AUG - 8 2009

UNIVERSITY of HAWAI'I SYSTEM

Office of Capital Improvements

July 29, 2009

Ms. Katherine Puana Kealoha, Director
State of Hawai'i
Department of Health
Office of Environmental Quality Control
235 S. Beretania St., Suite 702
Honolulu, HI 96813

SUBJECT Final Environmental Assessment/Finding of No Significant Impact (FEA/FONSI)
Windward Community College
Library and Learning Resource Center
Kaneohe, Oahu, Hawaii

Dear Ms. Puana Kealoha,

The University of Hawaii, the approving agency, is submitting two (2) copies of the Final Environmental Assessment/Finding of No Significant Impact (FEA/FONSI) for the proposed Library and Learning Resource Center at Windward Community College. The FEA/FONSI was prepared in compliance with the requirements of Chapter 343, Hawaii Revised Statutes, and Hawaii Administrative Rules, Title 11, Department of Health, Chapter 200.

Attached are the publication form, project summary, two (2) copies of the FEA/FONSI, and a CD with the electronic file. Please publish the notice of availability of the FEA/FONSI in the August 8, 2009 issue of *The Environmental Notice*.

The basis for the FONSI determination is set forth in Chapter 6 of the FEA. The determination is pursuant to the significance criteria set forth in Hawaii Administrative Rules, Title 11, State of Hawaii, Department of Health, Chapter 200, Environmental Impact Statement Rules, Section 12.

1960 East West Road, Biomedical Sciences B-102
Honolulu, Hawai'i 96822
Telephone: (808) 956-7935
Fax: (808) 956-3175
An Equal Opportunity/Affirmative Action Institution

Should you have any questions or require additional information, please contact Mr. Loren Lau at (808) 956-2739.

Sincerely,

Mr. Brian Minaai
Associate Vice President
for Capital Improvements

Attachments:
(1) Draft Environmental Assessment (two copies)
(2) CD

cc: Mr. Terry McFarland, Architects Hawaii, Ltd.
Mr. Jeffrey Hunt, Windward Community College
Mr. Ronald Sato, Wilson Okamoto Corporation

Final Environmental Assessment/
Finding of No Significant Impact

WINDWARD COMMUNITY COLLEGE
LIBRARY AND LEARNING RESOURCE CENTER
Kaneohe, Oahu, Hawaii

Prepared for:
University of Hawaii
Office of Capital Improvements

Prepared by:
Wilson Okamoto Corporation

July 2009

FINAL
ENVIRONMENTAL ASSESSMENT

WINDWARD COMMUNITY COLLEGE
LIBRARY & LEARNING RESOURCE CENTER

Proposing Agency:
University of Hawaii
Office of Capital Improvements

Prepared by:
Wilson Okamoto Corporation
Engineers and Planners
1907 S. Beretania Street, Suite 400
Honolulu, Hawaii 96826

July 2009

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SUMMARY

PROPOSING AGENCY:	University of Hawaii Community Colleges Office of Capital Improvements 1960 East-West Road, Biomedical Sciences Building, B-102 Honolulu, Hawaii 96822
APPROVING AGENCY:	University of Hawaii Community Colleges Office of Capital Improvements 1960 East-West Road, Biomedical Sciences Building, B-102 Honolulu, Hawaii 96822
AUTHORIZED AGENT:	Wilson Okamoto Corporation 1907 S. Beretania Street, Suite 400 Honolulu, Hawaii 96826 Contact: Mr. Ronald Sato, AICP Phone: 808-946-2277
PROJECT LOCATION:	Kaneohe, Oahu, Hawaii
TAX MAP KEY:	(1) 4-5-23: 14
AREA:	Approximately 64 acres
EXISTING USE:	Windward Community College
STATE LAND USE DESIGNATION:	Urban District
ZONING DESIGNATION:	Agricultural, General (AG-2)
SUSTAINABLE COMMUNITIES PLAN DESIGNATION:	Public Facility (PF)
PROPOSED ACTION:	The University of Hawaii Community Colleges is proposing to construct a new Library and Learning Resources Center (LLRC) at Windward Community College. The existing Building H (Hale Manaleo) will be demolished and replaced with the new LLRC. In addition three (3) segments of Ala Koolau will be widened and two (2) new parking lots will be constructed.
IMPACTS:	No significant impacts are anticipated from the proposed project. Construction activities are anticipated to have insignificant short-term noise and air quality impacts in the surrounding area. All applicable government rules and regulations will be complied with during construction to minimize construction-related impacts.

DETERMINATION: Finding of No Significant Impact (FONSI)

PARTIES CONSULTED DURING DRAFT EA:

Federal
U.S. Army Corps of Engineers
U.S. Fish and Wildlife Service

State
Department of Accounting & General Services
Department of Education
Department of Health (DOH), OEQC
DOH, Environmental Planning Office
DOH, Environmental Management Office
Department of Land & Natural Resources (DLNR)
DLNR, Historic Preservation Division
Office of Hawaiian Affairs
Department of Transportation
Windward Comprehensive Health Center
Hawaii State Hospital
Judiciary, Kaneohe District Courthouse

City
Board of Water Supply
Department of Parks & Recreation
Department of Planning & Permitting
Department of Transportation Services
Fire Department
Police Department
Department of Facility Maintenance

Other
Kaneohe Neighborhood Board, No. 30
Representative Ken Ito
Representative Cynthia Thielen
Representative Pono Chong
Representative Jessica Wooley
Representative Chris Lee
Senator Jill Tokuda
Senator Clayton Hee
Councilmember Ikaika Anderson
Councilmember Rod Tam
Hakipuu Learning Center

PREFACE

This Final Environmental Assessment was prepared pursuant to Chapter 343, Hawaii Revised Statutes (HRS) and Title 11, Chapter 200, Department of Health Administrative Rules. The University of Hawaii is proposing to implement improvements to the Windward Community College (WCC) on the Island of Oahu. This proposed project involves the construction of a new Library and Learning Resources Center (LLRC) and parking lot on the WCC campus. If funding is available, the following additive improvements are proposed: another parking lot will be constructed and three (3) segments of Ala Koolau will be widened. This EA includes an assessment of impacts covering the entire project with the additive improvements.

An *Environmental Assessment for Windward Community College Master Plan* (October 1987) was previously prepared by the Department of Accounting and General Services. The Environmental Assessment (EA) did not include the proposed LLRC in place of Hale Manaleo. As a result, an EA is being prepared pursuant to Chapter 343, Hawaii Revised Statutes (HRS) and Title 11, Chapter 200, Hawaii Administrative Rules (HAR). In addition, the proposed project involves the use of State lands and funds.

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1.0 INTRODUCTION

1.1 BACKGROUND

Windward Community College (WCC) is one of seven public community colleges in the State of Hawaii and one of four community colleges located on Oahu. WCC is part of the University of Hawaii system. WCC provides two-year liberal arts program and an extensive non-credit employee training program. WCC also offers a variety of cultural and educational classes for the community. WCC opened in the Fall of 1972 with an enrollment of 535 students, offering a limited variety of courses in the liberal arts and more limited offerings in selected vocational fields. Over the past 36 years, WCC has expanded in enrollment and the types of classes and services provided. For Spring 2009, approximately 1,854 students are enrolled at WCC.

The parcel on which the subject property is situated is owned by the State of Hawaii and placed under the jurisdiction of the State Department of Health by Executive Orders No. 589 and 1243. Since 1970, the State Hospital site has been shared with the WCC, when eight buildings were transferred to the College.

In October 1985, the Director of Department of Health and the President of the University of Hawaii signed a Memorandum of agreement in which approximately 66 acres of land containing buildings occupied by WCC would be transferred to the College.

1.2 WINDWARD COMMUNITY COLLEGE MASTER PLAN

1.2.1 Previous Environmental Assessment

An *Environmental Assessment for Windward Community College Master Plan* was prepared in October 1987. The proposing agency was the State of Hawaii, Department of Accounting and General Services (DAGS). DAGS proposed a site and facilities development plan to accommodate the projected educational needs of WCC. Several alternatives were developed which combined the best use of existing facilities with proposed new buildings. Four new buildings were proposed: a two-story multi-purpose building (Hale Akoakoa, Campus Center), two academic instruction buildings (Hale Palanakila, Arts and Humanities and Hale Imiloa/Hale Hokulani, Science and Imaginarium), and a physical education facility on the lower end of campus. The remaining buildings would be renovated to accommodate the needs of the College.

1.2.2 Plan Review Use

The Plan Review Use (PRU) Permit for Windward Community College's Five Year Master Plan was approved on May 4, 1994 under Council Resolution No. 94-87, CD-1. As part of the PRU, nine (9) conditions were imposed, and all of the conditions have been complied with (see Section 4.2.4 for further details).

Under this Resolution, Condition No. 8 addressed a timeframe for which building permits must be obtained to implement the improvements indicated under that master plan. A request to modify this Condition to grant a time extension was approved by the City Department of Planning and Permitting (DPP) on June 16, 2000. The time requirement under the Resolution was thus amended to extend it to the "eighth anniversary" from the date of the adoption of this Resolution. Under this extension, the timeframe was extended up to the year 2002. As a result, another time extension was required to allow for the construction of the proposed LLRC and its accessory improvements.

An amendment request was prepared and submitted to the DPP for processing and action by the City Council. The amendment request to PRU Condition 8 was approved by the Zoning Committee on November 18, 2008 and the City Council on December 3, 2008.

1.3 COMPLIANCE WITH CHAPTER 343, HRS

The *Environmental Assessment for Windward Community College Master Plan* (October 1987) did not include the proposed LLRC. As a result, an environmental assessment (EA) is being prepared pursuant to Chapter 343, HRS and Title 11, Chapter 200, HAR. The proposed project involves the use of State land and State funds and, therefore, triggers the State environmental review process in accordance with Chapter 343, HRS. Because the proposed project has been initiated by the University of Hawaii, the project is considered an "Agency Action" by the University. The University of Hawaii is the "Proposing Agency" initiating this action and will serve as the "Approving Agency" for the EA. Wilson Okamoto Corporation is serving as the "Authorized Agent" on behalf of the UH in the preparation of this environmental document. A Finding of No Significant Impact (FONSI) will be issued for this project.

2.0 PROJECT DESCRIPTION

2.1 PROJECT LOCATION

Windward Community College (WCC) in Kaneohe, within the Koolaupoko District of Oahu (see Figure 2-1). WCC currently encompasses approximately 64 acres and is further identified as Tax Map Key (TMK) 4-5-23: 14 (see Figure 2-2). Situated about 200 feet above sea level, WCC is located on a gradually sloping rise immediately below the Koolau Mountains. There is a panoramic view of Kaneohe Bay and the Kaneohe Marine Corps Base. Access to WCC is from Keaahala Road, approximately one-half mile from the intersection of Likelike Highway and Kahekili Highway.

WCC was formerly a portion of the Hawaii State Hospital (HSH), administered by the State Department of Health. WCC has consolidated most of its buildings makai of the HSH, and the University of Hawaii has been using the facilities as a community college since 1972.

The proposed LLRC will replace the existing Hale Manaleo located at the north end of the campus quadrangle. Hale Laakea and Hale Manaopono are located mauka and makai of Hale Manaleo (see Figures 2-3 and 2-4). An open lawn area and Ala Koolau is located to the east. The buildings at the north end are Hale Palanakila, Hale Hokulani, Hale Imiloa, and Lanihuli Observatory. Buildings to the south are Hale Akoakoa, Hale Alakai, and Hale Kuhina. Other buildings surrounding the project site are the one story buildings Hale Noeau, and Hale Naauao.

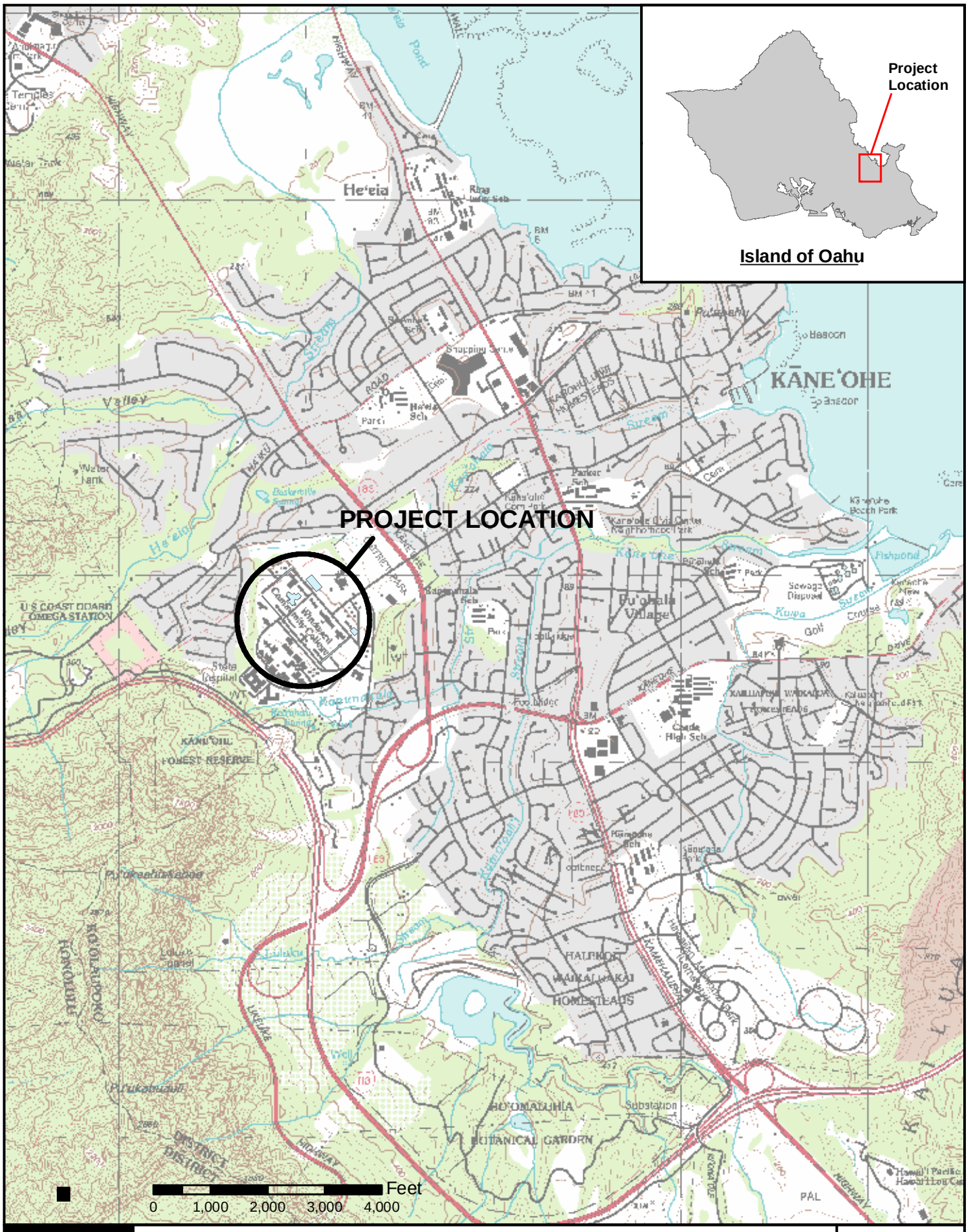
2.2 EXISTING FACILITIES

WCC occupies fourteen buildings (as shown in Figure 2-3). Since the approval of the PRU in 1994, WCC has implemented several of the improvements represented in the Five Year Master Plan based upon available funding appropriated by the Legislature (see Figure 2-5). With the exception of the newly built facilities (Building D - Hale Akoakoa, Building J - Hale Palanakila, Building K - Hale Imiloa/Hale Hokulani, and Lanihulu Observatory), the other buildings were constructed between 1929 and 1935 and reflect the early Spanish missionary style architecture. These buildings were converted from hospital wards to provide classrooms, laboratories, office, and support facilities. These buildings do not lend themselves to efficient use because of the limitations of the building design. Several of these facilities still need to be renovated to better meet the educational needs of the faculty and students. Majority of the buildings are single story except for the recently constructed buildings.

The remaining new facilities to be constructed include the proposed LLRC, a General Education Facility, and a Child Care Services Center. In addition to renovating existing buildings and the construction of new buildings, site improvements including upgrading utilities, roadways and walkways, and other infrastructure also need to be implemented.

Since the approval of the Resolution, the following buildings have been demolished, renovated, or constructed:

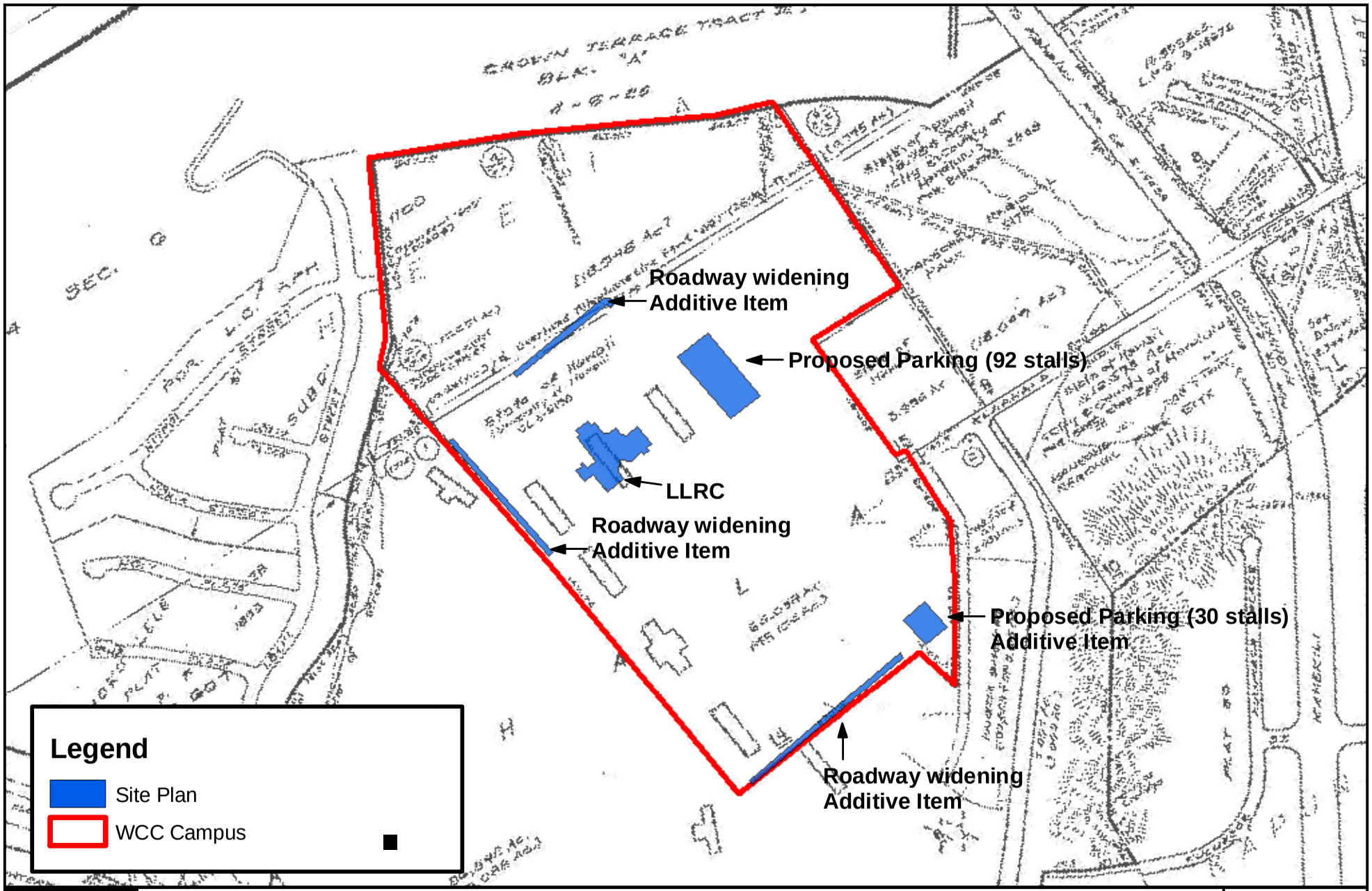
- Akahi Building: This building was demolished and replaced with a parking lot.
- Hale Palanakila: This new building along with parking relocation improvements were constructed in conformance to the Master Plan. The building includes a 300-seat performance theatre, classes for ceramics, photography, and art studies.



WCC LIBRARY & LEARNING RESOURCE CENTER

Location Map

FIGURE 2-1



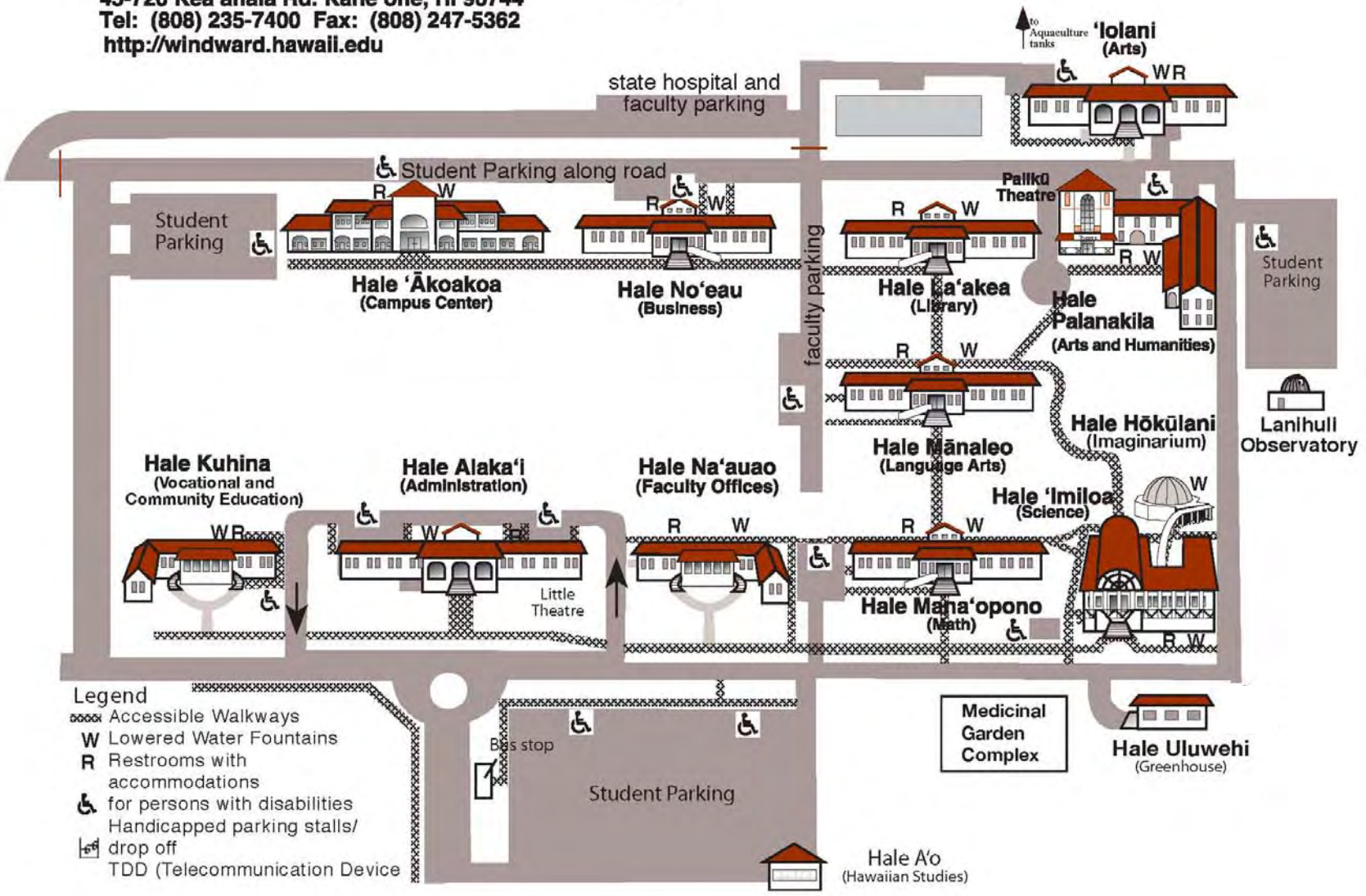
WCC LIBRARY & LEARNING RESOURCE CENTER

Tax Map Key: 4-5-023:014

FIGURE 2-2

Windward Community College

45-720 Kea'ahala Rd. Kāne'ohe, HI 96744
Tel: (808) 235-7400 Fax: (808) 247-5362
http://windward.hawaii.edu



WCC LIBRARY & LEARNING RESOURCE CENTER

WCC Campus Map

FIGURE 2-3

Ilima Way bisects the campus. Hale Manaopono on the right and Hale Manaleo in the center background.

Hale Manaleo (looking mauka) from bottom of Ilima Way.

Hale Manaleo (looking mauka) from Hale Imiloa.

Ilima Way (looking mauka), with on street parking to the left and Hale Manaleo to the right.

Hale Manaleo on the right.

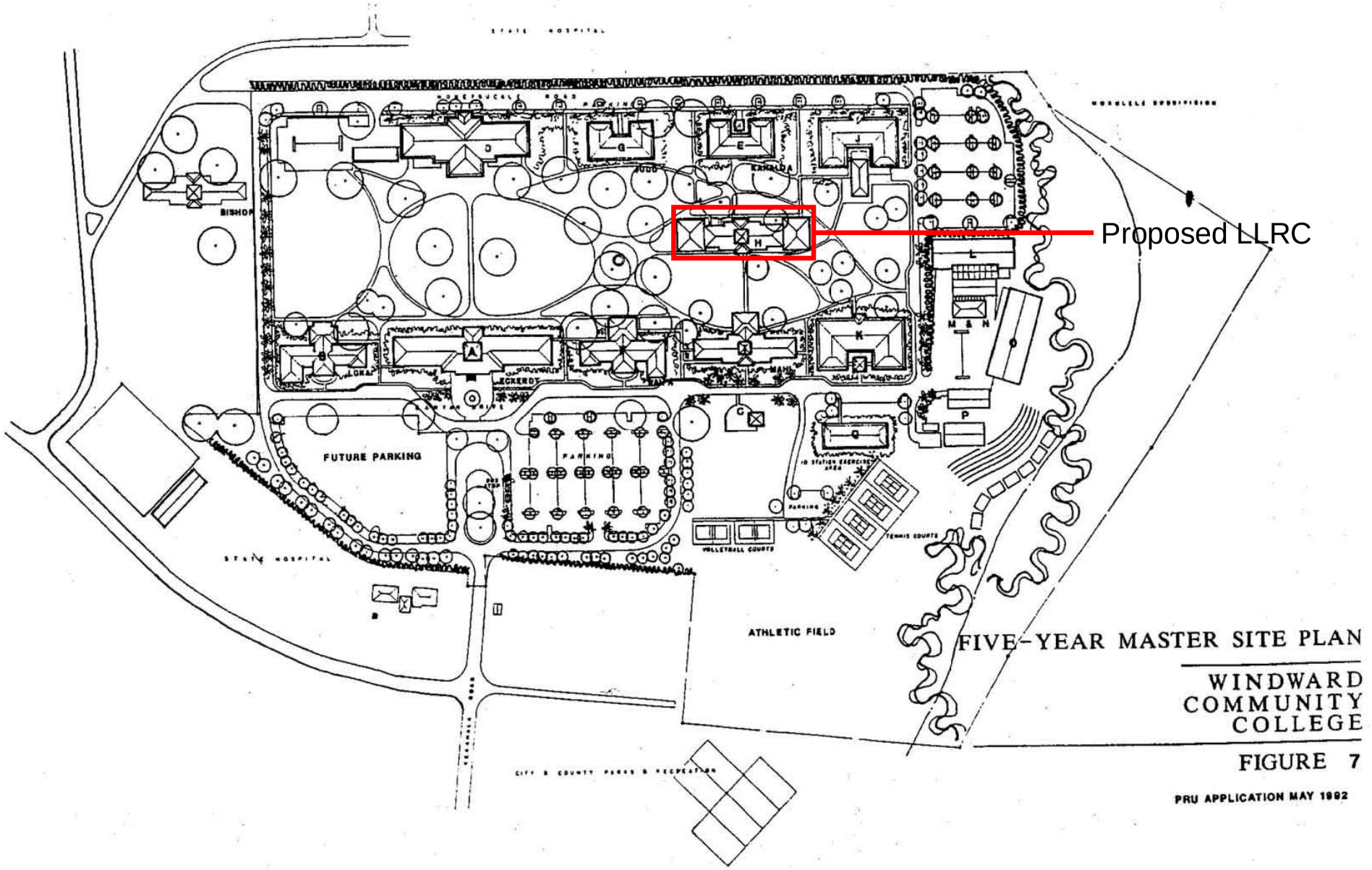
Hale Laakea, the existing Library, located mauka of Hale Manaleo.

WCC LIBRARY & LEARNING RESOURCE CENTER

Project Site Photos – Hale Manaleo

FIGURE

2-4



Source: *Plan Review Use For a Five Year Master Plan for the University of Hawaii Windward Community College,* May 1992.

	WCC LIBRARY & LEARNING RESOURCE CENTER	**FIGURE**
	WCC Five Year Master Plan Layout, 1992	**2-5**

- Central Kitchen Building: This building was demolished and replaced with the Campus Center (Hale Akoakoa).
- Lanihuli Observatory: A new 1,400 square foot observatory located at the northern end of the campus.
- Hale Imiloa and Hale Hokulani: Construction of these buildings were completed in 1997 and 2000.
- Student Parking Lot: The area for the Rehabilitation Building C has been demolished and replaced with a new student parking lot located makai of Hale Alakai (Administration Building).
- Status of Existing Buildings: The following is a summary of the existing campus buildings.

    1. Hale Noeau: This building is used for their business program. This building was recently closed for asbestos removal and will be re-opened very soon.
    2. Hale Laakea: This building serves as the college's library.
    3. Hale Manaleo: This building is used for their language arts program. WCC proposes to demolish this building and construct the new LLRC.
    4. Hale Manaopono: This building is used for the math program.
    5. Hale Naauao: This building is used as faculty offices.
    6. Hale Alakai: This building is used as the college's administration building.
    7. Hale Kuhina: This building is used for WCC's vocational and community education programs.
    8. Hale Ao is used for the Hawaiian Studies program and is located near the student parking lot at the main entrance of WCC.
    9. Hale Awa: This building has been leased to the Law Library Microfilm Consortium (LLMC) until 2027. LLMC is a non-profit consortium of libraries devoted to providing economical access to a wide range of legal land law-related materials.

Hale Laakea is a one-story, 6,155 square foot building that houses WCC Library. Hale Manaleo is also a one-story, 6,155 square foot building that accommodates Language Arts. As mentioned above, these buildings were once hospital wards and do not lend themselves to efficient use because of the limitations of the building design. As a result, WCC proposes to demolish Hale Manaleo and replace it with the proposed LLRC. Library services at Hale Laakea will move into the LLRC and the existing building will eventually be renovated and used for another purpose. The classrooms and services at Hale Manaleo will move elsewhere throughout the campus.

The vehicular entrance to the campus is on Keaahala Road. Ala Koolau intersects Keaahala Road and continues around the major open space and campus buildings to define the perimeter of the campus. Ala Koolau (formerly Ilima Way) bisects the quadrangle and is located immediately southeast of Hale Manaleo.

Parking for the campus is located in three primary areas and are accessed off of Ala Koolau: 1) to the right of the WCC entrance along Keaahala Road, 2) across from Hale Palanakila, and 3) to the southeast of Hale Akoakoa. There is also parking along Ala Koolau and around Hale Alakai, Hale Kuhina, and the automotive area.

2.3 SURROUNDING USES

The Hawaii State Hospital (HSH) encompasses 102 acres of land mauka of the WCC. The HSH is the State's major psychiatric facility and is licensed for approximately 180 beds. While the HSH adjoins the site on the south and southwest, the general character of the neighborhood is residential.

To the northeast are Kaneohe District Park, State of Hawaii Department of Health's Windward Comprehensive Health Center, and the Hawaii State Judiciary's Kaneohe District Courthouse (see Figure 2-6). Kaneohe District Park is maintained by the City and County of Honolulu and consists of a gymnasium, pool, two baseball fields and tennis courts.

Residential developments are located to the west of WCC and northeast across Kahekili Highway. Keaahala Stream starts one-fourth of a mile to the north of WCC campus, meanders through northern portion of Kaneohe Town, and enters Kaneohe Bay at Makani Kai Marina.

2.4 PROJECT NEED AND OBJECTIVES

The development of WCC has progressed in accordance with the development plans represented in the Five Year Master Plan. Unfortunately, the timeframes for implementing improvements have been subject to funding availability and have unfortunately been delayed. The University of Hawaii has finally received funding and is now moving forward to design and construct a new LLRC at the WCC campus.

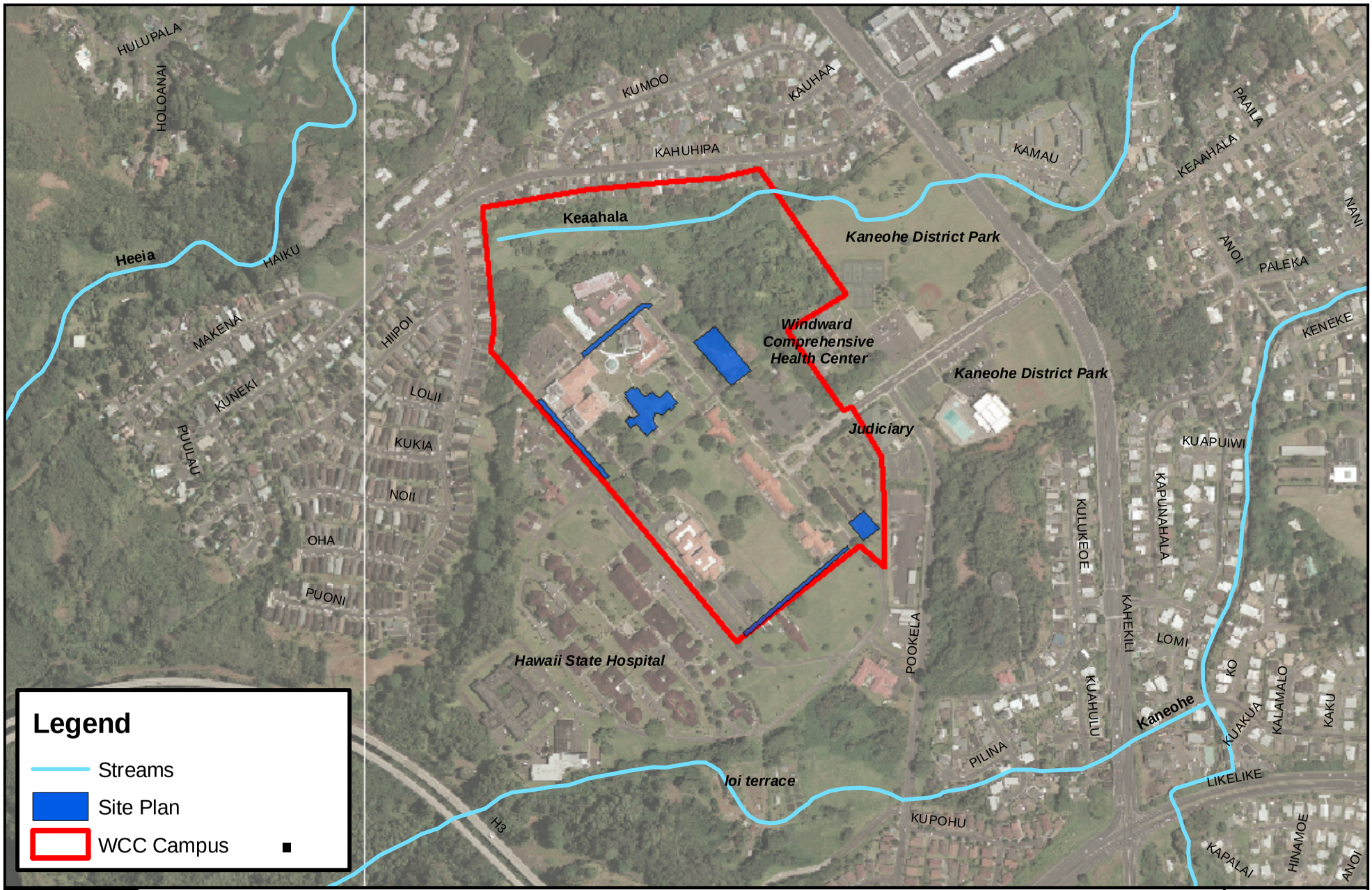
The purpose of this project is to provide a state of the art facility that is capable of accommodating WCC's present and anticipated future enrollment. Majority of the existing buildings were constructed between 1929 and 1935 and were converted from hospital wards to provide classrooms, laboratories, office, and support facilities. These buildings do not lend themselves to efficient use because of the limitations of the building design. The existing Library (Hale Laakea) is approximately 6,155 square feet and is at full capacity. As a result, the existing library is not equipped with modern electrical, mechanical, and other telecommunications infrastructure to effectively accommodate the current level of computers and other technology related equipment used by the College for their programs and functions. This project will satisfy needed functional space requirements and facilities to correct current inadequacies in the existing Library's capacity to serve the students and faculty.

The project also includes widening and realignment of campus roads and construction of additional parking stalls to fulfill campus master plan initiatives. The construction of the new LLRC will require additional parking to accommodate for the increase in floor space. Two new parking lots are proposed. The additional parking will also be in compliance with WCC's *Parking Implementation Plan*. The *Parking Implementation Pl*an report prepared by Okita Kunimitsu & Associates, Inc. in October 1995 was approved by the City on December 14, 1995, as part of the PRU permit. The *Parking Implementation Plan* (PIP) establishes the number of required parking stalls and a phasing program to ensure the provision of adequate parking with the projected growth and development of the campus. The necessary number of parking and loading spaces provided would also be in accordance with the City & County of Honolulu's Land Use Ordinance. If funding is available, a second parking lot will be constructed

2.5 PROJECT DESCRIPTION

2.5.1 General

The University of Hawaii proposes to demolish Hale Manaleo to construct a new LLRC on the WCC campus (see Figure 2-7). The new LLRC will provide a state of the art facility that is capable of accommodating WCC's present and anticipated future enrollment. The new LLRC will incorporate several separate functions which are currently spread out in other buildings on the WCC campus. Included is 1) the Library; 2) the Testing and Tutoring Center; 3) Instructional and Media Services; 4) Computing Services and Computer Laboratory; and 5) LLRC Administration.



WCC LIBRARY & LEARNING RESOURCE CENTER

Surrounding Uses

FIGURE 2-6

The proposed project site is a highly used central location at the north end of the quadrangle. This site optimally places the new LLRC at a convenient crossroads and hub for campus pedestrian traffic moving between the buildings at the south end of campus and the buildings at the north end of campus (see Figure 2-7). Included among these are the Student Center, the Humanities Building, the Science Complex, classroom buildings and parking.

The project also includes widening of campus roads and construction of additional parking stalls to fulfill campus master plan initiatives, as shown in Figure 2-7.

2.5.2 Library and Learning Resources Center

The proposed LLRC is a three story, 62,000 square foot facility that will replace the existing one story Hale Manaleo, which will be demolished. The proposed modern facility will house the library, learning skills center, computer labs, and media center. The library and related services will be located on the first floor, with study areas, conference rooms, offices, and other library related services on the second and basement levels. The proposed facility will be less than 50 feet in height (Figures 2-8 and 2-9).

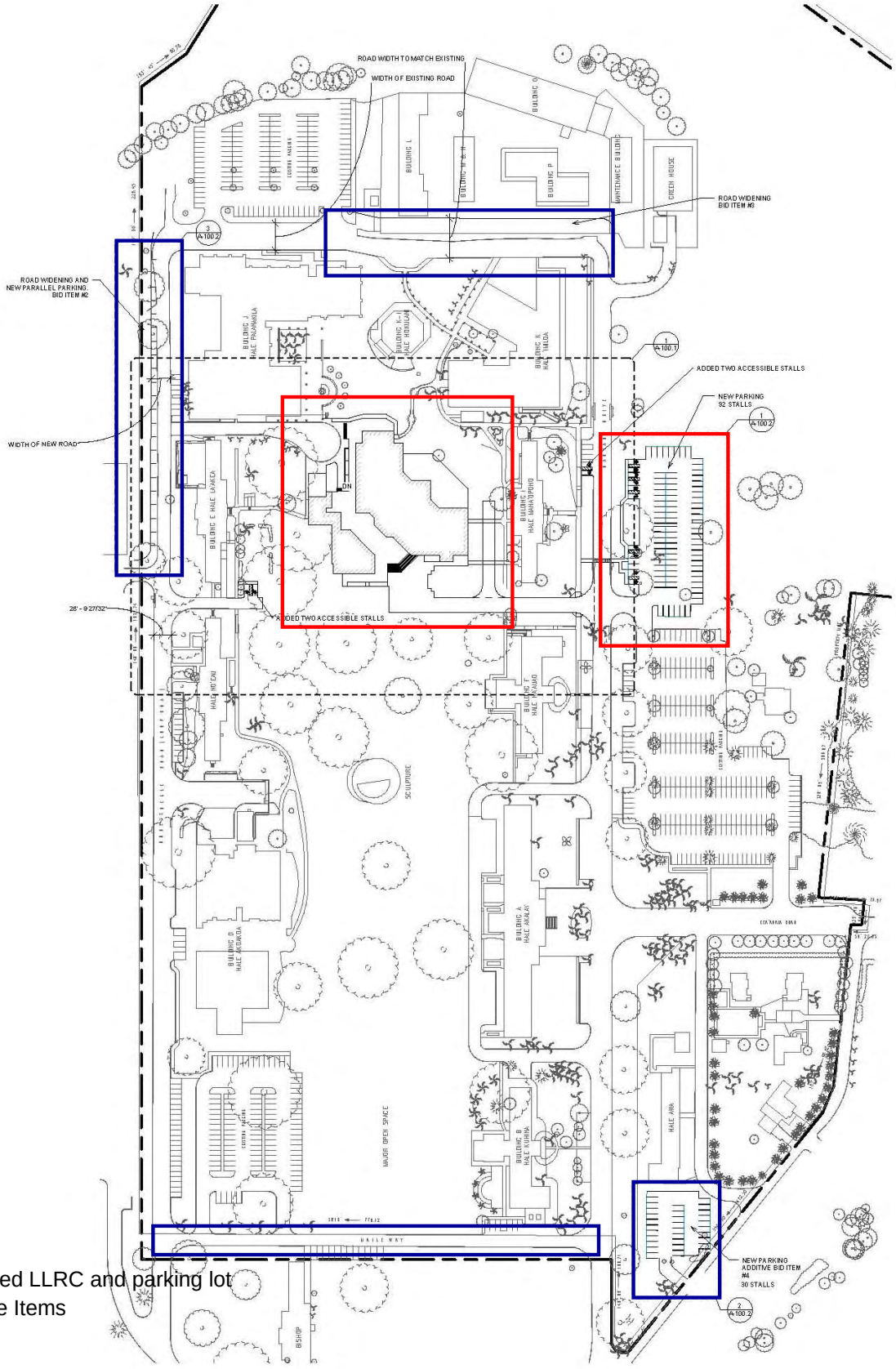
The LLRC will be designed not to significantly impact the expansive green open space of the quadrangle, dramatic views of the Ko'olau mountain range, prominent banyan trees and distant views of the ocean at Kaneohe Bay. There banyan trees located around Hale Manaleo which will be protected during the construction of the new facility.

In February 2008, the State Historic Preservation Division (SHPD) was consulted to obtain approval to demolish the existing Hale Manaleo in order to construct a new LLRC that is more efficient in space and accommodate the needs and requirements of staff, faculty, students and the public. The proposed design was approved by SHPD, with the provisions that the defining characteristics of the historic area be respected and maintained.

The exterior design of the proposed facility will be consistent with the Spanish Mission Revival architectural style already established throughout the campus. The design will encourage the use of natural daylight and allow for views of the Koolau mountains to the west and distant ocean views to the north and east. To promote environmental sustainability, the project goal is to achieve a Leadership in Energy and Environmental Design (LEED) Silver or better certification, based on the U.S. Green Building Council criteria.

Currently the view from the LLRC is impaired by the overhead power lines and poles that run directly in front of the building and campus quadrangle. The overhead power lines and poles will be removed.

The portion of Ala Koolau that bisects the campus will be closed and the existing accessible parking stalls relocated (see Figures 2-4 and 2-7). The results will extend the campus quadrangle and create a contiguous, green, open space, thus maintaining and enhancing the existing view corridors. A fire lane will be located immediately makai of the proposed LLRC. The closure of this portion of Ala Koolau and the fire lane will also function as a plaza for pedestrian circulation and gathering space.



Proposed LLRC and parking lot
Additive Items

Not to scale.

Source: Architects Hawaii, Ltd.

WCC LIBRARY & LEARNING RESOURCE CENTER

Overall Site Plan

FIGURE 2-7

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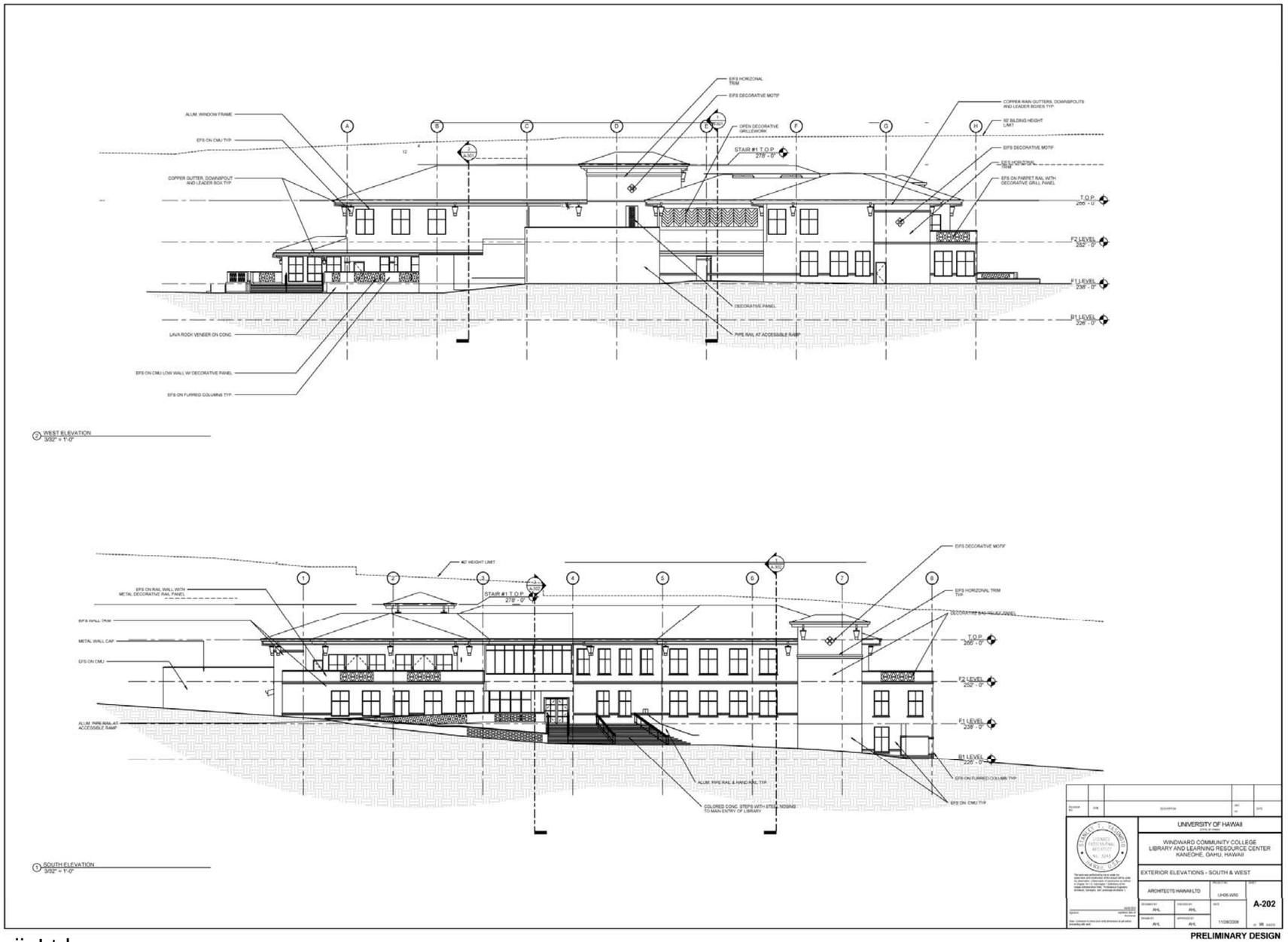

Not to scale.

Source: Architects Hawaii, Ltd.

WCC LIBRARY & LEARNING RESOURCE CENTER

West and South Elevation Plans

FIGURE 2-8

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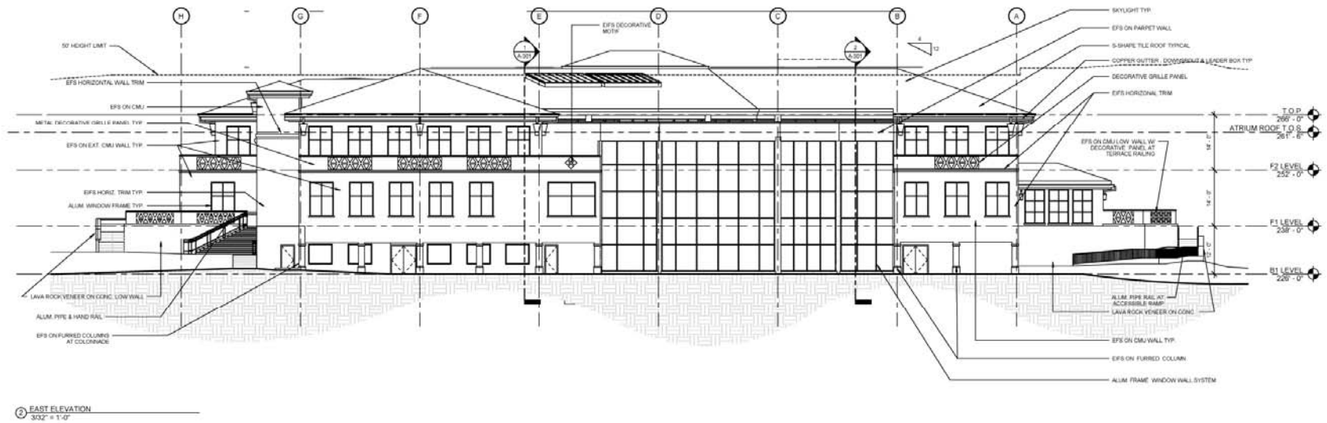
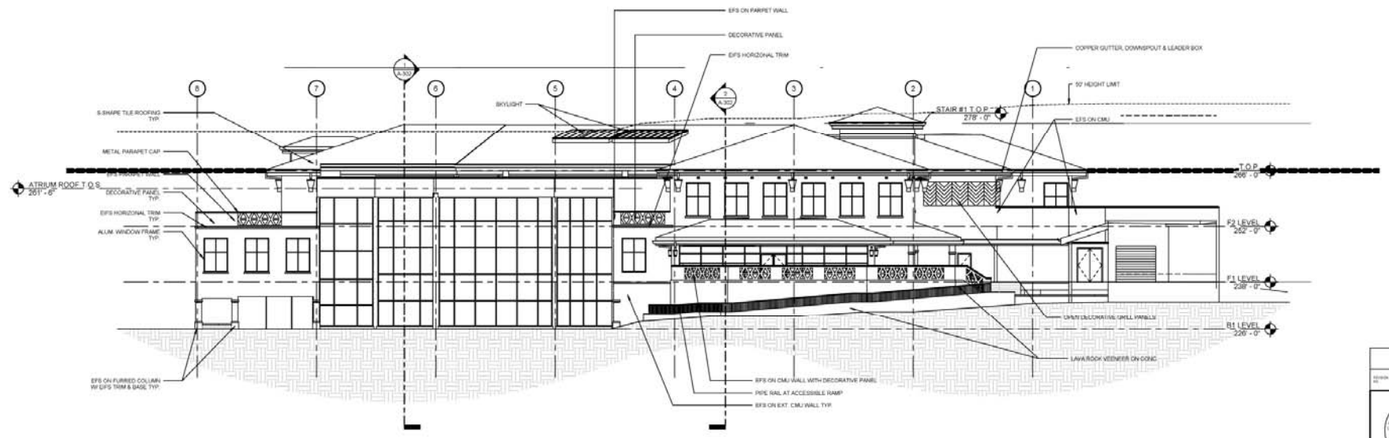


2 EAST ELEVATION
3/32" = 1'-0"



1 NORTH ELEVATION
3/32" = 1'-0"

UNIVERSITY OF HAWAII
WINDWARD COMMUNITY COLLEGE
LIBRARY AND LEARNING RESOURCE CENTER
KANEOHE, OAHU, HAWAII
EXTERIOR ELEVATIONS - NORTH & EAST
ARCHITECTS HAWAII LTD
UH05-W50
A-201
11/28/2008
PRELIMINARY DESIGN

Not to scale.

Source: Architects Hawaii, Ltd.

WCC LIBRARY & LEARNING RESOURCE CENTER

East and North Elevation Plans

FIGURE 2-9

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2.5.3 Parking and Roadway Improvements

The proposed project also includes widening of campus roads and construction of additional parking stalls to fulfill campus master plan initiatives (see Figures 2-7, 2-10, and 2-11). Two parking lots are proposed as part of the proposed project. A new parking lot (hereinafter referred to as parking lot #1) is proposed in an undeveloped area northwest of the existing parking lot at the WCC entrance. Parking lot #1 will be approximately 27,583 square feet and consist of 92 parking spaces (including 10 ADA stalls). In addition, 4 ADA stalls will be provided near Hale Manaopono and Hale Laakea (2 parking stalls near each building). While a total of 96 stalls will be added to this area, 10 parking stalls along Ala Koolau will be removed, resulting in a net addition of 86 parking stalls. The parking lot will essentially be an expansion of the existing parking lot near Hale Ao (Hawaiian Studies Building).

If funds are still available, a second parking lot (hereinafter referred to as parking lot #2) is proposed near Hale Awa (see Figures 2-5 and 2-7). Parking lot #2 will be approximately 11,116 square feet and consist of 30 parking stalls. This area is already paved and was previously used as a tennis court. If this parking lot is constructed, a total of 126 stalls could be provided under the LLRC project.

Also proposed is the road widening of three (3) segments of Ala Koolau. Approximately 420 feet of Ala Koolau between Hale Imiloa and the maintenance yard will be widened from to 20 feet to 53 feet to realign with the portion of Ala Koolau fronting Hale Palanakila (see Figures 2-5 and 2-7).

Approximately 533 feet of Ala Koolau behind Hale Palanakila will be widened from 23 feet to 31 feet to match the width of the adjacent segment of roadway. Improvements will also include approximately 21 parallel parking stalls along Ala Koolau. If all proposed improvements are constructed a total of 137 parking stall will be provided under the LLRC project.

The third segment of Ala Koolau to be widened is along the southern boundary of WCC, between Hale Kuhina and the student parking lot. Approximately 700 feet of Ala Koolau will be widened from 15 feet to 25 feet.

2.6 PROJECT SCHEDULE AND COST

Design of this project is occurring during the EA process. Construction of this project will occur after completion of the project's design. The initial phase will consist of the construction of the new LLRC and parking lot #1 near entrance parking lot. Depending upon funding, later phases would include the additional parking lot #2 adjacent to Hale Awa and the roadway widening of three (3) segments of Ala Koolau. The current schedule is for construction to begin in early 2010 and be completed in the year 2011.

In Fall 2007, WCC with the help of the community and key legislators appropriated $41.6 million for its construction.

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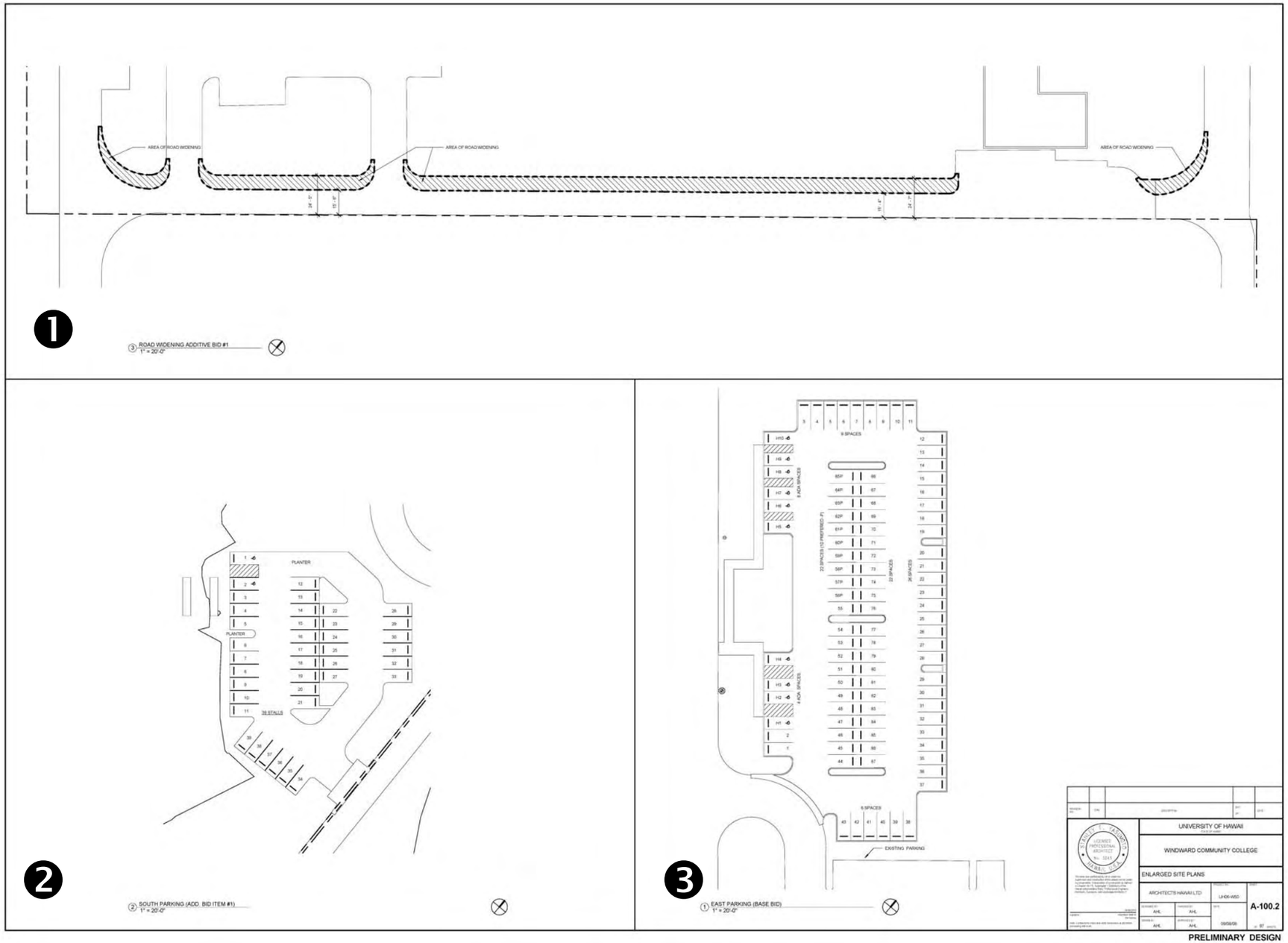

❶ Ala Koolau Road Widening between student parking lot and Hale Kuhina (Additive item)

❷ Parking lot #2 at Hale Awa (Additive Item)

❸ Parking lot #1 near existing entrance parking lot and Hale Ao

Not to scale.
Source: Architects Hawaii, Ltd.

