzo(a)anthracene [c]		15.5	6.7	1.7	ug/kg	SW846 8270C BY SIM
Benzo(a)pyrene [c]		21.3	6.7	1.1	ug/kg	SW846 8270C BY SIM
Benzo(b)fluoranthene [c]		34.2	6.7	1.3	ug/kg	SW846 8270C BY SIM
Benzo(g,h,i)perylene [c]		24.1	6.7	1.5	ug/kg	SW846 8270C BY SIM
Benzo(k)fluoranthene [c]		23.7	6.7	1.5	ug/kg	SW846 8270C BY SIM
Chrysene [c]		32.9	6.7	1.3	ug/kg	SW846 8270C BY SIM
Dibenzo(a,h)anthracene [c]		6.2 J	6.7	1.9	ug/kg	SW846 8270C BY SIM
Fluoranthene [c]		34.7	33	3.3	ug/kg	SW846 8270C BY SIM
Indeno(1,2,3-cd)pyrene [c]		17.5	6.7	1.7	ug/kg	SW846 8270C BY SIM
Phenanthrene [c]		7.0 J	33	3.3	ug/kg	SW846 8270C BY SIM
Pyrene [c]		29.5 J	33	3.3	ug/kg	SW846 8270C BY SIM
4,4'-DDE		0.84 J	3.3	0.60	ug/kg	SW846 8081A
Barium		21.2	10		mg/kg	SW846 6010B
Chromium		9.5	0.50		mg/kg	SW846 6010B
Lead		16.2	1.0		mg/kg	SW846 6010B
C28092-4A	**13-2011.DU4**					
TPH (> C28-C40)		486	450	110	mg/kg	SW846 8015B M
C28092-5	**13-2011.DU5**					
Benzo(a)anthracene [c]		16.4 J	17	4.2	ug/kg	SW846 8270C BY SIM
Benzo(a)pyrene [c]		21.6	17	2.8	ug/kg	SW846 8270C BY SIM
Benzo(b)fluoranthene [c]		38.2	17	3.3	ug/kg	SW846 8270C BY SIM
Benzo(g,h,i)perylene [c]		31.1	17	3.7	ug/kg	SW846 8270C BY SIM
Benzo(k)fluoranthene [c]		19.1	17	3.8	ug/kg	SW846 8270C BY SIM
Chrysene [c]		30.0	17	3.3	ug/kg	SW846 8270C BY SIM
Dibenzo(a,h)anthracene [c]		6.0 J	17	4.7	ug/kg	SW846 8270C BY SIM
Fluoranthene [c]		48.4 J	83	8.3	ug/kg	SW846 8270C BY SIM
Indeno(1,2,3-cd)pyrene [c]		23.5	17	4.2	ug/kg	SW846 8270C BY SIM
Phenanthrene [c]		11.6 J	83	8.3	ug/kg	SW846 8270C BY SIM
Pyrene [c]		38.8 J	83	8.3	ug/kg	SW846 8270C BY SIM
4,4'-DDE		0.88 J	3.3	0.60	ug/kg	SW846 8081A
4,4'-DDT [b]		0.61 J	3.3	0.50	ug/kg	SW846 8081A
Barium		12.5	10		mg/kg	SW846 6010B
Chromium		4.6	0.50		mg/kg	SW846 6010B
Lead		13.7	1.0		mg/kg	SW846 6010B

Summary of Hits

Job Number: C28092
Account: EnviroServices and Traning Center
Project: WHC-Site Sampling
Collected: 06/04/13

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
C28092-5A	**13-2011.DU5**					
TPH (C10-C28)		19.5 J	55	14	mg/kg	SW846 8015B M
TPH (> C28-C40)		151	110	28	mg/kg	SW846 8015B M
C28092-6	**13-2011.DU6**					
Benzo(a)anthracene [c]		19.5	17	4.2	ug/kg	SW846 8270C BY SIM
Benzo(a)pyrene [c]		27.0	17	2.8	ug/kg	SW846 8270C BY SIM
Benzo(b)fluoranthene [c]		41.0	17	3.3	ug/kg	SW846 8270C BY SIM
Benzo(g,h,i)perylene [c]		37.8	17	3.7	ug/kg	SW846 8270C BY SIM
Benzo(k)fluoranthene [c]		31.3	17	3.8	ug/kg	SW846 8270C BY SIM
Chrysene [c]		42.3	17	3.3	ug/kg	SW846 8270C BY SIM
Dibenzo(a,h)anthracene [c]		7.2 J	17	4.7	ug/kg	SW846 8270C BY SIM
Fluoranthene [c]		69.4 J	83	8.3	ug/kg	SW846 8270C BY SIM
Indeno(1,2,3-cd)pyrene [c]		27.4	17	4.2	ug/kg	SW846 8270C BY SIM
Phenanthrene [c]		18.0 J	83	8.3	ug/kg	SW846 8270C BY SIM
Pyrene [c]		52.7 J	83	8.3	ug/kg	SW846 8270C BY SIM
4,4'-DDD		1.2 J	3.3	0.70	ug/kg	SW846 8081A
4,4'-DDE		1.1 J	3.3	0.60	ug/kg	SW846 8081A
4,4'-DDT		0.66 J	3.3	0.50	ug/kg	SW846 8081A
Barium		17.4	10		mg/kg	SW846 6010B
Chromium		5.3	0.50		mg/kg	SW846 6010B
Lead		17.4	1.0		mg/kg	SW846 6010B
C28092-6A	**13-2011.DU6**					
TPH (C10-C28)		50.0 J	65	16	mg/kg	SW846 8015B M
TPH (> C28-C40)		387	130	32	mg/kg	SW846 8015B M

(a) Dilution required due to matrix interference. Extract would not concentrate (dark and viscous); and high concentration of non-target hydrocarbons.
(b) Quantitation between primary and confirmation differed by > 40% possibly due to matrix interference. Lower value reported.
(c) Dilution required due to matrix interference (dark and viscous extract; high concentration of non-target hydrocarbons).

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: 13-2011.DU1
Lab Sample ID: C28092-1
Matrix: SO - Soil
Method: SW846 8270C BY SIM SW846 3550B
Project: WHC-Site Sampling

Date Sampled: 06/04/13
Date Received: 06/06/13
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X29997.D	10	06/13/13	NL	06/12/13	OP8135	EX1351
Run #2							

	Initial Weight	Final Volume
Run #1	30.2 g	10.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	1700	170	ug/kg	
208-96-8	Acenaphthylene	ND	1700	170	ug/kg	
120-12-7	Anthracene	ND	1700	170	ug/kg	
56-55-3	Benzo(a)anthracene	ND	330	83	ug/kg	
50-32-8	Benzo(a)pyrene	ND	330	56	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	330	66	ug/kg	
191-24-2	Benzo(g,h,i)perylene	106	330	73	ug/kg	J
207-08-9	Benzo(k)fluoranthene	ND	330	76	ug/kg	
218-01-9	Chrysene	ND	330	66	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	330	93	ug/kg	
206-44-0	Fluoranthene	ND	1700	170	ug/kg	
86-73-7	Fluorene	ND	1700	170	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	330	83	ug/kg	
90-12-0	1-Methylnaphthalene	ND	1700	330	ug/kg	
91-57-6	2-Methylnaphthalene	ND	1700	330	ug/kg	
91-20-3	Naphthalene	ND	1700	330	ug/kg	
85-01-8	Phenanthrene	ND	1700	170	ug/kg	
129-00-0	Pyrene	ND	1700	170	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	38%		13-123%
321-60-8	2-Fluorobiphenyl	66%		17-126%
1718-51-0	Terphenyl-d14	70%		51-146%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: 13-2011.DU1
Lab Sample ID: C28092-1
Matrix: SO - Soil
Method: SW846 8081A SW846 3550B
Project: WHC-Site Sampling

Date Sampled: 06/04/13
Date Received: 06/06/13
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	MM016221.D	3	06/11/13	RV	06/11/13	OP8128	GMM450
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	10.0 ml
Run #2		

Pesticide PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	10	1.2	ug/kg	
319-84-6	alpha-BHC	ND	10	1.1	ug/kg	
319-85-7	beta-BHC	ND	10	2.4	ug/kg	
319-86-8	delta-BHC	ND	10	1.2	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	10	1.2	ug/kg	
12789-03-6	Chlordane	193	100	10	ug/kg	
60-57-1	Dieldrin	ND	10	1.8	ug/kg	
72-54-8	4,4'-DDD	8.1	10	2.1	ug/kg	J
72-55-9	4,4'-DDE	2.0	10	1.8	ug/kg	J
50-29-3	4,4'-DDT	4.5	10	1.5	ug/kg	J
72-20-8	Endrin	ND	10	1.8	ug/kg	
7421-93-4	Endrin aldehyde	ND	10	1.8	ug/kg	
959-98-8	Endosulfan-I	ND	10	1.7	ug/kg	
33213-65-9	Endosulfan-II	ND	10	1.8	ug/kg	
1031-07-8	Endosulfan sulfate	ND	10	1.7	ug/kg	
76-44-8	Heptachlor	ND	10	1.4	ug/kg	
1024-57-3	Heptachlor epoxide	ND	10	1.5	ug/kg	
72-43-5	Methoxychlor	ND	10	1.6	ug/kg	
8001-35-2	Toxaphene	ND	100	20	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	48%		31-113%
877-09-8	Tetrachloro-m-xylene	48%		31-113%
2051-24-3	Decachlorobiphenyl	65%		61-129%
2051-24-3	Decachlorobiphenyl	61%		61-129%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	13-2011.DU1		
Lab Sample ID:	C28092-1	**Date Sampled:**	06/04/13
Matrix:	SO - Soil	**Date Received:**	06/06/13
Method:	SW846 8082 SW846 3550B	**Percent Solids:**	n/a
Project:	WHC-Site Sampling		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	PP030952.D	1	06/11/13	RV	06/11/13	OP8129	GPP1013
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	33	6.7	ug/kg	
11104-28-2	Aroclor 1221	ND	33	17	ug/kg	
11141-16-5	Aroclor 1232	ND	33	17	ug/kg	
53469-21-9	Aroclor 1242	ND	33	17	ug/kg	
12672-29-6	Aroclor 1248	ND	33	17	ug/kg	
11097-69-1	Aroclor 1254	ND	33	17	ug/kg	
11096-82-5	Aroclor 1260	70.5	33	6.7	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	65%		38-109%
877-09-8	Tetrachloro-m-xylene	64%		38-109%
2051-24-3	Decachlorobiphenyl	64%		49-138%
2051-24-3	Decachlorobiphenyl	56%		49-138%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

3.1
3

Client Sample ID:	13-2011.DU1		
Lab Sample ID:	C28092-1	**Date Sampled:**	06/04/13
Matrix:	SO - Soil	**Date Received:**	06/06/13
		Percent Solids:	n/a
Project:	WHC-Site Sampling		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	2.7	2.0	mg/kg	10	06/13/13	06/15/13	RS	SW846 6010B [1]	SW846 3050B [3]
Barium	38.7	20	mg/kg	10	06/13/13	06/15/13	RS	SW846 6010B [1]	SW846 3050B [3]
Cadmium	< 1.0	1.0	mg/kg	10	06/13/13	06/15/13	RS	SW846 6010B [1]	SW846 3050B [3]
Chromium	57.0	1.0	mg/kg	10	06/13/13	06/15/13	RS	SW846 6010B [1]	SW846 3050B [3]
Lead	32.7	2.0	mg/kg	10	06/13/13	06/15/13	RS	SW846 6010B [1]	SW846 3050B [3]
Mercury [a]	< 0.042	0.042	mg/kg	10	06/17/13	06/17/13	DQ	SW846 7471A [2]	SW846 7471A [4]
Selenium	< 2.0	2.0	mg/kg	10	06/13/13	06/15/13	RS	SW846 6010B [1]	SW846 3050B [3]
Silver	1.0	1.0	mg/kg	10	06/13/13	06/15/13	RS	SW846 6010B [1]	SW846 3050B [3]

(1) Instrument QC Batch: MA3225
(2) Instrument QC Batch: MA3227
(3) Prep QC Batch: MP6321
(4) Prep QC Batch: MP6336

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	13-2011.DU1		
Lab Sample ID:	C28092-1A	**Date Sampled:**	06/04/13
Matrix:	SO - Soil	**Date Received:**	06/06/13
Method:	SW846 8015B M SW846 3550B	**Percent Solids:**	89.5
Project:	WHC-Site Sampling		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH304380.D	50	06/10/13	AG	06/07/13	OP8111	GHH1003
Run #2							

	Initial Weight	Final Volume
Run #1	10.1 g	1.0 ml
Run #2		

TPH Extractable

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	144	550	140	mg/kg	J
	TPH (> C28-C40)	1690	1100	280	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	78%		37-122%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	13-2011.DU1		
Lab Sample ID:	C28092-1A	**Date Sampled:**	06/04/13
Matrix:	SO - Soil	**Date Received:**	06/06/13
		Percent Solids:	89.5
Project:	WHC-Site Sampling		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Moisture, Percent	10.5		%	1	06/07/13 12:00	AC	SM18 2540G

RL = Reporting Limit

Report of Analysis

Client Sample ID: 13-2011.DU2
Lab Sample ID: C28092-2
Matrix: SO - Soil
Method: SW846 8270C BY SIM SW846 3550B
Project: WHC-Site Sampling

Date Sampled: 06/04/13
Date Received: 06/06/13
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	X29996.D	10	06/13/13	NL	06/12/13	OP8135	EX1351
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	10.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	1700	170	ug/kg	
208-96-8	Acenaphthylene	ND	1700	170	ug/kg	
120-12-7	Anthracene	ND	1700	170	ug/kg	
56-55-3	Benzo(a)anthracene	ND	330	83	ug/kg	
50-32-8	Benzo(a)pyrene	ND	330	57	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	330	67	ug/kg	
191-24-2	Benzo(g,h,i)perylene	98.6	330	73	ug/kg	J
207-08-9	Benzo(k)fluoranthene	ND	330	77	ug/kg	
218-01-9	Chrysene	ND	330	67	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	330	93	ug/kg	
206-44-0	Fluoranthene	ND	1700	170	ug/kg	
86-73-7	Fluorene	ND	1700	170	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	330	83	ug/kg	
90-12-0	1-Methylnaphthalene	ND	1700	330	ug/kg	
91-57-6	2-Methylnaphthalene	ND	1700	330	ug/kg	
91-20-3	Naphthalene	ND	1700	330	ug/kg	
85-01-8	Phenanthrene	ND	1700	170	ug/kg	
129-00-0	Pyrene	ND	1700	170	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	84%		13-123%
321-60-8	2-Fluorobiphenyl	77%		17-126%
1718-51-0	Terphenyl-d14	83%		51-146%

(a) Dilution required due to matrix interference. Extract would not concentrate (dark and viscous); and high concentration of non-target hydrocarbons.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: 13-2011.DU2
Lab Sample ID: C28092-2
Matrix: SO - Soil
Method: SW846 8081A SW846 3550B
Project: WHC-Site Sampling

Date Sampled: 06/04/13
Date Received: 06/06/13
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	MM016222.D	3	06/11/13	RV	06/11/13	OP8128	GMM450
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	10.0 ml
Run #2		

Pesticide PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	10	1.2	ug/kg	
319-84-6	alpha-BHC	ND	10	1.1	ug/kg	
319-85-7	beta-BHC	ND	10	2.4	ug/kg	
319-86-8	delta-BHC	ND	10	1.2	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	10	1.2	ug/kg	
12789-03-6	Chlordane	26.7	100	10	ug/kg	J
60-57-1	Dieldrin	ND	10	1.8	ug/kg	
72-54-8	4,4'-DDD	ND	10	2.1	ug/kg	
72-55-9	4,4'-DDE	ND	10	1.8	ug/kg	
50-29-3	4,4'-DDT	ND	10	1.5	ug/kg	
72-20-8	Endrin	ND	10	1.8	ug/kg	
7421-93-4	Endrin aldehyde	ND	10	1.8	ug/kg	
959-98-8	Endosulfan-I	ND	10	1.7	ug/kg	
33213-65-9	Endosulfan-II	ND	10	1.8	ug/kg	
1031-07-8	Endosulfan sulfate	ND	10	1.7	ug/kg	
76-44-8	Heptachlor	ND	10	1.4	ug/kg	
1024-57-3	Heptachlor epoxide	ND	10	1.5	ug/kg	
72-43-5	Methoxychlor	ND	10	1.6	ug/kg	
8001-35-2	Toxaphene	ND	100	20	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	52%		31-113%
877-09-8	Tetrachloro-m-xylene	53%		31-113%
2051-24-3	Decachlorobiphenyl	101%		61-129%
2051-24-3	Decachlorobiphenyl	96%		61-129%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	13-2011.DU2		
Lab Sample ID:	C28092-2	**Date Sampled:**	06/04/13
Matrix:	SO - Soil	**Date Received:**	06/06/13
Method:	SW846 8082 SW846 3550B	**Percent Solids:**	n/a
Project:	WHC-Site Sampling		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	PP030953.D	1	06/11/13	RV	06/11/13	OP8129	GPP1013
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	33	6.7	ug/kg	
11104-28-2	Aroclor 1221	ND	33	17	ug/kg	
11141-16-5	Aroclor 1232	ND	33	17	ug/kg	
53469-21-9	Aroclor 1242	ND	33	17	ug/kg	
12672-29-6	Aroclor 1248	ND	33	17	ug/kg	
11097-69-1	Aroclor 1254	ND	33	17	ug/kg	
11096-82-5	Aroclor 1260	38.9	33	6.7	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	72%		38-109%
877-09-8	Tetrachloro-m-xylene	67%		38-109%
2051-24-3	Decachlorobiphenyl	75%		49-138%
2051-24-3	Decachlorobiphenyl	68%		49-138%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	13-2011.DU2		
Lab Sample ID:	C28092-2	**Date Sampled:**	06/04/13
Matrix:	SO - Soil	**Date Received:**	06/06/13
		Percent Solids:	n/a
Project:	WHC-Site Sampling		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	< 2.0	2.0	mg/kg	10	06/13/13	06/17/13	RS	SW846 6010B [2]	SW846 3050B [3]
Barium	25.9	20	mg/kg	10	06/13/13	06/17/13	RS	SW846 6010B [2]	SW846 3050B [3]
Cadmium	< 1.0	1.0	mg/kg	10	06/13/13	06/17/13	RS	SW846 6010B [2]	SW846 3050B [3]
Chromium	19.6	1.0	mg/kg	10	06/13/13	06/17/13	RS	SW846 6010B [2]	SW846 3050B [3]
Lead	21.5	2.0	mg/kg	10	06/13/13	06/17/13	RS	SW846 6010B [2]	SW846 3050B [3]
Mercury [a]	< 0.041	0.041	mg/kg	10	06/17/13	06/17/13	DQ	SW846 7471A [1]	SW846 7471A [4]
Selenium	< 2.0	2.0	mg/kg	10	06/13/13	06/17/13	RS	SW846 6010B [2]	SW846 3050B [3]
Silver	< 1.0	1.0	mg/kg	10	06/13/13	06/17/13	RS	SW846 6010B [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA3227
(2) Instrument QC Batch: MA3228
(3) Prep QC Batch: MP6321
(4) Prep QC Batch: MP6336

(a) Elevated reporting limit(s) due to matrix interference.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	13-2011.DU2		
Lab Sample ID:	C28092-2A	**Date Sampled:**	06/04/13
Matrix:	SO - Soil	**Date Received:**	06/06/13
Method:	SW846 8015B M SW846 3550B	**Percent Solids:**	85.9
Project:	WHC-Site Sampling		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH304381.D	50	06/10/13	AG	06/07/13	OP8111	GHH1003
Run #2							

	Initial Weight	Final Volume
Run #1	10.2 g	1.0 ml
Run #2		

TPH Extractable

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	163	570	140	mg/kg	J
	TPH (> C28-C40)	1750	1100	290	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	67%		37-122%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	13-2011.DU2		
Lab Sample ID:	C28092-2A	**Date Sampled:**	06/04/13
Matrix:	SO - Soil	**Date Received:**	06/06/13
		Percent Solids:	85.9
Project:	WHC-Site Sampling		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Moisture, Percent	14.1		%	1	06/07/13 12:00	AC	SM18 2540G

RL = Reporting Limit

Report of Analysis

Client Sample ID:	13-2011.DU3		
Lab Sample ID:	C28092-3	**Date Sampled:**	06/04/13
Matrix:	SO - Soil	**Date Received:**	06/06/13
Method:	SW846 8270C BY SIM SW846 3550B	**Percent Solids:**	n/a
Project:	WHC-Site Sampling		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	X29995.D	10	06/13/13	NL	06/12/13	OP8135	EX1351
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	10.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	1700	170	ug/kg	
208-96-8	Acenaphthylene	ND	1700	170	ug/kg	
120-12-7	Anthracene	ND	1700	170	ug/kg	
56-55-3	Benzo(a)anthracene	ND	330	83	ug/kg	
50-32-8	Benzo(a)pyrene	ND	330	57	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	330	67	ug/kg	
191-24-2	Benzo(g,h,i)perylene	113	330	73	ug/kg	J
207-08-9	Benzo(k)fluoranthene	ND	330	76	ug/kg	
218-01-9	Chrysene	ND	330	67	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	330	93	ug/kg	
206-44-0	Fluoranthene	ND	1700	170	ug/kg	
86-73-7	Fluorene	ND	1700	170	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	330	83	ug/kg	
90-12-0	1-Methylnaphthalene	ND	1700	330	ug/kg	
91-57-6	2-Methylnaphthalene	ND	1700	330	ug/kg	
91-20-3	Naphthalene	ND	1700	330	ug/kg	
85-01-8	Phenanthrene	ND	1700	170	ug/kg	
129-00-0	Pyrene	ND	1700	170	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	49%		13-123%
321-60-8	2-Fluorobiphenyl	57%		17-126%
1718-51-0	Terphenyl-d14	64%		51-146%

(a) Dilution required due to matrix interference. Extract would not concentrate (dark and viscous); and high concentration of non-target hydrocarbons.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	13-2011.DU3		
Lab Sample ID:	C28092-3	**Date Sampled:**	06/04/13
Matrix:	SO - Soil	**Date Received:**	06/06/13
Method:	SW846 8081A SW846 3550B	**Percent Solids:**	n/a
Project:	WHC-Site Sampling		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	MM016223.D	3	06/11/13	RV	06/11/13	OP8128	GMM450
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	10.0 ml
Run #2		

Pesticide PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	10	1.2	ug/kg	
319-84-6	alpha-BHC	ND	10	1.1	ug/kg	
319-85-7	beta-BHC	ND	10	2.4	ug/kg	
319-86-8	delta-BHC	ND	10	1.2	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	10	1.2	ug/kg	
12789-03-6	Chlordane [a]	20.5	100	10	ug/kg	J
60-57-1	Dieldrin	ND	10	1.8	ug/kg	
72-54-8	4,4'-DDD	ND	10	2.1	ug/kg	
72-55-9	4,4'-DDE	ND	10	1.8	ug/kg	
50-29-3	4,4'-DDT	4.6	10	1.5	ug/kg	J
72-20-8	Endrin	ND	10	1.8	ug/kg	
7421-93-4	Endrin aldehyde	ND	10	1.8	ug/kg	
959-98-8	Endosulfan-I	ND	10	1.7	ug/kg	
33213-65-9	Endosulfan-II	ND	10	1.8	ug/kg	
1031-07-8	Endosulfan sulfate	ND	10	1.7	ug/kg	
76-44-8	Heptachlor	ND	10	1.4	ug/kg	
1024-57-3	Heptachlor epoxide	ND	10	1.5	ug/kg	
72-43-5	Methoxychlor	ND	10	1.6	ug/kg	
8001-35-2	Toxaphene	ND	100	20	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	40%		31-113%
877-09-8	Tetrachloro-m-xylene	42%		31-113%
2051-24-3	Decachlorobiphenyl	78%		61-129%
2051-24-3	Decachlorobiphenyl	85%		61-129%

(a) Quantitation between primary and confirmation differed by > 40% possibly due to matrix interference. Lower value reported.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	13-2011.DU3		
Lab Sample ID:	C28092-3	**Date Sampled:**	06/04/13
Matrix:	SO - Soil	**Date Received:**	06/06/13
Method:	SW846 8082 SW846 3550B	**Percent Solids:**	n/a
Project:	WHC-Site Sampling		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	PP030954.D	1	06/11/13	RV	06/11/13	OP8129	GPP1013
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	33	6.7	ug/kg	
11104-28-2	Aroclor 1221	ND	33	17	ug/kg	
11141-16-5	Aroclor 1232	ND	33	17	ug/kg	
53469-21-9	Aroclor 1242	ND	33	17	ug/kg	
12672-29-6	Aroclor 1248	ND	33	17	ug/kg	
11097-69-1	Aroclor 1254	ND	33	17	ug/kg	
11096-82-5	Aroclor 1260	67.0	33	6.7	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	57%		38-109%
877-09-8	Tetrachloro-m-xylene	56%		38-109%
2051-24-3	Decachlorobiphenyl	52%		49-138%
2051-24-3	Decachlorobiphenyl	48% [a]		49-138%

(a) Outside control limits due to matrix interference.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	13-2011.DU3		
Lab Sample ID:	C28092-3	**Date Sampled:**	06/04/13
Matrix:	SO - Soil	**Date Received:**	06/06/13
		Percent Solids:	n/a
Project:	WHC-Site Sampling		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	< 2.0	2.0	mg/kg	10	06/13/13	06/17/13	RS	SW846 6010B [2]	SW846 3050B [3]
Barium	33.8	20	mg/kg	10	06/13/13	06/17/13	RS	SW846 6010B [2]	SW846 3050B [3]
Cadmium	< 1.0	1.0	mg/kg	10	06/13/13	06/17/13	RS	SW846 6010B [2]	SW846 3050B [3]
Chromium	22.4	1.0	mg/kg	10	06/13/13	06/17/13	RS	SW846 6010B [2]	SW846 3050B [3]
Lead	28.7	2.0	mg/kg	10	06/13/13	06/17/13	RS	SW846 6010B [2]	SW846 3050B [3]
Mercury	< 0.0041	0.0041	mg/kg	1	06/17/13	06/17/13	DQ	SW846 7471A [1]	SW846 7471A [4]
Selenium	< 2.0	2.0	mg/kg	10	06/13/13	06/17/13	RS	SW846 6010B [2]	SW846 3050B [3]
Silver	< 1.0	1.0	mg/kg	10	06/13/13	06/17/13	RS	SW846 6010B [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA3227
(2) Instrument QC Batch: MA3228
(3) Prep QC Batch: MP6321
(4) Prep QC Batch: MP6336

RL = Reporting Limit

Report of Analysis

Client Sample ID:	13-2011.DU3		
Lab Sample ID:	C28092-3A	**Date Sampled:**	06/04/13
Matrix:	SO - Soil	**Date Received:**	06/06/13
Method:	SW846 8015B M SW846 3550B	**Percent Solids:**	89.0
Project:	WHC-Site Sampling		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH304382.D	50	06/10/13	AG	06/07/13	OP8111	GHH1003
Run #2							

	Initial Weight	Final Volume
Run #1	10.2 g	1.0 ml
Run #2		

TPH Extractable

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	213	550	140	mg/kg	J
	TPH (> C28-C40)	2250	1100	280	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	72%		37-122%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	13-2011.DU3		
Lab Sample ID:	C28092-3A	**Date Sampled:**	06/04/13
Matrix:	SO - Soil	**Date Received:**	06/06/13
		Percent Solids:	89.0
Project:	WHC-Site Sampling		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Moisture, Percent	11		%	1	06/07/13 12:00	AC	SM18 2540G

RL = Reporting Limit

Report of Analysis

Client Sample ID:	13-2011.DU4		
Lab Sample ID:	C28092-4	**Date Sampled:**	06/04/13
Matrix:	SO - Soil	**Date Received:**	06/06/13
Method:	SW846 8270C BY SIM SW846 3550B	**Percent Solids:**	n/a
Project:	WHC-Site Sampling		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	X29994.D	2	06/13/13	NL	06/12/13	OP8135	EX1351
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	33	3.3	ug/kg	
208-96-8	Acenaphthylene	ND	33	3.3	ug/kg	
120-12-7	Anthracene	ND	33	3.3	ug/kg	
56-55-3	Benzo(a)anthracene	15.5	6.7	1.7	ug/kg	
50-32-8	Benzo(a)pyrene	21.3	6.7	1.1	ug/kg	
205-99-2	Benzo(b)fluoranthene	34.2	6.7	1.3	ug/kg	
191-24-2	Benzo(g,h,i)perylene	24.1	6.7	1.5	ug/kg	
207-08-9	Benzo(k)fluoranthene	23.7	6.7	1.5	ug/kg	
218-01-9	Chrysene	32.9	6.7	1.3	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	6.2	6.7	1.9	ug/kg	J
206-44-0	Fluoranthene	34.7	33	3.3	ug/kg	
86-73-7	Fluorene	ND	33	3.3	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	17.5	6.7	1.7	ug/kg	
90-12-0	1-Methylnaphthalene	ND	33	6.7	ug/kg	
91-57-6	2-Methylnaphthalene	ND	33	6.7	ug/kg	
91-20-3	Naphthalene	ND	33	6.7	ug/kg	
85-01-8	Phenanthrene	7.0	33	3.3	ug/kg	J
129-00-0	Pyrene	29.5	33	3.3	ug/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	91%		13-123%
321-60-8	2-Fluorobiphenyl	97%		17-126%
1718-51-0	Terphenyl-d14	116%		51-146%

(a) Dilution required due to matrix interference (dark and viscous extract; high concentration of non-target hydrocarbons).

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	13-2011.DU4		
Lab Sample ID:	C28092-4	**Date Sampled:**	06/04/13
Matrix:	SO - Soil	**Date Received:**	06/06/13
Method:	SW846 8081A SW846 3550B	**Percent Solids:**	n/a
Project:	WHC-Site Sampling		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	MM016224.D	1	06/11/13	RV	06/11/13	OP8128	GMM450
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	10.0 ml
Run #2		

Pesticide PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	3.3	0.40	ug/kg	
319-84-6	alpha-BHC	ND	3.3	0.37	ug/kg	
319-85-7	beta-BHC	ND	3.3	0.80	ug/kg	
319-86-8	delta-BHC	ND	3.3	0.40	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	3.3	0.40	ug/kg	
12789-03-6	Chlordane	ND	33	3.3	ug/kg	
60-57-1	Dieldrin	ND	3.3	0.60	ug/kg	
72-54-8	4,4'-DDD	ND	3.3	0.70	ug/kg	
72-55-9	4,4'-DDE	0.84	3.3	0.60	ug/kg	J
50-29-3	4,4'-DDT	ND	3.3	0.50	ug/kg	
72-20-8	Endrin	ND	3.3	0.60	ug/kg	
7421-93-4	Endrin aldehyde	ND	3.3	0.60	ug/kg	
959-98-8	Endosulfan-I	ND	3.3	0.57	ug/kg	
33213-65-9	Endosulfan-II	ND	3.3	0.60	ug/kg	
1031-07-8	Endosulfan sulfate	ND	3.3	0.57	ug/kg	
76-44-8	Heptachlor	ND	3.3	0.47	ug/kg	
1024-57-3	Heptachlor epoxide	ND	3.3	0.50	ug/kg	
72-43-5	Methoxychlor	ND	3.3	0.53	ug/kg	
8001-35-2	Toxaphene	ND	33	6.7	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	68%		31-113%
877-09-8	Tetrachloro-m-xylene	70%		31-113%
2051-24-3	Decachlorobiphenyl	87%		61-129%
2051-24-3	Decachlorobiphenyl	94%		61-129%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	13-2011.DU4		
Lab Sample ID:	C28092-4	**Date Sampled:**	06/04/13
Matrix:	SO - Soil	**Date Received:**	06/06/13
Method:	SW846 8082 SW846 3550B	**Percent Solids:**	n/a
Project:	WHC-Site Sampling		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	PP030955.D	1	06/11/13	RV	06/11/13	OP8129	GPP1013
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	33	6.7	ug/kg	
11104-28-2	Aroclor 1221	ND	33	17	ug/kg	
11141-16-5	Aroclor 1232	ND	33	17	ug/kg	
53469-21-9	Aroclor 1242	ND	33	17	ug/kg	
12672-29-6	Aroclor 1248	ND	33	17	ug/kg	
11097-69-1	Aroclor 1254	ND	33	17	ug/kg	
11096-82-5	Aroclor 1260	ND	33	6.7	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	89%		38-109%
877-09-8	Tetrachloro-m-xylene	97%		38-109%
2051-24-3	Decachlorobiphenyl	79%		49-138%
2051-24-3	Decachlorobiphenyl	68%		49-138%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	13-2011.DU4		
Lab Sample ID:	C28092-4	**Date Sampled:**	06/04/13
Matrix:	SO - Soil	**Date Received:**	06/06/13
		Percent Solids:	n/a
Project:	WHC-Site Sampling		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	< 1.0	1.0	mg/kg	5	06/13/13	06/17/13	RS	SW846 6010B [2]	SW846 3050B [3]
Barium	21.2	10	mg/kg	5	06/13/13	06/17/13	RS	SW846 6010B [2]	SW846 3050B [3]
Cadmium	< 0.50	0.50	mg/kg	5	06/13/13	06/17/13	RS	SW846 6010B [2]	SW846 3050B [3]
Chromium	9.5	0.50	mg/kg	5	06/13/13	06/17/13	RS	SW846 6010B [2]	SW846 3050B [3]
Lead	16.2	1.0	mg/kg	5	06/13/13	06/17/13	RS	SW846 6010B [2]	SW846 3050B [3]
Mercury	< 0.0041	0.0041	mg/kg	1	06/17/13	06/17/13	DQ	SW846 7471A [1]	SW846 7471A [4]
Selenium	< 1.0	1.0	mg/kg	5	06/13/13	06/17/13	RS	SW846 6010B [2]	SW846 3050B [3]
Silver	< 0.50	0.50	mg/kg	5	06/13/13	06/17/13	RS	SW846 6010B [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA3227
(2) Instrument QC Batch: MA3228
(3) Prep QC Batch: MP6321
(4) Prep QC Batch: MP6336

RL = Reporting Limit

Report of Analysis

Client Sample ID:	13-2011.DU4		
Lab Sample ID:	C28092-4A	**Date Sampled:**	06/04/13
Matrix:	SO - Soil	**Date Received:**	06/06/13
Method:	SW846 8015B M SW846 3550B	**Percent Solids:**	87.8
Project:	WHC-Site Sampling		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH304441.D	20	06/11/13	AG	06/07/13	OP8111	GHH1004
Run #2							

	Initial Weight	Final Volume
Run #1	10.0 g	1.0 ml
Run #2		

TPH Extractable

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	230	57	mg/kg	
	TPH (> C28-C40)	486	450	110	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	80%		37-122%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	13-2011.DU4		
Lab Sample ID:	C28092-4A	**Date Sampled:**	06/04/13
Matrix:	SO - Soil	**Date Received:**	06/06/13
		Percent Solids:	87.8
Project:	WHC-Site Sampling		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Moisture, Percent	12.2		%	1	06/07/13 12:00	AC	SM18 2540G

RL = Reporting Limit

Report of Analysis

Client Sample ID:	13-2011.DU5		
Lab Sample ID:	C28092-5	**Date Sampled:**	06/04/13
Matrix:	SO - Soil	**Date Received:**	06/06/13
Method:	SW846 8270C BY SIM SW846 3550B	**Percent Solids:**	n/a
Project:	WHC-Site Sampling		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	X29993.D	5	06/13/13	NL	06/12/13	OP8135	EX1351
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	83	8.3	ug/kg	
208-96-8	Acenaphthylene	ND	83	8.3	ug/kg	
120-12-7	Anthracene	ND	83	8.3	ug/kg	
56-55-3	Benzo(a)anthracene	16.4	17	4.2	ug/kg	J
50-32-8	Benzo(a)pyrene	21.6	17	2.8	ug/kg	
205-99-2	Benzo(b)fluoranthene	38.2	17	3.3	ug/kg	
191-24-2	Benzo(g,h,i)perylene	31.1	17	3.7	ug/kg	
207-08-9	Benzo(k)fluoranthene	19.1	17	3.8	ug/kg	
218-01-9	Chrysene	30.0	17	3.3	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	6.0	17	4.7	ug/kg	J
206-44-0	Fluoranthene	48.4	83	8.3	ug/kg	J
86-73-7	Fluorene	ND	83	8.3	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	23.5	17	4.2	ug/kg	
90-12-0	1-Methylnaphthalene	ND	83	17	ug/kg	
91-57-6	2-Methylnaphthalene	ND	83	17	ug/kg	
91-20-3	Naphthalene	ND	83	17	ug/kg	
85-01-8	Phenanthrene	11.6	83	8.3	ug/kg	J
129-00-0	Pyrene	38.8	83	8.3	ug/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	72%		13-123%
321-60-8	2-Fluorobiphenyl	86%		17-126%
1718-51-0	Terphenyl-d14	96%		51-146%

(a) Dilution required due to matrix interference (dark and viscous extract; high concentration of non-target hydrocarbons).

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	13-2011.DU5		
Lab Sample ID:	C28092-5	**Date Sampled:**	06/04/13
Matrix:	SO - Soil	**Date Received:**	06/06/13
Method:	SW846 8081A SW846 3550B	**Percent Solids:**	n/a
Project:	WHC-Site Sampling		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	MM016225.D	1	06/11/13	RV	06/11/13	OP8128	GMM450
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	10.0 ml
Run #2		

Pesticide PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	3.3	0.40	ug/kg	
319-84-6	alpha-BHC	ND	3.3	0.37	ug/kg	
319-85-7	beta-BHC	ND	3.3	0.80	ug/kg	
319-86-8	delta-BHC	ND	3.3	0.40	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	3.3	0.40	ug/kg	
12789-03-6	Chlordane	ND	33	3.3	ug/kg	
60-57-1	Dieldrin	ND	3.3	0.60	ug/kg	
72-54-8	4,4'-DDD	ND	3.3	0.70	ug/kg	
72-55-9	4,4'-DDE	0.88	3.3	0.60	ug/kg	J
50-29-3	4,4'-DDT [a]	0.61	3.3	0.50	ug/kg	J
72-20-8	Endrin	ND	3.3	0.60	ug/kg	
7421-93-4	Endrin aldehyde	ND	3.3	0.60	ug/kg	
959-98-8	Endosulfan-I	ND	3.3	0.57	ug/kg	
33213-65-9	Endosulfan-II	ND	3.3	0.60	ug/kg	
1031-07-8	Endosulfan sulfate	ND	3.3	0.57	ug/kg	
76-44-8	Heptachlor	ND	3.3	0.47	ug/kg	
1024-57-3	Heptachlor epoxide	ND	3.3	0.50	ug/kg	
72-43-5	Methoxychlor	ND	3.3	0.53	ug/kg	
8001-35-2	Toxaphene	ND	33	6.7	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	83%		31-113%
877-09-8	Tetrachloro-m-xylene	82%		31-113%
2051-24-3	Decachlorobiphenyl	80%		61-129%
2051-24-3	Decachlorobiphenyl	92%		61-129%

(a) Quantitation between primary and confirmation differed by > 40% possibly due to matrix interference. Lower value reported.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	13-2011.DU5		
Lab Sample ID:	C28092-5	**Date Sampled:**	06/04/13
Matrix:	SO - Soil	**Date Received:**	06/06/13
Method:	SW846 8082 SW846 3550B	**Percent Solids:**	n/a
Project:	WHC-Site Sampling		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	PP030956.D	1	06/11/13	RV	06/11/13	OP8129	GPP1013
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	33	6.7	ug/kg	
11104-28-2	Aroclor 1221	ND	33	17	ug/kg	
11141-16-5	Aroclor 1232	ND	33	17	ug/kg	
53469-21-9	Aroclor 1242	ND	33	17	ug/kg	
12672-29-6	Aroclor 1248	ND	33	17	ug/kg	
11097-69-1	Aroclor 1254	ND	33	17	ug/kg	
11096-82-5	Aroclor 1260	ND	33	6.7	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	92%		38-109%
877-09-8	Tetrachloro-m-xylene	104%		38-109%
2051-24-3	Decachlorobiphenyl	84%		49-138%
2051-24-3	Decachlorobiphenyl	75%		49-138%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	13-2011.DU5		
Lab Sample ID:	C28092-5	**Date Sampled:**	06/04/13
Matrix:	SO - Soil	**Date Received:**	06/06/13
		Percent Solids:	n/a
Project:	WHC-Site Sampling		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	< 1.0	1.0	mg/kg	5	06/13/13	06/17/13	RS	SW846 6010B [2]	SW846 3050B [3]
Barium	12.5	10	mg/kg	5	06/13/13	06/17/13	RS	SW846 6010B [2]	SW846 3050B [3]
Cadmium	< 0.50	0.50	mg/kg	5	06/13/13	06/17/13	RS	SW846 6010B [2]	SW846 3050B [3]
Chromium	4.6	0.50	mg/kg	5	06/13/13	06/17/13	RS	SW846 6010B [2]	SW846 3050B [3]
Lead	13.7	1.0	mg/kg	5	06/13/13	06/17/13	RS	SW846 6010B [2]	SW846 3050B [3]
Mercury	< 0.0041	0.0041	mg/kg	1	06/17/13	06/17/13	DQ	SW846 7471A [1]	SW846 7471A [4]
Selenium	< 1.0	1.0	mg/kg	5	06/13/13	06/17/13	RS	SW846 6010B [2]	SW846 3050B [3]
Silver	< 0.50	0.50	mg/kg	5	06/13/13	06/17/13	RS	SW846 6010B [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA3227
(2) Instrument QC Batch: MA3228
(3) Prep QC Batch: MP6321
(4) Prep QC Batch: MP6336

RL = Reporting Limit

Report of Analysis

Client Sample ID:	13-2011.DU5		
Lab Sample ID:	C28092-5A	**Date Sampled:**	06/04/13
Matrix:	SO - Soil	**Date Received:**	06/06/13
Method:	SW846 8015B M SW846 3550B	**Percent Solids:**	89.8
Project:	WHC-Site Sampling		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH304426.D	5	06/11/13	AG	06/07/13	OP8111	GHH1004
Run #2							

	Initial Weight	Final Volume
Run #1	10.0 g	1.0 ml
Run #2		

TPH Extractable

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	19.5	55	14	mg/kg	J
	TPH (> C28-C40)	151	110	28	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	84%		37-122%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	13-2011.DU5		
Lab Sample ID:	C28092-5A	**Date Sampled:**	06/04/13
Matrix:	SO - Soil	**Date Received:**	06/06/13
		Percent Solids:	89.8
Project:	WHC-Site Sampling		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Moisture, Percent	10.2		%	1	06/07/13 12:00	AC	SM18 2540G

RL = Reporting Limit

Report of Analysis

Client Sample ID:	13-2011.DU6		
Lab Sample ID:	C28092-6	**Date Sampled:**	06/04/13
Matrix:	SO - Soil	**Date Received:**	06/06/13
Method:	SW846 8270C BY SIM SW846 3550B	**Percent Solids:**	n/a
Project:	WHC-Site Sampling		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	X29992.D	5	06/13/13	NL	06/12/13	OP8135	EX1351
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	83	8.3	ug/kg	
208-96-8	Acenaphthylene	ND	83	8.3	ug/kg	
120-12-7	Anthracene	ND	83	8.3	ug/kg	
56-55-3	Benzo(a)anthracene	19.5	17	4.2	ug/kg	
50-32-8	Benzo(a)pyrene	27.0	17	2.8	ug/kg	
205-99-2	Benzo(b)fluoranthene	41.0	17	3.3	ug/kg	
191-24-2	Benzo(g,h,i)perylene	37.8	17	3.7	ug/kg	
207-08-9	Benzo(k)fluoranthene	31.3	17	3.8	ug/kg	
218-01-9	Chrysene	42.3	17	3.3	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	7.2	17	4.7	ug/kg	J
206-44-0	Fluoranthene	69.4	83	8.3	ug/kg	J
86-73-7	Fluorene	ND	83	8.3	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	27.4	17	4.2	ug/kg	
90-12-0	1-Methylnaphthalene	ND	83	17	ug/kg	
91-57-6	2-Methylnaphthalene	ND	83	17	ug/kg	
91-20-3	Naphthalene	ND	83	17	ug/kg	
85-01-8	Phenanthrene	18.0	83	8.3	ug/kg	J
129-00-0	Pyrene	52.7	83	8.3	ug/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	65%		13-123%
321-60-8	2-Fluorobiphenyl	79%		17-126%
1718-51-0	Terphenyl-d14	90%		51-146%

(a) Dilution required due to matrix interference (dark and viscous extract; high concentration of non-target hydrocarbons).