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Site Plan for Other Proposed Improvements

FIGURE 2-10a

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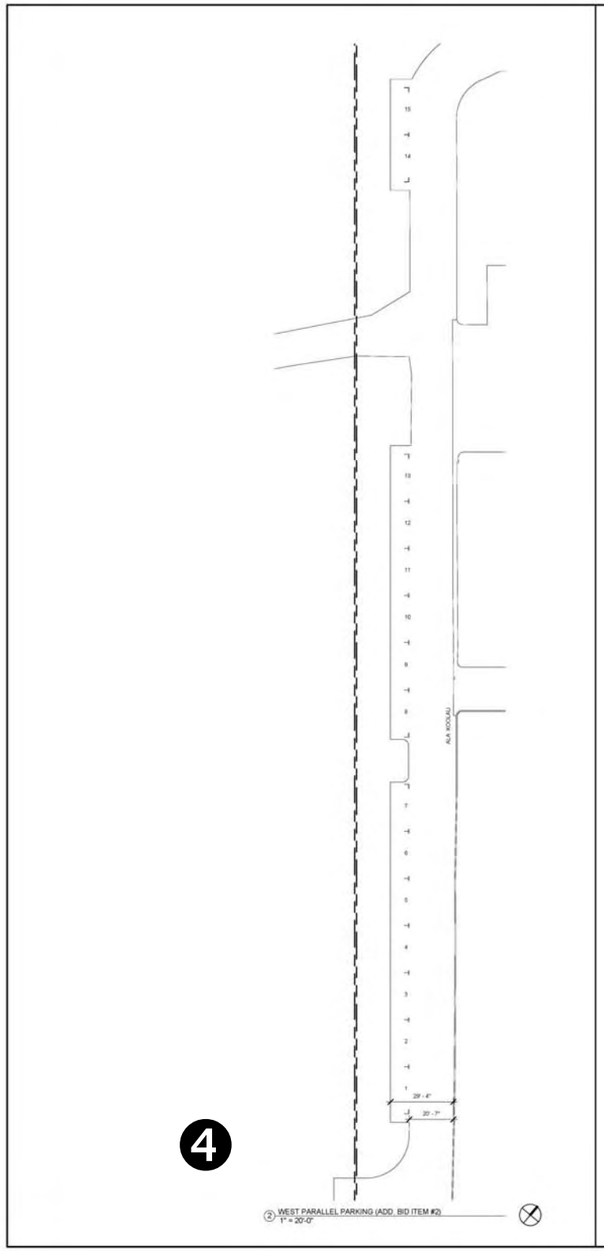
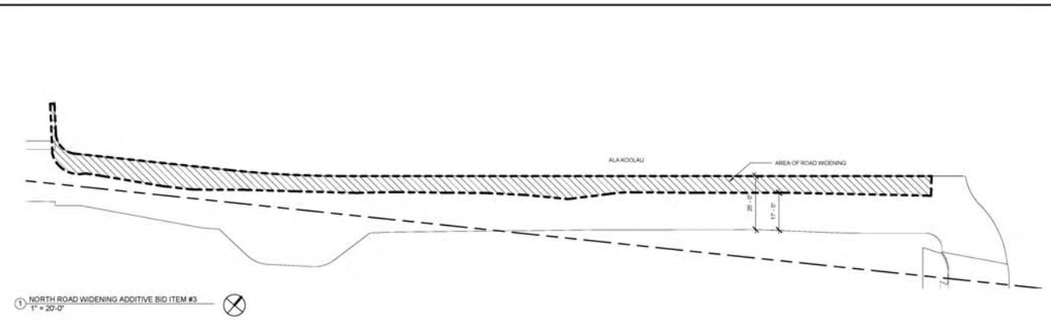


❹



❺

❹ Ala Koolau Road Widening mauka of Hale Palanakila (Additive item)

❺ Ala Koolau Road widening in front of Imiloa and maintenance yard (Additive item)

Not to scale.
Source: Architects Hawaii, Ltd.

UNIVERSITY OF HAWAII
WINDWARD COMMUNITY COLLEGE
ENLARGED SITE PLAN
ARCHITECTS HAWAII LTD.
A-100.3

PRELIMINARY DESIGN

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Site Plan for Other Proposed Improvements

FIGURE 2-10b

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Site for proposed parking lot #1.

Site for proposed parking lot #1.

Site for proposed parking lot #2.

Ala Koolau fronting Hale Palanakila, looking makai. Proposed realignment of Ala Koolau.

Ala Koolau behind Hale Laakea and Hale Palanakila. Proposed realignement of Ala Kooau.

Ala Koolau between Hale Kuhina and student parking lot.

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Project Site Photos – Parking Areas and Roadway Widening

FIGURE

2-11

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3.0 DESCRIPTION OF THE EXISTING ENVIRONMENT, PROJECT IMPACTS AND MITIGATION MEASURES

The following is a description of the existing environment, assessment of potential impacts and proposed measures to mitigate potential adverse impacts resulting from the proposed project.

3.1 CLIMATE

The climate of the coastal and central lowlands of Kaneohe is characterized by frequent tradewind showers and moderate rainfall. WCC is situated near the slopes of the Koolau Range where rainfall is high and cloudiness is common. According to the *Hawaii Rainfall Atlas*, the median annual rainfall in the vicinity of WCC is about 75 inches.

The average monthly temperature ranges from 69˚ to 79˚ F. The highest temperature occurs in August or September and the lowest in January or February.

Tradewinds are predominant during the summer months, blowing from the north-northeast 90 percent of the time. During the winter months, they prevail less than 50 percent of the time. The mean wind velocity throughout the year is approximately 11 knots.

3.2 GEOLOGY, TOPOGRAPHY, AND SOILS

The physiography of Windward Oahu is dominated by the Koolau Range, the eroded remnants of a volcanic dome. Land in Haiku Valley is overlain by materials deposited during the subsequent Honolulu volcanic series. Precipitous fluted cliffs extend for 20 miles on the Windward side of the Koolau Range.

The Kaneohe area is characterized by deep amphitheatre valleys, separated by steep-sided basaltic ridges that project seaward from the Koolau Range. Collovium deposited at the base of the cliffs by erosion, smooth the transition to stream deposited alluvium on the coastal plains. While much of the coastal plain in the Windward area is underlined by calcareous sedimentary materials, they are sparse in Kaneohe.

WCC is located on land characterized by older and younger alluvium. The older alluvium forms an apron at the base of projecting Koolau basaltic ridges and spurs. Its composition is predominantly silt and clay with lesser amounts of sand and gravel, and a few beds of poorly sorted gravel and cobbles. The younger alluvium, which extends up stream valleys, consists chiefly of reworked older alluvium and is composed of gravel, sand and silt.

WCC's campus site generally slopes downward from south-southeast at 260 feet to the north at 200 feet. The proposed project site (Hale Manaleo) slopes from an approximate elevation of 240 feet on the southwest corner to an approximate location of 225 feet to the northeast (mauka side of Hale Manaopono).

According to the U.S. Natural Resources Conservation Service (1972), the soils in the project site belong to the Lolekaa-Waikane Association, "*Deep, nearly level to very steep, well-drained soils that have a dominantly fine-textured subsoil; on fans, terraces and uplands. "*

The following soil types are found in the project area (see Figure 3-1):

- Alaeloa silty clay, 15 to 35 percent slopes (AeE) – This soil occurs on smooth side slopes and toe slopes in the uplands. In a representative profile the surface layer is dark reddish-brown silty clay about 10 inches thick. The subsoil, about 48 inches thick, is dark-red and red silty clay that subangular blocky structure. The substratum is soft, weathered basic igneous rock. The soil is medium acid in the surface layer and strongly acid in the subsoil. Permeability is moderately rapid. Runoff is medium, and the erosion hazard is moderate. This soil is used for pineapple, pasture, truck crops, orchards, wildlife habitat, and homesites.

- Hanalei silty clay, 2 to 6 percent slopes (HnB) – On this soil, runoff is slow and the erosion hazard is slight. This soils is used for sugarcane, taro and pasture.

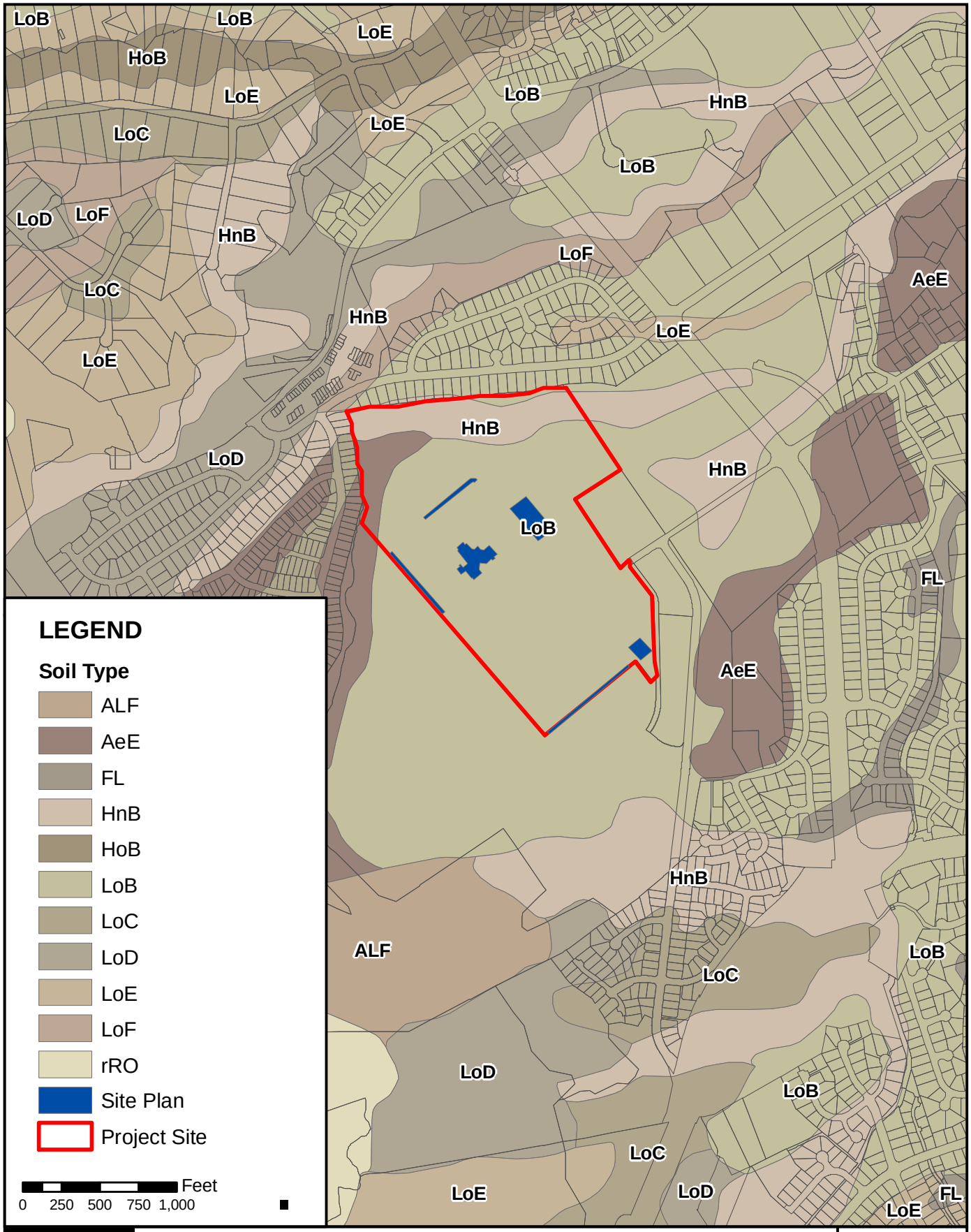
- Lolekaa silty clay, 3 to 8 percent slopes (LoB) – This soil is on terraces and fans. In a representative profile the surface layer is dark brown silty clay about 10 inches thick. The subsoil is 46 to more than 70 inches thick. The upper part is dark brown silty clay that has subangular blocky structure, and the lower par is dark yellowish-brown loam that has subangular blocky structure. The substratum us strongly weathered gravel. The soil is strongly acid in the surface layer and strongly acid to extremely acid in the subsoil. Permeability is moderately rapid. Runoff is slow, and the erosion hazard is slight. The available water capacity is about 1.3 inches per foot of soil. Soft, weathered gravel is common in the subsoil but does not affect use and management of the soil for farming. The soil is used for pasture, homesites, truck crops, bananas, and papaya.

Impacts and Mitigation Measures

No significant impact on the geology, overall topography, or soils of the project site is anticipated during the construction of the proposed facilities. Construction of the proposed facilities will require grading activities and excavation for building foundations, utilities, and roadbeds. Graded and excavated areas will be built over, paved over, or backfilled and landscaped. To achieve required elevations for proper drainage, grading within the project site may slightly alter the existing topography.

The proposed LLRC, parking lot #2 and the roadway widening will occur on lands which have been previously disturbed. Cut and fill will be no more than a two to one ratio. The proposed parking lot #1 will be placed adjacent to the existing parking lot, which is currently undeveloped and covered with overgrown vegetation. The elevation of parking lot #1 is likely to generally match existing grade and site grading for parking lot should generally be limited to shallow cuts and fill. Parking lot #2 will be placed adjacent to Hale Awa, an area already paved and previously used as tennis courts. Excavation and grading activities associated with construction will be regulated by the City and County of Honolulu grading ordinance. Graded and excavated areas will be built over, paved over, or backfilled and landscaped.

A National Pollutant Discharge Elimination System (NPDES) Individual Permit for Storm Water Associated with Construction will be required for construction of the proposed project area as the area of soil disturbance from activities such as clearing and grubbing, grading and stockpiling will be in excess of one acre. The permit requires compliance with a Best Management Practices (BMP) Plan which, in turn requires compliance with City ordinances pertaining to grading, grubbing, stockpiling, soil erosion and sedimentation. Site specific erosion and sediment control measures of the BMP plan may include construction of berms to detain run-off and installation of silt fences to filter silt from run-off.



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Soils Map

FIGURE 3-1

To minimize potential short-term erosion impacts during construction activities, various erosion control measures are available for implementation. Erosion control measures considered to minimize effects during construction may include: use of temporary sprinklers in non-active construction areas; stationing water trucks on the site during construction to provide immediate sprinkling in active construction areas; use of temporary silt fencing, sand bags, or screens; thorough watering of graded areas after construction activity has ceased for the day; or sodding or planting of affected areas immediately after site work has been completed.

No significant long term impacts on soils are anticipated as a result of the proposed project and its accessory improvements. Areas disturbed during construction will be built over, paved, or landscaped to minimize erosion and sedimentation.

Other Construction Related Disturbances

Dust, noise, odor, and traffic disturbances associated with construction activities are not expected to significantly impact the surrounding environment. Fugitive dust is expected to be minimal because construction would involve relatively minimal grading and excavation activities. Dust control measures could be considered to minimize soil loss from fugitive dust emissions such as implementation of a watering program. Other measures include practices of good construction management at the job site, and the paving or planting of bare areas when practicable.

Construction access from Keaahala Road and an access road would be built off of Ala Koolau between Hale Naauao and Hale Manaopono. Construction-related noise may have an impact upon students and faculty at WCC since construction activities may occur during the school year and during regular school hours. However, this would be a temporary impact, as construction will only last until completion of the project. If required, a noise variance for construction activities from the State Department of Health would be obtained by the contractor, and the requirements under the permit complied with. Further measures to mitigate noise disruption to WCC would include erecting temporary plywood noise barriers. These noise barriers would be placed between construction areas and campus buildings and construction in accordance with University and DOH specifications.

Odor, if any, would be a negligible disturbance to those near the project site. Finally, traffic impacts by construction vehicles on surrounding roadways should be minimal since construction of the proposed LLRC will occur at WCC campus which is located away from the main highway and roadways used by the general public. The only additional traffic generated on surrounding roadways would be that associated with construction workers traveling to and from the site. This additional traffic would only be temporary associated with the duration of construction activities.

An on-site staging area for construction vehicles and equipment will be located on campus. The contractor will work with WCC administration to determine the area to be used for staging. The contractor will implement necessary measures such as temporary chainlink fences to protect materials and construction-related equipment areas would be clearly marked and temporary fences used to keep unauthorized persons out.

Necessary measures and best management practices would be developed throughout the project's design and coordinated with appropriate agencies for review. Required ministerial permits from the City will be obtained after pertinent review and approval of the construction plans. Construction activities would need to comply with pertinent Hawaii Administrative Rules (HAR) of the State Department of Health as Title 11,

Chapter 46 (Community Noise Control), Chapter 54 (Water Quality Standards), Chapter 55 Z(Water Pollution Control), Chapter 60.1 (Air Pollution Control).

3.3 HYDROLOGY

3.3.1 Ground Water

High-level ground water, isolated from seawater by dikes or other material of low permeability formed during the basaltic lava flows of the Koolau Volcanic Series, maintains the base flow of streams, man-made water-development tunnels, and the draft of pumped wells. The direction of groundwater movement is predominantly southeastward from the mountains toward the valleys and ocean.

WCC is situated on alluvium underlain by a dike complex. The permeability of near-surface older alluvium is low. Older alluvium and a weathered zone of lava flows can form a nearly impermeable cap confining water in underlying unweathered lava. Windward Oahu wells located in alluvium generally have a low yield.

The site is underlain by the Koolaupoko aquifer system, which is part of the Windward Aquifer Sector. This system is identified as an unconfined, high-level dike aquifer. The total sustainable yield of the Koolaupoko aquifer is 43 million gallon per day (mgd).

According to the State Commission on Water Resource Management, there is a potable water well (# 2449-01) within a half mile northeast of the WCC campus that is owned by the City and County of Honolulu Board of Water Supply (BWS). A potable water well (#2449-02) also exists approximately 0.15 miles west of the WCC campus that is owned by the Department of Land and Natural Resources (DNLR), however, it is not currently in use. An irrigation well (# 2448-01) producing good quality water is located 0.1 miles south of the WCC campus and is owned by the State Department of Health (DOH). A private well (#2448-02) is located 0.17 miles south of the campus, which is no longer in use and has been sealed.

Impacts and Mitigation Measures

No significant impacts to groundwater underlying the project site are anticipated during construction of the proposed facilities. Construction activities are not likely to introduce to, nor release from, the soil any materials which could adversely affect groundwater, including groundwater sources for domestic use.

Construction of the new LLRC,parking lots, and accessory improvements are expected to have minimal impacts on the surrounding groundwater system. The small increase in developed impervious surface from this project would inevitably decrease the amount of localized groundwater recharge occurring at the project site. However, this decrease is expected to be negligible and ultimately inconsequential to the overall function of the area's natural hydrologic system.

Storm runoff from the project site during site preparation will be controlled in compliance with the City and County of Honolulu, *Rules Relating to Storm Drainage Standards.* Typical mitigation measures include: appropriately stockpiling materials on-site to prevent runoff; building over, or establishing landscaping as early as possible on disturbed soils to minimize length of exposure.

To minimize potential short-term erosion impacts during construction activities, various erosion control measures are available for implementation. Erosion control measures considered to minimize effects during construction may include: use of temporary sprinklers in non-active construction areas; stationing

water trucks on the site during construction to provide immediate sprinkling in active construction areas; use of temporary silt fencing, sand bags, or screens; thorough watering of graded areas after construction activity has ceased for the day; or sodding or planting of affected areas immediately after site work has been completed.

Construction material wastes will be appropriately disposed of and prevented from leaching into receiving bodies of water. Dewatering is not anticipated for this project.

The proposed project would not cause any increases in College personnel, since the facility is intended to service existing staff and students. Adding the proposed LLRC would not change the existing or future enrollment for WCC. As a result, the operation of the proposed LLRC should not result in substantial increases for potable water demand at the College that may significantly impact ground water resources.

3.3.2 Surface Water

Many streams, all short and some intermittent, flow generally northeastward from the crest of the Koolau Range. The upper reaches of streams in amphitheater headed valleys are fed by numerous little tributaries draining the steep pali. The streams flow in narrow valleys through hilly terrain. As they approach the shoreline, the valleys join, becoming broad and flat-bottomed.

Streams near WCC include Kaneohe-Kamooalii, Keaahala, Kapunahala, and Heeia (see Figure 2-6). The total length of the Kaneohe-Kamooalii stream channel is approximately 17.3 miles long, the segment of Kaneohe Stream below Kamooalii and Kapunahala Streams is approximately 1.2 miles. Both Kamooalii and Kaneohe Streams are perrennial, with Kamooalii Stream being a tributary of Kaneohe Stream. The *1990 Hawaii Stream Assessment* rated Kaneohe Stream as having "substantial" riparian and recreational resource values.

Kapunahala Stream, a tributary of Kaneohe Stream, flows 0.18 miles (972 feet) south of WCC. Kapunahala Stream is a relatively short stream, running approximately 1.6 miles in length. The stream drains a small subwatershed on the north flank of Puu Keahiakahoe, fed by Keaahala Spring. The lower reach of Kapunahala Stream has a concrete lined channel with a confluence at Keneke Street, from there the stream continues on and joins with Kamooali Stream.

Keaahala Stream flows along the northern portion of WCC property. Keaahala Stream is a perennial stream that runs for approximately 1.9 miles. The lower 90 percent of the stream is channelized as it runs through the urbanized landscape of Kaneohe while the upper 10 percent of the stream channel is natural as it flows through forested, conservation land. The ability of the stream to support aquatic life is listed as 100% unsupported; this includes fish, shellfish, and wildlife protection and propagation. In addition, the water quality of the stream is impaired by nutrients, other habitat alterations and exotic species. Keaahala Stream is listed as having moderate aquatic resources, substantial riparian resources and moderate recreational resources.

Heeia Stream is located approximately 0.15 miles (820 feet) north, northeast of WCC and is a perennial stream running approximately 2.1 miles long. Two tributaries feed Heeia Stream – Iolekaa and Haiku Streams. Heeia Stream supports some of the largest federally designated wetlands in the state as well as Heeia Fishpond. The *1990 Hawaii Stream Assessment* rates Heeia Stream as having an "outstanding" riparian resource value and "substantial" recreational value. It is the only stream in the Kaneohe-Kahaluu

area with an outstanding stream rating. To the southeast of the WCC campus, adjacent to Hawaii State Hospital is located a traditional Hawaiian agricultural terraces or loi. The source of water for the loi and gardens is an adjacent natural stream, Kapunahala Stream and Keaahala Spring. This loi area is also a protected wetland.

Impacts and Mitigation Measures

No significant impacts to surface waters located near in the vicinity of the project site are anticipated as a result of the proposed project. Storm runoff from the project site during site preparation will be controlled in compliance with the City and County of Honolulu, *Rules Relating to Storm Drainage Standards.* Excavation and grading activities associated with construction of the proposed project will be regulated by the City's grading and ordinance. Typical mitigation measures include: appropriately stockpiling materials on-site to prevent runoff; building over, or establishing landscaping as early as possible on disturbed soils to minimize length of exposure.

Since the area of soil disturbance within the project site will exceed one acre and the coastal waters of Kaneohe Bay are classified as "AA", an NPDES Individual permit for Construction Storm Water Activities will be obtained from the DOH. A Best Management Practices (BMP) Plan will be prepared in conjunction with the NPDES Individual permit application. Dewatering and hydrotesting is not anticipated for the proposed project.

The proposed project will not have a significant effect on Keaahala Stream or aquatic resources associated with it. The project will not involve stream channel alterations or diverting of any surface flow water. The only effect to the stream would be additional storm water runoff being directed into this stream due to the increase of impervious area on campus. The proposed project will not result in the discharge (placement) of dredged and/or fill material into waters of the U.S.

Construction impacts will comply with HAR, Chapters 11-54 and 11-55.

3.3.3 Coastal Waters

The proposed project site is approximately 1.9 miles mauka of Kaneohe Bay. Coastal waters within Kaneohe Bay are classified as "AA: marine waters by State Department of Health Administrative Rules, Title 11, Chapter 54" Water Quality Standards. Class AA marine waters are recognized by DOH with the objective that "these waters remain in their natural pristine state as nearly as possible with an absolute minimum of pollution or alteration of water quality from any human-caused source or actions. To the extent practicable, the wilderness character of these areas shall be protected."

Impacts and Mitigation Measures

No significant impacts on coastal waters are anticipated as a result of the proposed project. During construction, storm runoff has the potential to carry increased amounts of sediment into storm drain systems and streams due to erosion of exposed soils. Storm runoff from the project site will be controlled in compliance with the City and County of Honolulu, *Rules Relating to Storm Drainage Standards*. Excavation and grading activities associated with construction of the proposed project will be regulated by the City's grading and ordinance. Typical mitigation measures include: appropriately stockpiling materials on-site to prevent runoff; building over, or establishing landscaping as early as possible on disturbed soils to minimize length of exposure.

Appropriate BMPs would be considered and incorporated into design plans to address potential short- and long-term impacts from runoff. In addition, such plans developed would be reviewed by pertinent agencies for comments and approval prior to construction. Therefore, impacts on coastal waters and water quality should be minimal and minor because the contractor will employ approved measures to prevent silt runoff from construction areas along with complying with other related permit conditions.

The area of soil disturbance within the project site will exceed one acre and the coastal waters of Kaneohe Bay are classified as "AA". Therefore, pursuant to HAR Chapter 11-55, a National Pollutant Discharge Elimination System (NPDES) Individual permit for Construction Storm Water Activities will be required from the State of Hawaii Department of Health (DOH). A BMP Plan will be prepared in conjunction with the NPDES Individual permit application. Dewatering and hydrotesting is not anticipated for the proposed project.

3.4 WETLANDS

A traditional Hawaiian agricultural terrace or loi is located southeast of Hawaii State Hospital, approximately 1,500 feet from the proposed LLRC. The source of water for the loi and gardens is an adjacent natural stream, Kapunahala Stream and Keaahala Spring. This loi area is also a protected wetland.

Impacts and Mitigation Measures

No significant impacts on the nearby loi are anticipated as a result of the proposed project. The loi is approximately 1,500 southeast of the proposed project site and WCC's campus site generally slopes downward from south-southeast to north. Storm runoff from the project site will be controlled in compliance with the City and County of Honolulu, *Rules Relating to Storm Drainage Standards.* Excavation and grading activities associated with construction of the proposed project will be regulated by the City's grading and ordinance. Typical mitigation measures include: appropriately stockpiling materials on-site to prevent runoff; building over, or establishing landscaping as early as possible on disturbed soils to minimize length of exposure.

3.5 FLOOD HAZARD

Based on the Flood Insurance Rate Map ("FIRM"), Community Panel Number 15003C0270 F (revised September 30, 2004) the project site is located within the following zones (see Figure 3-2):

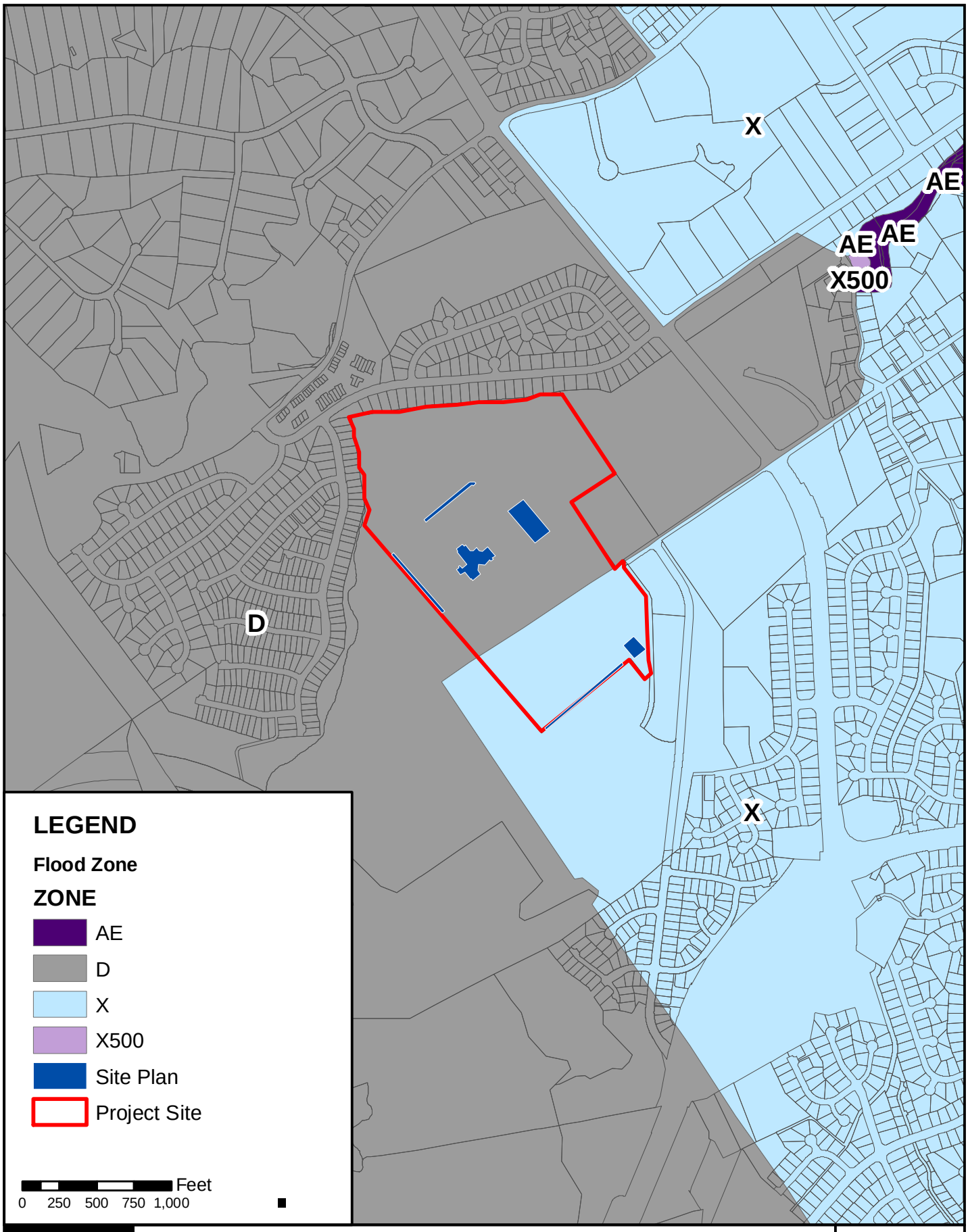
- Zone X: Areas determined to be outside the 0.2% annual chance of floodplain.
- Zone D: Areas in which flood hazards are undetermined, but possible.

Impacts and Mitigation Measures

No impacts related to flooding are anticipated. The proposed project will increase the impervious surface area, which will marginally increase storm runoff. Proposed drainage improvements, however, will be designed to accommodate runoff.

3.6 FLORA AND FAUNA

The prevalent vegetation found at altitudes below 1,500 feet on the slopes of the Koolau Range, where annual rainfall is 60 inches or more, consist of closed guava forests with shrubs. Characteristic plants include guava (*Psidium guajava*), Boston fern (*Nephrolepis exaltata bostoniensis*), Hilo grass (*Paspalum*



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Flood Zone Map

FIGURE 3-2

conjugatum), basket grass (*Oplismenus hirtellus*), false staghorn fern (*Dicranopteris linearis*), kukui (*Aleurites molucanna*) and hala (*Pandanus odoratissimus*).

Vegetation along Kahekili Highway includes California grass (*Brachiaria mutica*) and lantana (*Lantana camara L.*). Flora found along a branch of Keaahala Stream near Kahekili Highway include wedelia (*Wedelia trilobata*), Job's tears (*Coix lachryma-jobi*), basket grass (*Oplismenus hirtellus*), sword fern (*Nephrolepis sp.*), umbrella sedge (*Cyperus alternifolius*), banana (*Musa sapientum*) and Christmas berry (*Schinus terebinthifolius*).

Existing vegetation around Hale Manaleo consists of an open area covered with grass and several mature banyan trees. Coconut palms are planted along Ala Koolau. WCC could provide habitats or be frequented by a variety of mammals known to exist in the region, which includes feral cats, feral dogs, mongoose, rats and house mice.

Birds found in the guava mixed forest and urban area of Kaneohe include the cardinal, barred and spotted doves, pueo, ricebird and white-eye. The Elepaio and Iiwi may be found in the guava mixed forest that lies beyond Hawaii State Hospital. The critical habitat area for the Elepaio is beyond the 2,000 foot elevation in the Kaneohe Forest Preserve. These forests are not within the project site and will not be impacted by the construction of the proposed project. Birds common to major urban areas also include the mockingbird, myna, golden plover and house sparrow.

Impacts and Mitigation Measures

Since the project site does not provide a unique habitat in the area, no significant impacts on flora and faunal species are anticipated. No candidate, proposed, or listed threatened or endangered species will be disturbed. The incorporation of landscaping following construction will re-attract birds such as those presently found on the site.

Site preparation for the proposed parking lot #1 will remove vegetation serving as habitats for the various avian, mammal and insect species inhabiting that area. Comparable habitats in adjoining areas will continue to be available to these species during construction and project landscaping will subsequently restore some of the displaced habitats.

Mature banyan trees located around the proposed LLRC will be protected during construction. To the extent possible, existing trees will be left in place as part of the campus landscape.

3.7 AQUATIC RESOURCES

Heeia, Keaahala, and Kaneohe Streams were surveyed by the U.S. Department of the Interior Fish and Wildlife Service in 1978. Stream fauna found in the upper reaches of Heeia Stream, Keaahala Stream and the lower reaches of Kaneohe Stream are presented in Table 3-1. In 1990, the DLNR's Commission on Water Resource Management (CWRM) and the U.S. National Park Service (USNPS) undertook a cooperative project that produced the key stream reference document entitled *Hawaii Stream Assessment* (HSA). According to the *Hawaii Stream Assessment*, Heeia, Keaahala, and Kaneohe Streams are identified as streams that support aquatic, riparian, and recreational resources.

Table 3-1
Stream Biota

Species	Heeia Stream	Kaneohe Stream	Keaahala Stream
Crustacea			
*Atya bisulcata (Atyid shrimp)	X		X
*Macrobrachium grandimanus (Hawaiian Prawn)	X	X	X
Macrobrachium lar (Tahitian Prawn)	X	X	
Procambarus clarkii (Crayfish)	X	X	X
Atyoida bisulcata	X	X	
Mollusk			
Nertina vespertina	X	X	X
Pisces			
+Awaous stamineus (Goby)		X	
Cichlasoma sp (Cichlid)		X	
Clarias fuscus (Chinese catfish)		X	
+Eleotris sandwicensis (Eleotrid)	X	X	X
Gambusia affinis (Mosquito fish)	X		
Misgurnus anguillicaudatus (Oriental weatherfish)	X		
Poecilia mexicana (Shortfin molly)	X	X	X
Poecilia reticulata (Guppy)	X	X	X
Tilapia mossambica (Tilapia)		X	
Xiphophorus helleri (Green swordtail)	X	X	X
Xiphophorus maculatus (Southern platyfish)		X	
Stenogobius hawaiiensis	X	X	X
Awaous guamensis		X	X
Chanos chanos		X	
Elops hawaiiensis		X	
Kuhlia sanvicensis	X	X	
Kuhlia xenura	X	X	X
Mugil cephalus	X	X	X
Caranx ignobilis	X		
Sphyraena barracuda	X		X
Diodon hystrix			X
Damselfly			
Megalagrion nigrohamatum nigrolineatum	X	X	

* Endemic + Indigenous All others, introduced

Source: U.S. Department of the Interior, Fish and Wildlife Service, Amadeo S. Timbol and John A. Maciolek, *Stream Channel Modification in Hawaii, Part A: Statewide inventory of Streams; Habitat Factors and Associates Biota*, April 1978.

DLNR, Letter dated July 13, 2009 (see Appendix A)

Impacts and Mitigation Measures

Since the project site does not provide a unique habitat in the area, no significant impacts on flora and faunal species are anticipated. No candidate, proposed, or listed threatened or endangered species will be disturbed. The incorporation of landscaping following construction will re-attract birds such as those presently found on the site.

Site preparation for the proposed parking lot #1 will remove vegetation serving as habitats for the various avian, mammal and insect species inhabiting that area. Comparable habitats in adjoining areas will continue to be available to these species during construction and project landscaping will subsequently restore some of the displaced habitats.

Storm runoff from the project site during site preparation will be controlled in compliance with the City and County of Honolulu, *Rules Relating to Storm Drainage Standards.* Typical mitigation measures include: appropriately stockpiling materials on-site to prevent runoff; building over, or establishing landscaping as early as possible on disturbed soils to minimize length of exposure.

To minimize potential short-term erosion impacts during construction activities, various erosion control measures are available for implementation. Erosion control measures considered to minimize effects during construction may include: use of temporary sprinklers in non-active construction areas; stationing water trucks on the site during construction to provide immediate sprinkling in active construction areas; use of temporary silt fencing, sand bags, or screens; thorough watering of graded areas after construction activity has ceased for the day; or sodding or planting of affected areas immediately after site work has been completed.

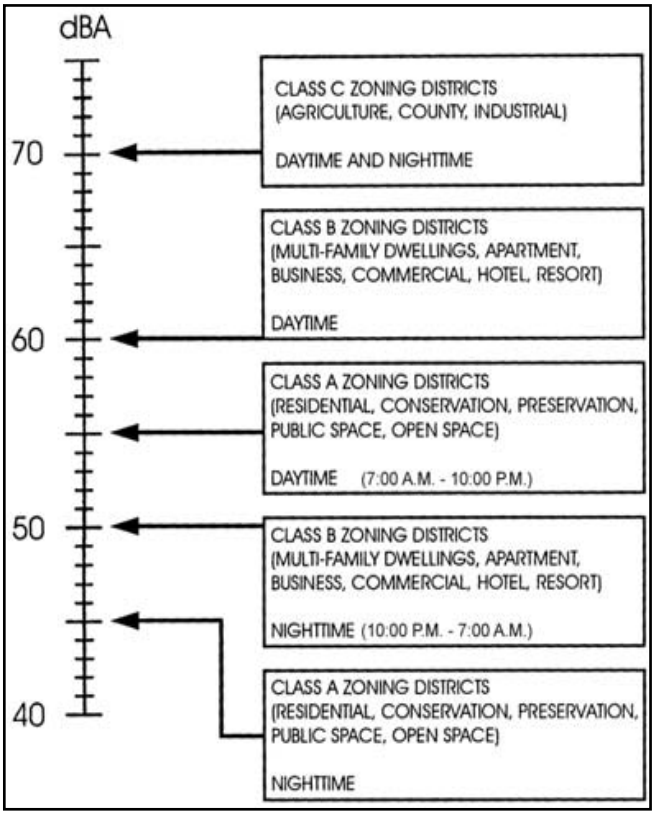
Construction material wastes will be appropriately disposed of and prevented from leaching into receiving bodies of water. Dewatering is not anticipated for this project.

3.8 NOISE

The State Department of Health (Title 11, Chapter 46, Department of Health Administrative Rules) defines three classes of zoning districts and specifies corresponding maximum permissible sound levels due to stationary noise sources such as air-conditioning units, exhaust systems, generators, compressors, pumps, etc., and equipment related to agricultural, construction, and industrial activities (see Figure 3-3). These levels are enforced for any location at or beyond the property line and shall not be exceeded for more than 10 percent of the time during any 20-minute period.

Ambient noise at the project area is generated by vehicular traffic on nearby Keaahala Road and Kahekili Highway, along with Kaneohe District Park, the Department of Transportation Baseyard, and aircraft noise associated with Kaneohe Marine Corps Base. Noise sensitive receptors the Hawaii State Hospital and subdivisions located to the northwest of WCC.

Figure 3-3
Maximum Permissible Sound Levels in dBA



Impacts and Mitigation Measures

Noise from construction will be unavoidable during the entire construction period. Because construction activity will occur in different locations of the project site at different times, the intensity and duration of exposure to construction noise at any receptor location will vary. Development of the new LLRC and accessory improvements involves excavation and grading. The various construction phases of the project may generate significant amounts of noise, which may impact nearby residences, Hawaii State Hospital, and the faculty and students on campus.

Construction noise impacts will be mitigated somewhat by compliance with provisions of the State Department of Health (DOH) Administrative Rules, Title 11, Chapter 46, "Community Noise Control". Heavy vehicles required for construction must comply with Title 11, Chapter 42 and "Vehicular Noise Control for Oahu". 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 regulator limits.

Since WCC is located in a residential area and bordered by existing homes, there will be some temporary noise impacts on these surrounding residents. The majority of noise impacts will affect the residential homes nearest to the construction site which are located along the northwest border of the campus, adjacent to the area of construction impact.

Construction-related activities will temporarily increase ambient noise levels within the vicinity of the work area. Actual noise levels produced would depend on the methods employed throughout construction. Earthmoving equipment such as bulldozers and diesel-powered trucks would probably by the loudest equipment used during construction. Typical ranges of construction equipment noise vary between 70 and 95 dBA.

Thus, construction activities are not expected to result in a significant impact. If necessary, a permit would be obtained from the State DOH to allow these activities. This permit includes restrictions to help mitigate potential noise impacts resulting from short-term construction activities, and would be followed by the contractor.

In the long-term the proposed project will not generate significant additional traffic as discussed in Section 2.11. Hence, any increase in traffic-related noise will also not be significant.

3.9 AIR QUALITY

The DOH has six (6) monitoring stations throughout the island of Oahu. Each monitoring station typically does not monitor the full complement of air quality parameters. For selected criteria pollutants, the State of Hawaii has established its State ambient air quality standards which are somewhat more stringent than the federal standards under Hawaii Administrative Rules, Title 11, Chapter 59. Hawaii AAQS are more restrictive than federal standards for CO, NO_2, and O_3. In addition, Hawaii regulates emissions of hydrogen sulfide (H_2S), for which there are no federal standards. Hawaii has adopted the NAAQS for PM_{10}, SO_2, and Pb. A summary of the federal and Hawaii ambient air quality standards that apply to the proposed project area is presented in Table 3-2.

There is not air monitoring station on the windward side of Oahu. There are no point sources of airborne emissions in the immediate vicinity of the project site. The air quality in this area is considered good with the primary non-point source of emissions from vehicles travelling along Kahekili Highway. While there is no air quality monitoring station in the vicinity of the project site, air quality is assumed to be in compliance with state and federal standards. The PM_{10} levels have been well below the federal and state standards. The PM 2.5 levels have also been well below Federal and State Standards.

According to the State Department of Health's (DOH) *2007 Annual Summary Hawai'i Air Quality Data*, the state's air quality "continues to be one of the best in the nation, and criteria pollutant levels remain well below state and federal ambient air quality standards." The report contains five-year trends based on annual averages for particulates, sulfur dioxide and nitrogen dioxide, annual averages of daily maximum 1- and 8-hour values recorded for carbon monoxide, and annual averages of daily maximum 8-hour values recorded for ozone concentrations from 2003 to 2007. During this period, the averages were well below both the federal and, the, more stringent, State standards for carbon monoxide and nitrogen dioxide.

Table 3-2
State and Federal Ambient Air Quality Standards

Air Pollutant	Averaging Time	Hawaii AAQS	Federal (NAAQS)	
			Primary	Secondary
Carbon Monoxide (CO)	1-hour 8-hour	9 ppm 4 ppm	35 ppm 9 ppm	-- --
Lead (Pb)	Quarterly	1.5 µg/m³	1.5 µg/m³	1.5 µg/m³
Nitrogen Dioxide (NO_2)	Annual	0.04 ppm	0.05 ppm	0.05 ppm
Ozone (O_3)	1-hour 8-hour	-- 0.08 ppm	0.12 ppm 0.075 ppm	0.12 ppm 0.075 ppm
Particulate Matter ≤10 micrometers in diameter (PM_{10})	Annual 24-hour	50 µg/m³ 150 µg/m³	50 µg/m³ 150 µg/m³	50 µg/m³ 150 µg/m³
Particulate Matter ≤2.5 micrometers in diameter ($PM_{2.5}$)	Annual 24-hour	-- --	15 µg/m³ 35 µg/m³	15 µg/m³ 35 µg/m³
Hydrogen Sulfide (H_2S)	1-hour	0.025 ppm	--	--
Sulfur Oxides (SO_2)	Annual 24-hour 3-hour	0.03 ppm 0.14 ppm 0.50 ppm	0.03 ppm 0.14 ppm --	-- -- 0.50 ppm (1,300 µg/m³)

Source: State Department of Health, 2008

Impacts and Mitigation Measures

No significant impacts on ambient air quality are anticipated during construction and operation of the proposed project.

The proposed project will have short-term construction-related impacts on air quality, including the generation of dust and emissions from construction vehicles, equipment and commuting construction workers. During construction, activities such as clearing, grubbing, grading, and excavation at the project site will generate dust while vehicles and equipment will produce exhaust emissions. Dust control measures stipulated by Department of Health Administrative Rules, Title 11, Chapter 60, "Air Pollution Control" regulations will be employed, as appropriate, during construction and may include:

- Planning the different phases of construction, focusing on minimizing the amount of dust generating materials and activities, centralizing on-site vehicular traffic routes, and locate potentially dusty equipment in areas of least impact;
- Providing an adequate water source at the site prior to start-up of construction activities;
- Landscaping and rapid covering of bare areas, including slopes, starting from the initial grading phase;
- Controlling of dust from shoulders, and access roads;
- Providing adequate dust control measure during weekends, after hours, and prior to start-up of construction activities; and,
- Controlling of dust from debris being hauled away from project site.
- Limiting the areas that are disturbed at any given time;
- Applying chemical soil stabilizers, mulching, or using wind screens;
- Establishing a road cleaning or tire washing program to reduce fugitive dust emissions from trucks using paved roadways in or around the project site; and
- Establishing landscaping early in the construction schedule to control dust.

The properties which are anticipated to be most affected by air quality impacts during construction are Hawaii State Hospital and residences located at the north and south of WCC.

Emissions from construction equipment, trucks and commuting construction workers are not anticipated to significantly impact ambient air quality. No air pollutants that may be generated at the project site are anticipated to exceed federal or State ambient air quality standards in the vicinity. Slow-moving construction vehicles, however, can disrupt peak hour traffic, increasing congestion and resulting in vehicular emissions. Traffic congestion and resulting emissions will be mitigated by transporting slower construction equipment during off-peak traffic hours.

In the long-term, operation of the proposed LLRC will have no significant impact on air quality in the vicinity of the project site because there are not activities or other point sources associated with the proposed LLRC that would be emitting significant air pollutants. The proposed project will not generate significant additional traffic, as discussed in Section 4.11. Hence, any increase in traffic-related emissions will also not be significant.

3.10 ARCHAEOLOGICAL RESOURCES

An archaeological inventory survey/archaeological assessment for the project site was conducted by Cultural Surveys Hawaii, Inc. to address Hawaiian customary and traditional rights and their applicability to the project area (see Appendix B).

Hawaiian legends and traditions indicate that the *ahupua'a* of Kaneohe, on the eastern side of the Ko'olaupoko district, was associated with agricultural pursuits irrigated by the streams and/or springs. The project area is situated in an area that was known for its extensive agricultural use. Some of the best terraces were located in the vicinity of the project area. Historic maps identified six (6) Land Commission Awards (LCAs) in the vicinity of the project area. LCA documentation indicates lands in the vicinity of the project area were utilized for traditional Hawaiian habitation and agriculture.

The proposed project area is within the former Keaahala Military Reservation. In 1914, approximately 281 acres of land was relinquished to the United States of America for development of a military installation, Keaahala Military Reservation, used as a field artillery range. In 1991, the Department of Army conducted a field investigation of a portion of the Keaahala Military Reservation and determined that the "extensive development of the project would have removed archaeological or historic features which may have been present". A large portion of the Keaahala Military Reservation is now under the jurisdiction of the State of Hawaii and is currently being utilized as site locations for the Kaneohe District Park, Hawaii State Hospital, and Windward Community College.

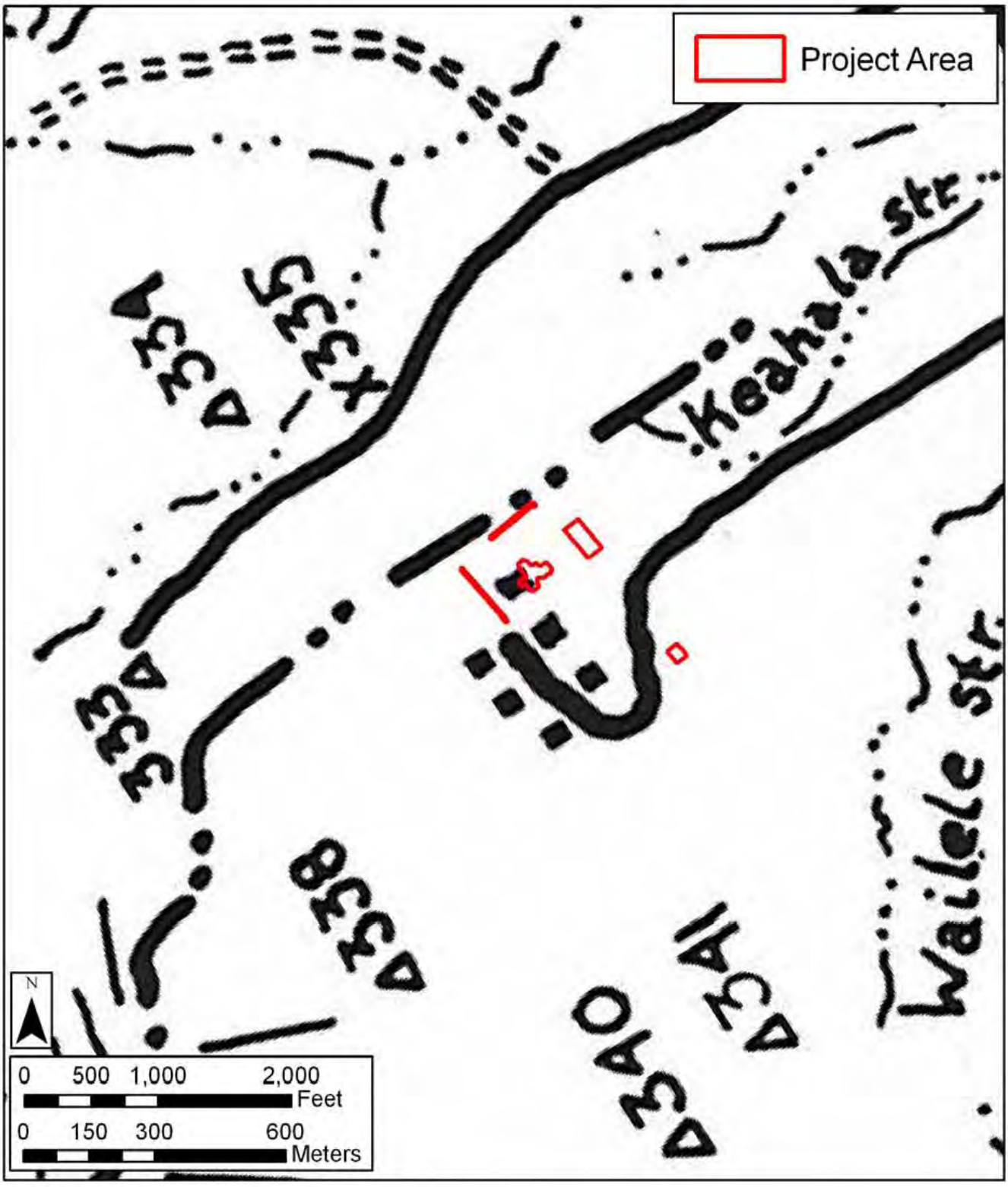
In 1924, 147 acres of the Keaahala Military Reservation was set aside for the construction of a new Territorial Hospital, now known as the Hawaii State Hospital. Historic maps places the entire project area within the Hospital complex. By the late 1950's there were more than a thousand patients at the Hospital. In 1950 a new treatment facility was constructed just mauka of the Hospital. The pre-war buildings were gradually abandoned, and in 1972, the original hospital site was transferred from the Department of Health to the University of Hawaii, for the creation of the Windward Community College.

Kaneohe Stream, Kapunahala Stream, and Keaahala Spring are important stream resources to the area. Kaneohe Stream applies only to the segment below the confluence of Kamooalii and Kapunahala Streams. Its tributaries comprises the mauka part of the Kaneohe watershed. Kapunahala Stream drains a small subwatershed on the north flank of Puu Keahiakahoe, fed by Keaahala Srping. Although Kapunahala Stream is shown on topographic maps as arising at around 600 feet elevation (above H-3) on the north flank of Puu Keahikahoe, most of the perennial flow comes from Keaahala Spring at around 280 feet elevation.

The earliest archaeological work in the Koolaupoko District was conducted by J. Gilbert McAllister and he identified six sites in the vicinity of the project site: Site 338 (Papuaa a Kane, the pigpen of Kane), Site 341 and 334 (Kumukumu and Kapuna Springs), Site 335 (old terraces), Site 333 (Kane ame Kanalao Heiau), and Site 340 (Kukuiokane Heiau) (see Figure 3-4). These sites are located 1,290 feet to 3,360 feet away from the project area.

There is nothing to indicate Site 333, the old Kane ame Kanalao Heiau site now except an old stonewall which may have been built subsequent from the rocks of the *heiau*. Site 335, old terraces, have been neglected and full overgrown with weeds, but the rectangular terraces can still be seen. Site 340, Kukuiokane Heiau, the largest and most important heiau in the region, was destroyed

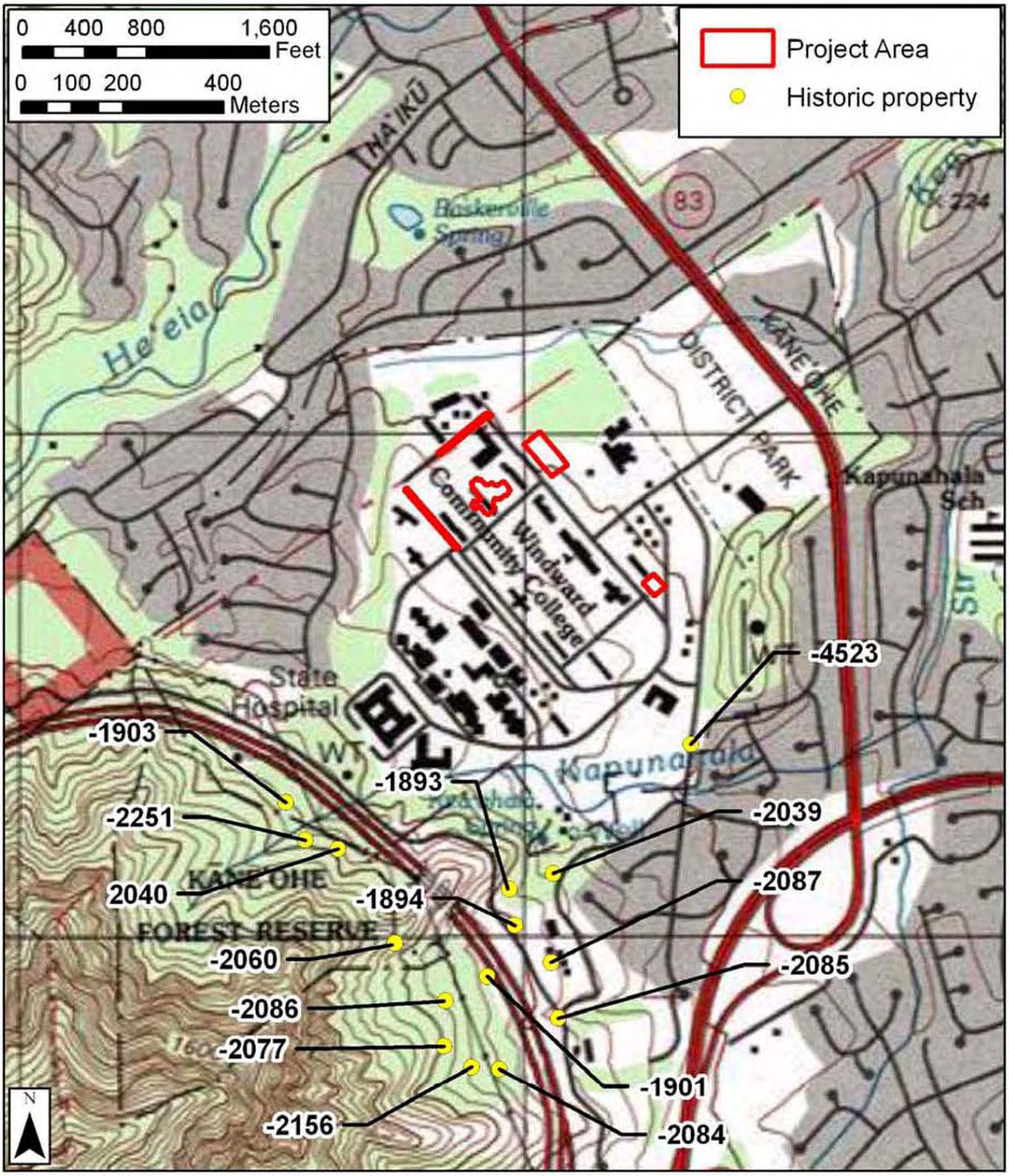
Archaeological investigations, including an inventory survey, monitoring and data recovery were also conducted for the Windward Highway corridor of Interstate Route H-3 project. Archaeological investigations occurred at 49 archaeological sites in the Windward Highway project area, fifteen of which are in the vicinity of the project area (see Figure 3-5).



Not to scale.

Source: Cultural Surveys Hawaii, December 2008

	WCC LIBRARY & LEARNING RESOURCE CENTER	**FIGURE**
	Historic Sites Identified by J. Gilbert McAllister	**3-4**



Not to scale.

Source: Cultural Surveys Hawaii, December 2008

WCC LIBRARY & LEARNING RESOURCE CENTER	FIGURE
Historic Properties in the Vicinity of the Project Site	**3-5**

On September 4, 2008, the entire project area was subjected to 100% pedestrian inspection. No historic properties were identified. Based on background research, no historic properties (i.e. archaeological sites) are expected to be encountered during the pedestrian survey of the project area. Successive land modifications within the project area associated with the Keaahala Military Reservation, the Territorial Hospital, and Windward Community College have caused extensive land disturbances (i.e. grading, leveling, filling, etc.) which would have destroyed any evidence (surface and subsurface) of pre- and post-contact land use.

Impacts and Mitigation Measures

The proposed project involves the demolition of Hale Manaleo. This structure was built by at least 1928 as a component of the Territorial Hospital. Due to the historic nature of this structure, SHPD was consulted. In February 2008 SHPD was consulted with to obtain approval to demolish the existing Hale Manaleo building. The proposed design was approved by SHPD, with the provision that the defining characteristics of the historic area be respected and maintained (see Appendix C). SHPD required that the new LLRC maintain a minimum distance of sixty (60) feet to any existing building. In addition, it was required that the new building is located to the north of an imaginary line drawn from the south ends of Hale Manaopono and Hale Laakea. Another provision was to provide a display depicting historical information for the Territorial Hospital in the new LLRC.

WCC is also eligible for listing on the Hawaii and National Registers of Historic Places. The college campus was originally the Territorial Hospital for the mentally ill. It is significant for its associations with the history of treatment of the mentally ill in Hawaii and as a good example of the Spanish Mission Revival style of architecture. Although Hale Manaleo is not individually distinctive, it contributes to the historic complex which represents the prevailing philosophy at the time of providing more humane treatment and environments for the mentally ill. As such, the new LLRC was designed to minimally impact the historic character of the quadrangle area of WCC.

The proposed project is not expected to impact any archaeological historic properties, including subsurface cultural deposits, due to the historic and modern land disturbances that have occurred within the project area, which have likely destroyed any archaeological historic properties that may have once existed within the project area.

SHPD determined an “effect with agreed-upon mitigation commitments”:

- An updated National Register of Historic Places nomination form for the eligible district;
- Good faith intent to update the current master plan, to include the guidelines, within 10 years pending legislative approval;
- Commitment to provide an educational display within the proposed LLRC to include historical information on the Territorial Hospital; and
- Intent to provide documents and collaborate with the Department of Health to display the original asylum campus in a future museum in Bishop Hall (Hawaii State Hospital). Should the museum not materialize within the next 10 years, WCC will provide information on their website.

In the event that historic resources, including human skeletal remains, are identified during the construction activities, all work needs to cease in the immediate vicinity of the find, the find needs to be protected from additional disturbance, and the SHPD will be contacted.

3.11 TRAFFIC

Wilson Okamoto Corporation (WOC) prepared a traffic impact report for the proposed project (Appendix D). A traffic survey was conducted on October 23, 2008, between the morning peak hours of 6:00 am and 9:00 am, and the afternoon peak hours of 3:00 pm and 6:00 pm. The following intersections were assessed to determine the relative impact of the proposed project:

- Kahekili Highway and Keaahala Road
- Keaahala Road, Pookela Street, and the Windward Comprehensive Health Center Driveway
- Keaahala Road and the Windward Community College Access Road

The intersections were assessed using the methodologies from the Transportation Research Board *Highway Capacity Manual* and the *Highway Capacity Software* developed by the Federal Highway Administration. Operating conditions at these intersections are described in terms of their level-of-service (LOS). LOS is identified by LOS "A" (best) and LOS "F" (worst).

The peak hours of traffic in the vicinity of the project site generally occur between 7:30 am to 8:30 am and 4:00 pm to 5:00 pm.

Kahekili Highway and Keaahala Road – At this signalized intersection, both approaches of Kahekili Highway (State Highway) have exclusive left-turn lanes, two through lanes, and a shared through lane and right-turn lane. West of Kahekili Highway, Keaahala Road (City and County of Honolulu Roadway) is generally oriented in the east-west direction and serves as an access road for the uses along it's alignment, as well as a connector road between Kamehameha Higwhay (State Highway) and Kahekili Highway. The eastbound approach of Keaahala Road has one through lane, and exclusive turning lanes while the westbound approach has an exclusive left-turn lane and a shared through and right-turn lane.

The traffic movements on Kahekili Highway approaches of the intersections operate at LOS "D" during both peak periods, respectively, with the exception of the northbound through and right-turn traffic movement which operates at LOS "C" during the PM peak period, respectively.

Traffic movements on both approaches of Keaahala Road operate at LOS "D" during both peak periods, respectively. Traffic

Keaahala Road, Pookela Street, and the Windward Comprehensive Health Center Driveway – At this unsignalized intersection, both approaches of Keaahala Road have exclusive left-turn lanes and a shared though and right-turn lane. Pookela Street (Private Roadway) is generally oriented in the north-south direction and provides access to the residential uses along its alignment. The northbound approach of Pookela Street has one stop-controlled lane that serves all traffic movements. The southbound approach of the intersection is comprised of the driveway for the Windward Comprehensive Health Center which has one stop-controlle lanes that serves all traffic movements.

The critical traffic movements on the Keaahala Road approaches are eastbound and westbound left-turn traffic movements which operate at LOS "A" during both peak periods, respectively. The Pookela Street approach operates at LOS "A" and LOS "B" during the AM and PM peak periods, respectively. The southbound approach of the intersection is comprised of the driveway for the Windward Comprehensive Health Center. This approach operates at LOS "C" during both peak periods.

Keaahala Road and the Windward Community College Access Road (Ala Koolau) – At this unsignalized intersection, the westbound approach of Keaahala Road has one lane that serves left-turn and right-turn traffic movements. The northbound and southbound approaches of intersection are comprised of the access road (Ala Koolau) for the community college. The northbound approach has one stop-controlled lane that serves through and right-turn traffic movements, while the southbound approach has one stop-controlled lane that serves left-turn and through traffic movements.

At the intersection with the Windward Community College access road, Keaahala Road operates at LOS "A" during both peak periods, respectively. The northbound and southbound approaches of the intersection operate at LOS "A" and LOS "B", respectively, during both peak periods.

Impacts and Mitigation Measures

The proposed LLRC is expected to house existing college functions and activities which are currently spread out in other buildings on the campus. As such, the proposed project is not expected to generate additional trips. However, as detailed in the *Enrollment Projections University of Hawaii Fall 2008 – 2014* prepared by the Institutional Research Office at the University of Hawaii (July 2008), the enrollment at WCC is expected to increase slightly in the next few years. The anticipated increase in enrollment is not expected to have a significant impact on traffic operations in the vicinity of the college. Table 3-2 summarizes the projected Year 2011 AM and PM peak hour traffic volumes and operating conditions.

Traffic operations in the vicinity of Windward Community College are expected to remain similar to existing conditions during both peak hours of traffic despite the anticipated increase in enrollment at the college. The critical traffic movements at the intersection of Keaahala Road with Kahekili Highway are expected to continue operating at LOS "D" or better during both peak periods while those at the intersection with Pookela Street and the driveway for the Windward Comprehensive Health Center are expected to continue operating at LOS "C" or better during both peak periods. Similarly, the critical traffic movements at the intersection of Keaahala Road with the college's access road are expected to continue operating at LOS "B" or better during both peak periods.

Based on the analysis of the traffic data, the following are the recommendations of this study:

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

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

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

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

Table 3-3
Existing and Projected LOS Traffic Operating Conditions

Intersection	Critical Traffic Movement		AM		PM	
			Exist	Year 2011	Exist	Year 2011
Kahekili Hwy/ Keaahala Rd	Eastbound	LT	D	D	D	D
		TH	D	D	D	D
		RT	D	D	D	D
	Westbound	LT	D	D	D	D
		TH-RT	D	D	D	D
	Northbound	LT	D	D	D	D
		TH-RT	C	C	D	D
	Southbound	LT	D	D	D	D
		TH-RT	D	D	D	D
Keaahala Rd/ Pookela St/ WCHC Dwy	Eastbound	LT	A	A	A	A
	Westbound	LT	A	A	A	A
	Northbound	LT-TH-RT	A	A	B	B
	Southbound	LT-TH-RT	C	C	C	C
Keaahala Rd/ WCC Access Rd	Westbound	LT-RT	A	A	A	A
	Northbound	TH-RT	A	A	A	A
	Southbound	LT-TH	B	B	B	B

3.12 VIEWS

WCC is located on gently sloping land on the northeastern slope of Puu Keahiakahoe, a peak in the Koolau Range. Scenic views from the campus include Kaneohe Bay, Kaneohe town, Olomana Ridge, and the towering Koolau Range to the northwest and southwest.

According to the City & County of Honolulu's *Koolaupoko Sustainable Communities* Plan (August 2000), WCC is located within an area that has continuous makai views.

The City & County of Honolulu's *Coastal View Study* (1987) identifies two viewsheds within the Kaneohe Bay Viewshed. Two significant roadway views are located within these sections, the first occurring along Kamehameha Highway near the Heeia Boat Harbor. The second roadway view occurs from a portion of the H-3 Freeway leading into Kaneohe Marine Corps Station. Kehekili Highway from Kamehameha Highway to Likelike Highway is not identified as a road with significant scenic views.

The existing WCC buildings, are generally not visible from public vantage points along Likelike and Kahekili Highways due to low building profiles, topography, and forested areas surrounding much of the campus. The proposed LLRC will take advantage of its location in the center of campus as well as take advantage of the mauka and makai views from its location. The Koolau Mountains are viewed from most locations on the WCC Campus. The two views that are identified in the WCC's Urban Design Plan are the views to the south and to the west. The lower image views from the campus are limited to a certain degree by the campus buildings themselves on the north-northwest, west, southwest, east, northeast, and north. The view to the south-southeast is open at grade level to the mountains.

Impacts and Mitigation Measures

The proposed project incorporates the scenic setting of the campus as an asset to the programs offered by WCC. The proposed facility will be less than 50 feet in height and the architectural theme will reflect the Spanish Mission Revival architectural style. The campus is generously landscaped and additional landscaping will be provided to screen parking areas.

3.13 SOCIO-ECONOMIC CHARACTERISTICS

Population and Housing: The Department of Business, Economic Development and Tourism (DBEDT) estimates the population of Oahu at 905,601 for 2007. According to a demographic profile of various Oahu neighborhoods prepared by the City's Department of Planning and Permitting (DPP) using the 2000 Census data, Neighborhood Area 30: Kaneohe had a population of 36,736. In comparison to Oahu as a whole, the Kaneohe population is slightly older; has a racial mix with less Asians and slightly more Native Hawaiian or Pacific Islanders; a greater number of family households and a proportional number of households with children under 18; higher homeownership rates; and, lower vacancy rates (See Table 3-4).

Economy: According to the 2000 Census data, the 1999 median household income for Kaneohe Census District Place was $66,000, which is significantly higher than the median household income of $45,100 for Honolulu and $49,800 for the state of Hawaii.

Impacts and Mitigation Measures

Population and Housing: No significant impacts to population or housing in the vicinity of the project site are anticipated as a result of the construction and operation of the proposed project. The proposed new LLRC and its accessory improvements are not expected to change the existing resident population in the community or the windward region. There are no new residential units associated with this project and non in-migration of individuals to reside within the City and County of Honolulu would result due to the new LLRC. As a result, there should be no impact on the existing resident population in Kaneohe.

This project would also not change or alter the character of Kaneohe or the character of the island's Koolaupoko district. The project essentially adds another needed facility to the campus to alleviate existing space shortages with the existing library. Thus, the project would only improve the existing campus facilities intended to serve students and faculty there. Consequently, this project would not change existing uses in the surrounding area or have a significant impact on surrounding land uses.

Economy: No significant impact to the economy within the vicinity of the project site are anticipated as a result of the construction and operation of the proposed facilities. In the short-term, the proposed project will confer some positive benefits to the local economy. Direct economic benefits will result from construction expenditures both through the purchase of materials from local suppliers and through the

employment of local labor, thereby stimulating that sector of the economy. During construction, retail businesses in the vicinity of the project site may benefit from the increased presence of workers.

Table 3-4
DEMOGRAPHIC CHARACTERISTICS: 2000

Subject	Neighborhood Area #30		O'ahu	
	Number	Percent	Number	Percent
Total population	36,736	100.0	876,156	100.0
AGE				
Under 5 Years	2,116	5.8	56,849	6.5
5 – 17 years	6,864	18.7	151,909	17.3
18 – 64 years	22,421	61.0	549,661	62.7
65 years and over	5,335	14.5	117,737	13.4
Median age (years)	38.1	--	35.7	--
RACE (alone or in combination with other races)				
White	15,116	41.1	308,838	35.2
Black or African American	513	1.4	29,764	3.4
American Indian and Alaska Native	771	2.1	15,921	1.8
Asian	22,350	60.8	539,384	61.6
Native Hawaiian and other Pacific Islander	11,483	31.3	189,292	21.6
Other	1,103	3.0	32,003	3.7
HOUSEHOLD (BY TYPE)				
Total Households	11,348	100.0	286,450	100.0
Family households (families)	9,186	80.9	205,672	71.8
With own children under 18 years	3,700	32.6	91,022	31.8
Married-couple family	7,012	61.8	156,195	54.5
With own children under 18 years	2,835	25.0	70,442	24.6
Female householder, no husband present	1,571	13.8	35,138	12.3
With own children under 18 years	633	5.6	15,235	5.3
Non – families	2,162	19.1	80,778	28.2
Living with non-relatives	597	5.3	18,815	6.6
Living alone and 65 years and over	590	5.2	20,021	7.0
Average persons per household	3.18	--	2.95	--
HOUSING OCCUPANCY AND TENURE				
Total Housing Units	11,821	100.0	315,988	100.0
Occupied units	11,348	96.0	286,450	90.7
By owner	8,051	68.1	156,290	49.5
By renter	3,297	27.9	130,160	41.2
Vacant units	473	4.0	29,538	9.3
Available housing vacancy rate (%)	2.0	--	4.9	--
Homeownership rate (%)	70.9	--	54.6	--

Source: 2001 Census File, City & County of Honolulu, Department of Planning & Permitting

3.14 PUBLIC SERVICES

Emergency Services: Police protection is provided by the City and County of Honolulu, through the Kaneohe Police Station, located at 45-270 Waikalua Road, approximately one mile from the project site.

Fire protection is provided by the City and County of Honolulu. The nearest station is Kaneohe Fire Station, located at 45-910 Kamehameha Highway, approximately one mile from the project site.

Health care services for residents of the Kaneohe area are available at Straub Family Health Center located at Windward Mall in Kaneohe. Medical care is available at the Castle Medical Center College in Kailua, which also provides 24-hour emergency service. The Windward Comprehensive Health Center is a State facility located along Keaahala Road near the entrance to the WCC. It consists of a Dental Health Division, Early Intervention Division, Family Health Services Division, Health Promotion and Education Office, Mental Health Divisions for children and for adults, Public Health Nursing Branch, and a WIC branch. The adjacent Hawaii State Hospital is a 244-bed facility dedicated to serving adults with serious mental illnesses.

Educational Services: Educational services for the Kaneohe area are provided by eight public schools. These schools are the Heeia Elementary School (K-6), Benjamin Parker Elementary School (K-6), Kapunahala Elementary School (K-6), Puohala Elementary School (K-6), Kaneohe Elementary School (K-6), King Intermediate (7-8) , Castle High School (9-12), and Windward Community College.

The public library serving the Kaneohe area is the Kaneohe Regional Library which is part of the State of Hawaii Library System.

Parks and Facilities: The Kaneohe area offers a host of public recreational facilities including Kaneohe Playground, Kaneohe District Park, Kaneohe Civic Center Playground, Kaneohe Community and Senior Center, Kaneohe Beach Park, Kaluapuhi Neighborhood Park, and numerous school parks. Facilities with a regional service area include Hoomaluia Park and Pali Golf Course.

Impacts and Mitigation Measures

In the short-term, construction activities at the project site may increase potential demand for police services due to construction-related traffic, security of the construction site and the presence of more people associated with construction. The potential need for fire protection services would increase due to the presence of construction materials and equipment on the project site. The presence of construction workers and others at the project site would also increase the potential demand for emergency care services. These impacts, however, would be relatively insignificant within the overall context of the areas served by the respective public services.

In the long term, operation of the proposed facilities will have negligible community impact on police, fire, and emergency services, since the project involves replacing an existing building with a modern facility designed to current fire code and with security considerations.

3.15 INFRASTRUCTURE

Water: WCC is serviced by a looped potable water system, consisting of 2-, 6-, 8-, and 16 inch waterlines. The source of the water is the City & County of Honolulu's water system off a 16-inch water main that connects Lolii and Keaahala Streets. This connection provides water to the system that supplies the

College's buildings and an existing 600,000 gallon water tank mauka of the Hawaii State Hospital (above the Goddard Building). The water tank was originally used to store water pumped from an artesian well on site. The artesian well has since been de-commissioned.

Wastewater: WCC is serviced of 6- and 8-inch sewerlines. The sewer system is connected to the municipal system at Keaahala Street and Kamua Place. Both of these systems flow makai and combine downstream.

Drainage: Runoff from the WCC is directed to the Keaahala Stream drainage basin via on-site and off-site drainage structures, which ultimately empty into Kaneohe Bay. Runoff from the northwestern portion of these areas is diverted through a system of catch basins and underground drain lines into a gully to the west of the property. This gully is part of the Keaahala Stream Drainage basin. The southwestern portion is drained by catch basins and underground drain lines leading to the east side of the Kaneohe District Park where it empties into a ditch which is also part of the Keaahala Stream Drainage basin.

Solid Waste: Municipal solid waste collection and disposal services are provided by the Refuse Collection and Disposal Division of the City and County of Honolulu Department of Environmental Services.

Electrical: Three phase electric utility service is provided to WCC at 12,470 volts by Hawaiian Electric Company (HECO). The electrical power usage for the campus is primarily metered and controlled at the main electrical metering and switching vault located at the northeast corner of the student/public parking lot on Keaahala Road. Distribution to the various buildings on campus is provided at 12.47 kV via underground primary loop feeders routed through electrical handholes and underground ductlines. The existing primary distribution system has sufficient capacity to support the LLRC.

Existing overhead communications lines along Ala Koolau (formerly Ilima Way) that presently feeds Hale Manaleo, Hale Laakea, and Hale Noeau will be removed and placed underground.

Impacts and Mitigation Measures

Water: No significant impacts on the municipal water system are anticipated during construction of the proposed project. The existing water system for Hale Manaleo will be utilized. A new 6-inch waterline will connect to the existing water system along Ilima Way. The new LLRC will contain a fire sprinkler system similar to the other buildings on campus.

Wastewater: No significant impacts on the municipal wastewater system are anticipated during construction of the proposed project. .The new wastewater system will be connected to the existing wastewater system and have a minimum pipe size of 4 inches.

Drainage: No significant impacts on the drainage system are anticipated during construction of the proposed project. The drainage system shall direct all surface runoff away from the building. The inlets will be directed toward an underground detention system located on-site and the overflow will be toward an existing detention pond.

The drainage anticipated for the proposed LLRC will utilize existing drainage lines on either side of the project site. There is a 36-inch drainage main to the north-northwest and a 24-inch drainage main to the

south and southeast. Both of these mains flow to the east where they both have outlet structures that flow into an open drainage ditch.

Storm runoff from the project site during site preparation will be controlled in compliance with the City and County of Honolulu, *Rules Relating to Storm Drainage Standards.* Typical mitigation measures include: appropriately stockpiling materials on-site to prevent runoff; building over, or establishing landscaping as early as possible on disturbed soils to minimize length of exposure.

Since the area of soil disturbance within the project site will exceed one acre, an NPDES Individual permit for Construction Storm Water Activities will be obtained from the DOH. A Best Management Practices (BMP) Plan will be prepared in conjunction with the NPDES Individual permit application.

Solid Waste: No significant impacts on the municipal solid waste collection and disposal system are anticipated during construction of the proposed project. Construction of the proposed project will require grading and excavation activities, which may result in excess soil. It will be the responsibility of the contractor to property dispose of excess soil and other construction wastes at a Department of Health permitted solid waste facility.

Electrical: No significant impacts on the electrical system are anticipated during construction of the proposed project.

Parking lot light assemblies consisting of luminaries mounted on metal poles will be provided to match the lighting for the existing parking lots.

Street lighting along the widened roadways will be provided to match existing lighting. The road widening of Ala Koolau behind Hale Laakea and Hale Palanakila will remove four or five streetlights mounted on wooden poles and will be replaced with street lighting to match existing pole lighting in adjacent areas.

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4.0 RELATIONSHIP TO LAND USE, POLICIES AND CONTROLS

The plans and policies relating to the proposed project range from broad program guidance to land use controls governing the project site. Construction of the proposed project is in consonance with the various plans, policies, and regulatory controls, as discussed below.

4.1 STATE OF HAWAII

4.1.1 Hawaii State Plan

The Hawaii State Plan (Chapter 226, Hawaii Revised Statutes, as amended) provides the overall theme, goals, objectives, policies and priority guidelines for statewide planning. The Hawaii State Plan also directs the appropriate State agencies to prepare functional plans for their respective program areas. The proposed project supports and is consistent with the following State Plan objectives:

Socio-cultural advancement – Education

(a)(1): Emphasize quality educational programs in Hawaii's institutions to promote academic excellence.

(a)(2): Promote programs and activities that facilitate the acquisition of basic skills, such as reading, writing, computing, listening, speaking, and reasoning.

(a)(4): Ensure the provision of adequate and accessible educational services and facilities that are designed to meet individual and community needs.

(b)(3): Increase and approve the use of information technology in education and encourage programs which increase the public's awareness and understanding of the impact of information technologies on our lives.

(b)(4): Support education programs and activities that enhance personal development, physical fitness, recreation, and cultural pursuits of all groups.

(b)(5) Provide appropriate educational opportunities for groups with special needs.

(c)(2): Promote educational programs which enhance understanding of Hawaii's cultural heritage.

Comment: The proposed project will create a new LLRC that will aid in the continuation of quality educational programs that contribute to the overall academic excellence at WCC. The proposed modern facility will house the library, learning skills center, computer labs, and media center. The library and related services will be located on the first floor, with study areas, conference rooms, offices, and other library related services on the second and basement levels. The college will continue to promote a variety of programs, including those that support the acquisition of basic skills, encourage public understanding of information technology, enhance personal development, and promote the community's understanding of Hawaii's cultural heritage. The proposed project will also meet related future demands.

4.1.2 State Functional Plans

State Functional Plans serve as the primary implementing vehicle for the goals, objectives and policies of the Hawaii State Plan. The functional plans guide implementation of State and County actions in the following areas: agriculture, transportation, conservation lands, education, tourism, water resources, energy, recreation, historic and preservation, health, housing, higher education, employment, and human services. The following are related objectives and policies applicable to the proposed project:

State Education Functional Plan:

Objective A(4): Services and Facilities

Policy: Ensure the provision of adequate and accessible educational services and facilities that are designed to meet individual and community needs.

Objective B(3): Increased Use of Technology

Policy: Increase and improve the uses of information technology in education and encourage programs which increase the public's awareness and understanding of the impact of information technologies on our lives.

Objective B(4): Personal Development

Policy: Support education programs and activities that enhance personal development, physical fitness, recreation, and cultural pursuits of all groups.

Comment: The proposed project will create a new LLRC that will aid in the continuation of quality educational programs that contribute to the overall academic excellence at WCC. The proposed modern facility will house the library, learning skills center, computer labs, and media center. The library and related services will be located on the first floor, with study areas, conference rooms, offices, and other library related services on the second and basement levels. The College will continue to promote a variety of programs, including those that support the acquisition of basic skills, encourage public understanding of information technology, enhance personal development, and promote the community's understanding of Hawaii's cultural heritage. The proposed project will also meet related future demands.

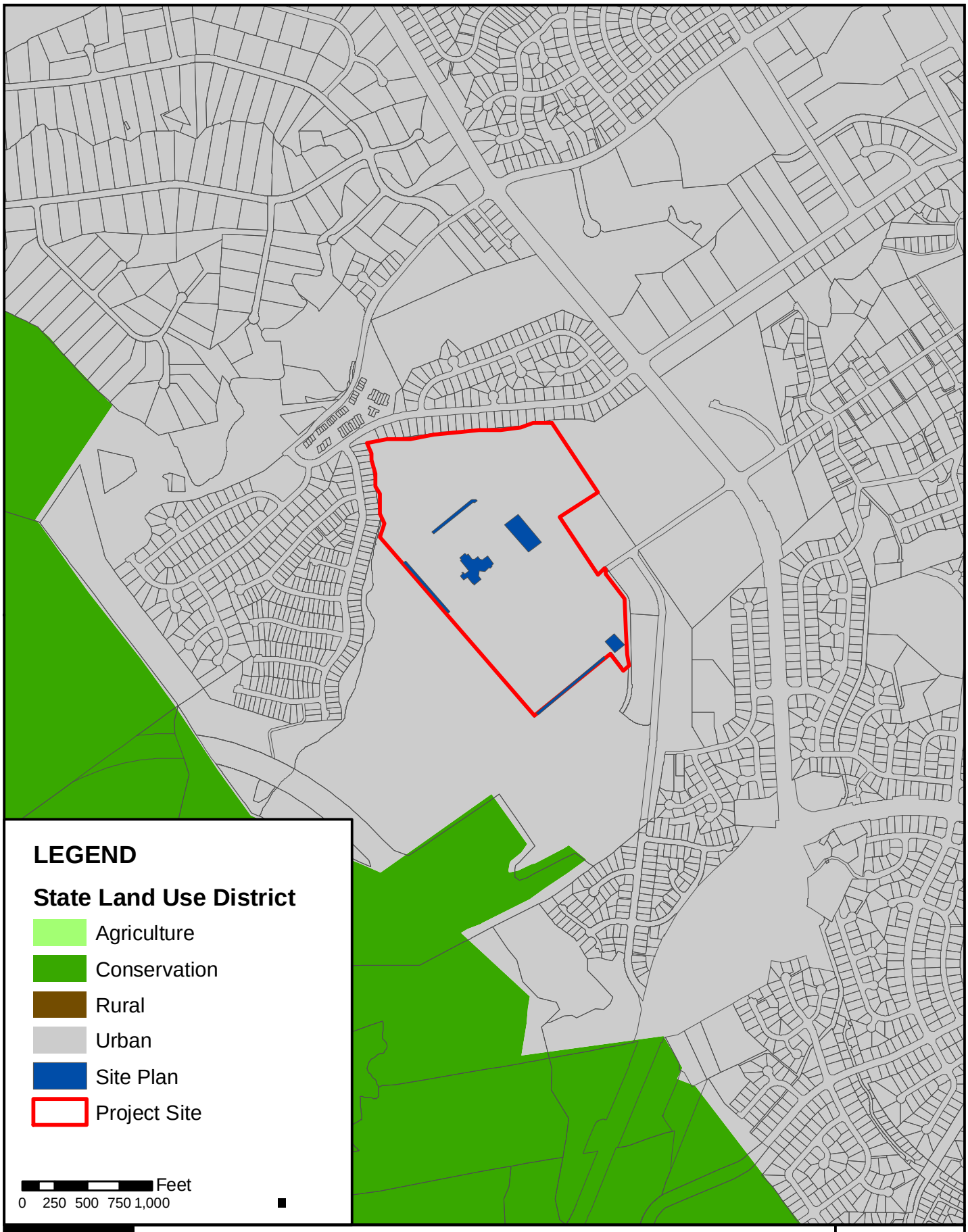
4.1.3 State Land Use District

The State Land Use Law 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 of Hawaii's people. The Hawaii Land Use Law in Chapter 205, Hawaii Revised Statutes (HRS), classifies all land in the State into four land use districts: Urban, Agricultural, Conservation, and Rural. The project site lies within the Urban District, which includes "lands characterized by city-like concentrations of people, structures, streets, urban level of services and other related uses." (see Figure 4-1). The proposed project is consistent with the Urban classification.

4.2 CITY AND COUNTY OF HONOLULU

4.2.1 General Plan

The General Plan for the City and County of Honolulu is a statement of the long-range social, economic, environmental, and design objectives for the general welfare and prosperity of the people of Oahu. The Plan is also a statement of broad policies that facilitate the attainment of the objectives of the Plan. Eleven subject areas provide the framework for the City's expression of public policy concerning the needs of the people and functions of government. These areas include population; economic activity; the natural environment; housing; transportation and utilities; energy; physical development and urban design; public safety; health and education; culture and recreation; and government operations and fiscal management.



WCC LIBRARY & LEARNING RESOURCE CENTER

State Land Use District Map

FIGURE 4-1

As presented in Chapters 1 and 2 and assessed in Chapter 3 of this environmental assessment, the proposed action is in consonance with the following objectives and policies of the General Plan:

III. Natural Environment

Objective A: To protect and preserve the natural environment.

Policy 9: Protect mature trees on public and private lands and encourage their integration into new developments.

Objective B: To preserve and enhance the natural monuments and scenic views of Oahu for the benefit of both residents and visitors.

Policy 2: Protect Oahu's scenic views, especially those seen from highly developed and highly travelled areas.

Policy 3: Locate roads, highways, and other public facilities and utilities in areas where they will least obstruct important views of the mountains and the sea.

Comment: WCC is located on gently sloping land on the northeastern slope of Puu Keahiakahoe, a peak in the Koolau Range. Scenic views from the site include Kaneohe Bay, Kaneohe town, Olomana Ridge, and the towering Koolau Range to the northwest and southwest. The proposed project incorporates the scenic setting of the campus as an asset to the WCC. The proposed LLRC will take advantage of its location in the center of campus as well as take advantage of the mauka and makai views from its location.

The existing WCC buildings, are generally not visible from public vantage points along Likelike and Kahekili Highways due to low building profiles, topography, and forested areas surrounding much of the campus. The proposed facility will be less than 50 feet in height and the architectural theme will reflect the Spanish Mission Revival architectural style.

Several mature banyan trees are located near Hale Manaleo and will be protected during the construction. The campus is generously landscaped and additional landscaping will be provided to screen parking areas.

VII. Physical Development and Urban Design

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

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

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

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

Policy 5: *Require new developments in stable, established communities and rural areas to be compatible with the existing communities and areas.*
Policy 8: *Preserve and maintain beneficial open space in urbanized areas.*
Policy 9: *Design public structures to meet high aesthetic and functional standards and to complement the physical character of the communities they will serve.*
Policy 10: *Establish a review process to evaluate the design of major development projects.*

Comment: The development of WCC has progressed in accordance with the development plans represented in the Five Year Master Plan. Unfortunately, the timeframes for implementing improvements have been subject to funding availability and have unfortunately been delayed. The University of Hawaii has finally received funding and is now moving forward to design and construct a new LLRC at the WCC campus. In Fall 2007, WCC with the help of the community and key legislators appropriated $41.6 million for its construction.

The purpose of this project is to provide a state of the art facility that is capable of accommodating WCC's present and anticipated future enrollment. This project will satisfy needed functional space requirements and facilities to correct current inadequacies in the existing Library's capacity to serve the students and faculty.

The proposed project incorporates the scenic setting of the campus as an asset to the WCC. The proposed LLRC will take advantage of its location in the center of campus as well as take advantage of the mauka and makai views from its location. The design of the proposed LLRC complies with the Urban Design Plan for WCC and will be reviewed by the Design Committee.

The existing WCC buildings, are generally not visible from public vantage points along Likelike and Kahekili Highways due to low building profiles, topography, and forested areas surrounding much of the campus. The proposed facility will be less than 50 feet in height and the architectural theme will reflect the Spanish Mission Revival architectural style.

Several mature banyan trees are located near Hale Manaleo and will be protected during the construction. The proposed LLRC was designed to have minimal impact on the mature banyan trees and the open space of the quadrangle. The campus is generously landscaped and additional landscaping will be provided to screen parking areas.

IX. Health and Education

Objective B: *To provide a wide range of educational opportunities for the people of Oahu.*

Policy 1: *Support education programs that encourage the development of employable skills.*
Policy 2: *Encourage the provision of informal education programs for people of all age groups.*
Policy 3: *Encourage the after-hours use of school buildings, grounds, and facilities.*
Policy 4: *Encourage the construction of school facilities that are designed for flexibility and high levels of use.*
Policy 5: *Facilitate the appropriate location of learning institutions form the preschool through the university levels.*

Comment: By creating a new LLRC the proposed project will aid in the college's continuing provision of quality educational opportunities, programs, and facilities. Overall, the project will greatly improve the college's facilities and ability to serve the community.

IX. Health and Education

Objective C: To make Honolulu the center of higher education in the Pacific.

Policy 1: Encourage continuing improvement in the quality of higher education in Hawaii.
Policy 2: Encourage the development of diverse opportunities in higher education.

Comment: The project will further encourage higher education in the Pacific that is able to promote diverse educational opportunities throughout the island.

4.2.2 Development and Sustainable Communities Plan

The City and County of Honolulu's Development/Sustainable Communities Plan program provides a relatively detailed framework for implementing the objectives and policies of the General Plan on an area wide basis. Eight community-oriented plans have been adopted covering the entire island. Each of the plans is intended to help guide public policy, investment, and decision making within their representative region.

4.2.2.1 Koolaupoko Sustainable Communities Plan

The project site is located within the Koolaupoko Sustainable Communities Plan (SCP) Area, which extends from Makapuu Point to Kaoio Point. The City's Land Use Map indicates WCC is located on lands designated for Institutional uses. The proposed project is consistent with the following guidelines, policies and principles contained in the Koolaupoko SCP:

3.8 Institutional Uses
3.8.1 General Policies:

Existing Campuses: 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 and should be sited and designed to respect the scenic context.

3.8.2 Planning Principles
The following principles apply to the expansion or renovation of existing institutional campuses:

- *Appropriate Scale and Architectural Style. Maintain consistency between the building mass of an institution and its campus setting. The architectural character of institutional buildings and structures should respect the surrounding urban and natural features, particularly when located adjacent to a residential area of 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. Also, resource conservation measures such as water flow constructors and facilities for the sorting of waste materials for recycling should be incorporated in the design of new development.*

Comment: The proposed construction is based on a Master Plan that preserves the scenic and open nature of the campus. The proposed LLRC will take advantage of its location in the center of campus as well as take advantage of the mauka and makai views from its location. The proposed facility will be less than 50 feet in height and the architectural theme will reflect the Spanish Mission Revival architectural style. Several mature banyan trees are located near Hale Manaleo and will be protected during the construction. The campus is generously landscaped and additional landscaping will be provided to screen parking areas.

The design will encourage the use of natural daylight and allow for views of the Koolau mountains to the west and distant ocean views to the north and east. To promote environmental sustainability, the project goal is to achieve a Leadership in Energy and Environmental Design (LEED) Silver Certification, based on the U.S. Green Building Council (USGBC) criteria. Some of the sustainable strategies include:

1. Supporting alternative means of transportation by providing bicycle storage, staff showers, preferred parking for carpool/vanpools, and preferred parking for low-emission/hybrid vehicles.
2. Sensitivity to site disturbance and preservation of open space.
3. Water use reduction using ultra flow fixtures, waterless urinals, and no irrigation.
4. Optimized energy performance using:
    a. High efficiency, chilled beam air conditioning system
    b. Capturing natural daylight using large window walls, light shelves, skylights, and clerestory windows
    c. Energy efficient lighting
    d. Sustainable on-site power generation
5. Interior finished utilizing post consumer and pre consumer recycle content
6. Improved indoor air and environmental quality and mold prevention
7. Low impact cleaning and maintenance procedures to maintain the healthy environment within the building for years to come.

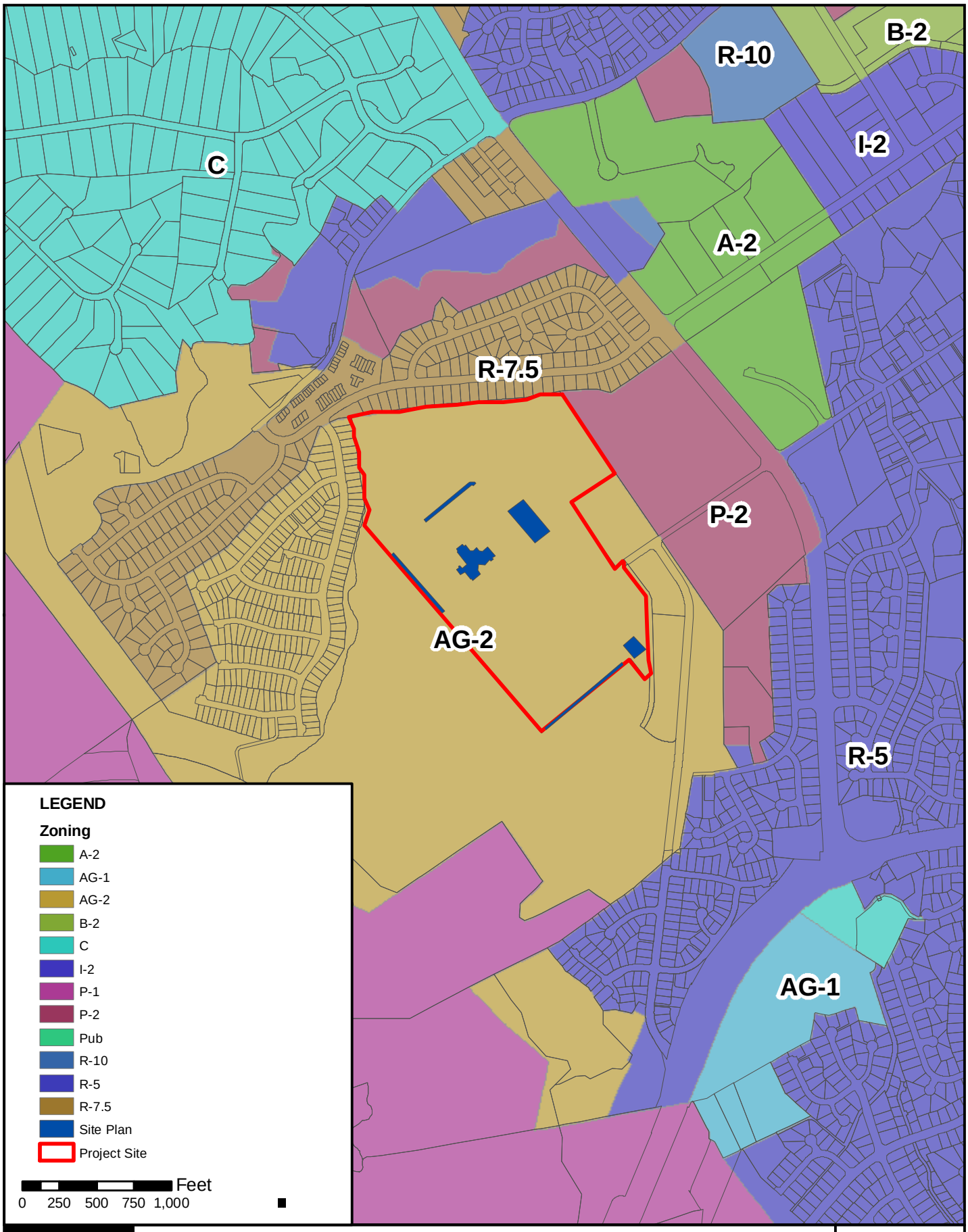
4.2.3 Land Use Ordinance and Zoning

The City and County of Honolulu Land Use Ordinance (LUO) regulates land use in accordance with adopted land use policies, including the General Plan and DPs. The provisions are also referred to as the zoning ordinance. The project site is zoned AG-2 General Agricultural District (see Figure 4-2). According to the LUO, Universities and colleges are permitted in AG-2 with a Plan Review Use (PRU) Permit.

4.2.4 Plan Review Use (PRU)

The City and County of Honolulu (City) Council previously approved a Plan Review Use (PRU) Permit for a Five Year Master Plan planned for Windward Community College on May 4, 1994 under Council Resolution No. 94-87, CD-1. The Master Plan included the construction of new buildings, the renovation of existing buildings and the development of support infrastructure, including the proposed LLRC. As part of the PRU, nine (9) conditions were imposed, and all of the conditions have been satisfied.

Under this Resolution, Condition No. 8 addressed a timeframe for which building permits must be obtained to implement the improvements indicated under that master plan. This condition stated:



WCC LIBRARY & LEARNING RESOURCE CENTER

City & County of Honolulu Zoning Map

FIGURE 4-2

> *"No building permit shall be issued for construction which is: (1) covered by this Plan Review Use; and (2) for which Plan Review Use approval is required, after the fifth anniversary of the date of the adoption to this Resolution unless the Applicant obtains an amendment to the Resolution to permit the construction or obtains a new Plan Review Use approval from the City Council for the construction."*

A request to modify this Condition to grant a time extension was approved by the City Department of Planning and Permitting (DPP) on June 16, 2000. The time requirement under the Resolution was thus amended to extend it to the "eighth anniversary" from the date of the adoption of this Resolution. Under this extension, the timeframe was extended up to the year 2002. However, no further time extensions have been issued since then. As a result, another amendment to this Condition is required to allow for the construction of the proposed LLRC along with other future improvements implemented by WCC. Windward Community College - University of Hawaii is requesting to amend Condition No. 8.

The amendment to Condition No. 8 extending the time required to obtain building permits was needed to allow construction of improvements planned for WCC which includes the currently proposed LLRC project. Without this amendment, construction of the LLRC project would not be able to occur resulting in the loss of about $41.6 million in funding already appropriated for this project. Furthermore, additional improvements planned by WCC would not be allowed to proceed.

With the loss of this funding, there are no assurances WCC can get funding re-appropriated for this project in the future given competing funding requests by other colleges within the University of Hawai'i system. In addition, the costs required to construct the project would be greater in the future due to increasing inflation costs.

Without the amendment, other improvements planned for WCC under the master plan would also not be able to be implemented. This includes several renovation projects for existing buildings as well. The inability of WCC to implement these improvements would significantly impede their ability to adequately provide quality educational programs and activities for their students and provide support facilities for faculty.

The City Council approved the amendment on December 3, 2008 (see Appendix E).

4.2.4.1 Compliance with Parking Implementation Plan

One of the conditions of the PRU was to prepare A Parking Implementation Plan (PIP). A PIP was prepared and was approved on December 14, 1995 by the City. This plan provides phasing information and detailed layouts for the parking facilities proposed in the Windward Community College (WCC) Five Year Master Plan. The PIP was organized into five phases to address provisions corresponding with each major phase of campus development. Required parking would also be phased to support new facilities. The necessary number of parking and loading spaces provided would be in accordance with the Land Use Ordinance and be available during all increments of construction activities.

As funding became available, the construction of new facilities and the renovation of existing facilities occurred. The development of the campus did not necessarily follow the phasing outlined in the PIP, therefore the total number of parking stalls needed at each phase may have been less or more than what should have been provided.

The proposed project falls within Phase 3 of the PIP. At the end of Phase 3, WCC should have 869 parking stalls. At the end of all phases, WCC should have 912 parking stalls, based on the approval for a Minor Modification for Building D on June 16, 2000.

A parking survey was conducted by Architects Hawaii in June 2008. Currently there are 624 parking stalls (includes 39 ADA stalls) and 5 loading spaces. WCC is currently 245 stalls short based on Phase 3 of the PIP. At the end of all phases WCC should meet the required number of parking stalls (912 parking stalls) as stated in the PIP.

Proposed locations for parking areas have changed since the approval of the PIP. Hale Ao (Hawaiian Studies Building) which was scheduled to be used for parking (provide 84 stalls at Phase 5), has been renovated using federal funds. As a result, Hale Ao will not be replaced with parking. In addition, Hale Awa, which was master planned to become a parking lot (252 stalls), has been leased to the Law Library Microfilm Consortium until 2027 affecting WCC's ability to provide planned parking stalls. With the removal of a parking lot at Hale Awa and Hale Ao, other areas for additional parking need to be identified and planned for to account for the loss of these parking areas.

The location of the proposed new parking lot #1 was previously identified as the proposed Child Care and Services Center in the Five Year Master Plan. The relocation of the proposed Child Care and Services Center will need to be addressed when WCC's Master Plan is updated.

For the proposed LLRC, 96 parking stalls are proposed. A new parking lot adjacent to the existing front entrance parking lot (parking lot #1) will consist of 92 parking stalls (includes 10 ADA stalls) and 4 additional ADA stalls will be placed near Hale Manaopono and Hale Laakea (2 ADA stalls near each building). While 96 stalls will be added, 10 existing stalls well be eliminated, resulting in a net addition of 86 parking stalls, which meets the LUO parking requirements.

In addition to the new parking lot mentioned above, two additional parking areas are also proposed. Another parking area (parking lot #2) is proposed next to Hale Awa, which will consist of 30 parking stalls. An additional 21 parking stalls will be provided along Ala Koolau (mauka boundary of WCC). These additional parking areas are additive bid items and will be constructed or not, depending on funding. A total of 137 parking stalls could be provided with the LLRC project. WCC would still be short by 108 stalls at the end of Phase 3 and 151 stalls short at the end of all phases.

Although the number of existing parking stalls is less than what the PIP states for Phase 3, the number of parking stalls being provided as part of the proposed project meets LUO parking requirements. The PIP will need to be updated when WCC updates their PRU Master Plan.

4.2.4.2 Compliance with Urban Design Plan

Another condition of the PRU was to prepare an Urban Design Plan and Design Guidelines. This plan was accepted on April 12, 1996 by the City. This plan is provided to supplement, and to be used in conjunction with the Planned Review Use for a Five Year Master Plan for WCC. The WCC Urban Design Plan provides additional guidance for implementing the desired character of future developments and the concepts set forth in the Five Year Master Plan.

Campus Concepts and Themes

The Urban Design Plan states *"The concept for the overall design character is to promote the atmosphere and feel associated with a friendly, small town college campus which presently exists. In response to this image, design concepts and themes consistently call for preserving and enhancing the existing unique qualities of the buildings and site features….."*

Campus Architecture Objectives:

- *Create an identity for the College buildings that is separate from the Hawaii State Hospital.*
- *Keep footprints of new buildings compact to maintain maximum open space.*
- *Introduce new buildings that respect the location, scale and size of the existing buildings.*

Comment: The new LLRC was initially planned to be about 81,700 square feet in size, but was scaled down to approximately 69,000 square feet. Figure 2-7 includes an overall site plan for this project. The proposed three-story facility will replace Hale Manaleo located near the center of the WCC campus. Hale Laakea and Hale Manaopono are located mauka and makai of Hale Manaleo. An open lawn area is located to the east and Hale Palanakila is located to the west. The proposed LLRC is designed to take advantage of the open space on campus and the mauka/makai views from the proposed building.

Site Design Objectives:

- *Create strong edge definition between the college and the State Hospital.*
- *Keep central portion of main campus and northern corner (future play fields) as major open space.*
- *Locate parking and roads at the perimeter of the main campus.*
- *Create a pathway system for pedestrians and maintenance, covered walkways and accessible routes.*

Comment: The new LLRC was initially planned to be about 81,700 square feet in size, but was scaled down to approximately 69,000 square feet. The proposed three-story facility will replace Hale Manaleo (Building H) located near the center of the WCC campus. The site optimally places the new LLRC at the hub of campus pedestrian traffic. Hale Laakea and Hale Manaopono are located mauka and makai of Hale Manaleo. An open lawn area is located to the east and Hale Palanakila is located to the west. The proposed LLRC is designed to take advantage of the open space on campus and the mauka/makai views from the proposed building.

The LLRC will be designed not to significantly impact the expansive green open space of the quadrangle, dramatic views of the Koolau mountain range, prominent banyan trees and distant views of the ocean at Kaneohe Bay.

The exterior design of the proposed facility will be consistent with the Spanish Mission Revival architectural style already established throughout the campus. The design will encourage the use of natural daylight and allow for views of the Koolau mountains to the west and distant ocean views to the north and east.

The existing road, Ilima Way, will be demolished and the existing accessible parking stalls relocated. The results will extend the campus quadrangle and create a contiguous, green, open space, thus maintaining and enhancing the existing view corridors.

Fire truck access to the LLRC is required. Ala Koolau located to the east of Hale Manaleo bisects the campus and is proposed to be closed off. The fire lane driveway and turnaround will be designed to

function as a plaza for pedestrian circulation, and the large turn around area as an open plaza, gathering space.

The proposed LLRC is in compliance with the architectural and design concept objectives discussed in the Urban Design Plan.

Building Layout: The new LLRC was initially planned to be about 81,700 square feet in size, but was scaled down to 62,000 square feet. Figure 2-7 includes an overall site plan for this project. The proposed three-story facility will replace Hale Manaleo located near the center of the WCC campus. Hale Laakea and Hale Manaopono are located mauka and makai of Hale Manaleo. An open lawn area is located to the east and Hale Palanakila is located to the west. The proposed LLRC is designed to take advantage of the open space on campus and the mauka/makai views from the proposed building. The proposed LLRC will not exceed the 50 foot height limit, as shown in Figures 2-8 and 2-9.

Vehicular Circulation and Parking: The proposed project eliminates Ala Koolau that divides the main campus. This area will be used for the new fire lane and truck turnaround area required for the project. The turnaround "plaza" will also function as a pedestrian gathering place.

The two proposed parking lots are proposed at the periphery of the campus. Proposed parking lot #1 is proposed as an extension of the existing entrance parking lot and parking lot #2 is located adjacent to Hale Awa.

Three (3) segments of Ala Koolau will also be widened.

Pedestrian Circulation: The proposed LLRC project will enhance the pedestrian system. The LLRC is located in the center of campus and will become the focus and/or main gathering place for WCC. The proposed project eliminates the existing through-road and turning into it a pedestrian like plaza which will also be used for emergency access.

The proposed project site is a highly used central location at the north end of the "Quad", the central green open space. This site optimally places the new LLRC at a convenient crossroads and hub for campus pedestrian traffic moving between the buildings at the south end of campus and the buildings at the north end of campus. Included among these are the Student Center, the Humanities Building, the Science Complex, classroom buildings and parking.

Landscaping: The location of the new LLRC building was appropriately sited to maintain the existing banyan trees. The mature banyan trees located around the existing Hale Manaleo, proposed parking lot #1, and Ala Koolau will be protected during the construction of the new facility. Landscaping will be added around the proposed parking lots as needed. The Landscape plan will be in compliance with the Landscape Plan approved by the City.

Design Review Committee

The proposed project is under review with the Design Review Committee.

5.0 ALTERNATIVES CONSIDERED

5.1 NO ACTION ALTERNATIVE

Under the No Action Alternative, WCC would maintain their existing facilities and would not build a new Library and Learning Resources Center, additional parking, and accessory improvements. The No Action Alternative would require that the school's staff and students continue to operate under existing conditions. These deficiencies would continue to impair the school's ability to effectively provide for a stimulating and productive environment for students. It would also restrict the college's ability to provide a state of the art facility that is capable of accommodating WCC's present and anticipated future enrollment.

5.2 ALTERNATIVE SITE DEVELOPMENT LAYOUTS

A variety of site development concepts were developed as part of the design process to analyze and evaluate the project's siting, height, scenic views, and open space requirements. The project site is limited by the development standards pursuant to the Plan Review Use for Five Year Master Plan for WCC.

Due to the disadvantages of building a new LLRC around Hale Manaleo, demolishing Hale Manaleo was the appropriate alternative.

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6.0 DETERMINATION AND COMPLIANCE

This Final EA was prepared in accordance with the consultation process of Chapter 343, HRS. Based on the significance criteria of Section 200-12 of Title 11, Administrative Rules, Department of Health, State of Hawaii, it is determined that the proposed project will not have a major effect on the environment, therefore this Finding of No Significant Impact (FONSI) will be filed with the State Office of Environmental Quality Control (OEQC). The proposed project's relationship to each of the significance criteria is discussed below.

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

The proposed project will not involve the loss or destruction of any natural or cultural resource. The proposed LLRC was designed to preserve the open space in the center of campus. The mature banyan trees located near Hale Manaleo will be protected throughout construction.

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

The proposed project will not curtail the beneficial uses of the environment. The proposed project involves the redevelopment of a site already developed. The proposed LLRC was designed to preserve the open space and take advantage of the mauka and makai views. The proposed project is being designed to meet Silver LEED guidelines.

(3) Conflict with the state's long-term environmental policies or goals and guidelines as expressed in Chapter 343, HRS, and any revisions thereof and amendments thereto, court decisions, or executive orders;

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

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

The proposed project will not adversely impact the economic or social welfare of the community. The proposed project would provide short-term economic benefits in the form of construction jobs.

(5) Substantially affect public health;

The proposed project will not adversely impact public health. Short-term impacts are related to construction-related activities such as air and noise. The appropriate mitigation measures will be implemented to minimize the impact to the students and staff of WCC, as well as the surrounding neighbors.

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

The proposed project would not generate any new in-migrant residents to the island of Oahu due to additional permanent jobs since none are expected. The new building would be operated by the existing

school's staff. Thus, there would be no significant effect on State and City operational expenditures for public services performed by staff. The new building will contribute increased operating costs for the overall college associated with increased electrical use. However, this increase is not expected to be significant and would be appropriately incorporated in the WCC's operating budget and expenses. The proposed project is being designed to meet Silver LEED guidelines.

(7) Involve a substantial degradation of environmental quality;

The proposed project is not anticipated to have a negative impact upon the environment. Construction activities associated with the proposed project are anticipated to result in short-term impacts to noise, air quality, water quality and traffic in the immediate vicinity. With the incorporation of mitigation measures during the construction period, the project will not result in long-term degradation to the environmental quality.

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

The proposed project will not create a commitment for any larger actions, nor will it contribute to cumulative negative effect upon the environment. The proposed project involves the redevelopment of a site already developed and consistent with land use plans and designations.

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

The proposed improvements will occur on already developed portions of the project site. There are no known rare, threatened or endangered species of flora or fauna or associated habitat on the project site that could be adversely affected by the proposed action.

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

Operation of construction equipment would temporarily elevate ambient noise and concentrations of exhaust emission in the immediate vicinity of the project site. The proposed redevelopment will have no significant long-term impact on air or water quality or ambient noise levels in the vicinity.

(11) Affect 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;

The project site is located within Zones "X" and "D", Areas determined to be outside the 0.2% annual chance of floodplain and areas in which flood hazards are undetermined. No significant impacts to flood hazards are anticipated as a result of the proposed action.

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

The proposed redevelopment is based on a Master Plan that incorporates the scenic setting of the campus as an asset to the programs offered by the College. The campus is generously landscaped and additional landscaping will be provided along the entry way and perimeter of the campus. The proposed project was designed to preserve the open space and take advantage of the mauka and makai views.

(13) Require substantial energy consumption.

Construction and operation of the project will not require substantial energy consumption. The proposed buildings and improvements are intended to improve operational efficiencies. The proposed project is being designed to meet Silver LEED guidelines.

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7.0 LIST OF REQUIRED PERMIT APPROVALS

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

State of Hawaii

Department of Health
- Noise Variance Permit
- Permit for Air Emissions
- National Pollutant Discharge Elimination System (NPDES) Individual Permit

Disabilities Communication and Access Board (DCAB)
- Review pursuant to the Americans with Disabilities Act Accessibility Guidelines (ADAAG)

State Historic Preservation Division
- Historic Buildings Review

City & County of Honolulu

Department of Planning and Permitting
- Building Permit
- Grading Permit
- Amendment Request to Plan Review Use (PRU): The City Council approved the amendment on December 3, 2008

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8.0 CONSULTATION

8.1 PRE-ASSESSMENT CONSULTATION

The following agencies and organizations were contacted during the preparation of the Draft EA. Of those who formally replied during the pre-assessment period, some had no comments while others provided substantive comments as indicated by the ✓ and ✓✓, respectively. All written comments are reproduced herein (Appendix A).

Federal
U.S. Army Corps of Engineers
U.S. Fish and Wildlife Service

State
Department of Accounting & General Services ✓✓
Department of Education ✓
Department of Health, Office of Environmental Quality Control
Department of Health, Environmental Planning Office
Department of Health, Environmental Management Office
Department of Land & Natural Resources
Department of Land & Natural Resources, Land Division ✓
Department of Land & Natural Resources, Historic Preservation Division ✓
Department of Land & Natural Resources, Commission on Water Resources Management
Department of Land & Natural Resources, Engineering Division ✓✓
Department of Transportation ✓✓
Windward Comprehensive Health Center
Hawaii State Hospital
Judiciary, Kaneohe District Courthouse

City
Board of Water Supply ✓✓
Department of Parks & Recreation ✓
Department of Planning & Permitting ✓✓
Department of Transportation Services ✓✓
Fire Department ✓✓
Police Department ✓
Department of Facility Maintenance ✓

Other
Kaneohe Neighborhood Board, No. 30
Representative Ken Ito, 48th District
Representative Cynthia Thielen,
Representative Pono Chong
Representative Tommy Waters
Representative Colleen Rose Meyer
Representative Michael Magaoay
Senator Jill Tokuda ✓✓

Senator Clayton Hee, 23rd District
Councilmember Barbara Marshall
Councilmember Rod Tam
Hakipuu Learning Center

8.2 PARTIES CONSULTED DURING THE DRAFT EA

The following agencies and organizations were consulted and comments solicited for the Draft EA. Of those who formally replied during the Draft EA comment period, some had no comments while others provided substantive comments as indicated by the ✓ and ✓✓, respectively. All written comments are reproduced herein (Appendix A).

Federal
U.S. Army Corps of Engineers ✓✓
U.S. Fish and Wildlife Service

State
Department of Accounting & General Services ✓✓
Department of Education ✓
Department of Health, Office of Environmental Quality Control
Department of Health, Environmental Planning Office ✓✓
Department of Health, Environmental Management Office
Department of Land & Natural Resources
Department of Land & Natural Resources, Division of Aquatic Resources ✓✓
Department of Land & Natural Resources, Land Division ✓
Department of Land & Natural Resources, Historic Preservation Division
Department of Land & Natural Resources, Engineering Division ✓✓
Office of Hawaiian Affairs
Department of Transportation ✓✓
Windward Comprehensive Health Center
Hawaii State Hospital
Judiciary, Kaneohe District Courthouse

City
Board of Water Supply ✓✓
Department of Parks & Recreation
Department of Planning & Permitting ✓✓
Department of Transportation Services ✓✓
Fire Department ✓✓
Police Department
Department of Facility Maintenance

Other
Kaneohe Neighborhood Board, No. 30
Representative Ken Ito
Representative Cynthia Thielen
Representative Pono Chong

Representative Jessica Wooley
Representative Chris Lee
Senator Jill Tokuda
Senator Clayton Hee
Councilmember Ikaika Anderson
Councilmember Rod Tam
Hakipuu Learning Center

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9.0 REFERENCES

1. City & County of Honolulu, Department of Land Utilization. *Coastal View Study.* 1987.

2. City and County of Honolulu, Department of Planning and Permitting. *General Plan Objectives and Policies*. 1992.

3. City and County of Honolulu, Department of Planning and Permitting. *Koolaupoko Sustainable Communities Plan*. August 2000.

4. George A.L. Yuen & Associates. *State Water Resources Protection Plan*. State of Hawaii, Review Draft March 1992.

5. Giambelluca, T.W., Nullet, M.A. and Schroeder, T.A. *Hawaiian Rainfall Atlas Report R76,* Hawaii Division of Water and Land Development, DLNR. 1986.

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7. Hawaii State Department of Business, Economic Development and Tourism. *Hawaii Census 2000*.

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11. Sato & Associates, Inc. for State of Hawaii Department of Land & Natural Resources. *Final Environmental Assessment and Finding of No Significant Impact Windward Exploratory Well.* October 1998.

12. State of Hawaii Department of Land and Natural Resources Commission on Water Resource Management and the U.S. National Park Service, *Hawaii Stream Assessment: A Preliminary Appraisal of Hawaii's Stream Resources,* December 1990.

13. United States Department of Agriculture Soil Conservation Service. *Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii*, August 1972.

14. University of Hawaii, Department of Geography. *Atlas of Hawaii.* The University Press of Hawaii, Honolulu, Third Edition 1998.

15. University of Hawaii, Institutional Research Office. *Enrollment Projections University of Hawaii Fall 2008 to Fall 2014.* July 2008.

16. University of Hawaii at Manoa. *University of Hawaii System Spring 2009 Enrollment Reaches All-Time Record of 50,952.* Website: http://manoa.hawaii.edu.cgi-bin/uhmnews2?20090202121007 Accessed March 8, 2009.

17. U.S. Fish and Wildlife Service National Wetlands Inventory Website. http\\www.fws.gov/wetlands/Data/MapperIntro.html Accessed December 9, 2008.

18. Wilson Okamoto & Associates, Inc. for State of Hawaii Department of Accounting and General Services. *Environmental Assessment and Negative Declaration for Hawaii State College Development.* May 1987.

19. Wilson Okamoto & Associates, Inc. for the City and County of Honolulu Department of Planning. *Oahu Water Management Plan Technical Reference Document.* March 1990.

20. Wilson Okamoto & Associates, Inc. and Brown and Caldwell for City & County of Honolulu, Department of Environmental Services and Department of Design and Construction. *Kailua-Kaneohe-Kahaluu Facilities Plan*. September 1998.

21. Wilson Okamoto Corporation for the City and County of Honolulu Department of Design and Construction and Kaneohe – Kahaluu Community Vision Team. *Kaneohe – Kahaluu Stream Restoration and Maintenance A Community Guidebook.* June 2004.

Appendix A

Consultation Letters

LINDA LINGLE
GOVERNOR

RUSS K. SAITO
COMPTROLLER

BARBARA A. ANNIS
DEPUTY COMPTROLLER

STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
P.O. BOX 119, HONOLULU, HAWAII 96810

(P)1300.8

SEP - 9 2008

RS

Mr. Ronald Sato, AICP
Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

Dear Mr. Sato:

Subject: Pre-Assessment Consultation for Draft Environmental Assessment
Windward Community College – Library and Learning Resources Center Project
Kaneohe, Oahu, Hawaii
TMK 4-5-23:014

Thank you for the opportunity to provide comments for the Pre-Assessment Consultation for the Draft Environmental Assessment for the subject project. The proposed project does not impact any of the Department of Accounting and General Services' projects or existing facilities, and we have no comments to offer at this time.

If you have any questions regarding the above, please have your staff call Mr. David DePonte of the Planning Branch at 586-0492.

Sincerely,

ERNEST Y. W. LAU
Public Works Administrator

DD:vca
c: OEQC

1907 South Beretania Street
Artesian Plaza, Suite 400
Honolulu, Hawaii, 96826 USA
Phone: 808.946.2277
Fax: 808.946.2253
www.wilsonokamoto.com

7723-01
April 27, 2009

Mr. Ernest K. Lau, Public Works Administrator
Department of Accounting & General Services
State of Hawaii
P.O. Box 119
Honolulu, Hawaii 96810

SUBJECT: Pre-Assessment Consultation for Draft Environmental Assessment
Windward Community College – Library & Learning Resource Center
Kaneohe, Oahu, Hawaii
Tax Map Key: 4-5-23:014

Dear Mr. Lau:

Thank you for your letter dated September 9, 2008. We acknowledge that the proposed project does not have any impacts to any of the Department of Accounting & General Services' projects or existing facilities, and that you have no comments to offer at this time.

Your letter, along with this response will be reproduced in the forthcoming Draft EA. We appreciate your participation during this phase of the process.

Sincerely,

Ronald Sato, AICP
Project Manager

cc: Terry McFarland, Architects Hawaii, Ltd.
Jeffrey Hunt, Windward Community College

LINDA LINGLE
GOVERNOR

PATRICIA HAMAMOTO
SUPERINTENDENT

RS

STATE OF HAWAI'I
DEPARTMENT OF EDUCATION
P.O. BOX 2360
HONOLULU, HAWAII 96804

RECEIVED
SEP 19 2008
WILSON OKAMOTO CORPORATION

OFFICE OF THE SUPERINTENDENT

September 16, 2008

Mr. Ronald Sato
Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

Dear Mr. Sato:

Subject: Pre-Assessment Consultation for Windward Community College Library and Learning Center, Kaneohe, Oahu, TMK: 4-5-023:014

The Department of Education has reviewed the project summary for the proposed library and learning center at the University of Hawaii's Windward Community College and we have no comment or concern.

Thank you for this opportunity to offer our comments. If you have any questions, please contact Heidi Meeker of the Facilities Development Branch at 377-8301.

Very truly yours,

Patricia Hamamoto
Superintendent

PH:jmb

c: Randolph Moore, Assistant Superintendent, OSFSS
Duane Kashiwai, Public Works Administrator, FDB
Lea Albert, CAS, Castle/Kahuku Complex Areas

AN AFFIRMATIVE ACTION AND EQUAL OPPORTUNITY EMPLOYER

1907 South Beretania Street
Artesian Plaza, Suite 400
Honolulu, Hawaii, 96826 USA
Phone: 808.946.2277
Fax: 808.946.2253
www.wilsonokamoto.com

7723-01
April 27, 2009

Ms. Patricia Hamamoto, Superintendent
Department of Education
State of Hawaii
P.O. Box 2360
Honolulu, Hawaii 96804

SUBJECT: Pre-Assessment Consultation for Draft Environmental Assessment
Windward Community College – Library & Learning Resource Center
Kaneohe, Oahu, Hawaii
Tax Map Key: 4-5-23:014

Dear Ms. Hamamoto:

Thank you for your letter dated September 16, 2008. We acknowledge that you have no comments to offer at this time.