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	13-2011.DU6		
Lab Sample ID:	C28092-6	**Date Sampled:**	06/04/13
Matrix:	SO - Soil	**Date Received:**	06/06/13
Method:	SW846 8081A SW846 3550B	**Percent Solids:**	n/a
Project:	WHC-Site Sampling		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	MM016226.D	1	06/11/13	RV	06/11/13	OP8128	GMM450
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	10.0 ml
Run #2		

Pesticide PPL List

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	3.3	0.40	ug/kg	
319-84-6	alpha-BHC	ND	3.3	0.37	ug/kg	
319-85-7	beta-BHC	ND	3.3	0.80	ug/kg	
319-86-8	delta-BHC	ND	3.3	0.40	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	3.3	0.40	ug/kg	
12789-03-6	Chlordane	ND	33	3.3	ug/kg	
60-57-1	Dieldrin	ND	3.3	0.60	ug/kg	
72-54-8	4,4'-DDD	1.2	3.3	0.70	ug/kg	J
72-55-9	4,4'-DDE	1.1	3.3	0.60	ug/kg	J
50-29-3	4,4'-DDT	0.66	3.3	0.50	ug/kg	J
72-20-8	Endrin	ND	3.3	0.60	ug/kg	
7421-93-4	Endrin aldehyde	ND	3.3	0.60	ug/kg	
959-98-8	Endosulfan-I	ND	3.3	0.57	ug/kg	
33213-65-9	Endosulfan-II	ND	3.3	0.60	ug/kg	
1031-07-8	Endosulfan sulfate	ND	3.3	0.57	ug/kg	
76-44-8	Heptachlor	ND	3.3	0.47	ug/kg	
1024-57-3	Heptachlor epoxide	ND	3.3	0.50	ug/kg	
72-43-5	Methoxychlor	ND	3.3	0.53	ug/kg	
8001-35-2	Toxaphene	ND	33	6.7	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	58%		31-113%
877-09-8	Tetrachloro-m-xylene	59%		31-113%
2051-24-3	Decachlorobiphenyl	65%		61-129%
2051-24-3	Decachlorobiphenyl	74%		61-129%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	13-2011.DU6		
Lab Sample ID:	C28092-6	**Date Sampled:**	06/04/13
Matrix:	SO - Soil	**Date Received:**	06/06/13
Method:	SW846 8082 SW846 3550B	**Percent Solids:**	n/a
Project:	WHC-Site Sampling		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	PP030957.D	1	06/11/13	RV	06/11/13	OP8129	GPP1013
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	10.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	33	6.7	ug/kg	
11104-28-2	Aroclor 1221	ND	33	17	ug/kg	
11141-16-5	Aroclor 1232	ND	33	17	ug/kg	
53469-21-9	Aroclor 1242	ND	33	17	ug/kg	
12672-29-6	Aroclor 1248	ND	33	17	ug/kg	
11097-69-1	Aroclor 1254	ND	33	17	ug/kg	
11096-82-5	Aroclor 1260	ND	33	6.7	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	70%		38-109%
877-09-8	Tetrachloro-m-xylene	78%		38-109%
2051-24-3	Decachlorobiphenyl	66%		49-138%
2051-24-3	Decachlorobiphenyl	58%		49-138%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	13-2011.DU6		
Lab Sample ID:	C28092-6	**Date Sampled:**	06/04/13
Matrix:	SO - Soil	**Date Received:**	06/06/13
		Percent Solids:	n/a
Project:	WHC-Site Sampling		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	< 1.0	1.0	mg/kg	5	06/13/13	06/17/13	RS	SW846 6010B [2]	SW846 3050B [3]
Barium	17.4	10	mg/kg	5	06/13/13	06/17/13	RS	SW846 6010B [2]	SW846 3050B [3]
Cadmium	< 0.50	0.50	mg/kg	5	06/13/13	06/17/13	RS	SW846 6010B [2]	SW846 3050B [3]
Chromium	5.3	0.50	mg/kg	5	06/13/13	06/17/13	RS	SW846 6010B [2]	SW846 3050B [3]
Lead	17.4	1.0	mg/kg	5	06/13/13	06/17/13	RS	SW846 6010B [2]	SW846 3050B [3]
Mercury	< 0.0042	0.0042	mg/kg	1	06/17/13	06/17/13	DQ	SW846 7471A [1]	SW846 7471A [4]
Selenium	< 1.0	1.0	mg/kg	5	06/13/13	06/17/13	RS	SW846 6010B [2]	SW846 3050B [3]
Silver	< 0.50	0.50	mg/kg	5	06/13/13	06/17/13	RS	SW846 6010B [2]	SW846 3050B [3]

(1) Instrument QC Batch: MA3227
(2) Instrument QC Batch: MA3228
(3) Prep QC Batch: MP6321
(4) Prep QC Batch: MP6336

RL = Reporting Limit

Report of Analysis

Client Sample ID:	13-2011.DU6		
Lab Sample ID:	C28092-6A	**Date Sampled:**	06/04/13
Matrix:	SO - Soil	**Date Received:**	06/06/13
Method:	SW846 8015B M SW846 3550B	**Percent Solids:**	76.2
Project:	WHC-Site Sampling		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH304427.D	5	06/11/13	AG	06/07/13	OP8111	GHH1004
Run #2							

	Initial Weight	Final Volume
Run #1	10.1 g	1.0 ml
Run #2		

TPH Extractable

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	50.0	65	16	mg/kg	J
	TPH (> C28-C40)	387	130	32	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	81%		37-122%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	13-2011.DU6		
Lab Sample ID:	C28092-6A	**Date Sampled:**	06/04/13
Matrix:	SO - Soil	**Date Received:**	06/06/13
		Percent Solids:	76.2
Project:	WHC-Site Sampling		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Moisture, Percent	23.8		%	1	06/07/13 12:00	AC	SM18 2540G

RL = Reporting Limit

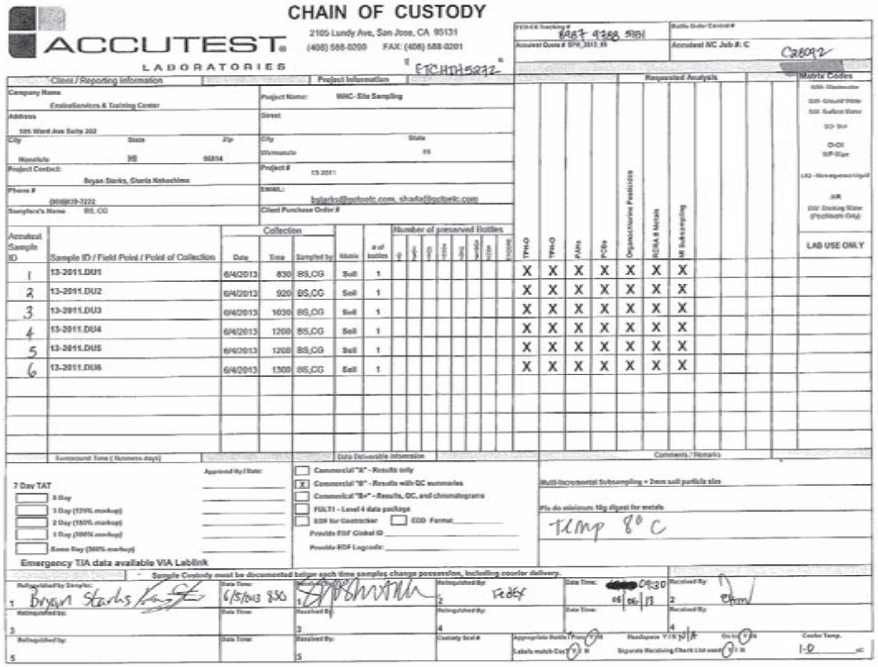
Northern California ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody



ACCUTEST LABORATORIES

CHAIN OF CUSTODY

2105 Lundy Ave, San Jose, CA 95131
(408) 588-0200 FAX: (408) 588-0201

Accutest Quote # EPA_2012_88

Accutest NC Job #: C28092

Client / Reporting Information

Company Name: Environmental Training Center

Address: 505 West Ave Suite 202

City: Honolulu State: HI Zip: 96814

Project Contact: Bryan Starks, Sheila Nakashima

Phone #: (808)839-7222

Sampler's Name: BS, CG

Project Information

Project Name: WAC-Site Sampling

Street:

City: Waimanalo State: HI

Project #: 13-2011

EMAIL: bstarks@optiondc.com, sheila@optiondc.com

Client Purchase Order #:

Requested Analysis

Matrix Codes

Accutest Sample ID	Sample ID / Field Point / Point of Collection	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	TPHG	TPHD	PAHs	PCBs	Organochlorine Pesticides	RCRA 8 Metals	SB Subsampling	LAB USE ONLY
1	13-2011.DU1	6/4/2013	830	BS,CG	Soil	1	X	X	X	X	X	X	X	
2	13-2011.DU2	6/4/2013	920	BS,CG	Soil	1	X	X	X	X	X	X	X	
3	13-2011.DU3	6/4/2013	1030	BS,CG	Soil	1	X	X	X	X	X	X	X	
4	13-2011.DU4	6/4/2013	1200	BS,CG	Soil	1	X	X	X	X	X	X	X	
5	13-2011.DU5	6/4/2013	1200	BS,CG	Soil	1	X	X	X	X	X	X	X	
6	13-2011.DU6	6/4/2013	1300	BS,CG	Soil	1	X	X	X	X	X	X	X	

Turnaround Time (Business days)

7 Day TAT

Data Deliverable Information

Commercial "A" - Results only

Commercial "B" - Results with QC summaries

Commercial "B+" - Results, QC, and chromatograms

FULTI - Level 4 data package

EDD for Geotracker EDD Format

Provide EDF Global ID

Provide EDF Logicode

Comments / Remarks

Multi-incremental Subsampling = 2mm soil particle size

Pb do minimum 10g digest for metals

Temp 8°C

Emergency TIA data available VIA Lablink

Sample Custody must be documented below each time samples change possession, including courier delivery.

1 Relinquished By: Bryan Starks 6/5/2013 830 — Date Time: 6/5/2013 830

2 Received By: — Relinquished By: FEDEX

3 Relinquished By: — Date Time: — Received By:

4 Relinquished By: — Date Time: — Received By:

5 Relinquished By: — Date Time: — Received By:

Custody Seal #

Appropriate Bottle Preservation Y / N

Headspace Y / N

On Ice Y / N

Cooler Temp. 1-2 °C

Labels match COC Y / N

Separate Receiving Check List used Y / N

C28092: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: C28092 **Client:** ENVIROSERVICES & TRAINING CENTER **Project:** WHC-SITE SAMPLING

Date / Time Received: 6/6/2013 **Delivery Method:** FedEx **Airbill #'s:** 8987 9788 5151

Cooler Temps (Initial/Adjusted): #1: (1/1); 0

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☐		☑	3. COC Present:	☑		☐
2. Custody Seals Intact:	☐		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	IR Gun		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	☑
2. Trip Blank listed on COC:	☐		☐	☑
3. Samples preserved properly:	☐		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments *Foreign Soil Sample*
Sub-sampled an Aliquot for %MOIST & TPH-DRO/ORO before "Drying"

Accutest Laboratories
V:408.588.0200
2105 Lundy Avenue
F: 408.588.0201
San Jose, CA 95131
www.accutest.com

C28092: Chain of Custody
Page 2 of 2

Northern California ACCUTEST LABORATORIES

GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: C28092
Account: ETCHIH EnviroServices and Traning Center
Project: WHC-Site Sampling

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8135-MB	X29973.D	1	06/12/13	NL	06/12/13	OP8135	EX1351

The QC reported here applies to the following samples: **Method:** SW846 8270C BY SIM

C28092-1, C28092-2, C28092-3, C28092-4, C28092-5, C28092-6

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	17	1.7	ug/kg	
208-96-8	Acenaphthylene	ND	17	1.7	ug/kg	
120-12-7	Anthracene	ND	17	1.7	ug/kg	
56-55-3	Benzo(a)anthracene	ND	3.3	0.83	ug/kg	
50-32-8	Benzo(a)pyrene	ND	3.3	0.57	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	3.3	0.67	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	3.3	0.73	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	3.3	0.77	ug/kg	
218-01-9	Chrysene	ND	3.3	0.67	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	3.3	0.93	ug/kg	
206-44-0	Fluoranthene	ND	17	1.7	ug/kg	
86-73-7	Fluorene	ND	17	1.7	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	3.3	0.83	ug/kg	
90-12-0	1-Methylnaphthalene	ND	17	3.3	ug/kg	
91-57-6	2-Methylnaphthalene	ND	17	3.3	ug/kg	
91-20-3	Naphthalene	ND	17	3.3	ug/kg	
85-01-8	Phenanthrene	ND	17	1.7	ug/kg	
129-00-0	Pyrene	ND	17	1.7	ug/kg	

CAS No.	Surrogate Recoveries		Limits
4165-60-0	Nitrobenzene-d5	115%	13-123%
321-60-8	2-Fluorobiphenyl	117%	17-126%
1718-51-0	Terphenyl-d14	131%	51-146%

Blank Spike/Blank Spike Duplicate Summary

Job Number: C28092
Account: ETCHIH EnviroServices and Traning Center
Project: WHC-Site Sampling

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8135-BS	X29974.D	1	06/12/13	NL	06/12/13	OP8135	EX1351
OP8135-BSD	X29975.D	1	06/12/13	NL	06/12/13	OP8135	EX1351

The QC reported here applies to the following samples: **Method:** SW846 8270C BY SIM

C28092-1, C28092-2, C28092-3, C28092-4, C28092-5, C28092-6

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	167	138	83	147	88	6	51-102/33
208-96-8	Acenaphthylene	167	139	83	148	89	6	52-105/32
120-12-7	Anthracene	167	137	82	147	88	7	65-105/29
56-55-3	Benzo(a)anthracene	167	143	86	151	91	5	77-115/25
50-32-8	Benzo(a)pyrene	167	128	77	142	85	10	76-124/27
205-99-2	Benzo(b)fluoranthene	167	151	91	166	100	9	79-123/26
191-24-2	Benzo(g,h,i)perylene	167	116	70	136	82	16	70-125/27
207-08-9	Benzo(k)fluoranthene	167	161	97	161	97	0	78-120/25
218-01-9	Chrysene	167	142	85	152	91	7	79-111/24
53-70-3	Dibenzo(a,h)anthracene	167	127	76	148	89	15	69-128/26
206-44-0	Fluoranthene	167	151	91	165	99	9	70-109/28
86-73-7	Fluorene	167	152	91	163	98	7	52-105/32
193-39-5	Indeno(1,2,3-cd)pyrene	167	118	71* [a]	141	85	18	72-122/27
90-12-0	1-Methylnaphthalene	167	133	80	140	84	5	49-96/33
91-57-6	2-Methylnaphthalene	167	134	80	141	85	5	53-102/32
91-20-3	Naphthalene	167	126	76	136	82	8	49-98/31
85-01-8	Phenanthrene	167	141	85	151	91	7	55-104/30
129-00-0	Pyrene	167	131	79	141	85	7	67-108/29

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
4165-60-0	Nitrobenzene-d5	100%	109%	13-123%
321-60-8	2-Fluorobiphenyl	103%	108%	17-126%
1718-51-0	Terphenyl-d14	107%	112%	51-146%

(a) Outside laboratory control limits; but within marginal exceedence criteria.

* = Outside of Control Limits.

Northern California ACCUTEST LABORATORIES

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: C28092
Account: ETCHIH EnviroServices and Traning Center
Project: WHC-Site Sampling

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8128-MB	MM016233.D	1	06/11/13	RV	06/11/13	OP8128	GMM450

The QC reported here applies to the following samples: **Method:** SW846 8081A

C28092-1, C28092-2, C28092-3, C28092-4, C28092-5, C28092-6

CAS No.	Compound	Result	RL	MDL	Units	Q
309-00-2	Aldrin	ND	3.3	0.40	ug/kg	
319-84-6	alpha-BHC	ND	3.3	0.37	ug/kg	
319-85-7	beta-BHC	ND	3.3	0.80	ug/kg	
319-86-8	delta-BHC	ND	3.3	0.40	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	3.3	0.40	ug/kg	
12789-03-6	Chlordane	ND	33	3.3	ug/kg	
60-57-1	Dieldrin	ND	3.3	0.60	ug/kg	
72-54-8	4,4'-DDD	ND	3.3	0.70	ug/kg	
72-55-9	4,4'-DDE	ND	3.3	0.60	ug/kg	
50-29-3	4,4'-DDT	ND	3.3	0.50	ug/kg	
72-20-8	Endrin	ND	3.3	0.60	ug/kg	
7421-93-4	Endrin aldehyde	ND	3.3	0.60	ug/kg	
959-98-8	Endosulfan-I	ND	3.3	0.57	ug/kg	
33213-65-9	Endosulfan-II	ND	3.3	0.60	ug/kg	
1031-07-8	Endosulfan sulfate	ND	3.3	0.57	ug/kg	
76-44-8	Heptachlor	ND	3.3	0.47	ug/kg	
1024-57-3	Heptachlor epoxide	ND	3.3	0.50	ug/kg	
72-43-5	Methoxychlor	ND	3.3	0.53	ug/kg	
8001-35-2	Toxaphene	ND	33	6.7	ug/kg	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	104%	31-113%
877-09-8	Tetrachloro-m-xylene	97%	31-113%
2051-24-3	Decachlorobiphenyl	91%	61-129%
2051-24-3	Decachlorobiphenyl	103%	61-129%

Method Blank Summary

Job Number: C28092
Account: ETCHIH EnviroServices and Traning Center
Project: WHC-Site Sampling

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8129-MB	PP030961.D	1	06/11/13	RV	06/11/13	OP8129	GPP1013

The QC reported here applies to the following samples: **Method:** SW846 8082

C28092-1, C28092-2, C28092-3, C28092-4, C28092-5, C28092-6

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	33	6.7	ug/kg	
11104-28-2	Aroclor 1221	ND	33	17	ug/kg	
11141-16-5	Aroclor 1232	ND	33	17	ug/kg	
53469-21-9	Aroclor 1242	ND	33	17	ug/kg	
12672-29-6	Aroclor 1248	ND	33	17	ug/kg	
11097-69-1	Aroclor 1254	ND	33	17	ug/kg	
11096-82-5	Aroclor 1260	ND	33	6.7	ug/kg	

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	100%	38-109%
877-09-8	Tetrachloro-m-xylene	105%	38-109%
2051-24-3	Decachlorobiphenyl	95%	49-138%
2051-24-3	Decachlorobiphenyl	86%	49-138%

Method Blank Summary

Job Number: C28092
Account: ETCHIH EnviroServices and Traning Center
Project: WHC-Site Sampling

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8111-MB	GG43441.D	1	06/08/13	RV	06/07/13	OP8111	GGG1168

The QC reported here applies to the following samples: **Method:** SW846 8015B M

C28092-1A, C28092-2A, C28092-3A, C28092-4A, C28092-5A, C28092-6A

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	10	2.5	mg/kg	
	TPH (> C28-C40)	ND	20	5.0	mg/kg	

CAS No.	Surrogate Recoveries		Limits
630-01-3	Hexacosane	108%	37-122%

Blank Spike/Blank Spike Duplicate Summary

Job Number: C28092
Account: ETCHIH EnviroServices and Traning Center
Project: WHC-Site Sampling

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8128-BS	MM016234.D	1	06/11/13	RV	06/11/13	OP8128	GMM450
OP8128-BSD	MM016235.D	1	06/11/13	RV	06/11/13	OP8128	GMM450

The QC reported here applies to the following samples: **Method:** SW846 8081A

C28092-1, C28092-2, C28092-3, C28092-4, C28092-5, C28092-6

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
309-00-2	Aldrin	33.3	30.2	91	32.2	97	6	35-119/28
319-84-6	alpha-BHC	33.3	30.4	91	31.9	96	5	33-126/28
319-85-7	beta-BHC	33.3	30.3	91	32.1	96	6	42-123/24
319-86-8	delta-BHC	33.3	33.0	99	35.0	105	6	40-131/23
58-89-9	gamma-BHC (Lindane)	33.3	30.5	92	32.1	96	5	37-126/26
60-57-1	Dieldrin	33.3	28.8	86	29.9	90	4	53-124/24
72-54-8	4,4'-DDD	33.3	31.1	93	32.1	96	3	65-128/26
72-55-9	4,4'-DDE	33.3	30.1	90	31.5	95	5	55-123/26
50-29-3	4,4'-DDT	33.3	24.7	74	28.6	86	15	59-129/28
72-20-8	Endrin	33.3	33.2	100	34.3	103	3	58-131/22
7421-93-4	Endrin aldehyde	33.3	28.6	86	32.9	99	14	60-130/28
959-98-8	Endosulfan-I	33.3	30.9	93	32.4	97	5	49-126/26
33213-65-9	Endosulfan-II	33.3	29.6	89	30.9	93	4	60-130/23
1031-07-8	Endosulfan sulfate	33.3	32.4	97	34.8	104	7	57-142/25
76-44-8	Heptachlor	33.3	33.9	102	35.8	107	5	43-127/25
1024-57-3	Heptachlor epoxide	33.3	31.6	95	33.1	99	5	52-121/24
72-43-5	Methoxychlor	33.3	26.5	80	28.7	86	8	69-144/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
877-09-8	Tetrachloro-m-xylene	97%	100%	31-113%
877-09-8	Tetrachloro-m-xylene	94%	97%	31-113%
2051-24-3	Decachlorobiphenyl	85%	89%	61-129%
2051-24-3	Decachlorobiphenyl	102%	101%	61-129%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C28092
Account: ETCHIH EnviroServices and Traning Center
Project: WHC-Site Sampling

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8129-BS	PP030962.D	1	06/11/13	RV	06/11/13	OP8129	GPP1013
OP8129-BSD	PP030963.D	1	06/11/13	RV	06/11/13	OP8129	GPP1013

The QC reported here applies to the following samples: **Method:** SW846 8082

C28092-1, C28092-2, C28092-3, C28092-4, C28092-5, C28092-6

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
12674-11-2	Aroclor 1016	133	142	107	120	90	17	46-114/22
11096-82-5	Aroclor 1260	133	153	115	136	102	12	54-127/21

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
877-09-8	Tetrachloro-m-xylene	109%	93%	38-109%
877-09-8	Tetrachloro-m-xylene	115%* [a]	97%	38-109%
2051-24-3	Decachlorobiphenyl	102%	93%	49-138%
2051-24-3	Decachlorobiphenyl	97%	89%	49-138%

(a) Outside of in-house control limits; but within the method control limits.

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C28092
Account: ETCHIH EnviroServices and Traning Center
Project: WHC-Site Sampling

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8111-BS	GG43442.D	1	06/08/13	RV	06/07/13	OP8111	GGG1168
OP8111-BSD	GG43443.D	1	06/08/13	RV	06/07/13	OP8111	GGG1168

The QC reported here applies to the following samples: **Method:** SW846 8015B M

C28092-1A, C28092-2A, C28092-3A, C28092-4A, C28092-5A, C28092-6A

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	BSD mg/kg	BSD %	RPD	Limits Rec/RPD
	TPH (C10-C28)	100	73.0	73	77.3	77	6	39-102/29
	TPH (> C28-C40)	100	86.9	87	90.6	91	4	42-111/26

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
630-01-3	Hexacosane	101%	107%	37-122%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C28092
Account: ETCHIH EnviroServices and Traning Center
Project: WHC-Site Sampling

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8128-MS	MM016227.D	10	06/11/13	RV	06/11/13	OP8128	GMM450
OP8128-MSD	MM016228.D	10	06/11/13	RV	06/11/13	OP8128	GMM450
C28149-3	MM016231.D	1	06/11/13	RV	06/11/13	OP8128	GMM450

The QC reported here applies to the following samples: **Method:** SW846 8081A

C28092-1, C28092-2, C28092-3, C28092-4, C28092-5, C28092-6

CAS No.	Compound	C28149-3 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
309-00-2	Aldrin	ND		33.3	25.7	77	23.3	70	10	35-119/28
319-84-6	alpha-BHC	ND		33.3	22.4	67	21.7	65	3	33-126/28
319-85-7	beta-BHC	ND		33.3	22.4	67	23.9	72	6	42-123/24
319-86-8	delta-BHC	ND		33.3	23.4	70	21.8	65	7	40-131/23
58-89-9	gamma-BHC (Lindane)	ND		33.3	21.5	65	22.0	66	2	37-126/26
60-57-1	Dieldrin	21.3		33.3	35.6	43* [a]	34.5	40* [a]	3	53-124/24
72-54-8	4,4'-DDD	ND		33.3	24.0	72	21.4	64* [a]	11	65-128/26
72-55-9	4,4'-DDE	38.2		33.3	47.1	27* [a]	40.8	8* [a]	14	55-123/26
50-29-3	4,4'-DDT	12.3		33.3	31.1	57* [a]	22.9	32* [a]	30*	59-129/28
72-20-8	Endrin	ND		33.3	28.2	85	26.0	78	8	58-131/22
7421-93-4	Endrin aldehyde	ND		33.3	23.6	71	21.9	66	7	60-130/28
959-98-8	Endosulfan-I	ND		33.3	23.6	71	21.7	65	8	49-126/26
33213-65-9	Endosulfan-II	ND		33.3	22.3	67	21.4	64	4	60-130/23
1031-07-8	Endosulfan sulfate	ND		33.3	27.3	82	23.7	71	14	57-142/25
76-44-8	Heptachlor	ND		33.3	26.7	80	24.9	75	7	43-127/25
1024-57-3	Heptachlor epoxide	0.66	J	33.3	26.0	76	23.1	67	12	52-121/24
72-43-5	Methoxychlor	ND		33.3	25.5	77	20.6	62* [a]	21	69-144/30

CAS No.	Surrogate Recoveries	MS	MSD	C28149-3	Limits
877-09-8	Tetrachloro-m-xylene	83%	77%	97%	31-113%
877-09-8	Tetrachloro-m-xylene	83%	73%	94%	31-113%
2051-24-3	Decachlorobiphenyl	77%	74%	91%	61-129%
2051-24-3	Decachlorobiphenyl	84%	81%	104%	61-129%

(a) Outside control limits due to matrix interference.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C28092
Account: ETCHIH EnviroServices and Traning Center
Project: WHC-Site Sampling

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8129-MS	PP030958.D	3	06/11/13	RV	06/11/13	OP8129	GPP1013
OP8129-MSD	PP030959.D	3	06/11/13	RV	06/11/13	OP8129	GPP1013
C28092-5	PP030956.D	1	06/11/13	RV	06/11/13	OP8129	GPP1013

The QC reported here applies to the following samples: **Method:** SW846 8082

C28092-1, C28092-2, C28092-3, C28092-4, C28092-5, C28092-6

CAS No.	Compound	C28092-5 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
12674-11-2	Aroclor 1016	ND		133	122	92	135	101	10	46-114/22
11096-82-5	Aroclor 1260	ND		133	130	98	140	105	7	54-127/21

CAS No.	Surrogate Recoveries	MS	MSD	C28092-5	Limits
877-09-8	Tetrachloro-m-xylene	83%	69%	92%	38-109%
877-09-8	Tetrachloro-m-xylene	98%	83%	104%	38-109%
2051-24-3	Decachlorobiphenyl	74%	68%	84%	49-138%
2051-24-3	Decachlorobiphenyl	73%	62%	75%	49-138%

6.3.2

6

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C28092
Account: ETCHIH EnviroServices and Traning Center
Project: WHC-Site Sampling

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP8111-MS	HH304428.D	5	06/11/13	AG	06/07/13	OP8111	GHH1004
OP8111-MSD	HH304429.D	5	06/11/13	AG	06/07/13	OP8111	GHH1004
C28092-6A	HH304427.D	5	06/11/13	AG	06/07/13	OP8111	GHH1004

The QC reported here applies to the following samples: **Method:** SW846 8015B M

C28092-1A, C28092-2A, C28092-3A, C28092-4A, C28092-5A, C28092-6A

CAS No.	Compound	C28092-6A mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH (C10-C28)	50.0	J	130	168	91	151	78	11	39-102/29
	TPH (> C28-C40)	387		130	478	70	464	60	3	42-111/26

CAS No.	Surrogate Recoveries	MS	MSD	C28092-6A	Limits
630-01-3	Hexacosane	82%	77%	81%	37-122%

6.3.3

6

* = Outside of Control Limits.

Northern California ACCUTEST LABORATORIES

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: C28092
Account: ETCHIH - EnviroServices and Traning Center
Project: WHC-Site Sampling

QC Batch ID: MP6321
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date: 06/13/13

Metal	RL	IDL	MDL	MB raw	final
Aluminum	20	1.3	2		
Antimony	2.0	.07	.087		
Arsenic	2.0	.07	.07	-0.040	<2.0
Barium	20	.04	.035	0.26	<20
Beryllium	1.0	.02	.012		
Boron	10	.09	.2		
Cadmium	1.0	.02	.015	0.010	<1.0
Calcium	500	.71	7.6		
Chromium	1.0	.03	.054	0.10	<1.0
Cobalt	1.0	.02	.022		
Copper	2.5	.12	.19		
Iron	20	.64	1.6		
Lead	2.0	.07	.054	0.060	<2.0
Magnesium	500	2.7	1.5		
Manganese	1.5	.01	.054		
Molybdenum	2.0	.02	.024		
Nickel	1.0	.02	.024		
Potassium	1000	1.8	1.3		
Selenium	2.0	.18	.23	0.12	<2.0
Silicon		.12			
Silver	1.0	.03	.044	-0.010	<1.0
Sodium	1000	1.5	4.8		
Strontium	1.0	.02	.017		
Thallium	2.0	.05	.073		
Tin	50	.02	.41		
Titanium	1.0	.04	.079		
Vanadium	1.0	.03	.025		
Zinc	2.0	.03	.098		

Associated samples MP6321: C28092-1, C28092-2, C28092-3, C28092-4, C28092-5, C28092-6

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

Page 1

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C28092
Account: ETCHIH - EnviroServices and Traning Center
Project: WHC-Site Sampling

QC Batch ID: MP6321
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date: 06/13/13

Metal	C28092-1 Original	MS	Spikelot MPIR4A	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic	2.7	6.7	4.99	80.2	75-125
Barium	38.7	47.0	4.99	166.5(a)	75-125
Beryllium					
Boron					
Cadmium	0.20	5.1	4.99	98.3	75-125
Calcium					
Chromium	57.0	58.9	4.99	38.1 (a)	75-125
Cobalt					
Copper					
Iron					
Lead	32.7	43.2	4.99	210.6(a)	75-125
Magnesium					
Manganese					
Molybdenum					
Nickel					
Potassium					
Selenium	0.58	5.4	4.99	96.7	75-125
Silicon					
Silver	1.0	5.9	4.99	98.3	75-125
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Vanadium					
Zinc					

Associated samples MP6321: C28092-1, C28092-2, C28092-3, C28092-4, C28092-5, C28092-6

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C28092
Account: ETCHIH - EnviroServices and Traning Center
Project: WHC-Site Sampling

QC Batch ID: MP6321
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date: 06/13/13

Metal	C28092-1 Original	MSD	Spikelot MPIR4A	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic	2.7	6.8	4.99	76.2	1.5	20
Barium	38.7	48.4	4.99	62.1 (a)	2.9	20
Beryllium						
Boron						
Cadmium	0.20	5.0	4.99	96.2	2.0	20
Calcium						
Chromium	57.0	58.9	4.99	-178.4(a	0.0	20
Cobalt						
Copper						
Iron						
Lead	32.7	44.9	4.99	164.3(a)	3.9	20
Magnesium						
Manganese						
Molybdenum						
Nickel						
Potassium						
Selenium	0.58	5.3	4.99	91.0	1.9	20
Silicon						
Silver	1.0	5.9	4.99	88.2	0.0	20
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Vanadium						
Zinc						

Associated samples MP6321: C28092-1, C28092-2, C28092-3, C28092-4, C28092-5, C28092-6

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: C28092
Account: ETCHIH - EnviroServices and Traning Center
Project: WHC-Site Sampling

QC Batch ID: MP6321
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date: 06/13/13

Metal	BSP Result	Spikelot MPIR4A	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	45.1	50	90.2	80-120
Barium	47.9	50	95.8	80-120
Beryllium				
Boron				
Cadmium	46.4	50	92.8	80-120
Calcium				
Chromium	49.0	50	98.0	80-120
Cobalt				
Copper				
Iron				
Lead	45.5	50	91.0	80-120
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium	45.0	50	90.0	80-120
Silicon				
Silver	46.8	50	93.6	80-120
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP6321: C28092-1, C28092-2, C28092-3, C28092-4, C28092-5, C28092-6

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: C28092
Account: ETCHIH - EnviroServices and Traning Center
Project: WHC-Site Sampling

QC Batch ID: MP6321
Matrix Type: SOLID

Methods: SW846 6010B
Units: ug/l

Prep Date: 06/13/13

Metal	C28092-1 Original	SDL 10:50%	DIF	QC Limits
Aluminum				
Antimony				
Arsenic	306	271	1.4	0-10
Barium	3880	4540	16.8*(a)	0-10
Beryllium				
Boron				
Cadmium	19.7	10.1	48.7 (b)	0-10
Calcium				
Chromium	5720	6770	18.4*(a)	0-10
Cobalt				
Copper				
Iron				
Lead	3280	3510	6.9	0-10
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium	76.3	0.00	100.0(b)	0-10
Silicon				
Silver	104	187	79.4 (b)	0-10
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP6321: C28092-1, C28092-2, C28092-3, C28092-4, C28092-5, C28092-6

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Serial dilution indicates possible matrix interference.
(b) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: C28092
Account: ETCHIH - EnviroServices and Traning Center
Project: WHC-Site Sampling

QC Batch ID: MP6336
Matrix Type: SOLID

Methods: SW846 7471A
Units: mg/kg

Prep Date: 06/17/13

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.0042	.00017	.00043	-0.00012	<0.0042

Associated samples MP6336: C28092-1, C28092-2, C28092-3, C28092-4, C28092-5, C28092-6

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

7.2.1

7

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C28092
Account: ETCHIH - EnviroServices and Traning Center
Project: WHC-Site Sampling

QC Batch ID: MP6336
Matrix Type: SOLID

Methods: SW846 7471A
Units: mg/kg

Prep Date: 06/17/13

Metal	C28092-1 Original	MSD	Spikelot HGPWS1	% Rec	MSD RPD	QC Limit
Mercury	0.019	0.079	0.0333	180.3N(a	10.8	20

Associated samples MP6336: C28092-1, C28092-2, C28092-3, C28092-4, C28092-5, C28092-6

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

7.2.2

7

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C28092
Account: ETCHIH - EnviroServices and Traning Center
Project: WHC-Site Sampling

QC Batch ID: MP6336
Matrix Type: SOLID

Methods: SW846 7471A
Units: mg/kg

Prep Date: 06/17/13

Metal	C28092-1 Original	MS	Spikelot HGPWS1	% Rec	QC Limits
Mercury	0.019	0.088	0.0333	207.3N(a	75-125

Associated samples MP6336: C28092-1, C28092-2, C28092-3, C28092-4, C28092-5, C28092-6

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

7.2.2

7

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: C28092
Account: ETCHIH - EnviroServices and Traning Center
Project: WHC-Site Sampling

QC Batch ID: MP6336
Matrix Type: SOLID

Methods: SW846 7471A
Units: mg/kg

Prep Date: 06/17/13

Metal	BSP Result	Spikelot HGPWS1	% Rec	QC Limits
Mercury	0.016	0.0167	96.0	80-120

Associated samples MP6336: C28092-1, C28092-2, C28092-3, C28092-4, C28092-5, C28092-6

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

7.2.3

7

APPENDIX B

Traffic Impact Assessment Report by SSFM International

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FINAL

Waimanalo Health Center Expansion

Traffic Impact Analysis Report

Waimanalo, Hawaii

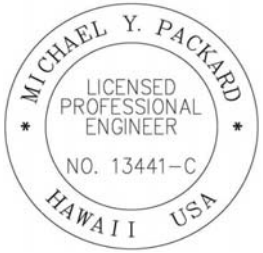
November 19, 2013

Prepared for

Erskine Architects, Inc.

Prepared by

SSFM INTERNATIONAL



This work was prepared by me or under my supervision:

Michael Y. Packard

Date: 11/19/13

Licensed Professional Engineer
License Number 13441
Expires: 4/30/2014

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Table of Contents

I. PROJECT DESCRIPTION 1
II. EXISTING CONDITIONS 5
A. Community Concerns 5
B. Geometric Configuration 5
1. Intersection Configuration 5
2. Roadway Configuration 6
C. Volumes 6
1. 24-Hour Volumes 6
2. Peak Hour Volumes 8
3. Existing Multi Modal Conditions 8
D. Intersection Level of Service 12
1. Methodology 12
2. Existing (2013) Intersection Conditions 13
E. Existing Conditions Mitigation 14
1. Traffic Signal Warrant Methodology 14
2. Traffic Signal Warrants for Existing (2013) Conditions 15
III. FUTURE CONDITIONS 16
A. Surrounding Area Conditions 16
B. Geometric Conditions 16
C. Volumes 16
1. Future Without Project Volumes 16
2. Future Project Volumes 18
3. Future Multi Modal Volumes 20
D. Level of Service 22
1. Future (2017) Without Project Intersection Conditions 22
2. Future (2017) With Project Intersection Conditions 23
E. Future Conditions Mitigation 23
1. Traffic Signal Warrants for Future (2017) Without Project Conditions 23
2. Traffic Signal Warrants for Future (2017) With Project Conditions 24
IV. SUMMARY AND RECOMMENDATION 25
V. REFERENCES 26

List of Figures

Figure 1: Project Location Map 2
Figure 2: Tax Map Key 3
Figure 3: Proposed Site Plan 4
Figure 4: Existing (2013) Lane Configurations 7
Figure 5: Existing (2013) Peak Hour Volumes 9
Figure 6: Existing (2013) Pedestrian and Bicycle Peak Hour Volumes 10
Figure 7: Future (2017) Without Project Peak Hour Volumes 17
Figure 8: Project Related Trips 19
Figure 9: Future (2017) With Project Peak Hour Volumes 21

List of Tables

Table 1: Kalanianaole Highway Average Daily Traffic 6
Table 2: TheBus Peak Hour Volumes 11
Table 3: LOS Criteria for Unsignalized Intersections 12
Table 4: LOS Criteria for Signalized Intersections 13
Table 5: Existing (2013) Intersection Level of Service 14
Table 6: Existing (2013) Intersection Traffic Signal Warrant 15
Table 7: Future (2017) Without Project Average Daily Traffic 18
Table 8: Project Related Trip Generation 18
Table 9: Future (2017) Without Project Intersection Level of Service 22
Table 10: Future (2017) With Project Intersection Level of Service 23
Table 11: Future (2017) Without Project Intersection Traffic Signal Warrant 24
Table 12: Future (2017) With Project Intersection Traffic Signal Warrant 24

List of Appendices

Appendix A –Turning Movement Counts
Appendix B - Analysis Reports Existing (2013) Conditions
Appendix C– Analysis Reports Future (2017) Without Project Conditions
Appendix D – Analysis Reports Future (2017) With Project Conditions

I. PROJECT DESCRIPTION

This traffic impact analysis report (TIAR) will assess impacts of the proposed development of the two-story outpatient medical clinic, and expansion of Waimanalo Health Center (WHC), in support of an Environmental Assessment and Special Management Area permit being completed for the project.

WHC is a non-profit, Federally-Qualified Health Center that provides primary and preventative health services, with a particular focus on Native Hawaiians and the medically underserved populations. The WHC campus is located in Waimanalo on the windward side of the island of Oahu (see Figure 1). WHC is proposing to expand and develop a two-story outpatient medical clinic on a plot of land currently used by the WHC for employee parking. The current WHC campus (TMK 4-1-9:279, hereinafter referred to as "parcel 279") and the site of the proposed two story outpatient medical clinic (TMK 4-1-9:282, hereinafter referred to as "parcel 282") are situated on two separate parcels of land, both owned by the State of Hawaii, Department of Land and Natural Resources (see Figure 2). These parcels are separated by the Waimanalo Fire Station, St. George Church, and across from Waimanalo Elementary and Intermediate School and Library.

WHC currently offers medical services in a campus that includes 17,698 square feet of buildings situated on parcel 279. Access to these facilities comes through a single full-access driveway off of Kalanianaole Highway. Existing clinic services include adult medicine, pediatric health, behavior health, dental services, women's health, and women, infant child program. Hours of operation are limited to weekdays from 8:00 AM to 5:00 PM (closed for lunch from noon to 1:00 PM) and Saturday (medical only) from 8:00 AM – noon. 68 employees currently work at WHC of which 39 are for medical services and 29 are administration and for programs. WHC employees currently park in a fenced in and gated lot on parcel 282 that has a full-access driveway off of Kalanianaole Highway. It is estimated that WHC provides services to an average of 80 patients per day of which most travel to/from WHC by passenger vehicle although 10-25% travel by City and County of Honolulu bus.

WHC plans to expand and develop an approximately 19,600 square-foot two-story building and associated parking lot on parcel 282 for a planned operation by year 2017. With this expansion, many services currently offered at the existing campus on parcel 279 will be relocated to the new building. The demolition of old structures on parcel 279 will occur after the successful transition of identified services to the completed new health care facility. Staffing projections are still being finalized although it is anticipated that total staffing of both parcels will increase 20% from existing levels with 40% of those employees remaining at parcel 279. For analysis purposes, it is assumed that employees will park in the parking lot of the parcel in which they work. Driveway access to the new development is being proposed for relocation, further east away from the fire station driveway from what currently exists. The proposed site plan can be seen in Figure 3.

Figure 1: Project Location Map

Waimanalo Health Center Expansion – Waimanalo, Hawaii

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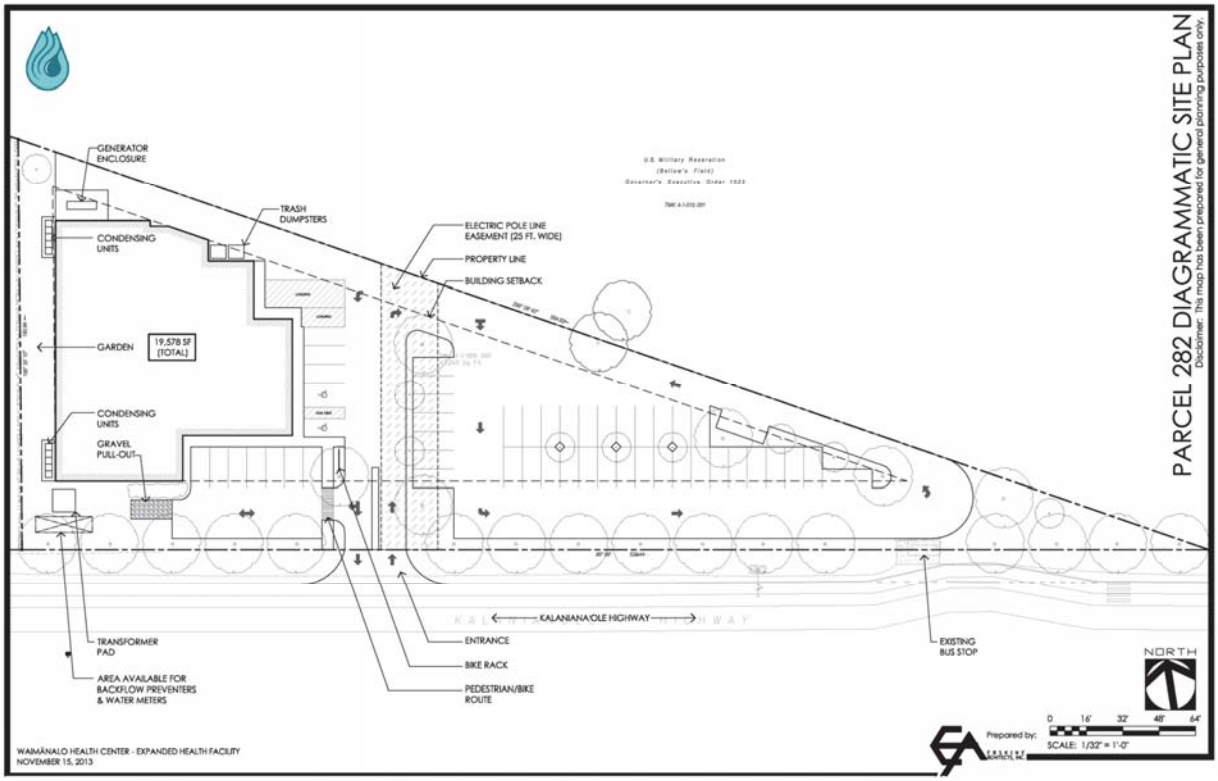

Source: *Erskine Architects, Inc. (November 15, 2013)*

Figure 3: Proposed Site Plan

Waimanalo Health Center Expansion – Waimanalo, Hawaii

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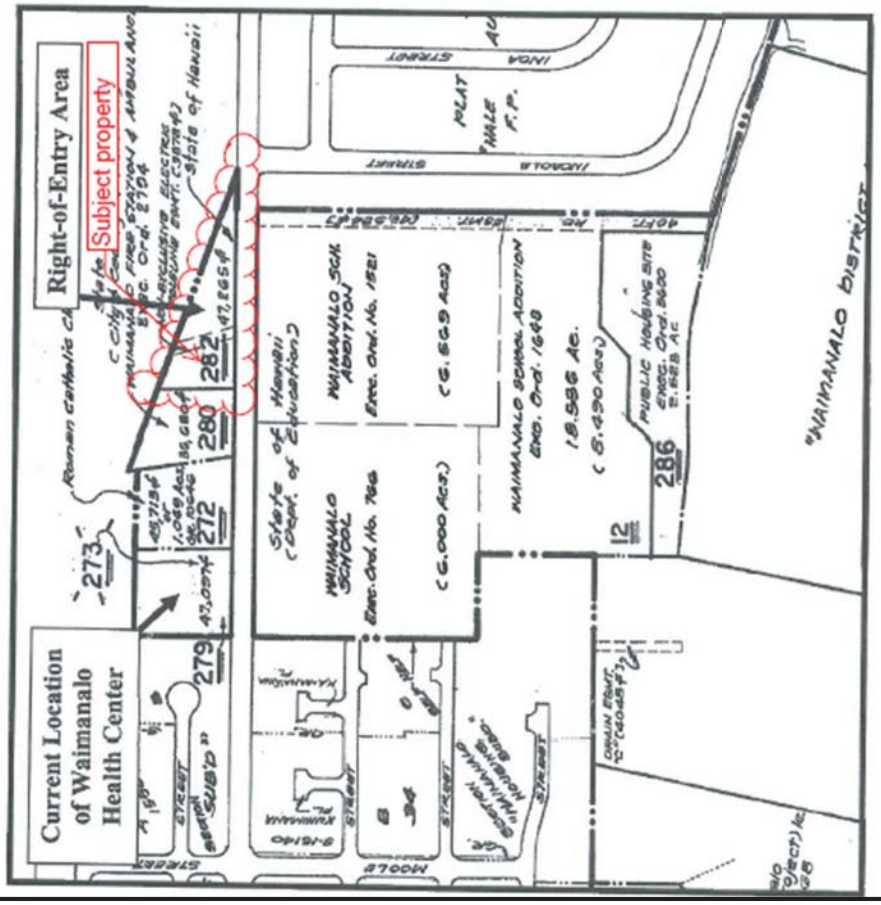

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Figure 2: Tax Map Key

Waimanalo Health Center Expansion - Waimanalo, Hawaii

II. EXISTING CONDITIONS

A. Community Concerns

Through review of Waimanalo Neighborhood Board No. 32 meeting minutes from 2008 through 2013, specific concerns and items of note associated with vehicular, bicycle, and pedestrian traffic in the immediately surrounding area included the following:

- April 2009 – Per Mayor's representative, a site investigation and evaluation report will be conducted regarding left turns from Inoaole Street.
- September 2009 – A request was made that the traffic signal lights on Kalanianaole Highway at Poalima Street be synchronized. Residents have noticed that the lights remain green for a longer time than usual when there are no vehicles in the area.
- October 2009 – A work order was initiated to have the traffic light checked for any malfunctions and to take corrective actions for the stop light at Poalima Street and Kalanianaole Highway.
- September 2010 – Concerns were raised regarding motorists speeding through Waimanalo during late night hours. It was noted that motorists choose Waimanalo due to its straightaway roads and have caused numerous accidents causing damages and even fatalities.
- July 2012 – Members raised concerns about reckless speeding of motor bikes in the residential area and farm lot areas.

B. Geometric Configuration

1. Intersection Configuration

The parking lot for the WHC campus (parcel 279) is accessed through a bi-directional driveway that intersects Kalanianaole Highway at a T-intersection. Along Kalanianaole Highway, between the existing WHC campus and WHC employee parking lot, driveway access exists to the Waimanalo Fire Station, St. George Church, and a one-way semi-circle driveway for Waimanalo Elementary and Intermediate School and Library.

Adjacent to the school driveway entrance, a crosswalk with a pedestrian activated traffic signal exists. Pedestrian push-buttons are on either side of Kalanianaole Highway. No vehicle traffic signal head exists for the side street approaches and therefore it functions as a mid-block traffic signal by only providing control for vehicles traveling along Kalanianaole Highway and crossing pedestrians.

The current driveway access to the WHC employee parking (parcel 282) is offset 50 feet to the east across from Waimanalo Elementary and Intermediate School and Library one-way exit. This access is located adjacent to a flashing beacon used by the Waimanalo Fire Station which has their primary station access 120 feet to the west of the WHC employee parking lot driveway with a secondary access for employee parking 75 feet west of that.

Further from the immediate project area, along Kalanianaole Highway, small side streets provide access primarily to single-family residential homes. Approximately 0.3 miles west of the WHC campus (parcel 279) driveway access, Kalanianaole Highway intersects Poalima Street/Shopping Center driveway at the

only signalized intersection in Waimanalo. Approximately 0.9 miles east of the WHC campus (parcel 279) driveway access, Kalanianaole Highway intersects with Aloioi Street which provides access to single family homes, Waimanalo Beach Park, and a McDonalds restaurant. Study intersection lane configurations are shown in Figure 4 which shows the lack of dedicated turn lanes at unsignalized intersections in the study area.

2. Roadway Configuration

Kalanianaole Highway (State Highway Route 72) is classified as a principal arterial that is part of a belt highway. In this section it traverses through a small urbanized area. Kalanianaole Highway provides the only highway connection between Kailua, at the signalized intersection with Kalanianaole Highway/Kailua Road (State Highway Route 61) at Castle Hospital, through Hawaii Kai to the signalized intersection at Ainakoa Avenue where the road transitions into Interstate H-1. Kalanianaole Highway is an undivided, two-lane road with 10.5-foot travel lanes, four to six foot shoulders, and no dedicated turn lanes except at the signalized intersection with Poalima Street/Shopping Center driveway. Asphalt sidewalks exist in places along the mauka (mountain) side of the road. The posted speed limit along Kalanianaole Highway adjacent to the project is 25 mph. East of the project site the posted speed limit is 35 mph.

C. Volumes

1. 24-Hour Volumes

Average daily traffic (ADT) along Kalanianaole Highway in the project area, at locations marked on Figure 1 is shown in Table 1.

Table 1: Kalanianaole Highway Average Daily Traffic

Roadway	Station	Location	Year	ADT
Kalanianaole Highway	B72 0072 00275	Waimanalo Stream Bridge	2011	22,600
	B72 0072 00305	Inoaole Stream Bridge	2011	15,800

Source: *Historical Traffic Station Maps* (HDOT)

2. Peak Hour Volumes

Turning movement counts were taken at the Kalanianaole Highway intersections with Poalima Street/Shopping Center driveway, Moore Street, WHC campus (parcel 279) driveway access, Waimanalo Elementary and Intermediate School and Library entrance, and Inoaole Street. Counts were taken on Tuesday, May 14, 2013 and Thursday, May 23, 2013 from 6:30-8:30 AM and 3:15-5:15 PM during a time when the adjacent school was still in session. School hours vary per grade and day of the week. Elementary school hours are from 7:45 AM to 2:05 PM on Monday, Tuesday, Thursday and Friday. Wednesday hours are from 7:45 AM to 1:15 PM. Middle school hours are from 7:50 AM to 2:05 PM on Monday, Tuesday, Thursday and Friday. Wednesday hours are from 7:50 AM to 1:15 PM. In addition to passenger vehicles, two school buses drop off and pick up students through the semi-circle driveway.

The traffic counts included separate counts of passenger vehicles, heavy vehicles (buses, trucks, vehicles with trailers), bicycles, and pedestrians. Peak hours were found to be 7:00-8:00 AM and 4:15-5:15 PM for all intersections except at Poalima where the peak hours were 7:15-8:15 AM and 3:30-4:30 PM. Morning peak hours overlap with the start of school although afternoon peak hours are after the end of normal school operating hours. In addition to the intersection counts, 37 vehicles were counted in the WHC employee parking lot (parcel 282) which included three vehicles already parked and 34 vehicles entering between 7:00-8:00 AM. As a worst case scenario, with WHC operations ending at 5:00 PM, it is assumed that all of those vehicles exit during the PM peak hour as well. Detailed intersection turning movement counts are included in Appendix A.

3. Existing Multi Modal Conditions

Minimal pedestrian and bicycle activity was observed in the study area during the peak hours. Existing pedestrian crosswalks and the associated pedestrian and bicycle peak hour volumes collected at the study intersections are shown in Figure 6.

Heavy vehicle volumes were tabulated separately during the intersection turning movement counts. Heavy vehicles include vehicles larger than passenger vehicles, such as delivery trucks, school and transit buses, and semi-tractor trailers. Heavy vehicle percent (i.e. percentage of heavy vehicles compared to total volume) along Kalanianaole Highway during the AM and PM peak hours was 3.2% and 1.9% respectively.

The City and County of Honolulu bus transit service, TheBus, runs Route 57, Route 77 and Route 89 along Kalanianaole Highway in the project area. There are four bus stops in each direction along Kalanianaole Highway between Poalima Street and Inoaole Street. The closest stops, located on either side of Kalanianaole Highway for travel in the east or west direction, are in front of St. George Church/ Waimanalo Elementary and Intermediate School and Library and 350-feet east of the parcel 282 driveway, just west of the intersection with Inoaole Street.

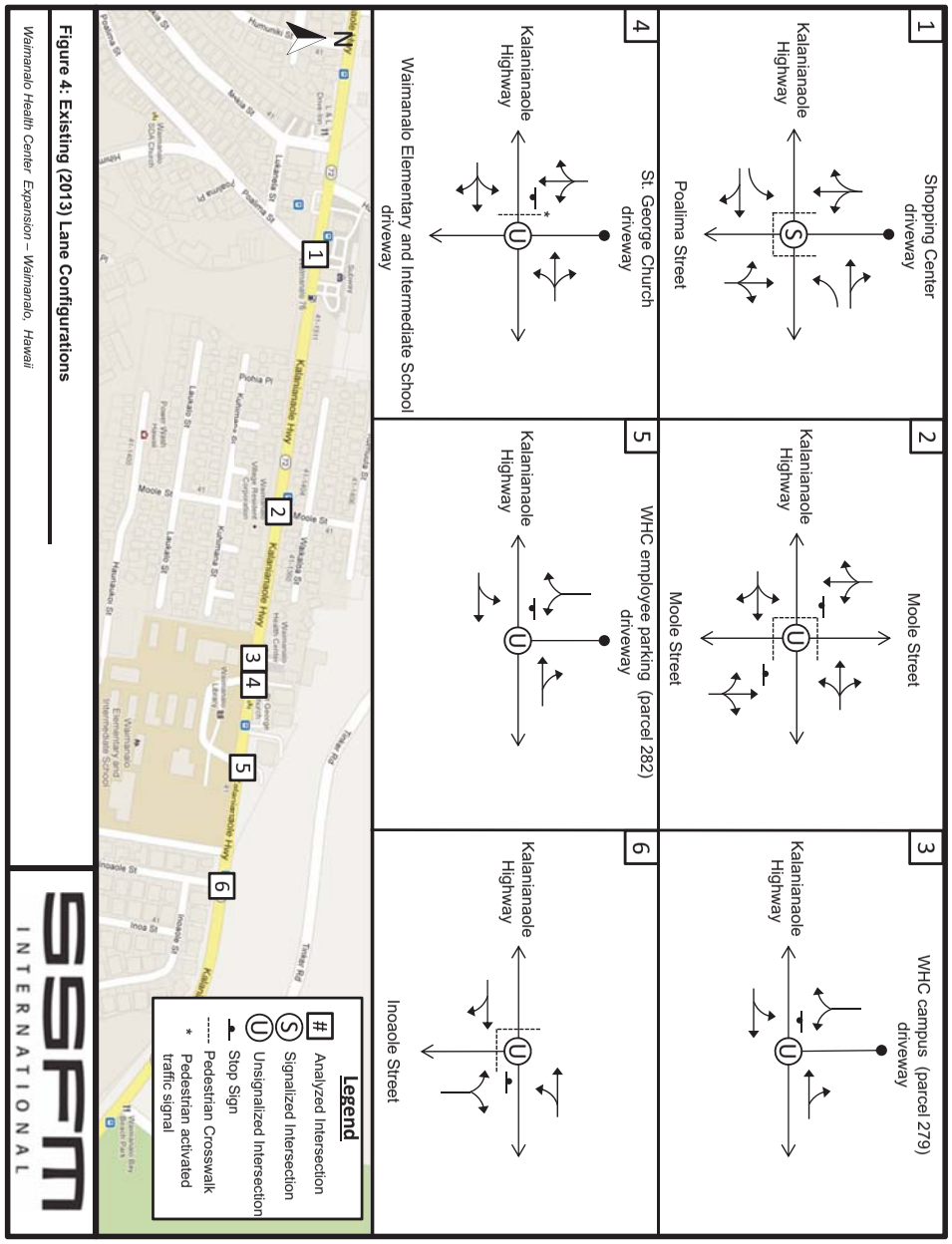

Figure 4: Existing (2013) Lane Configurations

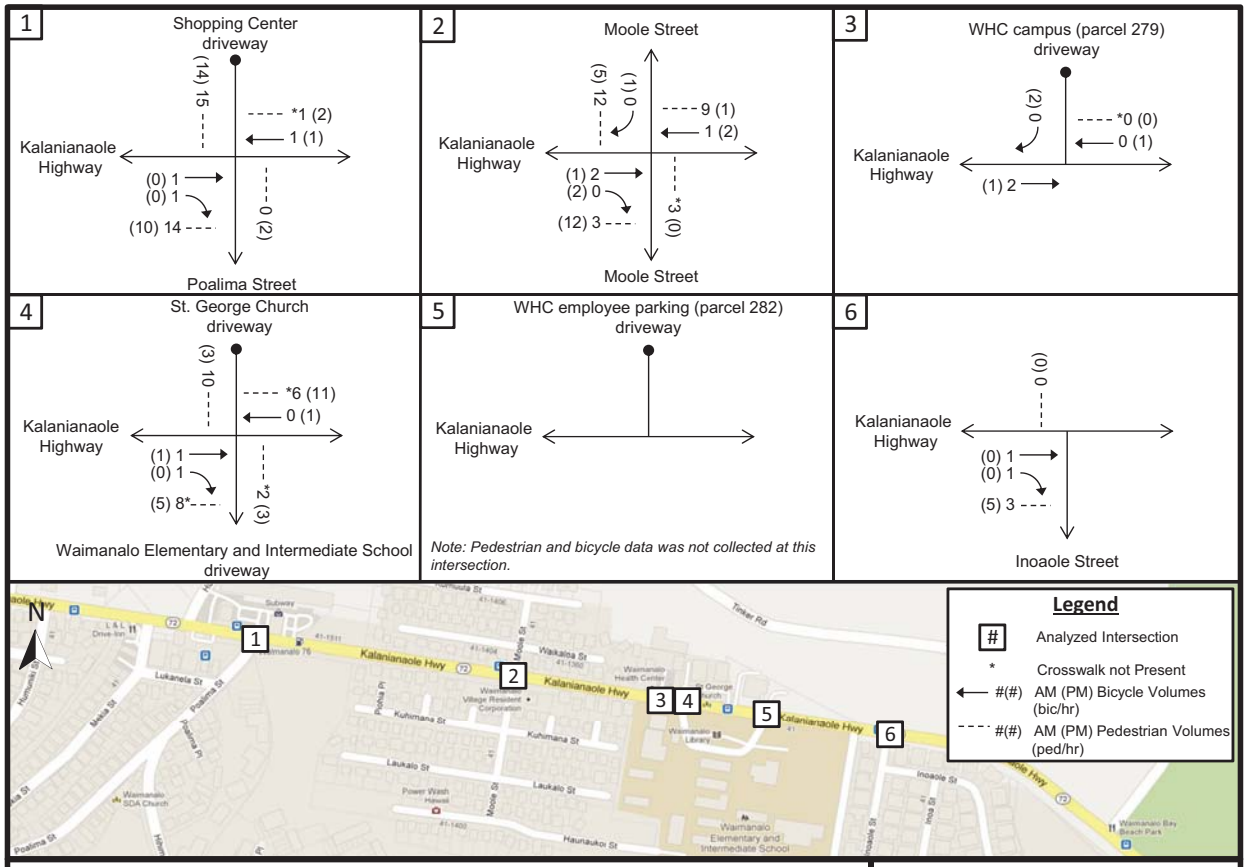

Figure 6: Existing (2013) Pedestrian and Bicycle Peak Hour Volumes

Waimanalo Health Center Expansion – Waimanalo, Hawaii

SSFM INTERNATIONAL

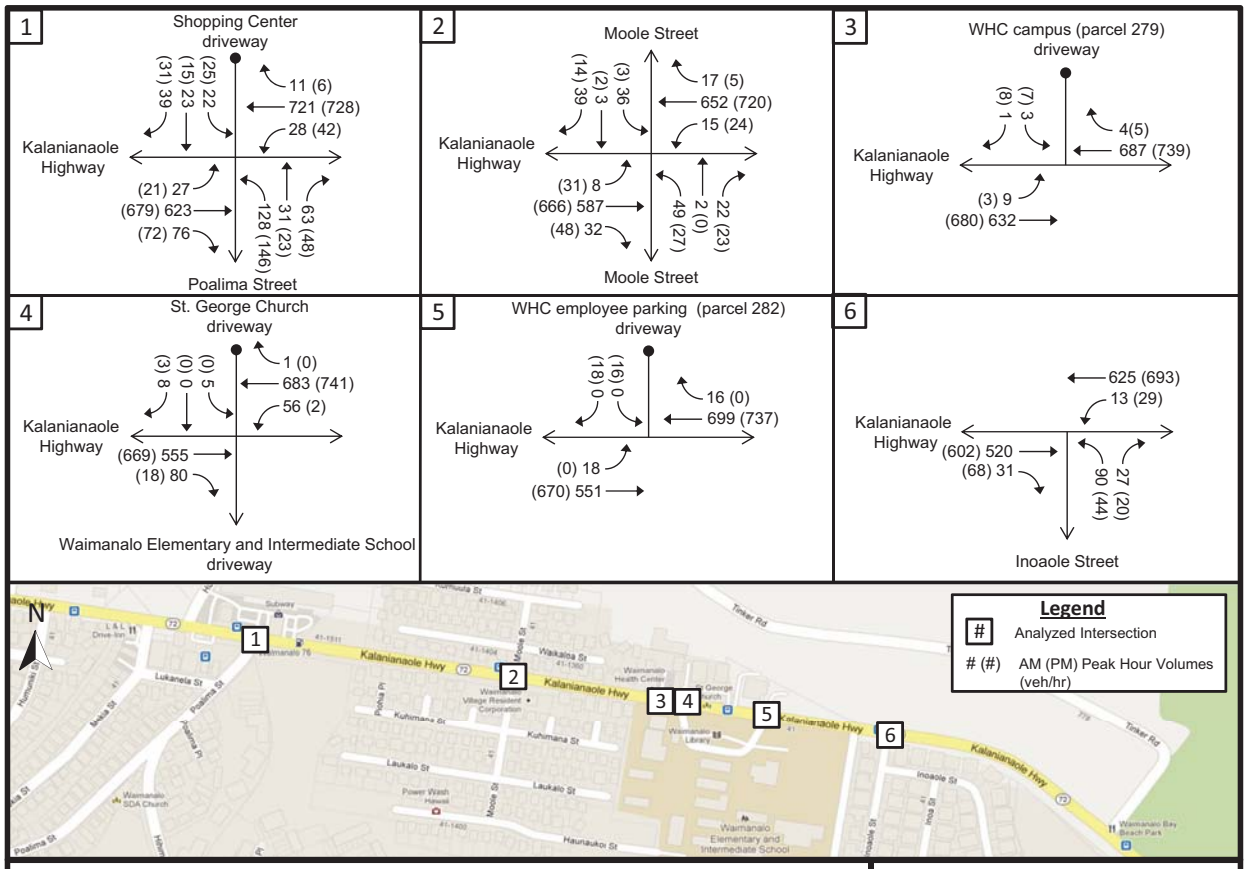

Figure 5: Existing (2013) Peak Hour Volumes

Waimanalo Health Center Expansion – Waimanalo, Hawaii

SSFM INTERNATIONAL

Route 57, Kailua–Waimanalo–Sea Life Park, runs from 5:00 AM to 9:30 PM, with stops daily in the northbound (Kailua-bound) direction every 10-20 minutes between 5:00 – 7:30 AM and 3:40 - 7:05 PM. In the southbound direction (Makapuu-bound) direction it runs from 5:10 AM to 11:30 PM, with stops every 10-20 minutes between 5:10 – 7:30 AM and every 20-30 minutes between 2:20 - 5:20 PM. Route 77, Waimanalo–Kailua, makes stops only during the weekdays with stops in the northbound direction every 90 minutes between 6:00 AM and 5:00 PM and with stops in the southbound direction every 90 minutes between 6:00 AM and 6:30 PM. Route 89, Waimanalo Express (Waimanalo to Downtown Honolulu), makes stops on the weekdays only (including state holidays) in the northbound direction between 5:30 AM to 6:30 AM and in the southbound direction between 5:00 PM to 5:30 PM. TheBus volumes along Kalanianaole Highway in the peak hours are shown in Table 2.

Table 2: TheBus Peak Hour Volumes

Roadway	Direction	AM	PM
Kalanianaole Highway	Eastbound	3	4
	Westbound	5	3

D. Intersection Level of Service

1. Methodology

Level of service (LOS) is an operational analysis rating system used in traffic engineering to measure the effectiveness of roadway operating conditions. There are six LOS ranging from A to F. LOS A is defined as being the least interrupted flow conditions with little or no delays, whereas LOS F is defined as conditions where extreme delays exist. Guidelines from the *Statewide Uniform Design Manual for Streets and Highways* (HDOT, 1980) and *A Policy on Geometric Design of Highways and Streets* (AASHTO, 2011) state that an appropriate LOS for an urban/suburban arterial, which is the classification of Kalanianaole Highway in the project area, is LOS C or D or better. Therefore, it is assumed that appropriate LOS for intersections and turning movements along those roads should be LOS C or D or better.

As stated in the *Highway Capacity Manual (HCM)* (TRB, 2010), LOS for a two-way stop controlled (TWSC) intersection is determined by the measured control delay (see Table 3) and is defined for each minor movement, not for the intersection as a whole. Vehicles traveling along the major, free-flow road, of a TWSC intersection, proceed through with minimal delay. Those vehicles approaching the intersection along the minor movement are controlled by a stop sign and thus experience delay attributable to the volume of vehicles passing along the free-flow road and the gaps available.

Table 3: LOS Criteria for Unsignalized Intersections

Average Control Delay (s/veh)	LOS by v/c Ratio	
	<=1.0	>1.0
≤ 10.0	A	F
>10 and ≤15	B	F
>15 and ≤25	C	F
>25 and ≤35	D	F
>35 and ≤50	E	F
>50	F	F

Source: *HCM* (TRB, 2010)

The LOS analysis for signalized intersections is based on average total vehicle delay based on the methodologies of the *HCM* (TRB, 2010), as shown in Table 4. High numbers of vehicles passing the intersection, long cycle lengths, inappropriate signal phasing, or a poor signal progression can result in long delays, and consequently poor LOS.

Table 4: LOS Criteria for Signalized Intersections

Average Control Delay (s/veh)	LOS by v/c Ratio	
	<=1.0	>1.0
≤ 10.0	A	F
>10 and ≤20	B	F
>20 and ≤35	C	F
>35 and ≤55	D	F
>55 and ≤80	E	F
>80	F	F

Source: *HCM* (TRB, 2010)

Another measure of intersection delay is the volume to capacity (v/c) ratio. This is the ratio of the volume of traffic utilizing the intersection compared to the maximum volume of vehicles that can be accommodated by the intersection during a specific period of time. A v/c ratio under 0.85 means the intersection is operating under capacity and excessive delays are not experienced. An intersection is operating near its capacity when v/c ratios range from 0.85 to 0.95. Unstable flows are expected when the v/c ratio is between 0.95 and 1.0. Any v/c ratio greater than or equal to 1.0 indicates that the intersection is operating at or above capacity which results in a LOS F, per the *HCM* (TRB, 2010). A traffic movement can have a poor LOS but low v/c which suggests that the traffic volumes along that movement are low but have to wait a long time to make the movement. This is common for low volume protected turn movements or side streets that have to wait through a long cycle length for their split to come up.

2. Existing (2013) Intersection Conditions

Existing (2013) intersection LOS and delay was calculated for the AM and PM peak hours using *HCS 2010* traffic analysis software (see Table 5). The northbound approach along Poalima Street/Shopping Center driveway resulted in LOS E for AM and PM peak hours although the total intersection LOS was appropriate. The northbound approach along Moole Street resulted in LOS F for the AM and PM peak hours, while the southbound approach also resulted in LOS F for the AM peak hour. The northbound approach along Inoaole Street resulted in LOS E for the AM and PM peak hours. The remaining movements resulted in appropriate LOS. Appendix B provides the detailed analysis reports for the Existing (2013) conditions.

Table 5: Existing (2013) Intersection Level of Service

Intersection	Approach	Movement	AM			PM		
			Delay	v/c	LOS	Delay	v/c	LOS
Kalanianaole Highway at Poalima Street/Shopping Center driveway	Intersection		17.9	-	B	16.8	-	B
	Eastbound	L	15.8	0.07	B	14.0	0.05	B
		T	10.4	0.57	B	10.2	0.59	B
	Westbound	L	15.3	0.07	B	15.7	0.10	B
		T	10.5	0.58	B	9.7	0.56	A
	Northbound	LTR	**57.7**	0.77	**E**	**56.3**	0.75	**E**
	Southbound	LTR	41.7	0.26	D	42.1	0.22	D
Kalanianaole Highway at Moole Street	Eastbound	L	9.1	0.01	A	9.6	0.04	A
	Westbound	L	9.0	0.02	A	9.3	0.03	A
	Northbound	LTR	**126.5**	0.88	**F**	**67.9**	0.50	**F**
	Southbound	LTR	**86.1**	0.81	**F**	26.7	0.14	D
Kalanianaole Highway at WHC campus (parcel 279) driveway	Eastbound	L	9.4	0.01	A	9.5	0.00	A
	Southbound	LR	29.2	0.03	D	25.6	0.10	D
Kalanianaole Highway at Waimanalo Elementary/Intermediate School driveway	Eastbound	L	9.2	0.00	A	9.4	0.00	A
	Westbound	L	9.3	0.07	A	9.1	0.00	A
	Southbound	LTR	24.7	0.14	C	14.8	0.02	B
Kalanianaole Highway at WHC employee parking (parcel 282) driveway	Eastbound	L	9.2	0.02	A	9.1	0.00	A
	Southbound	LR	-	-	-	23.1	0.15	C
Kalanianaole Highway at Inoaole Street	Westbound	L	8.6	0.01	A	9.1	0.03	A
	Northbound	LR	**48.2**	0.66	**E**	**39.9**	0.41	**E**

E. Existing Conditions Mitigation

Although the northbound approach at the intersection of Kalanianaole Highway and Poalima Street/Shopping Center Driveway have poor LOS, the total intersection LOS was appropriate. Other side street traffic movements at unsignalized intersections had results of LOS E or F during the peak hours. The signalization of a stop sign controlled intersection can allow for motorists approaching from the minor street to make movements through the protection of a traffic signal as opposed to waiting for a gap in the major street traffic. This can serve to mitigate delay to the minor street although adds delay to the major street that otherwise would not exist in a two-way stop sign controlled intersection.

1. Traffic Signal Warrant Methodology

Per standard traffic engineering practice, prior to the signalization of an intersection an engineering study of traffic conditions, pedestrian characteristics, and physical characteristics of the location shall be performed to determine whether installation of a traffic signal is justified.

The *Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD)* (FHWA, 2009) lists eight warrants for consideration of providing a traffic signal at an intersection. When being used for

future planning purposes, vehicular volumes are the primary warrants considered. With the traffic volume data available, four-hour and peak hour traffic signal warrants were considered. With a 2010 population in the Waimanalo CDP less than 10,000 a 70% factor is appropriate for use with the signal warrant analysis. For minor-street approaches with one lane, 60 vehicles per hour is the lower threshold for consideration of a four-hour traffic signal warrant and 75 vehicles per hour is the lower threshold for consideration of a peak hour traffic signal warrant.

2. Traffic Signal Warrants for Existing (2013) Conditions

Peak Hour Volume and Four-Hour Volume traffic signal warrants run for the unsignalized study intersections resulted in warrants passing for the Kalanianaole Highway intersections with Moole Street and with Inoaole Street (see Table 6). Appendix B includes the details of the traffic signal warrant analysis.

Table 6: Existing (2013) Intersection Traffic Signal Warrant

Unsignalized Intersection	Traffic Signal Warrant		
	Peak Hour	Four Hour	Result
Kalanianaole Highway at Moole Street	Pass	Pass	Pass
Kalanianaole Highway at WHC campus (parcel 279) driveway	No	No	No
Kalanianaole Highway at WHC employee parking (parcel 282) driveway	No	N/A	No
Kalanianaole Highway at Inoaole Street	Pass	No	Pass

As noted in neighborhood board comments, community concerns have concentrated on the prevalence of speeding in addition to the traffic signal operation at the intersection of Kalanianaole Highway and Poalima Street/Shopping Center driveway. Historically the community has preferred to retain a rural feel along Kalanianaole Highway and not include additional turn lanes or traffic signals. To mitigate delay, it is common practice for drivers along Kalanianaole Highway to slow down so as to allow vehicles to turn in front of them that otherwise would have had to wait for an appropriate gap in traffic.

Although side street traffic movements at unsignalized intersections had poor LOS during the peak hours, v/c for those movements suggests that additional capacity exists. Although It is common for the minor approach to a stop sign controlled intersection with a high volume road to have high delay during the peak hours although this is not necessarily cause for needed mitigation since this problem is not typically prevalent during off-peak hours.

III. FUTURE CONDITIONS

WHC plans to expand by constructing an approximately 19,600 square-foot two-story building with parking lot on parcel 282. Proposed facility operation is by year 2017 which will be used as the future build year for analysis.

A. Surrounding Area Conditions

From research into the *State of Hawaii Office of Environmental Quality Control* library, anticipated development in the area that would potentially affect traffic volumes at the study intersections includes the Kakaina residential units for the Department of Hawaiian Homelands.

In addition, through research into the *Statewide Transportation Improvements Program* (STIP), there are plans by Hawaii Department of Transportation (HDOT) to construct turning lanes, bus pullouts and lighting improvements along Kalanianaole Highway in two phases (Olomana Golf Course to Poalima Street and Poalima Street to Aloiloi Street). Construction is expected to occur from the end of 2013 through 2015 for the improvements from Olomana Golf Course to Poalima Street. Design is expected to start at the end of 2013 and run through 2014 for the segment from Poalima Street to Aloiloi Street. There are also construction plans to replace the existing Inoaole Stream Bridge in 2014 to 2015. No plans exist in the STIP to acquire right-of-way (ROW) along Kalanianaole Highway adjacent to parcel 282.

B. Geometric Conditions

With no anticipated projects that would affect roadway geometrics at the study intersections, lane configurations were kept as existing.

C. Volumes

1. Future Without Project Volumes

a) Background Growth

Traffic volumes along Kalanianaole Highway, from HDOT *Historical Traffic Station Maps*, showed a general decrease in ADT over the past five years. The *Waimanalo Bay Beach Park Master Plan Traffic Impact Analysis Report* (C&C, 2011) states that the latest planning data from HDOT projects traffic volumes along this section of Kalanianaole Highway to grow approximately 25 percent in the next 20 years. This equates to an annual growth rate of 1.2% per year. Despite a decline in traffic volumes noted in historical traffic counts, a conservative annual cumulative growth rate of 1.2% will be applied to through traveling future vehicular volumes along Kalanianaole Highway for this study.

b) Future Without Project Peak Hour Volumes

Future (2017) Without Project peak hour volumes are shown in Figure 6. It is not expected that there will be a significant change in pedestrian or bicycle traffic in the area.

c) Future Without Project 24-Hour Volumes

There will be a minimal increase to Future (2017) Without Project ADT along Kalanianaole Highway as a result of the background growth and surrounding area development (see Table 7).

Table 7: Future (2017) Without Project Average Daily Traffic

Roadway	Location	ADT
Kalanianaole Highway	Waimanalo Stream Bridge	24,430
	Inoaole Stream Bridge	17,010

2. Future Project Volumes

a) Trip Generation

WHC currently employs 68 people and provides services to an average of 80 patients per day. With the expansion, many services currently offered at parcel 279 will be relocated to parcel 282. Staffing projections are still being finalized although it is anticipated that total staffing of both parcels will increase 20% from existing levels. It is anticipated that there will be a 40%/60% split between employees operating out of parcels 279/282 respectively. For analysis, it is assumed that the volume of patient trip generation, through passenger vehicle, will increase proportionally with staffing. Table 8 shows the result of a 20% increase in total trip generation distributed between the two parcels.

Table 8: Project Related Trip Generation

Trip Generation	AM Peak Hour (vph)			PM Peak Hour (vph)		
	Enter	Exit	Total	Enter	Exit	Total
Existing Parcel 279	13	4	17	8	15	23
Existing Parcel 282	34	0	34	0	34	34
Existing Parcel 279 and 282 Total	47	4	51	8	49	57
Future Parcel 279 and 282 Total (20% increase)	56	5	61	10	59	69
Future Parcel 279 (40% of Future Total)	22	2	24	4	24	28
Future Parcel 282 (60% of Future Total)	34	3	37	6	35	41
Future Parcel 279 Difference (Project Related)	9	-2	7	-4	9	5
Future Parcel 282 Difference (Project Related)	0	3	3	6	1	7

b) Trip Distribution/Assignment

Following trip generation, trip distribution matches trip makers origins and destinations to determine the number of trips from each. Traffic assignment involves the selection of routes between the specified origins and destinations. It is assumed that vehicles accessing the two future parcels will have a similar distribution of ingress/egress of vehicles from the east and west as they currently do between the two parcels. The distributed project related trips during the AM and PM peak hours are shown in Figure 8.

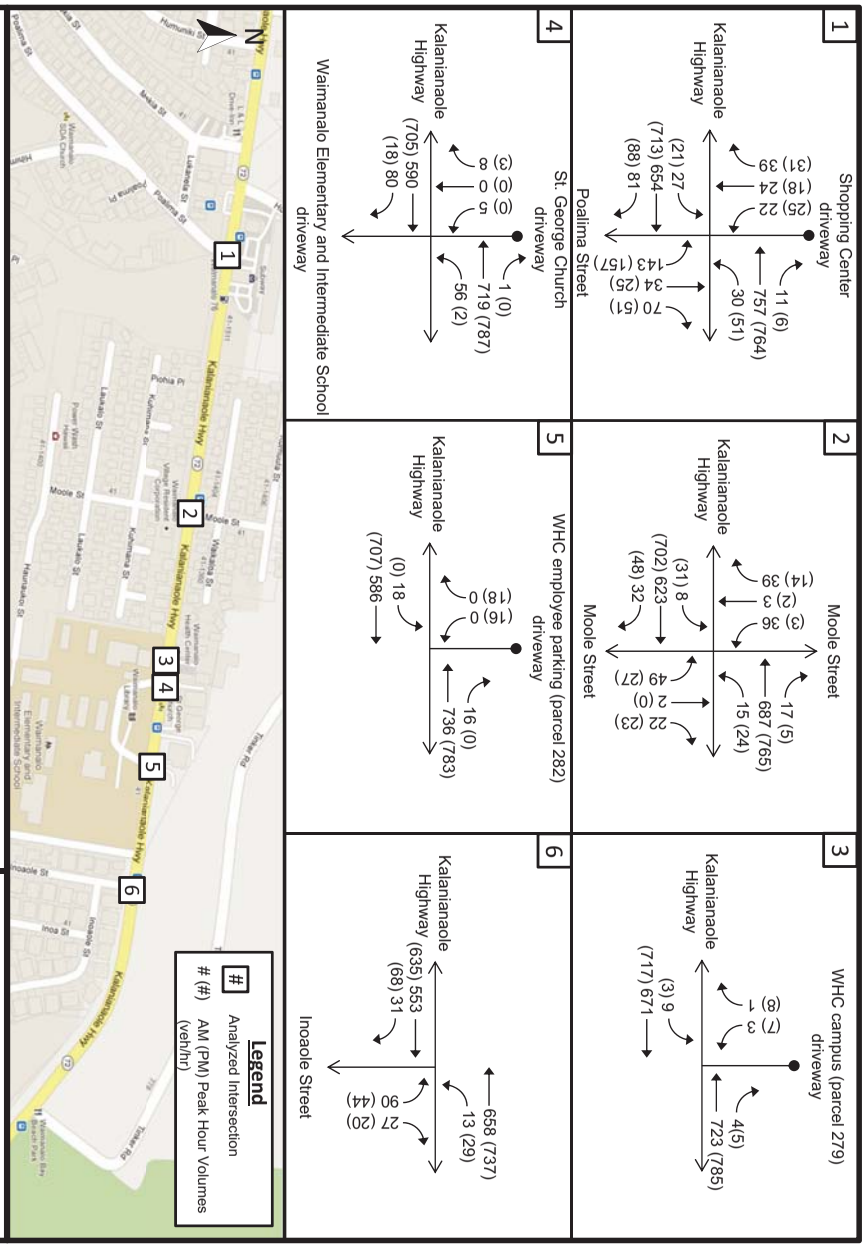

Figure 7: Future (2017) Without Project Peak Hour Volumes

c) Future With Project Peak Hour Volumes

The difference in volume between the existing and future parcel 279 and 282 project related volumes shown in Table 7 and depicted in Figure 8 were added to the Future (2017) Without Project traffic volumes for the resulting Future (2017) With Project traffic volumes shown in Figure 9.

d) Future With Project 24-Hour Volumes

With the WHC having a 20% increase in trips, there will be a minimal increase to Future (2017) daily traffic along Kalanianaole Highway as a result of the project related traffic.

3. Future Multi Modal Volumes

With a limited number of pedestrians and bicycles counted for existing conditions, and no plans for significant development or construction to change this, it is not anticipated that there will be a significant change in multi-modal volumes for the future.

Due to the medical services being offered at WHC, it is not likely that the proposed development will attract a significant number of patrons through walking or bicycle. Pedestrian and bicycle access to parcel 282 will come through the dedicated path adjacent to the driveway access. A bike rack is being shown in the site plan for use by employees or patients. It was noted that 10-25% of current WHC patients travel by City and County of Honolulu bus and that is expected to be maintained with the new facility, especially since parcel 282 is adjacent to a bus stop. Construction on parcel 282 should be sure to not impede bus service in the area. This includes maintaining access or temporarily relocating the bus stop adjacent to the project parcel.

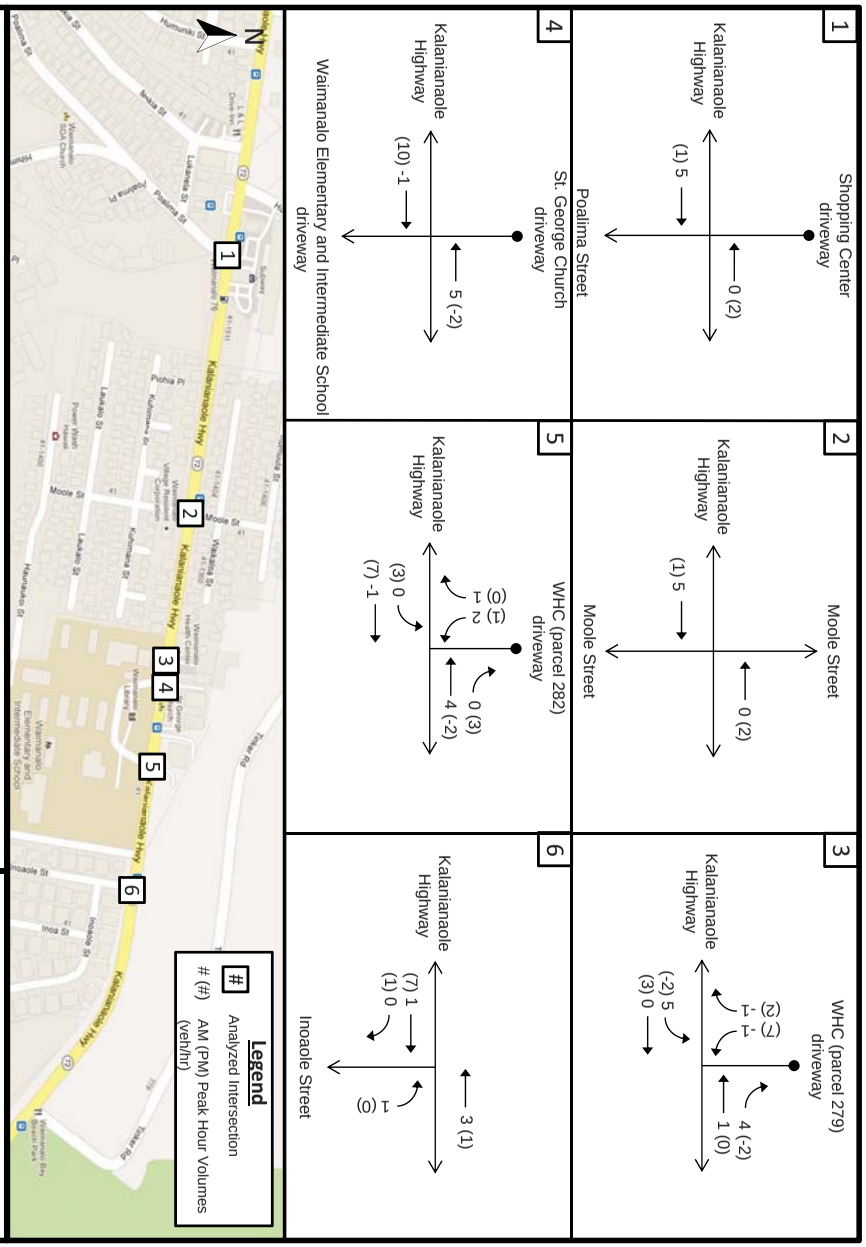

Figure 8: Project Related Trips

D. Level of Service

1. Future (2017) Without Project Intersection Conditions

With an increase in background traffic volumes, the Future (2017) Without Project conditions show a worsening in LOS and v/c (see Table 9). Both approaches along Moole Street now operate with LOS F during the AM. In addition, v/c > 1.0 for the AM northbound approach, which suggests that the approach is over capacity. Appendix C provides the detailed analysis reports for the Future (2017) Without Project conditions.

Table 9: Future (2017) Without Project Intersection Level of Service

Intersection	Approach	Movement	AM			PM		
			Delay	v/c	LOS	Delay	v/c	LOS
Kalanianaole Highway at Poalima Street/Shopping Center driveway	Intersection		20.1	-	C	19.2	-	B
	Eastbound	L	18.1	0.08	B	17.6	0.06	B
		T	11.6	0.61	B	12.9	0.67	B
	Westbound	L	17.7	0.08	B	21.3	0.15	C
		T	11.8	0.62	B	11.8	0.62	B
	Northbound	LTR	**64.4**	0.83	**E**	**58.6**	0.78	**E**
	Southbound	LTR	40.7	0.25	D	40.4	0.22	D
Kalanianaole Highway at Moole Street	Eastbound	L	9.2	0.01	A	9.8	0.04	A
	Westbound	L	9.2	0.02	A	9.5	0.03	A
	Northbound	LTR	**176.3**	**1.02**	**F**	**87.5**	0.58	**F**
	Southbound	LTR	**114.8**	0.91	**F**	29.8	0.15	D
Kalanianaole Highway at WHC campus (parcel 279) driveway	Eastbound	L	9.6	0.01	A	9.7	0.00	A
	Southbound	LR	32.1	0.04	D	28.4	0.11	D
Kalanianaole Highway at Waimanalo Elementary/Intermediate School driveway	Eastbound	L	9.4	0.00	A	9.7	0.00	A
	Westbound	L	9.5	0.07	A	9.3	0.00	A
	Southbound	LTR	26.9	0.15	D	15.6	0.02	C
Kalanianaole Highway at WHC employee parking (parcel 282) driveway	Eastbound	L	9.3	0.02	A	9.3	0.00	A
	Southbound	LR	-	-	-	25.3	0.16	D
Kalanianaole Highway at Inoaole Street	Westbound	L	8.7	0.01	A	9.2	0.04	A
	Northbound	LR	**59.5**	0.73	**F**	**46.5**	0.46	**E**

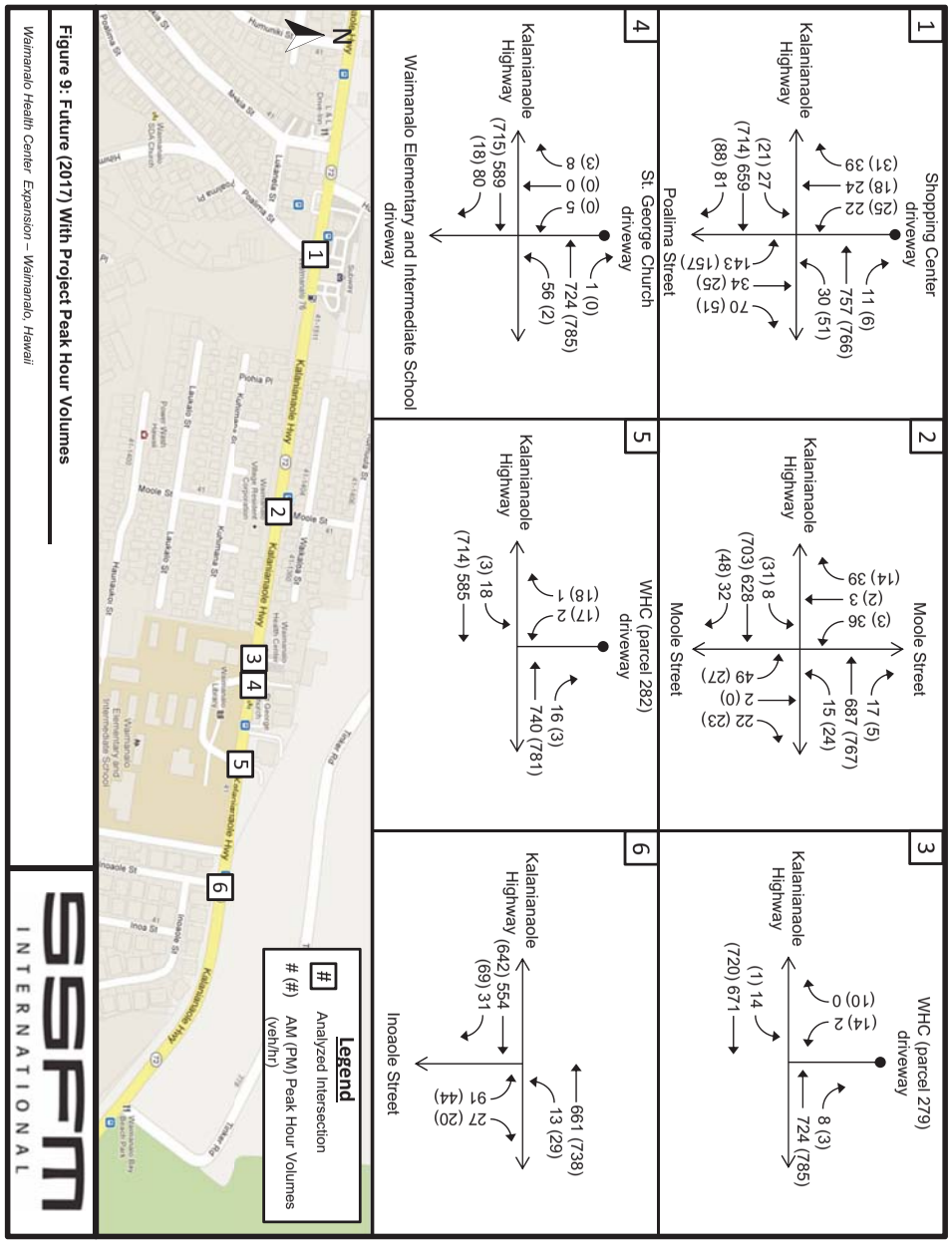

Figure 9: Future (2017) With Project Peak Hour Volumes

2. Future (2017) With Project Intersection Conditions

The Future (2017) With Project conditions show a minimal change in delay and LOS as a result of the added project related traffic (see Table 10). With the distribution of services offered between parcel 279 and 282, the increase in total vehicles traveling along Kalanianaole Highway results in a minimal increase in delay at the WHC driveways and worsening to LOS E for the southbound approach from parcel 279 during the AM. Capacity remains appropriate at the WHC driveways, as shown through the low v/c. Appendix D provides the detailed analysis reports for the Future (2017) With Project conditions.

Table 10: Future (2017) With Project Intersection Level of Service

Intersection	Approach	Movement	AM			PM		
			Delay	v/c	LOS	Delay	v/c	LOS
Kalanianaole Highway at Poalima Street/Shopping Center driveway	Intersection		20.1	-	C	19.2	-	B
	Eastbound	L	18.1	0.08	B	17.9	0.06	B
		T	11.7	0.62	B	12.9	0.67	B
	Westbound	L	17.8	0.08	B	21.5	0.15	C
		T	11.8	0.62	B	11.8	0.62	B
	Northbound	LTR	**64.4**	0.83	**E**	**58.4**	0.78	**E**
	Southbound	LTR	40.7	0.25	D	40.4	0.22	D
Kalanianaole Highway at Moole Street	Eastbound	L	9.2	0.01	A	9.8	0.04	A
	Westbound	L	9.2	0.02	A	9.5	0.03	A
	Northbound	LTR	**180.5**	**1.03**	**F**	**90.9**	0.59	**F**
	Southbound	LTR	**119.0**	0.92	**F**	30.1	0.15	D
Kalanianaole Highway at WHC (parcel 279) driveway	Eastbound	L	9.7	0.02	A	9.7	0.00	A
	Southbound	LR	**36.9**	0.02	**E**	34.9	0.22	D
Kalanianaole Highway at Waimanalo Elementary/Intermediate School driveway	Eastbound	L	9.4	0.00	A	9.6	0.00	A
	Westbound	L	9.4	0.07	A	9.3	0.00	A
	Southbound	LTR	27.2	0.15	D	15.5	0.02	C
Kalanianaole Highway at WHC (parcel 282) driveway	Eastbound	L	9.3	0.02	A	9.3	0.00	A
	Southbound	LR	23.2	0.01	C	26.3	0.17	D
Kalanianaole Highway at Inoaole Street	Westbound	L	8.7	0.01	A	9.3	0.04	A
	Northbound	LR	**62.2**	0.75	**F**	**47.4**	0.46	**E**

E. Future Conditions Mitigation

1. Traffic Signal Warrants for Future (2017) Without Project Conditions

With traffic signal warrants passing for Existing (2013) conditions at the Kalanianaole Highway intersections with Moole Street and with Inoaole Street, signals will be warranted for Future conditions since volumes are projected to increase. Future (2017) Without Project conditions at the intersection of Kalanianaole Highway and Moole Street result in v/c > 1.0, and therefore a separate left-turn lane should be considered for the northbound and southbound approaches if ROW exists. These conditions

are not as a result of the proposed WHC project and therefore not included as a part of project recommended mitigation.

Peak Hour Volume traffic signal warrants run for the unsignalized study intersections at the WHC driveways did not warrant the signalization of the intersections (see Table 11). With minimal change in delay, low v/c suggesting the movement was operating well under capacity, and no signal warrants passing, no mitigation is recommended at these intersections for Future (2017) Without Project conditions. Appendix C includes the details of the traffic signal warrant analysis for Future (2017) Without Project Conditions.

Table 11: Future (2017) Without Project Intersection Traffic Signal Warrant

Unsignalized Intersection	Traffic Signal Warrant
	Peak Hour
Kalanianaole Highway at WHC campus (parcel 279) driveway	No
Kalanianaole Highway at WHC employee parking (parcel 282) driveway	No

2. Traffic Signal Warrants for Future (2017) With Project Conditions

Peak Hour Volume traffic signal warrants run for the Future (2017) With Project volumes, at the unsignalized study intersections with the WHC driveways, still did not warrant the signalization of the intersections (see Table 12). With minimal change in delay, low v/c suggesting the movement was operating well under capacity, and no signal warrants passing, no mitigation is recommended for Future (2017) With Project conditions at the WHC driveways. Appendix D includes the details of the traffic signal warrant analysis for Future (2017) With Project Conditions.

Table 12: Future (2017) With Project Intersection Traffic Signal Warrant

Unsignalized Intersection	Traffic Signal Warrant
	Peak Hour
Kalanianaole Highway at WHC campus (parcel 279) driveway	No
Kalanianaole Highway at WHC employee parking (parcel 282) driveway	No

It is recommended that the flashing beacon on the makai side of the highway, connected with the adjacent fire station, be maintained or relocated to retain a clear view from traffic approaching along Kalanianaole Highway.