Your letter, along with this response will be reproduced in the forthcoming Draft EA. We appreciate your participation during this phase of the process.

Sincerely,

Ronald Sato, AICP
Project Manager

cc: Terry McFarland, Architects Hawaii, Ltd.
Jeffrey Hunt, Windward Community College

LINDA LINGLE
GOVERNOR

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

BRENNON T. MORIOKA
DIRECTOR

Deputy Directors
MICHAEL D. FORMBY
FRANCIS PAUL KEENO
BRIAN H. SEKIGUCHI
JIRO A. SUMADA

IN REPLY REFER TO:

STP 8.2999

September 22, 2008

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

Dear Mr. Sato:

Subject: Windward Community College (WCC)
Library and Learning Resources Center (LLRC) Project
Early Consultation for Draft Environmental Assessment (Draft EA)
TMK: 4-5-23: 014

Thank you for requesting the Department of Transportation's (DOT) review of the subject project that replaces an existing, aging building with a new three-story, 62,000 square-foot facility. DOT's initial comments are as follows:

1. The subject project's generated traffic alone is not expected to significantly impact traffic on State transportation facilities in the area.

2. DOT, however, remains interested in the total projected number of students and staff (teaching, administrative and support/maintenance) and the full development of the WCC campus. The future full build-out of the campus, coupled with the anticipated completed facilities of any adjoining complex using the same road(s) connecting to Kahekili Highway, is expected to generate cumulative traffic impacts at the highway. The determination of the resultant collective traffic impacts to Kahekili Highway will enable the proper planning and implementation of highway improvements.

3. The Draft EA should include a traffic assessment report and describe how the subject project fits into the overall plan and future build-out of the WCC campus.

4. The DOT reserves the right to provide additional comments upon receipt of the Draft EA. DOT requests four (4) copies of the Draft EA for review when it is completed.

The courtesy of your advance consultation is appreciated.

Very truly yours,

BRENNON T. MORIOKA, PH.D., P.E.
Director of Transportation

WILSON OKAMOTO CORPORATION
1907 South Beretania Street
Artesian Plaza, Suite 400
Honolulu, Hawaii, 96826 USA
Phone: 808.946.2277
Fax: 808.946.2253
www.wilsonokamoto.com

7723-01
April 27, 2009

Mr. Brennon T. Morioka, Ph.D., P.E.
Director
Department of Transportation
State of Hawaii
869 Punchbowl Street
Honolulu, Hawaii 96813-5097

SUBJECT: Pre-Assessment Consultation for Draft Environmental Assessment
Windward Community College – Library & Learning Resource Center
Kaneohe, Oahu, Hawaii
Tax Map Key: 4-5-23:014

Dear Mr. Morioka:

Thank you for your letter dated September 22, 2008 (STP 8.2999). We offer the following responses in order of your comments:

1. We acknowledge that traffic generated by the proposed project is not expected to significantly impact traffic on State transportation facilities in the area.
2. Traffic operations are expected to remain similar to existing conditions, based on the Traffic Impact Assessment Report prepared for the proposed project. The proposed project adds another needed facility to the campus to alleviate existing space shortages with the existing library. Thus, the project would only improve the existing campus facilities intended to serve students and faculty there. If and when the applicant updates the WCC Master Plan, the cumulative traffic impacts can be addressed at that time.
3. A Traffic Impact Assessment Report will be prepared and summarized in the Draft EA.
4. We acknowledge that DOT reserves the right to provide additional comments upon receipt of the Draft EA. We will submit four (4) copies of the Draft EA upon completion.

Your letter, along with this response will be reproduced in the forthcoming Draft EA. We appreciate your participation during this phase of the process.

Sincerely,

Ronald Sato, AICP
Project Manager

cc: Terry McFarland, Architects Hawaii, Ltd.
Jeffrey Hunt, Windward Community College

LINDA LINGLE
GOVERNOR OF HAWAII

LAURA H. THIELEN
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 19, 2008

RECEIVED
SEP 23 2008
WILSON OKAMOTO CORPORATION

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

Attention: Mr. Ronald Sato

Gentlemen:

Subject: Pre-assessment for draft environmental assessment for Windward Community College-Library & Learning Resources Center Project

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

Other than the comments from Engineering Division, Land Division, the Department of Land and Natural Resources has no other comments to offer on the subject matter. Should you have any questions, please feel free to call our office at 587-0433. Thank you.

Sincerely,

Charlene E. Unoki
for Morris M. Atta
Administrator

LINDA LINGLE
GOVERNOR OF HAWAII

LAURA H. THIELEN
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

August 28, 2008

RECEIVED
LAND DIVISION
2008 SEP 15 A 9:16
DEPT OF LAND & NATURAL RESOURCES
STATE OF HAWAII

MEMORANDUM

TO: **DLNR Agencies:**
__Div. of Aquatic Resources
__~~Div. of Boating & Ocean Recreation~~
_x_ Engineering Division
__~~Div. of Forestry & Wildlife~~
__Div. of State Parks
__Commission on Water Resource Management
__Office of Conservation & Coastal Lands
_x_ Land Division – Oahu District

FROM: Morris M. Atta Charlene
SUBJECT: Pre-assessment for Draft Environmental Assessment for Windward Community College-Library & Learning Resources Center Project
LOCATION: Kaneohe, Oahu, TMK: (1) 4-5-23:14
APPLICANT: Wilson Okamoto Corporation

Transmitted for your review and comment on the above referenced document. We would appreciate your comments on this document. Please submit any comments by September 15, 2008.

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 my office at 587-0433. Thank you.

Attachments

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

Signed:
Date: 9/11/08

-DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION

LD/MorrisAtta
Ref.:ProAssessmentDEAWindwardCommunityCollege
Oahu.611

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 Zones D and X. The Flood Insurance Program does not have any regulations for developments within Flood Zones D and 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. Robert Sumitomo at (808) 768-8097 or Mr. Mario Siu Li at (808) 768-8098 of the City and County of Honolulu, Department of Planning and Permitting.
( ) Mr. Kelly Gomes at (808) 961-8327 (Hilo) or Mr. Kiran Emler at (808) 327-3530 (Kona) of the County of Hawaii, Department of Public Works.
( ) Mr. Francis Cerizo at (808) 270-7771 of the County of Maui, Department of Planning.
( ) Mr. Mario Antonio at (808) 241-6620 of the County of Kauai, Department of Public Works.

(X) **The applicant should include water demands and infrastructure required to meet project needs. Please note that 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.**

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

( ) Additional Comments: _____

( ) Other: _____

Should you have any questions, please call Ms. Suzie Agraan of the Planning Branch at 587-0258.

Signed: _____
ERIC T. HIRANO, CHIEF ENGINEER
Date: 9/11/08

LINDA LINGLE
GOVERNOR OF HAWAII

LAURA H. THIELEN
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

August 28, 2008

MEMORANDUM

TO: **DLNR Agencies:**
__Div. of Aquatic Resources
__Div. of Boating & Ocean Recreation
_x_Engineering Division
__Div. of Forestry & Wildlife
__Div. of State Parks
__Commission on Water Resource Management
__Office of Conservation & Coastal Lands
_x_Land Division – Oahu District

FROM: Morris M. Atta
SUBJECT: Pre-assessment for Draft Environmental Assessment for Windward Community College-Library & Learning Resources Center Project
LOCATION: Kaneohe, Oahu, TMK: (1) 4-5-23:14
APPLICANT: Wilson Okamoto Corporation

Transmitted for your review and comment on the above referenced document. We would appreciate your comments on this document. Please submit any comments by September 15, 2008.

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 my office at 587-0433. Thank you.

Attachments

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

Signed: _____
Date: 9-3-08

WILSON OKAMOTO CORPORATION
1907 South Beretania Street
Artesian Plaza, Suite 400
Honolulu, Hawaii, 96826 USA
Phone: 808.946.2277
Fax: 808.946.2253
www.wilsonokamoto.com

7723-01
April 27, 2009

Mr. Morris M. Atta, Administrator
Land Division
Department of Land & Natural Resources
State of Hawaii
P.O. Box 621
Honolulu, Hawaii 96809

SUBJECT: Pre-Assessment Consultation for Draft Environmental Assessment
Windward Community College – Library & Learning Resource Center
Kaneohe, Oahu, Hawaii
Tax Map Key: 4-5-23:014

Dear Mr. Atta:

Thank you for your letter dated September 19, 2008. We offer the following responses in the respective order of each Division's comments:

Engineering Division

1. We acknowledge your confirmation of the proposed project site being located in Zones D and X.
2. The upcoming Draft EA will discuss the infrastructure improvements needed for the proposed project. We acknowledge that the applicant will be required to pay Water Systems Facilities Charges for resource development, transmission, and daily storage.
3. The applicant will provide water demands and calculations to the Engineering Division.

Land Division

1. We acknowledge the division has no objections to the proposed project.

Your letter, along with this response will be reproduced in the forthcoming Draft EA. We appreciate your participation during this phase of the process.

Sincerely,

Ronald Sato, AICP
Project Manager

cc: Terry McFarland, Architects Hawaii, Ltd.
Jeffrey Hunt, Windward Community College

LINDA LINGLE
GOVERNOR OF HAWAII

LAURA H. THIELEN
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION OF WATER RESOURCE MANAGEMENT

RUSSELL Y. TSUJI
FIRST DEPUTY

KEN C. KAWAHARA
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

RECEIVED
SEP 30 2008
WILSON OKAMOTO CORPORATION

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION
601 KAMOKILA BOULEVARD, ROOM 555
KAPOLEI, HAWAII 96707

September 29, 2008

Mr. Ronald Sato, AIC, Project Manager
Wilson Okamoto Corporation
1907 South Beretania Street, Artesian Plaza, Suite 400
Honolulu, HI 96826

LOG NO: 2008.3901
DOC NO: 0809ST62
Architecture

Dear Mr. Sato:

SUBJECT: **Chapter 6E-8 (HRS) Review**
Library and Learning Resources Center Project Involving Demolition of the Hale Manaleo Building - Pre-Assessment Consultation for Draft Environmental Assessment, University of Hawaii Community Colleges, Windward Community College, Kaneohe, Island of Oahu, Hawaii
TMK: (1) 4-5-023:002

This is in regards to the submittal received August 28, 2008 for Pre-Assessment Consultation on a Draft Environmental Assessment for the Library and Learning Resources Center Project at Windward Community College. Our determination for the proposed work is "**effect, with proposed mitigation commitments.**"

The project involves demolition of the existing, Hale Manaleo Building that is part of the original, "State Hospital for the Insane" that is not listed on the State or National Registers of Historic Places. We believe that the Hospital is eligible for listing under Criterion A, "associated with events that have made an important contribution to the broad patterns of our history." Although Hale Manaleo is not longer a part of the Hospital, the building is more than 50 years of age, therefore making it eligible for listing on the Register.

SHPD has continued consultation with staff from the University of Hawaii and its Community College system, Architects Hawaii, and Fung Associates on proposed mitigation commitments for the demolition of Hale Manaleo and on design developments of the new building from Architects Hawaii.

Thank you for the opportunity to comment. Should you have any questions regarding architectural concerns, please call Susan Tasaki at (808) 692-8015.

Sincerely,

Astrid M.B. Liverman, Ph.D.
Architecture Branch Chief

c: Teresa Davan/Lauren Morawski, SHPD Archaeology Branch, Oahu Island

WILSON OKAMOTO CORPORATION
1907 South Beretania Street
Artesian Plaza, Suite 400
Honolulu, Hawai, 96826 USA
Phone: 808.946.2277
Fax: 808.946.2253
www.wilsonokamoto.com

7723-01
April 27, 2009

Ms. Astrid M.B. Liverman, Ph.D.
Architecture Branch Chief
State Historic Preservation Division
Department of Land & Natural Resources
State of Hawaii
601 Kamokila Boulevard, Room 555
Kapolei, Hawaii 96707

SUBJECT: Pre-Assessment Consultation for Draft Environmental Assessment
Windward Community College – Library & Learning Resource Center
Kaneohe, Oahu, Hawaii
Tax Map Key: 4-5-23:014

Dear Ms. Liverman:

Thank you for your letter dated September 29, 2008 (LOG NO.: 2008.3901/DOC NO.: 0809ST62). We acknowledge you determination for the proposed work as "effect, with proposed mitigation commitments."

Your letter, along with this response will be reproduced in the forthcoming Draft EA. We appreciate your participation during this phase of the process.

Sincerely,

Ronald Sato, AICP
Project Manager

cc: Terry McFarland, Architects Hawaii, Ltd.
Jeffrey Hunt, Windward Community College

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843

September 3, 2008

Mr. Ronald Sato, AICP
Wilson Okamoto Corporation
1907 South Beretania Street
Arteslan Plaza, Suite 400
Honolulu, Hawaii 96826

Dear Mr. Sato:

Subject: Your Letter Dated August 28, 2008 on the Pre-Assessment Consultation for Windward Community College – Library and Learning Resources Center Project, TMK 4-5-023:014

Thank you for the opportunity to comment on the proposed resource center.

The existing water system is presently adequate to accommodate the proposed development. However, please be advised that this information is based upon current data and, therefore, the Board of Water Supply reserves the right to change any position or information stated herein up until the final approval of your building permit application. The final decision on the availability of water will be confirmed when the building permit application is submitted for approval.

When water is made available, the applicant will be required to pay our Water System Facilities Charges for resource development, transmission and daily storage.

The on-site fire protection requirements should be coordinated with the Fire Prevention Bureau of the Honolulu Fire Department.

The proposed resource center is subject to Board of Water Supply cross-connection control and backflow prevention requirements prior to issuance of the Building Permit Application.

If you have any questions, please contact Robert Chun at 748-5443.

Very truly yours,

KEITH S. SHIDA
Program Administrator
Customer Care Division

WILSON OKAMOTO CORPORATION

1907 South Beretania Street
Arteslan Plaza, Suite 400
Honolulu, Hawaii, 96826 USA
Phone: 808.946.2277
Fax: 808.946.2253
www.wilsonokamoto.com

7723-01
April 27, 2009

Mr. Keith S. Shida, Program Administrator
Customer Care Division
Board of Water Supply
City & County of Honolulu
630 S. Beretania Street
Honolulu, Hawaii 96843

SUBJECT: Pre-Assessment Consultation for Draft Environmental Assessment
Windward Community College – Library & Learning Resource Center
Kaneohe, Oahu, Hawaii
Tax Map Key: 4-5-23:014

Dear Mr. Shida:

Thank you for your letter dated September 3, 2008. We offer the following responses in order of your comments:

1. We acknowledge that the existing water system is presently adequate to accommodate domestic requirements of the proposed subdivision and that the Board of Water Supply reserves the right to change any position or information stated herein up until the final approval of a building permit application.
2. We acknowledge that the applicant will be required to pay Water Systems Facilities Charges for resource development, transmission, and daily storage.
3. The on-site fire protection requirements will be coordinated with the Fire Prevention Bureau of the Honolulu Fire Department.
4. We will comply with the cross-connection control and backflow prevention requirements in conjunction with the Building Permit Application.

Your letter, along with this response will be reproduced in the forthcoming Draft EA. We appreciate your participation during this phase of the process.

Sincerely,

Ronald Sato, AICP
Project Manager

cc: Terry McFarland, Architects Hawaii, Ltd.
Jeffrey Hunt, Windward Community College

DEPARTMENT OF TRANSPORTATION SERVICES

CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 3RD FLOOR
HONOLULU, HAWAII 96813
Phone: (808) 768-8305 • Fax: (808) 523-4730 • Internet: www.honolulu.gov

MUFI HANNEMANN
MAYOR

WAYNE Y. YOSHIOKA
DIRECTOR

RICHARD F. TORRES
DEPUTY DIRECTOR

RECEIVED
SEP 19 2008
WILSON OKAMOTO CORPORATION

TP8/08-276842R

September 18, 2008

Mr. Ronald Saito, AICP
Wilson Okamoto Corporation
1907 South Beretania Street
Artesian Plaza, Suite 400
Honolulu, Hawaii 96826

Dear Mr. Saito:

Subject: Windward Community College – Library and Learning Resources Center
Project Pre-Assessment Consultation for Draft Environmental Assessment

This is in response to your letter of August 26, 2008, requesting our review of and comments on the Pre-Assessment Consultation for the Draft Environmental Assessment (DEA) of the Windward Community College - Library and Learning Resources Center Project. We offer the following comments:

1. This project may affect bus routes, bus stops, and para-transit operations. Therefore, notification of the scope of work, location, proposed closure of any street, traffic lane, or bus stop and duration of project must be made two weeks prior to construction by informing the Department of Transportation Services, Sandra Abelaye at 768-8371 or sabelaye@honolulu.gov, and Oahu Transit Services, Inc. (bus operations: Art Akana 852-6030 – para-transit operations: John Black 454-5041).

2. The jurisdiction of the roadways affected by the project should also be mentioned in the DEA.

Should you have any questions on the matter, please contact Mr. Brian Suzuki at 768-8349.

Very truly yours,

WAYNE Y. YOSHIOKA
Director

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Artesian Plaza, Suite 400
Honolulu, Hawaii, 96826 USA
Phone: 808.946.2277
Fax: 808.946.2253
www.wilsonokamoto.com

7723-01
April 27, 2009

Mr. Wayne Y. Yoshioka, Director
Department of Transportation Services
City & County of Honolulu
650 S. King Street, 3rd Floor
Honolulu, Hawaii 96813

SUBJECT: Pre-Assessment Consultation for Draft Environmental Assessment
Windward Community College – Library & Learning Resource Center
Kaneohe, Oahu, Hawaii
Tax Map Key: 4-5-23:014

Dear Mr. Yoshioka

Thank you for your letter dated September 18, 2008 (TP8/08-276842R). We offer the following responses in order of your comments:

1. The Department of Transportation Services and Oahu Transit Services, Inc. will be notified and consulted with on any proposed closure of any street, traffic lane, or bus stop prior to construction.
2. The jurisdiction of the roadways in the project area will be discussed in the Draft EA.

Your letter, along with this response will be reproduced in the forthcoming Draft EA. We appreciate your participation during this phase of the process.

Sincerely,

Ronald Sato, AICP
Project Manager

cc: Terry McFarland, Architects Hawaii, Ltd.
Jeffrey Hunt, Windward Community College

DEPARTMENT OF FACILITY MAINTENANCE
CITY AND COUNTY OF HONOLULU
1000 Uluohia Street, Suite 215, Kapolei, Hawaii 96707
Phone: (808) 768-3343 • Fax: (808) 768 -3381
Website: www.honolulu.gov

MUFI HANNEMANN
MAYOR

CRAIG I. NISHIMURA, P.E.
DIRECTOR AND CHIEF ENGINEER

GEORGE "KEOKI" MIYAMOTO
DEPUTY DIRECTOR

IN REPLY REFER TO:
DRM 08 - 801

September 19, 2008

Mr. Ronald Sato, AICP
Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

RECEIVED
SEP 2 2 2008
WILSON OKAMOTO CORPORATION

Dear Mr. Sato:

Subject: Pre-Assessment Consultation
Windward Community College
Library and Learning Resource Center Project

Thank you for the opportunity to comment on the pre-assessment consultation for the Draft Environmental Assessment for the subject Windward Community College project.

We have no comments as the proposed improvements for the Library and Learning Resources Center will be within State property under State jurisdiction. The proposed improvements will have negligible impact on our facilities and operations.

Should you have any questions, please call Charles Pignataro of the Division of Road Maintenance, at 768-3697.

Sincerely,

Craig I. Nishimura, P.E.
Director and Chief Engineer

1907 South Beretania Street
Artesian Plaza, Suite 400
Honolulu, Hawaii, 96826 USA
Phone: 808.946.2277
Fax: 808.946.2253
www.wilsonokamoto.com

7723-01
April 27, 2009

Mr. Craig I. Nishimura, P.E.
Director and Chief Engineer
Department of Facility Maintenance
City & County of Honolulu
1000 Uluohia Street, Suite 215
Kapolei, Hawaii 96707

SUBJECT: Pre-Assessment Consultation for Draft Environmental Assessment
Windward Community College – Library & Learning Resource Center
Kaneohe, Oahu, Hawaii
Tax Map Key: 4-5-23:014

Dear Mr. Nishimura:

Thank you for your letter dated September 19, 2008 (DRM 08-801). We acknowledge that the proposed project will have negligible impact on the Department's facilities and operations.

Your letter, along with this response will be reproduced in the forthcoming Draft EA. We appreciate your participation during this phase of the process.

Sincerely,

Ronald Sato, AICP
Project Manager

cc: Terry McFarland, Architects Hawaii, Ltd.
Jeffrey Hunt, Windward Community College

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

MUFI HANNEMANN
MAYOR

KENNETH G. SILVA
FIRE CHIEF

ALVIN K. TOMITA
DEPUTY FIRE CHIEF

September 16, 2008

Mr. Ronald Sato, AICP
Wilson Okamoto Corporation
1907 South Beretania Street
Suite 400, Artesian Plaza
Honolulu, Hawaii 96826

Dear Mr. Sato:

Subject: Preassessment Consultation for Draft Environmental Assessment
Windward Community College Library and Learning Resources Center Project
Kaneohe, Oahu, Hawaii
Tax Map Key: 4-5-023: 014

In response to your letter of August 26, 2008, regarding the above-mentioned project, the Honolulu Fire Department (HFD) reviewed the material provided and requires that the following be complied with:

1. Provide a fire apparatus access road for every facility, building, or portion of a building hereafter constructed or moved into or within the jurisdiction when any portion of the facility or any portion of an exterior wall of the first story of the building is located more than 150 feet (45 720 mm) from fire apparatus access as measured by an approved route around the exterior of the building or facility. (1997 Uniform Fire Code, Section 902.2.1.)

2. Provide a water supply, approved by the county, capable of supplying the required fire flow for fire protection to all premises upon which facilities or buildings, or portions thereof, are hereafter constructed or moved into or within the county.

   On-site fire hydrants and mains capable of supplying the required fire flow shall be provided 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. (1997 Uniform Fire Code, Section 903.2, as amended.)

3. Submit civil drawings to the HFD for review and approval.

Should you have any questions, please call Battalion Chief Socrates Bratakos of our Fire Prevention Bureau at 723-7151.

Sincerely,

KENNETH G. SILVA
Fire Chief

KGS/SK:bh

cc: Jeff Hunt, Windward Community College
Terry McFarland, Architects Hawaii Ltd.

WILSON OKAMOTO CORPORATION
1907 South Beretania Street
Artesian Plaza, Suite 400
Honolulu, Hawaii, 96826 USA
Phone: 808.946.2277
Fax: 808.946.2253
www.wilsonokamoto.com

7723-01
April 27, 2009

Mr. Kenneth G. Silva, Chief
Honolulu Fire Department
City & County of Honolulu
636 South Street
Honolulu, Hawaii 96813-5007

SUBJECT: Pre-Assessment Consultation for Draft Environmental Assessment
Windward Community College – Library & Learning Resource Center
Kaneohe, Oahu, Hawaii
Tax Map Key: 4-5-23:014

Dear Chief Silva:

Thank you for your letter dated September 16, 2008.

A fire apparatus access road will be provided for the proposed facility off of the northeastern side of the building connecting to Ala Koolau. The fire lane will also act as pedestrian plaza. The civil engineering consultant for the proposed project has consulted with the Fire Department regarding on-site fire protection requirements.

Your letter, along with this response will be reproduced in the forthcoming Draft EA. We appreciate your participation during this phase of the process.

Sincerely,

Ronald Sato, AICP
Project Manager

cc: Terry McFarland, Architects Hawaii, Ltd.
Jeffrey Hunt, Windward Community College

DEPARTMENT OF PARKS AND RECREATION
CITY AND COUNTY OF HONOLULU

KAPOLEI HALE • 1000 ULUOHIA STREET, SUITE 309 • KAPOLEI, HAWAII 96707
TELEPHONE: (808) 768-3003 • FAX: (808) 768-7053 • INTERNET: www.honolulu.gov

September 3, 2008

Mr. Ronald Sato, AICP, Project Manager
Wilson Okamoto Corporation
1907 South Beretania, Suite 400
Honolulu, Hawaii 96826

Dear Mr. Sato:

Subject: Pre-Assessment Consultation for Draft Environmental Assessment
Windward Community College-Library and Learning Resources Center
Project TMK: 4-5-23:014

Thank you for the opportunity to review and comment at the Pre-Consultation stage of the Draft Environmental Assessment for the Windward Community College-Library and Learning Resources Center Project.

The Department of Parks and Recreation has no comment and as the proposed project will not impact any program or facility of the department, you are invited to remove us as a consulted party to the balance of the EIS process.

Should you have any questions, please contact Mr. John Reid, Planner, at 768-3017.

LESTER K. C. CHANG
Director

LKCC:jr
(276710)

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Artesian Plaza, Suite 400
Honolulu, Hawaii, 96826 USA
Phone: 808.946.2277
Fax: 808.946.2253
www.wilsonokamoto.com

7723-01
April 27, 2009

Mr. Lester K. Chang, Director
Department of Parks and Recreation
City & County of Honolulu
Kapolei Hale
1000 Uluohia Street, Suite 309
Kapolei, Hawaii 96707

SUBJECT: Pre-Assessment Consultation for Draft Environmental Assessment
Windward Community College – Library & Learning Resource Center
Kaneohe, Oahu, Hawaii
Tax Map Key: 4-5-23:014

Dear Mr. Chang:

Thank you for your letter dated September 3, 2008. We acknowledge that you have no comments to offer at this time and we will remove you from our consultation party list.

Your letter, along with this response will be reproduced in the forthcoming Draft EA. We appreciate your participation during this phase of the process.

Sincerely,

Ronald Sato, AICP
Project Manager

cc: Terry McFarland, Architects Hawaii, Ltd.
Jeffrey Hunt, Windward Community College

DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 7TH FLOOR • HONOLULU, HAWAII 96813
TELEPHONE: (808) 768-8000 • FAX: (808) 527-6743
INTERNET: www.honolulu.gov • DEPT. WEB SITE: www.honoluludpp.org

MUFI HANNEMANN
MAYOR

HENRY ENG, FAICP
DIRECTOR

DAVID K. TANOUE
DEPUTY DIRECTOR

2008/ELOG-2139(sn)
92/PRU-3

September 19, 2008

RECEIVED
SEP 22 2008
WILSON OKAMOTO CORPORATION

Mr. Ronald Sato, AICP
Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

Dear Mr. Sato:

Subject: Pre-Assessment Consultation for Draft Environmental Assessment
New Library and Learning Resources Center
Windward Community College
45-720 Keaahala Road – Kaneohe
Tax Map Key 4-5-23: 14

This responds to your letter (DPP date-stamped August 28, 2008, requesting our comments on the preparation of a Draft Environmental Assessment (DEA) for the above project. Based on the information provided, we offer the following comments:

1. A Plan Review Use (PRU) Permit No. 92/PRU-3 for a Five-Year Master Plan for Windward Community College was approved by City Council Resolution No. 94-87 on May 4, 1994. The master plan included the construction of new buildings, the renovation of existing buildings and the development of support infrastructure, including the proposed Library and Learning Resources Center (LLRC). The master plan generally identifies the proposed LLRC as a 69,798-square foot building to be used to accommodate a library, media production and computer facilities.

   Condition 8 of the resolution establishes a deadline by which building permits for construction covered by the PRU must be obtained. The deadline was May 4, 2002. We are currently processing a request from the Windward Community College to amend the resolution by eliminating Condition 8 or at a minimum, extend the deadline to 2018. Once we complete our review, we will transmit our recommendation on the request to the City Council for action. If the City Council does not grant the request, the applicant will be required to apply for a new PRU Permit.

2. The DEA should address the project's compliance with the approved PRU Permit, including the following:

   a. The approved Parking Implementation Plan.

   b. The approved Urban Design Plan, including the landscaping, architecture, signage and lighting.

   c. The new 92-space parking lot adjacent to the existing entrance parking lot, which does not reflect the approved Five-Year Master Plan which shows a new Child Care building surrounded by open space.

   d. The review and approval of the Design Review Committee (DRC) of the various design phases of the proposed improvements. The DRC is required to certify that the design satisfies the objectives and criteria set in previous reviews and those identified in the design guidelines.

   Confirmation of the project's compliance with the approved PRU Permit will be determined when specific details are provided.

3. The applicant should consult the State Historic Preservation Division of the Department of Land and Natural Resources if the building to be demolished is over 50 years old.

We appreciate the opportunity to review and comment on the project. Should you have any questions, please contact Sharon Nishiura of our staff 768-8031.

Very truly yours,

Anthony X. Ching

FOR Henry Eng, FAICP, Director
Department of Planning and Permitting

HE:pl

Doc. 647318

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Artesian Plaza, Suite 400
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www.wilsonokamoto.com

7723-01
April 27, 2009

Mr. David K. Tanoue, Director
Department of Planning & Permitting
City & County of Honolulu
650 S. King Street, 7th Floor
Honolulu, Hawaii 96813

SUBJECT: Pre-Assessment Consultation for Draft Environmental Assessment
Windward Community College – Library & Learning Resource Center
Kaneohe, Oahu, Hawaii
Tax Map Key: 4-5-23:014

Dear Mr. Tanoue:

Thank you for your letter dated September 19, 2008 (2008/ELOG-2139(sn) 92/PRU3). We offer the following responses in order of your comments:

1. We acknowledge that the Department is currently reviewing our Amendment Request to PRU Condition 8. We further acknowledge that if the City Council does not grant the request to modify Condition 8, the applicant will be required to apply for a new PRU.
2. The Draft EA will address the project's compliance with the approved PRU Permit, including the following:
    a. An update of the Parking Implementation Plan will be discussed in the upcoming Draft EA.
    b. The proposed project is in compliance with the approved Urban Design Plan, including landscaping, architecture, signage, and lighting.
    c. The location of the proposed 92-space parking lot does not reflect the approved Five Year Master Plan which shows a Child Care Service building. Discussion on the reasons behind extending the existing parking lot and possibly moving or eliminating the Child Care Service building will be included in the Draft EA.
    d. The architects and WCC will be consulting with the Design Review Committee
3. Architects Hawaii and Fung Associates have consulted with the State Historic Preservation Division regarding the demolition of Hale Manaleo. SHPD has determined an "effect with agreed-upon mitigation commitments" (see attachment).

Your letter, along with this response will be reproduced in the forthcoming Draft EA. We appreciate your participation during this phase of the process.

Sincerely,

Ronald Sato, AICP
Project Manager

cc: Terry McFarland, Architects Hawaii, Ltd.
Jeffrey Hunt, Windward Community College

POLICE DEPARTMENT

CITY AND COUNTY OF HONOLULU

801 SOUTH BERETANIA STREET · HONOLULU, HAWAII 96813
TELEPHONE: (808) 529-3111 · INTERNET: www.honolulupd.org

MUFI HANNEMANN
MAYOR

BOISSE P. CORREA
CHIEF

PAUL D. PUTZULU
KARL A. GODBEY
DEPUTY CHIEFS

OUR REFERENCE BS-VYH

September 5, 2008

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

RECEIVED
SEP 05 2008
WILSON OKAMOTO CORPORATION

Dear Mr. Sato:

This is in response to your letter of August 26, 2008, requesting comments on a Draft Environmental Assessment for the Windward Community College, Library and Learning Resources Center Project.

This project should have no significant impact on the facilities or operations of the Honolulu Police Department.

If there are any questions, please call Major Kenneth Simmons of District 4 at 247-2166 or Mr. Brandon Stone of the Executive Office at 529-3644.

Sincerely,

BOISSE P. CORREA
Chief of Police

By
DEBORA A. TANDAL
Assistant Chief of Police
Support Services Bureau

Serving and Protecting With Aloha

1907 South Beretania Street
Aresiaa Plaza, Suite 400
Honolulu, Hawaii, 96826 USA
Phone: 808.946.2277
Fax: 808.946.2253
www.wilsonokamoto.com

7723-01
April 27, 2009

Mr. Boisse P. Correa, Chief
Police Department
City & County of Honolulu
801 S. Beretania Street
Honolulu, Hawaii 96813

SUBJECT: Pre-Assessment Consultation for Draft Environmental Assessment
Windward Community College – Library & Learning Resource Center
Kaneohe, Oahu, Hawaii
Tax Map Key: 4-5-23:014

Dear Chief Correa:

Thank you for your letter dated September 5, 2008 (BS-VYH). We acknowledge that the proposed project should have no significant impact on the facilities and operations of the Honolulu Police Department.

Your letter, along with this response will be reproduced in the forthcoming Draft EA. We appreciate your participation during this phase of the process.

Sincerely,

Ronald Sato, AICP
Project Manager

cc: Terry McFarland, Architects Hawaii, Ltd.
Jeffrey Hunt, Windward Community College

The Senate
The Twenty-Fifth Legislature
of the
State of Hawaii

STATE CAPITOL
HONOLULU, HAWAII 96813

September 19, 2008

RECEIVED
SEP 22 2008
WILSON OKAMOTO CORPORATION

Mr. Ronald Sato, AICP
Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, Hawai'i 96826

Dear Mr. Sato,

I write to you in strong support of the proposed Library and Learning Resources Center (LLRC) at Windward Community College (WCC). Taking into consideration that the current building that houses WCC's library has accumulated a variety of problems over the years, including, but not limited to, roof leaks, sagging ceilings, and mildew, this facility will be a welcomed addition to this academic institution and our Windward community.

Additionally, the LLRC will centralize many of the college's most utilized functions and activities that are currently housed in separate buildings on the WCC campus. By integrating the library, tutoring center, instructional and media services, and computer lab under one roof, students can enjoy the benefits of a world class learning environment that has not previously existed on campus.

WCC has campaigned for such a facility since 1992, and when I was elected to office in 2006, the completion of this facility was one of my top priorities. Thanks to the tireless efforts of the students, faculty, and staff at WCC, it appears this dream is close to becoming a reality.

Again, I whole-heartedly support the construction of the proposed Library and Learning Resources Center. If you have any questions, please do not hesitate to contact me at 587-7215 or via email at sentokuda@capitol.hawaii.gov.

Sincerely,

SENATOR JILL N. TOKUDA
Hawai'i State Senate
District 24 (Kāne'ohe-Kailua)

cc: Angela Meixell, Windward Community College

Senator Jill N. Tokuda
State Capitol, Room 218 • Honolulu, Hawai'i 96813
Phone: (808) 587-7215 • Fax: (808) 587-7220 • E-mail: sentokuda@capitol.hawaii.gov

WILSON OKAMOTO CORPORATION
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Artesian Plaza, Suite 400
Honolulu, Hawaii, 96826 USA
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Fax: 808.946.2253
www.wilsonokamoto.com

7723-01
April 27, 2009

Senator Jill N. Tokuda
Hawaii State Senate, 24th District
State Capitol, Room 218
415 S. Beretania Street
Honolulu, Hawaii 96813

SUBJECT: Pre-Assessment Consultation for Draft Environmental Assessment
Windward Community College – Library & Learning Resource Center
Kaneohe, Oahu, Hawaii
Tax Map Key: 4-5-23:014

Dear Senator Tokuda:

Thank you for your letter dated September 19, 2008. We acknowledge your continued support on the proposed project.

Your letter, along with this response will be reproduced in the forthcoming Draft EA. We appreciate your participation during this phase of the process.

Sincerely,

Ronald Sato, AICP
Project Manager

cc: Terry McFarland, Architects Hawaii, Ltd.
Jeffrey Hunt, Windward Community College

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, HONOLULU DISTRICT
FORT SHAFTER, HAWAII 96858-5440

REPLY TO ATTENTION OF:

May 29, 2009

Regulatory Branch

File Number: POH-2009-00187

Brian Minaai, Associate Vice President
University of Hawaii, Office of Capital Improvements
1960 East West Rd., Biomedical Sciences B-102
Honolulu, Hawaii 96822

Dear Mr. Minaai:

This letter is in response to your request, dated May 4, 2009, for our review and comments regarding the Draft Environmental Assessment for the proposed Windward Community College (WCC)- Library and Learning Resource Center located in TMK 1-4-5-023-014, Kaneohe, Oahu, Hawai'i.

Based on the information furnished to our office, Kaneohe-Kamooalii, Keaahala, Kapunahala, and Heeia Streams as well as a loi wetland border WCC on the southeast and northeast ends of the project site. We recommend you avoid all water resources located within the project site. Please note that under Section 404 of the Clean Water Act of 1972 (33 U.S.C. 1344), Department of Army (DA) authorization is required for any activities that result in the discharge (placement) of dredged and/ or fill material into waters of the U.S. (as defined in 33 C.F.R. 328.3).

Thank you for the opportunity to comment. If you have any questions, please contact Ms. Meris Bantilan-Smith, of my Regulatory staff at 808-438-7023 (FAX: 808-438-4060) or by electronic mail at Meris.Bantilan-Smith@usace.army.mil. Please include file number POH-2009-187 in any future correspondence regarding this project. Please be advised you can provide comments on your experience with the Corps' Honolulu District Regulatory Branch by accessing our web-based customer survey form at http://per2.nwp.usace.army.mil/survey.html.

Sincerely,

George P. Young, P.E.
Chief, Regulatory Branch

Copy Furnished:
Ronald Sato, AICP, Wilson Okamoto Corporation, 1907 So. Beretania St., # 400, Honolulu, HI 96826
Katherine P. Kealoha, Director, State DOH, OEQC, 235 South Beretania St., #702, Honolulu, HI 96813

UNIVERSITY of HAWAI'I SYSTEM

Office of Capital Improvements

July 29, 2009

Mr. George P. Young, P.E., Chief
Regulatory Branch
Department of the Army
U.S. Army Corps of Engineers, Honolulu District
Building 230
Fort Shafter, HI 96858

SUBJECT: Draft Environmental Assessment
Windward Community College
Library and Learning Resource Center
Tax Map Key (TMK): 4-5-23: 014
Kaneohe, Oahu, Hawaii

Dear Mr. Young:

Thank you for your letter dated May 29, 2009 (File Number: POH-2009-00187). The proposed project will not result in the discharge (placement) of dredged and/or fill material into waters of the U.S. As stated in Section 3.3.2 Surface Water Storm water from the project site during site preparation and construction will be in compliance with the City's Rules Relating to Storm Drainage Standards and a Best Management Plan will be prepared in conjunction with the NPDES Permit application.

Your letter, along with this response will be reproduced in the forthcoming Final EA. We appreciate your participation during this phase of the process.

1960 East West Road, Biomedical Sciences B-102
Honolulu, Hawai'i 96822
Telephone: (808) 956-7935
Fax: (808) 956-3175
An Equal Opportunity/Affirmative Action Institution

Should you have any questions or require additional information, please contact Mr. Loren Lau at (808) 956-2739.

Sincerely,

Mr. Brian Minaai
Associate Vice President
for Capital Improvements

cc: Mr. Terry McFarland, Architects Hawaii, Ltd.
Mr. Jeffrey Hunt, Windward Community College
Mr. Ronald Sato, Wilson Okamoto Corporation

LINDA LINGLE
GOVERNOR

RUSS K. SAITO
COMPTROLLER

BARBARA A. ANNIS
DEPUTY COMPTROLLER

(P)1161.9

STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
P.O. BOX 119, HONOLULU, HAWAII 96810

JUN - 2 2009

RECEIVED
JUN 03 2009
WILSON OKAMOTO CORPORATION

MEMORANDUM

TO: Mr. Brian Minaai, Associate Vice President
University of Hawaii, Office of Capital Improvements

ATTENTION: Mr. Loren Lau

FROM: Ernest Y. W. Lau
Public Works Administrator

SUBJECT: Draft Environmental Assessment
Windward Community College
Library & Learning Resource Center

Thank you for the opportunity to provide comments for the subject project. The proposed project does not impact any of the Department of Accounting and General Services' projects or existing facilities, and we have no comments to offer at this time.

If you have any questions regarding the above, please have your staff call Mr. David DePonte of the Planning Branch at 586-0492.

DH:mo
cc: Mr. Ronald Sato, Wilson Okamoto Corporation
Ms. Katherine Puana Kealoha, DOH OEQC

UNIVERSITY of HAWAI'I® SYSTEM

Office of Capital Improvements

July 29, 2009

Mr. Russ Saito, State Comptroller
Department of Accounting and General Services
State of Hawaii
1151 Punchbowl Street
Honolulu, HI 96813

SUBJECT: Draft Environmental Assessment
Windward Community College
Library and Learning Resource Center
Tax Map Key (TMK): 4-5-23: 014
Kaneohe, Oahu, Hawaii

Dear Mr. Saito:

Thank you for your letter dated June 2, 2009 ((P)1161.9). We acknowledge that the proposed project does not have any impacts to any of the Department of Accounting & General Services' projects or existing facilities, and that you have no comments to offer at this time.

Your letter, along with this response will be reproduced in the forthcoming Final EA. We appreciate your participation during this phase of the process.

Should you have any questions or require additional information, please contact Mr. Loren Lau at (808) 956-2739.

Sincerely,

Mr. Brian Minaai
Associate Vice President
for Capital Improvements

cc: Mr. Terry McFarland, Architects Hawaii, Ltd.
Mr. Jeffrey Hunt, Windward Community College
Mr. Ronald Sato, Wilson Okamoto Corporation

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Honolulu, Hawai'i 96822
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LINDA LINGLE
GOVERNOR

PATRICIA HAMAMOTO
SUPERINTENDENT

STATE OF HAWAI'I
DEPARTMENT OF EDUCATION
P.O. BOX 2360
HONOLULU, HAWAI'I 96804

OFFICE OF THE SUPERINTENDENT

RECEIVED
JUN 04 2009

June 2, 2009

TO: Mr. Brian Minaai, Associate Vice President
Office of Capital Improvements
University of Hawaii

ATTN: Mr. Loren Lau

FROM: Patricia Hamamoto, Superintendent
Department of Education

SUBJECT: Draft Environmental Assessment for Windward Community College
Library and Learning Center, Kaneohe, Oahu, TMK: 4-5-023:014

The Department of Education has reviewed the Draft Environmental Assessment for the proposed library and learning center at the University of Hawaii's Windward Community College and we have no comment or concern.

Thank you for this opportunity to offer our comments. If you have any questions, please contact Heidi Meeker of the Facilities Development Branch at 377-8301.

PH:jmb

c: Randolph Moore, Assistant Superintendent, OSFSS
Lea Albert, CAS, Castle/Kahuku Complex Areas
Ronald Sato, Wilson Okamoto Corporation
Katherine Puana Kealoha, OEQC

AN AFFIRMATIVE ACTION AND EQUAL OPPORTUNITY EMPLOYER

UNIVERSITY of HAWAI'I SYSTEM

Office of Capital Improvements

July 29, 2009

Ms. Patricia Hamamoto, Superintendent
Department of Education
State of Hawaii
P.O. Box 2360
Honolulu, HI 96804

SUBJECT: Draft Environmental Assessment
Windward Community College
Library and Learning Resource Center
Tax Map Key (TMK): 4-5-23: 014
Kaneohe, Oahu, Hawaii

Dear Ms. Hamamoto:

Thank you for your letter dated June 2, 2009. We acknowledge that you have no comments or concerns to offer at this time.

Your letter, along with this response will be reproduced in the forthcoming Final EA. We appreciate your participation during this phase of the process.

Should you have any questions or require additional information, please contact Mr. Loren Lau at (808) 956-2739.

Sincerely,

Mr. Brian Minaai
Associate Vice President
for Capital Improvements

cc: Mr. Terry McFarland, Architects Hawaii, Ltd.
Mr. Jeffrey Hunt, Windward Community College
Mr. Ronald Sato, Wilson Okamoto Corporation

1960 East West Road, Biomedical Sciences B-102
Honolulu, Hawai'i 96822
Telephone: (808) 956-7935
Fax: (808) 956-3175
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LINDA LINGLE
GOVERNOR OF HAWAII

CHIYOME L. FUKINO, M.D.
DIRECTOR OF HEALTH

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

In reply, please refer to:
EPO-09-069

June 5, 2009

Mr. Ronald Sato
Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

Dear Mr. Sato:

SUBJECT: Draft Environmental Assessment for Windward Community College – Library & Learning Resource Center
Kaneohe, Oahu, Hawaii
TMK: (1) 4-5-023: 014

Thank you for allowing us to review and comment on the subject application. The document was routed to the various branches of the Environmental Health Administration. We have the following Clean Water Branch, Clean Air Branch and General comments.

Clean Water Branch

The Department of Health, Clean Water Branch (CWB), has reviewed the subject document and offers these comments on your project. Please note that our review is based solely on the information provided in the subject document and its compliance with 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://www.hawaii.gov/health/environmental/env-planning/landuse/CWB-standardcomment.pdf.

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

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

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

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

2. You are 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). For the following types of discharges into Class A or Class 2 State waters, you may apply for NPDES general permit coverage by submitting the applicable Notice of Intent (NOI) form:

   a. Storm water associated with construction activities, including excavation, grading, clearing, demolition, uprooting of vegetation, equipment staging, and storage areas that result in the disturbance of equal to or greater than one (1) acre of total land area. The total land area includes a contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under a larger common plan of development or sale. An NPDES permit is required before the start of the construction activities.

   b. Discharges of hydrotesting water.

   c. Discharges of construction activity dewatering.

   You must submit a separate NOI form for each type of discharge at least 30 calendar days prior to the start of the discharge activity, except when applying for coverage for discharges of storm water associated with construction activity. For this type of discharge, the NOI must be submitted 30 calendar days before the start of construction activities. The NOI forms may be picked up at our office or downloaded from our website at http://www.hawaii.gov/health/environmental/water/cleanwater/forms/genl-index.html.

3. For types of wastewater discharges not covered by an NPDES general permit or discharges to Class AA or Class 1 State waters, you may need an NPDES individual permit. An application for an NPDES individual permit must be submitted at least 180 calendar days before the commencement of the discharge. The NPDES application forms may be picked up at our office or downloaded from our website at http://www.hawaii.gov/health/environmental/water/cleanwater/forms/indiv-index.html.

4. You must also submit a copy of the NOI or NPDES permit application to the State DLNR, State Historic Preservation Division (SHPD), or demonstrate to the satisfaction of the CWB that SHPD has or is in the process of evaluating your project. Please submit a copy of your request for review by SHPD or SHPD's determination letter for the project along with your NOI or NPDES permit application, as applicable.

5. Please note that all discharges related to the project construction or operation activities, whether or not NPDES permit coverage and/or Section 401 Water Quality Certification are required, must comply with the Water Quality Standards. Noncompliance with water quality requirements contained in HAR, Chapter 11-54, and/or permitting requirements, specified in

HAR, Chapter 11-55, may be subject to penalties of $25,000 per day per violation.

If you have any questions, please visit our website at http://www.hawaii.gov/health/environmental/water/cleanwater/index.html, or contact the Engineering Section, CWB, at 586-4309.

Clean Air Branch

Control of Fugitive Dust

Fugitive dust emissions occur during all phases of construction and operations. Activities close to existing residences, businesses, public areas or thoroughfares can cause dust problems. For cases involving mixed land use, we strongly recommend that buffer zones be established, wherever possible, in order to alleviate potential nuisance problems. We recommend that the contractors operate under a dust control management plan. The plan does not require the Department of Health approval, however it will help with identifying and minimizing the dust problems from the proposed project.

Examples of measures that can be included in the dust control plan are:

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 resource 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.

All activities must comply with the provisions of Hawaii Administrative Rules, §11-60.1-33 on Fugitive Dust. If you have any questions, please contact the Clean Air Branch at 586-4200

We strongly recommend that you review all of the Standard Comments on our website: www.hawaii.gov/health/environmental/env-planning/landuse/landuse.html. Any comments specifically applicable to this project should be adhered to.

If there are any questions about these comments please contact Jiacai Liu with the Environmental Planning Office at 586-4346.

Sincerely,

KELVIN H. SUNADA, MANAGER
Environmental Planning Office

c: EPO
CWB
CAB

UNIVERSITY of HAWAI'I SYSTEM

Office of Capital Improvements

July 29, 2009

Mr. Kelvin H. Sunada, Manager
Environmental Planning Office
Department of Health
State of Hawaii
P.O. Box 3378
Honolulu, Hawaii 96801-3378

SUBJECT: Draft Environmental Assessment
Windward Community College
Library and Learning Resource Center
Tax Map Key (TMK): 4-5-23: 014
Kaneohe, Oahu, Hawaii

Dear Mr. Sunada:

Thank you for your letter dated June 5, 2009 (EPO-09-069). We offer the following responses in order of your comments:

Clean Water Branch
As recommended, the Standard Comments on the Department of Health website has been reviewed and will be adhered to as applicable.

1. The proposed project will comply with HAR, Chapters 11-54 and 11-55.

2. As stated in the Draft EA, the proposed project will require an NPDES permit for Construction Strom Water Activities. The Final EA will be revised to state that an NPDES Individual permit will be required, as the coastal waters within Kaneohe Bay are classified as "AA.". The NPDES will be submitted 180 calendar days before the commencement of discharge.

   Hydrotesting and dewatering are not proposed for this project, however if needed, separate NOI for each type of discharge will be submitted prior to start of the discharge activity.

3. Wastewater discharges are not anticipated for the proposed project. However, an NPDES Individual permit will be required, as the coastal waters within Kaneohe Bay are classified as "AA."

1960 East West Road, Biomedical Sciences B-102
Honolulu, Hawai'i 96822
Telephone: (808) 956-7935
Fax: (808) 956-3175
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4. The State DLNR, Historic Preservation Division (SHPD) has been consulted prior and during the Draft EA process. A copy of the NPDES permit application will be submitted to the SHPD for their review.

5. We acknowledge that all discharges related to the construction and operation activities must comply with the State of Hawaii Water Quality Standards.

6. As stated in the Draft EA the proposed project will have short-term construction-related impacts on the surrounding environment and all activities will comply with HAR, Title 11, Chapter 60.

Clean Air Branch
As recommended, the Standard Comments on the Department of Health website has been reviewed and will be adhered to as applicable. All activities will comply with HAR, Chapter 11-60.

Your letter, along with this response will be reproduced in the forthcoming Final EA. We appreciate your participation during this phase of the process.

Should you have any questions or require additional information, please contact Mr. Loren Lau at (808) 956-2739.

Sincerely,

Mr. Brian Minaai
Associate Vice President
for Capital Improvements

cc: Mr. Terry McFarland, Architects Hawaii, Ltd.
Mr. Jeffrey Hunt, Windward Community College
Mr. Ronald Sato, Wilson Okamoto Corporation

LINDA LINGLE
GOVERNOR OF HAWAII

LAURA H. THIELEN
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

June 3, 2009

University of Hawaii
Office of Capital Improvements
1960 East West Road, Biomedical Sciences B-102
Honolulu, Hawaii 96826

Attention: Mr. Brian Minaai, Associate Vice President

Ladies and Gentlemen:

Subject: Draft Environmental Assessment for Windward Community College-Library & Learning Resource Center

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 comment.

Other than the comments from Engineering Division, Land Division-Oahu District, the Department of Land and Natural Resources has no other comments to offer on the subject matter. Should you have any questions, please feel free to call our office at 587-0433. Thank you.

Sincerely,

Morris M. Atta
Administrator

Cc: OEQC
Wilson Okamoto Corporation

LINDA LINGLE
GOVERNOR OF HAWAII

LAURA H. THIELEN
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

RECEIVED
2009 JUN -3 P 3:16

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

May 5, 2009

MEMORANDUM

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

FROM: Morris M. Atta
SUBJECT: Draft environmental assessment for Windward Community College Library and Learning Resource Center
LOCATION: Kaneohe, Oahu
APPLICANT: Wilson Okamoto Corporation on behalf of University of Hawaii Community Colleges

Transmitted for your review and comment on the above referenced document. We would appreciate your comments on this document. Please submit any comments by June 1, 2009.

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 my office at 587-0433. Thank you.

Attachments

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

Signed:
Date: 6/3/09

DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION

LD/MorisAtta
Ref.: DEAWindwardComLibrary&ResourceCenter
Oahu.689

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

( ) 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. Robert Sumitomo (808) 768-8097 or Mr. Mario Siu Li at (808) 768-8098 of the City and County of Honolulu, Department of Planning and Permitting.
( ) Mr. Kelly Gomes at (808) 961-8327 (Hilo) or Mr. Kiran Emler at (808) 327-3530 (Kona) of the County of Hawaii, Department of Public Works.
( ) Mr. Francis Cerizo at (808) 270-7771 of the County of Maui, Department of Planning.
( ) Mr. Mario Antonio at (808) 241-6620 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: _____

_____

(X) Other: Our previous comments dated September 11, 2008, which is included in the Draft Environmental Assessment document, still apply.

Should you have any questions, please call Ms. Suzie S. Agraan of the Planning Branch at 587-0258.

Signed: _____
ERIC T. HIRANO, CHIEF ENGINEER

Date: 6/3/09

LINDA LINGLE
GOVERNOR OF HAWAII

LAURA H. THIELEN
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

May 5, 2009

MEMORANDUM

FROM: ~~TO:~~

DLNR Agencies:
x Div. of Aquatic Resources
__Div. of Boating & Ocean Recreation
x Engineering Division
__Div. of Forestry & Wildlife
__Div. of State Parks
__Commission on Water Resource Management
__Office of Conservation & Coastal Lands
x Land Division –Oahu District

TO:

~~FROM:~~ Morris M. Atta
SUBJECT: Draft environmental assessment for Windward Community College Library and Learning Resource Center
LOCATION: Kaneohe, Oahu
APPLICANT: Wilson Okamoto Corporation on behalf of University of Hawaii Community Colleges

Transmitted for your review and comment on the above referenced document. We would appreciate your comments on this document. Please submit any comments by June 1, 2009.

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 my office at 587-0433. Thank you.

Attachments

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

Signed: _____
Date: 5/6/09

UNIVERSITY of HAWAI'I SYSTEM

Office of Capital Improvements

July 29, 2009

Mr. Morris M. Atta, Administrator
Department of Land and Natural Resources
State of Hawaii
PO Box 621
Honolulu, HI 96809

Attention: Mr. Morris Atta, Land Division

SUBJECT: Draft Environmental Assessment
Windward Community College
Library and Learning Resource Center
Tax Map Key (TMK): 4-5-23: 014
Kaneohe, Oahu, Hawaii

Dear Mr. Atta:

Thank you for your letter dated June 3, 2009. We offer the following responses in the respective order of each Division's comments:

Engineering Division

1. We acknowledge the previous comments dated September 11, 2008 still apply.

Land Division, Oahu District:

1. We acknowledge that you have no comments to offer at this time.

Your letter, along with this response will be reproduced in the forthcoming Final EA. We appreciate your participation during this phase of the process.

1960 East West Road, Biomedical Sciences B-102
Honolulu, Hawai'i 96822
Telephone: (808) 956-7935
Fax: (808) 956-3175
An Equal Opportunity/Affirmative Action Institution

Should you have any questions or require additional information, please contact Mr. Loren Lau at (808) 956-2739.

Sincerely,

Mr. Brian Minaai
Associate Vice President
for Capital Improvements

cc: Mr. Terry McFarland, Architects Hawaii, Ltd.
Mr. Jeffrey Hunt, Windward Community College
Mr. Ronald Sato, Wilson Okamoto Corporation

LINDA LINGLE
GOVERNOR OF HAWAII

LAURA H. THIELEN
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

RECEIVED
JUL 14 2009
WILSON OKAMOTO CORP.

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

July 13, 2009

University of Hawaii
Office of Capital Improvements
1960 East West Road, biomedical Sciences B-102
Honolulu, Hawaii 96826

Attention: Mr. Brian Minaai, Associate vice President

Ladies and Gentlemen:

Subject: Draft Environmental Assessment for Windward Community College-Library & Learning Resource Center

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 Division of Aquatic Resources for their review and comment.

The Department of Land and Natural Resources has no other comments to offer on the subject matter. Should you have any questions, please feel free to call our office at 587-0433. Thank you.

Sincerely,

for Morris M. Atta
Administrator

Cc: OEQC
Wilson Okamoto Corporation

LINDA LINGLE
GOVERNOR OF HAWAII

LAURA H. THIELEN
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

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LAND DIVISION
2009 JUL 13 A 10:07

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

May 5, 2009

RECEIVED
MAY 5 2009
AQUATIC RESOURCES

AQUATIC RESOURCES: 2215

DIRECTOR	
COMM. FISH.	
AQ RES/ENV	
AQ REC	
PLANNER	
STAFF SVCS	
RCUH/UH	
STATISTICS	
AFRC/FED AID	
EDUCATION	
SECRETARY	
OFFICE SVCS	
TECH ASST	✓
Return to:	
No. Copies	
Copies to:	
Due Date:	

GH

MEMORANDUM

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

FROM: Morris M. Atta
SUBJECT: Draft environmental assessment for Windward Community College Library and Learning Resource Center
LOCATION: Kaneohe, Oahu
APPLICANT: Wilson Okamoto Corporation on behalf of University of Hawaii Community Colleges

Transmitted for your review and comment on the above referenced document. We would appreciate your comments on this document. Please submit any comments by June 1, 2009.

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 my office at 587-0433. Thank you.

Attachments

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

Signed:
Date: 7/9/09

STATE OF HAWAII
Department of Land and Natural Resources
DIVISION OF AQUATIC RESOURCES

MEMORANDUM

TO: Dan A. Polhemus, Administrator
FROM: Glenn R. Higashi, Aquatic Biologist
SUBJECT: Draft Environmental Assessment for Windward Community College Library and Learning Resource Center
Comments Requested By: Morris M. Atta, Land Division
Date of Request: 5/9/09 Date Received: 5/9/09

Summary of Project

Title: **Draft Environmental Assessment for Windward Community College Library and Learning Resource Center**
Project By: **Wilson Okamoto Corporation on behalf of University of Hawaii Community Colleges**
Location: **Kaneohe, Oahu TMK: 4-5-23:014**

Brief Description:

Wilson Okamoto Corporation on behalf of University of Hawaii Community Colleges, Windward Community College (WCC) is proposing to construct a new Library and Learning Resource Center (LLRC) to provide a state of the art facility that is capable of accommodating WCC's present and anticipated future enrollment. The proposed LLRRC is a three story, 62,000 square foot facility that will replace the existing one story Hale Manaleo, which will be demolished. The proposed modern facility will house the library, learning skills center, computer labs, and media center. The library and related services will be located on the first floor, with study areas, conference rooms, offices, and other library related services on the second and basement levels. The proposed facility will be less than 50 feet in height.

The proposed project also includes widening of campus roads and construction of additional parking stalls to fulfill campus master plan initiatives. Two parking lots are proposed as part of the proposed project.

Streams near WCC include Kaneohe-Kamooalii, Keaahala, Kapunahala, and Heeia. The total length of the Kaneohe-Kamooalii stream channel is approximately 1.2 miles. Both Kaneohe and Kamooalii are perennial, with Kamooalii Stream Being a tributary of Kaneohe Stream.

Kapunahala Stream, a tributary of Kaneohe Stream, flows south of WCC. Kapunahala Stream is a relatively short stream, running approximately 1.6 miles in length. The stream drains a small subwatershed on the north flank of Puu Keahiakahoe, fed by Keaahala Spring. The lower reach of Kapunahala Stream has a concrete lined channel with a confluence at Keneke Street, from there the stream continues on and joins with Kamooalii Stream.

Keaahala Stream flows along the northern extent of WCC property. Keaahala Stream is a perennial stream that runs for approximately 1.9 miles. The lower 90 percent of the stream is channelized as it runs through the urbanized landscape of Kaneohe while the upper 10 percent of the stream channels is natural as it flows through forested, conservation land.

Heeia Stream is located north, northeast of WCC and is a perennial stream running approximately 2.1 miles long. Two tributaries feed Heeia Stream-Iolekaa and Haiku Streams. Heeia Stream supports some of the largest federally designated wetlands in the state as well as Heeia Fishpond.

Comments:

The Kaneohe watershed contains the following streams-Kaneohe, Kamooalii, and Kapunahala. These streams provide habitat for 11 native species of macrofauna. These include native fish species such as *Eleotris sandwicensis, Stenogobius hawaiiensis, Awaous guamensis, Chanos chanos, Elops hawaiiensis, Kuhlia sandvicensis, Kuhlia xenura,* and *Mugil cephalus.* The native crustaceans *Macrobrachium grandimanus* and *Atyoida bisulcata* the native mollusk *Neritina vespertina.* The stream also provides habitat for native damselfly, *Megalagrion nigrohamatum nigrolineatum* (ref. DAR Aquatic Resources Database, Oct. 6, 2006).