IV. SUMMARY AND RECOMMENDATION

WHC plans to expand and develop an approximately 19,600 square-foot two-story building and associated parking lot on parcel 282 for a planned operation by year 2017. With this expansion, many services currently offered at the existing WHC campus on parcel 279 will be relocated. The demolition of old structures on parcel 279 will occur after the successful transition of identified services to the completed new health care facility. Staffing projections are still being finalized although it is anticipated that total staffing of both parcels will increase 20% from existing levels with 40% of those employees remaining at parcel 279. Driveway access to the new development is being proposed for relocation, further east away from the fire station driveway from what currently exists.

Existing (2013) intersection LOS calculated for the AM and PM peak hours resulted in appropriate LOS for the project driveways. The northbound approach along Poalima Street/Shopping Center driveway resulted in LOS E for AM and PM peak hours although the total intersection LOS was appropriate. The northbound approach along Moole Street resulted in LOS F for the AM and PM peak hours, while the southbound approach also resulted in LOS F for the AM peak hour. The northbound approach along Inoaole Street resulted in LOS E for the AM and PM peak hours. Signal warrants passed for the unsignalized Kalanianaole Highway intersections with Moole Street and with Inoaole Street. Historically the community has preferred to retain a rural feel along Kalanianaole Highway and not include additional turn lanes or traffic signals. To mitigate delay, it is common practice for drivers along Kalanianaole Highway to slow down to allow vehicles to turn in front of them.

With an increase in background traffic volumes the Future (2017) Without Project conditions show a worsening in LOS and v/c. With conditions at the intersection of Kalanianaole Highway and Moole Street having v/c > 1.0 for the northbound movement in the AM, a separate left-turn lane should be considered for the northbound and southbound approaches if ROW exists. These conditions are not as a result of the proposed WHC project and therefore not included as a part of project recommended mitigation

The Future (2017) With Project conditions show a minimal change in delay and LOS. Signals are not warranted at either driveway and v/c remains low and therefore no mitigation is recommended at the project driveways. It is recommended to coordinate with the fire station to ensure the existing flashing beacon on the makai side of Kalanianaole Highway be maintained or relocated to remain visible to oncoming traffic.

V. REFERENCES

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APPENDIX A
Turning Movement Counts

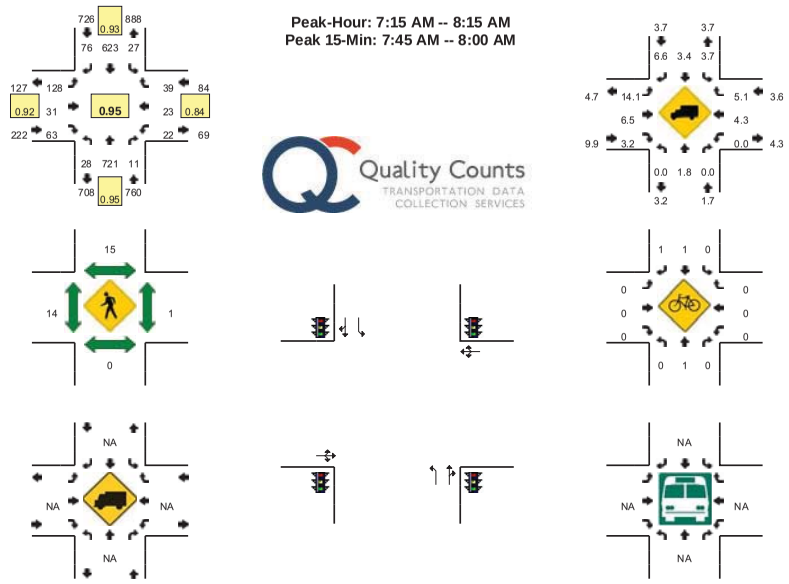
Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: Kalanianaole Hwy -- Poalima St
CITY/STATE: Waimanalo, HI

QC JOB #: 10958601
DATE: Thu, May 23 2013

Peak-Hour: 7:15 AM -- 8:15 AM
Peak 15-Min: 7:45 AM -- 8:00 AM



15-Min Count Period Beginning At	Kalanianaole Hwy (Northbound)				Kalanianaole Hwy (Southbound)				Poalima St (Eastbound)				Poalima St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:30 AM	10	129	4	0	5	92	22	0	33	3	10	0	1	4	4	0	317	
6:45 AM	10	138	2	0	9	85	19	0	31	3	5	0	1	4	6	0	313	
7:00 AM	7	157	6	0	6	107	20	0	34	7	11	0	3	0	12	0	370	
7:15 AM	6	184	5	0	6	151	24	0	27	9	9	0	2	7	13	0	443	1443
7:30 AM	9	184	2	0	9	143	17	0	37	5	20	0	4	6	7	0	443	1569
7:45 AM	10	188	3	0	8	170	17	0	29	6	19	0	7	4	9	0	470	1726
8:00 AM	3	165	1	0	4	159	18	0	35	11	15	0	9	6	10	0	436	1792
8:15 AM	6	127	2	0	4	127	26	0	34	5	13	0	3	6	4	0	357	1706

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	40	752	12	0	32	680	68	0	116	24	76	0	28	16	36	0	1880
Heavy Trucks	0	20	0		0	16	0		12	0	0		0	0	0		48
Pedestrians		0				4				8				0			12
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments: 630 to 830 amd and 315 to 515 pm

Report generated on 5/28/2013 2:37 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

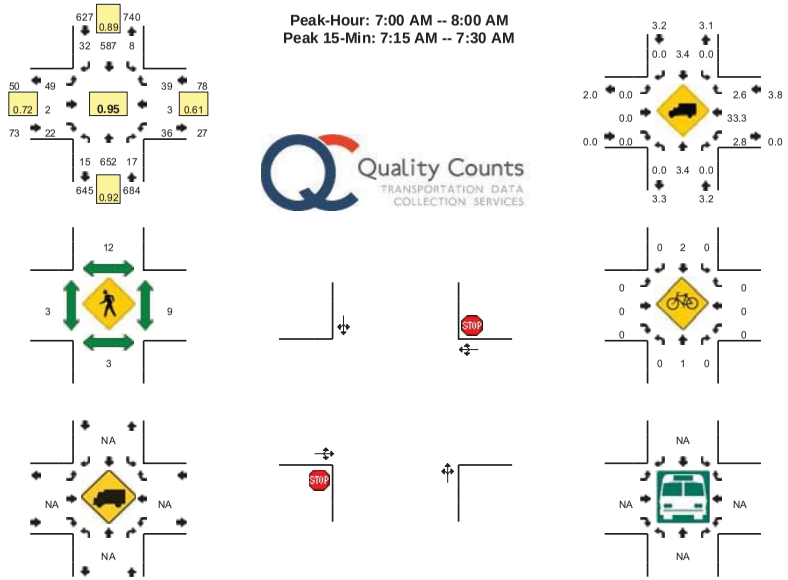
Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: Kalanianaole Hwy -- Moole St
CITY/STATE: Waimanalo, HI

QC JOB #: 10958603
DATE: Tue, May 14 2013

Peak-Hour: 7:00 AM -- 8:00 AM
Peak 15-Min: 7:15 AM -- 7:30 AM



15-Min Count Period Beginning At	Kalanianaole Hwy (Northbound)				Kalanianaole Hwy (Southbound)				Moole St (Eastbound)				Moole St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:30 AM	3	149	2	0	2	86	6	0	7	1	2	0	3	0	5	0	266	
6:45 AM	1	135	3	0	1	97	5	0	10	0	5	0	2	0	4	0	263	
7:00 AM	3	176	3	0	1	114	12	0	19	0	3	0	3	1	5	0	340	
7:15 AM	6	178	2	0	0	141	10	0	17	0	10	0	4	2	16	0	386	1255
7:30 AM	5	138	4	0	6	172	10	0	10	1	3	0	6	0	9	0	364	1353
7:45 AM	1	160	8	0	1	160	0	0	3	1	6	0	23	0	9	0	372	1462
8:00 AM	3	132	1	0	6	152	9	0	12	0	5	0	2	0	5	0	327	1449
8:15 AM	1	134	1	0	3	133	5	0	11	0	3	0	1	0	4	0	296	1359

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	24	712	8	0	0	564	40	0	68	0	40	0	16	8	64	0	1544
Heavy Trucks	0	12	0		0	20	0		0	0	0		0	4	0		36
Pedestrians		0				8				4				12			24
Bicycles	0	1	0		0	2	0		0	0	0		0	0	0		3
Railroad																	
Stopped Buses																	

Comments: 630 to 830 amd and 315 to 515 pm

Report generated on 5/24/2013 5:45 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

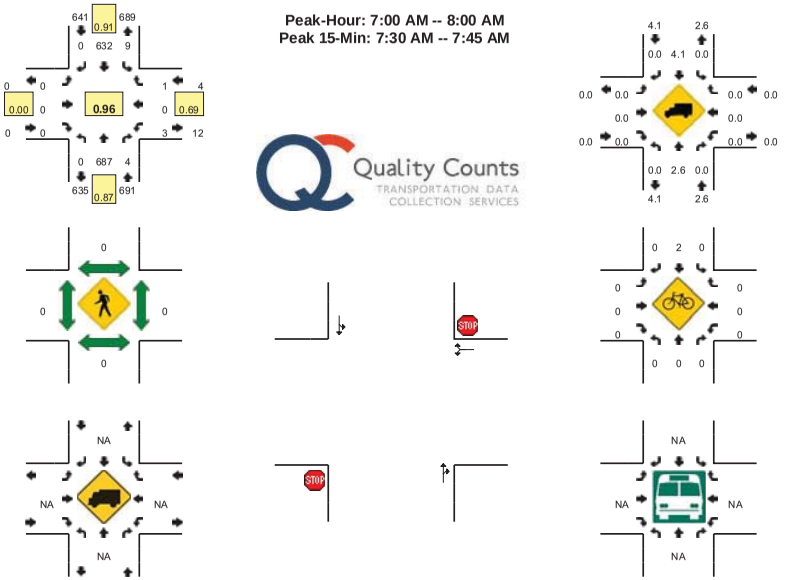
Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: Kalanianaole Hwy -- Waimanalo Health Center (parcel 279)
CITY/STATE: Waimanalo, HI

QC JOB #: 10958605
DATE: Tue, May 14 2013

Peak-Hour: 7:00 AM -- 8:00 AM
Peak 15-Min: 7:30 AM -- 7:45 AM



15-Min Count Period Beginning At	Kalanianaole Hwy (Northbound)				Kalanianaole Hwy (Southbound)				Waimanalo Health Center (Eastbound)				Waimanalo Health Center (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:30 AM	0	152	0	0	2	95	0	0	0	0	0	0	0	0	2	0	251	
6:45 AM	0	144	0	0	0	107	0	0	0	0	0	0	0	0	0	0	251	
7:00 AM	0	198	0	0	0	125	0	0	0	0	0	0	0	0	0	0	323	
7:15 AM	0	170	2	0	1	154	0	1	0	0	0	0	1	0	0	0	329	1154
7:30 AM	0	164	1	0	3	180	0	0	0	0	0	0	0	0	0	0	348	1251
7:45 AM	0	155	1	0	4	173	0	0	0	0	0	0	2	0	1	0	336	1336
8:00 AM	0	134	2	0	2	145	0	0	0	0	0	0	3	0	1	0	287	1300
8:15 AM	0	139	4	0	3	134	0	0	0	0	0	0	0	0	4	0	284	1255

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	656	4	0	12	720	0	0	0	0	0	0	0	0	0	0	1392
Heavy Trucks	0	8	0		0	20	0		0	0	0		0	0	0		28
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments: 630 to 830 amd and 315 to 515 pm

Report generated on 5/24/2013 5:45 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

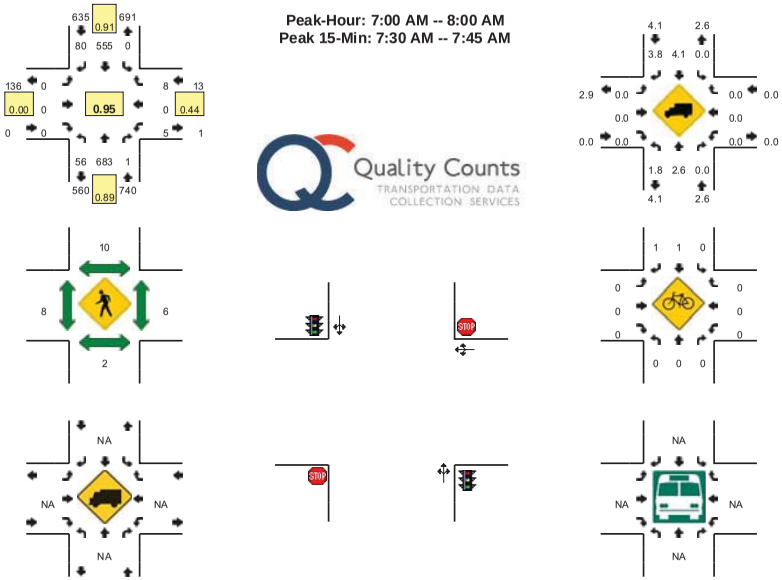
Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: Kalanianaole Hwy -- Elementary School
CITY/STATE: Waimanalo, HI

QC JOB #: 10958607
DATE: Tue, May 14 2013

Peak-Hour: 7:00 AM -- 8:00 AM
Peak 15-Min: 7:30 AM -- 7:45 AM



Quality Counts
TRANSPORTATION DATA COLLECTION SERVICES

15-Min Count Period Beginning At	Kalanianaole Hwy (Northbound)				Kalanianaole Hwy (Southbound)				Elementary School (Eastbound)				Elementary School (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:30 AM	3	152	0	0	0	87	8	0	0	0	0	0	0	0	0	0	250	
6:45 AM	8	144	0	0	0	92	15	0	0	0	0	0	0	0	0	0	259	
7:00 AM	10	198	0	0	0	112	13	0	0	0	0	0	0	0	0	0	333	
7:15 AM	19	166	1	0	0	135	20	0	0	0	0	0	2	0	6	0	349	1191
7:30 AM	19	163	0	0	0	147	33	0	0	0	0	0	1	0	2	0	365	1306
7:45 AM	8	156	0	0	0	161	14	0	0	0	0	0	2	0	0	0	341	1388
8:00 AM	2	135	0	0	1	134	13	0	0	0	0	0	0	0	1	0	286	1341
8:15 AM	1	143	0	0	0	132	2	0	0	0	0	0	0	0	0	0	278	1270

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	76	652	0	0	0	588	132	0	0	0	0	0	4	0	8	0	1460
Heavy Trucks	0	8	0		0	16	4		0	0	0		0	0	0		28
Pedestrians		0				12				12				4			28
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments: 630 to 830 amd and 315 to 515 pm

Report generated on 5/24/2013 5:45 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

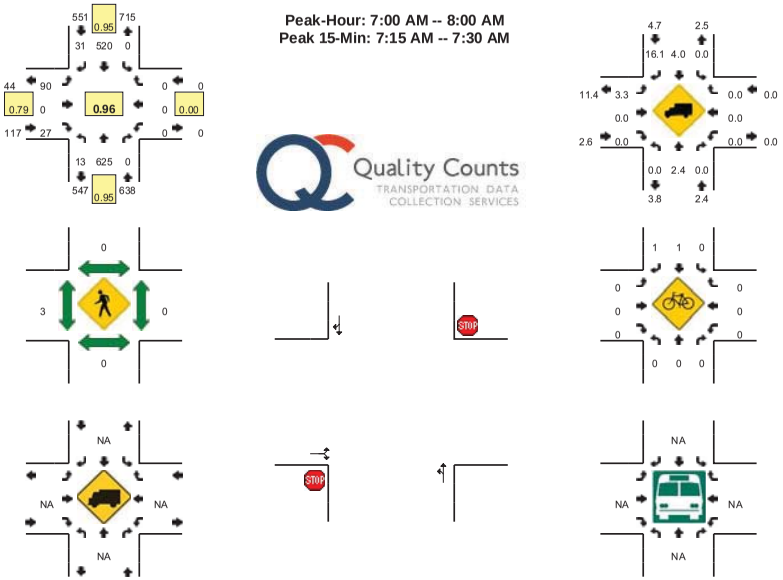
Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: Kalanianaole Hwy -- Inoaole St
CITY/STATE: Waimanalo, HI

QC JOB #: 10958609
DATE: Tue, May 14 2013

Peak-Hour: 7:00 AM -- 8:00 AM
Peak 15-Min: 7:15 AM -- 7:30 AM



Quality Counts
TRANSPORTATION DATA COLLECTION SERVICES

15-Min Count Period Beginning At	Kalanianaole Hwy (Northbound)				Kalanianaole Hwy (Southbound)				Inoaole St (Eastbound)				Inoaole St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:30 AM	0	132	0	0	0	82	5	0	14	0	5	0	0	0	0	0	238	
6:45 AM	2	145	0	0	0	82	4	0	20	0	1	0	0	0	0	0	254	
7:00 AM	1	167	0	0	0	100	4	0	24	0	9	0	0	0	0	0	305	
7:15 AM	4	154	0	0	0	136	8	0	28	0	9	0	0	0	0	0	339	1136
7:30 AM	2	163	0	0	0	142	7	0	17	0	3	0	0	0	0	0	334	1232
7:45 AM	6	141	0	0	0	142	12	0	21	0	6	0	0	0	0	0	328	1306
8:00 AM	4	141	0	0	0	128	10	0	13	0	6	0	0	0	0	0	302	1303
8:15 AM	3	132	0	0	0	138	9	0	13	0	5	0	0	0	0	0	300	1264

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	16	616	0	0	0	544	32	0	112	0	36	0	0	0	0	0	1356
Heavy Trucks	0	16	0		0	20	4		0	0	0		0	0	0		40
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	1		0	0	0		0	0	0		1
Railroad																	
Stopped Buses																	

Comments: 630 to 830 amd and 315 to 515 pm

Report generated on 5/28/2013 4:50 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

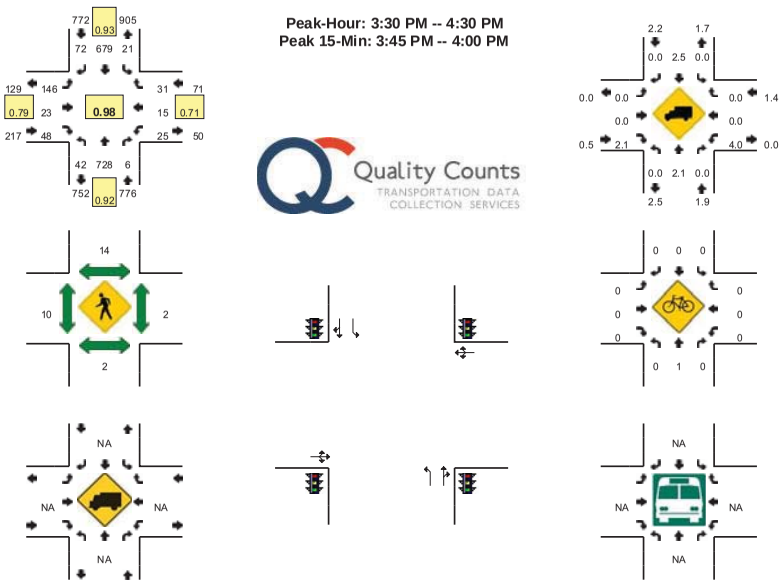
Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: Kalanianaole Hwy -- Poalima St
CITY/STATE: Waimanalo, HI

QC JOB #: 10958602
DATE: Thu, May 23 2013

Peak-Hour: 3:30 PM -- 4:30 PM
Peak 15-Min: 3:45 PM -- 4:00 PM



15-Min Count Period Beginning At	Kalanianaole Hwy (Northbound)				Kalanianaole Hwy (Southbound)				Poalima St (Eastbound)				Poalima St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
3:15 PM	14	167	0	0	4	174	13	0	33	2	7	0	9	3	16	0	442	
3:30 PM	9	184	1	0	4	156	21	0	42	6	21	0	5	3	5	0	457	
3:45 PM	9	182	2	0	3	190	21	0	32	6	7	0	7	3	8	0	470	
4:00 PM	10	166	3	0	7	166	10	0	41	8	10	0	7	4	10	0	442	1811
4:15 PM	14	196	0	0	7	167	20	0	31	3	10	0	6	5	8	0	467	1836
4:30 PM	9	165	2	0	4	183	22	0	35	6	11	0	5	6	3	0	451	1830
4:45 PM	8	151	2	0	8	183	14	0	21	6	5	0	7	3	9	0	417	1777
5:00 PM	8	170	1	0	5	165	18	0	39	7	14	0	10	2	5	0	444	1779

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	36	728	8	0	12	760	84	0	128	24	28	0	28	12	32	0	1880
Heavy Trucks	0	16	0		0	20	0		0	0	0		0	0	0		36
Pedestrians		0				8				16				0			24
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments: 630 to 830 amd and 315 to 515 pm

Report generated on 5/28/2013 2:37 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

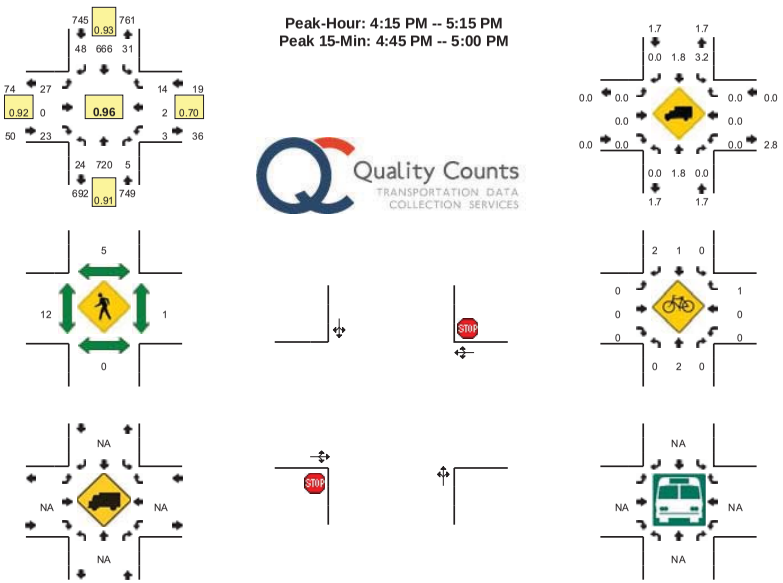
Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: Kalanianaole Hwy -- Moole St
CITY/STATE: Waimanalo, HI

QC JOB #: 10958604
DATE: Tue, May 14 2013

Peak-Hour: 4:15 PM -- 5:15 PM
Peak 15-Min: 4:45 PM -- 5:00 PM



15-Min Count Period Beginning At	Kalanianaole Hwy (Northbound)				Kalanianaole Hwy (Southbound)				Moole St (Eastbound)				Moole St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
3:15 PM	1	166	3	0	8	172	7	0	10	0	2	0	2	1	4	0	376	
3:30 PM	6	153	1	0	8	157	19	0	13	1	1	0	1	0	4	0	364	
3:45 PM	2	181	1	1	7	162	8	0	7	1	4	0	2	0	9	0	385	
4:00 PM	8	175	0	0	6	153	10	0	9	1	3	0	2	1	3	0	371	1496
4:15 PM	5	165	0	0	10	177	13	0	8	0	7	0	2	0	3	0	390	1510
4:30 PM	7	168	1	0	4	164	9	0	4	0	4	0	1	1	7	0	370	1516
4:45 PM	7	197	2	0	9	157	15	0	10	0	8	0	0	1	0	0	406	1537
5:00 PM	5	190	2	0	8	168	11	0	5	0	4	0	0	0	4	0	397	1563

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	28	788	8	0	36	628	60	0	40	0	32	0	0	4	0	0	1624
Heavy Trucks	0	12	0		0	20	0		0	0	0		0	0	0		32
Pedestrians		0				0				16				4			20
Bicycles	0	1	0		0	1	0		0	0	0		0	0	0		2
Railroad																	
Stopped Buses																	

Comments: 630 to 830 amd and 315 to 515 pm

Report generated on 5/24/2013 5:46 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

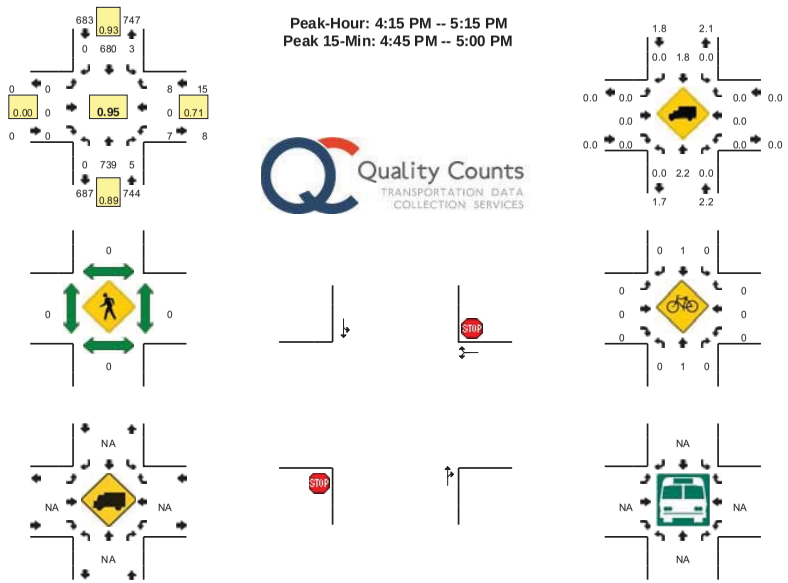
Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: Kalanianaole Hwy -- Waimanalo Health Center(parcel 279)
CITY/STATE: Waimanalo, HI

QC JOB #: 10958606
DATE: Tue, May 14 2013

Peak-Hour: 4:15 PM -- 5:15 PM
Peak 15-Min: 4:45 PM -- 5:00 PM



15-Min Count Period Beginning At	Kalanianaole Hwy (Northbound)				Kalanianaole Hwy (Southbound)				Waimanalo Health Center (Eastbound)				Waimanalo Health Center (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
3:15 PM	0	172	1	0	2	174	0	0	0	0	0	0	3	0	3	0	355	
3:30 PM	0	173	0	0	1	165	0	0	0	0	0	0	0	0	1	0	340	
3:45 PM	0	175	0	0	2	165	0	0	0	0	0	0	1	0	1	0	344	
4:00 PM	0	180	2	0	0	166	0	0	0	0	0	0	3	0	2	0	353	1392
4:15 PM	0	171	1	0	0	183	0	0	0	0	0	0	1	0	2	0	358	1395
4:30 PM	0	171	1	0	0	160	0	0	0	0	0	0	3	0	0	0	335	1390
4:45 PM	0	207	2	0	1	163	0	0	0	0	0	0	2	0	4	0	379	1425
5:00 PM	0	190	1	0	2	174	0	0	0	0	0	0	1	0	2	0	370	1442

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	828	8	0	4	652	0	0	0	0	0	0	8	0	16	0	1516
Heavy Trucks	0	20	0		0	12	0		0	0	0		0	0	0		32
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	1	0		0	0	0		0	0	0		1
Railroad																	
Stopped Buses																	

Comments: 630 to 830 amd and 315 to 515 pm

Report generated on 5/24/2013 5:46 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

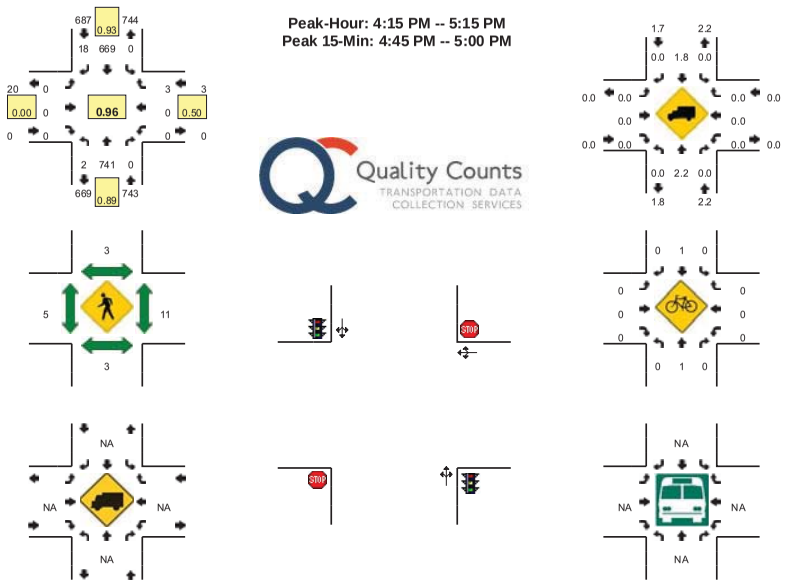
Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: Kalanianaole Hwy -- Elementary School
CITY/STATE: Waimanalo, HI

QC JOB #: 10958608
DATE: Tue, May 14 2013

Peak-Hour: 4:15 PM -- 5:15 PM
Peak 15-Min: 4:45 PM -- 5:00 PM



15-Min Count Period Beginning At	Kalanianaole Hwy (Northbound)				Kalanianaole Hwy (Southbound)				Elementary School (Eastbound)				Elementary School (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
3:15 PM	4	173	0	0	0	174	3	0	0	0	0	0	0	0	0	0	354	
3:30 PM	1	173	0	0	0	162	3	0	0	0	0	0	0	0	0	0	339	
3:45 PM	4	175	0	0	0	161	5	0	0	0	0	0	0	0	0	0	345	
4:00 PM	2	181	0	0	0	164	5	0	0	0	0	0	0	0	1	0	353	1391
4:15 PM	1	170	0	0	0	180	4	0	0	0	0	0	0	0	2	0	357	1394
4:30 PM	0	171	0	0	0	157	6	0	0	0	0	0	0	0	1	0	335	1390
4:45 PM	0	209	0	0	0	163	2	0	0	0	0	0	0	0	0	0	374	1419
5:00 PM	1	191	0	0	0	169	6	0	0	0	0	0	0	0	0	0	367	1433

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	836	0	0	0	652	8	0	0	0	0	0	0	0	0	0	1496
Heavy Trucks	0	20	0		0	12	0		0	0	0		0	0	0		32
Pedestrians		4				4				8				24			40
Bicycles	0	0	0		0	1	0		0	0	0		0	0	0		1
Railroad																	
Stopped Buses																	

Comments: 630 to 830 amd and 315 to 515 pm

Report generated on 5/24/2013 5:46 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

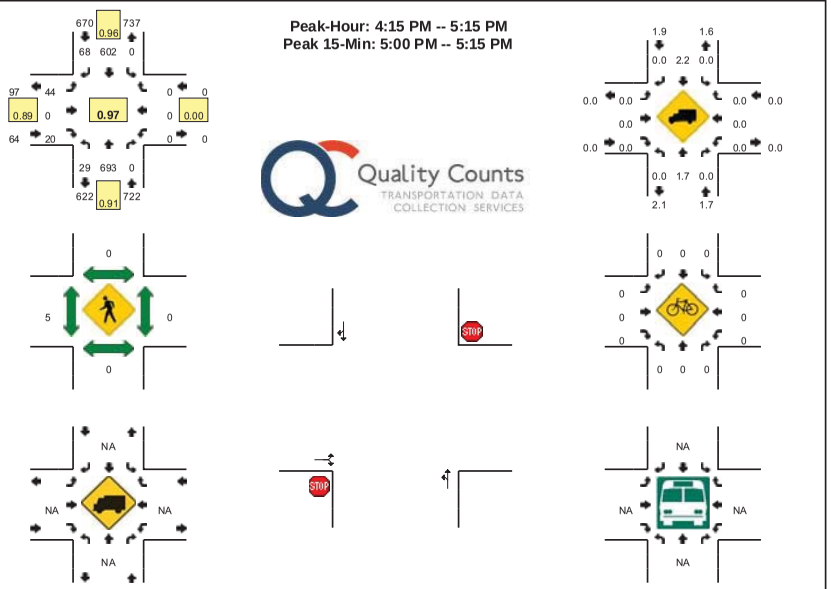
Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: Kalanianaole Hwy -- Inoaole St
CITY/STATE: Waimanalo, HI

QC JOB #: 10958610
DATE: Tue, May 14 2013

Peak-Hour: 4:15 PM -- 5:15 PM
Peak 15-Min: 5:00 PM -- 5:15 PM



15-Min Count Period Beginning At	Kalanianaole Hwy (Northbound)				Kalanianaole Hwy (Southbound)				Inoaole St (Eastbound)				Inoaole St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
3:15 PM	7	174	0	0	0	164	9	0	10	0	5	0	0	0	0	0	369	
3:30 PM	3	154	0	0	0	142	19	0	10	0	1	0	0	0	0	0	329	
3:45 PM	7	168	0	0	0	144	20	0	7	0	7	0	0	0	0	0	353	
4:00 PM	5	183	0	0	0	148	18	0	9	0	4	0	0	0	0	0	367	1418
4:15 PM	2	157	0	0	0	159	16	0	14	0	3	0	0	0	0	0	351	1400
4:30 PM	6	168	0	0	0	160	17	0	8	0	3	0	0	0	0	0	362	1433
4:45 PM	12	178	0	0	0	141	19	0	12	0	6	0	0	0	0	0	368	1448
5:00 PM	9	190	0	0	0	142	16	0	10	0	8	0	0	0	0	0	375	1456

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	36	760	0	0	0	568	64	0	40	0	32	0	0	0	0	0	1500
Heavy Trucks	0	12	0		0	8	0		0	0	0		0	0	0		20
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments: 630 to 830 amd and 315 to 515 pm

Report generated on 5/28/2013 4:49 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

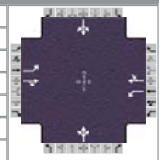
APPENDIX B

Analysis Reports

Existing (2013) Conditions

HCS 2010 Signalized Intersection Results Summary

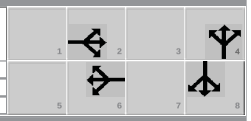
General Information				Intersection Information	
Agency	SSFM International, Inc			Duration, h	0.25
Analyst	myp	Analysis Date	Oct 7, 2013	Area Type	Other
Jurisdiction	Waimanalo, HI	Time Period	AM Peak Hour	PHF	0.95
Intersection	Poalima St/Shopping Cent	Analysis Year	Existing 2013	Analysis Period	1> 7:00
File Name	131007 myp Poalima AM.xus				
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	27	623	76	28	721	11	128	31	63	22	23	39

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	85.2	22.8	0.0	0.0	0.0	0.0
Yellow	4.0	4.0	0.0	0.0	0.0	0.0
Red	2.0	2.0	0.0	0.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		4		8
Case Number		6.0		6.0		8.0		8.0
Phase Duration, s		91.2		91.2		28.8		28.8
Change Period, *(Y+Rc)*, s		6.0		6.0		6.0		6.0
Max Allow Headway *(MAH)*, s		0.0		0.0		3.4		3.4
Queue Clearance Time *(g_s)*, s						22.7		7.4
Green Extension Time *(g_e)*, s		0.0		0.0		0.1		0.6
Phase Call Probability						1.00		1.00
Max Out Probability						1.00		0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	7	4	14	3	8	18
Adjusted Flow Rate *(v)*, veh/h	28	736		29	771			234			88	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	682	1809		733	1858			1337			1569	
Queue Service Time *(g_s)*, s	2.6	23.9		2.5	24.7			15.3			0.0	
Cycle Queue Clearance Time *(g_c)*, s	27.3	23.9		26.3	24.7			20.7			5.4	
Capacity *(c)*, veh/h	404	1285		435	1319			301			336	
Volume-to-Capacity Ratio *(X)*	0.070	0.573		0.068	0.584			0.776			0.263	
Available Capacity *(c_a)*, veh/h	404	1285		435	1319			315			351	
Back of Queue *(Q)*, veh/ln (50th percentile)	0.4	9.4		0.5	9.9			7.7			2.3	
Overflow Queue *(Q_3)*, veh/ln	0.0	0.0		0.0	0.0			0.0			0.0	
Queue Storage Ratio *(RQ)* (50th percentile)	0.15	0.00		0.15	0.00			0.00			0.00	
Uniform Delay *(d_1)*, s/veh	15.4	8.5		14.9	8.6			48.0			41.5	
Incremental Delay *(d_2)*, s/veh	0.3	1.9		0.3	1.9			9.9			0.2	
Initial Queue Delay *(d_3)*, s/veh	0.0	0.0		0.0	0.0			0.0			0.0	
Control Delay *(d)*, s/veh	15.7	10.4		15.2	10.5			57.9			41.7	
Level of Service (LOS)	B	B		B	B			E			D	
Approach Delay, s/veh / LOS	10.6	B		10.7	B		57.9	E		41.7	D	
Intersection Delay, s/veh / LOS	17.9						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.1	B	2.1	B	2.3	B	2.3	B
Bicycle LOS Score / LOS	1.7	A	1.8	A	0.9	A	0.6	A

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HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

```
Analyst:                Bll
Agency/Co.:             SSFM International
Date Performed:         6/24/2013
Analysis Time Period: AM Peak Hour
Intersection:
Jurisdiction:           Waimanalo, HI
Units: U. S. Customary
Analysis Year:          Existing (2013)
Project ID:  2013_040.000 EAI Waimanalo Health Center Expansion
East/West Street:       Kalanianaole Hwy
North/South Street:     Moole St
Intersection Orientation: EW                  Study period (hrs):  0.25
```

Vehicle Volumes and Adjustments

```
Major Street:  Approach        Eastbound              Westbound
               Movement     1      2      3     |  4      5      6
                            L      T      R     |  L      T      R
Volume                      8      587    32       15     652    17
Peak-Hour Factor, PHF       0.89   0.89   0.89     0.92   0.92   0.92
Hourly Flow Rate, HFR       8      659    35       16     708    18
Percent Heavy Vehicles      0      --     --       0      --     --
Median Type/Storage         Undivided            /
RT Channelized?
Lanes                          0   1    0             0   1    0
Configuration                   LTR                     LTR
Upstream Signal?                   No                      No

Minor Street:  Approach        Northbound             Southbound
               Movement     7      8      9     |  10     11     12
                            L      T      R     |  L      T      R
Volume                      49     2      22       36     3      39
Peak Hour Factor, PHF       0.72   0.72   0.72     0.61   0.61   0.61
Hourly Flow Rate, HFR       68     2      30       59     4      63
Percent Heavy Vehicles      0      0      0        3      33     3
Percent Grade (%)                  0                      0
Flared Approach:  Exists?/Storage         No     /               No     /
Lanes                       0   1    0             0   1    0
Configuration                      LTR                     LTR
```

Delay, Queue Length, and Level of Service

```
Approach             EB     WB        Northbound            Southbound
Movement             1      4   |  7      8      9    |  10     11     12
Lane Config          LTR    LTR |         LTR         |         LTR
v (vph)              8      16            100                    126
C(m) (vph)           886    911           113                    156
v/c                  0.01   0.02          0.88                   0.81
95% queue length     0.03   0.05          5.36                   5.25
Control Delay        9.1    9.0           126.5                  86.1
LOS                   A      A             F                      F
Approach Delay                            126.5                  86.1
Approach LOS                               F                      F
```

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: Bll
Agency/Co.: SSFM International
Date Performed: 6/24/2013
Analysis Time Period: AM Peak Hour
Intersection:
Jurisdiction: Waimanalo, HI
Units: U. S. Customary
Analysis Year: Existing (2013)
Project ID: 2013_040.000 EAI Waimanalo Health Center Expansion
East/West Street: Kalanianaole Hwy
North/South Street: WHC campus (parcel 279) dwy
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	9	632			687	4
Peak-Hour Factor, PHF	0.91	0.91			0.87	0.87
Hourly Flow Rate, HFR	9	694			789	4
Percent Heavy Vehicles	4	--	--		--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	1			1	0
Configuration	LT				TR	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				3		1
Peak Hour Factor, PHF				0.69		0.69
Hourly Flow Rate, HFR				4		1
Percent Heavy Vehicles				0		0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/		No	/
Lanes				0	0	
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	9						5	
C(m) (vph)	819						154	
v/c	0.01						0.03	
95% queue length	0.03						0.10	
Control Delay	9.4						29.2	
LOS	A						D	
Approach Delay							29.2	
Approach LOS							D	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: Bll
Agency/Co.: SSFM International
Date Performed: 6/24/2013
Analysis Time Period: AM Peak Hour
Intersection:
Jurisdiction: Waimanalo, HI
Units: U. S. Customary
Analysis Year: Existing (2013)
Project ID: 2013_040.000 EAI Waimanalo Health Center Expansion
East/West Street: Kalanianaole Hwy
North/South Street: Waimanalo Elem/Int School dwy
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	0	555	80	56	683	1
Peak-Hour Factor, PHF	0.91	0.91	0.91	0.89	0.89	0.89
Hourly Flow Rate, HFR	0	609	87	62	767	1
Percent Heavy Vehicles	0	--	--	2	--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	1	0	0	1	0
Configuration	LTR			LTR		
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				5	0	8
Peak Hour Factor, PHF				0.44	0.44	0.44
Hourly Flow Rate, HFR				11	0	18
Percent Heavy Vehicles				0	0	0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/		No	/
Lanes				0	1	0
Configuration					LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LTR	LTR					LTR	
v (vph)	0	62					29	
C(m) (vph)	855	900					212	
v/c	0.00	0.07					0.14	
95% queue length	0.00	0.22					0.47	
Control Delay	9.2	9.3					24.7	
LOS	A	A					C	
Approach Delay							24.7	
Approach LOS							C	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: Bll
Agency/Co.: SSFM International
Date Performed: 6/24/2013
Analysis Time Period: AM Peak Hour
Intersection:
Jurisdiction: Waimanalo, HI
Units: U. S. Customary
Analysis Year: Existing (2013)
Project ID: 2013_040.000 EAI Waimanalo Health Center Expansion
East/West Street: Kalanianaole Hwy
North/South Street: WHC employee (parcel 282) dwy
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	18	551			699	16
Peak-Hour Factor, PHF	1.00	1.00			1.00	1.00
Hourly Flow Rate, HFR	18	551			699	16
Percent Heavy Vehicles	2	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1			1	0
Configuration	LT				TR	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				0		0
Peak Hour Factor, PHF				1.00		1.00
Hourly Flow Rate, HFR				0		0
Percent Heavy Vehicles				0		0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/		No	/
Lanes				0	0	
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	18						0	
C(m) (vph)	885							
v/c	0.02							
95% queue length	0.06							
Control Delay	9.2							
LOS	A							
Approach Delay								
Approach LOS								

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: Bll
Agency/Co.: SSFM International
Date Performed: 6/24/2013
Analysis Time Period: AM Peak Hour
Intersection:
Jurisdiction: Waimanalo, HI
Units: U. S. Customary
Analysis Year: Existing (2013)
Project ID: 2013_040.000 EAI Waimanalo Health Center Expansion
East/West Street: Kalanianaole Hwy
North/South Street: Inoaole St
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		520	31	13	625	
Peak-Hour Factor, PHF		0.95	0.95	0.95	0.95	
Hourly Flow Rate, HFR		547	32	13	657	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

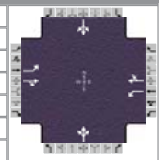
Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	90		27			
Peak Hour Factor, PHF	0.79		0.79			
Hourly Flow Rate, HFR	113		34			
Percent Heavy Vehicles	3		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No	/		/
Lanes	0	0				
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		13		147				
C(m) (vph)		1005		222				
v/c		0.01		0.66				
95% queue length		0.04		4.09				
Control Delay		8.6		48.2				
LOS		A		E				
Approach Delay				48.2				
Approach LOS				E				

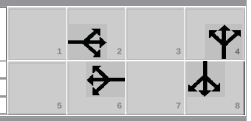
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	SSFM International, Inc			Duration, h	0.25
Analyst	myp	Analysis Date	Oct 7, 2013	Area Type	Other
Jurisdiction	Waimanalo, HI	Time Period	PM Peak Hour	PHF	0.98
Intersection	Poalima St/Shopping Cente	Analysis Year	Existing 2013	Analysis Period	1> 7:00
File Name	131007 myp Poalima PM.xus				
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	21	679	72	42	728	6	146	23	48	25	15	31

Signal Information									
Cycle, s	120.0	Reference Phase	2						
Offset, s	0	Reference Point	Begin	Green	86.2	21.8	0.0	0.0	0.0	0.0
Uncoordinated	No	Simult. Gap E/W	On	Yellow	4.0	4.0	0.0	0.0	0.0	0.0
Force Mode	Fixed	Simult. Gap N/S	On	Red	2.0	2.0	0.0	0.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		4		8
Case Number		6.0		6.0		8.0		8.0
Phase Duration, s		92.2		92.2		27.8		27.8
Change Period, ($Y+R_c$), s		6.0		6.0		6.0		6.0
Max Allow Headway (*MAH*), s		0.0		0.0		3.3		3.3
Queue Clearance Time (g_s), s						21.6		6.5
Green Extension Time (g_e), s		0.0		0.0		0.2		0.6
Phase Call Probability						1.00		1.00
Max Out Probability						1.00		0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	21	766		43	749			221			72	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	696	1813		713	1860			1336			1576	
Queue Service Time (g_s), s	1.8	24.7		3.7	22.8			15.1			0.0	
Cycle Queue Clearance Time (g_c), s	24.6	24.7		28.5	22.8			19.6			4.5	
Capacity (*c*), veh/h	428	1303		425	1337			292			326	
Volume-to-Capacity Ratio (*X*)	0.050	0.588		0.101	0.560			0.757			0.222	
Available Capacity (c_a), veh/h	428	1303		425	1337			318			354	
Back of Queue (*Q*), veh/ln (50th percentile)	0.3	9.6		0.7	9.1			7.1			1.9	
Overflow Queue (Q_3), veh/ln	0.0	0.0		0.0	0.0			0.0			0.0	
Queue Storage Ratio (*RQ*) (50th percentile)	0.11	0.00		0.23	0.00			0.00			0.00	
Uniform Delay (d_1), s/veh	13.7	8.2		15.2	8.0			48.5			42.0	
Incremental Delay (d_2), s/veh	0.2	2.0		0.5	1.7			7.9			0.1	
Initial Queue Delay (d_3), s/veh	0.0	0.0		0.0	0.0			0.0			0.0	
Control Delay (*d*), s/veh	14.0	10.2		15.6	9.7			56.4			42.1	
Level of Service (LOS)	B	B		B	A			E			D	
Approach Delay, s/veh / LOS	10.3	B		10.0	A		56.4	E		42.1	D	
Intersection Delay, s/veh / LOS	16.8						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.1	B	2.1	B	2.3	B	2.3	B
Bicycle LOS Score / LOS	1.8	A	1.8	A	0.9	A	0.6	A

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HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

```
Analyst:                Bll
Agency/Co.:             SSFM International
Date Performed:         6/24/2013
Analysis Time Period:   PM Peak Hour
Intersection:
Jurisdiction:           Waimanalo, HI
Units: U. S. Customary
Analysis Year:          Existing (2013)
Project ID:  2013_040.000 EAI Waimanalo Health Center Expansion
East/West Street:       Kalanianaole Hwy
North/South Street:     Moole St
Intersection Orientation: EW                  Study period (hrs):  0.25
```

Vehicle Volumes and Adjustments

```
Major Street:  Approach        Eastbound              Westbound
               Movement     1      2      3      |  4      5      6
                            L      T      R      |  L      T      R
Volume                     31     666    48       24     720    5
Peak-Hour Factor, PHF      0.93   0.93   0.93     0.91   0.91   0.91
Hourly Flow Rate, HFR      33     716    51       26     791    5
Percent Heavy Vehicles     3      --     --       0      --     --
Median Type/Storage        Undivided            /
RT Channelized?
Lanes                         0   1    0             0   1    0
Configuration                  LTR                     LTR
Upstream Signal?                  No                      No

Minor Street:  Approach        Northbound             Southbound
               Movement     7      8      9      |  10     11     12
                            L      T      R      |  L      T      R
Volume                     27     0      23       3      2      14
Peak Hour Factor, PHF      0.92   0.92   0.92     0.70   0.70   0.70
Hourly Flow Rate, HFR      29     0      24       4      2      20
Percent Heavy Vehicles     0      0      0        0      0      0
Percent Grade (%)                 0                      0
Flared Approach:  Exists?/Storage         No     /               No     /
Lanes                         0   1    0             0   1    0
Configuration                     LTR                     LTR
```

Delay, Queue Length, and Level of Service

```
Approach            EB     WB        Northbound            Southbound
Movement            1      4   |  7      8      9    |  10     11     12
Lane Config         LTR    LTR |         LTR         |         LTR

v (vph)             33     26            53                    26
C(m) (vph)          821    856           107                   192
v/c                 0.04   0.03          0.50                  0.14
95% queue length    0.13   0.09          2.22                  0.46
Control Delay       9.6    9.3           67.9                  26.7
LOS                  A      A             F                     D
Approach Delay                           67.9                  26.7
Approach LOS                              F                     D
```

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: Bll
Agency/Co.: SSFM International
Date Performed: 6/24/2013
Analysis Time Period: PM Peak Hour
Intersection:
Jurisdiction: Waimanalo, HI
Units: U. S. Customary
Analysis Year: Existing (2013)
Project ID: 2013_040.000 EAI Waimanalo Health Center Expansion
East/West Street: Kalanianaole Hwy
North/South Street: WHC campus (parcel 279) dwy
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	3	680			739	5
Peak-Hour Factor, PHF	0.93	0.93			0.89	0.89
Hourly Flow Rate, HFR	3	731			830	5
Percent Heavy Vehicles	0	--	--		--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	1			1	0
Configuration	LT				TR	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				7		8
Peak Hour Factor, PHF				0.71		0.71
Hourly Flow Rate, HFR				9		11
Percent Heavy Vehicles				0		0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/		No	/
Lanes				0	0	
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	3						20	
C(m) (vph)	807						195	
v/c	0.00						0.10	
95% queue length	0.01						0.34	
Control Delay	9.5						25.6	
LOS	A						D	
Approach Delay							25.6	
Approach LOS							D	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: Bll
Agency/Co.: SSFM International
Date Performed: 6/24/2013
Analysis Time Period: PM Peak Hour
Intersection:
Jurisdiction: Waimanalo, HI
Units: U. S. Customary
Analysis Year: Existing (2013)
Project ID: 2013_040.000 EAI Waimanalo Health Center Expansion
East/West Street: Kalanianaole Hwy
North/South Street: Waimanalo Elem/Int School dwy
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	0	669	18	2	741	0
Peak-Hour Factor, PHF	0.93	0.93	0.93	0.89	0.89	0.89
Hourly Flow Rate, HFR	0	719	19	2	832	0
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	1	0	0	1	0
Configuration	LTR			LTR		
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				0	0	3
Peak Hour Factor, PHF				0.50	0.50	0.50
Hourly Flow Rate, HFR				0	0	6
Percent Heavy Vehicles				0	0	0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/		No	/
Lanes				0	1	0
Configuration					LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LTR	LTR					LTR	
v (vph)	0	2					6	
C(m) (vph)	809	877					372	
v/c	0.00	0.00					0.02	
95% queue length	0.00	0.01					0.05	
Control Delay	9.4	9.1					14.8	
LOS	A	A					B	
Approach Delay							14.8	
Approach LOS							B	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: Bll
Agency/Co.: SSFM International
Date Performed: 6/24/2013
Analysis Time Period: PM Peak Hour
Intersection:
Jurisdiction: Waimanalo, HI
Units: U. S. Customary
Analysis Year: Existing (2013)
Project ID: 2013_040.000 EAI Waimanalo Health Center Expansion
East/West Street: Kalanianaole Hwy
North/South Street: WHC employee (parcel 282) dwy
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	0	670			737	0
Peak-Hour Factor, PHF	1.00	1.00			1.00	1.00
Hourly Flow Rate, HFR	0	670			737	0
Percent Heavy Vehicles	2	--	--		--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	1			1	0
Configuration	LT				TR	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				16		18
Peak Hour Factor, PHF				1.00		1.00
Hourly Flow Rate, HFR				16		18
Percent Heavy Vehicles				0		0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/		No	/
Lanes				0	0	
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	0						34	
C(m) (vph)	869						233	
v/c	0.00						0.15	
95% queue length	0.00						0.50	
Control Delay	9.1						23.1	
LOS	A						C	
Approach Delay							23.1	
Approach LOS							C	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: Bll
Agency/Co.: SSFM International
Date Performed: 6/24/2013
Analysis Time Period: PM Peak Hour
Intersection:
Jurisdiction: Waimanalo, HI
Units: U. S. Customary
Analysis Year: Existing (2013)
Project ID: 2013_040.000 EAI Waimanalo Health Center Expansion
East/West Street: Kalanianaole Hwy
North/South Street: Inoaole St
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		602	68	29	693	
Peak-Hour Factor, PHF		0.96	0.96	0.91	0.91	
Hourly Flow Rate, HFR		627	70	31	761	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	44		20			
Peak Hour Factor, PHF	0.89		0.89			
Hourly Flow Rate, HFR	49		22			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No	/		/
Lanes	0		0			
Configuration		LR				

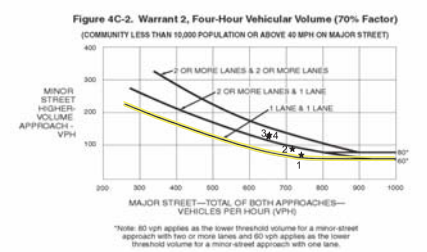
Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		31		71				
C(m) (vph)		909		172				
v/c		0.03		0.41				
95% queue length		0.11		1.84				
Control Delay		9.1		39.9				
LOS		A		E				
Approach Delay				39.9				
Approach LOS				E				

Traffic Signal Warrants
Existing Conditions
Kalanianaole Highway and Moole Street Intersection

4-Hour Warrant - Figure 4C-2

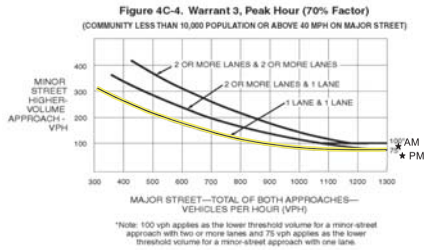
Major/Minor Roads	Approach Type	# of Lanes	1		2		3		4		Pass?
Kalanianaole Highway /	Minor	1	69	Pass	81	Pass	114	Pass	119	Pass	Pass
Moole Street	Major	1	749		717		657		661		



Source: *MUTCD, 2009.*

Peak Hour Warrant - Figure 4C-4

Major/Minor Roads	Approach Type	# of Lanes	AM Volume	Pass?	PM Volume	Pass?	Pass?
Kalanianaole Highway /	Major	1	1311	Yes	1494	No	Yes
Moole Street	Minor	1	78		50		

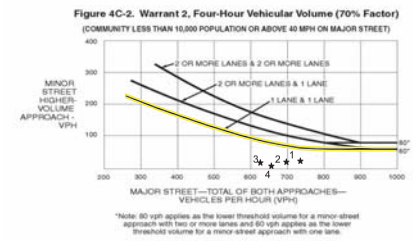


Source: *MUTCD, 2009.*

Traffic Signal Warrants
Existing Conditions
Kalanianaole Highway and WHC (parcel 279) driveway Intersection

4-Hour Warrant - Figure 4C-2

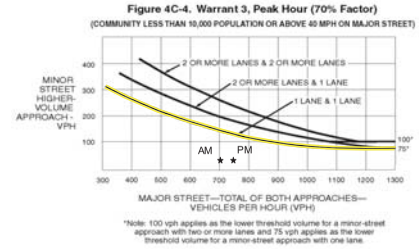
Major/Minor Roads	Approach Type	# of Lanes	1		2		3		4		Pass?
Kalanianaole Highway /	Minor	1	15	No	14	No	11	No	3	No	**No**
WHC (parcel 279) driveway	Major	1	744		703		644		666		



Source: *MUTCD 2009*

Peak Hour Warrant - Figure 4C-4

Major/Minor Roads	Approach Type	# of Lanes	AM Volume	Pass?	PM Volume	Pass?	Pass?
Kalanianaole Highway/	Major	1	14	No	15	No	No
WHC (parcel 279) driveway	Minor	1	703		744		



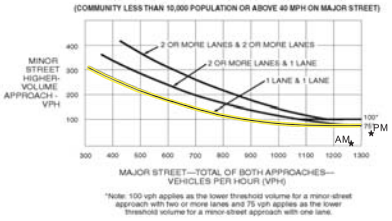
Source: *MUTCD 2009*

Traffic Signal Warrants
Existing Conditions
Kalanianaole Highway and WHC employee parking (parcel 282) driveway Intersection

Peak Hour Warrant - Figure 4C-4

Major/Minor Roads	Approach Type	# of Lanes	AM Volume	Pass?	PM Volume	Pass?	Pass?
Kalanianaole Highway /	Major	1	1284	No	1407	No	No
WHC employee parking (parcel 282) driveway	Minor	1	0		34		

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



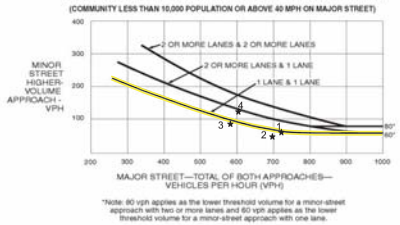
Source: *MUTCD, 2009*

Traffic Signal Warrants
Existing Conditions
Kalanianaole Highway and Inoaole Street Intersection

4-Hour Warrant - Figure 4C-2

Major/Minor Roads	Approach Type	# of Lanes	1		2		3		4		Pass?
Kalanianaole Highway /	Minor	1	64	No	53	No	84	No	110	Pass	**No**
Inoaole Street	Major	1	722		701		592		605		

Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)

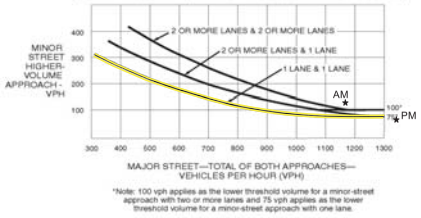


Source: *MUTCD, 2009.*

Peak Hour Warrant - Figure 4C-4

Major/Minor Roads	Approach Type	# of Lanes	AM Volume	Pass?	PM Volume	Pass?	Pass?
Kalanianaole Highway /	Major	1	1189	Yes	1392	No	Yes
Inoaole Street	Minor	1	117		64		

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



Source: *MUTCD, 2009.*

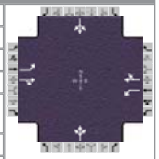
APPENDIX C

Analysis Reports

Future (2017) Without Project Conditions

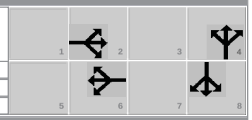
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	SSFM International, Inc			Duration, h	0.25
Analyst	myp	Analysis Date	Oct 7, 2013	Area Type	Other
Jurisdiction	Waimanalo, HI	Time Period	AM Peak Hour	PHF	0.95
Intersection	Poalima St/Shopping Cente	Analysis Year	Future 2017 Without	Analysis Period	1> 7:00
File Name	131007 myp Poalima fut wo AM.xus				
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	27	654	81	30	757	11	143	34	70	22	24	39

Signal Information											
Cycle, s	120.0	Reference Phase	2								
Offset, s	0	Reference Point	Begin	Green	84.0	24.0	0.0	0.0	0.0	0.0	
Uncoordinated	No	Simult. Gap E/W	On	Yellow	4.0	4.0	0.0	0.0	0.0	0.0	
Force Mode	Fixed	Simult. Gap N/S	On	Red	2.0	2.0	0.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		4		8
Case Number		6.0		6.0		8.0		8.0
Phase Duration, s		90.0		90.0		30.0		30.0
Change Period, *(Y+Rc)*, s		6.0		6.0		6.0		6.0
Max Allow Headway *(MAH)*, s		0.0		0.0		3.4		3.4
Queue Clearance Time *(g_s)*, s						25.5		7.4
Green Extension Time *(g_e)*, s		0.0		0.0		0.0		0.7
Phase Call Probability						1.00		1.00
Max Out Probability						1.00		0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	7	4	14	3	8	18
Adjusted Flow Rate *(v)*, veh/h	28	774		32	808			260			89	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	659	1809		708	1858			1325			1572	
Queue Service Time *(g_s)*, s	2.9	26.9		2.9	27.7			18.1			0.0	
Cycle Queue Clearance Time *(g_c)*, s	30.6	26.9		29.8	27.7			23.5			5.4	
Capacity *(c)*, veh/h	369	1266		397	1301			312			352	
Volume-to-Capacity Ratio *(X)*	0.077	0.611		0.080	0.622			0.832			0.254	
Available Capacity *(c_a)*, veh/h	369	1266		397	1301			312			352	
Back of Queue *(Q)*, veh/ln (50th percentile)	0.5	10.7		0.5	11.3			9.1			2.3	
Overflow Queue *(Q_3)*, veh/ln	0.0	0.0		0.0	0.0			0.0			0.0	
Queue Storage Ratio *(RQ)* (50th percentile)	0.17	0.00		0.18	0.00			0.00			0.00	
Uniform Delay *(d_1)*, s/veh	17.7	9.4		17.3	9.6			48.2			40.6	
Incremental Delay *(d_2)*, s/veh	0.4	2.2		0.4	2.2			16.3			0.1	
Initial Queue Delay *(d_3)*, s/veh	0.0	0.0		0.0	0.0			0.0			0.0	
Control Delay *(d)*, s/veh	18.1	11.6		17.7	11.8			64.4			40.7	
Level of Service (LOS)	B	B		B	B			E			D	
Approach Delay, s/veh / LOS	11.9	B		12.0	B		64.4	E		40.7	D	
Intersection Delay, s/veh / LOS	20.1						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.1	B	2.1	B	2.3	B	2.3	B
Bicycle LOS Score / LOS	1.8	A	1.9	A	0.9	A	0.6	A

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HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: Bll
Agency/Co.: SSFM International
Date Performed: 09/18/2013
Analysis Time Period: AM Peak Hour
Intersection:
Jurisdiction: Waimanalo, HI
Units: U. S. Customary
Analysis Year: Future (2017) Without
Project ID: 2013_040.000 EAI Waimanalo Health Center Expansion
East/West Street: Kalanianaole Hwy
North/South Street: Moole St
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	8	623	32	15	687	17
Peak-Hour Factor, PHF	0.89	0.89	0.89	0.92	0.92	0.92
Hourly Flow Rate, HFR	8	700	35	16	746	18
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	1	0	0	1	0
Configuration	LTR			LTR		
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	49	2	22	36	3	39
Peak Hour Factor, PHF	0.72	0.72	0.72	0.61	0.61	0.61
Hourly Flow Rate, HFR	68	2	30	59	4	63
Percent Heavy Vehicles	0	0	0	3	33	3
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage		No	/		No	/
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LTR	LTR		LTR			LTR	
v (vph)	8	16		100			126	
C(m) (vph)	858	879		98			139	
v/c	0.01	0.02		1.02			0.91	
95% queue length	0.03	0.06		6.25			6.11	
Control Delay	9.2	9.2		176.3			114.8	
LOS	A	A		F			F	
Approach Delay				176.3			114.8	
Approach LOS				F			F	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: Bll
Agency/Co.: SSFM International
Date Performed: 09/18/2013
Analysis Time Period: AM Peak Hour
Intersection:
Jurisdiction: Waimanalo, HI
Units: U. S. Customary
Analysis Year: Future (2017) Without
Project ID: 2013_040.000 EAI Waimanalo Health Center Expansion
East/West Street: Kalanianaole Hwy
North/South Street: WHC campus (parcel 279) dwy
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	9	671			723	4
Peak-Hour Factor, PHF	0.91	0.91			0.87	0.87
Hourly Flow Rate, HFR	9	737			831	4
Percent Heavy Vehicles	4	--	--		--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	1			1	0
Configuration	LT				TR	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				3		1
Peak Hour Factor, PHF				0.69		0.69
Hourly Flow Rate, HFR				4		1
Percent Heavy Vehicles				0		0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/		No	/
Lanes				0	0	
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	9						5	
C(m) (vph)	790						138	
v/c	0.01						0.04	
95% queue length	0.03						0.11	
Control Delay	9.6						32.1	
LOS	A						D	
Approach Delay							32.1	
Approach LOS							D	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: Bll
Agency/Co.: SSFM International
Date Performed: 09/18/2013
Analysis Time Period: AM Peak Hour
Intersection:
Jurisdiction: Waimanalo, HI
Units: U. S. Customary
Analysis Year: Future (2017) Without
Project ID: 2013_040.000 EAI Waimanalo Health Center Expansion
East/West Street: Kalanianaole Hwy
North/South Street: Waimanalo Elem/Int School dwy
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	0	590	80	56	719	1
Peak-Hour Factor, PHF	0.91	0.91	0.91	0.89	0.89	0.89
Hourly Flow Rate, HFR	0	648	87	62	807	1
Percent Heavy Vehicles	0	--	--	2	--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	1	0	0	1	0
Configuration	LTR			LTR		
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				5	0	8
Peak Hour Factor, PHF				0.44	0.44	0.44
Hourly Flow Rate, HFR				11	0	18
Percent Heavy Vehicles				0	0	0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage		/			No	/
Lanes				0	1	0
Configuration					LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LTR	LTR					LTR	
v (vph)	0	62					29	
C(m) (vph)	826	870					193	
v/c	0.00	0.07					0.15	
95% queue length	0.00	0.23					0.52	
Control Delay	9.4	9.5					26.9	
LOS	A	A					D	
Approach Delay							26.9	
Approach LOS							D	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: Bll
Agency/Co.: SSFM International
Date Performed: 09/18/2013
Analysis Time Period: AM Peak Hour
Intersection:
Jurisdiction: Waimanalo, HI
Units: U. S. Customary
Analysis Year: Future (2017) Without
Project ID: 2013_040.000 EAI Waimanalo Health Center Expansion
East/West Street: Kalanianaole Hwy
North/South Street: WHC employee (parcel 282) dwy
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	18	586			736	16
Peak-Hour Factor, PHF	1.00	1.00			1.00	1.00
Hourly Flow Rate, HFR	18	586			736	16
Percent Heavy Vehicles	2	--	--		--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	1			1	0
Configuration	LT				TR	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				0		0
Peak Hour Factor, PHF				1.00		1.00
Hourly Flow Rate, HFR				0		0
Percent Heavy Vehicles				0		0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage		/			No	/
Lanes				0	0	
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	18						0	
C(m) (vph)	858							
v/c	0.02							
95% queue length	0.06							
Control Delay	9.3							
LOS	A							
Approach Delay								
Approach LOS								

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                    HCS+: Unsignalized Intersections Release 5.6

_______________________TWO-WAY STOP CONTROL SUMMARY_____________________________

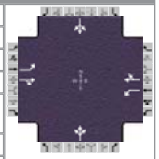
Analyst:              Bll
Agency/Co.:           SSFM International
Date Performed:       09/18/2013
Analysis Time Period: AM Peak Hour
Intersection:
Jurisdiction:         Waimanalo, HI
Units: U. S. Customary
Analysis Year:        Future (2017) Without
Project ID:  2013_040.000 EAI Waimanalo Health Center Expansion
East/West Street:     Kalanianaole Hwy
North/South Street:   Inoaole St
Intersection Orientation: EW                 Study period (hrs):  0.25

____________________Vehicle Volumes and Adjustments_________________________
Major Street:  Approach        Eastbound              Westbound
               Movement     1      2      3     |  4      5      6
                            L      T      R     |  L      T      R
_____________________________________________________________________________
Volume                      553    31        13     658
Peak-Hour Factor, PHF       0.95   0.95      0.95   0.95
Hourly Flow Rate, HFR       582    32        13     692
Percent Heavy Vehicles      --     --        0      --     --
Median Type/Storage         Undivided              /
RT Channelized?
Lanes                       1    0               0   1
Configuration                   TR                 LT
Upstream Signal?            No                      No
_____________________________________________________________________________
Minor Street:  Approach        Northbound             Southbound
               Movement     7      8      9     |  10     11     12
                            L      T      R     |  L      T      R
_____________________________________________________________________________
Volume                      90             27
Peak Hour Factor, PHF       0.79           0.79
Hourly Flow Rate, HFR       113            34
Percent Heavy Vehicles      3              0
Percent Grade (%)                  0                      0
Flared Approach:  Exists?/Storage          No     /                     /
Lanes                       0        0
Configuration                      LR
_____________________________________________________________________________

__________________Delay, Queue Length, and Level of Service_____________________
Approach             EB     WB        Northbound             Southbound
Movement             1      4   |  7      8      9    |  10     11     12
Lane Config                 LT  |         LR          |
_____________________________________________________________________________
v (vph)                     13             147
C(m) (vph)                  975            202
v/c                         0.01           0.73
95% queue length            0.04           4.74
Control Delay               8.7            59.5
LOS                          A              F
Approach Delay                             59.5
Approach LOS                                F
_____________________________________________________________________________
```

HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	SSFM International, Inc			Duration, h	0.25
Analyst	myp	Analysis Date	Oct 7, 2013	Area Type	Other
Jurisdiction	Waimanalo, HI	Time Period	PM Peak Hour	PHF	0.95
Intersection	Poalima St/Shopping Cente	Analysis Year	Future 2017 Without	Analysis Period	1> 7:00
File Name	131007 myp Poalima fut wo PM.xus				
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	21	713	88	51	764	6	157	25	51	25	18	31

Signal Information											
Cycle, s	120.0	Reference Phase	2								
Offset, s	0	Reference Point	Begin	Green	84.1	23.9	0.0	0.0	0.0	0.0	
Uncoordinated	No	Simult. Gap E/W	On	Yellow	4.0	4.0	0.0	0.0	0.0	0.0	
Force Mode	Fixed	Simult. Gap N/S	On	Red	2.0	2.0	0.0	0.0	0.0	0.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		4		8
Case Number		6.0		6.0		8.0		8.0
Phase Duration, s		90.1		90.1		29.9		29.9
Change Period, *(Y+Rc)*, s		6.0		6.0		6.0		6.0
Max Allow Headway *(MAH)*, s		0.0		0.0		3.3		3.3
Queue Clearance Time *(g_s)*, s						23.9		6.7
Green Extension Time *(g_e)*, s		0.0		0.0		0.0		0.6
Phase Call Probability						1.00		1.00
Max Out Probability						1.00		0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	7	4	14	3	8	18
Adjusted Flow Rate (*v*), veh/h	22	843		54	811			245			78	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	657	1809		663	1860			1324			1585	
Queue Service Time *(g_s)*, s	2.2	31.4		5.9	27.7			17.2			0.0	
Cycle Queue Clearance Time *(g_c)*, s	30.0	31.4		37.3	27.7			21.9			4.7	
Capacity (*c*), veh/h	369	1267		351	1303			314			356	
Volume-to-Capacity Ratio *(X)*	0.060	0.665		0.153	0.622			0.780			0.219	
Available Capacity *(c_a)*, veh/h	369	1267		351	1303			315			357	
Back of Queue *(Q)*, veh/ln (50th percentile)	0.4	12.5		1.0	11.3			8.1			2.0	
Overflow Queue *(Q_3)*, veh/ln	0.0	0.0		0.0	0.0			0.0			0.0	
Queue Storage Ratio *(RQ)* (50th percentile)	0.13	0.00		0.34	0.00			0.00			0.00	
Uniform Delay *(d_1)*, s/veh	17.5	10.1		20.5	9.5			47.5			40.3	
Incremental Delay *(d_2)*, s/veh	0.3	2.8		0.9	2.2			10.9			0.1	
Initial Queue Delay *(d_3)*, s/veh	0.0	0.0		0.0	0.0			0.0			0.0	
Control Delay *(d)*, s/veh	17.8	12.9		21.5	11.8			58.4			40.4	
Level of Service (LOS)	B	B		C	B			E			D	
Approach Delay, s/veh / LOS	13.0	B		12.4	B		58.4	E		40.4	D	
Intersection Delay, s/veh / LOS	19.2						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.1	B	2.1	B	2.3	B	2.3	B
Bicycle LOS Score / LOS	1.9	A	1.9	A	0.9	A	0.6	A

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HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: Bll
Agency/Co.: SSFM International
Date Performed: 09/18/2013
Analysis Time Period: PM Peak Hour
Intersection:
Jurisdiction: Waimanalo, HI
Units: U. S. Customary
Analysis Year: Future (2017) Without
Project ID: 2013_040.000 EAI Waimanalo Health Center Expansion
East/West Street: Kalanianaole Hwy
North/South Street: Moole St
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	31	702	48	24	765	5
Peak-Hour Factor, PHF	0.93	0.93	0.93	0.91	0.91	0.91
Hourly Flow Rate, HFR	33	754	51	26	840	5
Percent Heavy Vehicles	3	--	--	0	--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	1	0	0	1	0
Configuration	LTR			LTR		
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	27	0	23	3	2	14
Peak Hour Factor, PHF	0.92	0.92	0.92	0.70	0.70	0.70
Hourly Flow Rate, HFR	29	0	24	4	2	20
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage		No /			No /	
Lanes	0	1	0	0	1	0
Configuration		LTR			LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LTR	LTR		LTR			LTR	
v (vph)	33	26		53			26	
C(m) (vph)	787	828		92			171	
v/c	0.04	0.03		0.58			0.15	
95% queue length	0.13	0.10		2.64			0.52	
Control Delay	9.8	9.5		87.5			29.8	
LOS	A	A		F			D	
Approach Delay				87.5			29.8	
Approach LOS				F			D	

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TWO-WAY STOP CONTROL SUMMARY

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Intersection:
Jurisdiction: Waimanalo, HI
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Analysis Year: Future (2017) Without
Project ID: 2013_040.000 EAI Waimanalo Health Center Expansion
East/West Street: Kalanianaole Hwy
North/South Street: WHC campus (parcel 279) dwy
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	3	717			785	5
Peak-Hour Factor, PHF	0.93	0.93			0.89	0.89
Hourly Flow Rate, HFR	3	770			882	5
Percent Heavy Vehicles	0	--	--		--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	1			1	0
Configuration	LT				TR	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				7		8
Peak Hour Factor, PHF				0.71		0.71
Hourly Flow Rate, HFR				9		11
Percent Heavy Vehicles				0		0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/		No /	
Lanes				0	0	
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	3						20	
C(m) (vph)	772						174	
v/c	0.00						0.11	
95% queue length	0.01						0.38	
Control Delay	9.7						28.4	
LOS	A						D	
Approach Delay							28.4	
Approach LOS							D	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: Bll
Agency/Co.: SSFM International
Date Performed: 09/18/2013
Analysis Time Period: PM Peak Hour
Intersection:
Jurisdiction: Waimanalo, HI
Units: U. S. Customary
Analysis Year: Future (2017) Without
Project ID: 2013_040.000 EAI Waimanalo Health Center Expansion
East/West Street: Kalanianaole Hwy
North/South Street: Waimanalo Elem/Int School dwy
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	0	705	18	2	787	0
Peak-Hour Factor, PHF	0.93	0.93	0.93	0.89	0.89	0.89
Hourly Flow Rate, HFR	0	758	19	2	884	0
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	1	0	0	1	0
Configuration	LTR			LTR		
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				0	0	3
Peak Hour Factor, PHF				0.50	0.50	0.50
Hourly Flow Rate, HFR				0	0	6
Percent Heavy Vehicles				0	0	0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage		/			No	/
Lanes				0	1	0
Configuration					LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LTR	LTR					LTR	
v (vph)	0	2					6	
C(m) (vph)	774	848					347	
v/c	0.00	0.00					0.02	
95% queue length	0.00	0.01					0.05	
Control Delay	9.7	9.3					15.6	
LOS	A	A					C	
Approach Delay							15.6	
Approach LOS							C	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: Bll
Agency/Co.: SSFM International
Date Performed: 09/18/2013
Analysis Time Period: PM Peak Hour
Intersection:
Jurisdiction: Waimanalo, HI
Units: U. S. Customary
Analysis Year: Future (2017) Without
Project ID: 2013_040.000 EAI Waimanalo Health Center Expansion
East/West Street: Kalanianaole Hwy
North/South Street: WHC employee (parcel 282) dwy
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	0	707			783	0
Peak-Hour Factor, PHF	1.00	1.00			1.00	1.00
Hourly Flow Rate, HFR	0	707			783	0
Percent Heavy Vehicles	2	--	--		--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	1			1	0
Configuration	LT					TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				16		18
Peak Hour Factor, PHF				1.00		1.00
Hourly Flow Rate, HFR				16		18
Percent Heavy Vehicles				0		0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage		/			No	/
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	0						34	
C(m) (vph)	835						211	
v/c	0.00						0.16	
95% queue length	0.00						0.56	
Control Delay	9.3						25.3	
LOS	A						D	
Approach Delay							25.3	
Approach LOS							D	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: Bll
Agency/Co.: SSFM International
Date Performed: 09/18/2013
Analysis Time Period: PM Peak Hour
Intersection:
Jurisdiction: Waimanalo, HI
Units: U. S. Customary
Analysis Year: Future (2017) Without
Project ID: 2013_040.000 EAI Waimanalo Health Center Expansion
East/West Street: Kalanianaole Hwy
North/South Street: Inoaole St
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		635	68	29	737	
Peak-Hour Factor, PHF		0.96	0.96	0.91	0.91	
Hourly Flow Rate, HFR		661	70	31	809	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes		1	0	0	1	
Configuration			TR	LT		
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	44		20			
Peak Hour Factor, PHF	0.89		0.89			
Hourly Flow Rate, HFR	49		22			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0	0				
Configuration		LR				

Delay, Queue Length, and Level of Service

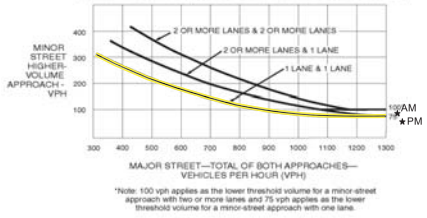
Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		31		71				
C(m) (vph)		883		155				
v/c		0.04		0.46				
95% queue length		0.11		2.11				
Control Delay		9.2		46.5				
LOS		A		E				
Approach Delay				46.5				
Approach LOS				E				

Traffic Signal Warrants
Future (2017) Without Project Conditions
Kalanianaole Highway and Moole Street Intersection

Peak Hour Warrant - Figure 4C-4

Major/Minor Roads	Approach Type	# of Lanes	AM Volume	Pass?	PM Volume	Pass?	Pass?
Kalanianaole Highway / Moole Street	Major	1	1382	Yes	1575	No	Yes
	Minor	1	78		50		

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



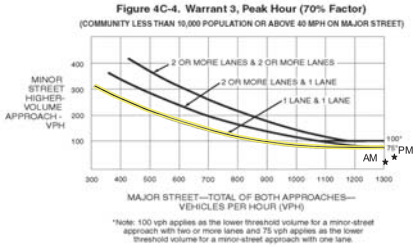
*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *MUTCD, 2009.*

Traffic Signal Warrants
Future (2017) Without Project Conditions
Kalanianaole Highway and WHC (parcel 279) driveway Intersection

Peak Hour Warrant - Figure 4C-4

Major/Minor Roads	Approach Type	# of Lanes	AM Volume	Pass?	PM Volume	Pass?	Pass?
Kalanianaole Highway /	Major	1	1407	No	1510	No	No
WHC (parcel 279) driveway	Minor	1	4		15		

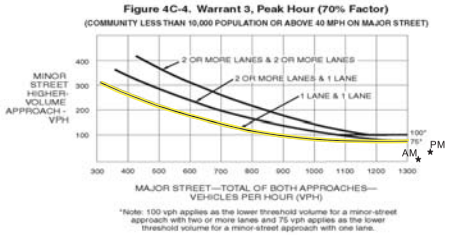


Source: *MUTCD, 2009.*

Traffic Signal Warrants
Future (2017) Without Project Conditions
Kalanianaole Highway and WHC employee parking (parcel 282) driveway Intersection

Peak Hour Warrant - Figure 4C-4

Major/Minor Roads	Approach Type	# of Lanes	AM Volume	Pass?	PM Volume	Pass?	Pass?
Kalanianaole Highway /	Major	1	1356	No	1490	No	No
WHC employee parking (parcel 282) driveway	Minor	1	0		34		



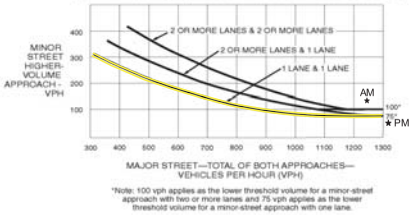
Source: *MUTCD 2009*

Traffic Signal Warrants
Future (2017) Without Project Conditions
Kalanianaole Highway and Inoaole Street Intersection

Peak Hour Warrant - Figure 4C-4

Major/Minor Roads	Approach Type	# of Lanes	AM Volume	Pass?	PM Volume	Pass?	Pass?
Kalanianaole Highway / Inoaole Street	Major	1	1255	Yes	1469	No	Yes
	Minor	1	117		64		

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)

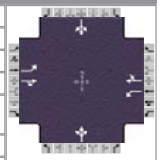


Source: *MUTCD, 2009.*

APPENDIX D
Analysis Reports
Future (2017) With Project Conditions

HCS 2010 Signalized Intersection Results Summary

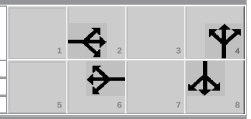
General Information				Intersection Information	
Agency	SSFM International, Inc			Duration, h	0.25
Analyst	myp	Analysis Date	Oct 18, 2013	Area Type	Other
Jurisdiction	Waimanalo, HI	Time Period	AM Peak Hour	PHF	0.95
Intersection	Poalima St/Shopping Cent	Analysis Year	Future (2017) With	Analysis Period	1> 7:00
File Name	131018 bll myp Poalima fut w AM.xus				
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	27	659	81	30	757	11	143	34	70	22	24	39

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	84.0	24.0	0.0	0.0	0.0	0.0
Yellow	4.0	4.0	0.0	0.0	0.0	0.0
Red	2.0	2.0	0.0	0.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		4		8
Case Number		6.0		6.0		8.0		8.0
Phase Duration, s		90.0		90.0		30.0		30.0
Change Period, *(Y+Rc)*, s		6.0		6.0		6.0		6.0
Max Allow Headway *(MAH)*, s		0.0		0.0		3.4		3.4
Queue Clearance Time *(g_s)*, s						25.5		7.4
Green Extension Time *(g_e)*, s		0.0		0.0		0.0		0.7
Phase Call Probability						1.00		1.00
Max Out Probability						1.00		0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	7	4	14	3	8	18
Adjusted Flow Rate *(v)*, veh/h	28	779		32	808			260			89	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	659	1809		704	1858			1325			1572	
Queue Service Time *(g_s)*, s	2.9	27.2		3.0	27.7			18.1			0.0	
Cycle Queue Clearance Time *(g_c)*, s	30.6	27.2		30.2	27.7			23.5			5.4	
Capacity *(c)*, veh/h	369	1266		393	1301			312			352	
Volume-to-Capacity Ratio *(X)*	0.077	0.615		0.080	0.622			0.832			0.254	
Available Capacity *(c_a)*, veh/h	369	1266		393	1301			312			352	
Back of Queue *(Q)*, veh/ln (50th percentile)	0.5	10.8		0.5	11.3			9.1			2.3	
Overflow Queue *(Q_3)*, veh/ln	0.0	0.0		0.0	0.0			0.0			0.0	
Queue Storage Ratio *(RQ)* (50th percentile)	0.17	0.00		0.18	0.00			0.00			0.00	
Uniform Delay *(d_1)*, s/veh	17.7	9.5		17.4	9.6			48.2			40.6	
Incremental Delay *(d_2)*, s/veh	0.4	2.2		0.4	2.2			16.3			0.1	
Initial Queue Delay *(d_3)*, s/veh	0.0	0.0		0.0	0.0			0.0			0.0	
Control Delay *(d)*, s/veh	18.1	11.7		17.8	11.8			64.4			40.7	
Level of Service (LOS)	B	B		B	B			E			D	
Approach Delay, s/veh / LOS	12.0	B		12.0	B		64.4	E		40.7	D	
Intersection Delay, s/veh / LOS	20.1						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.1	B	2.1	B	2.3	B	2.3	B
Bicycle LOS Score / LOS	1.8	A	1.9	A	0.9	A	0.6	A

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HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

```
Analyst:                Bll
Agency/Co.:             SSFM International
Date Performed:         10/18/2013
Analysis Time Period: AM Peak Hour
Intersection:
Jurisdiction:           Waimanalo, HI
Units: U. S. Customary
Analysis Year:          Future (2017) With
Project ID:  2013_040.000 EAI Waimanalo Health Center Expansion
East/West Street:       Kalanianaole Hwy
North/South Street:     Moole St
Intersection Orientation: EW                  Study period (hrs):  0.25
```

Vehicle Volumes and Adjustments

```
Major Street:  Approach        Eastbound              Westbound
               Movement     1      2      3     |  4      5      6
                            L      T      R     |  L      T      R
Volume                      8      628    32       15     687    17
Peak-Hour Factor, PHF       0.89   0.89   0.89     0.92   0.92   0.92
Hourly Flow Rate, HFR       8      705    35       16     746    18
Percent Heavy Vehicles      0      --     --       0      --     --
Median Type/Storage         Undivided            /
RT Channelized?
Lanes                          0   1    0              0   1    0
Configuration                   LTR                     LTR
Upstream Signal?                   No                      No

Minor Street:  Approach        Northbound             Southbound
               Movement     7      8      9     |  10     11     12
                            L      T      R     |  L      T      R
Volume                      49     2      22       36     3      39
Peak Hour Factor, PHF       0.72   0.72   0.72     0.61   0.61   0.61
Hourly Flow Rate, HFR       68     2      30       59     4      63
Percent Heavy Vehicles      0      0      0        3      33     3
Percent Grade (%)                  0                      0
Flared Approach:  Exists?/Storage         No     /               No     /
Lanes                       0   1    0              0   1    0
Configuration                      LTR                     LTR
```

Delay, Queue Length, and Level of Service

```
Approach              EB     WB        Northbound             Southbound
Movement              1      4   |  7      8      9    |  10     11     12
Lane Config           LTR    LTR |         LTR         |         LTR
v (vph)               8      16             100                    126
C(m) (vph)            858    876            97                     137
v/c                   0.01   0.02           1.03                   0.92
95% queue length      0.03   0.06           6.31                   6.22
Control Delay         9.2    9.2            180.5                  119.0
LOS                    A      A              F                      F
Approach Delay                              180.5                  119.0
Approach LOS                                 F                      F
```

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: Bll
Agency/Co.: SSFM International
Date Performed: 10/18/2013
Analysis Time Period: AM Peak Hour
Intersection:
Jurisdiction: Waimanalo, HI
Units: U. S. Customary
Analysis Year: Future (2017) With
Project ID: 2013_040.000 EAI Waimanalo Health Center Expansion
East/West Street: Kalanianaole Hwy
North/South Street: WHC (parcel 279) dwy
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	14	671			724	8
Peak-Hour Factor, PHF	0.91	0.91			0.87	0.87
Hourly Flow Rate, HFR	15	737			832	9
Percent Heavy Vehicles	4	--	--		--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	1			1	0
Configuration	LT				TR	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				2		0
Peak Hour Factor, PHF				0.69		0.69
Hourly Flow Rate, HFR				2		0
Percent Heavy Vehicles				0		0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/		No	/
Lanes				0	0	
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	15						2	
C(m) (vph)	786						115	
v/c	0.02						0.02	
95% queue length	0.06						0.05	
Control Delay	9.7						36.9	
LOS	A						E	
Approach Delay							36.9	
Approach LOS							E	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: Bll
Agency/Co.: SSFM International
Date Performed: 10/18/2013
Analysis Time Period: AM Peak Hour
Intersection:
Jurisdiction: Waimanalo, HI
Units: U. S. Customary
Analysis Year: Future (2017) With
Project ID: 2013_040.000 EAI Waimanalo Health Center Expansion
East/West Street: Kalanianaole Hwy
North/South Street: Waimanalo Elem/Int School dwy
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	0	589	80	56	724	1
Peak-Hour Factor, PHF	0.91	0.91	0.91	0.89	0.89	0.89
Hourly Flow Rate, HFR	0	647	87	62	813	1
Percent Heavy Vehicles	0	--	--	2	--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	1	0	0	1	0
Configuration	LTR			LTR		
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				5	0	8
Peak Hour Factor, PHF				0.44	0.44	0.44
Hourly Flow Rate, HFR				11	0	18
Percent Heavy Vehicles				0	0	0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/		No	/
Lanes				0	1	0
Configuration					LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LTR	LTR					LTR	
v (vph)	0	62					29	
C(m) (vph)	822	871					191	
v/c	0.00	0.07					0.15	
95% queue length	0.00	0.23					0.52	
Control Delay	9.4	9.4					27.2	
LOS	A	A					D	
Approach Delay							27.2	
Approach LOS							D	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: Bll
Agency/Co.: SSFM International
Date Performed: 10/18/2013
Analysis Time Period: AM Peak Hour
Intersection:
Jurisdiction: Waimanalo, HI
Units: U. S. Customary
Analysis Year: Future (2017) With
Project ID: 2013_040.000 EAI Waimanalo Health Center Expansion
East/West Street: Kalanianaole Hwy
North/South Street: WHC (parcel 282) dwy
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	18	585			740	16
Peak-Hour Factor, PHF	1.00	1.00			1.00	1.00
Hourly Flow Rate, HFR	18	585			740	16
Percent Heavy Vehicles	2	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1			1	0
Configuration	LT				TR	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				2		1
Peak Hour Factor, PHF				1.00		1.00
Hourly Flow Rate, HFR				2		1
Percent Heavy Vehicles				0		0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/		No	/
Lanes				0	0	
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	18						3	
C(m) (vph)	855						201	
v/c	0.02						0.01	
95% queue length	0.06						0.05	
Control Delay	9.3						23.2	
LOS	A						C	
Approach Delay							23.2	
Approach LOS							C	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: Bll
Agency/Co.: SSFM International
Date Performed: 10/18/2013
Analysis Time Period: AM Peak Hour
Intersection:
Jurisdiction: Waimanalo, HI
Units: U. S. Customary
Analysis Year: Future (2017) With
Project ID: 2013_040.000 EAI Waimanalo Health Center Expansion
East/West Street: Kalanianaole Hwy
North/South Street: Inoaole St
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		554	31	13	661	
Peak-Hour Factor, PHF		0.95	0.95	0.95	0.95	
Hourly Flow Rate, HFR		583	32	13	695	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

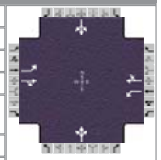
Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	91		27			
Peak Hour Factor, PHF	0.79		0.79			
Hourly Flow Rate, HFR	115		34			
Percent Heavy Vehicles	3		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No	/		/
Lanes	0	0				
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		13		149				
C(m) (vph)		974		200				
v/c		0.01		0.75				
95% queue length		0.04		4.94				
Control Delay		8.7		62.2				
LOS		A		F				
Approach Delay				62.2				
Approach LOS				F				

HCS 2010 Signalized Intersection Results Summary

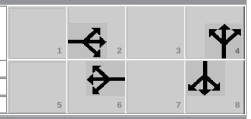
General Information				Intersection Information	
Agency	SSFM International, Inc			Duration, h	0.25
Analyst	myp	Analysis Date	Oct 18, 2013	Area Type	Other
Jurisdiction	Waimanalo, HI	Time Period	PM Peak Hour	PHF	0.95
Intersection	Poalima St/Shopping Cente	Analysis Year	Future (2017) With	Analysis Period	1> 7:00
File Name	131018 bll myp Poalima fut w PM.xus				
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	21	714	88	51	766	6	157	25	51	25	18	31

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	84.1	23.9	0.0	0.0	0.0	0.0
Yellow	4.0	4.0	0.0	0.0	0.0	0.0
Red	2.0	2.0	0.0	0.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		4		8
Case Number		6.0		6.0		8.0		8.0
Phase Duration, s		90.1		90.1		29.9		29.9
Change Period, *(Y+Rc)*, s		6.0		6.0		6.0		6.0
Max Allow Headway *(MAH)*, s		0.0		0.0		3.3		3.3
Queue Clearance Time *(gs)*, s						23.9		6.7
Green Extension Time *(ge)*, s		0.0		0.0		0.0		0.6
Phase Call Probability						1.00		1.00
Max Out Probability						1.00		0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	7	4	14	3	8	18
Adjusted Flow Rate *(v)*, veh/h	22	844		54	813			245			78	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	656	1809		662	1860			1324			1585	
Queue Service Time *(gs)*, s	2.2	31.4		5.9	27.9			17.2			0.0	
Cycle Queue Clearance Time *(gc)*, s	30.1	31.4		37.4	27.9			21.9			4.7	
Capacity *(c)*, veh/h	367	1267		350	1303			314			356	
Volume-to-Capacity Ratio *(X)*	0.060	0.666		0.153	0.624			0.780			0.219	
Available Capacity *(ca)*, veh/h	367	1267		350	1303			315			357	
Back of Queue *(Q)*, veh/ln (50th percentile)	0.4	12.6		1.0	11.4			8.1			2.0	
Overflow Queue *(Qs)*, veh/ln	0.0	0.0		0.0	0.0			0.0			0.0	
Queue Storage Ratio *(RQ)* (50th percentile)	0.13	0.00		0.34	0.00			0.00			0.00	
Uniform Delay *(d1)*, s/veh	17.6	10.1		20.6	9.6			47.5			40.3	
Incremental Delay *(d2)*, s/veh	0.3	2.8		0.9	2.3			10.9			0.1	
Initial Queue Delay *(d3)*, s/veh	0.0	0.0		0.0	0.0			0.0			0.0	
Control Delay *(d)*, s/veh	17.9	12.9		21.5	11.8			58.4			40.4	
Level of Service (LOS)	B	B		C	B			E			D	
Approach Delay, s/veh / LOS	13.0	B		12.4	B		58.4	E		40.4	D	
Intersection Delay, s/veh / LOS	19.2						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.1	B	2.1	B	2.3	B	2.3	B
Bicycle LOS Score / LOS	1.9	A	1.9	A	0.9	A	0.6	A

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HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

```
Analyst:                Bll
Agency/Co.:             SSFM International
Date Performed:         10/18/2013
Analysis Time Period:   PM Peak Hour
Intersection:
Jurisdiction:           Waimanalo, HI
Units: U. S. Customary
Analysis Year:          Future (2017) With
Project ID:  2013_040.000 EAI Waimanalo Health Center Expansion
East/West Street:       Kalanianaole Hwy
North/South Street:     Moole St
Intersection Orientation: EW                  Study period (hrs):  0.25
```

Vehicle Volumes and Adjustments