The Heeia Stream provides habitat for 10 native species of macrofauna. These include native fish species such as *Eleotris sandwicensis, Stenogobius hawaiiensis, Caranx ignobilis, Kuhlia sandvicensis, Kuhlia xenura, Mugil cephalus,* and *Sphyraena barracuda.* The native crustaceans *Macrobrachium grandimanus, Atyoida bisulcata* and the native mollusk *Neritina vespertina.* The stream also provides habitat for native damselfly, *Megalagrion nigrohamatum nigrolineatum* (ref. DAR Aquatic Resources Database, Oct. 6, 2006).

The Keaahala Stream provides habitat for 9 native species of macrofauna. These include native fish species such as *Eleotris sandwicensis, Stenogobius hawaiiensis, Awaous guamensis, Diodon hystrix, Kuhlia xenura, Mugil cephalus,* and *Sphyraena barracuda.* The native crustacean *Macrobrachium grandimanus* and the native mollusk *Neritina vespertina.*

The construction of the new Library and Learning Resource Center at WCC are not expected to have any significant impact on the aquatic resource values in this area. However, the following mitigative measures should be implemented during construction to minimize the potential for erosion, siltation and pollution of the aquatic environment:

1) lands denuded of vegetation should be planted or covered as quickly as possible to prevent erosion;
2) scheduling site work (particularly the excavation and grading) during periods of minimal rainfall; and,
3) prevent construction materials, petroleum products, debris and landscaping products at the construction site and staging areas from falling, blowing or leaching into the aquatic environment.

UNIVERSITY of HAWAI'I SYSTEM

Office of Capital Improvements

July 29, 2009

Mr. Morris M. Atta, Administrator
Land Division
Department of Land and Natural Resources
State of Hawaii
P.O. Box 621
Honolulu, HI 96809

SUBJECT: Draft Environmental Assessment
Windward Community College
Library and Learning Resource Center
Tax Map Key (TMK): 4-5-23: 014
Kaneohe, Oahu, Hawaii

Dear Mr. Atta:

Thank you for your letter dated July 13, 2009. We offer the following responses in the respective order of each Division's comment:

Division of Aquatic Resources

1. Thank you for providing additional information about the aquatic species found in the nearby streams. The information will be added to the Final EA.
2. The mitigative measures suggested in your letter will be included in the Final EA.

Your letter, along with this response will be reproduced in the forthcoming Final EA. We appreciate your participation during this phase of the process.

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Should you have any questions or require additional information, please contact Mr. Loren Lau at (808) 956-2739.

Sincerely,

Mr. Brian Minaai
Associate Vice President
for Capital Improvements

cc: Mr. Terry McFarland, Architects Hawaii, Ltd.
Mr. Jeffrey Hunt, Windward Community College
Mr. Ronald Sato, Wilson Okamoto Corporation

LINDA LINGLE
GOVERNOR

BRENNON T. MORIOKA
DIRECTOR

Deputy Directors
MICHAEL D. FORMBY
FRANCIS PAUL KEENO
BRIAN H. SEKIGUCHI
JIRO A. SUMADA

IN REPLY REFER TO:

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

STP 8.3270

May 27, 2009

Mr. Brian Minaai
Associate Vice President
University of Hawaii
Office of Capital Improvements
1960 East West Road, Biomedical Sciences B-102
Honolulu, Hawaii 96822

Attention: Mr. Loren Lau

Dear Mr. Minaai:

Subject: Windward Community College (WCC)
Library and Learning Resource Center
Draft Environmental Assessment (DEA)

Thank you for providing the subject project for the State Department of Transportation's (DOT) review and comments.

DOT understands that the subject project proposes to demolish an existing, aging building and to construct a three-story, 62,000-square foot facility consisting of a Library and Learning Resource Center and other offices. Access to the site is indirectly from the State highway, Kahekili Highway (Route 83).

The DOT Highways Division Planning Branch, telephone number (808) 587-1830, submits the following comments.

1. The DEA states that the proposed project constructs a new building that will consolidate offices and functions currently at different locations on the WCC campus and therefore asserts that there would be no additional trips. Also, the projection of trips for expanded student enrollment is considered to be minimal. The proposed additional parking spaces will service the new facility as well as increase parking availability at WCC. However, the future use of buildings and floor space being vacated with the consolidation of functions is not discussed and is presumed to represent some future renovation.

2. Highways Division does not agree with the underlying assumptions to the traffic analysis because future traffic growth would be expected to occur as a result of additional facility space being freed up on the campus. While the proposed subject project alone is not anticipated to create significant traffic impacts, it is recommended that WCC make every effort to master plan the campus in order to quantify overall long-term traffic impacts.

If there are any other questions, please contact Mr. David Shimokawa of the DOT Statewide Transportation Planning Office at (808) 587-2356.

Very truly yours,

BRENNON T. MORIOKA, PH.D., P.E.
Director of Transportation

c: Ronald Sato, Wilson Okamoto Corporation
Katherine Kealoha, Office of Environmental Quality Control

UNIVERSITY of HAWAI'I® SYSTEM

Office of Capital Improvements

July 29, 2009

Mr. Brennon Morioka, P.E., Director
Department of Transportation
State of Hawaii
869 Punchbowl Street
Honolulu, HI 96813-5097

SUBJECT: Draft Environmental Assessment
Windward Community College
Library and Learning Resource Center
Tax Map Key (TMK): 4-5-23: 014
Kaneohe, Oahu, Hawaii

Dear Mr. Morioka:

Thank you for your letter dated May 27, 2009 (STP 8.3270). We offer the following responses in order of your comments:

1. Currently the Library is located at Hale Laakea and will move to the proposed new Library and Learning Resource Center. As part of WCC's Master Plan, Hale Laakea along with other existing buildings will be renovated at a future phase and used for other purposes (see Section 2.2 of the Draft EA). Classrooms and services at Hale Manaleo will be moved elsewhere throughout the campus. Therefore, the spaces made available within the campus due to this project will support the existing programs provided at the college.
2. We acknowledge your difference in opinion as to the potential increase in traffic growth due to the space being freed up with this new library and learning research center. However, we believe this project would not affect traffic conditions during the weekday morning and afternoon peak hours because the new building will need to replace the existing Hale Manaleo building and programs occurring there. The only other building being freed up is the Hale Laakea building which presently serves as their library, but is only a single-story building of 6,155 square feet. Thus, the Hale Laakea building would likely serve an existing program or provide additional space for administrative functions occurring within the campus. When the

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applicant updates the WCC Master Plan, future traffic impacts will be appropriately quantified and addressed at that time.

Your letter, along with this response will be reproduced in the forthcoming Final EA. We appreciate your participation during this phase of the process.

Should you have any questions or require additional information, please contact Mr. Loren Lau at (808) 956-2739.

Sincerely,

Mr. Brian Minaai
Associate Vice President
for Capital Improvements

cc: Mr. Terry McFarland, Architects Hawaii, Ltd.
Mr. Jeffrey Hunt, Windward Community College
Mr. Ronald Sato, Wilson Okamoto Corporation

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843

May 15, 2009

Mr. Brian Minaai
Associate Vice President
University of Hawaii, Office of Capital Improvements
1960 East West Road, Biomedical Sciences B-102
Honolulu, Hawaii 96822

RECEIVED
MAY 19 2009
WILSON OKAMOTO CORPORATION

Attn: Mr. Loren Lau

Dear Mr. Minaai:

Subject: The Draft Environmental Assessment Dated April 2009 on the Windward Community College-Library & Learning Resource Center, TMK 4-5-023:014

Thank you for the letter on the proposed construction project.

The comments in our letter dated September 3, 2008, which is included in the document, are still applicable.

If you have any questions, please contact Robert Chun at 748-5443.

Very truly yours,

KEITH S. SHIDA
Program Administrator
Customer Care Division

cc: Mr. Ronald Sato, Wilson Okamoto Corporation
Ms. Katherine Puana Kealoha, Office of Environmental Quality Control

Water for Life . . . Ka Wai Ola

UNIVERSITY of HAWAI'I SYSTEM

Office of Capital Improvements

July 29, 2009

Mr. Keith S. Shida, Program Administrator
Customer Care Division
Board of Water Supply
City and County of Honolulu
630 S. Beretania Street
Honolulu, HI 96813

SUBJECT: Draft Environmental Assessment
Windward Community College
Library and Learning Resource Center
Tax Map Key (TMK): 4-5-23: 014
Kaneohe, Oahu, Hawaii

Dear Mr. Lum:

Thank you for your letter dated May 15, 2009. We acknowledge your previous comments dated September 3, 2008 still apply.

Your letter, along with this response will be reproduced in the forthcoming Final EA. We appreciate your participation during this phase of the process.

Should you have any questions or require additional information, please contact Mr. Loren Lau at (808) 956-2739.

Sincerely,

Mr. Brian Minaai
Associate Vice President
for Capital Improvements

cc: Mr. Terry McFarland, Architects Hawaii, Ltd.
Mr. Jeffrey Hunt, Windward Community College
Mr. Ronald Sato, Wilson Okamoto Corporation

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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

MUFI HANNEMANN
MAYOR

KENNETH G. SILVA
FIRE CHIEF

ALVIN K. TOMITA
DEPUTY FIRE CHIEF

May 21, 2009

Mr. Brian Minaai, Associate Vice President
Office of Capital Improvements
University of Hawaii
Biomedical Sciences B-102
1960 East West Road
Honolulu, Hawaii 96822

Dear Mr. Minaai:

Subject: Draft Environmental Assessment
Windward Community College Library and Learning Resource Center
Kaneohe, Oahu, Hawaii
Tax Map Key: 4-5-023: 014

In response to a letter from Mr. Ronald Sato dated May 4, 2009, regarding the above-mentioned subject, the Honolulu Fire Department (HFD) reviewed the material provided and requires that the following be complied with:

1. Provide a fire apparatus access road for every facility, building, or portion of a building hereafter constructed or moved into or within the jurisdiction when any portion of the facility or any portion of an exterior wall of the first story of the building is located more than 150 feet (45 720 mm) from a fire apparatus access road as measured by an approved route around the exterior of the building or facility. (1997 Uniform Fire Code, Section 902.2.1.)

2. Provide a water supply, approved by the county, capable of supplying the required fire flow for fire protection to all premises upon which facilities or buildings, or portions thereof, are hereafter constructed or moved into or within the county.

   On-site fire hydrants and mains capable of supplying the required fire flow shall be provided 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. (1997 Uniform Fire Code, Section 903.2, as amended.)

3. Submit civil drawings to the HFD for review and approval.

Should you have any questions, please call Battalion Chief Socrates Bratakos of our Fire Prevention Bureau at 723-7151.

Sincerely,

KENNETH G. SILVA
Fire Chief

KGS/SY:bh

cc: Katherine Puana Kealoha, Office of Environmental Quality Control
Ronald Sato, AICP, Wilson Okamoto Corporation ✓

DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 7TH FLOOR • HONOLULU, HAWAII 96813
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MUFI HANNEMANN
MAYOR

DAVID K. TANOUE
DIRECTOR

ROBERT M. SUMITOMO
DEPUTY DIRECTOR

2009/ELOG-1072(sn)
92/PRU-3

June 4, 2009

Mr. Brian Minaai, Associate Vice President
University of Hawaii, Office of Capital Improvements
1960 East West Road, Biomedical Sciences B-102
Honolulu, Hawaii 96822

Attention: Mr. Loren Lau

Dear Mr. Minaai:

Subject: Draft Environmental Assessment
Library and Learning Resource Center
Windward Community College
45-720 Keaahala Road – Kaneohe
Tax Map Key 4-5-23: 14

We have reviewed the Draft Environmental Assessment (DEA) for the proposed Library and Learning Resource Center (LLRC) at Windward Community College and offer the following comments:

1. Drainage. Expand this section to address the following:

   a. The project may need to address storm water quality requirements pursuant to Section II (Storm Water Quality) of the Rules Relating to Storm Drainage Standards.

   b. The applicant should consider on-site detention of surface water runoff to mitigate any increase in flood peak and also maintain existing surface drainage patterns as much as possible.

2. Wastewater. The applicant is required to submit a Site Development Division Master Application for Sewer Connection.

3. Land Use Ordinance (LUO) and Zoning. Revise this section to explain that universities and colleges are permitted in the AG-2 zoning district with a Plan Review Use (PRU) Permit. This statement will provide a transition to Section 4.2.4 of the DEA.

4. Plan Review Use (PRU) Permit. Permit No. 92/PRU-3 for a Five-Year Master Plan for Windward Community College was approved by City Council Resolution No. 94-87, CD-1, on May 4, 1994. The master plan included the construction of new buildings, the renovation of existing buildings and the development of support infrastructure, including the proposed LLRC. The master plan generally identifies the proposed LLRC as a two-story, 69,798-square foot building to be used to accommodate a library, media production, and computer facilities.

   a. Building. The proposed three-story, 62,000-square foot facility will accommodate the library, learning skills center, computer labs, and media center. The DEA indicates that the exterior design of the facility will be consistent with the Spanish Mission Revival architectural style already established throughout the campus. Although the facility is proposed for three stories, it should generally comply with the 50-foot maximum height. The configuration of the facility, however, differs from the PRU master plan and appears to be close to the existing Hale Mana'opono. The building elevations are to be revised to show the relationship between the two buildings and describe the potential visual impacts, if any, that the taller LLRC may have on the existing building.

   b. Parking Implementation Plan (PIP). The development of the campus, in both the construction of facilities and provision of parking spaces, has not entirely followed the phasing outlined in the PIP. However, adequate off-street parking has been provided for each improvement completed thus far. As such, revise this section to clarify the discrepancies in the existing and required parking counts. Update the required number of parking spaces based on the existing facilities and the proposed LLRC. Also, note that although the number of spaces to be provided may be less than the number identified in the PIP, the number of spaces to be provided will meet the updated required number of parking. We understand that the entire PIP will be updated when the applicant updates the PRU Master Plan. The compliance with the parking and loading requirements will be confirmed when specific details are provided.

   c. Urban Design Plan. Confirmation of the project's compliance with the Urban Design Plan will be confirmed when specific details are provided. As a reminder, the review and approval of the Design Review Committee (DRC) is required for the various design phases of the proposed improvements. The DRC must certify that the design satisfies the objectives and criteria set in previous reviews and those identified in the design guidelines.

We appreciate the opportunity to review and comment on the project. Should you have any questions, please contact the Urban Design Branch at 768-8029.

Very truly yours,

David K. Tanoue, Director
Department of Planning and Permitting

DKT:nw

cc: Mr. Ronald Sato, Wilson Okamoto Corporation
Ms. Katherine Puana Kealoha, Department of Health

Doc. 700066

UNIVERSITY of HAWAI'I® SYSTEM

Office of Capital Improvements

July 29, 2009

Mr. David Tanoue, Director
Department of Planning & Permitting
City and County of Honolulu
650 S. King Street, 7th Floor
Honolulu, HI 96813

SUBJECT: Draft Environmental Assessment
Windward Community College
Library and Learning Resource Center
Tax Map Key (TMK): 4-5-23: 014
Kaneohe, Oahu, Hawaii

Dear Mr. Tanoue:

Thank you for your letter dated June 4, 2009 (2009/ELOG-1072(sn)92/PRU3). We offer the following responses in the respective order of your comments:

1. Drainage: The drainage section will be revised to include that the proposed project will conform to storm water quality requirements pursuant to Section II, Storm Water Quality of the Rules Relating to Storm Drainage Standards. On-site detention alternatives will be considered to mitigate any increase in flood peak.
2. Wastewater: We acknowledge that a Site Development Division Master Application for Sewer Connection will be required.
3. Land Use Ordinance and Zoning: Section 4.2.3 will be revised to explain that universities and colleges are permitted in the AG-2 zoning district with a PRU Permit.
4. Plan Review Use Permit:
    a. The building's siting and design was developed in consultation with the University and the State Historic Preservation Division (SHPD) to address historic architectural considerations for the entire campus. Thus, the proposed building will not exceed the 50-foot height limit. The siting of this building in relation to Hale Manaopono was also

1960 East West Road, Biomedical Sciences B-102
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designed to maintain a minimum distance of 60 feet based upon these consultations. Therefore, this building's location meets the distance separation required from Hale Manaopono. Based upon these design requirements developed in consultation with SHPD along with the college's urban design plan requirements, we believe the project would not have a visual impact on the other campus buildings.

b. The discussion on the Parking Implementation Plan will be revised to address your concerns. This parking implementation plan will be updated when the University updates their PRU master plan.
c. The proposed plans have been reviewed and approved by the Design Review Committee.

Your letter, along with this response will be reproduced in the forthcoming Final EA. We appreciate your participation during this phase of the process.

Should you have any questions or require additional information, please contact Mr. Loren Lau at (808) 956-2739.

Sincerely,

Mr. Brian Minaai
Associate Vice President
for Capital Improvements

cc: Mr. Terry McFarland, Architects Hawaii, Ltd.
Mr. Jeffrey Hunt, Windward Community College
Mr. Ronald Sato, Wilson Okamoto Corporation

DEPARTMENT OF TRANSPORTATION SERVICES
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 3RD FLOOR
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MUFI HANNEMANN
MAYOR

WAYNE YOSHIOKA
DIRECTOR

SHARON ANN THOM
DEPUTY DIRECTOR

TP5/09-312601

June 2, 2009

Mr. Brian Minaai, Associate Vice President
University of Hawaii, Office of Capital Improvements
1960 East West Road, Biomedical Sciences B-102
Honolulu, Hawaii 96822

Attention: Mr. Loren Lau

Dear Mr. Minaai:

Subject: Windward Community College Library & Learning Resource Center
Draft Environmental Assessment

This responds to Mr. Ronald Sato's letter of May 4, 2009, requesting consultation and comments in preparing an Environmental Assessment for the subject project. As mentioned in our Pre-Assessment Consultation comments, we believe the jurisdiction of the roadways affected by the project should be mentioned in the Final Environmental Assessment.

Should you have any questions on the matter, please contact Mr. Brian Suzuki at 768-8349.

Very truly yours,

for WAYNE Y. YOSHIOKA
Director

cc: Office of Environmental Quality Control
Wilson Okamoto Corporation

UNIVERSITY of HAWAI'I SYSTEM

Office of Capital Improvements

July 29, 2009

Mr. Wayne Yoshioka, Director
Department of Transportation Services
City and County of Honolulu
650 S. King Street, 3rd Floor
Honolulu, HI 96813

SUBJECT: Draft Environmental Assessment
Windward Community College
Library and Learning Resource Center
Tax Map Key (TMK): 4-5-23: 014
Kaneohe, Oahu, Hawaii

Dear Mr. Yoshioka:

Thank you for your letter dated June 2, 2009. We will include the jurisdiction of the roadways affected by the project in the Final EA.

Your letter, along with this response will be reproduced in the forthcoming Final EA. We appreciate your participation during this phase of the process.

Should you have any questions or require additional information, please contact Mr. Loren Lau at (808) 956-2739.

Sincerely,

Mr. Brian Minaai
Associate Vice President
for Capital Improvements

cc: Mr. Terry McFarland, Architects Hawaii, Ltd.
Mr. Jeffrey Hunt, Windward Community College
Mr. Ronald Sato, Wilson Okamoto Corporation

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Appendix B

Archaeological Assessment for the Proposed Windward Community College Library and Learning Resources Center Project

Cultural Surveys Hawaii, Inc.

November 2008

DRAFT

Archaeological Assessment for the Proposed Windward Community College Library & Learning Resources Center Project, Kāneʻohe Ahupuaʻa, Koʻolaupoko District, Oʻahu Island TMK: [1] 4-5-023: por. 014

Prepared for

Wilson Okamoto Corporation

Prepared by

Hallett H. Hammatt, Ph.D.

and

David W. Shideler, M.A.

Cultural Surveys Hawaiʻi, Inc.

Kailua, Hawaiʻi

(Job Code: KANEOHE 3)

December 2008

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Management Summary

Reference	Archaeological Assessment for the Proposed Windward Community College Library & Learning Resources Center Project, Kāneʻohe Ahupuaʻa, Koʻolaupoko District, Oʻahu Island, TMK: [1] 4-5-023: por. 014 (Hammatt and Shideler2008)
Date	December 2008
Project Number (s)	Cultural Surveys Hawaiʻi (CSH) job code: KANEOHE 3
Investigation Permit Number	Fieldwork for this investigation was performed under archaeological fieldwork permit number 08-14, issued by the Hawaiʻi Department of Land and Natural Resources / State Historic Preservation Division (DLNR / SHPD).
Project Location	The project area consists of five discrete locations within the Windward Community College campus, and is bounded by the Kāneʻohe District Park to the northeast and by the Hawaiʻi State Hospital to the southwest. This area is depicted on the 1998 U.S. Geological Survey (USGS) 7.5 Minute Series topographic map, Kāneohe Quadrangle (Figure 1).
Land Jurisdiction	Public, State of Hawaiʻi
Agencies	State of Hawaiʻi Department of Land and Natural Resources / State Historic Preservation Division (DLNR / SHPD)
Project Description	The proposed Windward Community College (WCC) Library & Learning Resources Center (LLRC) project is a three-story, 62,000 square-foot facility that will replace the existing one story Hale Manaleo building, which will be demolished. The proposed project also includes the widening of two segments of Ala Koʻolau Road, construction of a new parking lot consisting of 92 parking stalls adjacent to the existing entrance parking lot, and another parking lot consisting of 30 parking stalls adjacent to Hale Awa. Associated ground disturbance will include excavation related to the project area's development, to include structural footings, utility installation, roadway and parking area installation, and landscaping.
Project Acreage	2.2 acres
Area of Potential Effect (APE) and Survey Acreage	Based on available information, the proposed WCC LLRC project will not impose adverse visual, auditory or other environmental impact to any known archaeological historic properties located either inside or outside the project area. As a result the project's APE is the same as the project area. The survey area for the current investigation consists of five discrete locations within the WCC campus collectively constituting approximately 2.2 acres.

Historic Preservation Regulatory Context	The WCC LLRC project constitutes a project requiring compliance with and review under state of Hawai'i historic preservation legislation [Hawai'i Revised Statutes (HRS) Chapter 6E-8 and Hawai'i Administrative Rules (HAR) Chapter 13-13-275]. At the request of Wilson Okamoto Corporation, CSH completed what began as an archaeological inventory survey investigation of the project area, per the requirements of HAR Chapter 13-13-276. Because no archaeological historic properties were located, this investigation became an archaeological assessment, per the language of HAR Chapter 13-13-275-5. This archaeological assessment report was prepared to support the proposed project's historic preservation review (under HAR 13-13-275) and any other project-related historic preservation consultation.
Fieldwork Effort	Todd Tulchin, B.A., and David Shideler M.A. assisted project director Jon Tulchin, B.A., with the field effort, which required approximately 2 person-days to complete. Fieldwork took place on September 14th 2008 under the general supervision of Hallett H. Hammatt, Ph.D. (principal investigator).
Number of Archaeological Historic Properties Identified	None
Archaeological Historic Properties Recommended Eligible to the Hawai'i Register of Historic Places (Hawai'i Register)	None
Archaeological Historic Properties Recommended Ineligible to the Hawai'i Register	None
Effect Recommendation	CSH's project specific effect recommendation for archaeological resources is "no effect". However, given prior SHPD determinations (see below) the project's overall recommendation regarding historic properties is "effect, with proposed mitigation commitments." The proposed WCC LLRC project has the potential to adversely affect the historic district of the Territorial Hospital, which is eligible for nomination to the National Register of Historic Places.

Mitigation Recommendation	The following mitigation measures have been recommended by SHPD (LOG NO: 2008.1072 / DOC NO: 0803AL14; see Appendix A): an updated National Register of Historic Places nomination form for the historic district of the Territorial Hospital; good faith effort to update the current master plan, to include guidelines, within 10 years pending legislative approval; commitment to provide an educational display within the new Learning Center to include historical information on the Territorial Hospital; and intent to provide documents and collaborate with the Department of Health to display the original asylum campus in a future museum in Bishop Hall. Should the museum not materialize within the next 10 years, WCC will provide the information on their website. No further archaeological work is recommended for the proposed WCC LLRC project.

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Section 1 Introduction

1.1 Project Background

At the request of Wilson Okamoto Corporation, Cultural Surveys Hawaii, Inc. (CSH) conducted an archaeological inventory survey/archaeological assessment of approximately 2.2 acres within the Windward Community College (WCC) campus in the *ahupua'a* of Kāne'ohe, Ko'olaupoko District, Island of O'ahu, TMK: [1] 4-5-023: por. 014. The WCC campus has been determined as eligible for nomination to the National Register of Historic Places (see present Appendix A & Appendix B). The present project area consists of five discrete locations within the WCC campus, and is bounded by Kāne'ohe District Park to the northeast and by the Hawai'i State Hospital to the southwest. This area is depicted on a 1998 U.S. Geological Survey (USGS) topographic map (Figure 1), a Tax Map Key (TMK) (Figure 2), and an aerial photograph (Figure 3)

The proposed Windward Community College (WCC) Library & Learning Resources Center (LLRC) project involves construction of a three-story, 62,000 square-foot facility that will replace the existing one story Hale Manaleo building, which will be demolished (Figure 4). The proposed project also includes the widening of two segments of Ala Ko'olau Road, construction of a new parking lot consisting of 92 parking stalls adjacent to the existing entrance parking lot, and another parking lot consisting of 30 parking stalls adjacent to Hale Awa (see Figure 4). Associated ground disturbance will include excavation related to the project area's development, to include structural footings, utility installation, roadway and parking area installation, and landscaping.

Based on available information, the proposed WCC LLRC project will not impose adverse visual, auditory or other environmental impact to any known archaeological historic properties, including standing architecture, located outside the project area. Accordingly, the proposed project, based on available information lacks potential to affect archaeological historic properties outside the project area. Accordingly, the proposed project, based on available information lacks potential to affect archaeological historic properties outside the project area. As a result the project's APE is the same as the project area. The survey area for the current investigation consists of five discrete locations within the WCC campus collectively constituting approximately 2.2 acres.

The proposed WCC LLRC project constitutes a project requiring compliance with and review under state of Hawai'i historic preservation legislation [Hawai'i Revised Statutes (HRS) Chapter 6E-8 and Hawai'i Administrative Rules (HAR) Chapter 13-13-275]. At the request of Wilson Okamoto Corporation, CSH completed what began as an archaeological inventory survey investigation of the project area, per the requirements of HAR Chapter 13-13-276. Because no archaeological historic properties were located, this investigation became an archaeological assessment, per the language of HAR Chapter 13-13-275-5. This archaeological assessment report was prepared to support the proposed project's historic preservation review (under HAR 13-13-275) and any other project-related historic preservation consultation.

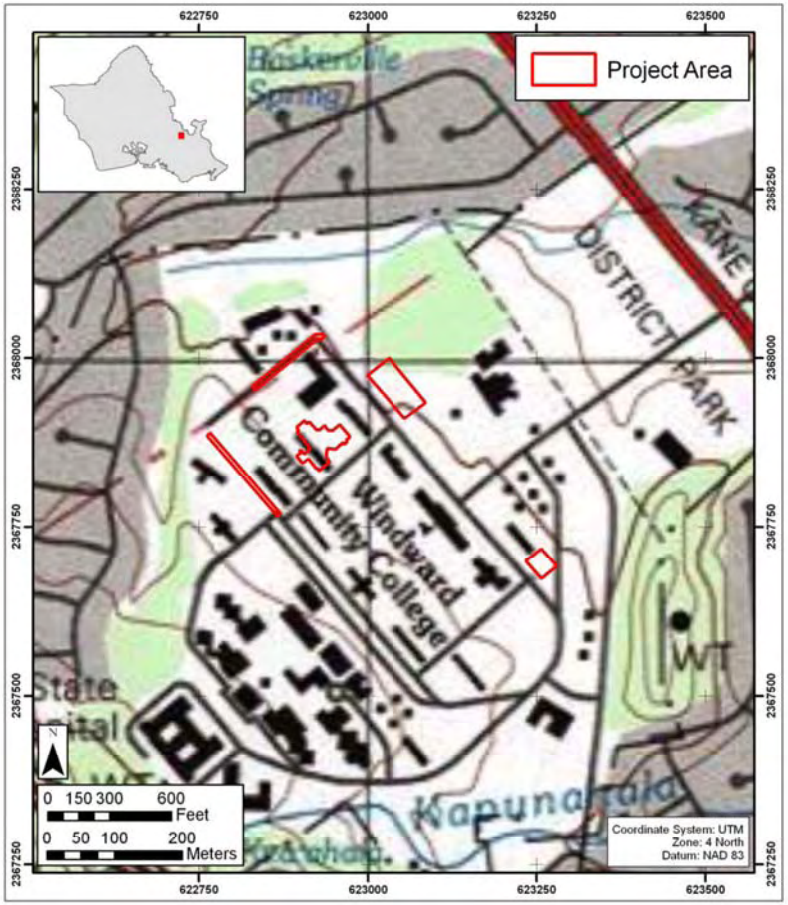

Figure 1. U.S. Geological Survey (USGS) 7.5 Minute Series Topographic Map, Kāne'ohe (1998) Quadrangle, showing the location of the project area(s)

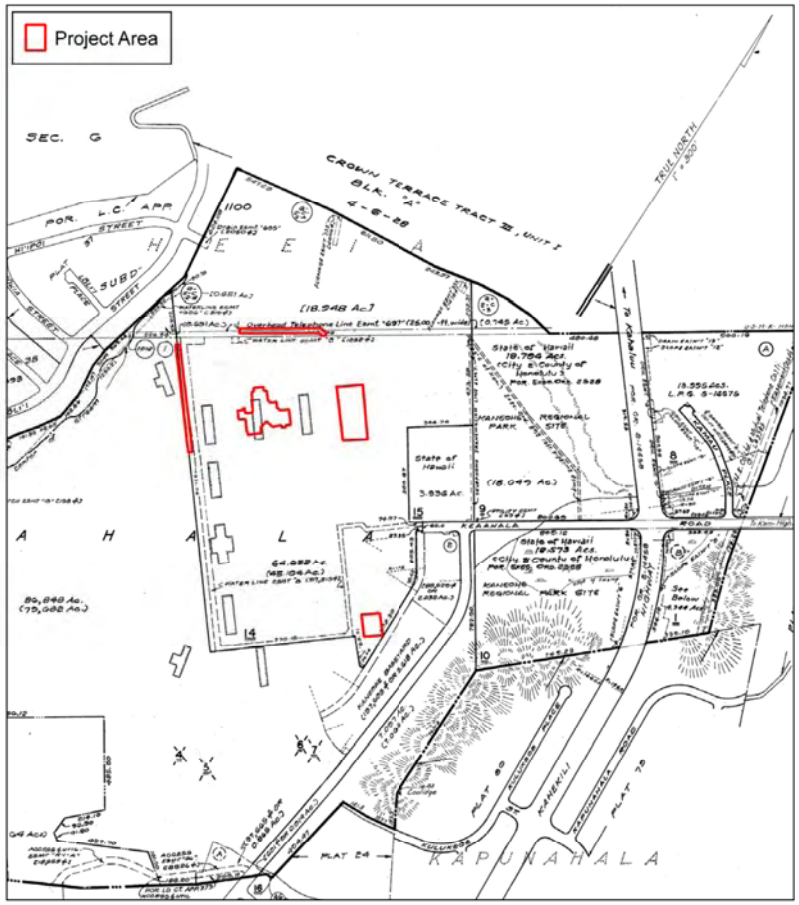

Figure 2. Portion of TMK [1] 4-5-023 showing the location of the project area(s)

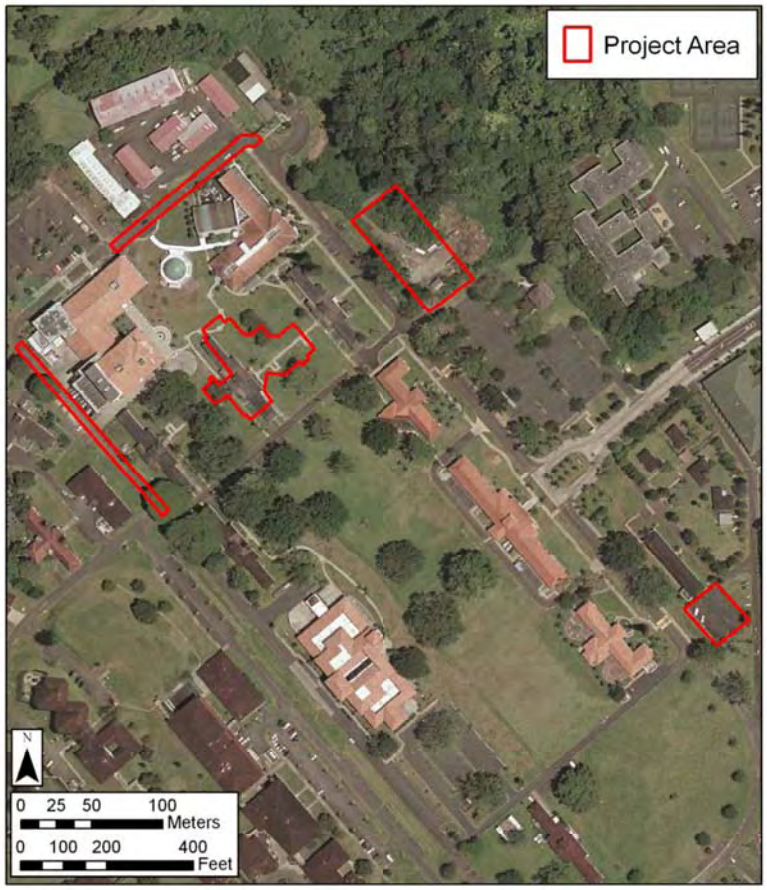

Figure 3. Aerial photograph showing the location of the project area(s) (source: USGS Orthoimagery 2005)

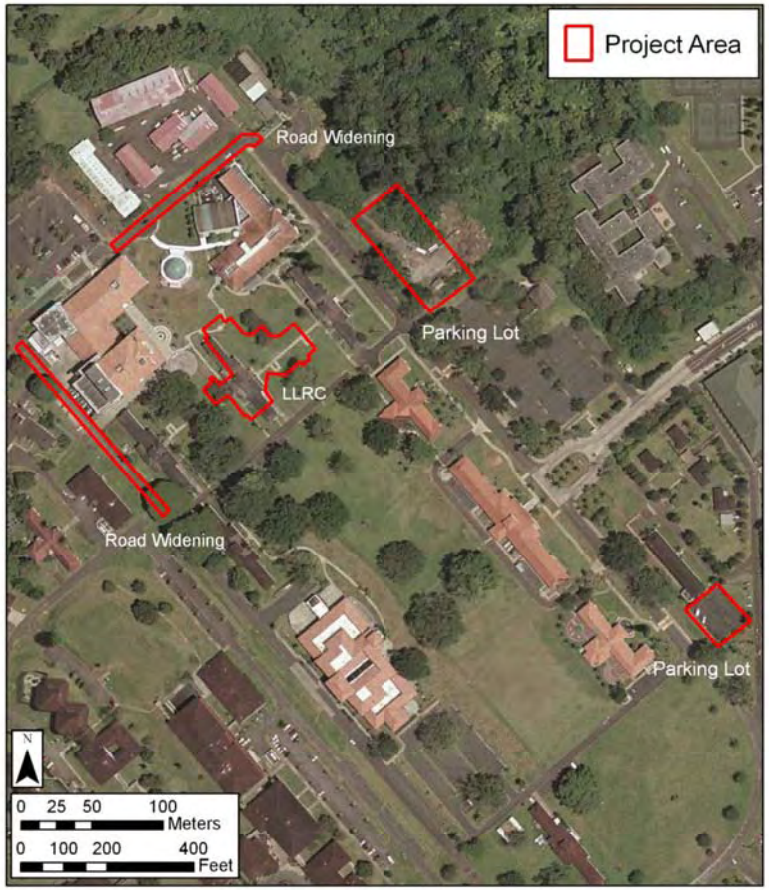

Figure 4. Aerial photograph indicating specific development areas proposed within the project area (source: USGS Orthoimagery 2005)

1.2 Scope of Work

The following archaeological inventory survey scope of work was developed and implemented to satisfy SHPD requirements. The scope of work for this inventory survey (which later became an archaeological assessment because no archaeological historic properties were located within the project area) was designed in accord with State Historic Preservation Division rules governing standards for archaeological inventory surveys and reports (HAR 13-13-276):

1. A complete ground survey of the entire project area for the purpose of historic property inventory. If historic properties were located the following would be applicable: All historic properties would be located, described, and mapped with evaluation of function, interrelationships, and significance; and documentation in the form of photographs and scale drawings of selected sites and complexes.
2. Research on historic and archaeological background, including search of historic maps, written records, and Land Commission Award documents. This research focused on the specific area with general background on the *ahupua‘a* and district and emphasizes settlement patterns.
3. Preparation of this inventory survey report including the following:
    a. A project description;
    b. A topographic map of the survey area showing all record historic properties;
    c. Descriptions of all historic properties, including selected photographs, scale drawings, and discussions of age, function, and significance, per the requirements of HAR Title 13, Subtitle 13, Chapter 276 “Rules Governing Standards for Archaeological Inventory Surveys and Reports.” Cultural resources were assigned State Inventory of Historic Properties (SIHP) numbers;
    d. Historical and archaeological background sections summarizing prehistoric and historic land use of the project area and its vicinity;
    e. A summary of cultural resource categories and significance based upon the Hawai‘i Register of Historic Places (Hawai‘i Register) criteria;
    f. A project effect recommendation
    g. Treatment recommendations to mitigate the project’s adverse effect on historic properties recommended eligible to the Hawai‘i Register (i.e. “significant historic properties”).

This scope of work includes full coordination with the State Historic Preservation Division (SHPD), and the City and County of Honolulu relating to archaeological matters. This coordination takes place after consent of the landowner or representatives.

1.3 Environmental Setting

1.3.1 Natural Environment

The project area is located approximately 2.4 km (1.5 miles) northeast of Kāne‘ohe Bay, and is 630 m (0.4 miles) northwest of He‘eia Stream and 400 m (0.3 miles) southeast of Kapunahala Stream. Lands within the project area are level with an elevation of 200 to 260 ft AMSL (Average Mean Sea Level).

According to U.S. Department of Agricultural (USDA) soil survey data (Foote et al. 1972) the sediments within the project area consist entirely of Lolekaa silty clay (LoB) (Figure 5). The Lolekaa series is described as “well-drained soils on fans and terraces on the windward side of the island of Oahu…developed in old, gravelly colluvium and alluvium…used for pasture, home sites, orchards, and truck crops.” (Foote et al. 1972).

The project area receives an average of 60 to 80 in. (1500 to 2000 mm) of annual rainfall (Giambelluca et al. 1986). The entire project area has been extensively disturbed and transformed by human activity leaving no naturally occurring vegetation within the project area.

1.3.2 Built Environment

The entire project area is situated within the WCC campus, an area which has been subjected to extensive land modification (i.e. grading, filling, excavation, etc.) for the development of numerous buildings and associated infrastructure. Specific to the project area are the presence of asphalt paved roads, abandoned tennis courts, a graded area covered with bulldozer push piles and construction debris, and the existing one-story Hale Manaleo building.

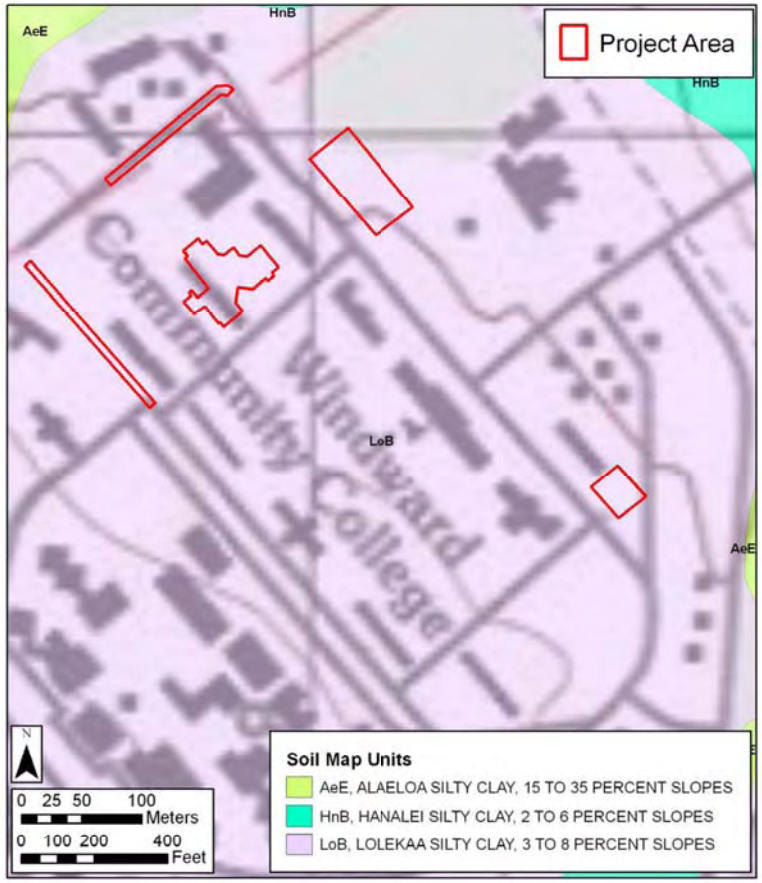

Figure 5. Overlay of Soil Survey of the State of Hawai'i (Foote et al. 1972), indicating sediment types within the project area

Section 2 Methods

Todd Tulchin, B.A., assisted project director Jon Tulchin, B.A., with the field effort, which required 2 person-days to complete. Fieldwork took place on September 14th 2008 under the general supervision of Hallett H. Hammatt, Ph.D. (principal investigator). The fieldwork was performed under CSH's annual archaeological research permit, No. 08-14, issued by DLNR / SHPD.

2.1 Field Methods

A complete ground survey of the project area was undertaken for the purpose of archaeological historic property identification and documentation. The pedestrian inspection of the study area was accomplished through systematic sweeps. The interval between the archaeologists was generally between 5-10 m.

2.2 Document Review

Background research included a review of previous archaeological studies on file at the State Historic Preservation Division (SHPD) of the Department of Land and Natural Resources (DLNR); a review of geology and cultural history documents at Hamilton Library of the University of Hawai'i, the Hawai'i State Archives, the Mission Houses Museum Library, the Hawai'i Public Library, and the Archives of the Bishop Museum; study of historic photographs at the Hawai'i State Archives and the Archives of the Bishop Museum; and a study of historic maps at the Survey Office of the DLNR. Information on LCAs was accessed through Waihona 'Āina Corporation's Māhele Data Base (<www.waihona.com>).

This research provided the environmental, cultural, historic, and archaeological background for the project area. The sources studied were used to formulate a predictive model regarding the expected type and location of sub-surface pre and post-contact historic properties in the project area.

Section 3 Background Research

3.1 Traditional and Historical Background

3.1.1 Mythological and Traditional Accounts

There are several myths and legends associated with Kāne'ohe. A few stories provide the origin of the name of the *ahupua'a* of Kāne'ohe. The word "Kāne" in Kāne'ohe has been interpreted variously as "husband", "man", or as a reference to the god Kāne, the god of creation, while *'ohe* means "bamboo". One account attributes the name to a story about a woman who compared her husband's cruelty to the cutting edge of a bamboo knife (Pukui et al. 1974:85, Clark 2002:161). Kāne'ohe may also be derived from *'ohe*, which is said to be one of the *kinolau* (body forms) of the god Kāne (Abbott 1992:15).

Paki (1972) provides another account Kāne'ohe which details the origin of the indigenous Hawaiian bamboo instruments *hano-ihu* (nose flute) and *pu'ili* (notched bamboo sticks):

> In Kaneohe proper, the people learned a new use for the Ohe…In olden times anyone who did not conform to the way of life lived so industriously by the shore people, was called E-epa, or non-conformist. The E'epa were not actually "touched in the head", or lo-lo [crazy], but just different. They liked to wander off by themselves and dwell among the mysteries of the upland forests where they listened to the music of Nature, and often became poets or musicians.
>
> Those upland reaches, all unexplored territory and sacred to the Spirits or Akua of Nature, where referred to as the Wao (upland forest), or places of mystery. In order to keep children from wandering to the uplands, their elders told the little ones, "Do not go up there or the Bamboo Man may keep you. We would mourn your absence in loneliness. Remain at home and learn your useful duties."
>
> Hano-ihu…longed to explore. Pu'ili…longed to accompany her playmate, Hano-ihu, when he wandered far. But, being more timid, she contended herself during the boy's absences and kept his secret of those upland trips he enjoyed.
>
> One sad day, Hano-ihu did not return. The people searched and could find no trace of the disobedient boy. Finally, the villagers decided the boy had died, and they told the other children that the Bamboo Man had taken the boy-wanderer.
>
> Pu'ili…decided that he was not dead and she must search for him. Acting upon the thought, the little girl followed the direction often taken by the boy and was soon alone in the dark recesses of the forest lands of Wao, the Mysterious.
>
> She saw nothing to fear. Rather, she delighted in the beauty of the forests, the fragrance of the ferns and blossoms growing besides singing rills of sweet waters,

> and danced along happily to the whistling of the Wind Gods in the tree tops touching the blue sky far above.
>
> Soon she realized the whistling was not actual the Wind, for it had a bird-like note that repeated itself in a gentle rhythm. Also, she saw the bamboo moving in the breeze and heard how it rattled its branches. She found two lengths of a bamboo branch and, one in each hand, beat time on the two sticks while she followed the plaintive note calls.
>
> Before her…she saw her beloved playmate sitting on the bank. Beside him was a tall, thin man whose eyes watched the boy, while the child blew upon a bamboo length. The man's lean hands waved to the rhythm of the notes, and the girl went dancing toward the pair, keeping time with her pair of bamboo sticks.
>
> Hano-ihu and the tall man finished their melody, then praised the little Pu'ili for joining them….She sat with them and learned that the man was Kane'ohe, the Bamboo Man who, as a child, had followed the lure of Wao and had invented a bamboo flute. Kindly, the old man explained to the children how the art of creativity often is lost unless those inspired do follow the call. He told them, "Now we shall return to the village, for I have answered the call and you two little ones will be musicians like me. In honor of this occasion, I shall name the flute after you, my boy...we shall name the time-keeping sticks for her."
>
> Gaily, the three went down the forest trail of Wao the Inspiring. They were welcomed with feasting and joy. That is how we have the...Bamboo, instruments today. The Hano-ihu or Nose flute; and the Pu'ili, or notched Bamboo sticks; and the hula named for these gifts of Kane'ohe, the Bamboo Man (Paki 1972:29-30).

Kamakau also specifically refers to Kāne'ohe in his discussion of the invasion of O'ahu, circa 1737, by the Hawai'i Island chief Alapa'i. Kamakau relates that Alapa'i's encampments were at Kailua and Kāne'ohe to insure abundant food supplies. The end to this war was settled at Naonealaʻa with the meeting of Kaua'i chief Peleioholani and Alapa'i:

> It was January 1737, that the two hosts met, splendidly dressed in cloaks of bird feathers and in helmet shaped heads coverings beautifully decorated with the feathers of birds…both chiefs were attired in a way to inspire admiration and awe, and the day was one of rejoicing as that of the ending of a dreadful conflict. So it was that Peleioholani and Alapa'i met at Naonealaʻa Kāne'ohe [Kamakau 1961:72].

3.1.2 Pre-contact Period

In pre-contact times, the *ahupua'a* of Kāne'ohe offered fresh water from *mauka* (upland) springs and a well developed fishpond system, making it both an agricultural and aquacultural center on O'ahu (Devaney et al. 1982:6).

Handy (1940) provides the following description of the extensive cultivation observed in Kāne'ohe:

> Kaneohe is one of the most complicated terrace areas in the islands. It can be comprehended only in light of its stream system. It is one of the most active communities in planting commercial taro, and a goodly portion of its lowland terraces, tucked away in pockets flanked an often hidden by low hills or by the town itself, are still planted in taro (for milling) by Hawaiians who own the land and by Orientals who lease the land or are hired.
>
> This ahupua'a was described in glowing terms a century and a half ago by Portlock. "…The Bay all round has a very bountiful appearance, the low land and valleys being in a high state of cultivation, and crowded with plantations of taro, sweet potatoes, sugar cane, etc., interspersed with a great number of coconut trees, which renders the prospect truly delightful" (Handy 1940: 97).

The project area is situated in an area that was known for its extensive agricultural use. Handy (1940) notes that "some of the best terraces" were located in the vicinity of the project area:

> On the north side of the ahupua'a near the boundary of He'eia, Keaahala Stream flows into Kalimukele. Some of the best terraces now in use are inland of the highway and are irrigated by Keaahala; a large old terrace system extends downstream below the highway. An elaborate system of water rights prevailed in ancient times throughout these sections irrigated by Keaahala (Handy 1940:97).

Pre-contact land use in Kāne'ohe would have consisted of wetland taro cultivation as well as the dry land cultivation of *hala* (pandanus), *wauke* (paper mulberry), bananas, and sweet potatoes (Handy and Handy 1972:456). Additionally, Kāne'ohe Bay, with about two-dozen walled fishponds, was a bountiful source of fish (Devaney et al. 1982:6, 140).

3.1.3 Early Historic Period – 1778 to Mid-1800s

Kāne'ohe has long been viewed as a "valuable" *ahupua'a* both in terms of agricultural and fishery productivity. In 1830 the chiefs of Hawai'i, Maui, and O'ahu, in a council meeting concerning the "late doings on Oahu", referred to Kāne'ohe as the "most valuable part" of the district of Ko'olaupoko (Kamakau 1961:303).

Describing the early historical times of Hawaiian *ali'i* (monarchy) in Kāne'ohe, the Devaney et al. (1982) Kāne'ohe study states:

> …when Kahanahana ruled O'ahu [circa 1773-1783], he sometimes lived in Kaneohe. After defeating Kahanahana circa 1783, Maui Chief Kahekili and most of his famous warriors lived in Koolaupoko at Kailua, Kaneohe, and Heeia (Fornander 1969:225; Kamakau 1961:138). When Kamehameha I apportioned the conquered O'ahu lands in 1795 to his warrior chiefs and counselors ('Ī'ī 1959:69-70), he retained as his personal property the ahupua'a of Kaneohe… Much of

> Kaneohe and all of Kahaluu and Kualoa were inherited as personal lands by Kamehameha's sons Liholiho and Kauikeaouli, Kamehameha II and III (Indices…1920:27-28). (Devaney et al. 1982:5)

Kamehameha III (Kauikeaouli) presided over the Māhele, the division of lands given to Hawaiian royalty and commoners. Kamehameha III, as mentioned above, had inherited Kāne'ohe and retained the bulk of the *ahupua'a* during the Māhele. After his death, his wife, Queen Kalama (Hakaleleponi), retained their portion of Kāne'ohe (Barrère 1994, Kame'eleihiwa 1992).

Kāne'ohe held a unique position in the cultivation of *'awa* (*Piper methysticum*), which was used to create a relaxant drink regarded as immoral by missionaries who sought to restrict consumption of the "intoxicant" brew. In 1846 obliging lawmakers created licensing laws and set up a system of appointing "*'awa* agents" to plant and sell *'awa* on the various islands. The argument for this system was that, although *'awa* was considered morally hazardous, it had medicinal value. There were 2 *'awa* agents assigned to O'ahu; one was William Harbottle who was authorized to grow *'awa* on 2 acres of land in Kāne'ohe (Greer 1970:66-67).

3.1.4 Mid- to late-1800s – The Great Māhele

The Organic Acts of 1845 and 1846 initiated the process of the Māhele, the division of Hawaiian lands, which introduced private property into Hawaiian society. In 1848, the crown and the *ali'i* received their land titles. The common people (*maka'āinana*) received their *kuleana* awards (individual land parcels) in 1850. It is through records for Land Commission Awards (LCAs) generated during the Māhele that the first specific documentation of life in Kāne'ohe Ahupua'a, as it had evolved up to the mid-nineteenth century come to light.

A total of 242 land claims were made for Kāne'ohe Ahupua'a, but only 150 were awarded (www.waihona.com). The average *kuleana* award was 2.38 acres (Kelly 1976:8). However, these claims were not only for commoners, as chiefs and/or *konohiki* were also awarded lots. The bulk of Kāne'ohe Ahupua'a went to Queen Kalama, 11 *konohiki* (chiefs), and 3 non-*konohiki* (privileged awardees who received large parcels of land) (Kelly 1976:7). The primary type of land use claimed in Kāne'ohe was taro cultivation, identified in the LCAs as *lo'i* (wetland taro fields). Also of note are references to *loko* (fishponds) and *kula* (dry land agricultural plots).

Six LCAs are located in the vicinity of the project area (Figure 6). Documentation these of LCAs was reviewed in an attempt to reconstruct traditional Hawaiian land use patterns in the vicinity of the project area during the mid nineteenth century (Table 1; see Appendix C). LCA documentation indicates lands in the vicinity of the project area were utilized for traditional Hawaiian habitation and agriculture. The presence of house lots, *lo'i* (wet land taro patches), sweet potato, and bitter melon are all indicated documenting traditional Hawaiian land use in the vicinity of the project area. Of note are LCAs 3571 and 3574 which are located in the *'ili* of Kalimukele, which Handy (1940) describes as having "some of the best terraces" used to cultivate taro in Kāne'ohe. Also of note is the presence of a Christian mission at LCA 387, located 670 m west of the project area.

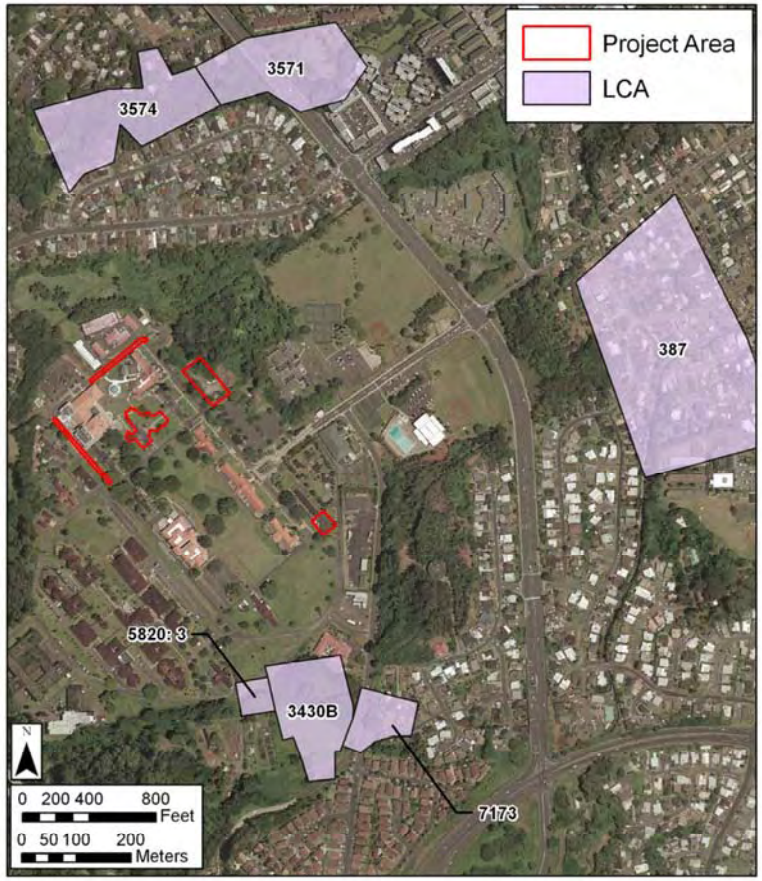

Figure 6. Locations of Land Commission Awards (LCAs) in the vicinity of the project area

Table 1. Land Commission Awards Located in the Vicinity of the Project Area

Land Claim #	Claimant	'Ili	Land Use	Landscape Feature
387	American Board of Missions	Kapunahala	Mission, cemetery	Boundary walls
3430B	Kawakawa	Keaahala	House lot, 10 *lo'i*	Bounded *mauka* by wasteland, Ko'olauloa by upland, *makai* by a road, and Kailua by a creek.
3571	Kalehuna	Kalimukele	House lot, 1 *lo'i*	Bounded *mauka* by taro land, Ko'olauloa by a *pali*, *makai* by a taro land, and Kailua by a *pali*.
3574	Kahuhu	Kalimukele	House lot, 1 *lo'i*	Bounded by a valley
5820	Kapuane	Keaahala	2 *lo'i*, house lot, sweet potato, bitter melon	Bounded by *lo'i*
7173	Kekuku	Hoowaa, Waikalua, Puiwa	House lot, 10 *lo'i*	None listed

3.1.5 Mid-1800s to 1920 – Sugar, Rice, & Ranching

In the 1860s, both commercial sugar cane and rice cultivation began in Kāne'ohe. The Kaneohe Sugar Plantation, which started around 1865, was on Queen Kalama's land with Charles Coffin Harris (C.C. Harris) as partner and manager. In 1871, C. C. Harris bought Queen Kalama's Ko'olaupoko properties from her heir, Charles Kanaina, as well as some land in Honolulu for $22,448. The sale included "…livestock, tool, fishponds, and fishing rights" (Bureau Of Conveyances, Book 34:53; cited in Devaney et al. 1982:29).

Rice cultivation was to eventually supersede taro and dominate the lowlands of Kāne'ohe. Rice was cultivated mainly by Chinese, who rented or leased the *lo'i* lands from the Hawaiian landowners. By the late 1880s, virtually the entire floodplain areas of Kāne'ohe were under rice cultivation. In 1890-92, the Kaneohe Rice Mill was erected and put into production on property adjoining Kāne'ohe Stream. The mill had a long flume coming to it from further up Kāne'ohe Stream. It also had a short railway leading to a small landing in Kāne'ohe Bay, north of Kāne'ohe Stream.

During the height of rice cultivation (circa 1890-1920), Chinese dominated the business. "To a great extent the rice business, growing and milling was controlled by Chinese *hui* (firms), which recruited laborers from China, handled investment capital from rich absentee landlords, and tallied profits" (Devaney et al. 1982:49).

By the 1920s, rice production gradually declined when it could no longer compete with the price of California grown rice (Dorrance 1998:94).

In the mid 19th century, ranching became a major enterprise. Cattle and sheep had been left on O'ahu by Vancouver in 1793, and the former had multiplied into a large herd by the 1840s (Devaney 1982:70). By the mid 1860s, the cattle were so numerous as to cause environmental degradation. Kaneohe Ranch was formed in 1876, on lands originally belonging to Queen Kalama. At its peak, the ranch included 12,000 acres and 2,000 head of cattle. Much of the land modification in the upland and hilly portions of Kāne'ohe may be the result of heavy cattle grazing over a long period of time.

3.1.6 1900s to Present

Pineapple

The commercial cultivation of pineapple began in the 1890s and the first decade of the 1900s in Kāne'ohe. From approximately 1910 to 1925, pineapple cultivation was a major industry in this area. In 1911, the company of Libby, McNeill and Libby built a pineapple cannery in Kahuku. At its peak, 2,500 acres were under pineapple cultivation on Windward O'ahu (Harper 1972) stretching from Kāne'ohe to Kahalu'u. A large percentage of this acreage was in the Kāne'ohe Bay region, including He'eia. A *heiau*, Kaualauki Heiau in He'eia, was mostly destroyed by pineapple field clearance during this time. In 1919, the Kaneohe Ranch Company and He'eia Agricultural Co., Ltd. leased 1000 acres of land in He'eia, Kāne'ohe, and Kailua, formerly planted in sugar, to the Libby company for a term of 17 years. In 1917, Libby leased an additional 600 acres in He'eia (Libby, McNeill & Libby Ms:2, cited in Kawachi 1990). While

the rice fields that covered old taro lands were mainly located near streams and near the coast, the pineapple fields were also grown on the slopes of higher lands, usually on land subleased to individual Japanese farmers:

> Pineapples were planted by individual Chinese and Japanese farmers on moderately sloped hill land where rice and taro could not be grown…these areas included the dissected alluvial terraces and the lower slopes and spurs of the Koolau range [Miyagi 1963:1151].

The change to the windward landscape due to pineapple cultivation is illustrated by the following passage:

> At last we reached the foot of the Pali…Joe and I looked over the surrounding hills, but looked in vain for the great areas of guava through which but a few months ago we had fought and cut our way. As far as the eye could reach pineapple had taken the place of the forest of wild guava. The newest industry in Hawaii was beginning even to press upon the cane fields of this side of the island [Alexander 1914:318, cited in Devaney et al. 1982:62].

The pineapple fields were abandoned when Molokai and Lāna'i pineapple cultivation began to boom, and Libby pulled out of the Ko'olaupoko enterprise (Kelly 1975:47). The cannery closed in 1923 (Dorrance 1998:95).

> Most of [the former pineapple] land went to grass, and some of it was used to graze cattle. Many of the small farmers returned to rice cultivation. The area along Heeia stream *mauka* of the viaduct continued to produce rice [Kelly 1975:47].