```
Major Street:  Approach        Eastbound              Westbound
               Movement     1      2      3     |  4      5      6
                            L      T      R     |  L      T      R
Volume                     31     703    48       24     767    5
Peak-Hour Factor, PHF      0.93   0.93   0.93     0.91   0.91   0.91
Hourly Flow Rate, HFR      33     755    51       26     842    5
Percent Heavy Vehicles     3      --     --       0      --     --
Median Type/Storage        Undivided            /
RT Channelized?
Lanes                         0   1    0              0   1    0
Configuration                  LTR                     LTR
Upstream Signal?                  No                      No

Minor Street:  Approach        Northbound             Southbound
               Movement     7      8      9     |  10     11     12
                            L      T      R     |  L      T      R
Volume                     27     0      23       3      2      14
Peak Hour Factor, PHF      0.92   0.92   0.92     0.70   0.70   0.70
Hourly Flow Rate, HFR      29     0      24       4      2      20
Percent Heavy Vehicles     0      0      0        0      0      0
Percent Grade (%)                 0                      0
Flared Approach:  Exists?/Storage         No     /               No     /
Lanes                         0   1    0              0   1    0
Configuration                     LTR                     LTR
```

Delay, Queue Length, and Level of Service

```
Approach            EB     WB        Northbound            Southbound
Movement            1      4    |  7      8      9    |  10     11     12
Lane Config         LTR    LTR  |         LTR         |         LTR

v (vph)             33     26           53                      26
C(m) (vph)          786    828          90                      169
v/c                 0.04   0.03         0.59                    0.15
95% queue length    0.13   0.10         2.71                    0.53
Control Delay       9.8    9.5          90.9                    30.1
LOS                  A      A            F                       D
Approach Delay                          90.9                    30.1
Approach LOS                             F                       D
```

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: Bll
Agency/Co.: SSFM International
Date Performed: 10/18/2013
Analysis Time Period: PM Peak Hour
Intersection:
Jurisdiction: Waimanalo, HI
Units: U. S. Customary
Analysis Year: Future (2017) With
Project ID: 2013_040.000 EAI Waimanalo Health Center Expansion
East/West Street: Kalanianaole Hwy
North/South Street: WHC (parcel 279) dwy
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	1	720			785	3
Peak-Hour Factor, PHF	0.93	0.93			0.89	0.89
Hourly Flow Rate, HFR	1	774			882	3
Percent Heavy Vehicles	0	--	--		--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	1			1	0
Configuration	LT				TR	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				14		10
Peak Hour Factor, PHF				0.71		0.71
Hourly Flow Rate, HFR				19		14
Percent Heavy Vehicles				0		0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/		No	/
Lanes				0	0	
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	1						33	
C(m) (vph)	773						153	
v/c	0.00						0.22	
95% queue length	0.00						0.78	
Control Delay	9.7						34.9	
LOS	A						D	
Approach Delay							34.9	
Approach LOS							D	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: Bll
Agency/Co.: SSFM International
Date Performed: 10/18/2013
Analysis Time Period: PM Peak Hour
Intersection:
Jurisdiction: Waimanalo, HI
Units: U. S. Customary
Analysis Year: Future (2017) With
Project ID: 2013_040.000 EAI Waimanalo Health Center Expansion
East/West Street: Kalanianaole Hwy
North/South Street: Waimanalo Elem/Int School dwy
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	0	715	18	2	785	0
Peak-Hour Factor, PHF	0.93	0.93	0.93	0.89	0.89	0.89
Hourly Flow Rate, HFR	0	768	19	2	882	0
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	0	1	0	0	1	0
Configuration	LTR			LTR		
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				0	0	3
Peak Hour Factor, PHF				0.50	0.50	0.50
Hourly Flow Rate, HFR				0	0	6
Percent Heavy Vehicles				0	0	0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/		No	/
Lanes				0	1	0
Configuration					LTR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LTR	LTR					LTR	
v (vph)	0	2					6	
C(m) (vph)	775	841					348	
v/c	0.00	0.00					0.02	
95% queue length	0.00	0.01					0.05	
Control Delay	9.6	9.3					15.5	
LOS	A	A					C	
Approach Delay							15.5	
Approach LOS							C	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: Bll
Agency/Co.: SSFM International
Date Performed: 10/18/2013
Analysis Time Period: PM Peak Hour
Intersection:
Jurisdiction: Waimanalo, HI
Units: U. S. Customary
Analysis Year: Future (2017) With
Project ID: 2013_040.000 EAI Waimanalo Health Center Expansion
East/West Street: Kalanianaole Hwy
North/South Street: WHC (parcel 282) dwy
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	3	714			781	3
Peak-Hour Factor, PHF	1.00	1.00			1.00	1.00
Hourly Flow Rate, HFR	3	714			781	3
Percent Heavy Vehicles	2	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	1			1	0
Configuration	LT				TR	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				17		18
Peak Hour Factor, PHF				1.00		1.00
Hourly Flow Rate, HFR				17		18
Percent Heavy Vehicles				0		0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/		No	/
Lanes				0	0	
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	3						35	
C(m) (vph)	834						204	
v/c	0.00						0.17	
95% queue length	0.01						0.60	
Control Delay	9.3						26.3	
LOS	A						D	
Approach Delay							26.3	
Approach LOS							D	

HCS+: Unsignalized Intersections Release 5.6

TWO-WAY STOP CONTROL SUMMARY

Analyst: Bll
Agency/Co.: SSFM International
Date Performed: 10/18/2013
Analysis Time Period: PM Peak Hour
Intersection:
Jurisdiction: Waimanalo, HI
Units: U. S. Customary
Analysis Year: Future (2017) With
Project ID: 2013_040.000 EAI Waimanalo Health Center Expansion
East/West Street: Kalanianaole Hwy
North/South Street: Inoaole St
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		642	69	29	738	
Peak-Hour Factor, PHF		0.96	0.96	0.91	0.91	
Hourly Flow Rate, HFR		668	71	31	810	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes		1	0	0	1	
Configuration		TR		LT		
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	44		20			
Peak Hour Factor, PHF	0.89		0.89			
Hourly Flow Rate, HFR	49		22			
Percent Heavy Vehicles	0		0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No	/		/
Lanes	0		0			
Configuration		LR				

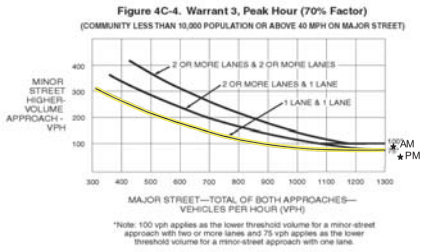
Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT		LR				
v (vph)		31		71				
C(m) (vph)		876		153				
v/c		0.04		0.46				
95% queue length		0.11		2.15				
Control Delay		9.3		47.4				
LOS		A		E				
Approach Delay				47.4				
Approach LOS				E				

Traffic Signal Warrants
Future (2017) With Project Conditions
Kalanianaole Highway and Moole Street Intersection

Peak Hour Warrant - Figure 4C-4

Major/Minor Roads	Approach Type	# of Lanes	AM Volume	Pass?	PM Volume	Pass?	Pass?
Kalanianaole Highway /	Major	1	1387	Pass	1578	No	Pass
Moole Street	Minor	1	78		50		

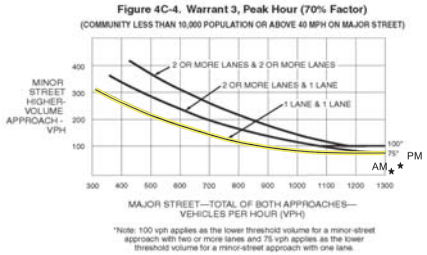


Source: *MUTCD, 2009.*

Traffic Signal Warrants
Future (2017) With Project Conditions
Kalanianaole Highway and WHC (parcel 279) driveway Intersection

Peak Hour Warrant - Figure 4C-4

Major/Minor Roads	Approach Type	# of Lanes	AM Volume	Pass?	PM Volume	Pass?	Pass?
Kalanianaole Highway /	Major	1	1417	No	1509	No	No
WHC (parcel 279) driveway	Minor	1	2		24		

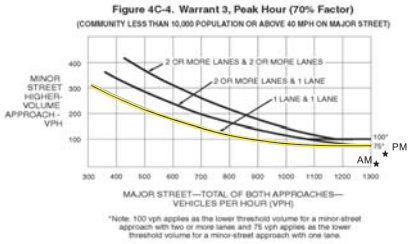


Source: *MUTCD 2009*

Traffic Signal Warrants
Future (2017) With Project Conditions
Kalanianaole Highway and WHC (parcel 282) driveway Intersection

Peak Hour Warrant - Figure 4C-4

Major/Minor Roads	Approach Type	# of Lanes	AM Volume	Pass?	PM Volume	Pass?	Pass?
Kalanianaole Highway /	Major	1	1359	No	1501	No	No
WHC (parcel 282) driveway	Minor	1	3		35		

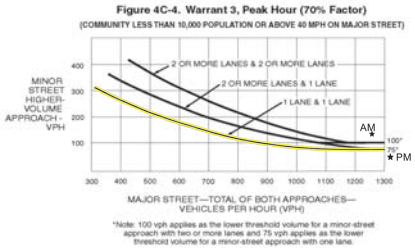


Source: *MUTCD 2009*

Traffic Signal Warrants
Future (2017) With Project Conditions
Kalanianaole Highway and Inoaole Street Intersection

Peak Hour Warrant - Figure 4C-4

Major/Minor Roads	Approach Type	# of Lanes	AM Volume	Pass?	PM Volume	Pass?	Pass?
Kalanianaole Highway /	Major	1	1259	Yes	1478	No	Yes
Inoaole Street	Minor	1	118		64		



Source: *MUTCD, 2009.*

APPENDIX C

Notification Letter from Marine Corps Base Hawai‘i

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UNITED STATES MARINE CORPS
MARINE CORPS BASE HAWAII
BOX 63002 KANEOHE BAY HAWAII 96863-3002

IN REPLY REFER TO:

5726
O&T
23 SEP 2013

Dr. Mary Oneha
Executive Director
Waimanalo Health Center
41-1347 Kalanianaole Highway
Waimanalo HI 96795

Dear Dr. Oneha:

SUBJECT: ENVIRONMENTAL DUE DILLAGENCE SURVEY

The purpose of this letter is to inform community leaders and adjacent property owners of an anticipated survey to be conducted by Marine Corps Base (MCB) Hawaii on parcel 5C of Marine Corps Training Area Bellows (MCTAB) located in Waimanalo, Oahu, Hawaii. The Parcel 5C site is approximately 1.5 acres, triangular shaped, and is situated to the north of the Waimanalo Community Health Center (enclosure 1). Given this area's long history with military training beginning prior to World War II, this survey aides MCB Hawaii in completing its environmental background check in order to declare the property excess. This survey is not associated with current training that routinely occurs at MCTAB.

MCB Hawaii intends to report and transfer the 1.5 acre parcel 5C to the General Services Administration as excess, provided there is no other military need for the property and if there are no existing environmental hazards that need to be addressed prior to transfer. In preparation for the transfer, MCB Hawaii will survey the environmental condition of the property to document the presence or lack of explosive hazards at the site. The environmental survey consists of surface clearance and a subsurface survey to determine the possibility and potential extent of munitions and explosives of concern (MEC). Although no explosive hazards are expected at Parcel 5C, this type of survey is routine for closing sites that have the potential for explosives. The findings of this survey will provide a basis for a MEC Hazard Assessment of the site which is required to transfer the property.

MCB Hawaii is providing this notification to inform you of anticipated field work related to the survey. The initial field work consists of preparing the site for metal detector surveys and includes clearing the surface of all metallic debris that may interfere with the survey. This may include light vegetation removal to access parts of the site. Upon completion of site preparation, the survey team will conduct sub surface metal detection surveys to identify metallic items that may be military munitions. Locations will be marked for a follow-on survey by a team who will dig on the location to assess what the metallic object is. In the unlikely event that any MEC is recovered during the survey, MCB Hawaii will provide notification to the community and coordinate follow-on actions as necessary.

If you have personal property on parcel 5C please remove it by Friday 4 October, 2013 to help with the site clearance. If you need assistance removing your personal property, or have any questions about this survey, please contact Tiffany Patrick, Community Plans and Liaison Officer at (808) 257-8815, or tiffany.patrick@usmc.mil. Thank you in advance for your consideration.

Sincerely,

BRIAN ANNICHIARICO
Colonel, U. S. Marine Corps
Commanding Officer, Marine Corps Base Hawaii

Enclosure: 1. Parcel 5C map

Enclosure 1. Parcel 5c is outlined in red

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APPENDIX D

Pre-Assessment Consultation

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THE LIMTIACO CONSULTING GROUP
CIVIL ENGINEERING AND ENVIRONMENTAL CONSULTANTS

September 20, 2013

Subject: Pre-Assessment Consultation, Draft Environmental Assessment
Waimānalo Health Center - Expanded Health Care Facility
Waimānalo, O`ahu, Hawai`i
Tax Map Keys 4-1-009: 279 and 282

Dear Sir or Madam,

On behalf of the Waimānalo Health Center, The Limtiaco Consulting Group is preparing a Draft Environmental Assessment (EA) for the proposed Waimānalo Health Center - Expanded Health Care Facility project. Pursuant to Chapter 343, Hawai`i Revised Statutes and Title 11, Chapter 200, Hawai`i Administrative Rules of the Department of Health, we are soliciting comments for the pre-assessment consultation phase of the Draft EA.

We would appreciate any input and information that you may have related to the project's possible impacts on biological resources such as native vegetation or sensitive habitats that may be utilized by threatened or endangered species. Additionally, to address and assess the cultural and archaeological resource impacts in the Draft EA, we would appreciate any input and information about potential project impacts on traditional and cultural practices and beliefs of any cultural or ethnic group(s). The name(s) and contact information of knowledgeable individual(s) whom we could contact regarding any such beliefs, practices, or resources that may be affected would be very helpful to us.

A summary of the proposed project is attached for your review. We would appreciate the submission of any comments to this pre-assessment consultation letter by Wednesday, October 9, 2013. The Draft EA is scheduled for publication in December 2013.

Please send your original comments to:
Kathleen Kravish, CFO
Attn: Randy Gillespie, Facilities Manager
Waimānalo Health Center
41-1347 Kalaniana`ole Highway
Waimānalo, Hawai`i 96795-1247
Fax: 259-6449

Please provide a copy of your comments to:
Sandy Hamura, Project Manager
The Limtiaco Consulting Group
680 Iwilei Road, Suite 430
Honolulu, Hawai`i 96817
Fax: 596-7361

Thank you for your participation in the environmental review process. Should you have any questions, please contact me at 596-7790.

Sincerely,

Sandy Hamura
Project Manager

680 IWILEI ROAD, SUITE 430 HONOLULU, HAWAII 96817
TEL (808) 596-7790 FAX (808) 596-7361
tlghawaii.com

Project Summary
Pre-Assessment Consultation for Preparation of the
Draft Environmental Assessment for the
Waimānalo Health Center - Expanded Health Care Facility, Waimānalo, O‘ahu
Tax Map Keys 4-1-009: 279 and 282

September 20, 2013

Introduction and Project Location

The Waimānalo Health Center, which celebrated its 20th anniversary in 2012, proposes to construct a new two-story health care facility adjacent to the Waimānalo Fire Station and across from Waimānalo Elementary and Intermediate School on Tax Map Key (TMK) 4-1-009: 282. Parcel 282 contains an unimproved parking lot and overgrown vegetation. Construction of the expanded health care facility and additional patient parking spaces would allow the Waimānalo Health Center (WHC) to relocate several existing clinics from older buildings on the detached parcel (TMK 4-1-009: 279) located adjacent to St. George Church.

WHC operates as a domestic non-profit and 501(c)(3) organization that qualifies for direct lease pursuant to Hawai‘i Revised Statutes (HRS) Section 171-43.1. Its current lease (GL-5400) expires on August 31, 2030. WHC is in compliance with the terms and conditions of GL-5400 and is seeking a new 65-year direct lease as part of the undertaking for the expanded facility.

The environmental review process will be completed to address environmental, social, and economic consequences and provide for public participation as required and defined by HRS Chapter 343 and Title 11, Chapter 200, Hawai‘i Administrative Rules of the Department of Health.

The current operations of the WHC are located on State of Hawai‘i property comprising 1.081 acres at 41-1347 Kalaniana‘ole Highway in Waimānalo, Ko‘olaupoko, O‘ahu (TMK 4-1-009: 279). WHC also utilizes the developed portion of TMK 4-1-009: 282 for employee parking. The total area of the triangular site (Parcel 282) where the expanded health care facility would be located is approximately 1.085 acres (see attached location map).

Project Description

Completion of the proposed project would allow WHC to achieve the following objectives:

- House medical, behavioral health, dental, vision, pharmacy, nutrition, outreach and eligibility services in a modern health care facility that may incorporate solar energy and sustainable design concepts;

- Implement Patient-Centered Health Care Home-style (PCHCH) concepts with properly configured and adequately sized examination rooms and support areas;
- Improve the delivery of coordinated patient care services;
- Reduce barriers and increase access to health care; and
- Continue its mission of providing health services to the medically underserved population of Waimānalo which has a high concentration of Native Hawaiian and part-Hawaiian families.

The proposed project includes the following considerations:

- The creation of additional patient parking on Parcel 282 would necessitate the removal of existing vegetation.
- The expanded health care facility consisting of a new two-story structure on Parcel 282 would add a visual element along Kalaniana'ole Highway.
- Determinations from the traffic impact analysis would be used to guide modifications to traffic and circulation patterns in the vicinity of Parcel 282 from improved access and egress for the expanded health care facility.
- An electrical easement encumbered under GL-5366 to Hawaiian Electric Company, Inc. that expires on December 31, 2061 would be relocated within Parcel 282.
- The expanded health care facility would require new connections and/or extensions for basic infrastructure services and systems (i.e., water, wastewater, power and communications).
- Construction-related activities affecting Parcel 282 and demolition of old structures on Parcel 279 would generate short-term effects such as erosion, surface runoff, fugitive dust, noise, intermittent traffic, solid waste, and potential disruptions to utility services that would cease upon project completion.

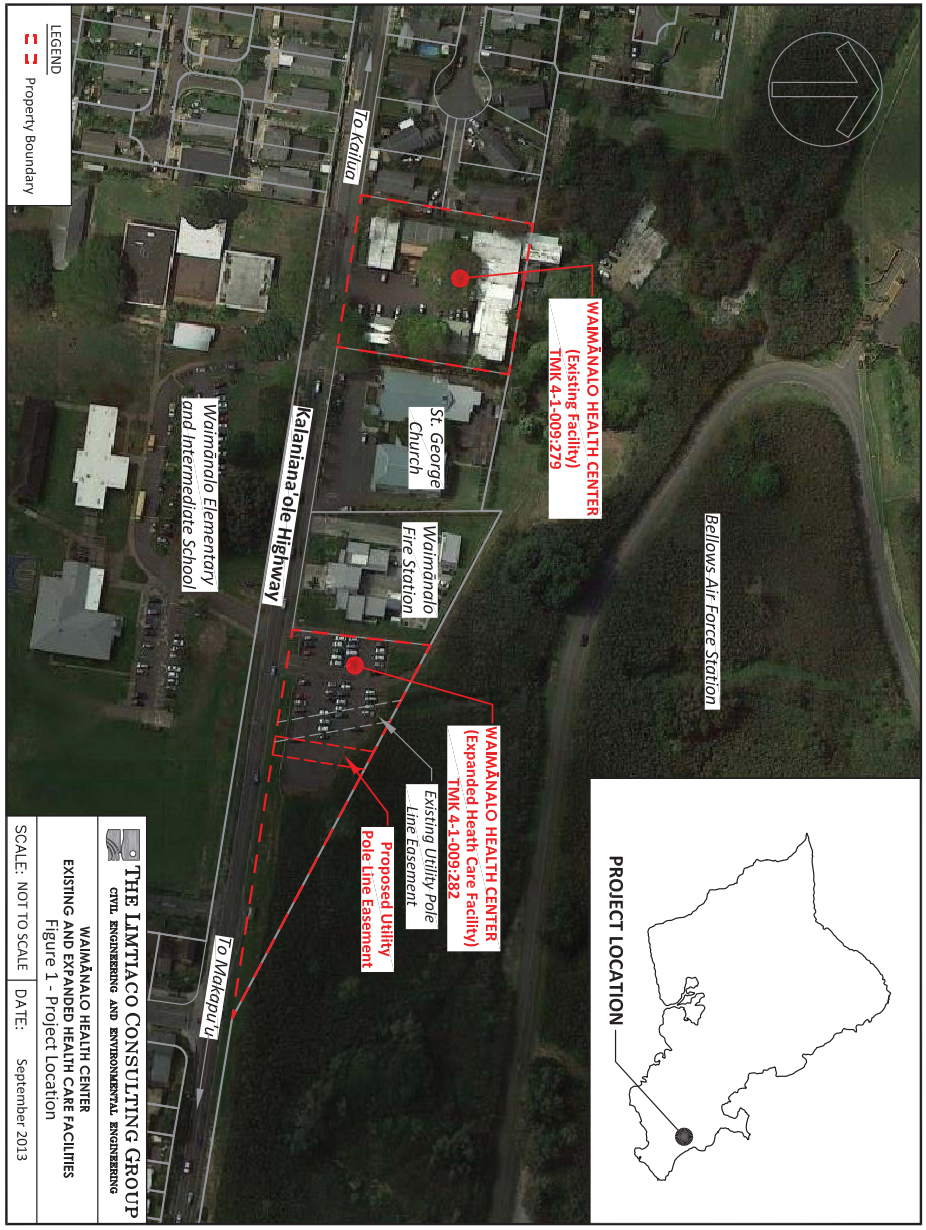
The expanded health care facility on Parcel 282 would allow WHC to continue its community service mission while improving the delivery of its services. Existing facilities utilized by WHC on Parcel 279 are inefficiently configured and inadequately sized based on modern standards for patient care. The repair and maintenance of old facilities continues to escalate, which adversely impacts the delivery of much-needed services.

Project Schedule

The Draft EA is scheduled for publication in December 2013. Completion of the environmental review process in March 2014 may allow construction of the new facility to commence in January 2015 with project completion in 2017.

Project Cost

The estimated total project cost is $13 million.



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Pacific Islands Fish and Wildlife Office
300 Ala Moana Boulevard, Room 3-122, Box 50088
Honolulu, Hawaii 96850

In Reply Refer To:
2013-SL-0461

SEP 25 2013

Ms. Kathleen Kravish, CFO
Attn: Randy Gillespie, Facilities Manager
Waimānalo Health Center
41-1347 Kalaniana'ole Highway
Waimānalo, Hawai'i 96795-1247

Subject: Pre-Assessment Consultation, Draft Environmental Assessment Waimānalo Health Center – Expanded Health Care Facility

Dear Ms. Kravish,

Thank you for your letter dated September 20, 2013, received on September 23, 2013, requesting information on listed species and critical habitat in the vicinity of the Waimānalo Health Center Expanded Health Care Facility. The purpose of the proposed project is to construct a new two-story health care facility as well as a parking lot on Parcel 282, (TMK: 4-1-009:282), and demolition of old structures on Parcel 279 (TMK: 4-1-009:279).

We have reviewed the information you provided and pertinent information in our files, including data compiled by the Hawaii Biodiversity and Mapping Program as it pertains to listed species and designated critical habitat. No federally designated or proposed critical habitat occurs within the proposed project footprint.

If you have questions regarding this letter, please contact Jason Chow, Fish and Wildlife Intern (phone: 808-792-9400, fax: 808-792-9580).

Sincerely,

Daniel Clark
Team Manager
O'ahu, Kaua'i, Northwestern Hawaiian Islands and American Samoa

---

THE LIMTIACO CONSULTING GROUP
CIVIL ENGINEERING AND ENVIRONMENTAL CONSULTANTS

November 20, 2013

Mr. Daniel Clark, Team Manager
U.S. Department of the Interior
Fish & Wildlife Service
Pacific Islands Fish and Wildlife Office
300 Ala Moana Boulevard, Room 3-122, Box 50088
Honolulu, HI 96850

Dear Mr. Clark:

Subject: Response to Pre-Assessment Consultation for the Draft Environmental Assessment for the Waimānalo Health Center - Expanded Health Care Facility Waimānalo, O'ahu, Hawai'i (Tax Map Keys 4-1-009: 279 and 282) 2013-SL-0461

Thank you for your letter dated 9/25/13 regarding the pre-assessment consultation phase for the Waimānalo Health Center - Expanded Health Care Facility project.

We acknowledge that your department has reviewed the pertinent information including data compiled by the Hawaii Biodiversity and Mapping Program and has concluded that no federally designated or proposed critical habitat occurs within the proposed project footprint.

The Draft EA is anticipated to be available for public review in December 2013 and we look forward to your department's continued participation in the environmental review process. If you have any questions, please do not hesitate to contact me at 596-7790.

Sincerely,

Sandy Hamura
Project Manager

cc: Kathleen Kravish, CFO, Waimānalo Health Center
Randy Gillespie, Facilities Manager, Waimānalo Health Center

680 IWILEI ROAD, SUITE 430 HONOLULU, HAWAII 96817
TEL (808) 596-7790 FAX (808) 596-7361
tlcghawaii.com

200 Akamainui Street
Mililani, Hawaii 96789-3999
Tel 808-625-2100
Fax 808-625-5888

OCEANIC TIME WARNER CABLE

Ms. Kathleen Kravish, CFO
Attn: Randy Gilliespie, Facilities Manager
Waimanalo Health Center
41-1347 Kalniana'ole Highway
Waimanalo, Hawaii 96795-1247

Subject: Pre-Assessment of Waimanalo Health Center-Expanded Facility

Dear Ms. Kathleen:

Thank you for the letter dated September 20, 2013.

Oceanic TimeWarner Cable has facilities on the utility poles on Kalanianaole Highway.

With the proposed utility poles on the property side, we can run our trunking cable on them just as we did at the current property.

Please send me the final plans for the infrastructure.
There is paperwork and procedures we do with the Utility Companies.
I will be doing the design and construction work.

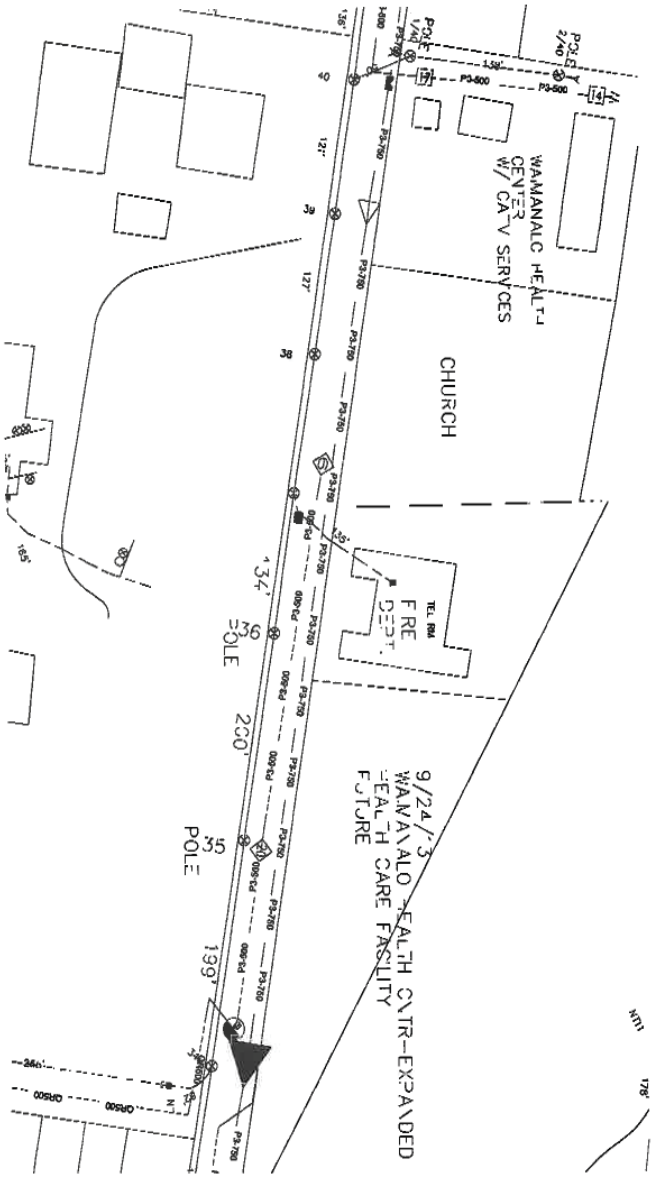
Let me know, if you have any questions.
My e-mail is leona.porter@twcable.com.
Office #: (808) 625-8457

Thank you,

Leona

Leona Porter
Outside Plant Engineer
Windward Area

cc: Sandy Hamura, Project Mgr, Limitiaco Consulting Group



THE LIMTIACO CONSULTING GROUP
CIVIL ENGINEERING AND ENVIRONMENTAL CONSULTANTS

November 19, 2013

Ms. Leona Porter
Oceanic Time Warner Cable
Mililani Technology Park
200 Akamainui Street
Mililani, HI 96789

Dear Ms. Porter:

Subject: Your Response to Pre-Assessment Consultation for the Draft Environmental Assessment for the Waimānalo Health Center - Expanded Health Care Facility Waimānalo, O'ahu, Hawai'i (Tax Map Keys 4-1-009: 279 and 282)

Thank you for your fax on 9/24/13 regarding the pre-assessment consultation phase for the Waimānalo Health Center - Expanded Health Care Facility project.

We acknowledge that Oceanic Time Warner Cable has facilities on utility poles on Kalaniana'ole Highway and can run trunking cables on proposed utility poles on the property side of the highway. We will continue to coordinate the infrastructure plans with you. Please note that the design phase of the health care facility project is projected to continue through July 2014.

The Draft Environmental Assessment is anticipated to be available for public review in December 2013 and we look forward to your company's continued participation in the environmental review process. If you have any questions, please do not hesitate to contact me at 596-7790.

Sincerely,

Sandy Hamura
Project Manager

cc: Kathleen Kravish, CFO, Waimānalo Health Center
Randy Gillespie, Facilities Manager, Waimānalo Health Center

680 IWILEI ROAD, SUITE 430 HONOLULU, HAWAII 96817
TEL (808) 596-7790 FAX (808) 596-7361
tlcghawaii.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:
13-182
Waimanalo HC

September 26, 2013

Kathleen Kravish, CFO
Attn: Randy Gillespie, Facilities Manager
Waimanalo Health Center
41-1347 Kalanianaole Highway
Waimanalo, Hawaii 96795-1247

Dear Ms. Kravish:

SUBJECT: Pre-Assessment Consultation, Draft Environmental Assessment Waimanalo Health Center – Expanded Health Care Facility Waimanalo, Oahu, Hawaii, TMK: (1) 4-1-009: 279 and 282

The Department of Health (DOH), Environmental Planning Office (EPO), acknowledges receipt of your letter dated September 20, 2013. Thank you for allowing us to review and comment on the subject document. EPO recommends that you review the Standard Comments found on our website:
http://health.hawaii.gov/epo/home/landuse-planning-review-program/.
You are required to adhere to all Standard Comments specifically applicable to this application.

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

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

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

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

Mahalo,

Laura Leialoha Phillips McIntyre, AICP
Manager, Environmental Planning Office

c. Sandy Hamura, Project Manager, The Limtiaco Consulting Group

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:

September 24, 2013

Ms. Kathleen Kraviah, CFO
Attn: Randy Gillespie, Facilities Manager
Waimanalo Health Center
41-1347 Kalaniana'ole Highway
Waimanalo, HI 96795-1247

Dear Mr. Gillespie:

This correspondence is in response to your request for a pre-assessment consultation to the Draft Environmental Assessment (EA) for the Waimanalo Health Center – Expanded Health Care Facility project.

Project activities shall comply with the following Administrative Rules of the Department of Health:

- Chapter 11-46 Community Noise Control

Should you have any questions, please contact me at (808) 586-4700.

Sincerely,

Jeffrey M. Eckerd
Program Manager
Indoor and Radiological Health Branch

c: Sandy Hamura, Project Manager, The Limtiaco Consulting Group

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

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

STATE OF HAWAII
DEPARTMENT OF HEALTH
SAFE DRINKING WATER BRANCH
919 ALA MOANA BLVD., ROOM 308
HONOLULU, HI 96814-4920

In reply, please refer to:
File: SDWB
WaimanaloHC01.docx

September 25, 2013

Ms. Sandy Hamura, Project Manager
The Limtiaco Consulting Group
680 Iwilei Road, Suite 430
Honolulu, Hawaii 96817

Dear Ms.Hamura:

SUBJECT: PRE-ASSESSMENT CONSULTATION
DRAFT ENVIRONMENTAL ASSESSMENT
WAIMANALO HEALTH CENTER – EXPANDED HEALTH CARE FACILITY, WAIMANALO, OAHU, HAWAII
TMK: 4-1-009: 279 and 282

The Safe Drinking Water Branch (SDWB) has reviewed the subject document and has the following comment: Please clearly identify the source of drinking water for the project.

If there are any questions, please call Mr. Michael Miyahira, Supervisor of the SDWB Engineering Section, at 586-4258.

Sincerely,

JOANNA L. SETO, P.E., CHIEF
Safe Drinking Water Branch

MM:slm

c: EPO

NEIL ABERCROMBIE
GOVERNOR

GENEVIEVE SALMONSON
INTERIM 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

September 25, 2013

Sandy Hamura, Project Manager
The Limtiaco Consulting Group
680 Iwilei Road, Suite 430
Honolulu, Hawai'i 96817

Subject: Pre-Assessment Consultation, Draft Environmental Assessment
Waimānalo Health Center – Expanded Health Care Facility
Waimānalo, O'ahu, Hawai'i
Tax Map Keys 4-1-009: 279 and 282

Dear Ms. Hamura,

The Office of Environmental Quality Control has received your September 20, 2013 letter, requesting comments about the proposed subject project. After review of the project summary, we offer these comments:

1. Identify the State agency that will make the determination on the project, pursuant to Chapter 343, Hawai'i Revised Statutes and Title 11, Chapter 200, Hawai'i Administrative Rules. The agency determination could be one of the following: (a) exemption declaration; (b) finding of no significant impact based on a final environmental assessment; or (c) acceptance of a final environmental impact statement.
2. Identify all approvals and permits the project will require.
3. A site specific survey and evaluation should be conducted to evaluate the project's possible impacts on biological resources such as native vegetation or sensitive habitats that may be threatened or endangered. Existing information might also be found in past environmental studies of the Waimānalo area; check the OEQC online library for relevant studies. The online library could be accessed from the OEQC home page: http://health.hawaii.gov/oeqc/.
4. The OEQC 2012 Guidebook, which could also be accessed from the above homepage, has guidelines on assessing cultural and archaeological resource

impacts on pages 11 to 13. The guide also suggests appropriate individuals in the community to be consulted for traditional and cultural practices information.

5. HAR §11-200-10 provides the contents requirements for an environmental assessment.

Thank you very much for the opportunity to offer comments on the proposed project. Feel free to contact Herman Tuiolosega at 586-4185 if you have further questions.

Sincerely,

Genevieve Salmonson

GENEVIEVE SALMONSON
Interim Director

c: Kathleen Kravish, CFO

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 4 1 009 279 & 282-ID1440
41-1347 Kalanianaole Hwy

September 27, 2013

Ms. Sandy Hamura
Project Manager
The Limtiaco Consulting Group
680 Iwilei Road Suite 430
Honolulu, Hawaii 96817

Dear Ms. Hamura:

Subject: Pre-Assessment Consultation for Draft Environmental Assessment
Waimanalo Health Center – Expanded Health Care Facility
41-1347 Kalanianaole Highway, Waimanalo, Oahu, Hawaii 96795
TMK (1) 4-1-009: 279 & 282

Thank you for allowing us the opportunity to review the above subject project which requests comments on the Pre-Assessment Consultation for the Draft Environmental Assessment for the Waimanalo Health Center, Expanded Health Care Facility.

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 & County of Honolulu's Waimanalo Wastewater Treatment Plant's sewer system.

Should you have any questions, please contact Mr. Mark Tomomitsu of my office at phone 586-4294.

Sincerely,

SINA PRUDER, P.E., CHIEF
Wastewater Branch

LM/MST.lmj

c: Ms. Laura McIntyre, DOH-Environmental Planning Office
Mr. George I. Atta, C&C of Honolulu, Dept. of Planning & Permitting 7th Floor
Ms. Kathleen Kravish, CFO, Waimanalo Health Center

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

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

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

In reply, please refer to:
EMD/CWB

10067PJF.13

October 18, 2013

Ms. Kathleen Kravish, CFO
Waimanalo Health Center
680 Iwilei Road, Suite 430
Honolulu, Hawaii 96817

Attn: Mr. Randy Gillespie,
Facilities Manager

Dear Ms. Kravish:

SUBJECT: Comments on the Draft Environmental Assessment for the Waimanalo Health Center – Expanded Health Care Facility Waimanalo, Island of Oahu, Hawaii

The Department of Health (DOH), Clean Water Branch (CWB), acknowledges receipt of your letter, dated September 20, 2013, requesting comments on your project. The DOH-CWB has reviewed the subject document and offers these comments. Please note that our review is based solely on the information provided in the subject document and its compliance with the Hawaii Administrative Rules (HAR), Chapters 11-54, and 11-55. You may be responsible for fulfilling additional requirements related to our program. We recommend that you also read our standard comments on our website at: http://health.hawaii.gov/epo/files/2013/05/CWB-standardcomment.pdf.

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

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

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

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

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

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

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

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

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

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

Sincerely,

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

JF:rh

c: Ms. Sandy Hamura, The Limtiaco Consulting Group

THE LIMTIACO CONSULTING GROUP
CIVIL ENGINEERING AND ENVIRONMENTAL CONSULTANTS

November 19, 2013

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

Dear Ms. McIntyre:

Subject: Responses to Pre-Assessment Consultation for the Draft Environmental Assessment for the Waimānalo Health Center - Expanded Health Care Facility Waimānalo, O'ahu, Hawai'i (Tax Map Keys 4-1-009: 279 and 282)

Thank you for your letter dated 9/26/13 regarding the pre-assessment consultation phase for the Waimānalo Health Center - Expanded Health Care Facility project.

Our complied responses to your office and other branches of the Department of Health (DOH) are indicated below.

Environmental Planning Office (EPO) comments dated 9/26/13 (13-182 Waimanalo HC)
We have reviewed the Standard Comments found on the DOH EPO website and acknowledge the requirement to adhere to applicable comments.

Thank you for the list of sources that provide strategies to support the sustainable design of communities and for the link to the Health Impact Assessment on the Centers for Disease Control and Prevention website. Completion of the expanded health care facility ensures the beneficial use of Parcels 279 and 282 for health care purposes for a longer period of time with the successful award of a new 65-year lease.

The Draft Environmental Assessment (EA) is anticipated to be available for public review in December 2013.

Indoor and Radiological Health Branch comments dated 9/24/13
We acknowledge and will state in the EA that project activities shall comply with the provisions of Hawai'i Administrative Rules (HAR) Title 11, Chapter 46, "Community Noise Control."

Safe Drinking Water Branch comments dated 9/25/13 (SDWB WaimanaloHC01.docx)
The EA will include a discussion pertaining to the source of drinking water. We are aware that the project area is within the Waimānalo Aquifer System Area (ASYA) that is part of the Windward Aquifer Sector Area. Parcels 279 and 282 are *makai* of the Underground Injection Control line, which indicates that the underlying groundwater is not considered a potential source of drinking water.

The new health care facility on Parcel 282 does not involve the development of new potable water sources. Parcel 282 is located within an area served by existing municipal systems for potable water and wastewater disposal. The long-term use of Parcels 279 and 282 is not anticipated to result in contamination of the underlying aquifer and groundwater sources in the Waimānalo ASYA.

680 IWILEI ROAD, SUITE 430 HONOLULU, HAWAII 96817
TEL (808) 596-7790 FAX (808) 596-7361
tlcghawaii.com

Office of Environmental Quality Control comments dated 9/25/13
The EA will identify the Department of Land and Natural Resources as the State agency that will make the determination and will include a list of required approvals and permits.

Parcels 279 and 282 are within a larger geographic area that has experienced a long history of significant land-disturbing activities including large-scale agriculture, livestock and ranching activities that altered the natural environment. The sites do not contain habitat for proposed, candidate, or listed threatened or endangered species. Project actions include the necessary removal of overgrown vegetation consisting of introduced, non-native floral species on Parcel 282 that currently provides the visual effect of green space. The proposed project includes new landscaping with trees and native plants that are adapted to the local environment.

The EA will include a discussion of archaeological and cultural resource impacts. Consultation was sought from several agencies, organizations, and associations including the State Historic Preservation Division (SHPD), O'ahu Burial Council, Office of Hawaiian Affairs (OHA), Department of Hawaiian Home Lands, Waimānalo Village Residents' Corporation, Waimānalo Hawaiian Homes Association (WHHA), Native Hawaiian Chamber of Commerce, and Onipaa Na Kupuna O Waimānalo. OHA indicated that it is unaware of traditional and cultural practices at Parcel 282. WHHA expressed its full support for the project and recommended five long-time residents as additional contacts. Waimānalo Health Center (WHC) consulted twelve (12) community individuals including four (4) suggested by the WHHA. Their collective knowledge suggests that Parcel 282 has not been utilized for traditional and cultural practices within recent times. The following terms and conditions pertaining to subsurface resources are stated in the right-of-entry permit for Parcel 282 (PSF No. 12OD-087): "In the event any unanticipated sites or remains such as bone or charcoal deposits, human burials, rock or coral alignments, pavings or walls are encountered the WHC shall stop work and contact the SHPD in Kapolei at (808) 692-8015 immediately."

We acknowledge that the content requirements for an EA are found in HAR §11-200-10.

Department of Health, Wastewater Branch comments dated 9/27/13 (LM/MST:lmj)
The EA will state that the subject project is located in the critical wastewater disposal area as determined by the Oahu Wastewater Advisory Committee and domestic wastewater from the project will be handled by the City and County of Honolulu's Waimānalo wastewater treatment plant sewer system. We acknowledge that the DOH Wastewater Branch has no comments to offer at this time.

Department of Health, Clean Water Branch comments dated 10/18/13 (10067PJF.13)
We reviewed the Standard Comments and note that there are no surface water resources within or immediately adjacent to Parcels 279 and 282. The Waimānalo Stream and its tributary, Kahawai Stream, are perennial freshwater resources in the project area. Sediments, nutrients, chemicals and debris enter the stream course as it flows from conservation lands at the base of the Ko'olau Mountain Range through agricultural lots to residential areas and military property before entering Waimānalo Bay, which is no less than 0.6 miles *makai* or seaward of Parcels 279 and 282.

A short-term and temporary impact of the project would occur from dewatering activities and the generation of additional surface runoff during construction and demolition work, especially if heavy rains coincide with ground disturbance such as excavation or trenching. We acknowledge that a National Pollutant Elimination System (NPDES) Permit will be required pursuant to HAR Title 11, Chapter 55, "Water Pollution Control." We are aware that NPDES General Permit coverage for discharges to State waters (HAR §11-55, Appendices B through L) expired at midnight on October 21, 2012 and DOH is currently going through the rule change process to re-adopt NPDES General Permits. Activities and discharges that require NPDES permit coverage during the rule change

process are required to apply for the NPDES Individual Permit, which must be submitted at least 180 calendar days before the commencement of the discharge. The expanded health care facility is currently in the design phase, which is projected to continue through July 2014. We will continue to consult with your department prior to the submittal of the appropriate NPDES Permit application (i.e., General or Individual).

The proposed project does not involve work in, over, or under waters of the United States; therefore, we have not contacted the U.S. Army Corps of Engineers.

Lastly, we acknowledge that discharges that violate applicable water quality or permitting requirements are subject to penalties of $25,000 per day per violation.

We look forward to the Department of Health's continued participation in the environmental review process. If you have any questions, please do not hesitate to contact me at 596-7790.

Sincerely,

Sandy Hamura
Project Manager

cc: Jeffrey M. Eckerd, Program Manager, DOH Indoor and Rediological Health Branch
Joanna L. Seto, P.E., Chief, DOH Safe Drinking Water Branch
Genevieve Salmonson, Interim Director, DOH Office of Environmental Quality Control
Sina Pruder, P.E., Chief, Wastewater Branch
Alex Wong, P.E., Chief, DOH Clean Water Branch
Kathleen Kravish, CFO, Waimānalo Health Center
Randy Gillespie, Facilities Manager, Waimānalo Health Center

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-1851(AA)

October 2, 2013

Ms. Kathleen Kravish, CFO
Waimanalo Health Center
41-1347 Kalanianaole Highway
Waimanalo, Hawaii 96795-1247

Attn: Randy Gillespie, Facilities Manager

Dear Ms. Kravish:

SUBJECT: Pre-Assessment Consultation
Waimanalo Health Center - Expanded Health Care Facility
41-1347 Kalanianaole Highway - Waimanalo
Tax Map Keys: 4-1-9: 279 and 282

This is in response to your letter of September 20, 2013, requesting comments on the proposed expansion of the existing Waimanalo Health Center (WHC) on an adjacent lot identified as Tax Map Key 4-1-9: 282, which currently contains an unimproved parking lot and overgrown vegetation. Specifically, you are asking for information concerning the project's possible impacts on biological resources such as native vegetation or sensitive habitats that may be utilized by threatened or endangered species, and information concerning project impacts on traditional and cultural practices and beliefs.

Our department's expertise does not include native vegetation or habitats, or traditional and cultural practices and beliefs. We suggest that you contact the United States Fish and Wildlife Services for information concerning impacts on threatened or endangered species, and the Office of Hawaiian Affairs and the State Historic Preservation Division for information concerning traditional and cultural practices and beliefs of the area.

The project will involve construction of a two-story building on Parcel 282, which is zoned R-5 Residential District and is in the Special Management Area (SMA). The site is also in the State Land Use Urban District and in Flood Zone X. Flood Zone X consists of areas beyond the 500-year flood plain.

For purposes of the Land Use Ordinance, the proposed expansion of the WHC is considered a "public use and structure", because the WHC provides various general health care services to the community under agreements with the State Department of Health to fulfill specific functions for the public good, as authorized by State law. Public uses and structures are permitted in the R-5 Residential District. Further, there are no specific parking requirements for a public use and structure, but rather, parking for a public use and structure will be determined by the Director of the Department of Planning and Permitting.

As the project site is located in the SMA, it is subject to the regulations of the SMA Ordinance [Chapter 25 of the Revised Ordinances of Honolulu (ROH)]. As such, the proposal will require approval of a SMA Use Permit (Major). The first phase of the SMA Use Permit (Major) application process is the preparation and acceptance of an Environmental Assessment (EA), which you are in the process of completing. Therefore, the EA shall be prepared pursuant to Chapter 343 of the Hawaii Revised Statutes and Chapter 25 of the ROH.

Should you have any questions, please do not hesitate to contact Ann Asaumi of our staff at 768-8020.

Very truly yours,

for George I. Atta, FAICP,
Director

GIA:nw

cc: The Limtiaco Consulting Group (Sandy Hamura)

THE LIMTIACO CONSULTING GROUP
CIVIL ENGINEERING AND ENVIRONMENTAL CONSULTANTS

November 19, 2013

Mr. George I. Atta, FAICP, Director
City & County of Honolulu
Department of Planning & Permitting
650 South King Street, 7th Floor
Honolulu, HI 96813

Dear Mr. Atta:

Subject: Your Response to Pre-Assessment Consultation for the Draft Environmental Assessment for the Waimānalo Health Center - Expanded Health Care Facility
Waimānalo, O'ahu, Hawai'i (Tax Map Keys 4-1-009: 279 and 282)
2013/ELOG-1851(AA)

Thank you for your letter dated 10/02/13 regarding the pre-assessment consultation phase for the Waimānalo Health Center - Expanded Health Care Facility project.

The pre-assessment consultation letter was sent to several agencies, organizations, and associations including the U.S. Fish and Wildlife Services and the State Historic Preservation Division, O'ahu Burial Council, Office of Hawaiian Affairs (OHA), Department of Hawaiian Home Lands, Waimānalo Village Residents' Corporation, Waimānalo Hawaiian Homes Association (WHHA), Native Hawaiian Chamber of Commerce, and Onipaa Na Kupuna O Waimānalo. We are aware that Parcels 279 and 282 are within a larger geographic area that has experienced a long history of significant land-disturbing activities including large-scale agriculture, livestock and ranching activities that altered the natural environment.

OHA indicated that it is unaware of traditional and cultural practices at the project site immediately adjacent to the Waimānalo Fire Station (Parcel 282). The WHHA expressed its full support for the project and recommended additional contacts. Waimānalo Health Center consulted twelve (12) community individuals. Their collective knowledge suggests that Parcel 282 has not been utilized for traditional and cultural practices within recent times.

The Environmental Assessment (EA) will state that Parcels 279 and 282 are in the State Land Use Urban District and in Flood Zone X. Specific statements from your letter will also be included in the EA as indicated below.

The City and County of Honolulu, Department of Planning and Permitting provided the following comments pertaining to the expanded health care facility project in its letter dated October 2, 2013:

- *The expanded care facility is a "public use and structure" because the WHC provides general health care services to the community under agreements with the DOH to fulfill specific functions for the public good as authorized by State law;*
- *Public uses and structures are permitted in the R-5 Residential District;*
- *There are no specific parking requirements for a public use and structure;*
- *Parking for a public use and structure will be determined by the DPP Director;*
- *The project site is located within the Special Management Area (SMA), and is therefore subject to the regulations of the SMA Ordinance found in Chapter 25 of the Revised Ordinances of Honolulu;*
- *The proposal will require approval of a SMA Use Permit (Major); and*

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tlcghawaii.com

- *The first phase of the SMA Use Permit (Major) application process is the preparation and acceptance of an EA.*

We are preparing the EA to concurrently address the first phase of the SMA Use Permit (Major) application process. It is anticipated that the SMA Use Permit (Major) will be obtained during the design phase of the health care facility project, which is projected to continue through July 2014.

The Draft EA is anticipated to be available for public review in December 2013 and we look forward to your department's continued participation in the environmental review process. If you have any questions, please do not hesitate to contact me at 596-7790.

Sincerely,

Sandy Hamura
Project Manager

cc: Kathleen Kravish, CFO, Waimānalo Health Center
Randy Gillespie, Facilities Manager, Waimānalo Health Center

POLICE DEPARTMENT

CITY AND COUNTY OF HONOLULU

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

KIRK W. CALDWELL
MAYOR

LOUIS M. KEALOHA
CHIEF

DAVE M. KAJIHIRO
MARIE A. McCAULEY
DEPUTY CHIEFS

OUR REFERENCE WK-WS

October 1, 2013

Ms. Kathleen Kravish, Chief Financial Officer
Waimānalo Health Center
41-1347 Kalaniana'ole Highway
Waimānalo, Hawai'i 96795-1247

Attention: Mr. Randy Gillespie, Facilities Manager

Dear Ms. Kravish:

This is in response to a letter from the Limtiaco Consulting Group dated September 20, 2013, requesting comments on the Pre-Assessment Consultation, Draft Environmental Assessment, for the Waimānalo Health Center – Expanded Health Care Facility.

The Honolulu Police Department has no specific concerns about the Waimānalo Health Center facility. However, if related construction is needed on Kalaniana'ole Highway, we recommend that adequate personnel be hired to conduct the safe movement of traffic and pedestrians in the project area.

If there are any questions, please call Major John McEntire of District 4 (Kāne'ohe/Kailua/Kahuku) at 723-8639.

LOUIS M. KEALOHA
Chief of Police

By CLAYTON G. KAU
Assistant Chief
Support Services Bureau

cc: Ms. Sandy Hamura,
The Limtiaco Consulting Group

Serving and Protecting With Aloha

THE LIMTIACO CONSULTING GROUP
CIVIL ENGINEERING AND ENVIRONMENTAL CONSULTANTS

November 19, 2013

Assistant Chief Clayton G. Kau
City & County of Honolulu Police Department
Support Services Bureau
801 South Beretania Street
Honolulu, HI 96813

Dear Assistant Chief Kau:

Subject: Your Response to Pre-Assessment Consultation for the Draft Environmental Assessment for the Waimānalo Health Center - Expanded Health Care Facility
Waimānalo, O'ahu, Hawai'i (Tax Map Keys 4-1-009: 279 and 282)
WK-WS

Thank you for your letter dated 10/01/13 regarding the pre-assessment consultation phase for the Waimānalo Health Center - Expanded Health Care Facility project.

We acknowledge that the Honolulu Police Department has no specific concerns with regards to the proposed project. Specific statements with regards to the safe movement of traffic and pedestrians will be included in the Environmental Assessment (EA) as indicated below.

> *Disruptions to vehicular, bicycle and pedestrian traffic during the various phases of construction will be intermittent and temporary in nature. Appropriate traffic control devices and warning signs will be installed and the traffic flow will be directed by construction personnel or by law enforcement personnel, when necessary.*

The Draft EA is anticipated to be available for public review in December 2013 and we look forward to your department's continued participation in the environmental review process. If you have any questions, please do not hesitate to contact me at 596-7790.

Sincerely,

Sandy Hamura
Project Manager

cc: Kathleen Kravish, CFO, Waimānalo Health Center
Randy Gillespie, Facilities Manager, Waimānalo Health Center

680 IWILEI ROAD, SUITE 430 · HONOLULU, HAWAII 96817
TEL (808) 596-7790 · FAX (808) 596-7361
tlcghawaii.com

Claire Oshiro

From: Claire Oshiro
Sent: Wednesday, October 09, 2013 8:43 AM
To: 'Jerome K. Yasuhara'
Cc: Deirdra Alo; Kai Markell; Everett Ohta
Subject: THANKS RE: Pre-assessment consultation for Waimanalo Health Center - Expanded Health Care Facility

Hi again, Jerome: Thank you for catching my omission of Na Kupuna o Waimanalo, which I do recall from our conversation.

We appreciate the dialogue and additional contact information.

Thanks again. --Claire

From: Jerome K. Yasuhara
Sent: Tuesday, October 08, 2013 11:31 AM
To: Claire Oshiro
Cc: Deirdra Alo; Kai Markell; Everett Ohta
Subject: RE: Pre-assessment consultation for Waimanalo Health Center - Expanded Health Care Facility

Aloha e Claire,

Thank you very much for contacting OHA and for the summary below. May I also note that we mentioned Na Kupuna o Waimanalo—while I don't have a mailing address the last known contact is a Ms. Rosalie Amanda Hermanson, secretary for Na Kupuna O Waimanalo. Please feel free to contact me should you have any questions. Best regards!

Me ka ha`aha`a,

Jerome

Jerome Yasuhara
Ka `Aho Pueo, Kia`i Kānāwai
Compliance Specialist
Office of Hawaiian Affairs

OHA
Office of Hawaiian Affairs

711 Kapi`olani Blvd., Suite 500, Honolulu, HI 96813
Ph: 808-594-0129
Fax: 808-594-1825
email: [redacted]

This message is intended solely for the addressee(s) named above. Its contents may be privileged, confidential and protected from disclosure. Any unauthorized use, forwarding, disclosure or copying of this message or its contents is strictly prohibited. If you are not the intended recipient or have otherwise received this message by mistake, please notify the sender immediately by reply e-mail or by telephone call and permanently delete this e-mail.

From: Claire Oshiro
Sent: Tuesday, October 08, 2013 11:19 AM
To: Jerome K. Yasuhara
Subject: Pre-assessment consultation for Waimanalo Health Center - Expanded Health Care Facility

Hi Jerome:

Thank you for returning my call regarding the pre-assessment consultation for the Waimanalo Health Center - Expanded Health Care Facility that was addressed to Dr. Kamanaopono Crabbe.

My understanding from our conversation is that no letter of response will be sent; therefore, this email summarizes our telephone discussion.

The pre-assessment letter was sent to the following agencies, organizations and individuals who may be able to provide information or contacts pertaining to the Waimanalo project area:

Dept. of Land and Natural Resources, State Historic Preservation Division (Nicki Ann Thompson)
Dept. of Hawaiian Home Lands (Juan Garcia and Darrell C. Yagodich)
Waimanalo Neighborhood Board No. 32 (Wilson Kekoa Ho, Ryan Kalama and other board members)
Waimanalo Village Residents' Corporation
Waimanalo Hawaiian Homes Association (Paul P. Richards)
Waimanalo Public and School Library (Cora Eggerman)

Furthermore, your office is unaware of traditional and cultural practices at the project site immediately adjacent to the Waimanalo Fire Station (Parcel 282).

Per your recommendations, we will contact the Native Hawaiian Chamber of Commerce and the Oahu Island Burial Council.

Please do not hesitate to contact me regarding corrections, omissions or additions to this message.

Thank you again for your time and attention.

Claire Oshiro
The Limtiaco Consulting Group
(808) 596-7790 ext. 41
www.tlcghawaii.com

THE LIMTIACO CONSULTING GROUP
CIVIL ENGINEERING AND ENVIRONMENTAL CONSULTANTS

November 19, 2013

Mr. Jerome Yasuhara, Compliance Specialist
State of Hawai'i
Office of Hawaiian Affairs
Office of the Administrator
711 Kapiolani Boulevard, Suite 500
Honolulu, HI 96813

Dear Mr. Yasuhara:

Subject: Your Response to Pre-Assessment Consultation for the Draft Environmental Assessment for the Waimānalo Health Center - Expanded Health Care Facility Waimānalo, O'ahu, Hawai'i (Tax Map Keys 4-1-009: 279 and 282)

Thank you for the telephone discussion with Claire Oshiro and for your response via email on 10/08/13 regarding the pre-assessment consultation phase for the Waimānalo Health Center - Expanded Health Care Facility project.

We acknowledge that the Office of Hawaiian Affairs is unāware of traditional and cultural practices at the project site immediately adjacent to the Waimānalo Fire Station (Parcel 282). The pre-assessment consultation letter was sent to the State Historic Preservation Division, O'ahu Burial Council, Department of Hawaiian Home Lands, Waimānalo Hawaiian Homes Association (WHHA), Waimānalo Village Residents' Corporation, Native Hawaiian Chamber of Commerce, and Onipaa Na Kupuna O Waimānalo. The WHHA expressed its full support for the project and recommended additional contacts. Waimānalo Health Center consulted twelve (12) community individuals. Their collective knowledge suggests that Parcel 282 has not been utilized for traditional and cultural practices within recent times.

We responded to questions about the project at the most recent Waimānalo Neighborhood Board meeting on November 4, 2013. The Draft Environmental Assessment is anticipated to be available for public review in December 2013 and we look forward to your agency's continued participation in the environmental review process. If you have any questions, please do not hesitate to contact me or Claire Oshiro at 596-7790.

Sincerely,

Sandy Hamura
Project Manager

cc: Kathleen Kravish, CFO, Waimānalo Health Center
Randy Gillespie, Facilities Manager, Waimānalo Health Center

680 IWILEI ROAD, SUITE 430 HONOLULU, HAWAII 96817
TEL (808) 596-7790 FAX (808) 596-7361
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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

October 8, 2013

Kathleen Kravish, CFO
Attn: Randy Gillespie, Facilities Manager via email
Waimanalo Health Center
41-1347 Kalaniana'ole Highway
Waimanalo, Hawai'i 96795-1247

Dear Mr. Gillespie,

SUBJECT: Pre-Assessment Consultation, Draft Environmental Assessment, Waimanalo Health Center – Expanded Health Care Facility

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)

c: The Limtiaco Consulting Group via email
Attn: Sandy Hamura, Project Manager

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

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

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

September 26, 2013

MEMORANDUM

FROM: ~~TO:~~

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

TO: ~~FROM:~~ Russell Y. Tsuji, Land Administrator
SUBJECT: Pre-Assessment Consultation, Draft Environmental Assessment – Waimanalo Health Center – Expended Health Care Facility
LOCATION: Waimanalo, Oahu; TMK: (1) 4-1-009:279 and 282
APPLICANT: Waimanalo Health Center

Transmitted for your review and comment on the above referenced document. We would appreciate your comments on this document. Please submit any comments by October 7, 2013.

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

Attachments

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

Signed: Steve Lau
Print Name: STEVE LAU
Date: 10/7/2013

We have no comments at this stage and will wait for the publication of the DEA relating to this project.
Kenny Chang

cc: Central Files

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

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

RECEIVED
LAND DIVISION
2013 OCT -3 AM 9:32
DEPT. OF LAND & NATURAL RESOURCES
STATE OF HAWAII

"13 SEP 30 AM 9:46 ENGINEERING

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

September 26, 2013

MEMORANDUM

TO: ~~FROM:~~

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

FROM: ~~TO:~~ Russell Y. Tsuji, Land Administrator
SUBJECT: Pre-Assessment Consultation, Draft Environmental Assessment – Waimanalo Health Center – Expended Health Care Facility
LOCATION: Waimanalo, Oahu; TMK: (1) 4-1-009:279 and 282
APPLICANT: Waimanalo Health Center

Transmitted for your review and comment on the above referenced document. We would appreciate your comments on this document. Please submit any comments by October 7, 2013.

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

Attachments

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

Signed: [illegible]
Print Name: Carty S. Chang, Chief Engineer
Date: 10/7/13

cc: Central Files

DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION

LD/LMorikawa
RE: WaimanaloHealthCenterDEAPreAssessCon
Oahu.922

COMMENTS

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

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

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

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

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

( ) Mr. Mario Siu Li at (808) 768-8098 or Ms. Ardis Shaw-Kim at (808) 768-8296 of t he 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.
( ) Ms. Carolyn Cortez at (808) 270-7813 of the County of Maui, Department of Planning.
( ) Mr. Stanford Iwamoto at (808) 241-4884 of the County of Kauai, Department of Public Works.

( ) The applicant should include water demands and infrastructure required to meet project needs. Please note that projects within State lands 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.

( ) 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 Ms. Suzie S. Agraan of the Planning Branch at 587-0258.

Signed: _____
for CARTY S. CHANG, CHIEF ENGINEER

Date: 10/24/13

THE LIMTIACO CONSULTING GROUP
CIVIL ENGINEERING AND ENVIRONMENTAL CONSULTANTS

November 19, 2013

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

Dear Mr. Tsuji:

Subject: Your Response to Pre-Assessment Consultation for the Draft Environmental Assessment for the Waimānalo Health Center - Expanded Health Care Facility Waimānalo, O'ahu, Hawai'i (Tax Map Keys 4-1-009: 279 and 282)

Thank you for your letter dated 10/08/13 (which was sent via email) regarding the pre-assessment consultation phase for the Waimānalo Health Center - Expanded Health Care Facility project.

No comments were received from the Commission on Water Resource Management and State Historic Preservation Division. The complied comments from the Land Division - Oahu District and Engineering Division are acknowledged as indicated below.

Land Division - Oahu District

There are no comments at this time.

Engineering Division

The site is in Flood Zone X. The National Flood Insurance Program has no regulations for developments in Zone X.

The Draft Environmental Assessment is anticipated to be available for public review in December 2013 and we look forward to continued participation in the environmental review process by the many Divisions of the Department of Land and Natural Resources. If you have any questions, please do not hesitate to contact me at 596-7790.

Sincerely,

Sandy Hamura
Project Manager

cc: Kathleen Kravish, CFO, Waimānalo Health Center
Randy Gillespie, Facilities Manager, Waimānalo Health Center

680 IWILEI ROAD, SUITE 430 HONOLULU, HAWAII 96817
TEL (808) 596-7790 FAX (808) 596-7361
thghawaii.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

October 7, 2013

Waimanalo Health Center
41-1347 Kalanianaole Highway
Waimanalo, Hawaii 96795-1247

Attn: Randy Gillespie

Dear Mr. Gillespie:

Subject: Pre-Assessment Consultation, Draft Environmental Assessment
Waimanalo Health Center – Expanded Health Care Facility
Waimanalo, Oahu, Hawaii, Tax Map Keys 4-1-009: 279 and 282

The Department of Design and Construction does not have any comments to offer on the pre-assessment consultation.

Thank you for the opportunity to review and comment. Should there be any questions, please contact me at 768-8480.

Sincerely,

for M. Yonamine

Chris T. Takashige, P.E., CCM
Director

CTT: cf (531813)

Cc: Ms. Sandy Hamura – The Limtiaco Consulting Group

THE LIMTIACO CONSULTING GROUP
CIVIL ENGINEERING AND ENVIRONMENTAL CONSULTANTS

November 19, 2013

Mr. Chris T. Takashige, P.E., CCM, Director
City & County of Honolulu
Department of Design and Construction
650 South King Street, 11th Floor
Honolulu, HI 96813

Dear Mr. Takashige:

Subject: Your Response to Pre-Assessment Consultation for the Draft Environmental Assessment for the Waimānalo Health Center - Expanded Health Care Facility
Waimānalo, O'ahu, Hawai'i (Tax Map Keys 4-1-009: 279 and 282)
CTT: cf (531813)

Thank you for your letter dated 10/07/13 regarding the pre-assessment consultation phase for the Waimānalo Health Center - Expanded Health Care Facility project.

We acknowledge that the Department of Design and Construction has no comments to offer at this time.

The Draft Environmental Assessment is anticipated to be available for public review in December 2013 and we look forward to your department's continued participation in the environmental review process. If you have any questions, please do not hesitate to contact me at 596-7790.

Sincerely,

Sandy Hamura
Project Manager

cc: Kathleen Kravish, CFO, Waimānalo Health Center
Randy Gillespie, Facilities Manager, Waimānalo Health Center

680 IWILEI ROAD, SUITE 430 HONOLULU, HAWAII 96817
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tlcghawaii.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

October 8, 2013

Ms. Kathleen Kravish, CFO
Attn: Randy Gillespie, Facilities Manager
Waimanalo Health Center
41-1347 Kalanianaole Highway
Waimanalo, Hawaii 96795-1247

Dear Ms. Kravish:

Subject: Draft Environmental Assessment
Preassessment Consultation
Waimanalo Health Center - Expanded Health Care Facility
Tax Map Keys: 4-1-009: 279 and 282

In response to your letter of September 20, 2013, 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 (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:bh

cc: Sandy Hamura, The Limtiaco Consulting Group

THE LIMTIACO CONSULTING GROUP
CIVIL ENGINEERING AND ENVIRONMENTAL CONSULTANTS

November 19, 2013

Assistant Chief Rolland J. Harvest
City & County of Honolulu
Honolulu Fire Department
636 South Street
Honolulu, HI 96813

Dear Assistant Chief Harvest:

Subject: Your Response to Pre-Assessment Consultation for the Draft Environmental Assessment for the Waimānalo Health Center - Expanded Health Care Facility
Waimānalo, O'ahu, Hawai'i (Tax Map Keys 4-1-009: 279 and 282)
RJH/SY:bh

Thank you for your letter dated 10/08/13 regarding the pre-assessment consultation phase for the Waimānalo Health Center - Expanded Health Care Facility project.

The Board of Water Supply indicates in its letter dated October 11, 2013 that the project area is served by the Windward 272-foot Water System and this existing potable water system is adequate to accommodate the domestic and off-site fire protection requirements for the new health care facility on Parcel 282. A final decision with regards to the availability of water will be confirmed when the building permit application is submitted for approval. Please note that the design phase of the health care facility project is projected to continue through July 2014.

We acknowledge the National Fire Protection Association (NFPA) requirements that pertain to fire department access roads and we are aware that civil drawings must be submitted to the Honolulu Fire Department for review and approval. Specific statements with regards to the NFPA codes will be included in the Environmental Assessment (EA) as indicated below.

The proposed two-story outpatient medical clinic facility will be designed to conform to the International Building Code (IBC), the applicable sections of the National Fire Protection Association (NFPA), the 2010 ADA Standards for Accessible Design, the Facilities Guidelines Institute and other similar codes, as well as amendments by the City and County of Honolulu.

The Draft EA is anticipated to be available for public review in December 2013 and we look forward to your department's continued participation in the environmental review process. If you have any questions, please do not hesitate to contact me at 596-7790.

Sincerely,

Sandy Hamura
Project Manager

cc: Kathleen Kravish, CFO, Waimānalo Health Center
Randy Gillespie, Facilities Manager, Waimānalo Health Center

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Waimānalo Hawaiian Homes Association P.O. Box 353, Waimānalo, Hawaii 96795-0353

October 9, 2013

Waimanalo Health Center
Kathleen Kravish, CFO
Attn: Randy Gillespie, Facilities Manager
41-1347 Kalanianaole Highway
Waimanalo, Hawaii 96795-1247

Dear Kathleen, Aloha,

This letter is in response to your request dated September 20, 2013 concerning the subject of a pre-assessment consultation, draft environmental assessment for the proposed expansion of the Waimanalo Health Center seeking comments from the community concerning the areas which will be impacted.

Community Residents Knowledgeable of Waimanalo

Those individuals most knowledgeable to the historic, biological environments with the proposed areas are few; however, they may be considered the primary resources and familiar with the lands concerned. These include:

- Orpha Leiana Woodside
- Heine Aruda
- Grace Adviento
- Whitney Anderson, and
- James K. Kaonohi, Jr.

These individuals are very long time residents of the Waimanalo community and would be very familiar with the land area the proposal is mentioning. All currently live in the Waimanalo area and I'm sure the Waimanalo Health Center employees know how to contact them directly.

Waimanalo Hawaiian Homes Community Concerns

As the Association leadership met two weeks ago and most recently this week with its General membership discussions were brought forward and notes taken with respect to the safety of potential patrons, community residents and travelers passing through Waimanalo.

Paul P. Richards, President • N. Kilauea Wilson, Vice President • Moana Akana, Recording and Corresponding Secretary • M. Kuulei Laughlin, Treasurer • Roland Keaka Kealoha, Historian • Roxanne Hanawahine, Director • Apela Peahi, Director • Lorraine Higa, Director • Elaine N. Hines, Director • Joseph Aipa, Director

Waimānalo Hawaiian Homes Association P.O. Box 353, Waimānalo, Hawaii 96795-0353

Waimanalo Hawaiian Homes Association (WHHA) elected leadership and its general membership recently met and expressed their full support with regards to the expansion of the Waimanalo Health Center; however, the concerns are centered on the following areas:

- WHHA leadership and its membership fully support the operations of the Health Center and its intended expansion; however, the majority felt it would be to the benefit of the Health Center and the community at large for the property immediately located behind the current property at 41-1347 Kalanianaole highway and within the Bellows MCTB area be set aside as the "expansion" area for the construction of the two story building and other services as outlined in the project summary,
- WHHA leadership and its membership are concerned with the high volume of vehicular traffic currently on the highway and its proximity to the proposed site would move the bus stop and causes added traffic; therefore, the proposed site *should not include any parking,*
- The proposed area fronting the highway is stated as "add a visual element" in actuality would eliminate the "green space," while creating a "line of businesses" enhancing a "urban sprawl" effect in Waimanalo,
- Whereas, the residents of Hale Aupuni and those residing in the complex behind Waimanalo Elementary and Intermediate School whose access and egress would be complicated and most likely require another traffic installation stop light to ensure the safety of residents,
- Currently, the waste water management system located mauka of the McDonald's area accessible via Hihimanu street would need to be upgraded since its at maximum with servicing the needs of the community *or* the sewer line connect must be made towards the Kailua end of Waimanalo, and
- The height limitations would be within reason which would ensure the proposed building does not exceed the highest nearby trees maintaining an overall "canopy-like" of greenery within the Waimanalo area while avoiding the industrial, urban landscape so common in Honolulu, Kailua and Kaneohe.

We hope these comments will help to guide your discussions, research and planned consultations to ensure the needs of the Waimanalo Health Center are met and the characteristics which define Waimanalo as a "country community" remains while others continue to build a landscape so commonly associated with urban development.

Paul P. Richards, President • N. Kilauea Wilson, Vice President • Moana Akana, Recording and Corresponding Secretary • M. Kuulei Laughlin, Treasurer • Roland Keaka Kealoha, Historian • Roxanne Hanawahine, Director • Apela Peahi, Director • Lorraine Higa, Director • Elaine N. Hines, Director • Joseph Aipa, Director

Waimānalo Hawaiian Homes Association P.O. Box 353, Waimānalo, Hawaii 96795-0353

We applaud the work and standards of quality, services and programs provided by the Waimanalo Health Center and as a former worker and once a patient of the clinic we understand the challenges facing organizations to continually improve. As we are fully supportive of the project, we hope these concerns can be incorporated and addressed to the satisfaction of everyone concerned while maintaining the uniqueness of Waimanalo on a fiercely progressive island.

Should you have any questions or concerns, please feel free to call me at 808-284-2575 or via email at paul_28827@msn.com

Me ke aloha pumehana,

Paul P. Richards
President
Waimanalo Hawaiian Home Association

Facsimile: The Limitiaco Consulting Group; Attn: Sandy Hamura

cc: WHHA and NKI Board
WHHA General Membership Email listing

Paul P. Richards, President • N. Kilauea Wilson, Vice President • Moana Akana, Recording and Corresponding Secretary • M. Kuulei Laughlin, Treasurer • Roland Keaka Kealoha, Historian • Roxanne Hanawahine, Director • Apela Peahi, Director • Lorraine Higa, Director • Elaine N. Hines, Director • Joseph Aipa, Director

THE LIMTIACO CONSULTING GROUP
CIVIL ENGINEERING AND ENVIRONMENTAL CONSULTANTS

November 19, 2013

Mr. Paul P. Richards, President
Waimānalo Hawaiian Homes Association
P.O. Box 353
Waimānalo, HI 96795

Dear Mr. Richards:

Subject: Your Response to Pre-Assessment Consultation for the Draft Environmental Assessment for the Waimānalo Health Center - Expanded Health Care Facility Waimānalo, O'ahu, Hawai'i (Tax Map Keys 4-1-009: 279 and 282)

Thank you for your letter dated 10/09/13 regarding the pre-assessment consultation phase for the Waimānalo Health Center - Expanded Health Care Facility project.

The pre-assessment consultation letter was sent to the U.S. Fish and Wildlife Services, State Historic Preservation Division, O'ahu Burial Council, Office of Hawaiian Affairs (OHA), Department of Hawaiian Home Lands, Waimānalo Village Residents' Corporation, Native Hawaiian Chamber of Commerce, and Onipaa Na Kupuna O Waimānalo. OHA indicated that it is unaware of traditional and cultural practices at the project site immediately adjacent to the Waimānalo Fire Station (Parcel 282). Waimānalo Health Center (WHC) consulted twelve (12) community individuals, including four (4) of the long-time residents mentioned in your letter. Their collective knowledge suggests that Parcel 282 has not been utilized for traditional and cultural practices within recent times.

We acknowledge and appreciate that the Waimānalo Hawaiian Homes Association is fully supportive of the proposed project. Completion of the expanded health care facility ensures the beneficial use of Parcels 279 and 282 for health care purposes for a longer period of time with the successful award of a new 65-year lease. The concerns mentioned in your letter will be addressed in the Environmental Assessment (EA) and we offer the following responses for your consideration.

Utilize Parcel 5C, Which Is Currently Owned by Marine Corps Training Area Bellows (MCTAB)

On September 23, 2013, MCTAB notified community leaders and adjacent property owners of an environmental due diligence survey for Parcel 5C, which is located immediately north and adjacent to the WHC campus on Parcel 279. The survey of Parcel 5C will provide a background check for environmental hazards. MCTAB may eventually declare Parcel 5C as excess property that could be transferred to a new property owner sometime in the future after the survey results are known. At this time, the environmental conditions of Parcel 5C are unknown and its transfer from military ownership is not assured. A delayed action that relies on the potential availability of Parcel 5C may require a greater funding commitment for a two-story health care facility or a reduction in the scope and size of the facility since building materials and labor costs tend to increase with time.

Traffic Concerns and Bus Stop Relocation

The design of the new health care facility on Parcel 282 balances site constraints such as traffic considerations with WHC's goals for improving the delivery of much-needed health care services. The new driveway for Parcel 282 will be away from the intersection of Kalaniana'ole Highway with Inoaole Street to avoid compromising the access and egress for residents of the Hale Aupuni subdivision and those living in the complex behind the Waimānalo Elementary and Intermediate School. The bus routes, bus stops, and paratransit operations are not expected to be impacted by demolition or construction activities within Parcels 279 and 282.