Waiahole Forest Reserve

In 1918, the Waiahole Forest Reserve, located just *mauka* of the project area, was established with 1,169 acres of land set aside as "government and private lands under proper forest administration and protection so that damage by stock and man would be prevented and the native forest made to serve its function of conserving water"(Hawaiian For. & Ag. 1918:196). Circa 1900, the mountain slopes between He'eia and Kailua were usually too steep to support forests, but groves of *kukui* (*Aleurites moluccana*) trees were found around streams and springs. The forests in the entire reserve were typical for windward forests of O'ahu, with stands of native *koa* (*Acacia koa*), *'ōhi'a lehua* (*Metrosideros macropus*), *kukui*, *'ōhi'a 'ai* (*Eugenia malaccensis*), vines, and ferns. Reforestation of the preserve area began immediately, usually planted with exotic trees, including mahogany, molave, Japanese cedar, Australian red cedar, Norfolk Island pine, narra, Kauri pine, and bastard sandalwood (Devaney et al. 1982:89-90).

Kamehameha Highway

From 1920 to 1922, Kamehameha Highway was paved through the Kāne'ohe and He'eia *ahupua'a* and a bridge (the Long Bridge) was completed over He'eia Stream. After World War II, residential developments changed the face of the area. In 1959, 71.5% of the land in He'eia

was still agricultural. Much of this land was still owned by the Bishop Estate. In that year, a development agreement was awarded to Senator Mitsuyuki Kido by the Bishop Estate (Cooper and Daws 1990:50), who then organized the He‘eia Development Co. (HDCo) to develop 520 acres of He‘eia lands for residential use (Cooper and Daws 1990:432). A total of 107 residential lots were eventually built over six filled-in ponds in Kāne‘ohe and He‘eia (Dorrance 1998:95).

Military

On November 9, 1914, 281.34 acres of land was relinquished to the United States of America for development of a military installation, Kea‘ahala Military Reservation (Figure 7). The reservation was to be used as a field artillery range.

Corresponding with the Secretary of the Interior in May 1923, Governor Wallace R. Farrington stated that the Kea‘ahala Military Reservation was originally established for no other reason than that the Federal Government was afraid that the land would be cut up into homestead lots under laws existing at the time, and that the Federal or Territorial Governments would be forced to buy it back again under condemnation proceedings if it were needed either for military or territorial purposes (Takemoto et al. 1991).

A large portion of the Kea‘ahala Military Reservation is now under the land jurisdiction of the State of Hawai‘i and is currently being utilized as site locations for the Kāne‘ohe District Park, the Hawai‘i State Hospital, and Windward Community College.

Territorial Hospital

In 1850, King Kamehameha III created the Board of Health, which initiated the development of a well organized system of plantation medicine (Cody 1974). However, as William Cody (1974) notes, individuals afflicted with mental illness were treated as criminals or as beings possessed with evil spirits, and were either sent to jail or back to their home countries:

> …difficult psychiatric problems were often handled in somewhat the same manner as in other countries at that time, namely by social ostracism and/or jail. A “kahuna” or medicine man” might be asked to try and exorcise the evil spirits. Mentally ill persons were sometimes returned to their countries of origin, for example, the Philippines (Cody 1974: 207)

In 1862 the government, in response to considerable public interest in developing a hospital for the mentally ill, authorized construction of a facility to be known as the Oahu Insane Asylum, located at Pālama (Cody 1974). The Asylum was built in 1866 and its first six patients were transferred there from the Honolulu Jail

Due to crowded conditions at the Oahu Insane Asylum, the need for a new facility was realized. In 1924, President Calvin Coolidge, through executive order, set aside 147 acres of the Kea‘ahala Military Reservation at Kāne‘ohe for the construction of a new Territorial Hospital. By 1930, there were 541 patients at the Pālama facility. On January 6, 1930 the Oahu Insane Asylum closed and the U.S. Army moved the 549 patients to the new Territorial Hospital in Kāne‘ohe (Cody 1974).

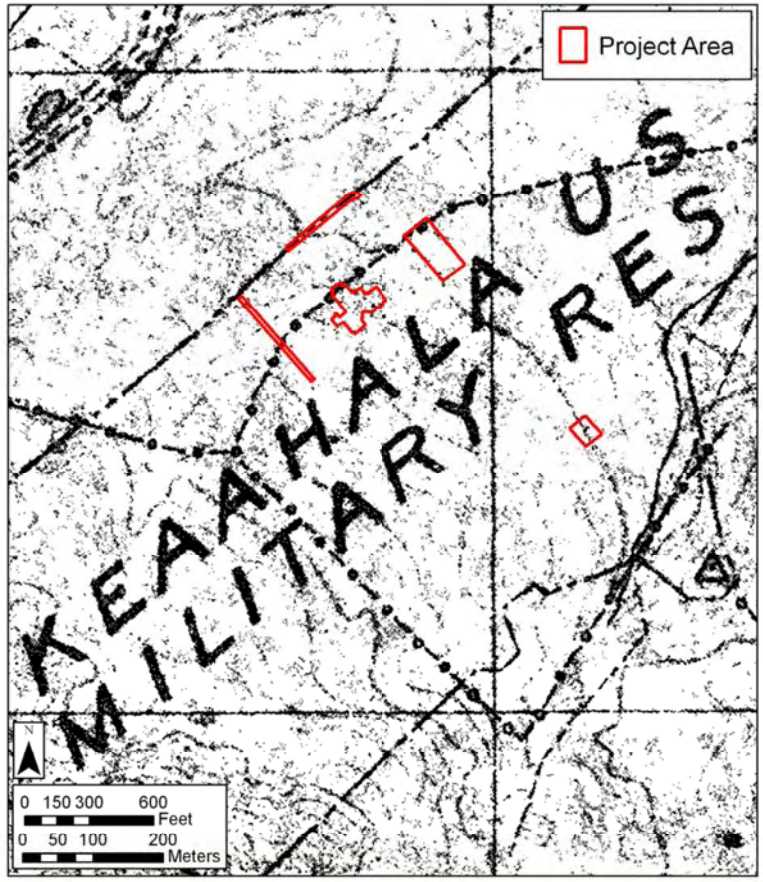

Figure 7. Portion of 1918 O‘ahu Fire Control map showing the project area situated within the Kea‘ahala Military Reservation

By the late 1950s, there were more than a thousand patients at the Kāne'ohe hospital (*Honolulu Advertiser,* February10, 2002), but during the 1960s, there was a large decrease in the hospital population:

> …by 1971 the hospital's licensed bed capacity was 220, below that at the turn of the century. This transformation was not unique to Hawai'i but reflected changes at state hospitals across the country. One contributing factor was the discovery, at last, of effective treatments for psychosis, mania, and depression – the neuroleptic and antidepressant medications. In addition, the Community Mental Health Act of 1963 fostered the trans-institutionalization of large numbers of patients by shifting federal funding from state hospitals into nursing homes, federal facilities, and private psychiatric facilities [hawaiipsychiatric.org/HawaiiPsychiatric.data/Library/HSH-Hx.pdf].

In 1950 a new treatment facility was constructed just *mauka* of the original hospital site. The pre-war buildings of the original hospital site were gradually abandoned, and beginning in 1972, the original hospital site was transferred from the Department of Health to the University of Hawai'i, for the creation of the Windward Community College campus. A review of historic maps indicates that a number of the buildings currently utilized by Windward Community College were originally constructed in the 1920s as part of the Territorial Hospital (Figure 8, Figure 9, & Figure 10). One such structure is the Hale Manaleo building which is located within the proposed footprint of the LLRC (Figure 11).

3.2 Previous Archaeological Research

Previous archaeological studies in the vicinity of the current project area are presented in Table 2 and shown in Figure 12. The following is a summary of these archaeological studies.

McAllister 1933

The earliest archaeological work in the Ko'olaupoko District was conducted by J. Gilbert McAllister in the 1930s. McAllister identified six sites in the vicinity of the project area: Site 333 (Kāne a me Kanaloa Heiau), Site 334 (Kapuna Spring), Site 335 (old taro terraces), Site 338 (pigpen of Kāne), Site 340 (Kukuiokāne Heiau), and Site 341 (Kumukumu Spring) (Figure 13).

Site 333 is the now destroyed Kāne ame Kanaloa Heiau, located approximately 740 m southwest of the project area. McAllister describes what was left of the *heiau* (altar, oracle tower, shrine, etc.) during his site visit:

> Site 333. Kane ame Kanaloa heiau, said by W. Kalani to be at the end of the pine trees beneath the ti. There is nothing to indicate the old temple site now except an old stone wall which may have been built subsequently from the rocks of the heiau (McAllister 1933:176).

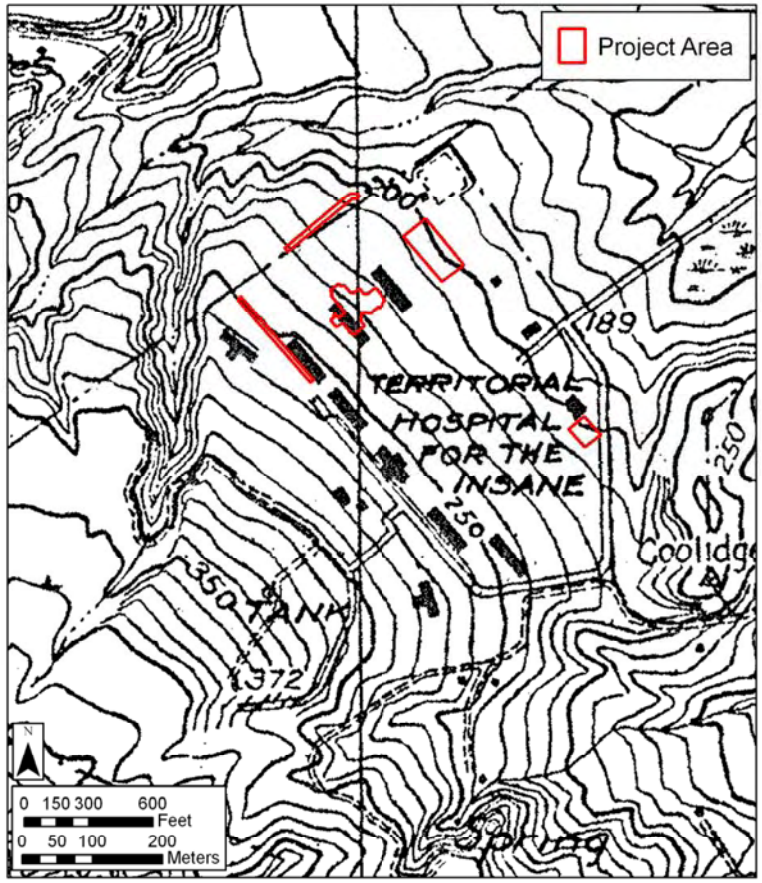

Figure 8. 1928 USGS topographic map, Kāne'ohe Quadrangle, showing the project area within the limits of the Territorial Hospital

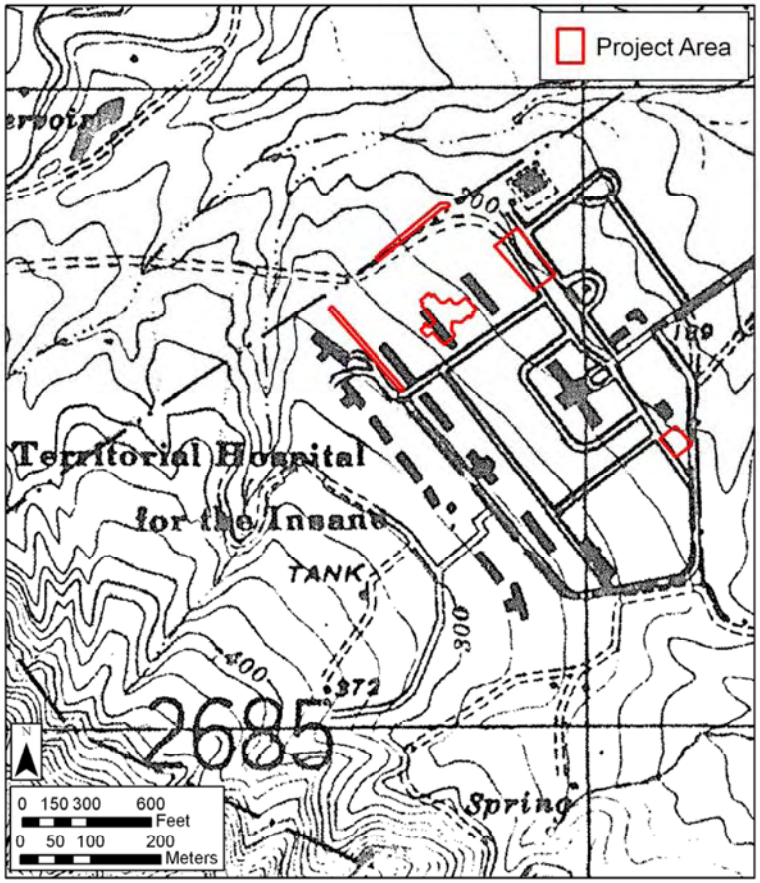

Figure 9. 1943 War Department map, showing the project area within the limits of the Territorial Hospital

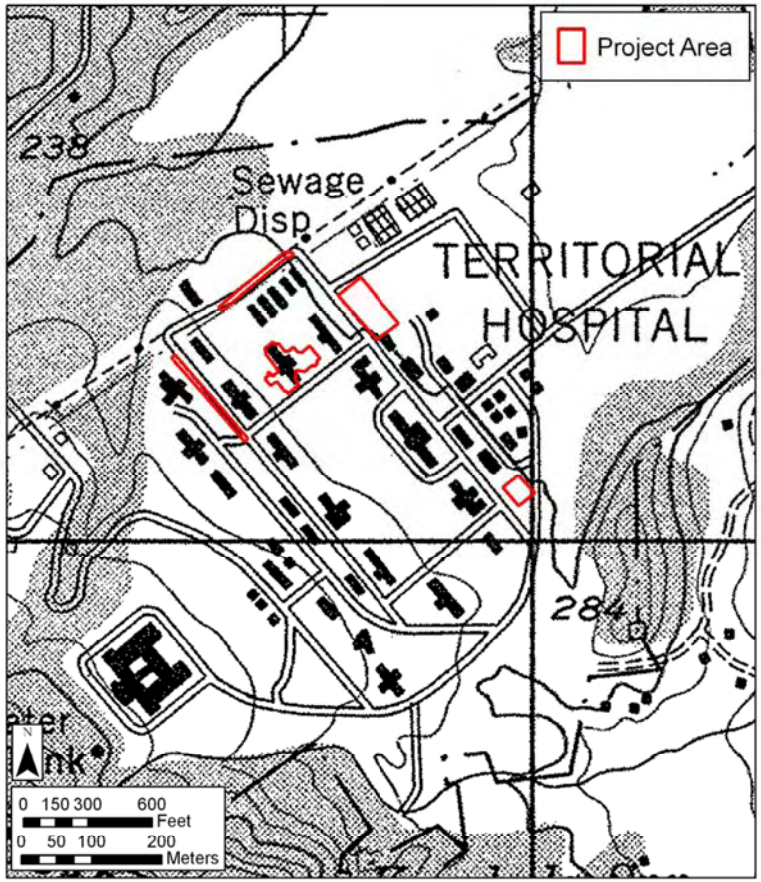

Figure 10. 1955 Army Map Service map, showing the project area within the limits of the Territorial Hospital

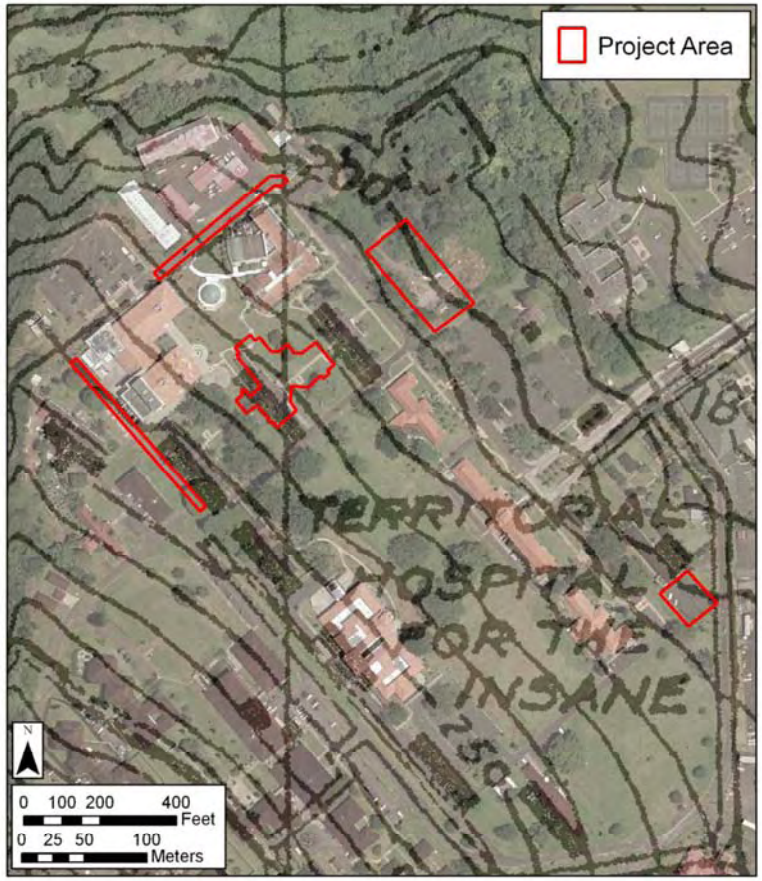

Figure 11. Aerial photograph with 1928 USGS map overlay showing Territorial Hospital infrastructure within the footprint of the proposed WCC LLRC

Table 2. Previous Archaeological Studies in the Vicinity of the Project Area

Reference	Location	Nature of Study	Results
McAllister 1933	Island of O'ahu	Island-wide archaeological survey	Site 333 (Kane ame Kanaloa Heiau), Site 334 (Kapuna Spring), Site 335 (old taro terraces), Site 338 (pigpen of Kane), Site 340 (Kukuiokane Heiau), and Site 341 (Kumukumu Spring)
Department of the Army 1991	Kāne'ohe District Park (TMK [1] 4-5-023: 009)	Archaeological field inspection	No historic properties identified.
Hammatt et al. 1992	Pō'okela Street (TMK [1] 4-5-023: 002)	Archaeological inventory survey	No historic properties identified.
Duncan & Hammatt 1993	Pō'okela Street (TMK [1] 4-5-023: 002)	Archaeological monitoring	One historic property identified: 50-80-10-4523, post-contact trash pit.
Williams 1993	U.S. Coast Guard Omega Transmitter Station site (TMK [1] 4-6-015)	Archeological reconnaissance & limited subsurface testing	One historic property identified: 50-80-10-4495, pre- and post-contact habitation.
Williams & Nees 1994a	U.S. Coast Guard Omega Transmitter Station site (TMK [1] 4-6-015)	Archeological reconnaissance & limited subsurface testing	Five historic properties identified: two are associated with the WWII Naval Radio Station (SHIP #50-80-10-4787 & -4788), and three are the remains of pre-contact stone faced pond field terraces (SIHP #50-80-10-4789, -4790, & -4791).
Williams & Nees 1994b	Interstate Highway H-3 & U.S. Coast Guard Omega Transmitter Station site	Archaeological and historical investigations	Eleven historic properties identified: five consisting of pre-contact habitation features including a house complex with numerous terraces (SIHP #50-80-10-2078) and four subsurface fire pit features (*imu*) (SIHP #50-80-10-2081, -2082, -2323, & -2324); the remaining six are pre-contact sites utilized into the post-contact period consisting of two agricultural terrace areas (SIHP #50-80-10-2042 & -2083), a habitation complex with terraces, alignments, and an enclosure (SIHP -2041), a religious complex containing walls and modified outcrops (SIHP -2080), a boundary wall (SIHP -1904), and a platform of undetermined function (SHIP -2079). All eleven historic properties are located over 1000 m west of the project area.

Reference	Location	Nature of Study	Results
Spear 1995	TMK [1] 4-5-023: por. 002 & por. 003	Archeological inventory survey	No historic properties identified.
Williams & Nees 1997	U.S. Coast Guard Omega Transmitter Station site (TMK [1] 4-6-15)	Archeological reconnaissance & limited subsurface testing	Two historic properties identified: SIHP #50-80-10-4635, a single depression and unusually weathered boulders; and SIHP -4637 a grouping of unusual stones.
Dockall et al. 2003	Interstate Highway H-3	Archeological inventory survey, data recovery, and monitoring	49 historic properties identified.

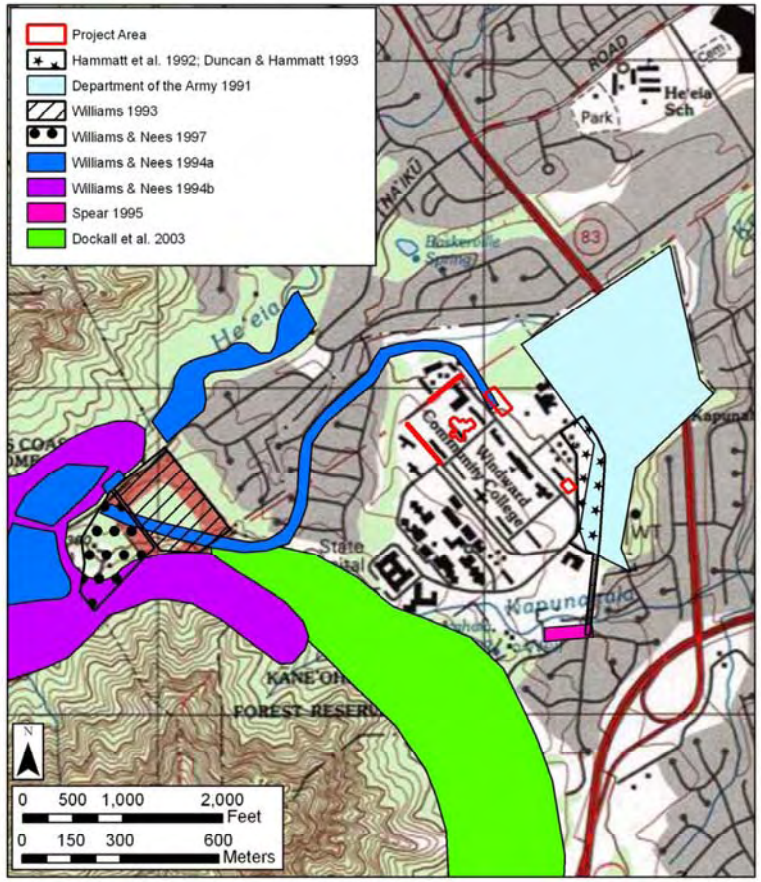

Figure 12. USGS 7.5-Minute Series Topographic Map, Kāne'ohe quadrangle (1998), showing previous archaeological studies in the vicinity of the project area

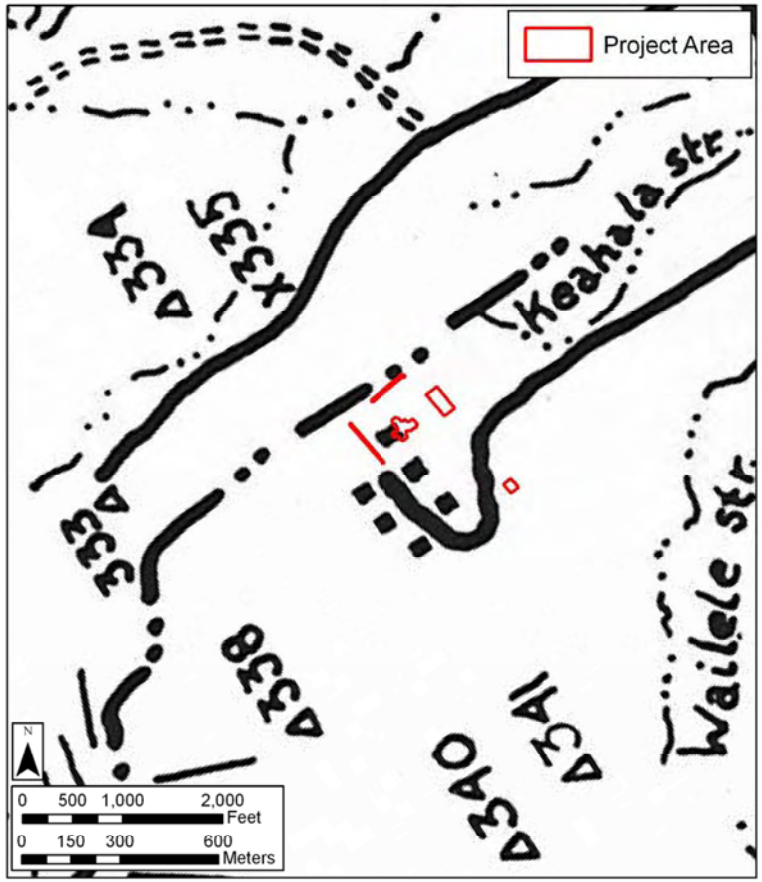

Figure 13. 1959 Bishop Museum map of the Ko'olaupoko District showing McAllister sites in the vicinity of the project area

Site 334 consists of Kapuna Spring described by McAllister (1933) as "a spring at which Kane and Kanaloa are said to have obtained their drinking water" (McAllister 1933:176). Site 334 is located approximately 630 m northwest of the project area.

Site 335 consists of old taro terraces situated within Haiku Valley, located approximately 430 m northwest of the project area. McAllister describes what was left of the terraces during his site visit:

> Site 335. Old taro terraces, now neglected. The valley (Haiku) broadens out with many acres of level rich lowlands protected by ridges which surround them almost completely. The land is now swampy and full of weeds, but the rectangular terraces can still be seen (McAllister 1933:176).

These terraces are likely the remnants of the taro *lo'i* mentioned in the LCAs 3571 and 3574 and described by Handy (1940) (see Section 3.1 Traditional and Historical Background above and Appendix C).

Site 338 consists of Papuaa a Kane (the pigpen of Kane), located approximately 830 m southwest of the project area. McAllister provides the following description of the site:

> Site 338. Papuaa a Kane, the pigpen of Kane just beneath Pu'u Keahiakahoe on the side of the pali.
>
> A small flat area where it is said that Kane kept his best pigs. Certainly they were safe, for owning to the contours of the land, only one with supernatural powers could carry off a pig from such a height.
>
> At the foot of the pali is a small swale, now covered with a heavy growth of kukui, where Kane and his wife, Mamalohoa, grew awa. It is said that exceptionally good awa can still be gathered there (McAllister 1933:177).

Sites 340 is the now largely destroyed Kukuiokāne Heiau, located approximately 1120 m south of the project area. McAllister describes what was left of the *heiau* during his site visit:

> Site 340. Kukuiokane Heiau, Luluku, inland from He'eia at the foot of the ridge above the banana fields.
>
> Because of the destruction of this heiau, which was the largest and most important one in the region, by Libby, McNeill and Libby Co., a disease attacked their pineapples and the undertaking was a failure, according to the old Hawaiians of the district. The present deserted fields are adequate proof. The structure was said to be very large and if the many stones, some several feet in thickness, scattered throughout the area are any indication of the extent and importance of the former heiau, the native conception is quite justified. The ploughed-up remains indicate heavy walls and several terraces. It is impossible to obtain dimensions (McAllister 1933:177).

Site 341 consists of Kumukumu Spring, located approximately 860 m south of the project area. The spring is said to be associated with Kukuiokane Heiau (Site 340) and very powerful, as McAllister describes:

> Site 341, Kumukumu Spring, said to have been connected with Kukuiokane Heiau (site340), Kaneohe.
>
> On the night of Kane the drums of the hula can be heard at this spring. There was once a man, Konomokai, who said that he could dry up this spring by putting his cane into it. When he did this, the cane turned into salt, for the water was more powerful than man (McAllister 1933:177).

Department of the Army 1991

In 1991, the Department of the Army conducted a field investigation of Kāne'ohe District Park (formerly part of the Keaahala Military Reservation), located just northeast of the current project area (Dept of Army 1991). The field investigation was to "gather background information related to use of the project site and specific environmental conditions and to assess the cost of removal of any debris, hazardous/toxic wastes, fuel contamination or other contaminated areas, if appropriate." This investigation also involved an archaeological surface investigation of the site. No historic properties were identified. It was believed that the "extensive development of the project site would have removed archaeological or historic features which may have been present" (Dept of Army 1991).

Hammatt et al. 1992

In 1992, CSH conducted an archaeological inventory survey for a proposed connecting road between Pō'okela Street and Kea'ahala Road and a Department of Transportation base yard, located immediately east of the current project area (Hammatt et al. 1992). The survey involved a complete pedestrian inspection of the study area as well as the excavation of two 1 m square test units at the southern portion of the project area in locations of anticipated ground disturbance. No historic properties were identified. It was determined that the northern portion of the study area suffered extensive disturbance associated with the construction of the Hawai'i State Hospital (a.k.a. Territorial Hospital); however, the southern portion of the study area was observed to have had less land modifications and was in the immediate vicinity of Kapunahala Stream, and thus may have the potential to contain subsurface cultural deposits buried by alluvial sediments. As a result archaeological monitoring was recommended (Hammatt et al. 1992).

Duncan & Hammatt 1993

In 1992, CSH conducted an archaeological monitoring of the construction of a connecting road between Pō'okela Street and Kea'ahala Road, located immediately east of the current project area (Duncan & Hammatt 1993). One historic property (SIHP #50-80-10-4523), consisting of a post-contact trash pit and an associated cement box, was identified in the southern portion of the study area, located approximately 300 m southeast of the current project area.

Williams 1993

In 1993, Ogden Environmental and Energy Services Co., Inc. conducted an archaeological reconnaissance and limited subsurface testing for proposed family housing construction within the U.S. Coast Guard Omega Transmitter Station site, located approximately 600 m southwest of the current project area (Williams 1993). One historic property was identified: SIHP #50-80-10-4495, a pre- and post-contact habitation consisting of two heavily disturbed terraces, located approximately 800 m west of the current project area. Subsurface testing at SIHP -4595 yielded both pre-contact artifacts (basalt flakes) and post-contact artifacts (historic glass and ceramic fragments). Additionally radiocarbon analysis of charcoal collected from a hearth feature provided a date range of 1260-1450 AD.

Williams & Nees 1994a

In 1994, Ogden Environmental and Energy Services Co., Inc. conducted an archaeological reconnaissance and limited subsurface testing at five discrete locations within the U.S. Coast Guard Omega Transmitter Station site (Williams & Nees 1994a). One of the five areas partially lies within the current project area, while the remaining four areas are from 300 to 900 m to the west. Five historic properties were identified: two are associated with the WWII Naval Radio Station (SHIP #50-80-10-4787 & -4788), and three are the remains of pre-contact stone faced pond field terraces (SIHP #50-80-10-4789, -4790, & -4791). All five historic properties are located over 1000 m west of the project area.

Williams & Nees (1994) made the following observations of the portion of their survey area which partially crosses thru the current project area:

> Given the extensive land alteration to this area during the 19th and 20th centuries (Devaney et al. 1982; Williams 1993) including pineapple agriculture and military activities, the potential for surface remains is very low. The potential for isolated subsurface remains, such as cooking features, is high (Williams & Nees 1994a:44).

Of note are Williams & Nees' (1994a) conclusions, based on background research, that there is a high potential of isolated subsurface cultural deposits at least partially within the current project area.

Williams & Nees 1994b

In 1994, Ogden Environmental and Energy Services Co., Inc. conducted archaeological and historical investigation for the Interstate Highway H-3 and within a portion of the U.S. Coast Guard Omega Transmitter Station site, located approximately 640 m southwest of the current project area (Williams & Nees 1994b). Eleven historic properties were identified: five consisting of pre-contact habitation features including a house complex with numerous terraces (SIHP #50-80-10-2078) and four subsurface fire pit features (*imu*) (SIHP #50-80-10-2081, -2082, -2323, & -2324); the remaining six are pre-contact sites utilized into the post-contact period consisting of two agricultural terrace areas (SIHP #50-80-10-2042 & -2083), a habitation complex with terraces, alignments, and an enclosure (SIHP -2041), a religious complex containing walls and

modified outcrops (SIHP -2080), a boundary wall (SIHP -1904), and a platform of undetermined function (SHIP -2079). All eleven historic properties are located over 1000 m west of the project area.

Spear 1995

In 1995, Scientific Consultant Services, Inc. conducted an archaeological inventory survey for a proposed road alignment located within Kapunahala Marsh, located approximately 370 m south of the current project area (Spear 1995). Fieldwork consisted of the collection and analysis of a single sediment core. Pollen and charcoal collected from the sediment core indicated pre-contact land use within the Kapunahala watershed by 692 years B.P. (Spear 1995). No historic properties were identified.

Williams & Nees 1997

In 1997, Ogden Environmental and Energy Services Co., Inc. conducted archaeological reconnaissance and limited subsurface testing within a portion of the U.S. Coast Guard Omega Transmitter Station site, located approximately 850 m southwest of the current project area (Williams & Nees 1997). Two historic properties were identified: SIHP #50-80-10-4635, a single depression and unusually weathered boulders; and SIHP -4637 a grouping of unusual stones. Subsurface testing at SIHP -4635 yielded eight traditional Hawaiian artifacts: seven basalt flakes and a volcanic glass core.

Dockall et al. 2003

In 2003, the Bishop Museum Department of Anthropology conducted an archaeological inventory survey, data recovery, and monitoring for Interstate Route H-3, located approximately 520 m southwest of the current project area (Dockall et al. 2003). 49 historic properties were identified. The 14 of the 49 historic properties are located in the vicinity of the current project area: SIHP #50-80-10-1893, -1894, -1901, -1903, 2039, -2040, -2060, -2077, -2084, -2085, -2086, -2087, -2151, and -2156. These historic properties are summarized in Table 3 and can be located in relation to the current project area on Figure 14.

Table 3. Historic Properties Identified by Dockall et al. (2003) in the Project Area Vicinity

SIHP # 50-80-10-	Description	Function
-1893	Mound	Post-contact agricultural
-1894	*'Ili* boundary wall	Boundary
-1901 Feature 1	Pit	Charcoal kiln
-1901 Feature 2	Linear slope modification	Trail
-1903	Complex of 19 surface features, mostly small rock mounds, with one platform, one boulder alignment, and one cut embankment	Post-contact agricultural with limited evidence of pre-contact use
-2039	Depression	Charcoal kiln
-2040	A large depression, linear arrangement of rock-faced terraces, and several rock mounds	Uncertain; possible pre-contact habitation or agricultural use, or may date to 20th century ranching activities
-2060	Charcoal filled pit	*Imu*
-2077	Charcoal concentration	Undetermined
-2084	Linear rock mound and terraces	Post-contact clearing for agriculture and ranching activities
-2085	Charcoal filled pit	*Imu*
-2086	Charcoal filled pit	*Imu*
-2087	Single cobble and boulder concentration with no evidence of a terrace	Clearing mound
-2156	Charcoal filled pit	*Imu*

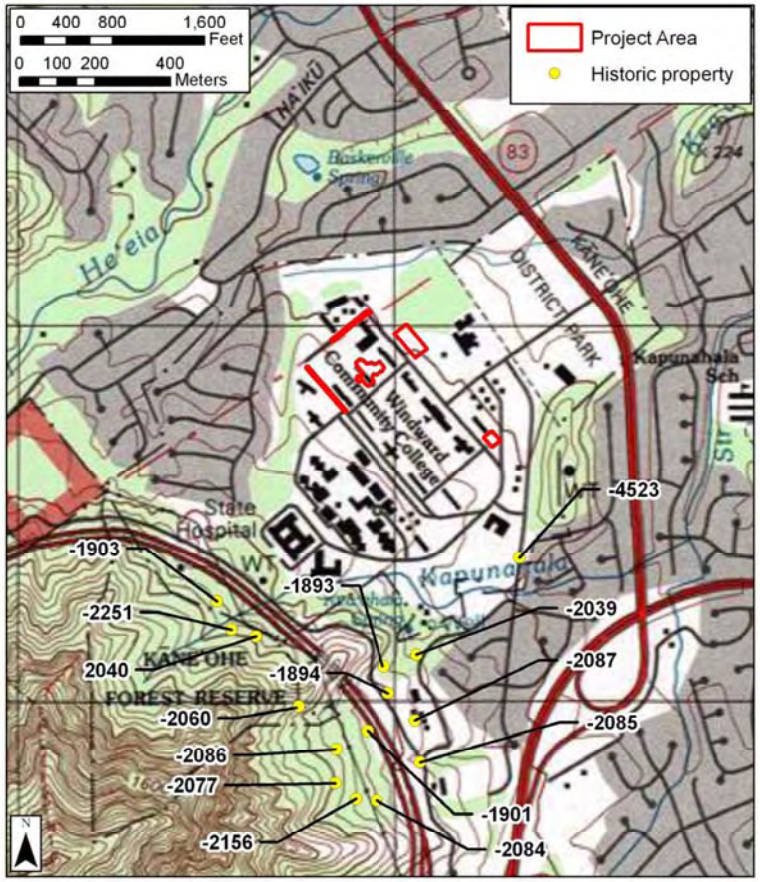

Figure 14. USGS 7.5-Minute Series Topographic Map, Kāne'ohe quadrangle (1998), showing historic properties in the vicinity of the project area. Note: All historic properties have the following prefix: 50-80-10.

3.3 Background Summary and Predictive Model

Kāne'ohe Ahupua'a contained abundant water sources and arable land which would have been extremely favorable to pre-contact Hawaiian populations for the development of large scale taro cultivation and the implementation of aquaculture in the form of large fish ponds or *loko*. A review of historic maps identified six LCAs are in the vicinity of the project area (see Figure 6). A review of LCA documentation indicates that lands in the vicinity of the project area were utilized for traditional Hawaiian habitation and agriculture. The presence of house lots, *lo'i* (wet land taro patches), sweet potato, and bitter melon are all indicated documenting traditional Hawaiian land use in the vicinity of the project area. Previous archaeological research has also documented pre-contact subsurface cultural deposits, agricultural complexes, religious structures, and habitations in the vicinity of the project area (McAllister 1933; Williams & Nees 1994a & b; Williams & Nees 1997; and Dockall et al. 2003), providing further evidence of the pre-contact Hawaiian occupation of the area.

During the early twentieth century, 281.34 acres of land within Kāne'ohe Ahupua'a was relinquished to the United States of America for the development of a military installation named Kea'ahala Military Reservation, used as a field artillery range. A 1918 O'ahu Fire Control map places the entire project area within the boundaries of the Kea'ahala Military Reservation (see Figure 7). In 1991, the Department of the Army conducted a field investigation of a portion of Keaahala Military Reservation and determined that the "extensive development of the project site would have removed archaeological or historic features which may have been present" (Dept of Army 1991).

In 1930, the Territorial Hospital for the treatment of the mentally ill was constructed within lands formerly consisting of the Kea'ahala Military Reservation. A review of historic maps places the entire project area within the Territorial Hospital complex. In 1950 a new treatment facility was constructed just *mauka* of the original hospital site. The pre-war buildings of the original hospital site were gradually abandoned, and beginning in 1972, the original hospital site was transferred from the Department of Health to the University of Hawai'i, for the creation of the Windward Community College campus. A review of historic maps indicates that a number of the buildings currently utilized by Windward Community College were originally constructed in the 1920s as part of the Territorial Hospital (see Figure 8, Figure 9, & Figure 10). One such structure is the Hale Manaleo building which is located within the proposed footprint of the LLRC (see Figure 11).

Based on background research, no historic properties (i.e. archaeological sites) are expected to be encountered during the pedestrian inspection of the project area. Successive land modifications within the project area associated with the Kea'ahala Military Reservation, the Territorial Hospital, and Windward Community College have caused extensive land disturbances (i.e. grading, leveling, filling, etc.) which would have destroyed any evidence (surface and subsurface) of pre- and post-contact land use. An exception to this is the possibility of encountering historic structures associated with the Territorial Hospital which have been reused by Windward Community College.

Section 4 Results of Fieldwork

4.1 Survey Findings

On September 14th 2008, the entire project area was subjected to 100% pedestrian inspection. No historic properties were identified.

In general, the entire project area was observed to have been completely disturbed by prior development associated with Windward Community College infrastructure (buildings, roads, subsurface utilities, etc.). The following is a summary of each of the six discrete areas that make up the project area.

The two areas proposed for road widening consisted of in-use asphalt paved roads bordered by one and two story buildings (Figure 15 & Figure 16). Evidence of subsurface utilities within and in the immediate vicinity of this area was observed through the presence of fire hydrants, sewer manholes, and electrical boxes located along the road corridors.

The area proposed for the development of a 92-stall parking facility, located near the northern corner of the WCC campus, consisted of a heavily vegetated area that showed signs of prior disturbance in the form of bulldozer push piles (Figure 17), graded areas, and areas of discarded construction debris (concrete chunks, pipes, etc.) (Figure 18). Also of note was the presence of and asphalt paved road and electric line corridor running along the southeastern edge this area (Figure 19).

The area proposed for the development of a 30-stall parking facility, located near the southeastern corner of the WCC campus, consisted of abandoned tennis courts (Figure 20).

The area proposed for the development of the LLRC, located within the northwestern portion of the WCC campus, consists primarily of a gently sloping grassy field with concrete sidewalks with metal railing present throughout (Figure 21). Of note is the presence of a building, currently named Hale Manaleo, situated within the footprint of the proposed LLRC (Figure 22). A review of historic maps indicates that this building was constructed by at least 1928 as a component of the Territorial Hospital. Due to the historic nature of this structure CSH recommends consultation with the State Historic Preservation Division Architecture Branch prior to any land disturbance associated with the construction of the proposed LLRC.

Figure 15. Ala Ko'olau Road along southwestern edge of WCC, showing existing conditions of area proposed for road widening, view to northwest

Figure 16. Ala Ko'olau Road along northwestern edge of WCC, showing existing conditions of area proposed for road widening, view to northeast

Figure 17. Large bulldozer push pile located within area proposed for 92-stall parking facility, view to southwest

Figure 18. Discarded construction debris located within area proposed for 92-stall parking facility

Figure 19. Asphalt road and electric line corridor running along southeastern edge of the area proposed for 92-stall parking facility, view to northwest

Figure 20. Abandoned tennis courts within the proposed for 30-stall parking facility, view to southwest

Figure 21. Concrete sidewalks and metal railings running thru area proposed for LLRC development, view to west

Figure 22. Hale Manaleo, historic structure situated within the footprint of the proposed LLRC, view to northwest

Section 5 Summary and Interpretation

In compliance with and to fulfill applicable Hawai'i state historic preservation legislation, CSH completed what began as an archaeological inventory survey investigation of the project area, but because no archaeological historic properties were located, this investigation became an archaeological assessment, per the language of HAR Chapter 13-13-275-5. Per the Hawai'i state requirements for archaeological assessments, this report includes the results of historical and archaeological background research and fieldwork. The background research focused on summarizing the project area's pre-Contact and historic land use, cultural significance, and types and locations of potential historic properties within the project area and its vicinity.

No historic properties were identified during a pedestrian inspection of the project area. In general, the areas proposed for development were observed to have been completely disturbed by prior development associated with Windward Community College infrastructure (buildings, roads, subsurface utilities, etc.). Of note is the presence of a building, currently named Hale Manaleo, situated within the footprint of the proposed LLRC. A review of historic maps indicates that this building was constructed by at least 1928 as a component of the Territorial Hospital. Due to the historic nature of this structure CSH recommends consultation with the State Historic Preservation Division Architecture Branch prior to any land disturbance associated with the construction of the proposed LLRC.

These findings are largely in keeping with expectations, based on background research. While a review of LCA documentation indicates that lands in the vicinity of the project area were utilized for traditional Hawaiian habitation and agriculture, the successive land modifications associated with the Kea'ahala Military Reservation, the Territorial Hospital, and Windward Community College would have destroyed any remains of pre-contact land use that may have been present. Additionally, these extensive land disturbances (i.e. grading, leveling, filling, etc.) would have also severely disturbed and/or destroyed any evidence of post-contact land use, with the exception of former Territorial Hospital buildings which are currently being utilized by Windward Community College, and have likely undergone extensive renovation. Thus the proposed WCC LLRC project is not expected to impact any archaeological historic properties, including subsurface cultural deposits, due to the historic and modern land disturbances that have occurred within the project area, which have likely destroyed any archaeological historic properties that may have once existed within the project area.

Section 6 Project Effect and Mitigation Recommendations

6.1 Project Effect

The basis of background research and fieldwork CSH concludes that the proposed project will have "no effect" on archaeological resources.

The SHPD Chapter 6E-8 review (present Appendix A) concludes a specific effect recommendation of "effect, with proposed mitigation commitments." The proposed WCC LLRC project has the potential to adversely affect contributing architectural elements of the historic district of the Territorial Hospital, which is eligible for nomination to the National Register of Historic Places.

6.2 Mitigation Recommendations

The following mitigation measures have been recommended by the SHPD (Log No: 2008.1072, Doc No: 0803AL14; see Appendix A): an updated National Register of Historic Places nomination form for the historic district of the Territorial Hospital; good faith effort to update the current master plan, to include guidelines, within 10 years pending legislative approval; commitment to provide an educational display within the new Learning Center to include historical information on the Territorial Hospital; and intent to provide documents and collaborate with the Department of Health to display the original asylum campus in a future museum in Bishop Hall. Should the museum not materialize within the next 10 years, WCC will provide the information on their website.

No further archaeological work is recommended for the proposed WCC LLRC project.

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Appendix A SHPD Correspondence

Chapter 6E-8 (HRS) Review of the Proposed WCC LLRC project

LINDA LINGLE
GOVERNOR OF HAWAII

LAURA H. THIELEN
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

RUSSELL Y. TSUJI
FIRST DEPUTY

KEN C. KAWAHARA
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCE ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
STATE HISTORIC PRESEERVATION DIVISION
601 KAMOKILA BOULEVARD, ROOM 555
KAPOLEI, HAWAII 96707

March 31, 2008

Ms. Tonia Moy
Fung Associates Inc.
1833 Kalakaua Avenue
Suite 1008
Honolulu, Hawaii 96815

LOG NO: 2008.1072
DOC NO: 0803AL14
Architecture

Dear Ms. Moy:

SUBJECT: **Chapter 6E-8 (HRS) Review**
New Learning Resource Center
Windward Community College
Kaneohe, Island of O'ahu, Hawaii
TMK: (1)-4-5-023:002

Thank you for your transmittal of March 14, 2008, which we received in our Kapolei office on March 18. SHPD staff met on site regarding the proposed project on November 29, 2007 and February 27, 2008.

The proposed project is for construction of a new Learning Resource Center at Windward Community College in Kaneohe on the Island of O'ahu. The library and learning center facility will be approximately 60,000 square feet when constructed and will seek LEED silver certification. The site and its area of potential effect is within the historic district of the Territorial Hospital, which is eligible for nomination to the National Register of Historic Places. Demolition of the historic, contributing Hale Manaleo (formerly known as Lono) is included in the scope of work of the proposed project.

In the course of consultation and included in the transmittal, Architects Hawaii, the project architects, presented to SHPD staff a myriad of alternative options considered during project development to include Hale Manaleo for preservation, rehabilitation, or moving. However, due to site constraints, functional considerations, and spatial needs, demolition and new construction was determined to be the most acceptable solution.

Per our November 29 meeting, SHPD determined an **effect with agreed-upon mitigation commitments**. Our office acknowledges receipt of the following mitigation measures: an updated National Register of Historic Places nomination form for the eligible district; good faith intent to update the current master plan, to include design guidelines, within 10 years pending

Ms. Tonia Moy
Fung Associates Inc.
Page 2 of 2

LOG NO: 2008.1072
DOC NO: 0803AL14

legislative approval; commitment to provide an educational display within the new Learning Center to include historical information on the Territorial Hospital; and intent to provide documents and collaborate with the Department of Health to display the original asylum campus in a future museum in Bishop Hall. Should the museum not materialize with the next 10 years, Windward Community College will provide the information on their website. SHPD looks forward to reviewing and commenting on architectural drawings for the new construction at the 10%, 35%, and 65% completion stages of the design. Finally, SHPD anticipates receipt of HABS level-III documentation of Hale Manaleo.

Regarding archaeological matters, demolition of Hale Manaleo may proceed without further concerns. However, in the event that historic resources, including human skeletal remains, are identified during the construction activities, all work needs to cease in the immediate vicinity of the find, the find needs to be protected from additional disturbance, and the State Historic Preservation Division, O'ahu Section, needs to be contacted immediately at (808) 692-8015. As the new building design is still in its preliminary stages, SHPD Archaeology Branch also reserves the right to provide comments at the 65% level regarding the area and depth of excavations, leech fields, etc.

Thank you for the opportunity to comment. Should you have any additional questions or concerns, please do not hesitate to contact Dr. Astrid Liverman in our O'ahu office at (808) 692-8028 or Astrid.M.Liverman@hawaii.gov regarding architectural matters. Please contact Lauren Morawski at 692-8019 or Lauren.M.Morawski@hawaii.gov regarding archaeological matters.

Sincerely,

Astrid M. Liverman

for Laura H. Thielen
State Historic Preservation Officer and Chairperson

AMBL:
c:
Chancellor Angela Meixell, Windward Community College, University of Hawaii, 45-720 Keaahala Road, Kane'ohe, Hawaii 96744
Kiersten Faulkner, Executive Director, Historic Hawaii Foundation, P.O. Box 1658, Honolulu, Hawaii 96806
Terry MacFarland, Architects Hawaii Limited, ASB Tower, 1001 Bishop Street, Suite 200, Honolulu, Hawaii 96813

Appendix B Territorial Hospital National Register of Historic Places Registration Form

NPS Form 10-900 OMB No. 1024-0018
(Rev. 10-90)

United States Department of the Interior
National Park Service

ATTACHMENT 4

NATIONAL REGISTER OF HISTORIC PLACES
REGISTRATION FORM

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in How to Complete the National Register of Historic Places Registration Form (National Register Bulletin 16A). Complete each item by marking "x" in the appropriate box or by entering the information requested. If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets (NPS Form 10-900a). Use a typewriter, word processor, or computer, to complete all items.

1. Name of Property

historic name Territorial Hospital

other names/site number Windward Community College

2. Location

street & number 45-720 Keaahala Road not for publication ___
city or town Kaneohe vicinity ___
state Hawaii code HI county Honolulu code 03
zip code 96744

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act of 1986, as amended, I hereby certify that this ____ nomination ____ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property ____ meets ____ does not meet the National Register Criteria. I recommend that this property be considered significant ___ nationally _X_ statewide _ _ locally. (___ See continuation sheet for additional comments.)

Signature of certifying official Date

State or Federal agency and bureau
In my opinion, the property ____ meets ____ does not meet the National Register criteria. (___ See continuation sheet for additional comments.)

Signature of commenting or other official Date

State or Federal agency and bureau

4. National Park Service Certification

I, hereby certify that this property is:
____ entered in the National Register
___ See continuation sheet.
____ determined eligible for the
National Register
___ See continuation sheet.
____ determined not eligible for the
National Register
____ removed from the National Register
____ other (explain): ____

Signature of Keeper Date of Action

5. Classification

Ownership of Property (Check as many boxes as apply)
___ private
___ public-local
_X_ public-State
___ public-Federal

Category of Property (Check only one box)
___ building(s)
_X_ district
___ site
___ structure
___ object

Number of Resources within Property

Contributing	Noncontributing	
11	____	buildings
____	____	sites
____	____	structures
____	____	objects
11	____	Total

Number of contributing resources previously listed in the National Register 0

Name of related multiple property listing (Enter "N/A" if property is not part of a multiple property listing.)
N/A

6. Function or Use

Historic Functions (Enter categories from instructions)
Cat: Health Care Sub: Hospital

Current Functions (Enter categories from instructions)
Cat: Education Sub: College

7. Description

Architectural Classification (Enter categories from instructions)
Late Nineteenth and Twentieth Century Revivals
Mission Revival

Materials (Enter categories from instructions)
foundation Concrete
roof Clay Tile, asphalt shingle
walls Concrete
other

Narrative Description (Describe the historic and current condition of the property on one or more continuation sheets.)

8. Statement of Significance

Applicable National Register Criteria (Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing)

__X__ A Property is associated with events that have made a significant contribution to the broad patterns of our history.

____ B Property is associated with the lives of persons significant in our past.

__X__ C Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.

____ D Property has yielded, or is likely to yield information important in prehistory or history.

Criteria Considerations (Mark "X" in all the boxes that apply.)

____ A owned by a religious institution or used for religious purposes.

____ B removed from its original location.

____ C a birthplace or a grave.

____ D a cemetery.

____ E a reconstructed building, object, or structure.

____ F a commemorative property.

____ G less than 50 years of age or achieved significance within the past 50 years.

Areas of Significance (Enter categories from instructions)

social history
architecture

Period of Significance 1929-1958

Significant Dates 1929-1935

Significant Person (Complete if Criterion B is marked above)

Cultural Affiliation

Architect/Builder Arthur Reynolds, Edwin Pettit, and Bjarne Dahl

Narrative Statement of Significance (Explain the significance of the property on one or more continuation sheets.)

9. Major Bibliographical References

(Cite the books, articles, and other sources used in preparing this form on one or more continuation sheets.)

Previous documentation on file (NPS)
___ preliminary determination of individual listing (36 CFR 67) has been requested.
___ previously listed in the National Register
___ previously determined eligible by the National Register
___ designated a National Historic Landmark
___ recorded by Historic American Buildings Survey #
___ recorded by Historic American Engineering Record #

Primary Location of Additional Data
__X__ State Historic Preservation Office
___ Other State agency
___ Federal agency
___ Local government
___ University
___ Other
Name of repository:

10. Geographical Data

Acreage of Property approximately 85 acres

UTM References (Place additional UTM references on a continuation sheet)

	Zone	Easting	Northing		Zone	Easting	Northing
1				3			
2				4			

___ See continuation sheet.

Verbal Boundary Description (Describe the boundaries of the property on a continuation sheet.)

Boundary Justification (Explain why the boundaries were selected on a continuation sheet.)

11. Form Prepared By

name/title Fung Associates

organization NA date February 29, 2008

street & number 1833 Kalakaua Avenue, Suite 1008 telephone (808)-941-3000

city or town Honolulu state HI zip code 96815

Additional Documentation

Submit the following items with the completed form:
Continuation Sheets

Maps
A USGS map (7.5 or 15 minute series) indicating the property's location.
A sketch map for historic districts and properties having large acreage or numerous resources.

Photographs
Representative black and white photographs of the property.

Additional items (Check with the SHPO or FPO for any additional items)

Property Owner

(Complete this item at the request of the SHPO or FPO.)
name University of Hawaii

street & number 2444 Dole Street, Bachman 202 telephone (808)-956-8207

city or town Honolulu state HI zip code 96822

Paperwork Reduction Act Statement: This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C. 470 et seq.).
Estimated Burden Statement: Public reporting burden for this form is estimated to average 18.1 hours per response including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Chief, Administrative Services Division, National Park Service, P.0. Box 37127, Washington, DC 20013-7127; and the Office of Management and Budget, Paperwork Reductions Project (1024-0018), Washington, DC 20503.

NPS Form 10-900-a OMB No. 1024-0018
(8-86)

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET

Section 7 Page 1 Territorial Hospital
name of property
Kaneohe, Hawaii
county and State

The Territorial Hospital historic district consists of nine buildings which were erected in the period 1928-1935, and one constructed circa 1950 for the care and treatment of Hawaii's mentally ill. Located near the base of the Koolau Mountains on a slightly sloping lot overlooking Kaneohe Bay, the district is characterized by an extensive green open space with modest Spanish Mission revival style buildings at its periphery. The buildings face downhill, towards the ocean, and are of reinforced concrete, one story in height, and originally nine had red tile roofs. Seven of the buildings are sited around the main quadrangle, which is defined by the buildings on three sides, and a roadway on the fourth. The other three buildings sit on the periphery of the quadrangle area. One sits across the roadway, immediately Kailua side of the quadrangle and the other two sit *makai* of the quadrangle area, separated from the main core of the district by a roadway and a parking lot. The buildings primarily served as wards to house the mentally ill, and as such are quite long and spaced relatively far apart from each other. Eighteen mature banyans (*Ficus benjamina*), primarily located on the large grassy quadrangle, further define the district's character.

The historic district stands out as a distinct entity thanks to its buildings' prominent locations around the quadrangle and their modest design. The former hospital buildings now house classrooms, offices, non-profits, and the library for Windward Community College. During the 1990s and 2000s the college removed a number of historic buildings and constructed several new buildings near the historic district. These were designed in a Spanish mission revival style, which is sensitive to the hospital's original design program. However, the new buildings are distinguishable from the historic district buildings by their scale and massing, as well as design.

The district was designed in four increments, with the general layout and initial buildings prepared by Arthur Reynolds in 1924-1925. These were augmented in 1926 by several wards designed by Edwin C. Pettit, an architect employed by the Territorial Department of Public Works. These designs led to the construction of the hospital's original ten buildings, which were completed in 1929. Of these ten buildings seven remain standing within the district. In 1931 and 1932 the Receiving and Treatment Building and a ward for disturbed patients were erected, following the plans of Territorial Department of Public Works architect Bjarne Dahl. The former still stands, while the latter was demolished. In 1935 the concluding pre-World War II phase of construction was accomplished with the building of two convalescent wards and another ward for disturbed patients. These were also designed by Bjarne Dahl and were partially funded with federal P.W.A. moneys. The two convalescent wards remain standing, while the ward for disturbed female patients has been removed. Following World War II Hale Awa was built.

The hospital was laid out with the female patients housed on the Kailua side of the grounds and the males were placed on the Hoolo side. The buildings included in the district are as follows:

1. Eckerdt Building (historic name); Hale Alaka`i (Windward Community College name): Originally the Receiving and Treatment Building, this 365 foot long building stands at the head of Keaahala Road, imparting an imposing entry impression. A single story in height, it sits on a raised foundation, and telescopes out toward the entry road. A centered, square tower with three blind round archways

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(8-86)

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET

Section 7 Page 2 Territorial Hospital
name of property
Kaneohe, Hawaii
county and State

contributes a solid vertical focal point. Further architectural interest derives from the outset, five bay wide, arcaded front lanai with its turned balustrade. Nineteen steps lead up to the lanai's centered entry bay. The composition is capped by a red tiled hipped roof with overhanging eaves, and the original windows have been replaced with jalousie windows. As with all the buildings in the district the historic interior has been substantially upgraded to accommodate contemporary collegiate needs. The building was completed in 1931 following the plans of Bjarne Dahl.

2 and 3. Lokai (2) and Waipa (3) (historic names); Hale Kuhina (2) and Hale Na`auao (3) (Windward Community College names): These two buildings are mirror images of each other, and flank Eckerdt (Hale Alaka`i). Constructed in 1935, following plans drawn by Bjarne Dahl, these buildings initially served as the Female and Male Convalescent Wards. These L-shaped, one-story buildings sit on raised foundations and feature porticos approached by a pair of curvilinear steps. Red tiled, hipped roofs with overhanging eaves with exposed, carved rafter tails cap the building and its portico. Four, slender Corinthian columns support the portico's roof. An inset lanai ran across the façade of the two buildings and along the front wing. The lanai's balustrade features a cut out, geometric pattern, which is echoed in the small balconies at the ends of the façade. Waipa (Hale Na`auao) still retains its lanai; however, Lokai (Hale Kuhina)'s lanai has been enclosed with fixed and sash windows. In addition, Lokai (Hale Kuhina)'s wing's lanai has been enclosed as a solid wall. Lokai (Hale Kuhina)'s original windows have been replaced by awning windows, while Waipa (Hale Na`auao)'s windows are now all jalousie. Both buildings have received a centered, rear addition, which houses a special events room in the former and a snack bar in the latter. Non-historic, brick paved terraces flank the special events room on either side.

4 through 7. Mahi (4), Lono (5), Kanaloa (6), and Judd (7) (historic names); Hale Mana`opono (4), Hale Manaleo (5), Hale La`akea (6), and Hale No`eau (7) (Windward Community College names): These four buildings served as wards for the male patients, and date from 1929, the work of Arthur Reynolds and Edwin Pettit. They all follow the same design. Mahi (Hale Mana`opono) sits to the Heeia side of Waipa (Hale Na`auao), and Lona (Hale Manaleo), and Kanaloa (Hale La`akea) are sited parallel to and uphill from Mahi. The three buildings define the Haaia edge of the quadrangle. Judd (Hale No`eau) stands to the Kailua side of Kanaloa. The single story buildings sit on raised foundations, and range between 150 and 234 feet in length and are approximately 24 feet wide. They are distinguished by a central, rectangular tower with flat arched windows set behind a centered, outset front lanai. The front lanai is seven bays wide, with a centered entry composed of three round archways. The three bays to either side of the entry have segmental arches. In all the buildings the lanai have been enclosed with fixed plate and jalousie windows. Simple Doric pilasters demarcate the bays of the body of the building. The buildings' original red tile roofs have been replaced by asphalt shingles and the original windows have given way to jalousies, awning, casement, and fixed windows. Modern, metal pent roofs shelter the entry steps on all four buildings.