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The Proposed Site (Parcel 282) Should Not Include Any Parking To Preserve Green Space

Elimination of the parking component of the new health care facility would allow the overgrown vegetation on the eastern portion of Parcel 282 to remain as green space; however, the elimination of parking at Parcel 282 would cause WHC employees or patrons to park their vehicles at off-site locations within Waimānalo when the parking lot at Parcel 279 is fully occupied.

Another Traffic Installation Stop Light For Safety Reasons

The EA includes a traffic impact assessment report (TIAR) prepared by SSFM International. There are known community concerns with respect to vehicular, bicycle and pedestrian traffic in the surrounding vicinity of Parcels 279 and 282. There is poor level-of-service during peak traffic periods at the intersections of Kalaniana'ole Highway with Poalima Street, Moole Street and Inoaole Street. The findings in the TIAR indicate that there would be a minimal change to the level-of-service at nearby intersections as a result of project-related traffic such that signals are not warranted at the driveways for Parcels 279 and 282. Future background traffic volume increases that may warrant traffic signals at the Moole Street and Inoaole Street intersections are not related to the proposed WHC project. The TIAR also noted that "the community has preferred to retain a rural feel along Kalaniana'ole Highway and not include additional turn lanes or traffic signals."

Waste Water Management System Concerns

Your letter states that the waste water management system located mauka of the McDonald's area and accessible by Hihimanu Street would need to be upgraded or the sewer line connection must be made towards the Kailua end of Waimānalo. We will continue to coordinate with the City and County of Honolulu Department of Planning and Permitting for the necessary approvals and permits. Please note that the design phase of the health care facility project is projected to continue through July 2014.

Height Limitations

We anticipate that the proposed project will not significantly alter the visual character of the Waimānalo area. The new health care facility will not exceed the 25-foot building height limitations. The proposed project will include landscaping with trees and other plants that grow naturally and are appropriate to the climate of Waimānalo. Landscaping is expected to include a small garden area.

We responded to questions about the proposed project at the most recent Waimānalo Neighborhood Board meeting on November 4, 2013. The Draft EA is anticipated to be available for public review in December 2013 and we look forward to your association's continued participation in the environmental review process. If you have any questions, please do not hesitate to contact me at 596-7790.

Sincerely,

Sandy Hamura
Project Manager

cc: Kathleen Kravish, CFO, Waimānalo Health Center
Randy Gillespie, Facilities Manager, Waimānalo Health Center

HAWAI'I GAS
THE CLEAN ENERGY COMPANY

October 4, 2013

Ms. Sandy Hamura
The Limtiaco Consulting Group
680 Iwilei Road, Suite 430
Honolulu, Hawaii 96817

Dear Ms. Hamura:

Subject: Pre-Assessment Consultation, Draft Environmental Assessment
Waimanalo Health Center – Expanded Health Care Facility
Waimanalo, O'ahu, Hawai'i
Tax Map Keys 4-1-009: 279 and 282

In response to your letter dated September 20, 2013, it has been determined that the area is currently clear of utility gas facilities.

Thank you for the opportunity to review the map. Should there be any questions, or if additional information is desired, please feel free to contact Jared Pasalo at 594-5008.

Sincerely,

HAWAI'IGAS

Keith K. Yamamoto
Manager, Engineering

KKY:krs
13-187

P.O. Box 3000 | Honolulu, Hawai'i 96802-3000 | www.HawaiiGas.com

THE LIMTIACO CONSULTING GROUP
CIVIL ENGINEERING AND ENVIRONMENTAL CONSULTANTS

November 19, 2013

Mr. Keith K. Yamamoto, Manager
The Gas Company (dba Hawai'i Gas)
Engineering Department
515 Kamakee Street
Honolulu, HI 96814

Dear Mr. Yamamoto:

Subject: Your Response to Pre-Assessment Consultation for the Draft Environmental Assessment for the Waimānalo Health Center - Expanded Health Care Facility
Waimānalo, O'ahu, Hawai'i (Tax Map Keys 4-1-009: 279 and 282)
KKY:krs 13-187

Thank you for your letter dated 10/04/13 regarding the pre-assessment consultation phase for the Waimānalo Health Center - Expanded Health Care Facility project.

We acknowledge the determination by Hawai'i Gas that the area is clear of utility gas facilities.

The Draft Environmental Assessment is anticipated to be available for public review in December 2013 and we look forward to your company's continued participation in the environmental review process. If you have any questions, please do not hesitate to contact me at 596-7790.

Sincerely,

Sandy Hamura
Project Manager

cc: Kathleen Kravish, CFO, Waimānalo Health Center
Randy Gillespie, Facilities Manager, Waimānalo Health Center

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October 9, 2013

Ms. Kathleen Kravish, CFO
Attn: Randy Gillespie, Facilities Manager
Waimanalo Health Center
41-1347 Kalaniana'ole Highway
Waimanalo, Hawaii 97695-1247

Dear Ms. Kravish:

Subject **Pre-Assessment Consultation Draft Environmental Assessment for the Waimanalo Health Center – Expanded Health Care Facility TMKs: 4-1-009:279 and 282, Waimanalo, Hawaii**

Thank you for the opportunity to comment on the subject project. Hawaiian Electric Company has no objections to the project. Should HECO have existing easements and facilities on the subject property, we will need continued access for maintenance of our facilities.

We appreciate your efforts to keep us apprised of the subject project in the planning process. As the Waimanalo Health Center – Expanded Health Care Facility project comes to fruition; please continue to keep us informed. Further along in the design, we will be better able to evaluate the effects on our system facilities.

If you have any questions, please call Rouen Liu at 543-7245.

Sincerely,

Rouen Q. W. Liu
Permits Engineer

Cc: Ms. Sandy Hamura

THE LIMTIACO CONSULTING GROUP
CIVIL ENGINEERING AND ENVIRONMENTAL CONSULTANTS

November 19, 2013

Mr. Kerstan Wong, Manager
Hawaiian Electric Company Inc.
Engineering Department
P.O. Box 2750
Honolulu, HI 96840

Dear Mr. Wong:

Subject: Response to Pre-Assessment Consultation for the Draft Environmental Assessment for the Waimānalo Health Center - Expanded Health Care Facility Waimānalo, O'ahu, Hawai'i (Tax Map Keys 4-1-009: 279 and 282)

Thank you for the letter dated 10/09/13 regarding the pre-assessment consultation phase for the Waimānalo Health Center - Expanded Health Care Facility project.

We will continue to coordinate the easement realignment with Mr. Rouen Q. W. Liu, Permits Engineer, and acknowledge that the effects of the new facility on the electric company's systems will be evaluated at a later stage of design, which is projected to continue through July 2014. The Environmental Assessment (EA) will include the statements below that pertain to electrical power.

> *Electrical power in the project area is provided by Hawaiian Electric Company, Inc. (HECO). There is a 25-foot HECO easement through Parcel 282. HECO requires continued access to its easement for maintenance of its facilities.*
>
> *Impacts and Mitigation Measures*
>
> *Proposed construction and demolition work has the potential to disrupt power and communication systems but these effects are expected to be short-term and temporary. The new health care facility on Parcel 282 is not anticipated to consume substantial amounts of energy since it represents a continuation of existing functions on Parcel 279. Select buildings on Parcel 279 will be demolished after the relocation of services to a modern facility on Parcel 282 that incorporates sustainable building design concepts and energy saving measures. There are no long-term impacts associated with establishing new service connections.*
>
> *The proposed project will be coordinated with HECO because there will be a realignment of the 25-foot easement through Parcel 282. The site design for the new facility accommodates HECO's need for continued access to its easement. HECO indicates that it has no objections to the project and is therefore agreeable to relocation of the easement. It is anticipated that WHC would be responsible for the total cost of relocating the electrical easement within Parcel 282.*

The Draft EA is anticipated to be available for public review in December 2013 and we look forward to HECO's continued participation in the environmental review process. If you have any questions, please do not hesitate to contact me at 596-7790.

Sincerely,

Sandy Hamura
Project Manager

cc: Kathleen Kravish, CFO, Waimānalo Health Center
Randy Gillespie, Facilities Manager, Waimānalo Health Center

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DEPARTMENT OF TRANSPORTATION SERVICES
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 3RD FLOOR
HONOLULU, HAWAII 96813
Phone: (808) 768-8305 • Fax: (808) 768-4730 • Internet: www.honolulu.gov

KIRK CALDWELL
MAYOR

MICHAEL D. FORMBY
DIRECTOR

MARK N. GARRITY, AICP
DEPUTY DIRECTOR

TP9/13-531973R

October 9, 2013

Ms. Kathleen Kravish, Chief Financial Officer
Waimanalo Health Center
41-1347 Kalanianaole Highway
Waimanalo, Hawaii 96795-1247

Attention: Randy Gillespie, Facility Manager

Dear Ms. Kravish:

SUBJECT: Pre-Consultation for Draft Environmental Assessment (DEA) Waimanalo Health Center – Expanded Health Care Facility; Tax Map Key (TMK): 4-1-009:279 and 282; Waimanalo, Oahu, Hawaii

In response to a letter dated September 20, 2013, from Ms. Sandy Hamura, Project Manager, The Limtiaco Consulting Group, 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.

- Your 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 Kalanianaole Highway that serve Routes 57, 77 and 89. 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.

We reserve further comment pending submission of the DEA.

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

Very truly yours,

Michael D. Formby
Director

cc: Ms. Sandy Hamura, Project Manager

THE LIMTIACO CONSULTING GROUP
CIVIL ENGINEERING AND ENVIRONMENTAL CONSULTANTS

November 19, 2013

Mr. Michael D. Formby, Director
City & County of Honolulu
Department of Transportation Services
650 South King Street, 3rd Floor
Honolulu, HI 96813

Dear Mr. Formby:

Subject: Your Response to Pre-Assessment Consultation for the Draft Environmental Assessment for the Waimānalo Health Center - Expanded Health Care Facility
Waimānalo, O'ahu, Hawai'i (Tax Map Keys 4-1-009: 279 and 282)
TP9/13-531973R

Thank you for your letter dated 10/09/13 regarding the pre-assessment consultation phase for the Waimānalo Health Center - Expanded Health Care Facility project.

The Environmental Assessment (EA) includes a traffic impact assessment report prepared by SSFM International. Waimānalo Health Center provides regular updates about its activities at the Waimānalo Neighborhood Board No. 32 meetings. We responded to questions about the proposed project at the most recent Neighborhood Board meeting on November 4, 2013.

Specific statements that pertain to traffic, pedestrian and public transit impacts will be included in the EA as indicated below.

Vehicular access to Parcels 279 and 282 is via driveways along Kalaniana'ole Highway (State Route 72), which is the primary arterial route connecting Waimānalo to Kailua and to Makapu'u. The section of highway in front of Parcels 279 and 282 is two lanes wide with limited shoulder space. The posted speed limit is 25 miles per hour in the vicinity of Parcels 279 and 282.

The City provides bus services to the Waimānalo area via Kalaniana'ole Highway. Routes 57, 77 and 89 provide service from Kailua to Waimānalo to Sea Life Park, from Waimānalo to Kailua, and from Waimānalo to downtown Honolulu, respectively. There are four bus stops in each direction along the east and west bound lanes of Kalaniana'ole Highway between Poalima Street and Inoaole Street.

The traffic impact assessment report (TIAR) included a review of Waimānalo Neighborhood Board No. 32 meeting minutes from 2008 through 2013 and the study of nearby intersections. The community has expressed concerns with respect to vehicular, bicycle and pedestrian traffic in the surrounding area. There is poor level-of-service during peak traffic periods at the intersections of Kalaniana'ole Highway with Poalima Street, Moole Street and Inoaole Street. Future background traffic volume increases that may warrant traffic signals at the Moole Street and Inoaole Street intersections are not related to the proposed WHC project. A separate left-turn lane for the northbound and southbound approaches of the Moole Street intersection would allow for an improvement over poor level-of-service conditions that already exist. The TIAR also noted that "the community has preferred to retain a rural feel along Kalaniana'ole Highway and not include additional turn lanes or traffic signals" (SSFM International, 2013).

Impacts and Mitigation Measures

Disruptions to vehicular, bicycle and pedestrian traffic during the various phases of construction will be intermittent and temporary in nature. Appropriate traffic control devices and warning signs will be installed and the traffic flow will be directed by construction personnel or by law

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enforcement personnel, when necessary. No traffic lane closures or traffic detours are expected in conjunction with the construction activities; however, a State-approved traffic control plan shall be prepared prior to the construction of the proposed project if lane closures or traffic detours are deemed necessary. The bus routes, bus stops, and paratransit operations are not expected to be impacted by demolition or construction activities within Parcels 279 and 282. Coordination with the City and County of Honolulu, Department of Transportation Services (DTS) and Oahu Transit Services, Inc. (OTS) will be accomplished as necessary to ensure minimal inconvenience to motorists and public transportation service. The contractor would be responsible for notifying the necessary DTS and OTS personnel of pertinent project details (such as the construction schedule) at least two weeks prior to the commencement construction activities.

Appropriate setbacks and sight distances will be incorporated into the project design. The new driveway for Parcel 282, which will be further east and farther away from the Waimānalo Fire Station driveway, must be approved by the DTS. Coordination and consultation with the Traffic Review Branch is expected to be conducted by the project representative and/or the construction contractor as a requirement for acquiring the necessary project approvals and permits. The findings in the TIAR indicate that there would be a minimal change to the level-of-service at nearby intersections as a result of project-related traffic such that signals are not warranted at the driveways for Parcels 279 and 282. Coordination with the Waimānalo Fire Station is recommended to ensure that the existing flashing beacon on the makai side of Kalaniana'ole Highway is maintained or relocated and is visible to oncoming traffic.

We acknowledge that DTS reserves further comment pending submission of the Draft EA, which is anticipated to be available for public review in December 2013. We look forward to your department's continued participation in the environmental review process.

If you have any questions, please do not hesitate to contact me at 596-7790.

Sincerely,

Sandy Hamura
Project Manager

cc: Kathleen Kravish, CFO, Waimānalo Health Center
Randy Gillespie, Facilities Manager, Waimānalo Health Center

NEIL ABERCROMBIE
GOVERNOR

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

GLENN M. OKIMOTO
DIRECTOR

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

DIR 1389
HWY-PS 2.5847

October 17, 2013

Ms. Kathleen Kravish, CFO
Waimanalo Health Center
41-1347 Kalanianaole Highway
Waimanalo, Hawaii 96795-1247

Attention: Mr. Randy Gillespie

Dear Ms. Kravish:

Subject: Pre-Assessment Consultation for Draft Environmental Assessment
Waimanalo Health Center – Expanded Health Care Facility
Oahu, Waimanalo, TMK: (1) 4-1-009: 279, 282

It is our understanding that Waimanalo Health Center (WHC) plans to improve parcel 282, including constructing a new 2-story building and associated facilities which will allow for consolidation and relocation of health activities from parcel 279. WHC also intends to obtain a 65-year lease to replace a current lease that will expire in 2030. Both parcels have direct access via driveways to Kalanianaole Highway, State route 72.

Since State lands are involved, pursuant to HRS 343, a draft environmental assessment is being prepared and pre-assessment consultation comments are being solicited.

We request that a traffic assessment (TA) be prepared and submitted for our review and acceptance. The TA should address WHC traffic, access to Kalanianaole Highway, pedestrian and bicycle access to the new center and along the property frontage and recommend transportation mitigation improvements, as required. Sight distance is not expected to be a problem but should be verified. Discussion about the status of parcel 279 after activity relocation should be included.

If there are any questions, please contact Gary Ashikawa, Systems Planning Engineer, Highways Division, Planning Branch at 587-6336. File Number 2013-209.

Very truly yours,

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

c: Ms. Sandy Hamura, The Limtiaco Consulting Group

THE LIMTIACO CONSULTING GROUP
CIVIL ENGINEERING AND ENVIRONMENTAL CONSULTANTS

November 19, 2013

Mr. Glenn M. Okimoto, Director of Transportation
State of Hawai'i
Department of Transportation
Aliiaimoku Building
869 Punchbowl Street, #509
Honolulu, HI 96813

Dear Mr. Okimoto:

Subject: Your Response to Pre-Assessment Consultation for the Draft Environmental Assessment for the Waimānalo Health Center - Expanded Health Care Facility Waimānalo, O'ahu, Hawai'i (Tax Map Keys 4-1-009: 279 and 282)

Thank you for your letter dated 10/17/13 regarding the pre-assessment consultation phase for the Waimānalo Health Center - Expanded Health Care Facility project.

The Environmental Assessment (EA) includes a traffic impact assessment report prepared by SSFM International that will be submitted for your department's review and acceptance as requested. We will coordinate with your department during the progression of the design phase, which is projected to continue through July 2014.

Select buildings on Parcel 279 will be demolished after the successful transition of several existing services to the completed health care facility on Parcel 282. Completion of the expanded health care facility ensures the beneficial use of Parcels 279 and 282 for health care purposes for a longer period of time with the successful award of a new 65-year lease.

The report prepared by SSFM addresses project-related traffic, access to Kalanianaole Highway, geometric considerations, pedestrian and bicycle access, and mitigation. Specific statements pertaining to circulation and traffic will be included in the Draft EA as indicated below.

Vehicular access to Parcels 279 and 282 is via driveways along Kalaniana'ole Highway (State Route 72), which is the primary arterial route connecting Waimānalo to Kailua and to Makapu'u. The section of highway in front of Parcels 279 and 282 is two lanes wide with limited shoulder space. The posted speed limit is 25 miles per hour in the vicinity of Parcels 279 and 282.

The City provides bus services to the Waimānalo area via Kalaniana'ole Highway. Routes 57, 77 and 89 provide service from Kailua to Waimānalo to Sea Life Park, from Waimānalo to Kailua, and from Waimānalo to downtown Honolulu, respectively. There are four bus stops in each direction along the east and west bound lanes of Kalaniana'ole Highway between Poalima Street and Inoaole Street.

The traffic impact assessment report (TIAR) included a review of Waimānalo Neighborhood Board No. 32 meeting minutes from 2008 through 2013 and the study of nearby intersections. The community has expressed concerns with respect to vehicular, bicycle and pedestrian traffic in the surrounding area. There is poor level-of-service during peak traffic periods at the intersections of Kalaniana'ole Highway with Poalima Street, Moole Street and Inoaole Street. Future background traffic volume increases that may warrant traffic signals at the Moole Street and Inoaole Street intersections are not related to the proposed WHC project. A separate left-turn lane for the northbound and southbound approaches of the Moole Street intersection would allow for an improvement over poor level-of-service conditions that already exist. The TIAR also noted that

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"the community has preferred to retain a rural feel along Kalaniana'ole Highway and not include additional turn lanes or traffic signals" (SSFM International, 2013).

Impacts and Mitigation Measures

Disruptions to vehicular, bicycle and pedestrian traffic during the various phases of construction will be intermittent and temporary in nature. Appropriate traffic control devices and warning signs will be installed and the traffic flow will be directed by construction personnel or by law enforcement personnel, when necessary. No traffic lane closures or traffic detours are expected in conjunction with the construction activities; however, a State-approved traffic control plan shall be prepared prior to the construction of the proposed project if lane closures or traffic detours are deemed necessary. The bus routes, bus stops, and paratransit operations are not expected to be impacted by demolition or construction activities within Parcels 279 and 282. Coordination with the City and County of Honolulu, Department of Transportation Services (DTS) and Oahu Transit Services, Inc. (OTS) will be accomplished as necessary to ensure minimal inconvenience to motorists and public transportation service. The contractor would be responsible for notifying the necessary DTS and OTS personnel of pertinent project details (such as the construction schedule) at least two weeks prior to the commencement construction activities.

Appropriate setbacks and sight distances will be incorporated into the project design. The new driveway for Parcel 282, which will be further east and farther away from the Waimānalo Fire Station driveway, must be approved by the DTS. Coordination and consultation with the Traffic Review Branch is expected to be conducted by the project representative and/or the construction contractor as a requirement for acquiring the necessary project approvals and permits. The findings in the TIAR indicate that there would be a minimal change to the level-of-service at nearby intersections as a result of project-related traffic such that signals are not warranted at the driveways for Parcels 279 and 282. Coordination with the Waimānalo Fire Station is recommended to ensure that the existing flashing beacon on the makai side of Kalaniana'ole Highway is maintained or relocated and is visible to oncoming traffic.

The Draft EA is anticipated to be available for public review in December 2013 and we look forward to your department's continued participation in the environmental review process. If you have any questions, please do not hesitate to contact me at 596-7790.

Sincerely,

Sandy Hamura
Project Manager

cc: Kathleen Kravish, CFO, Waimānalo Health Center
Randy Gillespie, Facilities Manager, Waimānalo Health Center

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:
13-971A CAB

November 13, 2013

Ms. Kathleen Kravish, CFO
Waimanalo Health Center
41-1347 Kalanianaole Highway
Waimanalo, Hawaii 96795-1247

Attention: Mr. Randy Gillespie, Facilities Manager

Dear Ms. Kravish:

SUBJECT: Draft Environmental Assessment
Waimanalo Health Center - Expanded Health Care Facility
Waimanalo, Oahu, Hawaii
Tax Map Key Nos: 4-1-009: 279 and 282

Construction/Demolition that May Involve Asbestos
If the proposed project includes renovation/demolition activities which may involve asbestos, the applicant should contact the Asbestos Abatement Office in the Indoor and Radiological Health Branch at 586-5800.

Control of Fugitive Dust
A significant potential for fugitive dust emissions exists during all phases of demolition and construction. The activities must comply with the provisions of Hawaii Administrative Rules, §11-60.1-33 on Fugitive Dust. We encourage the contractor to implement a dust control plan, which does not require approval by the Department of Health, to comply with the fugitive dust regulations. Dust control measures may include, but are not limited to, the following:

a) 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;
b) Providing an adequate water source at the site prior to start-up of construction activities;
c) Landscaping and providing rapid covering of bare areas, including slopes, starting from the initial grading phase;
d) Minimizing dust from shoulders and access roads;
e) Providing adequate dust control measures during weekends, after hours, and prior to daily start-up of construction activities; and
f) Controlling dust from debris being hauled away from the project site. Also, controlling dust from daily operations of material being processed, stockpiled, and hauled to and from the facility.

If you have any questions, please contact Mr. Barry Ching of the Clean Air Branch at 586-4200.

Sincerely,

NOLAN S. HIRAI, P.E.
Manager, Clean Air Branch

BC:rg

THE LIMTIACO CONSULTING GROUP
CIVIL ENGINEERING AND ENVIRONMENTAL CONSULTANTS

November 20, 2013

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

Dear Ms. McIntyre:

Subject: Response to Pre-Assessment Consultation for the Draft Environmental Assessment for the Waimānalo Health Center - Expanded Health Care Facility
Waimānalo, O'ahu, Hawai'i (Tax Map Keys 4-1-009: 279 and 282)
13-971A CAB

We received the letter from the Clean Air Branch dated 11/13/2013 after the compiled responses were mailed to your department.

Clean Air Branch comments dated 11/13/13 (13-971A CAB)
We acknowledge that the Asbestos Abatement Office in the Indoor and Radiological Health Branch should be contacted if demolition activities involve asbestos.

Specific statements pertaining to the control of fugitive dust will be included in the Environmental Assessment (EA) as indicated below.

> *The proposed project is expected to generate short-term construction-related impacts on air quality such as fugitive dust and emissions from construction vehicles and equipment. The contractor will be responsible for complying with HAR Title 11, Chapter 60, "Air Pollution Control." The contractor will be responsible for the implementation of adequate dust control measures during all phases of development and construction activities.*

Please note that the new facility is proposed to be air conditioned throughout and will include a backup generator for emergency power. We will consult with the Clean Air Branch during the progression of the design phase, which is projected to continue through July 2014.

The Draft EA is anticipated to be available for public review in December 2013 and we look forward to your department's continued participation in the environmental review process. If you have any questions, please do not hesitate to contact me at 596-7790.

Sincerely,

Sandy Hamura
Project Manager

cc: Nolan S. Hirai, P.E., Manager, DOH Clean Air Branch
Kathleen Kravish, CFO, Waimānalo Health Center
Randy Gillespie, Facilities Manager, Waimānalo Health Center

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WAIMANALO NEIGHBORHOOD BOARD NO. 32

c/o NEIGHBORHOOD COMMISSION • 530 SOUTH KING STREET ROOM 406 • HONOLULU, HAWAII 9813
TEL: (808)768-3710• FAX: (808)768-3711• EMAIL nco@honolulu.gov• INTERNET: http://www1.honolulu.gov/nco

SPECIAL MEETING AGENDA
Monday, November 4, 2013
National Guard Training Auditorium
711 Tinker Road
Bellows AFS, Waimanalo
7:30 p.m.

*****NOTE SPECIAL MEETING DATE*****

Rules of Speaking: Anyone wishing to speak is asked to raise their hand, and when recognized by the Chair, to address comments to the Chair. Speakers are encouraged to keep their comments under 3 minutes, and those giving reports are urged to keep their reports under 3 minutes. Please silence all electronic devices.

Note: The Board may take action on any agenda item. As required by the State Sunshine Law (HRS 92), specific issues not noted on this agenda cannot be voted on, unless added to the agenda. A two-thirds vote (9) of this 13-member Board is needed to add an item to the agenda. Items may not be added if they are of major importance and will affect a significant number of people.

1. **Call to Order** by Chair Wilson Kekoa Ho
   1.1. Moment of Silence for Kahu Ryan Kalama

2. **Public Safety Input**
   2.1. Honolulu Fire Department (HFD)
   2.2. Honolulu Police Department (HPD)
   2.3. Mayor Kirk Caldwell's Representative – Chris Takashige
   2.4. Councilmember J. Ikaika Anderson
   2.5. Board of Water Supply (BWS)

3. **Approval of the October 14, 2013 Regular Meeting Minutes**

4. **Treasurer's Report**

5. **Community Concerns**
   5.1. Discussion for December Meeting Recess
   5.2. Poalima Community and DHHL Update – Andrew Jamila
   5.3. Olomana Heights Development – Senator Laura Thielen
   5.4. Kaiona Beach Park Commercial Activities – Lieutenant Dave Eber

6. **Board Business**
   6.1. University of Hawaii Selection Committee – Christine Neves
   6.2. Waimanalo Carnival Report – Andrew Jamila

7. **Community Reports** Three (3) minutes each
   7.1. Elected Officials – Senator Laura Thielen and Representative Chris Lee
   7.2. Governor Neil Abercrombie Representative – Mary Alice Evans
   7.3. Military Reports – National Guard, Marines, Air Force
   7.4. Hawaiian Homestead – Paul Richards
   7.5. Waimanalo Health Center – Mary Oneha
   7.6. Education Reports – Blanche Pope Elementary School and Waimanalo Elementary and Intermediate School

   7.7. Hawaii Job Corps – Julie Dugan
   7.7. Waimanalo Co-Op – Kehaulani Padilla
   7.8. Hui Malama O Ke Kai – Mia Elison
   7.9. Waimanalo Ahupua'a Coalition – Bernie Strand

8. **Announcements**

9. **Adjournment**

A mailing list is maintained for interested persons and agencies to receive this Board's agenda and minutes. Additions, corrections, and deletions to the mailing list may be directed to the Neighborhood Commission Office (NCO), Honolulu Hale, 530 South King Street, Room 406, Honolulu, Hawaii 96813; Telephone (808) 768-3710 or Fax (808) 768-3711; or call Neighborhood Assistant Jenilea Heath at (808) 768-3781; or e-mail at jheath@honolulu.gov. Agendas and minutes are also available on the internet at www1.honolulu.gov/nco.

Any person wishing to attend a Neighborhood Board meeting and has questions about accommodations for a physical disability or a special physical need should call the Neighborhood Commission Office at 768-3710 between 8:00 a.m. and 4:00 p.m. at least 24 hours before the scheduled meeting.

WAIMANALO NEIGHBORHOOD BOARD NO. 32

c/o NEIGHBORHOOD COMMISSION • HONOLULU HALE, ROOM 406 • 530 SOUTH KING STREET
PHONE (808) 768-3710 • FAX (808) 768-3711 • INTERNET: http://www.honolulu.gov

DRAFT REGULAR MEETING MINUTES
MONDAY, NOVEMBER 4, 2013
298 REGIMENT MFTU RTI AUDITORIUM

CALL TO ORDER: Chair Wilson Kekoa Ho called the meeting to order at 7:31 p.m. **A quorum was established with eight (8) members present.** Note – This 13-member Board requires seven (7) members to establish a quorum and to take official Board action.

Members Present: Nani Akeo, Shannon Alivado, Wilson "Kekoa" Ho, Andrew Jamila Jr., Marvelle Kuulei Laughlin, Courtney Paulos, Ted Radovich and Shelly Texeira-Vickery.

Members Absent: Joe Albinio, Michael Buck, Maynard "Beanie" Koa, and Herbert Nakamura.

Guests: Chris Takashige (Mayor Kirk Caldwell's representative), Senator Laura Thielen, JD Aweau (Councilmember Ikaika Anderson's representative), Michael Cubas (Board of Water Supply); Darrell Young and Deni Chee (Department of Hawaiian Homelands); Tiffany Patrick and Major Pam Marshall (Marine Corps Base Hawaii); William Cambron (United States Air Force), Captain Norbert Pokini (Honolulu Fire Department), Maenani McAulton, Randy Gillespie, Keoni and Cyndy Aylett; Mary Oneha, and Liz Martinez (Waimanalo Health Center); Elijah Isaac (Hui Malama O Ke Kai), Fred Erskine (Erskine Architects Inc.), Bernie Strand (Waimanalo Ahupuaa Coalition), Kristen Mailheau (Hui O Koolaupoko), Julie Dugan (Job Corps), Johnathon Asuiar, Rowena Asuier, Lisa Kamakeala, Vernon Sart, Gideon Kaonohi, Kahu Ricky Bermudez, Claire Oshiro, Lerma and Kaleo Nakashima, Arthur Keolo Jr., F. Kaliliua, R. Thomaon, William R. England, Shawn Kadaoka, Dominic Kadoaka, John and Lorraine Hoapili, Leimomi Dierks, Ted Ralston, Margee Ralston, John David, and Jenilea M. Heath (Neighborhood Commission Office Staff).

Pule: Chair Ho welcomed everyone to the Board meeting and noted that meetings begin with an opening prayer. Those not wishing to participate were allowed to remove themselves. Kahu Ricky Bermudez gave the pule.

Moment of Silence: A moment of silence was held for the passing of Board member Kahu Ryan Kalama.

PUBLIC SAFETY INPUT:

Honolulu Fire Department (HFD): Captain Norbert K. Pokini reported the following:

- October 2013 Fire Statistics – The statistics included 1 vehicle fire, 52 medical emergencies, 5 search and rescues, and 10 miscellaneous calls for service, such as an activated alarm, a bonfire, downed power lines and a broken hydrant. There were no major or unusual incidents reported.
- Fire Safety Tip – Thanksgiving Day is the leading day for home fires involving cooking equipment. Do not leave cooking unattended. Stay home when roasting a turkey and check it frequently. Keep children at least three (3) feet away from the stove, and away from hot foods and liquids, as steam or splash could cause serious burns. Keep the floor clear to prevent tripping. Keep knives out of children's reach. Ensure electric cords from appliances are not dangling off the counter. Keep matches and utility lighters out of children's reach. Never leave children alone in a room with a lit candle. Push the smoke alarm test button to ensure it is operable.

Honolulu Police Department (HPD): No representative was present; no report was provided.

Mayor Kirk Caldwell's Representative: Chris Takashige reported the following:

- Transit Oriented Development (TOD) Symposium: The Department of Planning and Permitting (DPP) announced their 2013 TOD Symposium on Saturday, November 16, 2013 from 8:30 a.m. to 2:30 p.m. For more information, go to www.todhonolulu.org.
- Town Hall Meetings: Mayor Caldwell and his department directors will be attending town hall meetings at the following locations and times:
  - Wailua, Haleiwa at Wailua High School cafeteria from 6:00 p.m. to 8:00 p.m.
  - Koolauloa at Kahuku High School cafeteria from 6:00 p.m. to 8:00 p.m.

  - Waianae, Nanakuli, Maili at Waianae District Park from 6:00 p.m. to 8:00 p.m.
  - East Oahu at Kaiser High School cafeteria from 6:00 p.m. to 8:00 p.m.
- Wastewater Systems: Construction is ongoing for sewage pumps at Waimanalo Bay Beach Park.
- Speed Limits: The Department of Transportation Services (DTS) conducts investigations on a case-by-case basis and requests specific streets and/or intersection where speeding is occurring for evaluation.
- Department of Hawaiian Homeland (DHHL) Property: The City does not have jurisdiction on DHHL lands, as they are a state agency. DHHL has requested that the City Department of Planning and Permitting (DPP) issue building permits for all construction. DPP agreed with the request and will issue building permits if and when applications are submitted. The building code will be enforced for the permitted construction only and DPP will not inspect or issue violations for other unpermitted portions of the structure or conduct any types of investigations of complaints. When complaints are received, DPP will defer the complaints to DHHL for investigation.

Questions, comments and concerns followed:

1. Permitting: It was clarified that an individual may build a house on DHHL property with no permit required from DPP. There is not a state department of permitting.
2. Stoplight: Jamila requested that the timing for the traffic signal at the intersection of Hihimanu Street and Kalaniana'ole Highway be reevaluated. Takashige will follow up.
3. Commercial Activities: Chair Ho noted continuing commercial activities at public parks. It was noted that enforcement would be up to HPD, but that they have not yet resolved the issue. Takashige will follow up.

Councilmember J. Ikaika Anderson: JD Aweau reported problems with the play apparatus at Waimanalo Beach Park. The City Department of Design and Construction (DDC) will be installing two (2) new play structures at the park: a rock wall and a large, false climbing rock. Construction will begin in December 2014. A play structure had been installed recently. However the exposed metal joints of the apparatus began to rust even before the warranty took effect. Inspectors rejected and removed the rusted apparatus. The new structure will be more suited to the weather and saltwater air and is Little Tykes brand.

Board of Water Supply (BWS): Michael Cubas reported the following:

- Main Breaks: There were no water main breaks in the Waimanalo area in October 2013.
- Long-Range Improvement Plans: Many Oahu communities were first established more than a century ago. As the communities age, major portions of the island's infrastructure are also aging and nearing the end of their life spans. BWS must prioritize and implement projects to systematically replace pumps, pipes, reservoirs, and other components of Oahu's water system. BWS produces a six-year capital improvement project (CIP) that includes projects to address system renewal and replacement and capacity expansion to accommodate growth and pipeline and facility improvements. The BWS's Fiscal Year 2014-2019 Six (6)-Year CIP will be posted online by the end of this year.
- Water Master Plan: BWS's Water Master Plan is an initiative that aims to identify ways to extend the life of existing infrastructure, reduce main breaks, and develop a long-term Capital Improvement Program with a 30-year planning horizon. For more information on these initiatives, contact the BWS Communications Office at 748-5041.
- Estimated Billing Update: BWS staff continues to work to reduce the number of estimated bills. Since becoming aware of the issue in May 2013, BWS took actions to address the issue, including:
  - Identifying and replacing malfunctioning meter reading equipment.
  - Increasing staff to meet increased work demands for monthly bills.
  - Revisiting its method of bill estimation to more closely reflect a customer's recent water usage.
  - Reconfiguring the system to flag a bill that is estimated for more than three months in a row.
  - Monitoring the number of estimated bills to prevent occurrence of multiple estimated bills.

Approval of the October 2013 Regular Meeting Minutes: **Laughlin moved and Alivado seconded that the Waimanalo Neighborhood Board No. 32 approve the October 14, 2013 regular meeting minutes as amended. The motion was ADOPTED by UNANIMOUS CONSENT, 8-0-0 (Aye:** Akeo, Alivado, Ho, Jamila, Laughlin, Paulos, Radovich and Texeira-Vickery**).**

Corrections were as follows:

- Page 1 of 7: Under Pule, it was incorrectly noted that Chair Ho gave the pule. This should be changed to Arthur Keola.
- Page 3 of 7: In paragraph four (4), Chair Ho is wrongly noted as Chair Wong.

- Page 4 of 7: In Alivado's comments under the Olomana Heights Development, the second sentence should be deleted entirely and replaced with "Alivado expressed concern that we are not hearing from the developer so it would not be appropriate to make improper representations."
- Page 4 of 7: Under Emergency Preparedness, the Department of Emergency Management (DEM) should be changed to the Hawaiian Electric Company (HECO).

TREASURER'S REPORT: This item was deferred.

COMMUNITY CONCERNS

December Recess: **The Waimanalo Neighborhood Board No. 32 agreed to recess in December 2013 by UNANIMOUS CONSENT 8-0-0, (Aye**: Akeo, Alivado, Ho, Jamila, Laughlin, Paulos, Radovich and Texeira-Vickery**).**

Poalima Community Update: Chair Ho requested that Poalima community members provide testimony on the issues they have experienced due to construction on nearby DHHL land. Two DHHL representatives, Darrell Young and Deni Chee were present to take information and hear testimony,

- Cathlene Enos: Enos reported that construction has been ongoing for nearly a year. Enos was not aware if a historical study of the area had been done for iwi. Soil was removed from the area and replaced with backfill. Enos noted that she developed a lung infection which began when construction started. Samples taken from Enos' lungs contained soil which matched that of the construction area, suggesting the infection was caused by construction dust. Enos called the State Department of Health (DOH) due to the film of dust that forms during the day. Residents in the area are forced to shut their doors and windows to keep the dust out, and then either endure the heat, or turn on air conditioning units, which is expensive. There is an access area to the construction site which has been very problematic. It was supposed to have been blocked off, but is still in use. The construction crews have been using a machine for packing earth which has caused major damage to Enos' and other residents' homes, such as shaking houses, and cracked walls and ceilings. Enos also noted high grass that had not been cut, and an increased rat and feral cat problem. Complaints that have been filed have not been acknowledged.
- Lisa Kamakaala: Kamakaala noted that she is a resident of nearby Mekia Street. Since construction began, the area has flooded three (3) times. The water flow goes around the construction area, down the road, into the property behind Kamakaala's home, through the back fence, and down a side street. The force of the water is very strong; Kamakaala had placed a 20 foot long 4x8 inch beam to stop some of the water, but the beam was pushed aside by the water flow, which also washed away large decorative rocks. During a recent rain, the flood water was deep enough to cover speed bumps on the road. Kamakaala has not filed any formal complaints. Jamila noted that most residents, who are having significant issues, do not know where to go for help.
- Kaleo Nakashima: Regarding a recent rainstorm, Nakashima noted that the rain did not last long, but the flood water still managed to cover the speed bump. Nakashima suggested that more storm drains be added in the area if possible.
- Ron England: England noted that he lives next to Jamila. The flooding became an issue in the area. England provided pictures for the Board of the flood waters. Six (6) months ago, workers removed a large amount of coral sub-layer intending for it to help the flood problem. This method did not work but nothing further was done. The street travels downhill and tilts toward housing, which England noted was an issue for the City. England's yard needs to be re topsoiled, as most of it was washed away by floodwaters. When England inquired with the construction company, he was told that the City and State were "sitting" on permits, so the company was unable to do anything further until the permits were approved. England also noted issues with the machine Enos had talked about, and added that pieces of his ceiling had fallen off. England has had a rat problem, along with all of his neighbors. England noted that when any other developer is preparing for construction, many prepatory steps have to be taken. However, DHHL did not have to go through those steps, so when vegetation was cut for construction, the rats and vermin living in the grasses evacuated into the surrounding neighborhood. England raised the point that when residents move into the new homes, there will already be some animosity towards them from the neighbors due to the problems their development has caused. England added that the construction company has been trying to work with the neighbors.
- Vernon Santos: Santos also provided pictures from the recent rainstorm's flooding. The water flows under his house and floods the driveway. There are two (2) drains in front of his home, which are unable to handle the amount of water brought down by flooding.

- Gideon Kaonohi: Starting at 7:00 a.m., doors and windows have to be shut to keep the dust and diesel fumes out of homes. Kaonohi noted that his wife has had to call him home from work on multiple occasions due to extremely loud machinery near their home. Kaonohi is a retired construction vehicle operator. The crew was using a drum roller, which shook the ground and caused damage, cracking his walls, as well as Enos'. Kaonohi's wife must undergo dialysis at home, and is uncomfortable and unable to rest with the loud and construction. Kaonohi also noted an excavator operator trying to break boulders, and rolling them around toward Mekia Street. Kaonohi and other neighbors expressed that they have had enough with the treatment they have received from DHHL, which they feel has been unfair. Kaonohi added that the construction workers were not doing their jobs correctly.
- Further Concerns from Absent Residents: Jamila noted that one of his neighbors on Mekia Street was unable to attend the meeting, but wanted to know what was happening with the truck access area, and why such large trucks were allowed to use it, as they make for hazardous driving conditions on the small road. Signatures had been collected to stop use of the road by construction trucks.
- DHHL Representative Darrell Young: Young noted that he drove by the neighborhood earlier this day and some of the additional machinery will be making drainage improvements. There have been delays because when the improvements were added, the plans had to be resubmitted. A response was received and the final version will be submitted soon. Work will be completed shortly thereafter.
- Suggestions: It was suggested that temporary solutions, such as flood inhibiting rolls should be placed to at least keep the water from flooding homes and yards. Young appreciated these suggestions and asked that if community members have any further suggestions, they email darrell.t.young@hawaii.gov. Young is currently the Deputy Director of DHHL.
- Responses: Chair Ho requested that each community member who provided testimony receive a response from DHHL regarding their issues. Young and Chee collected contact information, and will follow up with the residents. The issue will be added to the January 2014 agenda and will be discussed again then. The audience and Board thanked Young and Chee for their attendance and help at the meeting. Applause followed.

Olomana Heights Development: Senator Laura Thielen reported the following:

- Missed Meeting: Senator Thielen apologized for missing the October 2013 Board meeting.
- History of Property: Senator Thielen checked on the Olomana Heights land and found that development began on it during Governor Ben Cayetano's term. The State purchased multiple properties above the ridgeline on Olomana, however there was one parcel that was not purchased. By law, the parcel may have one (1) farm dwelling, which must be an accessory to farm use. There cannot be any restrictive covenance which would prevent anyone from doing agricultural development. However, the development is not currently being marketed as farm dwellings.
- Bill 47: Senator Thielen clarified for Texeira-Vickery that she is familiar with Council Bill 47, regarding the Koolauloa Sustainable Communities Plan, but is not involved in it, as she is a State legislator, and Bill 47 is at the City level.
- Restrictions: Jamila reported that individuals working on the Olomana Heights development noted that it would be a gated community with million dollar homes. Senator Thielen noted that a similar issue had come up on Kauai. Restrictions from the State said that the land had to be used for agriculture, but restrictions from the developers included design elements which would not make agriculture possible. Maui County is also increasing enforcement of agriculture plans. Inspectors will be checking agriculture lands to ensure requirements are being followed.
- Return: Senator Thielen will attend the January 2014 Board meeting.

Waimanalo Health Center (WHC) Expansion: Fred Erskine, Claire Oshiro, and Mary Oneha reported:

- Facilities: The current WHC facilities are old, and the health center buildings were never meant to house health care systems or equipment. The buildings need to be regularly updated to meet health and Americans with Disabilities Act (ADA) codes and regulations. The cost to improve facilities has begun to exceed the value of the structures. Expansion will allow for modernization, facility updates, and for WHC to better assess and address public needs.
- Assessment: The Environmental Assessment (EA) will be available for public review in December 2013. Any community input is appreciated.

Questions, comments, and concerns followed:

1. Parking: Chair Ho asked about how parking will be arranged. It was explained that the current designs expand the WHC structures into the current parking area, and reorganizing parking is still in the planning

process. The long-term plans include a two (2) story clinic, which is consistent with the land use ordinance for the area. There are currently 49 parking stalls.

2. Design Planning: Erskine explained for Alivado that the WHC project is not yet in its design phase, however the parcel is zoned R-5. Though the structure will be considered public use, building standards will be followed and the maximum height of the permanent building will still be 25 feet.
3. Bus Stop: Oneha explained for community member Kahu Rickey Bermudez that nothing will be done to disturb the nearby bus stop's permanent location.

Ohana Night Club Liquor License:

- Opposition to License: Texeira-Vickery reported that she checked with the Honolulu Liquor Commission (LIQ) and found that the Ohana Nightclub was not granted a liquor license of any sort, but was only granted permission to apply for a license. Texeira-Vickery also expressed opposition to the nightclub, noting that at least seven (7) establishments already have liquor licenses in Waimanalo. Residents were encouraged to submit testimony opposing the license for Ohana Nightclub.
- Licenses: It was clarified that the establishments which already have liquor licenses are 7-11, Bobbies Liquor Store, two (2) locations on Bellows, Shima's, Olomana Golf Course, and Serg's Resaurant.

BOARD BUSINESS

University of Hawaii Selection Committee: No representative was present; no report was given.

Waimanalo Carnival: Andrew Jamila reported the following:

- Hokulea: The Polynesian Voyaging Society was a partner at the Carnival. The voyaging canoe Hokulea stopped in Waimanalo Bay as part of the events, which Jamila reported was very beautiful and touched many people. The late Kahu Ryan Kalama blessed the opening ceremonies, and Nainoa Thompson gave a speech. Tours of Hokulea were given.
- Success: Jamila reported that the Waimanalo Carnival was a great success, and that the organizers hope to partner with the Polynesian Voyaging Society again. Jamila thanked the community for attending, and thanked Hui Malama O Ke Kai for their assistance.

COMMUNITY REPORTS

Senator Laura Thielen: Senator Thielen reported the following:

- Marriage Equality Bill: Senator Thielen reported that Representative Chris Lee was unable to attend the meeting as he was still in hearings regarding the Marriage Equality Bill, or Senate Bill (SB) 1. Senator Thielen noted that it was likely the House of Representatives would make some amendments to the bill regarding religious exemptions.
- Appointments: The Senate will be going through new appointments made under Governor Abercrombie. There have been 36 appointments made since May 2013, and more will be made by the start of the regular legislative session in January 2014.

Questions, comments, and concerns followed:

1. Ballot: Jamila asked if a vote on same-sex marriage would be put on a ballot. Senator Thielen explained that in 1998, a vote was taken, and the decision to allow same-sex marriage was put to legislators.
2. Bill 47: Senator Thielen explained for Texeira-Vickery that there was an original Koolauloa Sustainable Communities Plan, but it was changed under Mayor Mufi Hanneman's administration. The changes were not solidified and under Mayor Peter Carlisle's administration the plan was still undecided. Senator Thielen explained that while any changes to the plan directly affect only people living in the Koolauloa area, Senator Thielen personally thinks other community plans may be indirectly affected, because the changes could open other plans to also be changed at any time.

Governor Neil Abercrombie's Representative: No representative was present, no report was given.

MILITARY REPORTS:

National Guard: Lieutenant Colonel Mark Young reported the following:

- Noise: No noise disturbances are anticipated in the near future from base activities.
- Graduation: A class of 55 soldiers graduated recently from the Warrior Leadership Course.

- Emergency Preparedness: Based on community feedback, the National Guard at Bellows will be developing a community working group in regards to emergency preparedness. The group will be aimed at supporting Waimanalo in the event of a natural disaster.
- Holidays: Lieutenant Colonel Young wished everyone a safe and happy holiday season.

Air Force: Major William Cambron reported the following:

- Job Availability: Jobs are almost always available at Bellows Air Force Base. Job options include housekeeping, frontdesk customer service, and life guard positions, among others.
- Partnership: Julie Dugan thanked Major Cambron for the Air Force's partnership with Job Corps.
- Parade: The Waimanalo Christmas Parade will take place on Saturday, December 14, 2013 from 9:00 a.m. to 11:00 p.m. The permit for the parade has been paid for by multiple community members, including absent Board member Maynard Beanie Koa.

Marine Corps Base Hawaii (MCBH): Major Pam Marshall reported the following:

- Runway: Construction on the main runway at MCBH is complete, and fixed wing aircraft have been back on the base since October 25, 2013.
- Training: The United States Fish and Wildlife Service (FWS) will be conducting a survey in training area 1, which will run for 10 months.
- Shoreline Stabilization: The cranes located along the ponds at MCBH are working on a shoreline stabilization project, which will be complete in mid February 2014.
- Marathon: The annual Turkey Trot 10 kilometer run will be on Saturday, November 16, 2013.
- Lava Viper: The Lava Viper exercise will be taking place on the island of Hawaii from January 2014 to February 2014 involving fixed wing aircraft.
- Osprey: A date has not yet been decided for when the MV-22 Osprey aircraft will be on MCBH, though the plan is within fiscal year 2015.

Hawaiian Homestead: No representative was present; no report was given.

Waimanalo Health Center (WHC): Mary Oneha reported that WHC will be hosting a Diabetes Health Fair on Wednesday, November 6, 2013 from 10:00 a.m. to 2:00 p.m. Flyers were made available to the audience.

Hawaii Job Corps: Julie Dugan reported the following:

- Breast Cancer Awareness: October was breast cancer awareness month. To raise money, Job Corps students participated in a five (5)-mile walk over Ford Island. The fundraiser was record breaking, with the students raising $1,943 for cancer research.
- Volunteer: A Job Corps group will be volunteering time to work at Salvation Army, preparing Thanksgiving dinner for over 2,500 people.
- Nurse Assistant: Enrollment for a certified nurse assistant course begins in early December 2013, and the course begins in January 2014.

Education Reports: No representative was present; no report was given.

Waimanalo Co-Op: Kehaulani Padilla reported the following:

- Membership: The first membership meeting will be held Saturday, November 9, 2013 at 9:00 a.m. at the co-op store. Anyone interested in joining the co-op should attend, as well as those who are already members, and anyone who would like to be a vendor at the store. Vendors could include farmers, artisans, or makers of value added products.
- Opening Day: The co-op will open on Thursday, November 14, 2013.

Questions, comments, and concerns followed:

1. Liquor License: The co-op will be applying for a liquor license, but only intends to sell fine wines. The license has not been applied for yet; this will be in the second or third phase.
2. Name: The name of the establishment will be the Waimanalo Market Co-Op.
3. Value Added Product: A value product is a prepared product such as a cooked dish. The co-op does not have a commercial kitchen, but they are interested in getting vendors together to rent a space with a commercial kitchen for a day to prepare and package products to sell. This would hopefully be once a week on Tuesdays. Kehaulani encouraged anyone with value added products to join.

Hui Malama O Ke Kai: Elijah Isaac reported the following:

- Thanks: Isaac thanked the community for helping to celebrate Hokulea at the Waimanalo Carnival. The turnout was high and the weather was good. Isaac noted that the event could not have been successful without community partners.
- Kui Kalo Night: The poi pounding event is held every third (3rd) Tuesday, and this month will be on Tuesday, November 19, 2013 from 6:00 p.m. to 7:00 p.m.
- Nohona Kanaka: The last two nights of this series will be on Wednesday, November 6, 2013, and Wednesday, November 13, 2013 from 6:00 p.m. to 7:00 p.m. More information can be found at www.huimalamaokekai.org.

Waimanalo Ahupuaa Coalition (WAC): Bernie Strand thanked the Board for holding a moment of silence in honor of the late Kahu Ryan Kalama. Kalama was very involved in WAC.

ANNOUNCEMENTS:

- Recycling Day: Alivado announced the Waimanalo Community Recycling Day to take place on Saturday, January 11, 2013 from 9:00 a.m. to 1:00 p.m. at Waimanalo Beach Park. For more information, call 381-7202.

- Kawainui Marsh: Community member Ted Ralston noted a discussion on the future of Kawainui Marsh, which will be held on Saturday, November 30, 2013 from 9:00 a.m. to 12:00 p.m. at Le Jardin School.

ADJOURNMENT The meeting adjourned at 9:19 p.m.

Submitted by:
Jenilea Heath, Neighborhood Assistant

Reviewed by:
Leland Ribac, Neighborhood Assistant II

APPENDIX E

Draft EA Comments and Responses

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THE LIMTIACO CONSULTING GROUP
CIVIL ENGINEERING AND ENVIRONMENTAL CONSULTANTS

December 23, 2013

Subject: Draft Environmental Assessment and Anticipated Finding of No Significant Impact
Waimānalo Health Center - Expanded Health Care Facility
Waimānalo, O'ahu, Hawai'i
Tax Map Keys 4-1-009: 279 and 282

Dear Sir or Madam,

The announcement pertaining to the Draft Environmental Assessment and Anticipated Finding of No Significant Impact (DEA-AFNSI) for the proposed Waimānalo Health Center - Expanded Health Care Facility appears on page 6 of the current issue of The Environmental Notice published by the Office of Environmental Quality Control (OEQC), which is enclosed for your convenience. The entire notice and electronic copy of the Draft EA may be downloaded from http://health.hawaii.gov/oeqc/. Hard copies of the Draft EA were submitted to OEQC and are also available at the Hawai'i State Library (Hawai'i Documents Center) and at the Waimānalo Public and School Library.

As indicated in the notice, comments are due by Wednesday, January 22, 2014. The 30-day consultation period is derived from the process set forth in Chapter 343, Hawai'i Revised Statutes and Title 11, Chapter 200, Hawai'i Administrative Rules of the Department of Health.

Please address comments to the agency and applicant, and send a copy to our office.

Agency:
Steve Lau, Land Agent
Department of Land and Natural Resources, Land Division
1151 Punchbowl Street, Room 220
Honolulu, HI 96813
Email: Stephen.T.Lau@hawaii.gov

Applicant:
Kathleen Kravish, CFO
Randy Gillespie, Facilities Mgr.
Waimānalo Health Center
41-1347 Kalaniana'ole Highway
Waimānalo, Hawai'i 96795
Fax: 259-6449

Consultant:
Sandy Hamura, Project Mgr.
The Limtiaco Consulting Group
1622 Kanakanui Street
Honolulu, Hawai'i 96817

Thank you for your participation in the environmental review process. Should you have any questions, please contact me at 596-7790 and note our new mailing address.

Sincerely,

Sandy Hamura
Project Manager

1622 KANAKANUI STREET · HONOLULU, HAWAII 96817
(808) 596-7790 ~ tlcghawaii.com

Wildlife Service (Service), and an Incidental Take License from the State Department of Land and Natural Resources (DLNR), Division of Forestry and Wildlife. The issuance of an ITP triggers the need for environmental compliance under the National Environmental Policy Act (NEPA). The Service and DLNR have determined that an Environmental Impact Statement (EIS) is warranted. By issuing this notice, the State process under HRS Chapter 343 and the federal process under NEPA will be aligned, and the EIS will be put forth as a single document that meets the requirements of both regulations.

6. Waimanalo Health Center – Expanded Health Care Facility DEA (AFNSI)

Island: O'ahu
District: Ko'olaupoko
TMK: 4-1-009: 279 and 4-1-009: 282
Permits: City and County of Honolulu Building Permits, Grubbing/Grading/Stockpiling Permits, SMA Use Permit (Major), Industrial Wastewater Discharge Permit; State of Hawai'i National Pollutant Discharge Elimination System Permit, Community Noise Permit, Non-Covered and/or Covered Source Permit (Air Quality), Lane Use Permit for Construction Work, Oversized and Overweight Vehicles on State Highways Permit.
Applicant: Waimānalo Health Center, 41-1347 Kalaniana'ole Highway, Waimānalo, HI 96795.
Contact: Kathleen Kravish or Randy Gillespie, 808-259-7948.
Approving Agency: Department of Land and Natural Resources, Land Division, 1151 Punchbowl Street, Room 220, Honolulu, HI 96813.
Contact: Steve Lau at 808-587-0447 or e-mail Stephen.T.Lau@hawaii.gov.
Consultant: The Limtiaco Consulting Group, 1622 Kanakanui Street, Honolulu, HI 96817.
Contact: Sandy Hamura, 808-596-7790.
Status: Statutory 30-day public review and comment period starts; comments are due by January 22, 2014. Please send comments to the applicant, approving agency, and consultant.

Waimānalo Health Center (WHC) proposes to construct a new two-story outpatient health care facility and parking lot on State of Hawai'i property identified as Tax Map Key (TMK) 4-1-009: 282 adjacent to the Waimānalo Fire Station and across from Waimānalo Elementary and Intermediate School. The new facility would house select health services that are currently offered at WHC's existing campus located at 41-1347 Kalaniana'ole Highway on TMK 4-1-009: 279. WHC is applying for a 65-year direct lease for both State-owned parcels.

Existing facilities utilized by WHC are inefficiently configured and inadequately sized based on modern standards for patient care. The repair and maintenance of old facilities continues to escalate, which adversely impacts the delivery of much-needed services. The 35-year direct lease (GL-5400) for the property containing the existing WHC campus expires on August 31, 2030.

WHC was granted a management right-of-entry for the triangular parcel where new construction would occur. The parcel contains an existing unimproved parking lot and overgrown vegetation. Construction of the new health care facility would allow WHC to relocate medical, behavioral health, vision, pharmacy, nutrition, outreach, and eligibility services. GL-5400 is expected to be mutually terminated upon the issuance of a new 65-year lease.

WAIMANALO NEIGHBORHOOD BOARD NO. 32

c/o NEIGHBORHOOD COMMISSION • 530 SOUTH KING STREET ROOM 406 • HONOLULU, HAWAII 9813
TEL: (808)768-3710• FAX: (808)768-3711• EMAIL nco@honolulu.gov• INTERNET: http://www1.honolulu.gov/nco

REGULAR MEETING AGENDA

Monday, January 13, 2014
National Guard Training Auditorium
711 Tinker Road
Bellows AFS, Waimanalo
7:30 p.m.

Rules of Speaking: Anyone wishing to speak is asked to raise his or her hand, and when recognized by the Chair, to address comments to the Chair. Speakers are encouraged to keep their comments less than three (3) minutes, and those giving reports are urged to keep their reports less than three (3) minutes. Please silence all electronic devices.

Note: The Board may take action on any agenda item. As required by the State Sunshine Law (HRS 92), specific issues not noted on this agenda cannot be voted on, unless added to the agenda. A two-thirds (2/3) vote of nine (9) of this 13-member Board is needed to add an item to the agenda. However, items may not be added, if they are of major importance and will affect a significant number of people.

1. **Call to Order** by Chair Wilson Kekoa Ho

2. **City Reports**
   - 2.1. Honolulu Fire Department (HFD) Report
   - 2.2. Honolulu Police Department (HPD) Report
   - 2.3. Mayor Kirk Caldwell's Representative – Chris Takashige
   - 2.4. Councilmember J. Ikaika Anderson

3. **Community Concerns**
   - 3.1. Emergency Preparedness – Major General Darryll Wong
   - 3.2. City Emergency Director – Peter Hirai
   - 3.3. Community Emergency Volunteer – Frencha Kalilimoku

4. **Approval of November 4, 2013 Board Minutes**

5. **Board Business**
   - 5.1. Community Enterprises – Bolo Kahawai
   - 5.2. Ohana Nite Club Liquor Application – Sheryl Vickery
   - 5.3. Poalima Community vs. Department of Hawaiian Homes Lands (DHHL) Update – Andrew Jamila
   - 5.4. Beachlot Commercial Bus and Surfboard Activity

6. **Community Reports**
   - 6.1. Hawaii Job Corps – Julie Dugan
   - 6.2. Waimanalo Health Center – Mary Oneha
   - 6.3. Education Reports – Blanche Pope and Waimanalo Elementary
   - 6.4. Elected Officials – Senator Laura Thielen and Representative Chris Lee
   - 6.5. Military Reports – Marines, Air Force and National Guard
   - 6.6. Governor Neil Abercrombie's Representative – Mary Alice
   - 6.7. Hawaiian Homestead – Paul Richards
   - 6.8. Waimanalo Co-op – Kehaulani Padilla
   - 6.9. Waimanalo Ahupua'a – Bernie Strand
   - 6.10. Hui Malama O Ke Kai – Elijah Isaac

Oahu's Neighborhood System – Established 1973

7. **Announcements**

8. **Adjournment**

A mailing list is maintained for interested persons and agencies to receive this Board's agenda and minutes. Additions, corrections, and deletions to the mailing list may be directed to the Neighborhood Commission Office (NCO), Honolulu Hale, 530 South King Street, Room 406, Honolulu, Hawaii 96813; Telephone (808) 768-3710 or Fax (808) 768-3711; or call Neighborhood Assistant K. Russell Ho at (808) 768-3715; or e-mail at kho4@honolulu.gov. Agendas and minutes are also available on the internet at www1.honolulu.gov/nco.

Any person wishing to attend a Neighborhood Board meeting and has questions about accommodations for a physical disability or a special physical need should call the Neighborhood Commission Office at 768-3710 between 8:00 a.m. and 4:00 p.m. at least 24 hours before the scheduled meeting.

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

01-09-14 A10:55 RCVD

January 8, 2014

The Limtiaco Consulting Group, Inc.
Attention: Claire Oshiro
1622 Kanakanui Street
Honolulu, Hawaii 96817

Dear Ms. Oshiro,

SUBJECT: Waimanalo Health Center – Expanded Care Facility Draft 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

December 2, 2013

MEMORANDUM

~~FROM:~~ ~~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

TO:

~~FROM:~~ Russell Y. Tsuji, Land Administrator
SUBJECT: Waimanalo Health Center – Expanded Care Facility Draft EA
LOCATION: Waimanalo, Oahu, Hawai`I; TMK 4-1-009: 279 and 4-1-009: 282
APPLICANT: Waimanalo Health Center by its consultant, The Limtiaco Consulting Group

Transmitted for your review and comment on the above-referenced 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 "Waimanalo Health Center – Expanded Care Facility Draft EA", then click on "Files" and "Download a copy".

We would appreciate your comments on this document. Please submit any comments by January 8, 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

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

Signed: Steve Lau
Print Name: STEVE LAU
Date: 12/27/2013

cc: Central Files

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

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

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

'13 DEC 03 PM 1:27 ENGINEERING

December 2, 2013

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: Waimanalo Health Center Expanded Care Facility Draft EA
LOCATION: Waimanalo, Oahu, Hawai`I; TMK 4-1-009: 279 and 4-1-009: 282
APPLICANT: Waimanalo Health Center by its consultant, The Limtiaco Consulting Group

RECEIVED
LAND DIVISION
2014 JAN -3 PM 3:02
DEPT. OF LAND & NATURAL RESOURCES
STATE OF HAWAII

Transmitted for your review and comment on the above-referenced 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 "Waimanalo Health Center – Expanded Care Facility Draft EA", then click on "Files" and "Download a copy".

We would appreciate your comments on this document. Please submit any comments by January 8, 2014. If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Supervising Land Agent Steve Molmen at (808) 587-0439. Thank you.

Attachments

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

Signed: [signature]
Print Name: for Carty S. Chang, Chief Engineer
Date: 1/2/14

cc: Central Files

DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION

LD/Russell Y. Tsuji
REF: DEA for Waimanalo Health Center – Expanded Care Facility
Oahu.024

COMMENTS

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

( ) Please 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 ___.

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

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

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

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

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

( ) Additional Comments: _____

( ) Other: _____

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

Signed: [signature]
for CARTY S. CHANG, CHIEF ENGINEER

Date: 1/2/14

THE LIMTIACO CONSULTING GROUP
CIVIL ENGINEERING AND ENVIRONMENTAL CONSULTANTS

January 30, 2014

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

Dear Mr. Tsuji:

Subject: Response to the Draft Environmental Assessment and Anticipated Finding of No Significant Impact for the Waimānalo Health Center - Expanded Health Care Facility Waimānalo, O'ahu, Hawai'i (Tax Map Keys 4-1-009: 279 and 282)

Thank you for your letter dated 1/08/14 (which was sent via email).

No comments were received from the Commission on Water Resource Management, Office of Conservation and Coastal Lands, and State Historic Preservation Division. The complied comments from the Land Division - Oahu District and Engineering Division are acknowledged as indicated below.

Land Division - Oahu District

We have no objections.

Engineering Division

The site is in Flood Zone X. The National Flood Insurance Program has no regulations for developments in Zone X.

The Final Environmental Assessment is anticipated to be available for public review in February 2014 and we look forward to continued participation in the environmental review process by the many Divisions of the Department of Land and Natural Resources. If you have any questions, please do not hesitate to contact me at 596-7790.

Sincerely,

Sandy Hamura
Project Manager

cc: Kathleen Kravish, CFO, Waimānalo Health Center

1622 KANAKANUI STREET • HONOLULU, HAWAII 96817
(808) 596-7790 • tlcghawaii.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

01-27-14A11:53 RCVD

TP12/13-543354R

January 22, 2014

Mr. Steve Lau, Land Agent
Department of Land and Natural Resources,
Land Division
1151 Punchbowl Street, Room 220
Honolulu, Hawaii 96813

Ms. Kathleen Kravish, CFO
Mr. Randy Gillespie, Facilities Manager
Waimanalo Heath Center
41-1347 Kalanianaole Highway
Waimanalo, Hawaii 96795

Dear Mr. Lau, Ms. Kravish, and Mr. Gillespie:

SUBJECT: Draft Environmental Assessment (DEA) and Anticipated Finding of No Significant Impact (FONSI) Waimanalo Health Center-Expanded Health Care Facility; Waimanalo, Oahu, Hawaii

In response to The Limtiaco Consulting Group letter dated December 23, 2013, we have no comments to offer at this time.

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

Very truly yours,

for Michael D. Formby
Director

cc: Ms. Sandy Hamura, Project Manager
The Limtiaco Consulting Group

THE LIMTIACO CONSULTING GROUP
CIVIL ENGINEERING AND ENVIRONMENTAL CONSULTANTS

January 30, 2014

Mr. Michael D. Formby, Director
City & County of Honolulu
Department of Transportation Services
650 South King Street, 3rd Floor
Honolulu, HI 96813

Dear Mr. Formby:

Subject: Response to the Draft Environmental Assessment and Anticipated Finding of No Significant Impact for the Waimānalo Health Center - Expanded Health Care Facility Waimānalo, O'ahu, Hawai'i (Tax Map Keys 4-1-009: 279 and 282) TP12/13-543354R

Thank you for your letter dated 1/22/14. We acknowledge that the Department of Transportation Services has no comments to offer at this time.

The Final Environmental Assessment is anticipated to be available for public review in February 2014 and we look forward to continued participation in the environmental review process by the many Divisions of the Department of Land and Natural Resources. If you have any questions, please do not hesitate to contact me at 596-7790.

Sincerely,

Sandy Hamura
Project Manager

cc: Kathleen Kravish, CFO, Waimānalo Health Center

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(808) 596-7790 • tlcghawaii.com