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(8-86)

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET

Section 7 Page 3 Territorial Hospital
name of property
Kaneohe, Hawaii
county and State

8. Bishop Building (historic name); The sole surviving female patient ward, this structure dates from 1929 and is similar in design to Judd (Hale No`eau), Kanaloa (Hale La`akea), Lono (Hale Manaleo) and Mahi (Hale Mana`opono). As with the other buildings, its outset lanai has been enclosed with fixed windows, its original red tile roof has been replaced with asphalt shingles, and a metal shed roof extends out over its entry steps. Its original windows have been replaced by awning windows. This building remains under the administration of the Department of Health, and currently houses a charter school, the Hakipu`u Learning Center.

9. The Supervisor's Residence (historic name); White House (Windward Community College Name): Built in 1929, this is the only original wood frame building to survive. This two-story Four Square house sits on a lava rock post and pier foundation, and has a steep hipped roof with overhanging eaves with exposed rafter tails. The clapboard clad dwelling features a right of center, single story portico with a hipped roof supported by square, paneled posts. A modern concrete ramp now leads to this entry. To the left of center, a modern, incompatible single story wing extends from the house. An original enclosed lanai with transom windows extends from the right rear. The dwelling still retains its 6 x 1 double hung windows. A modern entry has been added at the left rear corner.

10. Hale Awa (historic name): Constructed in the years following World War II this two-story, stuccoed, hollow tile building features a hip-gablet roof. Bands of windows, steel awning on the mauka side, and jalousie (which may be original) on the makai side, run the length of this rectangular building. Steps lead up to a modest, centered front entry which is inset. Centered on the rear elevation is a small concrete patio with a door which also accesses the building. A lounge originally looked out upon the patio, but its windows have been removed and their opening boarded up. A small, flat roofed wing extends off the rear elevation, it most likely served as a laundry. On the Heeia end of the building a large wooden ramp winds its way up to the second floor. This was constructed in the mid-1980s when the Law Library Microforum Consortium only occupied the second floor, with no interior access from the ground floor. The Consortium recently gained possession of the entire building and intends to remove the non-historic ramp.

The Territorial Hospital historic district retains its historic integrity, although some modifications to the buildings have occurred over time. The buildings remain in their original locations and retain their original footprints, rooflines, and massing. The large quadrangle with its lawn and banyan trees remains intact. The buildings are sufficiently large that the enclosing of certain lanai, the remodeling of the interiors, and replacement of windows has not detracted from the overall historic ambiance of the district.

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United States Department of the Interior
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NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET

Section 8 Page 1 Territorial Hospital
name of property
Kaenohe, Hawaii
county and State

The Territorial Hospital historic district is significant for its associations with the history of the treatment of the mentally ill in Hawaii. It is also significant as a good example of the Spanish mission revival style of architecture applied to a large complex of institutional buildings in Hawaii during the late 1920s and early 1930s. Although not all the buildings are individually distinctive, the buildings as a whole make a strong architectural statement related to the philosophy of providing more humane treatment and environments for the mentally ill.

In Hawaii, prior to 1862, "the mentaly afflicted were sent to jail to mingle with the felons and prisoners of all kinds; they were treated simply as dangerous characters to be kept away from the public; and it was not until this date [1862] that the question was raised of setting aside a place for their care." [*Report of the President of the Board of Health*, (Honolulu, 1901)]. In 1862 the government appropriated money for the purchase of land and the construction of facilities; however, it was not until 1866 that the Oahu Insane Asylum was completed. Located on School Street, the "lunatic asylum" remained at that location until 1930, when the more spacious quarters in Kaneohe were opened.

During the early 1920s the need for a new asylum was recognized and in 1924 President Calvin Coolidge through an executive order set aside 147 acres in Kaneohe, which had been under the administration the War Department, to the Territory of Hawaii. The Legislature appropriated $300,000 for the asylum and the Department of Public Works expended $25,000 to have Arthur Reynolds draw up the plans. Subsequent legislatures appropriated additional funds, and by 1929 $844,913 were expended on the construction of the new institution. Reynolds died in 1925 from a stroke and Edwin Pettit of the Department of Public Works completed the initial plans.

The new hospital reflected the period's more enlightened view on the treatment of the mentally ill, and was considered a model of its kind. The December 13, 1931 *Honolulu Advertiser* reported that mainland experts who visited the institution found it equal to some mainland hospitals and "far superior to most of those to be found anywhere." With magnificent views of both the Koolau Mountains and Kaneohe Bay, the design of the new hospital strove to avoid a "frigid institutional atmosphere," [*Honolulu Advertiser*, November 24, 1929] and provided ample room for recreation and farming. The physicians felt such beautiful surroundings would have a beneficial effect upon the patients. Equipped with its own sewage plant, power house, water system, bakery, kitchen, laundry facility, and ice plant, the new hospital was likened to a city unto itself, a "haven of refuge for the insane" [*Ibid.*]. The patients worked in the laundry, bakery, kitchens, shops, sewing room, and the farm, which included a dairy.

Not only did the physical plant indicate the changed attitude towards the mentally ill, but also the terms employed in the administration of the hospital disclosed the shifting philosophy of treatment. Terms such as "mental illness," "order of hospitalization," and "conditional discharge," supplanted such words as "lunacy," "insanity," "order of commitment," and "parole." The complex itself was called a "hospital" rather than a "lunatic asylum" or "insane asylum." Although accommodating great advances in the treatment of

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Section 8 Page 2 Territorial Hospital
name of property
Kaneohe, Hawaii
county and State

the mentally ill, the new hospital primarily served as an institution of custody rather than one of treatment. Following World War II advances in the field of psychiatry and the declining condition of the physical plant encouraged the construction of more modern structures on lands *mauka* of the historic district. In 1950 a new treatment facility with beds for 215 patients was opened. The pre-war buildings were gradually abandoned, and beginning in 1972, the original hospital facilities were transferred from the Department of Health to the University of Hawaii and the historic district and its surrounding area were converted into Windward Community College.

The Territorial Hospital is also significant as a good example of Spanish mission revival style architecture applied to a large complex of public buildings during the late 1920s and early 1930s in Hawaii. The earliest known Spanish mission revival style buildings known to have been built in Hawaii date from the late 1890s when C.W. Dickey adapted the form for houses designed for Henry Cooper and William Irwin (no longer extant). The former was constructed of blue stone and featured an interior courtyard, while the latter was described by the *Pacific Commercial Advertiser* of October 4, 1899 as, "of the California Mission order, which is simply a modification of the architectural designs of all civilized southern countries. The influence of Byzantine, Italian renaissance, Moorish and Spanish renaissance, may all be traced to what is known today as 'California Mission architecture.' For eight centuries this general style has held sway as the beau ideal of southern climates, and it is certainly most appropriate for Honolulu." The annexation of Hawaii as a territory of the United States led to a surge of renaissance revival and neo-classical revival style buildings in the islands, which eclipsed any thoughts of Spanish architecture in Hawaii. It was not until the 1920s that Spanish architectural forms emerged in large numbers on the streets of Honolulu. New York architect Bertram Goodhue following a 1917 visit to Hawaii, strongly advocated Spanish forms as highly appropriate for Hawaii, and during the 1920s Mediterranean designs emerged as the style of choice for major public buildings. The popularity of the style is well-reflected in such registered buildings as the Honolulu Post Office, Honolulu Hale, McKinley High School, the Police Station and District Courthouse at Merchant and Bethel streets, Hawaiian Electric Building, Richards Street YWCA, Armed Forces YMCA, and various fire stations throughout the city. The Territorial Hospital continued this tradition of utilizing a building form that was deemed climatically appropriate and aesthetically pleasing.

The architect of the original increment of the hospital, Arthur Reynolds over the years maintained a periodic relationship with Hawaii. Born in England in 1863, he initially came to the Islands in the fall of 1891 from Chicago by way of San Francisco. The young architect immediately entered into a partnership with Clinton Briggs Ripley which lasted until 1895, when Reynolds departed on a trip around the world. He resumed his partnership with Ripley in Oakland in 1907 and the pair returned to Hawaii in 1910 designing buildings in a variety of historic styles including the no longer extant Spanish mission revival Central Y.M.C.A (1912) and neo-classical revival Hawaii Hall at the University of Hawaii (1911). In 1912 he again left the Islands, only to return in 1919. During his final stay in the island he designed the Kekuanaoa Building and Aloha Tower, as well as the Territorial Hospital. He saw neither the Aloha Tower nor the Territorial Hospital completed having died of a stroke in August 1925.

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Section 8 Page 3 Territorial Hospital
name of property
Kaneohe, Hawaii
county and State

The architect responsible for the 1930s buildings on the grounds of the hospital was Bjarne Dahl. He initially came to Hawaii in 1925 to supervise the construction of the Richards Street YWCA for Julia Morgan. Upon its completion he remained in the territory, and became the head of the Department of Public Works. In addition to the Territorial Hospital, he also designed a number of buildings at Kalaupapa. In 1935 he left government employ to form the firm of Dahl & Conrad which received many commissions for moderne style apartments, commercial buildings, and residences in the years prior to World War II.

The years of significance stop at 1958 due to the 50 year closing date as set forth by National Register Bulletin 16.

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Section 9 Page 1 Territorial Hospital
name of property
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county and State

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Original blueprints

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"Noble Work Being Done [for] Hawaii's Unfortunates at Wonderful Kaneohe Hospital,: *Honolulu Advertiser,* December 13, 1931, p. 2.

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"New Units at Territorial Hospital Are Completed," *Honolulu Star Bulletin*, December 23, 1935, p. 9.

Interview with Jerry Dupont, the director of the Law Library Microforum Consortium

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Section 10 Page 1

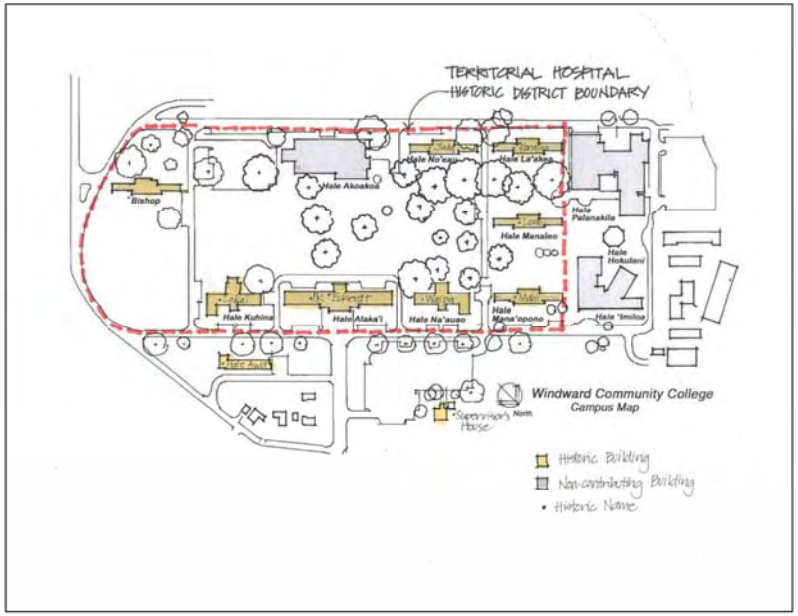
Territorial Hospital
name of property
Kaneohe, Hawaii
county and State

Verbal Boundary Description

The property being nominated includes a portion of the property owned by the University of Hawaii in 2008, as described by Tax Map Key 4-5-23:02, as indicated by the red boundary on the attached map.

Boundary Justification

This is property associated with the Territorial Hospital during the period 1928-1958.



Appendix C LCA Documentation

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Articles | Information | Examples | Survey | About Us | Contact Us
Mahele Database | Boundary Commission | Land Grants | Royal Patents | Review Cart & Checkout

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Mahele Database Documents
Number: 00387*O

Claim Number:		**00387*O**	
Claimant:		**ABCFM (Mission)**	
Other claimant:			
Other name:		American Board of Missions	
Island:		**Oahu**	
District:		**Waialua, Kona, Koolaupoko**	
Ahupuaa:		**Honolulu, Kaneohe, Kawailoa**	
Ili:		**Beretania St., Punahou, Kawaihao, Kukuluaeo, Kamakapili**	
Apana:	**34**	Awarded:	**1**
Loi:	**0**	FR:	26,31,33,34,35
Plus:		NR:	**229v2**
Mala Taro:	0	FT:	
Kula:	0	NT:	
House lot:	**0**	RP:	**1600,1944,1945,1958,1931&**
Kihapai/Pakanu:	0	Number of Royal Patents:	**15**
Salt lands:	0	Koele/Poalima:	**No**
Wauke:	**0**	Loko:	**No**
Olona:	0	Lokoia:	**No**
Noni:	**0**	Fishing Rights:	**No**
Hala:	0	Sea/Shore/Dunes:	**No**
Sweet Potatoes:	0	Auwai/Ditch:	**No**
Irish Potatoes:	0	Other Edifice:	**No**
Bananas:	**0**	Spring/Well:	**No**
Breadfruit:	**0**	Pigpen:	**No**
Coconut:	0	Road/Path:	**No**
Coffee:	0	Burial/Graveyard:	**Yes**
Oranges:	0	Wall/Fence:	**No**
Bitter Melon/Gourd:	0	Stream/Muliwai/River:	**No**
Sugar Cane:	0	Pali:	**No**
Tobacco:	0	Disease:	**No**

https://www.waihona.com/purchase.asp 10/14/2008

Koa/Kou Trees:	0	Claimant Died:	No
Other Plants:	0	Other Trees:	0
Other Mammals:	No	Miscellaneous:	

No. 387*O, General Claim, Mission Claims continued from page 20 [Maui]F.R. 26-27v2

To the Board of Commissioners for quieting Land titles, Gentlemen:

The undersigned as agents of the Mission of the American Board of Commissioners for foreign missions a the Sandwich Islands beg leave to present for your examination, the accompanying documents; being statements of grants made to various individuals of the mission at sundry times & places, for the purpose of affording facilities for the prosecution of the Missionary work in these Islands by the Missionaries of the said A.B.C.F.M. to the end, that if upon examination, they shall be found valid, the said grants may be confirmed in such manner as the laws of the Sandwich Islands may require. The following is a list of claims to be considered, viz.

Kauai - Premises & lands at Waiole, Koloa & Waimea
Oahu - Premises & lands at Honolulu, Ewa, Waialua, Kaneohe, Hauula & Punahou
Molakai - Premises & lands at Kaaluaha & out stations - if any
Maui - Premises & lands at Lahaina, Lahainaluna, Kanipali, Wailuku & Hana
Hawaii - Premises & lands at Kailua, Kealakekua, Kau, Hilo, Kohala & Waimea.

The lands & premises at the above-mentioned stations are in care of the resident missionaries of the A.B.C.F.M. at said stations. We have thought it best to enumerate all the stations though some of the claims have not been received, & some have been already presented to the Board.
Signed, Samuel N. Castle, Edwin O. Hall, agents
Honolulu, March 125h, 1847

The claims herewith sent are for Waialua, Honolulu, Punahou, Kaneohe, Waiole, Koloa, Waimea, Kaui, Hilo, Kealakekua, Kailua, Waimea, Hawaii, Kohala.

I believe Kau, Lahainaluna, Lahaina, Wailuku, Hana & Molakai are already sent in.
S.N.C.

F.R. 31-33v2
[No. 387], Honolulu, Statement of Mission Lands Claims at Honolulu.

Premises occupied by Mr. Dimond, given by Kalaimoku to Reverend William Ellis of F. M. [Foreign Missions] Society, & by him to the Mission of A.B.C.F.M, at these islands. The original grant was much larger then the spot at present enclosed by Mr. Dimond.

2d. All the parcels of land enclosed by the mission in the district known as Kawaihao, which whole distinct was given by Kaahumanu, 1st to Mr. Bingham for the use of the mission & also any enclosed portions of said district, if there be any such, not in actual possession of the natives. The mission buildings & land upon said lands. Also a portion of ground enclosed & upon which stands an adobie school house, at present occupied by Mr. Wilcox.

In addition there is a land in Koolau called Kaluanui, given by Kaahumanu to Mr. Bingham.
S.N. Castle, Edwin O. Hall, agents.

To the Board of Commissioners &c, Gentlemen:

In compliance with your public notice relative to claims of land &c I beg leave to state that I have no lease or written document of the Mission premises now occupied by myself in the Northwest part of Honolulu called Kaumakapili.

This station was commenced by myself soon after the general meeting of the American missionaries

held in May 1837.

The land upon which the dwelling house, the station school house & meeting house are erected, was said to belong at that time to Konia, wife of Paki. Several of the chiefs then in authority, viz. Kinau, Kekuanaoa, Kona & Paki, after mature deliberation, informed me that they had set apart the yard in which the dwelling house is built, & the one where the station schoolhouse is erected, for a new missionary station & told me that I might commence operations at pleasure.

In the fall of 1838, the same persons set apart our meeting house yard as a place upon which to erect a house of worship to Almighty God. These 3 several yards are each enclosed with adobie walls, & their boundaries & dimensions are nearly as follows:

1st. Residence of the missionary measures about 46 yards & is bounded by a narrow lane. The mauka side is about 53 yards long, the northwest end is about 46 yards wide & the makai side is 60 yards long.

2d. The schoolhouse yard lies contiguous to the enclosure above described on the Southwest and is an oblong square, bounded on the Southeast side by the narrow lane & is 46 yard long and about 24 yards wide.

3d. The meetinghouse yard lies a few rods mauka of the mission dwelling house. The makai end is bounded by the public road & measures 48 yards, the northwest side is about 70 yards long & the mauka end is 40 yards wide, the southeast side is 51 yards long
Signed, Lowell Smith
Honolulu, July 14, 1846

F.R. 33-34v2
[No. 387], Punahou [margin note illegible]

The undersigned claim in behalf of the mission of A.B.C.F.M. at the Sandwich Islands all that tract of land known as Punahou lot mauka & makai; to be used for the purposes for which it was granted.

That portion of said land which lies mauka of the Wai'un [?] road is said to be bounded nearly as follows: commencing by Allen's bridge which crosses the street near Allen's house & running inland to near the top of Ualakaa. Thence east into the valley near a certain rocky knowl [sic. knoll] pointed out by natives as the corner, thence toward the sea along a line running a short distance [illegible] east of that part of said land which is enclosed & extending to the road which runs from Honolulu to Waikiki just mauka of Allen's house, thence along said road to place of beginning.

The boundaries of that part which lies on the sea shore we cannot define so definitely, but presume there will be no difficulty in determining them as it is commonly known as pertaining to Punahou. This part embraces fishing grounds, coral flats & salt beds.

The above land was given by Boki to Mr. Bingham: then a number of the above named mission & the grant was afterwards confirmed by Kaahumanu. We have heard several persons mentioned as being acquainted with the facts & circumstances respecting this grant of land among whom are Reverend H. Bingham, Asa Thurston, William Richards, Levi Chamberlain, Governor Kekuanaoa, Laanui, John Ii, &c&c.
Signed, Daniel Dole, W.H. Rice.

I was told that Punahou extended from the road near to Allens, back to the top of Ualakaa, then the northern boundary was said to run from the top of Ualakaa eastward into the valley so far that the eastern line would include much of the rocky hill near the spring in passing down the road near Allens. There, there was a large flat on the sea shore embracing fishponds & salt beds & coral flats.
The above was written by Mr. Bingham from United States
W. Richards

F.R. 34-35v2
[No. 387], Kaneohe, Land connected with the mission station at Kaneohe

About 4 acres are held by the mission enclosed by a fence; it has been occupied about 12 years. The station was taken by permission of the King & the land given by an agent of Liliha, widow of Boki, since deceased.

In addition to the above there is a taro land, known among the natives as an ili aina; not designated by any particular boundaries. This was given for the use of the mission by Liliha - widow of Boki.
(No signature)
Kaneohe, December 8,1846

F.R. 35-36v2
[No. 387], Ewa, April 20, 1847

To the Commissioner, &c, Gentlemen:
I hereby make application for confirmation of title to a piece of land called Kionaole, a small ili in the ahupuaa of Waiawa, Ewa. I hereby enclosed a draft of said land, the measurement of which is as follows: Beginning at Northwest course & running south 74 fathoms, thence east 70 fathoms, thence north 20 fathoms, thence west 26 fathoms, thence north 44 fathoms & thence west 40 fathoms to the place of beginning. Said land comprises about 3 acres more or less.

Also a fish pond situated near the river joining southeast corner on a piece of waste land reckoned as belonging to Manana, an ahupuaa on the opposite side of the river. Said fish pond was dug out for me by my church members in 1838 & measures 27 fathoms by 14 (see draft).

I would also ask for a grant to the Protestant Church at Ewa for the use of their pastor, one of the moo paahao, of which there are two in Waiawa. As they have not been cultivated for more than 3 years & are now overgrown with bulrushes, there is no probability that both will be wanted again for the aupuni. Each moo contains 3 or 4 acres each. The members of the church wish one of them to cultivate, the avails of which are to be devoted to religious purposes.

Also, my house lot within the ili aina of Waiawa called Panaio, & three or four acres of land adjoining the Protestant Chapel for a church yard and burying ground, to be confirmed by title in the same manner as similar grants are confirmed.

For authority respecting the grant of my land marked out i the enclosed draft. I beg to refer you to Governor Kekuanaoa executor of Kinau, who gave me the said land in 1836 or early in 1837.
Signed, A. Bishop

[DIAGRAM]

F.R. 28v2
No. 387, [American Board of Commissioners for Foreign Missions], [Oahu claims, continuation of claims from other islands]

Extract from a letter addressed to Mr. Castle dated February 17th, Waialua and Signed P.J. Gulick.

"P.S. I opened this to say a few words relative to the land connected with our premises. What it seems desirable to retain is a long narrow strip of probably 20 acres; bounded on the East by a road which crosses the river, or brook, Anahula, about 1/4 of a mile east of Mr. Emerson's residence, On the south by the brook Lanahula, On the west by the road which crosses said brook just opposite Mr. Emerson's house & On the north by a crooked stone wall built by Mr. Lock & Mr. Wilcox.

It has also been a stone wall on the east and a doby west, built by our Brethren. It is the better part of the land called Lokoea, but on the west & north it is said to fall considerably within the boundaries of Lokoea. With these data & the papers, I think you can make a more correct statement that I can;

unless I get it surveyed. I don't know that I can do any better than I have now done.
Signed P.J. Gulick.

N.R. 229-231v2
No. 387, [Missionary claim]

Unirrigated farm land at Waialua, Oahu. Conveyance of a portion of land for dry farming at Waialua.

Because of my thought of the importance of knowledge and education which will benefit the Kingdom of Hawaii; and because I also think Mr. Loke /Mr. Looke/ has a good school at Waialua and the students are preparing to be educated to end the idleness and deficiencies of this land, therefore I agree and explain that a portion of land at Waialua shall be transferred to said school without payment or tax. the diagram of this land is below, however, the north side is not exactly like the diagram. The ancient boundary will prevail on that side until the time when I understand the correctness of the new move. The steam is not conveyed with the land. It is, however, the boundary on this side. If the supplies of the school are taken on the stream this is not a wrong, however, the fish are protected.

Furthermore, there are given some divisions of water for this land, three days in one week on the north side of the stream, and on the south side, two days. On those two days the water shall flow to irrigate the crops.

Furthermore, John Ii, the School Superintendent of Oahu, shall administer that land and he is also the perpetual custodian of that land.

It /the land/ is conveyed absolutely to that school; it shall not be arbitrarily taken, nor shall it be disturbed unless the school is at fault or its haole teacher or his successor, perhaps. The land shall be administered so as to benefit the school. The land may not be given over to anyone else. It is given only for the benefit and to supply the needs of the school. Here is the diagram of the land:

/see diagram/ [No diagram in this text]

This diagram is not absolutely correct, as it was not surveyed with a transit. The beginning of the measurement is at the corner marked I, at a place close to the wooden road over the water/bridge or causeway?/

This word is recorded at Honolulu on the 14th day of September, 1841.
KEKUANAOA
Witness: Paalua, Limaikaika /Armstrong/

In accordance with Kekuanaoa's thought explained in this paper, giving me the administration of that kula farm land at Waialua, I agree that this land be conveyed to said school, and Locke or his successor, perhaps, the one who teaches at that school, to stimulate intellectual growth here in Hawaii.

Recorded at Honolulu this 14th day of September, 1841.
JOHN II, School Superintendent of Oahu

We two consent to all the words in this document.
KAMEHAMEHA III, KEKAULUOHI

F.T. 260v3
No. 387, American Mission, Part 1, Section 5, Division 1, 22 February, Emerson Waialua

1. Kuakoa, sworn, I know this land at Kawaipuole in Waialua.

It is bounded:

Mauka by Kukipa's land
Waianae by an old adobe fence
Makai by my fence
Waimea by land of mine and a kalo patch of Poli and a river called Anahulu, and a kalo patch of mine.

2. This land is in Olohana, an ili, the land is called Manawai. It is an orange garden

bounded:
Mauka by a stone wall and a dry stream
Waianae by stream of Kawailoa
Makai by konohiki's land
Kolauloa by a pali.

3. This piece is an ili aina of Kawailoa at Paalaa.

It is kalo and kula bounded:
by konohiki's land, Mauka
Waianae by a pali
Makai by konohiki's land
Kolauloa by a stream of Paalaa.

Claimant got the piece No. 1 from Kinau in 1832 and has lived there constantly ever since, and no one has ever disturbed him.

He got No. 2 from Gideon Laanui in Kinau's time, 1838, and has occupied it without disturbance in peace ever since.

He got the piece No. 3 from Kinau in 1835 and has held it ever since in peace.

Olopana, sworn, the preceding testimony is correct and true, which I now of my own knowledge, and that Mr. Emerson has lived there to the present time in peace.

Continued page 302.

No. 2. Mr. Emerson did not think required a survey and states it at less than acre.

F.T. 302v3
No. 387, Sandwich Islands Mission Claim, Part 1. Section 5, Division 1, J.S. Emerson, from P. 260 [p. 260 claim for Waialua Oahu]

Kilioe, sworn (from Kauikawaha's written Report to Claimant and translated by him for the Commissioner), I heard D. Oleloa & Kaukualii ,his wife, say the Kinau wrote to them at Kauai thus "Laanui sought for land for the Missionary located at Waialua & he has found it within your land viz. Hawailoa - Give Your assent that it be given him" To which we Daniela ma gave our assent in writing.

Kamalie, sworn, I heard the same things as Kilioe says - and I heard before, at a time when Hawailoa was our land as hoaainas - my mother's brother named Wana, one of Laanui's family, came to us and said "Your land is given by the foreigner, Mr. Emerson by Kinau - so says Laanui.
Continued 306 page, Division 2

F.T. 306-307v3
No. 387, Sandwich Islands Mission, Part 1, Section 5, Division 2, P.I. Gulick, from p. 302

Reverend I.S. Emerson, sworn, In about 1837 Kinau granted to me a certain part of the land now occupied by Mr. Gulick to aid the Church. This grant included the Western end, containing probably 3 to 5 acres. It did not I think to include the spot of Mr. Gulick's house lot. that spot, as I understood

Mr. Locke came into an unwritten contract between him & Laanui, by which Mr. L. [Locke] was to pay Laanui a certain sum per annum for the remainder of the land which Mr. Gulick now claims. This land has been in the possession & use of the Mission from about 1838 to this time.

Witness admitted Mr. Metcalf's survey [as] correct.

"E ike auanei na kanaka a pau ma keia palapala ke nana mai lakou.

Owau o M. Kekuanaoa ka makua Kane a kahu waiwai o Victoria Kamamalu. Ua Kuai lilo loa aku au no`u iho a no kuu poe hoolilna a hope paha i kekahi mau Eka Umikumamaono a me ka hapa Eka aina e waiho la ma Kawailoa & Waialua Mokupuni Oahu. Aia keia aina maka aoao mauka iho o ka pa ona Gulicka la. Ua komo pu keia me kahi i Ku mua ai kona hale.

Eia ke kumu o ka lilo ana o keia aina no ka loaa ana mai ma kuu lima na Dala maikai $82.50. No laila aole o`u kuleana i koe. ua lilo loa ia Gulika a me kona mau hoolilna a hopepaha.

No ka oiaio Kekakau nei au i kou inoa i keia la 23 October, 1850, M. Kekuanaoa
Ike maka, Kahiwalani

F.T. 341-343v3 [Claim 5877 of Keakaku]

F.T. 368v3
Cl. 387, American Mission, Part 1, Section 6, Ewa, May 14, 1856

Artemis Bishop testified that in 1836 this land called "Kianaole" in the district of Ewa was given to witness for the American Board of Missions and that the 2 surveys of T. Metcalf of the same, dated March 2, 1849, correctly desribe the lot which has been occupied & used for the Mission without interruption to the present time.

Note. Governor Kekuanaoa has seen these surveys & approved of them before the Commission.

See page 343

N.T. 592-593v3
No. 387, Honolulu Mission, Part 1, Section 5, Waialua, Emerson

Kuakoa, sworn, I have seen his land at Kawaipuolo in Waialua.

The boundaries are:
Mauka, Huki's lot
Waianae, the old mud wall
Makai, my fence
Waimea, Kuokoa's land, Poli's patch, Anahulu River and one patch for me.

2. Olohana ili land in Kawailoa named Manawai and is an orange grove.

Mauka, a stone wall and dry stream
Waianae, Kawailoa stream
Makai, the konohiki's land
Koolauloa, a precipice.

3. Hawaiiloa's ili land at Paalaa, a taro land and the pasture.
Mauka, the konohiki's land
Waianae, a precipice
Makai, the konohiki's land

Koolauloa, Paalaa's stream.

Section 1 from Kinau in the year 1833 and he has always lived there to the present. No one has objected.

Section 2 is from G. Laanui during Kinau's time in 1838 and life has been comfortable; No one has objected. Section 3 is from Kinau in 1835. No one has objected.

Olopana, sworn, The statements just made by Kuokoa are true, accurate and right and I have known the same way. Emerson has always lived there to the present. No one has objected.

N.T. 677v3
No. 387, Emerson, Part 1, Section 5, October 8, 1850

Kuokua, sworn, I have seen Emerson's land at Kawailoa Paalaa in Waialua. I have known the boundaries, but I have not known who had given him his land except that I had heard only it was given by Kinau and Kamekualii; however, I am not very sure.

F.T. 115-116v3
Cl. 387, part 1, americal Sandwich Island Mission, Oahu, 23 March [1849], section 2 Punahou, Oahu, [illegible], William H. Rice, agent, present

[Margin note: Mr. Lee's notes]

John Ii, sworn for claimant, I am well acquainted with Punahou and its boundaries. It consists of two parts, one inland and the other a sea land.

It is bounded:
Mauka by the large land called Manoa
Waialae by Mauna Pohaku
Makai by kula land of Allen, Kapeau, myself & others.

I think it extends nearly down to the road leading from Honolulu past Allen's place, Honolulu side by the road leading from the old Allen place to Manoa and by my land.

The makai part of Punahou is bounded:
Mauka by Kewalo and Koula
Waititi side by Kalia
Seaward it extends out to where the surf breaks
Honolulu side by Honoliilii.

This land was given to Mr. Bingham for the Sandwich Island Mission by Governor Boki in 1829. It was given upon the same terms as all their other lands were given to them; and the Grant was confirmed, so far as silence proved it, for in truth she [he?] had no right to set aside this grant.

From that time to this, the Sandwich Island Mission have been the only possessors and konohikis of the land. I was a witness to the gift. The title of the Mission is perfectly clear.

The name of the makai part is Kukulaaeo. There are several tenants on the land of Punahou whose rights should be respected.

Z. Kaauwai, sworn, I know this land. I heard Boki say to Hoapili Kane concerning the gift of this land to Sandwich Island Mission that the had given it to Mr. Bingham.

Boki's wife made some objections to giving it to Mr. Bingham, claiming it has hers as received from her father, Hoapili Kane but Hoapili Kane confirmed the gift and it was adjudged to be

right & propert.

From what I heard at the time of the boundaries, I should think Mr. Metcalf's survey correct.

[Award 387; (Oahu) R.P. 1600; Beretania St. Honolulu Kona; 2 ap.; 5.36 Acs; R.P. 1600; King St. Honolulu Kona; 1 ap.; .41 Ac.; King St. Honolulu Kona; 3 ap.; 6.66 Acs; no R.P.; R.P. 5698; Printers Lane Honolulu Kona; 1 ap.; .36 Ac.; R.P. 1947; Panaio; 3 ap.; 4.13 Acs. (A. Bishop); R.P. 1931, Punahou Manoa Kona; 1 ap.; 224.68 Acs; R.P. 1945; Punahou Manoa Kona; 1 ap.; 77 Acs; R.P. 1941, 1945, 1958 R.P. 1931; Punahou Honolulu; 1 ap.; 36.90 Acs (S.N. Castle and Amos S. Cooke); R.P. 1932; Kawaiahao Honolulu; 1 ap.; 1.23 Ac. (S.N. Castle); R.P. 1941; Kawaiahao Honolulu; 1 ap.; 1.30 Ac.(Maria P. Chamberlain); R.P. 1941 Punahou Honolulu; 1 ap.; 26.66 Acs (Maria P. Chamberlain); R.P. 1944; Kukuluaeo; 3 ap.; 77 Acs (Ephraim W. Clarke; R.P. 1944; Kawaiahao Honolulu; 2 ap.; 1.64 Ac. (Ephraim W. Clarke); R.P. 1934; Kawaiahao Honolulu; 1 ap.; 1.5 Ac. (Amos S. Cooke); R.P. 1945; Kawaiahao & Punahou Honolulu; 3 ap.; 27.97 Acs (E.M. Rogers); R.P. 1933; Kaumakapili Honolulu; 1 ap.; .53 Ac. ; R.P. 1600; Kaumakapili Honolulu Kona; 1 ap.; .6 Ac.; R.P. 1600; Kaumakapili Honolulu Kona; 1 ap.; .19 Ac.; (Lowell Smith); R.P.1938; Pukauki Kaneohe Koolaupoko; 1 ap.; 16.1 Acs; R.P. 1958; Waikapoki Kaneohe Koolaupoko; 1 ap.; 5.13 Acs (ABCFM); R.P. 1951; Kawailoa Waialua; 2 ap.; 10.81 acs (John S. Emerson); R.P. 1940; Kawailoa Waialua; 1 ap.; 24.56 acs. (Peter I. Gulick)]

Number: 03430B

Claim Number:	03430B		
Claimant:	Kawakawa		
Other claimant:			
Other name:			
Island:	Oahu		
District:	Koolaupoko		
Ahupuaa:	Kaneohe		
Ili:	Keaahala		
Apana:	2	Awarded:	1
Loi:	10	FR:	
Plus:		NR:	
Mala Taro:		FT:	305,358v14
Kula:		NT:	
House lot:	1	RP:	
Kihapai/Pakanu:		Number of Royal Patents:	
Salt lands:		Koele/Poalima:	No
Wauke:		Loko:	No
Olona:		Lokoia:	No
Noni:		Fishing Rights:	No
Hala:		Sea/Shore/Dunes:	No
Sweet Potatoes:		Auwai/Ditch:	No
Irish Potatoes:		Other Edifice:	No
Bananas:		Spring/Well:	No
Breadfruit:		Pigpen:	No

Coconut:		Road/Path:	No
Coffee:		Burial/Graveyard:	No
Oranges:		Wall/Fence:	No
Bitter Melon/Gourd:		Stream/Muliwai/River:	No
Sugar Cane:		Pali:	No
Tobacco:		Disease:	No
Koa/Kou Trees:		Claimant Died:	No
Other Plants:		Other Trees:	
Other Mammals:	No	Miscellaneous:	

Helu 3430B, Kawakawa, See 358 page, Kuleana haule.
F.T. 305v14

Ua hoohikiia oia, ua kakau ia kona kuleana i Naiwieha.

Kuiaia, hoohikiia, Ua ike au i kona aina ma Kaneohe Ili o Keaahala.

Apana 1: 10 loi.
Apana 2. Kahuahale.

Apana 1, na palena:
Mauka, aina nahelehele
Koolauloa, kula
Makai, Alanui
Kailua, kahawai.

Apana 2: Puni i ke kula na aoao a pau.

Na Kahalau mai i ka M.H. 1844, Aole keakea.

F.T. 358v14
No. 3430B, Kawakawa, claimant, from page 305

Claimant swears that his claim was written by Naiwieha.

Kuiaia, sworn, says I know the land of claimant in Kaneohe in the Ili of Keaahala as follows:

No. 1. 10 lois
No. 2. House lot.

No. 1 is bounded:
Mauka by waste land
Koolauloa by upland
Makai by a road
Kailua by a creek.

No. 2 is bounded: On all sides by upland.

Claimant had his land from Kahalau in the year 1844 and he had it in peace to the present time.

[Award 3430B, R.P. 2331; Keaahala Kaneohe Koolaupoko, 1 ap.; 6.170 Acs]

Number: 03571

Claim Number:	03571		
Claimant:	Kalehuna		
Other claimant:			
Other name:			
Island:	Oahu		
District:	Koolaupoko		
Ahupuaa:	Heeia		
Ili:	Kalimukele		
Apana:	2	Awarded:	1
Loi:	1	FR:	
Plus:		NR:	140v4
Mala Taro:		FT:	117,428v14
Kula:		NT:	
House lot:	1	RP:	3629
Kihapai/Pakanu:		Number of Royal Patents:	1
Salt lands:		Koele/Poalima:	No
Wauke:		Loko:	No
Olona:		Lokoia:	No
Noni:		Fishing Rights:	No
Hala:		Sea/Shore/Dunes:	No
Sweet Potatoes:		Auwai/Ditch:	Yes
Irish Potatoes:		Other Edifice:	No
Bananas:		Spring/Well:	No
Breadfruit:		Pigpen:	No
Coconut:		Road/Path:	No
Coffee:		Burial/Graveyard:	No
Oranges:		Wall/Fence:	No
Bitter Melon/Gourd:		Stream/Muliwai/River:	No
Sugar Cane:		Pali:	Yes
Tobacco:		Disease:	No
Koa/Kou Trees:		Claimant Died:	No
Other Plants:		Other Trees:	
Other Mammals:	No	Miscellaneous:	

No. 3571, Kalehuna -
N.R. 140v4

Greetings to the Land Commissioners: My claim is for one `ili and two kula. One lo`i is in Piilani's land. This is in Heeia, Oahu and I got it from Paki in 1839
KALEHUNA

F.T. 117v14
Helu 3571, Kalehuna, See 428 page

Kahuhu, hoohikiia, Ua ike au i kona aina ma ka Ili o Kalimukele, Heeia.

Apana 1. Mooaina
Apana 2. Kahuahale.

Apana 1:
Mauka, ko Kahuhu aina kalo
Koolaulao, pali
Makai, moo o Hopunui
Kailua, pali.

Apana 2.
Mauka, pahale o Kauhane
Koolauloa, pali
Makai, kula
Kailua, Auwai.

Na Paki mai loaa ia`u i ka M.H. 1839. Aole mea keakea.

Pueokahi hoohikiia. Ua like no ko maua ike me Kahuhu i hai ae nei.

F.T. 428v14
No. 3571, Kalehuna, claimant, from page 117

Kahuhu, sworn say, the land of claimant is in Heeia in the ili of Kalimukele. It is a moo aina as follows:

No. 1. One mooaina
No. 2. House lot.

No. 1 is bounded:
Mauka by my taro land
Koolauloa by a pali
Makai bythe taro land of Hopunui
Kailua, by a pali.

No. 2 is bounded:
Mauka by the house lot of Kaukani
Koolauloa by a pali
Makai by upland
Kailua by a creek.

Claimant had his land from Paki in the year 1839 and has had it in peace to this time.

Pueokahi, sworn says, the above testimony is all true.

[Award 3571; R.P. 3629; Heeia Koolaupoko; 1 ap.; 9.16 Acs]

Number: 03574

Claim Number:	**03574**
Claimant:	**Kahuhu**
Other claimant:	
Other name:	

Island:	**Oahu**		
District:	**Koolaupoko**		
Ahupuaa:	**Heeia**		
Ili:	**Kalimukele**		
Apana:	**1**	Awarded:	**1**
Loi:	**1**	FR:	
Plus:		NR:	**141v4**
Mala Taro:		FT:	**114,426v14**
Kula:		NT:	
House lot:	**1**	RP:	**1006**
Kihapai/Pakanu:		Number of Royal Patents:	**1**
Salt lands:		Koele/Poalima:	**No**
Wauke:		Loko:	**No**
Olona:		Lokoia:	**No**
Noni:		Fishing Rights:	**No**
Hala:		Sea/Shore/Dunes:	**No**
Sweet Potatoes:		Auwai/Ditch:	**No**
Irish Potatoes:		Other Edifice:	**No**
Bananas:		Spring/Well:	**No**
Breadfruit:		Pigpen:	**No**
Coconut:		Road/Path:	**Yes**
Coffee:		Burial/Graveyard:	**No**
Oranges:		Wall/Fence:	**No**
Bitter Melon/Gourd:		Stream/Muliwai/River:	**No**
Sugar Cane:		Pali:	**Yes**
Tobacco:		Disease:	**No**
Koa/Kou Trees:		Claimant Died:	**No**
Other Plants:		Other Trees:	
Other Mammals:	**No**	Miscellaneous:	**valley boundary**

No. 3574, Kahuhu
N.R. 141v4

Greetings to the Land Commissioners: My claim is for my three sections of land, three kula and house claim, at Heeia, Oahu. I got them from Paki in 1839.
KAHUHU

F.T. 114v14
Helu 3574, Kahuhu, See 426 page

Pueokahi, hoohikiia, Ua ike au i kona aina ma o Kalimukele, ka Ili Heeia, o Kalimaukele ha inoa o ha Mooaina & Kahuahale & kahi kula.

Penei na palena:
Mauka, alanui
Koolauloa, he wahi Awaawa
Makai, ko Kalehuna aina
Kailua, lihi pali.

Na Paki mai loaa ia`u i ka M.H. 1839. Aole mea keakea.

Elemakule, hoohikiia, Ua like no ko maua ike me Pueokahi i hai ae nei.

F.T. 426v14
No. 3574, Kahuhu, claimant, from page 114

Pueokahi, sworn say, claimant's land is in Heeia, the ili Kalimukele, a mooaina and consists of taro land & house lot.

It is bounded:
Mauka by a road
Koolauloa by a pali
Makai by the land of Kalehuna
Kailua by a pali.

Claimant had his land from Paki in the year 1839 and has had it undisturbed to the present time.

Kaelemakule, sworn, testifies to the truth of the above statement.

[Award 3574; R.P. 1006; Kalimukele Heeia Koolaupoko; 1 ap.; 9 Acs]

Number: 05820

Claim Number:	**05820**		
Claimant:	**Kapunae**		
Other claimant:	Kapunae 2; heir; Lihue opposes		
Other name:			
Island:	**Oahu**		
District:	**Koolaupoko**		
Ahupuaa:	**Kaneohe**		
Ili:	**Keaahala, Ulupau, Heleloa**		
Apana:	**4**	Awarded:	**1**
Loi:	**2**	FR:	
Plus:		NR:	**149v5**
Mala Taro:		FT:	**462v3,303,357v14**
Kula:		NT:	
House lot:	**1**	RP:	**1382**
Kihapai/Pakanu:		Number of Royal Patents:	**1**
Salt lands:	2	Koele/Poalima:	**No**
Wauke:		Loko:	**No**
Olona:		Lokoia:	**No**
Noni:		Fishing Rights:	**No**
Hala:		Sea/Shore/Dunes:	**No**
Sweet Potatoes:	1	Auwai/Ditch:	**No**
Irish Potatoes:		Other Edifice:	**No**

Bananas:		Spring/Well:	**No**
Breadfruit:		Pigpen:	**No**
Coconut:		Road/Path:	**No**
Coffee:		Burial/Graveyard:	**No**
Oranges:		Wall/Fence:	**No**
Bitter Melon/Gourd:	1	Stream/Muliwai/River:	**No**
Sugar Cane:		Pali:	**No**
Tobacco:		Disease:	**No**
Koa/Kou Trees:		Claimant Died:	**Yes**
Other Plants:		Other Trees:	
Other Mammals:	**No**	Miscellaneous:	**konohiki took 2 patches**

No. 5820, Kapunae
N.R. 149v5

Greetings to the Land Commissioners: I hereby state my claim for land. I have two lo`i in Keaahala in Kaneohe. Panalaau is the Konohiki. In the land of Kekahimoku I have two salt mo`o. In the land of Kekai at Ulupau is a sweet potato kula. At Heleloa is a kula planted in gourd. I got these in the time of Keaniani.
KAPUNAE

F.T. 462v3
No. 5820, Kapunai, 4th May 1853, Disputed for the King, from page 303, volume 14

Lihue, sworn says, he knows the part of this claim now in dispute. In the ili of "Paeli," Kaneohe there are 2 patches in dispute. They were koele patches in the time of Kamehameha I, when he lived at Waikiki. I am the luna of the konohiki on that land. I have been luna about 4 years and I have worked these patches as koeles. They were koeles also in the time of my predecessor, Panalaau. Kapunai planted these 2 patches some time under the konohiki & divided the food with him.

Kaholo, sworn says, he is a kamaaina of Kaneohe. The 2 patches now in dispute were koeles in ancient times. I left Kaneohe in the time of Kaahumanu. Since that time I do not know whether these patches were koeles or not.

Kuiaia, sworn says, he is a kamaaina of Kaneohe. These two patches are not poalimas. The poalimas are in another place. Panalaau gave these patches to Kapunai before the death of Kinau. Kapunai never divided the food with the konohiki, he took it all for his own use, & held the patches up to the time of his death in 1848.

Kepani, sworn says, the patches in dispute have always belonged to the konohiki. Kapunai got these patches from Panalaau about 1843 and cultivated them up to the time of his death. I do not now whether konohiki got a part of the food or not. I know that Panalaau worked these two patches as poalima between the death of Kinau & 1843. They were always poalima patches as far as I know (Ap. 1 to be struck out).

F.T. 303v14
Helu 5820, Kapunae, (Make), See 357page

Kuiaia, hoohikiia, Ua ike au i kona aina ma Kaneohe, Ili o Keaahala.

Apana 1. 2 loi.
Apana 2. 2 loi paakai ma ka Ili o Kapolai.

Apana 3. Mala uwala.
Apana 4. Kahuahale.

Apana 1 na palena:
Mauka, poalima
Koolauloa, loi o Koolau
Makai, Loi o Kahelena
Kailua, loi o Ku.

Apana 2:
Mauka, kula Alialia
Koolauloa, na loi paakai o Kalaikilo
Makai, na loi paakai o Ilihara
Kailua, na loi paakai o Kuiaia.

Apana 3: Puni i ke kula na aoao a pau.

No Opunui mai loaa ia`u i ka wa e ola ana o Liliha. Aole keakea ia. A hiki i kona ana i make ai. Ua make ka mea nono keia kuleana i ka Makahiki 1848. A Ua hooiliia ia Kapunae 2 kana keiki hanai. Ua lawe ia nae keia kuleana ke konohiki hou i ka M.H. 1850. No kona kuhi he poalima.

Kawakawa, hoohikiia, Ua like no ko`u ike me Kuiaia i hai ae nei.

Apana 1 disallowed, See volume 3 F.T.

F.T. 356v14
No. 5820, Kapunae, claimant, from page 303

Kuiaia, sworn, says I know the land of claimant in Kaneohe in the Ili of Keaahala as follows:

No. 1. 2 lois.
No. 2. 2 salt ponds.
No. 3. Potatoe field.
No. 4. House lot.

No. 1 is bounded:
Mauka by a poalima
Koolauloa by the loi of Koolau
Makai by the loi of Kahelena
Kailua by the loi of Ku.

No. 2 is bounded:
Mauka by upland
Koolauloa by salt pits of Kalaikilo
Makai by salt pits of Ilihara
Kailua by salt pits of Kuiaia.

No. 3 is bounded: On all sides by upland.

Claimant had his land from Opunui in the time Keaniani in the time of Liliha and had in peace till the time of his death in the year 1848. An adopted son, Kapunae is his heir. During the present year the new konohiki has taken the two taro patches of claim and on the ground of it being a poalima but is was not a poalima.

Kawakawa, sworn, says the above is all true.

[Award 5820; R.P. 1382; Keaahala Kaneohe Koolaupoko; 3 ap.; 2.18 Acs]

Number: 07173

Claim Number:	**07173**		
Claimant:	**Kekuku**		
Other claimant:			
Other name:			
Island:	**Oahu**		
District:	**Koolaupoko**		
Ahupuaa:	**Kaneohe**		
Ili:	**Hoowaa, Waikalua, Puiwa**		
Apana:	**2**	Awarded:	**1**
Loi:	**10**	FR:	
Plus:		NR:	
Mala Taro:		FT:	
Kula:		NT:	
House lot:	**1**	RP:	**8101**
Kihapai/Pakanu:		Number of Royal Patents:	**1**
Salt lands:		Koele/Poalima:	**No**
Wauke:		Loko:	**No**
Olona:		Lokoia:	**No**
Noni:		Fishing Rights:	**No**
Hala:		Sea/Shore/Dunes:	**No**
Sweet Potatoes:		Auwai/Ditch:	**No**
Irish Potatoes:		Other Edifice:	**No**
Bananas:		Spring/Well:	**No**
Breadfruit:		Pigpen:	**No**
Coconut:		Road/Path:	**No**
Coffee:		Burial/Graveyard:	**No**
Oranges:		Wall/Fence:	**No**
Bitter Melon/Gourd:		Stream/Muliwai/River:	**No**
Sugar Cane:		Pali:	**No**
Tobacco:		Disease:	**No**
Koa/Kou Trees:		Claimant Died:	**No**
Other Plants:		Other Trees:	
Other Mammals:	**No**	Miscellaneous:	

No. 7173, Kekuku
N.R. 297v5

I hereby state my claim for some lo`is, also a kula, in the `Ili of Hoomaa in Kaneohe, Koolaupoko, Island of Oahu.
KEKUKU X, his mark

F.T. 71v11

No. 7173, Kekuku

Kauhi, hoohikiia, Ua ike au i kona aina ma Kaneohe, Koolaupoko

Apana 1. 6 loikalo ma ka ili aina o Hoowaa
Apana 2. Pahale a me kula ma ka ili o Waikalua

Apana 1. Penei na palena
Mauka, ka ili aina o Paawela
Koolauloa, ka ili o Puupao
Makai, ko`u aina
Kailua, poalima o ke konohiki

Apana 2. Penei na palena
Mauka, ke kula o Waikalua
Koolauloa, ko Kawana aina
Makai, pela no
Kailua, alanui Aupuni

No Kaaukai mai kona i ka wa e ola ana o Liliha i ka M.H. 1835, a ua mau kona noho ana, aole mea keakea. Apana 2, he aina waiho wale iho no, a na`u no i kukulu i na hale i ka M.H. 1839, a ua mau kona noho ana, aole mea keakea

Palau hoohikiia, Ua like no ko`u ike me ka Kauihi i hai ae nei, aole mea keakea

F.T. 11-12v11
No. 7173, Kekuku

Kauhi, sworn says, I am a kamaaina of Kaneohe and know this claimant's land. It consists of two pieces.

No. 1 is 6 lois in the Ili of Hoowaa.
No. 2 is a house lot & kula in Waikalua.

No. 1 is bounded:
Mauka by the Ili of Pawela
Koolau by the Ili of Puupao
Makai by my land in Hoowaa
Kailua by 3 poalima lois.

No. 2 is bounded:
Mauka by the Ili of Waikalua
Koolau by the Ili of Waikalua
Makai by the Ili of Waikalua
Kailua by the Alanui aupuni.

The claimant received No. 1 from Kaaukai in 1835 when Liliha was living, and his title was never disputed. No. 2 he received from no one. He took it up as a waste spot in 1839 and he has possessed it in peace ever since.

Palau, sworn, verified the testimony of Kauhi in full.

N.T. 143146v10
No. 7173, Kekuku, Claims Building. 30 April 1852, Objection I. Kapena, Konohiki (from page 11, Vol. 11)

Pa, sworn (for Kekuku), I have seen this place in Puiwa ili of Kaneohe, over which there is a dispute -

there are ten patches.

Mauka and Koolauloa, Konohiki's pastures
Makai, Kaina's land
Kailua Mahele's patch.

Kekuku's land from I. Kapena at the time of the government was taking the lands, so I. Kapena was on the upper part and Kekuku received the lower part. I have seen that patch Hoowai. It had been a patch for the tenant since the time of Kamehameha I and Kahina was the first tenant.

Kamehameha I lived on the lower part of the land. Kahina was the konohiki, my parents were tenants under Kahina and together they have eaten the yield from this patch.

I. Kapena, according to your knowledge, was this patch a koele?

Pa - Kahina was the konohiki and my parents were under him; there wqs no koele day for this land. Dyeing cloth was the only koele here whenever Kalaimoku had a supply because the land had been provided for this purpose. Uluaoao succeeded Kahina as konohiki and my parents were under him, yet he ate the taro from this patch which we prepared and gave to him. The taro was also from two other patches. At that time koele was realized on two patches, Hoowaa patch was not one of them. Work was on one day a month, with an interval of three months. Uluaoao did not demand koele work, however he gave the land and released my parents. They were dismissed after the death of Kinau in 1839, and Kamaikoaloa got this land after Uluaoa had been released, with Kekuku as tenant under him. I have not known that Hoowaa has been given to Kekuku but I do know that all of Puiwa has been given to him where he has always lived to the present time.

Kapena - I have seen this patch Hoowaa, over which there is a dispute with the konohiki. This patch is for Kekuku, the person who comes in contact with the soil and all of Puiwa is for the konohiki. Kahina was not a koele tenant during the time of Kamehameha. I. He lived with my parents; Halamaimai, Opunui, Kanakahou and Naaina. These people lived under Kahina and Rshina lived here until we were grown. He did not request Hoowaa to be a poalima; my parents planted here; it was theirs; however, Kahina ate of the yield from the same calabash. The taro which was prepared for the chiefs was from the two patches and that which was from this patch was for Kahina and us. Hoowaa was not caused to be a Friday either by Uluaoao or Maikaaloa. Kekuku was the tenant. I had seen Maikaaloa give all of the land to Kekuku and Kekuku has sustained his with food. Other patches have been made Fridays, this patch has not been made a Friday. Kapena succeeded Maikaaloa with Kekuku still as tenant. Kekuku was left alone while Kekuku worked and provided for Kapena. I believe this patch is for Kekuku.

Keawe, sworn (for Kapena), I had seen this patch at the time of Kamehameha I. It was for this konohiki, my father. It was he who planted in the patch, he had a fish deposit which he had built himself. He had also built two other patches for the government taxes. I did not know Pa's parents, Uluaoao got all of this land after Kahina had been released. Pa's parents were living there but the patch was for Uluaoao where he lived and died there. Kamaikaaloa, in turn, received the land after which it was taken by the government with Kekuku as tenant. Then Kapena became konohiki by the sale with the government while Kekuku remained as tenant. I believe this patch is for the konohiki, just as it was in ancient times.

Kapena - The land for whicb the konohiki reaches out with his hands becomes his land, the land was for Kahina. The tenants did work in the patch under the konohiki. I have seen Pa. Uluaoao, the konohiki, received the land upon Kahina's death, he worked in that patch, the tenants cultivated and harvested. Uluaoao, his parents were there and Pa was under him. Maikaawale succeeded Uluaoao from Kamehameha I, he lived there for a short while. It was Kekuku who lived there a long while at the time of Kaiakoili. I had seen Kawaikaaloa working constantly in that patch at that time.

Kihina, sworn, I was born and raised in Puiwa. My father, Kahina was konohiki of this land and the men whose wives he shared, were under him; Kauweku, Waikane, Puali, Halemaimai, Puali 2 and Keawe. They did the work n the three patches for Kahina, but Kahina bought the young awa fish from Waikiki, and breeded them for Kamehameha I. During the reign of Kamehameha II, Uluaoao,

received the land with those three patches, the tenants did not get them. I believe this patch for the konohiki.

Mahakea, sworn (for Kekuku), At the time Kahina had the land, I had not known this patch over which there is a dispute, was for him. When he was released, the land went to Uluaoao, I had not known this patch was for the konohiki. It was for the tenant. After him, Kamaikaaloa received the land, I had not known that this patch was for the konohiki. When the lands got back to the government, it did not become a koele. I have known Kahina, Pa and Keawe.

Kepani, sworn, when Kahina was konohiki of this land under Kamehameha I, I had known this patch was for the konohiki because this was a huge patch with fish breeding in it for the konohiki and there was cultivation of taro. I have seen Kamehameha I, and Kalaimoku enjoy the yield of this patch. Uluaoao had this patch in his own hands together with the tenants of the land after Kahina had been released. The tenants who had a lease on hogs wanted to build a bank.

Kauhi, sworn, I have seen this place, it is in the ili of Puiwa in Kaneohe, Koolaupoko. I had seen Kahina as konohiki for all of Puiwa during the reign of Kamehameha I. A tenant had this Hoowaa, over which there is a dispute and many tenants have cultivated this patch. No koele work had been done during Kahina's konohikiship. Uluaoa was the new konohiki during the reign of Kamehameha II. Koele cultivation was done with three other separate patches from Hoowaa, they have always been koeles since the first people there.

Kamaikaaloa takes charge of this land after Uluaoa during the reign of Kamehameha II. Kekuku eats of the yield of the land under Kawaikaaloa and had Hoowaa at the same time. There were no koele or Friday days.

Kamaikaaloa was released after the government had taken this land while Kekuku continued to live here under the government. In 1849 Kapena bought this land from the government fee simple and Hoowaa had not been a koele. Kekuku had that patch. It has never been a patch for the konohiki, it has never yielded food for them since the beginning to Kapena's time. The Konohikis have never worked in this patch and nothing has ever been seen given to the konohikis from this patch. They had a claim to three other patches here,

[Award 7173; Land Patent 8101; Puiwa Kaneohe Koolaupoko; 1 ap.; .35 Ac.]

Appendix C

State Historic Preservation Division Letter

March 31, 2008

LINDA LINGLE
GOVERNOR OF HAWAII

LAURA H. THIELEN
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

RUSSELL Y. TSUJI
FIRST DEPUTY

KEN C. KAWAHARA
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESEERVATION DIVISION
601 KAMOKILA BOULEVARD, ROOM 555
KAPOLEI, HAWAII 96707

March 31, 2008

Ms. Tonia Moy
Fung Associates Inc.
1833 Kalakaua Avenue
Suite 1008
Honolulu, Hawaii 96815

LOG NO: 2008.1072
DOC NO: 0803AL14
Architecture

Dear Ms. Moy:

SUBJECT: Chapter 6E-8 (HRS) Review
New Learning Resource Center
Windward Community College
Kaneohe, Island of O'ahu, Hawaii
TMK: (1)-4-5-023:002

Thank you for your transmittal of March 14, 2008, which we received in our Kapolei office on March 18. SHPD staff met on site regarding the proposed project on November 29, 2007 and February 27, 2008.

The proposed project is for construction of a new Learning Resource Center at Windward Community College in Kaneohe on the Island of O'ahu. The library and learning center facility will be approximately 60,000 square feet when constructed and will seek LEED silver certification. The site and its area of potential effect is within the historic district of the Territorial Hospital, which is eligible for nomination to the National Register of Historic Places. Demolition of the historic, contributing Hale Manaleo (formerly known as Lono) is included in the scope of work of the proposed project.

In the course of consultation and included in the transmittal, Architects Hawaii, the project architects, presented to SHPD staff a myriad of alternative options considered during project development to include Hale Manaleo for preservation, rehabilitation, or moving. However, due to site constraints, functional considerations, and spatial needs, demolition and new construction was determined to be the most acceptable solution.

Per our November 29 meeting, SHPD determined an **effect with agreed-upon mitigation commitments**. Our office acknowledges receipt of the following mitigation measures: an updated National Register of Historic Places nomination form for the eligible district; good faith intent to update the current master plan, to include design guidelines, within 10 years pending

LOG NO: 2008.1072
DOC NO: 0803AL14

legislative approval; commitment to provide an educational display within the new Learning Center to include historical information on the Territorial Hospital; and intent to provide documents and collaborate with the Department of Health to display the original asylum campus in a future museum in Bishop Hall. Should the museum not materialize with the next 10 years, Windward Community College will provide the information on their website. SHPD looks forward to reviewing and commenting on architectural drawings for the new construction at the 10%, 35%, and 65% completion stages of the design. Finally, SHPD anticipates receipt of HABS level-III documentation of Hale Manaleo.

Regarding archaeological matters, demolition of Hale Manaleo may proceed without further concerns. However, in the event that historic resources, including human skeletal remains, are identified during the construction activities, all work needs to cease in the immediate vicinity of the find, the find needs to be protected from additional disturbance, and the State Historic Preservation Division, O'ahu Section, needs to be contacted immediately at (808) 692-8015. As the new building design is still in its preliminary stages, SHPD Archaeology Branch also reserves the right to provide comments at the 65% level regarding the area and depth of excavations, leech fields, etc.

Thank you for the opportunity to comment. Should you have any additional questions or concerns, please do not hesitate to contact Dr. Astrid Liverman in our O'ahu office at (808) 692-8028 or Astrid.M.Liverman@hawaii.gov regarding architectural matters. Please contact Lauren Morawski at 692-8019 or Lauren.M.Morawski@hawaii.gov regarding archaeological matters.

Sincerely,

Astrid M. Liverman

for Laura H. Thielen
State Historic Preservation Officer and Chairperson

AMBL:
c:
Chancellor Angela Meixell, Windward Community College, University of Hawaii, 45-720 Keaahala Road, Kane'ohe, Hawaii 96744
Kiersten Faulkner, Executive Director, Historic Hawaii Foundation, P.O. Box 1658, Honolulu, Hawaii 96806
Terry MacFarland, Architects Hawaii Limited, ASB Tower, 1001 Bishop Street, Suite 200, Honolulu, Hawaii 96813

Appendix D

Traffic Impact Assessment Report

Wilson Okamoto Corporation

November 2008

Traffic Impact Report

Windward Community College
Library & Learning Resources Center

Prepared for:
Architects Hawaii Ltd.

Prepared by:
Wilson Okamoto Corporation

November 2008

TRAFFIC IMPACT REPORT

FOR THE PROPOSED

WINDWARD COMMUNITY COLLEGE

LIBRARY & LEARNING RESOURCES CENTER

Prepared for:

Architects Hawaii Ltd.
American Savings Bank Tower
1001 Bishop Street, Suite 200
Honolulu, Hawaii 96813

Prepared by:

Wilson Okamoto Corporation
1907 S. Beretania Street, Suite 400
Honolulu, Hawaii 96826
WOC Ref. #7723-02

November 2008

TABLE OF CONTENTS

I. INTRODUCTION

A. Purpose of Study

The purpose of this study is to identify and assess the traffic impacts resulting from the proposed Library & Learning Resources Center at Windward Community College located in Kaneohe on the island of Oahu. The proposed project entails the construction of a 62,000 square foot building on the existing community college campus.

B. Scope of Study

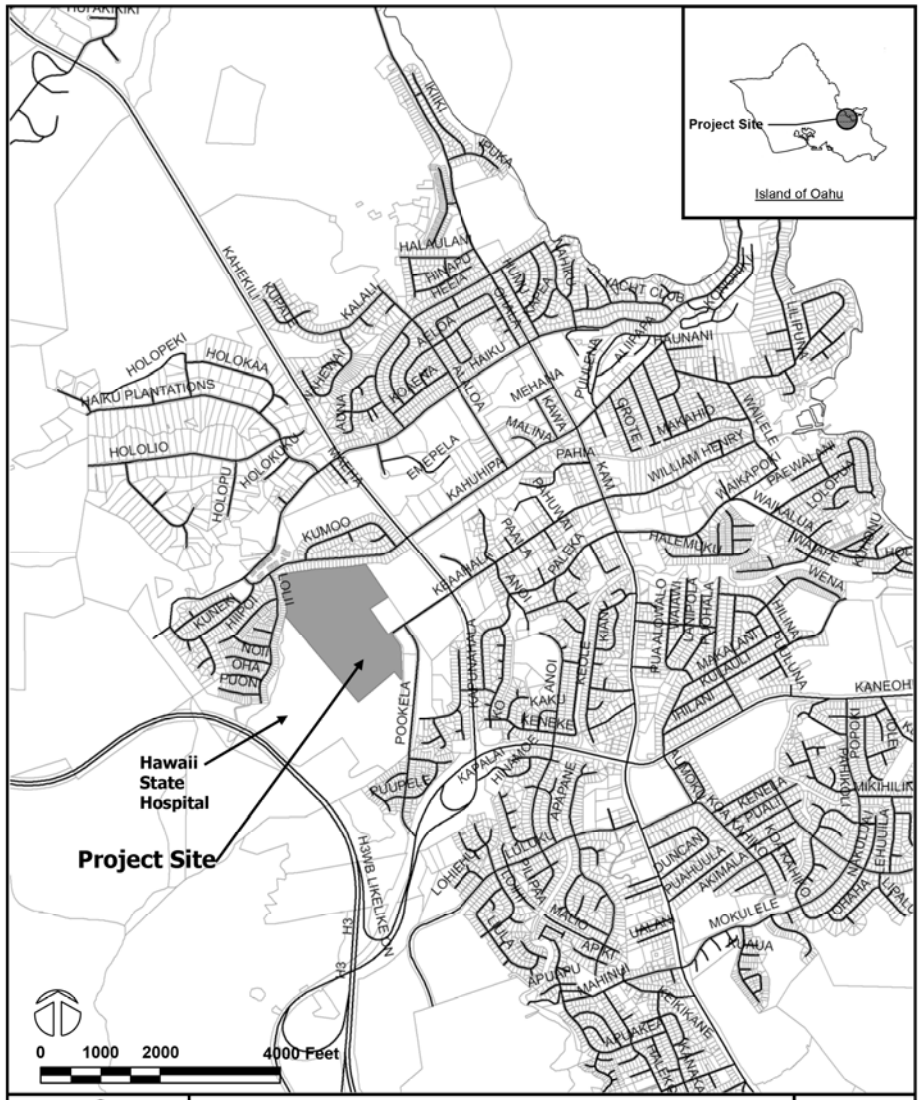
This report presents the findings and conclusions of the traffic study, the scope of which includes:

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

II. PROJECT DESCRIPTION

A. Location

The existing Windward Community College is located adjacent to the Hawaii State Hospital at the western terminus of Keaahala Road in Kaneohe on the island of Oahu (see Figure 1). The project site is further identified as Tax Map Key: 4-5-23: 14 (por). Access to the existing community college is provided via Keaahala Road off Kahekili Highway.



WILSON OKAMOTO CORPORATION ENGINEERS - PLANNERS	WINDWARD COMMUNITY COLLEGE	FIGURE
	LOCATION MAP AND VICINITY MAP	1

B. Project Characteristics

The existing Windward Community College is located on a 64-acre site adjacent to the Hawaii State Hospital in Kaneohe. A Five Year Master Plan for the college was approved on May 4, 1994 that included the proposed Library & Learning Resources Center (LLRC). However, funding for the center was not available until recently. The proposed project entails the demolition of an existing building ("Hale Manaleo") and construction of a new three-story, 62,000 square foot building which is expected to house the following functions which are currently spread out in other buildings on the college campus:

- Library
- Testing and Tutoring Center
- Instructional and Media Services
- Computing Services and Computer Laboratory
- LLRC Administration

In conjunction with this project, improvements are also proposed for the campus' roadways and parking lots. Two segments of the campus' circulator roadway ("Ala Koolau") will be widened and two new parking lots will be constructed. The proposed project is expected to be completed by the Year 2011 and vehicular access to the campus will continue to be provided via Keaahala Road. Figure 2 shows the proposed project site plan.

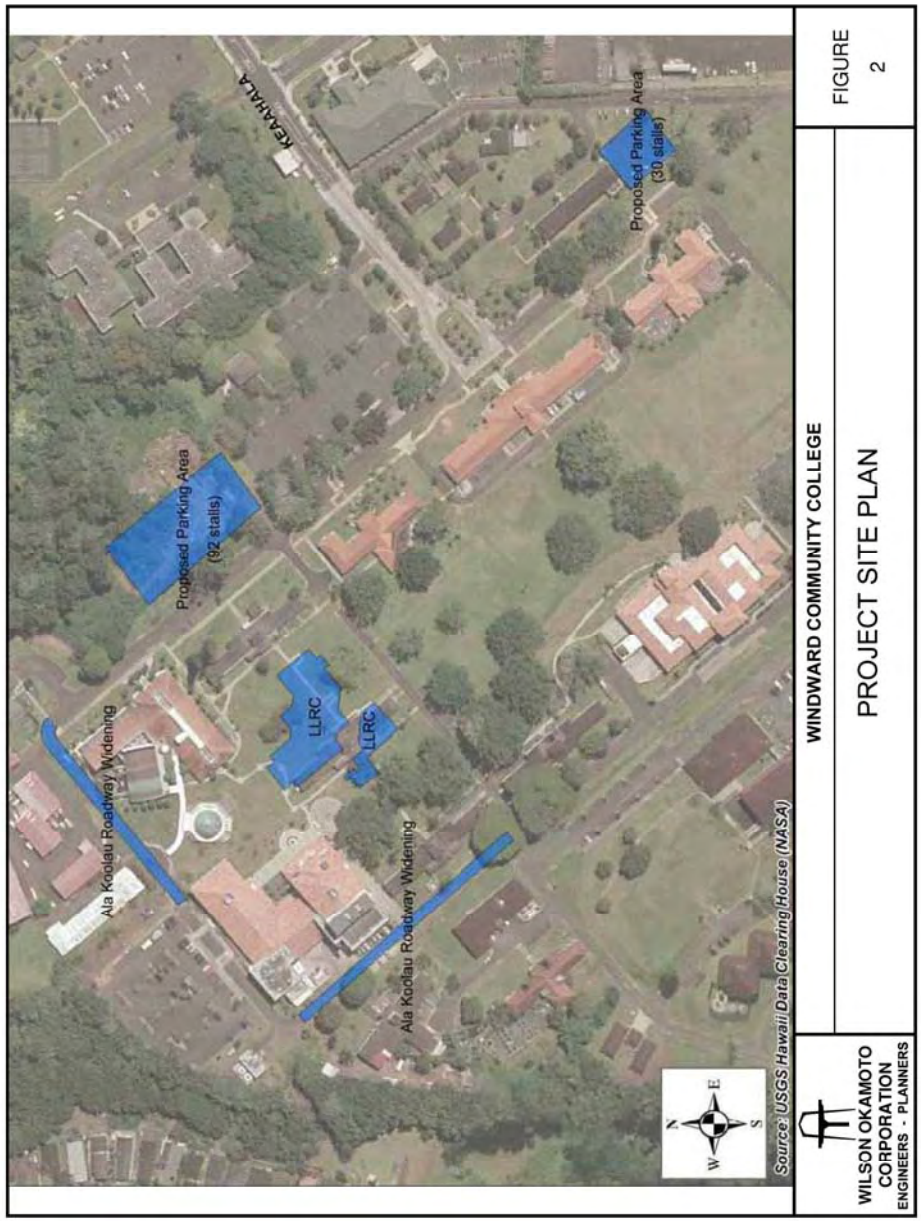
III. EXISTING TRAFFIC CONDITIONS

A. General

The project site is located west of Kahekili Highway at the western terminus of Keaahala Road. Kahekili Highway serves as an alternate access route through Kaneohe generally oriented in the north-south direction between its southern terminus at Likelike Highway and northern terminus at Kamehameha Highway.

B. Area Roadway System

East of the existing Windward Community College, Kahekili Highway intersects Keaahala Road. At this signalized intersection, both approaches of the highway have exclusive left-turn lanes, two through lanes, and a shared through and



right-turn lane. West of the highway, Keaahala Road is generally oriented in the east-west direction and serves as an access road for the uses along its alignment, as well as, a connector road between Kamehameha Highway and Kahekili Highway. At the intersection with Kahekili Highway, the eastbound approach of Keaahala Road has one through lane and exclusive turning lanes while the westbound approach has an exclusive left-turn lane and a shared through and right-turn lane.

West of the intersection with Kahekili Highway, Keaahala Road intersects Pookela Street and the driveway for the Windward Comprehensive Health Center. At this unsignalized intersection, both approaches of Keaahala Road have exclusive left-turn lanes and a shared through and right-turn lane. Pookela Street is generally oriented in the north-south direction and provides access to the residential uses along its alignment. The northbound approach of Pookela Street has one stop-controlled lane that serves all traffic movements. The southbound approach of the intersection is comprised of the driveway for the Windward Comprehensive Health Center which has one stop-controlled lane that serves all traffic movements.

Further west, Keaahala Road intersects the access road for the Windward Community College. At this unsignalized intersection, the westbound approach of Keaahala Road has one lane that serves left-turn and right-turn traffic movements. The northbound and southbound approaches of intersection are comprised of the access road for the community college. The northbound approach has one stop-controlled lane that serves through and right-turn traffic movements while the southbound approach has one stop-controlled lane that serves left-turn and through traffic movements.

C. Traffic Volumes and Conditions

1. General

a. Field Investigation

A field investigation was conducted on October 23, 2008 and consisted of manual turning movement count surveys along Keaahala Road in the project vicinity. The manual turning movement count

surveys were conducted between the morning peak hours of 6:00 AM and 9:00 AM, and the afternoon peak hours of 3:00 PM and 6:00 PM at the following intersections:

- Kahekili Highway and Keaahala Road
- Keaahala Road, Pookela Street, and the Windward Comprehensive Health Center Driveway
- Keaahala Road and the Windward Community College Access Road

Appendix A includes the existing traffic count data.

b. Capacity Analysis Methodology

The highway capacity analysis performed in this study is based upon procedures presented in the "Highway Capacity Manual", Transportation Research Board, 2000, and the "Highway Capacity Software", developed by the Federal Highway Administration. The analysis is based on the concept of Level of Service (LOS).

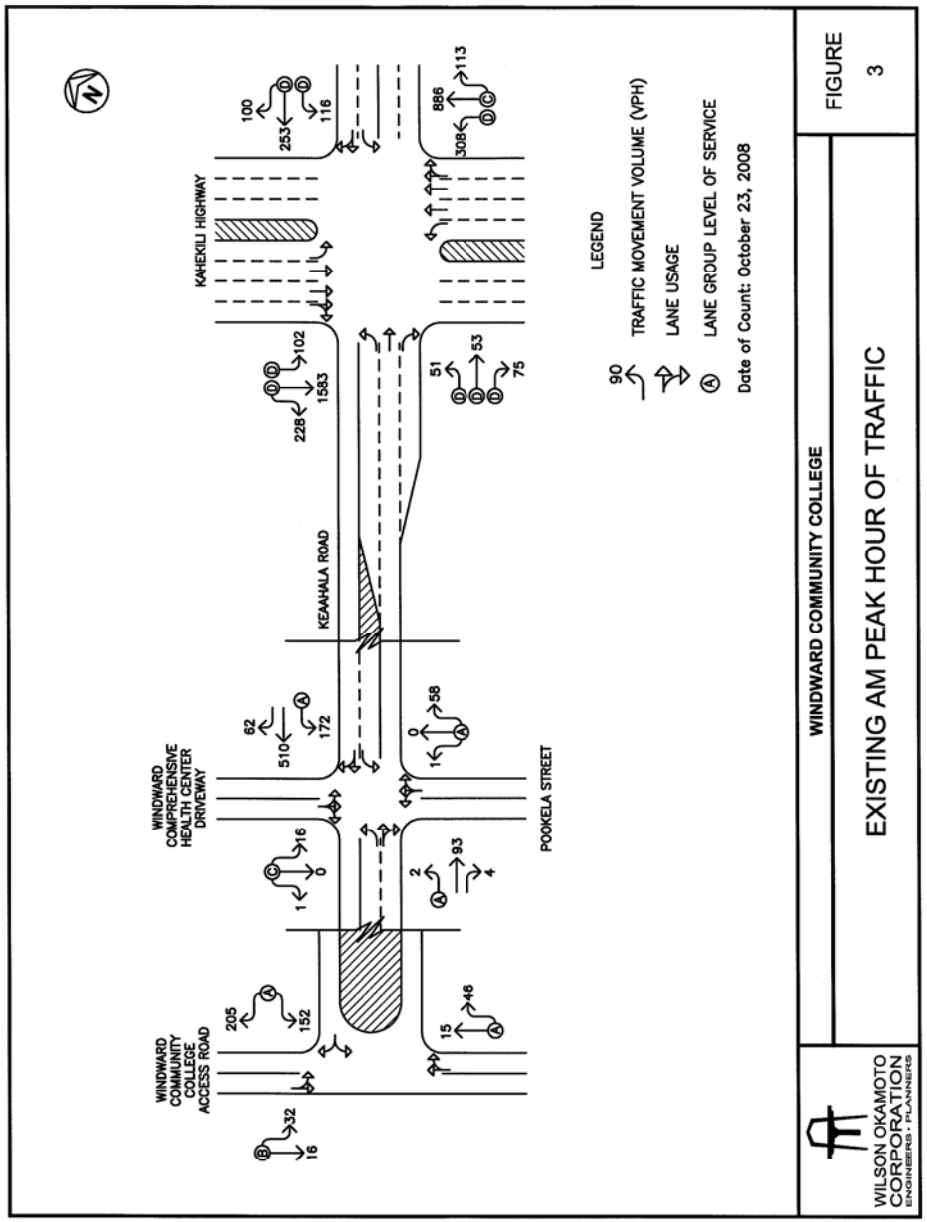
LOS is a quantitative and qualitative assessment of traffic operations. Levels of Service are defined by LOS "A" through "F"; LOS "A" representing ideal or free-flow traffic operating conditions and LOS "F" unacceptable or potentially congested traffic operating conditions.

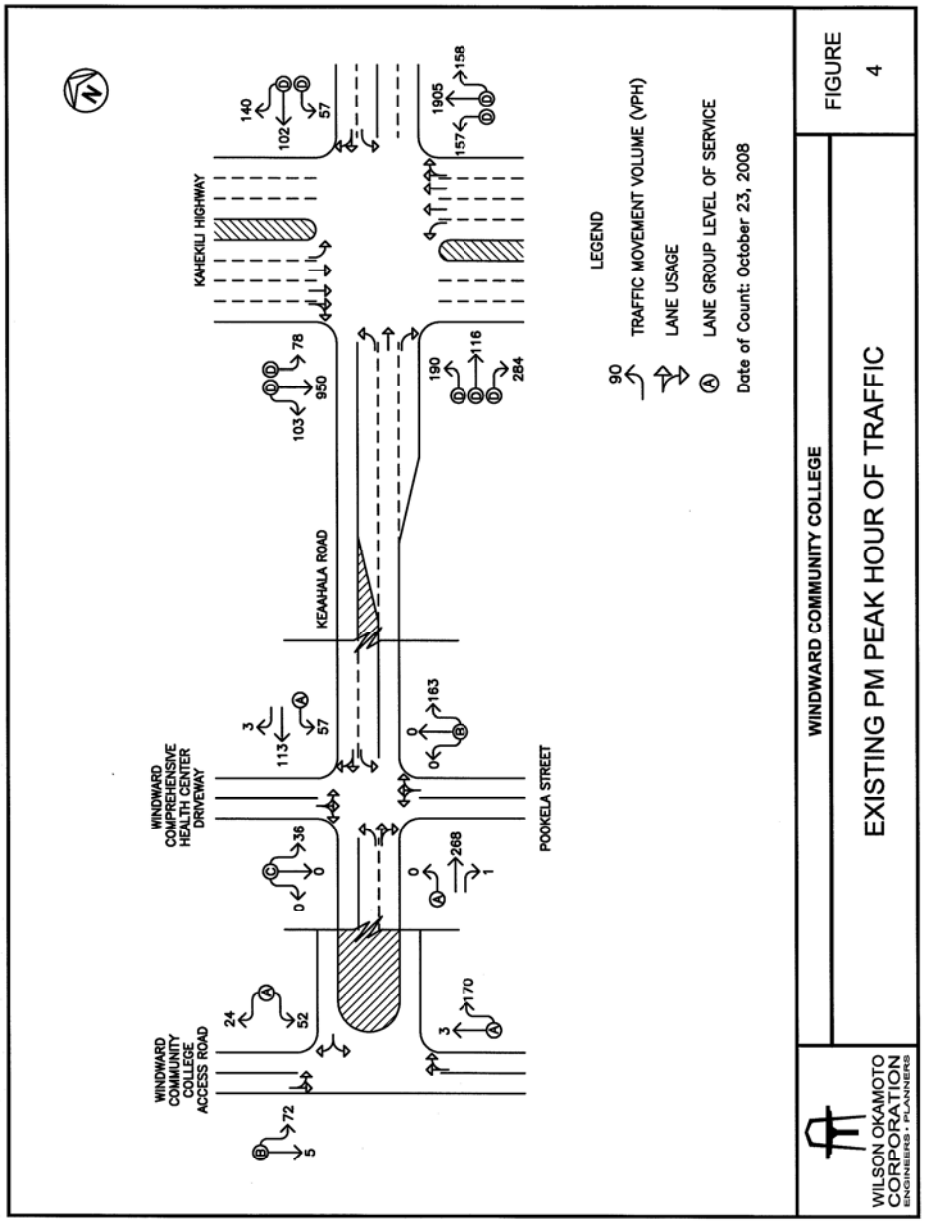
"Volume-to-Capacity" (v/c) ratio is another measure indicating the relative traffic demand to the road carrying capacity. A v/c ratio of one (1.00) indicates that the roadway is operating at or near capacity. A v/c ratio of greater than 1.00 indicates that the traffic demand exceeds the road's carrying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

2. Existing Peak Hour Traffic

a. General

Figures 3 and 4 show the existing AM and PM peak hour traffic volumes and operating traffic conditions. The AM peak hour of





traffic occurs between 7:30 AM and 8:30 AM in the vicinity of the proposed project. In the afternoon, the PM peak hour of traffic occurs between the hours of 4:00 PM and 5:00 PM. The analysis is based on these peak hour time periods for each intersection to identify the traffic impacts resulting from the proposed project. LOS calculations are included in Appendix C.

b. Kahekili Highway and Keaahala Road

At the intersection with Keaahala Road, Kahekili Highway carries 1,307 vehicles northbound and 1,913 vehicles southbound during the AM peak hour of traffic. During the PM peak hour, the overall traffic volume is slightly higher with 2,220 vehicles traveling northbound and 1,131 vehicles traveling southbound. The traffic movements on the Kahekili Highway approaches of the intersection operate at LOS "D" during both peak periods with the exception of the northbound through and right-turn traffic movement which operates at LOS "C" during the PM peak period.

The Keaahala Road approaches of this intersection carry 179 vehicles eastbound and 469 vehicles westbound during the AM peak period. During the PM peak period, the overall traffic volume is higher with 590 vehicles traveling eastbound and 299 vehicles traveling westbound. The traffic movements on both approaches of Keaahala Road operate at LOS "D" during both peak periods.

Traffic queues periodically formed on the approaches of the intersection with average queue lengths of 10-12 vehicles observed along the highway and 3-5 vehicles along Keaahala Road during both peak periods. Most of these queues cleared after each traffic signal cycle change, but occasionally vehicles had to wait for more than one traffic signal cycle length.

c. Keaahala Road, Pookela Street, and the Windward Comprehensive Health Center Driveway

At the intersection with Pookela Street and the driveway for the Windward Comprehensive Health Center, Keaahala Road carries 99 vehicles eastbound and 744 vehicles westbound during the AM peak hour of traffic. During the PM peak hour, the overall traffic volume is less with 269 vehicles traveling eastbound and 173 vehicles traveling westbound. The critical traffic movements on the Keaahala Road approaches are the eastbound and westbound left-turn traffic movements which operate at LOS "A" during both peak periods.

The Pookela Street approach of the intersection carries 59 vehicles and 163 vehicles northbound during the AM and PM peak periods, respectively. This approach operates at LOS "A" and LOS "B" during the AM and PM peak periods, respectively.

The southbound approach of the intersection is comprised of the driveway for the Windward Comprehensive Health Center. This approach carries 17 vehicles and 36 vehicles southbound during the AM and PM peak periods and operates at LOS "C" during both peak periods.

d. Keaahala Road and the Windward Community College Access Road

At the intersection with the Windward Community College access road, Keaahala Road carries 357 vehicles and 76 vehicles westbound during the AM peak hour of traffic. This approach operates at LOS "A" during both peak periods.

The northbound and southbound approaches of the intersection are comprised of the access road for the Windward Community College. These approaches carry 61 vehicles northbound and 48 vehicles southbound during the AM peak period. The traffic volumes are higher during the PM peak period with 173 vehicles traveling

northbound and 77 vehicles traveling southbound. The northbound and southbound approaches of the intersection operate at LOS "A" and LOS "B," respectively, during both peak periods.

IV. PROJECTED TRAFFIC CONDITIONS

A. Site-Generated Traffic

1. Trip Generation Methodology

The trip generation methodology used in this study is based upon generally accepted techniques developed by the Institute of Transportation Engineers (ITE) and published in "Trip Generation, 7th Edition," 2003. The ITE trip generation rates are developed empirically by correlating the vehicle trip generation data with various land use characteristics such as the number of vehicle trips generated per student. The proposed Library & Learning Resources Center is expected to house existing college functions and activities which are currently spread out in other buildings on the campus. As such, the proposed project is not expected to generate any additional trips. However, as detailed in the report entitled "Enrollment Projections University of Hawaii Fall 2008 to Fall 2014" prepared by the Institutional Research Office at the University of Hawaii in July 2008, the enrollment at Windward Community College is expected to increase slightly in the next few years. Table 1 summarizes the trip generation characteristics applied to the AM and PM peak hours of traffic resulting from the anticipated increase in enrollment by the Year 2011.

Table 1: Peak Hour Trip Generation

JUNIOR/COMMUNITY COLLEGE		
INDEPENDENT VARIABLE:	*Existing Enrollment =*	*1,856 students*
	Year 2011 Enrollment =	*1,864 students*
	Net Increase =	*8 students**
		PROJECTED TRIP ENDS
AM PEAK	ENTER	1
	EXIT	0
	TOTAL	1
PM PEAK	ENTER	1
	EXIT	0
	TOTAL	1

2. Trip Distribution

Access to Windward Community College will continue to be provided via Keaahala Road. All site-generated trips were assumed to utilize Keaahala Road to travel between the college and Kahekili Highway. The directional distribution of traffic at the intersections of Keaahala Road with Kahekili Highway and the access road for the college was assumed to remain similar to existing conditions.

B. Through Traffic Forecasting Methodology

Typically, travel forecasts are developed based upon historical traffic count data obtained from the State Department of Transportation (SDOT), Highway Division survey stations. However, since the SDOT traffic survey data along Kahekili Highway in the vicinity of the project indicates relatively stable traffic volumes, use of the SDOT data is inappropriate to derive a reasonable level of accuracy or certainty in the traffic forecast. As such, the travel forecast developed for this study conservatively assumes the existing traffic volumes along Kahekili Highway will increase at a rate of 0.5% per year to the Year 2011. Using 2008 as the Base Year, a growth factor of 1.015 was applied to the existing through traffic demands along the highway to achieve the projected Year 2011 traffic demands.

C. Other Considerations

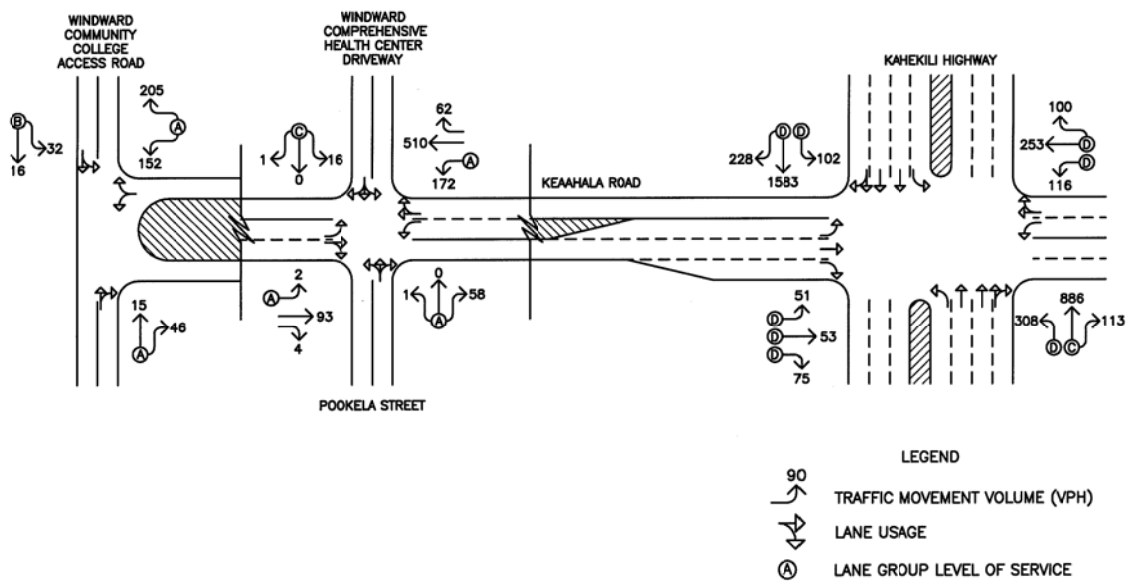
The existing Windward Community College is located adjacent to the Hawaii State Hospital. In past years, the hospital has considered expanding its facility to provide more and better services. However, at the time of this report, their development plan and timing is not known and, as such, is not incorporated into the Year 2011 traffic analyses.

D. Total Traffic Volumes

The projected Year 2011 AM and PM peak hour traffic volumes and operating conditions at the study intersections are shown on Figures 5 and 6, and summarized in Table 2. The existing levels of service are provided for comparison purposes. LOS calculations are included in Appendix D.

Table 2: Existing and Projected LOS Traffic Operating Conditions

Intersection	**Critical Traffic Movement**		**AM**		**PM**	
			Exist	**Year 2011**	**Exist**	**Year 2011**
Kahekili Hwy/ Keaahala Rd	Eastbound	LT	D	D	D	D
		TH	D	D	D	D
		RT	D	D	D	D
	Westbound	LT	D	D	D	D
		TH-RT	D	D	D	D
	Northbound	LT	D	D	D	D
		TH-RT	C	C	D	D
	Southbound	LT	D	D	D	D
		TH-RT	D	D	D	D
Keaahala Rd/ Pookela St/ WCHC Dwy	Eastbound	LT	A	A	A	A
	Westbound	LT	A	A	A	A
	Northbound	LT-TH-RT	A	A	B	B
	Southbound	LT-TH-RT	C	C	C	C

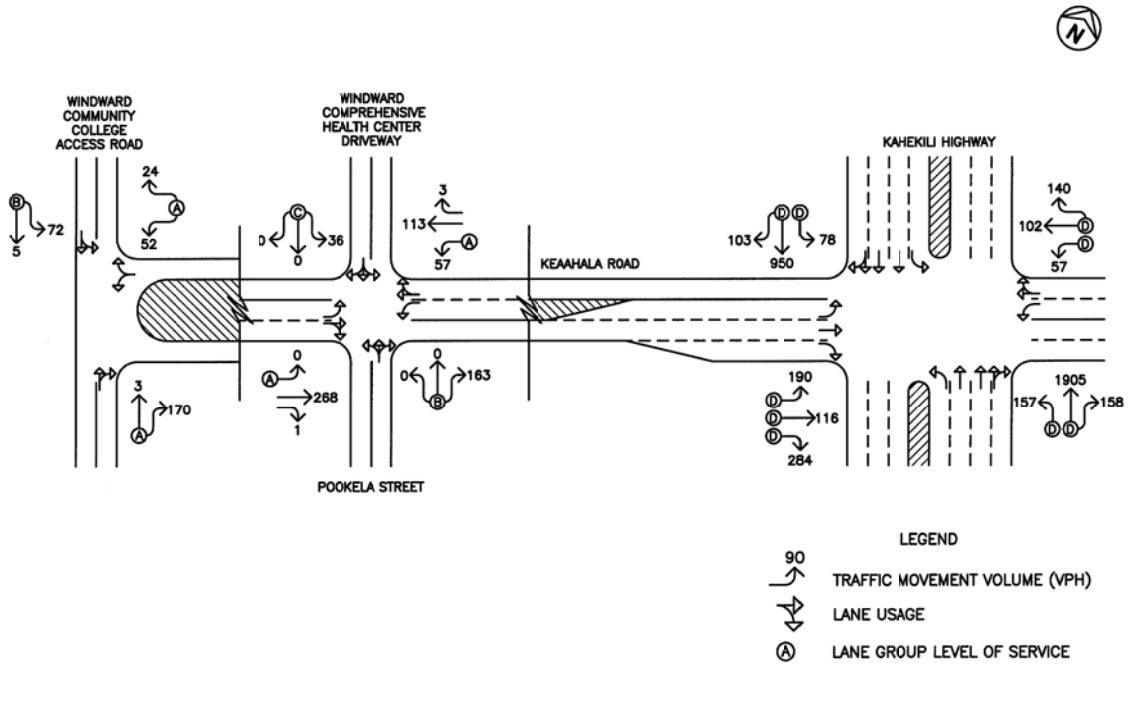


WILSON OKAMOTO CORPORATION
ENGINEERS • PLANNERS

WINDWARD COMMUNITY COLLEGE

YEAR 2011 AM PEAK HOUR OF TRAFFIC

FIGURE 5



WILSON OKAMOTO CORPORATION
ENGINEERS • PLANNERS

WINDWARD COMMUNITY COLLEGE

YEAR 2011 PM PEAK HOUR OF TRAFFIC

FIGURE 6

Table 2: Existing and Projected LOS
Traffic Operating Conditions (Cont'd)

Intersection	Critical Traffic Movement		AM		PM	
			Exist	Year 2011	Exist	Year 2011
Keaahala Rd/ WCC Access Rd	Westbound	LT-RT	A	A	A	A
	Northbound	TH-RT	A	A	A	A
	Southbound	LT-TH	B	B	B	B

Traffic operations in the vicinity of Windward Community College are expected to remain similar to existing conditions during both peak hours of traffic despite the anticipated increase in enrollment at the college. The critical traffic movements at the intersection of Keaahala Road with Kahekili Highway are expected to continue operating at LOS "D" or better during both peak periods while those at the intersection with Pookela Street and the driveway for the Windward Comprehensive Health Center are expected to continue operating at LOS "C" or better during both peak periods. Similarly, the critical traffic movements at the intersection of Keaahala Road with the college's access road are expected to continue operating at LOS "B" or better during both peak periods.

V. RECOMMENDATIONS

Based on the analysis of the traffic data, the following are the recommendations of this study:

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

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

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

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

VI. CONCLUSION

The proposed Library & Learning Resources Center at the Windward Community College is expected to house existing college functions and activities which are currently spread out in other buildings on the campus. As such, the proposed project is not expected to generate any additional trips. However, the enrollment at the college is expected to increase slightly in the next few years. The anticipated increase in enrollment is not expected to have a significant impact on traffic operations in the vicinity of the college. The traffic movements at the study intersections along Keaahala Road are expected to continue operating at levels of service similar to existing conditions with the anticipated enrollment increase. In addition, the total traffic volumes entering the study intersections along Keaahala Road are expected to increase by approximately less than 0.5% during both peak periods. These increases in the total traffic volumes are in the range of daily volume fluctuations along that roadway and represent a minimal increase in the overall traffic volumes.

APPENDIX A

EXISTING TRAFFIC COUNT DATA

WILSON OKAMOTO CORPORATION
1907 S. Beretania Street Suite 400
Honolulu, Hi 96826

Counter:D4-5675, D4-5673
Counted:JY, DY
Weather:Clear

File Name : KahKea AM
Site Code : 00000001
Start Date : 10/23/2008
Page No : 1

Groups Printed- Unshifted

	Kahekili Highway Southbound					Keaahala Road Westbound					Kahekili Highway Northbound					Keaahala Road Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	6	476	7	1	490	45	11	5	2	63	22	88	14	2	126	1	2	19	0	22	701
06:15 AM	8	574	15	0	597	48	9	11	0	68	40	111	18	1	170	5	1	25	1	32	867
06:30 AM	12	555	20	0	587	64	22	15	0	101	57	118	13	0	188	5	6	25	0	36	912
06:45 AM	14	495	16	2	527	54	18	13	2	87	27	143	7	0	177	4	5	28	0	37	828
Total	40	2100	58	3	2201	211	60	44	4	319	146	460	52	3	661	15	14	97	1	127	3308
07:00 AM	23	541	21	0	585	53	8	5	0	66	57	157	8	0	222	10	7	43	0	60	933
07:15 AM	33	408	10	1	452	55	21	16	0	92	50	174	12	0	236	4	9	16	0	29	809
07:30 AM	39	477	36	1	553	38	42	35	0	115	55	230	18	0	303	7	11	20	0	38	1009
07:45 AM	31	360	63	2	456	30	75	29	0	134	86	232	34	1	353	15	21	21	0	57	1000
Total	126	1786	130	4	2046	176	146	85	0	407	248	793	72	1	1114	36	48	100	0	184	3751
08:00 AM	19	367	72	1	459	28	93	23	1	145	77	216	30	0	323	10	9	15	0	34	961
08:15 AM	13	379	57	2	451	20	43	13	0	76	90	208	31	1	330	19	12	19	0	50	907
08:30 AM	20	314	20	0	354	23	30	12	0	65	84	199	15	0	298	15	8	16	0	39	756
08:45 AM	21	249	63	1	334	26	21	15	0	62	97	208	14	0	319	12	10	11	0	33	748
Total	73	1309	212	4	1598	97	187	63	1	348	348	831	90	1	1270	56	39	61	0	156	3372
Grand Total	239	5195	400	11	5845	484	393	192	5	1074	742	2084	214	5	3045	107	101	258	1	467	10431
Apprch %	4.1	88.9	6.8	0.2		45.1	36.6	17.9	0.5		24.4	68.4	7	0.2		22.9	21.6	55.2	0.2		
Total %	2.3	49.8	3.8	0.1	56	4.6	3.8	1.8	0	10.3	7.1	20	2.1	0	29.2	1	1	2.5	0	4.5	

	Kahekili Highway Southbound					Keaahala Road Westbound					Kahekili Highway Northbound					Keaahala Road Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	**39**	**477**	36	1	**553**	**38**	42	**35**	0	115	55	230	18	0	303	7	11	20	0	38	**1009**
07:45 AM	31	360	63	**2**	456	30	75	29	0	134	86	**232**	**34**	**1**	**353**	15	**21**	**21**	0	**57**	1000
08:00 AM	19	367	**72**	1	459	28	**93**	23	**1**	**145**	77	216	30	0	323	10	9	15	0	34	961
08:15 AM	13	379	57	2	451	20	43	13	0	76	**90**	208	31	1	330	**19**	12	19	0	50	907
Total Volume	102	1583	228	6	1919	116	253	100	1	470	308	886	113	2	1309	51	53	75	0	179	3877
% App. Total	5.3	82.5	11.9	0.3		24.7	53.8	21.3	0.2		23.5	67.7	8.6	0.2		28.5	29.6	41.9	0		
PHF	.654	.830	.792	.750	.868	.763	.680	.714	.250	.810	.856	.955	.831	.500	.927	.671	.631	.893	.000	.785	.961

WILSON OKAMOTO CORPORATION
1907 S. Beretania Street Suite 400
Honolulu, Hi 96826

Counter:D4-5675, D4-5673
Counted:JY, DY
Weather:Clear

File Name : KahKea PM
Site Code : 00000001
Start Date : 10/23/2008
Page No : 1

Groups Printed- Unshifted

	Kahekili Highway Southbound					Keaahala Road Westbound					Kahekili Highway Northbound					Keaahala Road Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	19	242	19	2	282	15	19	44	0	78	26	431	28	0	485	43	30	107	1	181	1026
03:15 PM	13	217	32	2	264	19	14	24	0	57	26	426	38	0	490	25	23	61	4	113	924
03:30 PM	17	222	12	4	255	12	13	31	0	56	28	475	51	2	556	23	19	37	0	79	946
03:45 PM	25	232	28	2	287	17	24	28	2	71	51	462	30	0	543	34	25	48	1	108	1009
Total	74	913	91	10	1088	63	70	127	2	262	131	1794	147	2	2074	125	97	253	6	481	3905
04:00 PM	19	241	19	0	279	7	25	25	0	57	13	534	42	0	589	53	35	74	0	162	1087
04:15 PM	25	232	14	0	271	16	22	38	2	78	41	390	36	1	468	52	23	79	0	154	971
04:30 PM	12	239	28	3	282	20	27	39	1	87	49	461	46	0	556	42	24	87	0	153	1078
04:45 PM	22	238	42	7	309	14	28	38	2	82	54	520	34	0	608	43	34	44	0	121	1120
Total	78	950	103	10	1141	57	102	140	5	304	157	1905	158	1	2221	190	116	284	0	590	4256
05:00 PM	36	219	39	4	298	21	27	42	1	91	55	422	38	0	515	29	25	45	0	99	1003
05:15 PM	30	197	26	2	255	16	20	28	2	66	38	559	47	2	646	26	13	39	0	78	1045
05:30 PM	22	216	22	3	263	9	14	43	1	67	46	439	31	2	518	23	14	16	0	53	901
05:45 PM	27	202	29	4	262	20	22	22	0	64	42	429	26	0	497	17	7	22	0	46	869
Total	115	834	116	13	1078	66	83	135	4	288	181	1849	142	4	2176	95	59	122	0	276	3818
Grand Total	267	2697	310	33	3307	186	255	402	11	854	469	5548	447	7	6471	410	272	659	6	1347	11979
Apprch %	8.1	81.6	9.4	1		21.8	29.9	47.1	1.3		7.2	85.7	6.9	0.1		30.4	20.2	48.9	0.4		
Total %	2.2	22.5	2.6	0.3	27.6	1.6	2.1	3.4	0.1	7.1	3.9	46.3	3.7	0.1	54	3.4	2.3	5.5	0.1	11.2	

	Kahekili Highway Southbound					Keaahala Road Westbound					Kahekili Highway Northbound					Keaahala Road Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	19	**241**	19	0	279	7	25	25	0	57	13	**534**	42	0	589	**53**	**35**	74	0	**162**	1087
04:15 PM	**25**	232	14	0	271	16	22	38	**2**	78	41	390	36	**1**	468	52	23	79	0	154	971
04:30 PM	12	239	28	3	282	**20**	27	**39**	1	**87**	49	461	**46**	0	556	42	24	**87**	0	153	1078
04:45 PM	22	238	**42**	**7**	**309**	14	**28**	38	2	82	**54**	520	34	0	**608**	43	34	44	0	121	**1120**
Total Volume	78	950	103	10	1141	57	102	140	5	304	157	1905	158	1	2221	190	116	284	0	590	4256
% App. Total	6.8	83.3	9	0.9		18.8	33.6	46.1	1.6		7.1	85.8	7.1	0		32.2	19.7	48.1	0		
PHF	.780	.985	.613	.357	.923	.713	.911	.897	.625	.874	.727	.892	.859	.250	.913	.896	.829	.816	.000	.910	.950

WILSON OKAMOTO CORPORATION
1907 S. Beretania Street Suite 400
Honolulu, Hi 96826

Counter:D4-5676
Counted:TO
Weather:Clear

File Name : PooKea AM
Site Code : 00000001
Start Date : 10/23/2008
Page No : 1

Groups Printed- Unshifted

	Windward Comprehensive Health Center Southbound					Keaahala Road Westbound					Pookela Street Northbound					Keaahala Road Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	0	0	0	0	0	13	19	0	0	32	0	0	13	0	13	0	4	0	1	5	50
06:15 AM	0	0	0	0	0	21	26	1	0	48	0	0	13	0	13	0	3	0	0	3	64
06:30 AM	0	0	1	0	1	39	42	3	0	84	0	0	21	0	21	0	6	0	1	7	113
06:45 AM	1	0	0	0	1	19	41	1	0	61	0	0	24	0	24	0	14	0	0	14	100
Total	1	0	1	0	2	92	128	5	0	225	0	0	71	0	71	0	27	0	2	29	327
07:00 AM	0	0	0	0	0	19	57	5	0	81	0	0	32	0	32	0	34	0	0	34	147
07:15 AM	1	0	1	0	2	14	56	0	0	70	0	1	13	0	14	1	14	1	0	16	102
07:30 AM	1	0	1	0	2	34	87	16	0	137	0	0	19	0	19	0	17	2	0	19	177
07:45 AM	3	0	0	8	11	39	153	24	0	216	0	0	12	0	12	0	34	0	1	35	274
Total	5	0	2	8	15	106	353	45	0	504	0	1	76	0	77	1	99	3	1	104	700
08:00 AM	4	0	0	2	6	49	175	10	0	234	0	0	9	0	9	1	21	1	0	23	272
08:15 AM	8	0	0	1	9	50	95	12	3	160	1	0	18	2	21	1	21	1	1	24	214
08:30 AM	6	0	0	4	10	62	46	8	1	117	0	0	13	1	14	0	24	4	3	31	172
08:45 AM	7	0	0	1	8	77	46	6	0	129	1	0	18	0	19	0	24	2	2	28	184
Total	25	0	0	8	33	238	362	36	4	640	2	0	58	3	63	2	90	8	6	106	842
Grand Total	31	0	3	16	50	436	843	86	4	1369	2	1	205	3	211	3	216	11	9	239	1869
Apprch %	62	0	6	32		31.8	61.6	6.3	0.3		0.9	0.5	97.2	1.4		1.3	90.4	4.6	3.8		
Total %	1.7	0	0.2	0.9	2.7	23.3	45.1	4.6	0.2	73.2	0.1	0.1	11	0.2	11.3	0.2	11.6	0.6	0.5	12.8	

	Windward Comprehensive Health Center Southbound					Keaahala Road Westbound					Pookela Street Northbound					Keaahala Road Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	1	0	**1**	0	2	34	87	16	0	137	0	0	**19**	0	19	0	17	**2**	0	19	177
07:45 AM	3	0	0	**8**	**11**	39	153	**24**	0	216	0	0	12	0	12	0	**34**	0	**1**	**35**	**274**
08:00 AM	4	0	0	2	6	49	**175**	10	0	**234**	0	0	9	0	9	**1**	21	1	0	23	272
08:15 AM	**8**	0	0	1	9	**50**	95	12	**3**	160	**1**	0	18	**2**	**21**	1	21	1	1	24	214
Total Volume	16	0	1	11	28	172	510	62	3	747	1	0	58	2	61	2	93	4	2	101	937
% App. Total	57.1	0	3.6	39.3		23	68.3	8.3	0.4		1.6	0	95.1	3.3		2	92.1	4	2		
PHF	.500	.000	.250	.344	.636	.860	.729	.646	.250	.798	.250	.000	.763	.250	.726	.500	.684	.500	.500	.721	.855

WILSON OKAMOTO CORPORATION
1907 S. Beretania Street Suite 400
Honolulu, Hi 96826

Counter:D4-5676
Counted:TO
Weather:Clear

File Name : PooKea PM
Site Code : 00000001
Start Date : 10/23/2008
Page No : 1

Groups Printed- Unshifted

	Windward Comprehensive Health center Southbound					Keaahala Road Westbound					Pookela Street Northbound					Keaahala Road Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	4	0	1	0	5	21	18	2	0	41	1	0	53	0	54	2	96	0	0	98	198
03:15 PM	7	0	0	0	7	13	16	4	0	33	0	0	32	0	32	2	60	1	0	63	135
03:30 PM	4	0	0	0	4	12	11	1	0	24	0	0	22	0	22	0	34	0	1	35	85
03:45 PM	5	0	0	6	11	16	22	3	0	41	0	0	22	1	23	0	53	0	0	53	128
Total	20	0	1	6	27	62	67	10	0	139	1	0	129	1	131	4	243	1	1	249	546
04:00 PM	5	0	0	3	8	9	12	1	0	22	0	0	40	0	40	0	81	0	0	81	151
04:15 PM	15	0	0	1	16	11	27	1	0	39	0	0	50	0	50	0	85	0	0	85	190
04:30 PM	11	0	0	2	13	20	32	1	0	53	0	0	44	0	44	0	61	0	0	61	171
04:45 PM	5	0	0	1	6	17	42	0	0	59	0	0	29	3	32	0	41	1	1	43	140
Total	36	0	0	7	43	57	113	3	0	173	0	0	163	3	166	0	268	1	1	270	652
05:00 PM	3	0	0	2	5	23	39	0	0	62	0	0	19	3	22	0	41	1	0	42	131
05:15 PM	3	0	1	3	7	12	44	0	1	57	0	0	21	2	23	0	29	0	1	30	117
05:30 PM	2	0	0	3	5	19	32	0	1	52	0	0	13	3	16	0	34	1	1	36	109
05:45 PM	3	0	0	0	3	25	18	0	0	43	0	0	20	0	20	0	23	0	0	23	89
Total	11	0	1	8	20	79	133	0	2	214	0	0	73	8	81	0	127	2	2	131	446
Grand Total	67	0	2	21	90	198	313	13	2	526	1	0	365	12	378	4	638	4	4	650	1644
Apprch %	74.4	0	2.2	23.3		37.6	59.5	2.5	0.4		0.3	0	96.6	3.2		0.6	98.2	0.6	0.6		
Total %	4.1	0	0.1	1.3	5.5	12	19	0.8	0.1	32	0.1	0	22.2	0.7	23	0.2	38.8	0.2	0.2	39.5	

	Windward Comprehensive Health center Southbound					Keaahala Road Westbound					Pookela Street Northbound					Keaahala Road Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	5	0	0	**3**	8	9	12	**1**	0	22	0	0	40	0	40	0	81	0	0	81	151
04:15 PM	**15**	0	0	1	**16**	11	27	1	0	39	0	0	**50**	0	**50**	0	**85**	0	0	**85**	**190**
04:30 PM	11	0	0	2	13	**20**	32	1	0	53	0	0	44	0	44	0	61	0	0	61	171
04:45 PM	5	0	0	1	6	17	**42**	0	0	**59**	0	0	29	**3**	32	0	41	**1**	**1**	43	140
Total Volume	36	0	0	7	43	57	113	3	0	173	0	0	163	3	166	0	268	1	1	270	652
% App. Total	83.7	0	0	16.3		32.9	65.3	1.7	0		0	0	98.2	1.8		0	99.3	0.4	0.4		
PHF	.600	.000	.000	.583	.672	.713	.673	.750	.000	.733	.000	.000	.815	.250	.830	.000	.788	.250	.250	.794	.858

WILSON OKAMOTO CORPORATION
1907 S. Beretania Street Suite 400
Honolulu, Hi 96826

Counter:D4-3891
Counted:MM
Weather:Clear

File Name : Keaahala Round-About AM
Site Code : 00000001
Start Date : 10/23/2008
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Groups Printed- Unshifted

	North-South Access Road Southbound					Keaahala Street Westbound					North-South Access Road Northbound					Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	0	0	0	1	1	12	0	6	0	18	0	0	1	0	1	0	0	0	0	0	20
06:15 AM	0	0	0	0	0	12	0	5	0	17	0	0	2	0	2	0	0	0	1	1	20
06:30 AM	0	2	0	0	2	40	0	8	0	48	0	0	5	0	5	0	0	0	0	0	55
06:45 AM	1	4	0	3	8	29	0	6	0	35	0	1	9	0	10	0	0	0	1	1	54
Total	1	6	0	4	11	93	0	25	0	118	0	1	17	0	18	0	0	0	2	2	149
07:00 AM	0	2	0	5	7	33	0	8	0	41	0	3	31	0	34	0	0	0	2	2	84
07:15 AM	3	3	0	1	7	35	0	13	0	48	0	1	10	0	11	0	0	0	0	0	66
07:30 AM	2	3	0	1	6	40	0	23	0	63	0	3	12	0	15	0	0	0	1	1	85
07:45 AM	6	4	0	1	11	51	0	48	0	99	0	1	20	1	22	0	0	0	1	1	133
Total	11	12	0	8	31	159	0	92	0	251	0	8	73	1	82	0	0	0	4	4	368
08:00 AM	11	3	0	0	14	32	0	87	0	119	0	9	8	0	17	0	0	0	2	2	152
08:15 AM	13	6	0	3	22	29	0	47	0	76	0	2	6	0	8	0	0	0	4	4	110
08:30 AM	9	1	0	4	14	21	0	12	0	33	0	3	10	0	13	0	0	0	4	4	64
08:45 AM	6	0	0	2	8	18	0	11	0	29	0	2	7	0	9	0	0	0	3	3	49
Total	39	10	0	9	58	100	0	157	0	257	0	16	31	0	47	0	0	0	13	13	375
Grand Total	51	28	0	21	100	352	0	274	0	626	0	25	121	1	147	0	0	0	19	19	892
Apprch %	51	28	0	21		56.2	0	43.8	0		0	17	82.3	0.7		0	0	0	100		
Total %	5.7	3.1	0	2.4	11.2	39.5	0	30.7	0	70.2	0	2.8	13.6	0.1	16.5	0	0	0	2.1	2.1	

	North-South Access Road Southbound					Keaahala Street Westbound					North-South Access Road Northbound					Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	2	3	0	1	6	40	0	23	0	63	0	3	12	0	15	0	0	0	1	1	85
07:45 AM	6	4	0	1	11	**51**	0	48	0	99	0	**1**	**20**	**1**	**22**	0	0	0	1	1	133
08:00 AM	11	3	0	0	14	32	0	**87**	0	**119**	0	**9**	8	0	17	0	0	0	2	2	**152**
08:15 AM	**13**	**6**	0	**3**	**22**	29	0	47	0	76	0	2	6	0	8	0	0	0	**4**	**4**	110
Total Volume	32	16	0	5	53	152	0	205	0	357	0	15	46	1	62	0	0	0	8	8	480
% App. Total	60.4	30.2	0	9.4		42.6	0	57.4	0		0	24.2	74.2	1.6		0	0	0	100		
PHF	.615	.667	.000	.417	.602	.745	.000	.589	.000	.750	.000	.417	.575	.250	.705	.000	.000	.000	.500	.500	.789

WILSON OKAMOTO CORPORATION
1907 S. Beretania Street Suite 400
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Counter:D4-3891
Counted:MM
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File Name : Keaahala Round-About PM
Site Code : 00000001
Start Date : 10/23/2008
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Groups Printed- Unshifted

	North-South Access Road Southbound					Keaahala Road Westbound					North-South Access Road Northbound					Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	35	2	0	6	43	12	0	10	0	22	0	2	59	0	61	0	0	0	2	2	128
03:15 PM	10	0	0	7	17	9	0	3	0	12	0	1	61	0	62	0	0	0	0	0	91
03:30 PM	5	0	0	4	9	2	0	4	0	6	0	1	26	0	27	0	0	0	0	0	42
03:45 PM	6	0	0	3	9	7	0	6	0	13	0	0	29	0	29	0	0	0	2	2	53
Total	56	2	0	20	78	30	0	23	0	53	0	4	175	0	179	0	0	0	4	4	314
04:00 PM	21	0	0	2	23	3	0	6	0	9	0	0	50	1	51	0	0	0	1	1	84
04:15 PM	35	4	0	5	44	9	0	3	0	12	0	2	36	1	39	0	0	0	4	4	99
04:30 PM	9	1	0	12	22	16	0	5	0	21	0	1	54	0	55	0	0	0	0	0	98
04:45 PM	7	0	0	2	9	24	0	10	0	34	0	0	30	0	30	0	0	0	3	3	76
Total	72	5	0	21	98	52	0	24	0	76	0	3	170	2	175	0	0	0	8	8	357
05:00 PM	6	0	0	4	10	8	0	14	0	22	0	0	25	0	25	0	0	0	1	1	58
05:15 PM	2	0	0	3	5	6	1	21	0	28	1	2	19	2	24	0	0	0	3	3	60
05:30 PM	7	0	0	0	7	7	0	16	0	23	0	0	8	0	8	0	0	0	2	2	40
05:45 PM	9	0	0	0	9	7	0	5	0	12	0	0	13	1	14	0	0	0	0	0	35
Total	24	0	0	7	31	28	1	56	0	85	1	2	65	3	71	0	0	0	6	6	193
Grand Total	152	7	0	48	207	110	1	103	0	214	1	9	410	5	425	0	0	0	18	18	864
Apprch %	73.4	3.4	0	23.2		51.4	0.5	48.1	0		0.2	2.1	96.5	1.2		0	0	0	100		
Total %	17.6	0.8	0	5.6	24	12.7	0.1	11.9	0	24.8	0.1	1	47.5	0.6	49.2	0	0	0	2.1	2.1	

	North-South Access Road Southbound					Keaahala Road Westbound					North-South Access Road Northbound					Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	21	0	0	2	23	3	0	6	0	9	0	0	50	**1**	51	0	0	0	1	1	84
04:15 PM	**35**	**4**	0	5	**44**	9	0	3	0	12	0	**2**	36	1	39	0	0	0	**4**	**4**	**99**
04:30 PM	9	1	0	**12**	22	16	0	5	0	21	0	1	**54**	0	**55**	0	0	0	0	0	98
04:45 PM	7	0	0	2	9	**24**	0	**10**	0	**34**	0	0	30	0	30	0	0	0	3	3	76
Total Volume	72	5	0	21	98	52	0	24	0	76	0	3	170	2	175	0	0	0	8	8	357
% App. Total	73.5	5.1	0	21.4		68.4	0	31.6	0		0	1.7	97.1	1.1		0	0	0	100		
PHF	.514	.313	.000	.438	.557	.542	.000	.600	.000	.559	.000	.375	.787	.500	.795	.000	.000	.000	.500	.500	.902

APPENDIX B

LEVEL OF SERVICE DEFINITIONS

LEVEL OF SERVICE DEFINITIONS

LEVEL-OF-SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS

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

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

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

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

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

LEVEL OF SERVICE DEFINITIONS

LEVEL-OF-SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS

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

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

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

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

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

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

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

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

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

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

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

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

APPENDIX C

CAPACITY ANALYSIS CALCULATIONS
EXISTING PEAK HOUR TRAFFIC ANALYSIS

HCS+: Signalized Intersections Release 5.3

Analyst: CL
Agency:
Date: 11/19/2008
Period: AM Peak
Project ID:
E/W St: Keaahala Rd

Inter.:
Area Type: All other areas
Jurisd:
Year : Existing
N/S St: Kahekili Hwy

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	1	1	1	0	1	3	0	1	3	0
LGConfig	L	T	R	L	TR		L	TR		L	TR	
Volume	51	53	75	116	253	100	308	886	113	102	1583	228
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
RTOR Vol			8			10			11			23

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4		5	6	7	8
EB Left	A				NB Left	A	A		
Thru	A				Thru		A	A	
Right	A				Right		A	A	
Peds					Peds				
WB Left	A				SB Left	A			
Thru	A				Thru			A	
Right	A				Right			A	
Peds					Peds				
NB Right					EB Right				
SB Right					WB Right				
Green	43.0					30.0	10.0	57.0	
Yellow	4.0					0.0	0.0	4.0	
All Red	1.0					0.0	0.0	1.0	

Cycle Length: 150.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	157	548	0.32	0.29	43.3	D		
T	534	1863	0.10	0.29	39.4	D	40.8	D
R	454	1583	0.15	0.29	40.0	D		
Westbound								
L	386	1346	0.30	0.29	42.2	D		
TR	513	1789	0.67	0.29	50.6	D	48.5	D
Northbound								
L	497	1863	0.62	0.27	50.7	D		
TR	2349	5258	0.42	0.45	28.4	C	33.7	C
Southbound								
L	373	1863	0.27	0.20	51.2	D		
TR	1995	5249	0.90	0.38	50.0	D	50.1	D

Intersection Delay = 43.9 (sec/veh) Intersection LOS = D

HCS+: Signalized Intersections Release 5.3

Analyst: CL
Agency:
Date: 11/19/2008
Period: PM Peak
Project ID:
E/W St: Keaahala Rd

Inter.:
Area Type: All other areas
Jurisd:
Year : Existing
N/S St: Kahekili Hwy

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	1	1	1	0	1	3	0	1	3	0
LGConfig	L	T	R	L	TR		L	TR		L	TR	
Volume	190	116	284	57	102	140	157	1905	158	78	950	103
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
RTOR Vol			28			14			16			10

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4		5	6	7	8
EB Left	A				NB Left	A	A		
Thru	A				Thru		A	A	
Right	A				Right		A	A	
Peds					Peds				
WB Left	A				SB Left	A			
Thru	A				Thru			A	
Right	A				Right			A	
Peds					Peds				
NB Right					EB Right				
SB Right					WB Right				
Green	47.0					30.0	5.0	58.0	
Yellow	4.0					0.0	0.0	4.0	
All Red	1.0					0.0	0.0	1.0	

Cycle Length: 150.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	284	905	0.67	0.31	50.9	D		
T	584	1863	0.20	0.31	37.9	D	44.7	D
R	496	1583	0.52	0.31	43.1	D		
Westbound								
L	380	1214	0.15	0.31	37.3	D		
TR	535	1708	0.43	0.31	41.4	D	40.5	D
Northbound								
L	435	1863	0.36	0.23	48.7	D		
TR	2220	5286	0.92	0.42	49.2	D	49.1	D
Southbound								
L	373	1863	0.21	0.20	50.4	D		
TR	2038	5270	0.51	0.39	35.4	D	36.4	D

Intersection Delay = 44.5 (sec/veh) Intersection LOS = D

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: CL
Agency/Co.:
Date Performed: 11/19/2008
Analysis Time Period: AM Peak
Intersection:
Jurisdiction:
Units: U. S. Customary
Analysis Year: Existing
Project ID:
East/West Street: Keaahala Rd
North/South Street: Pookela St
Intersection Orientation: EW Study period (hrs): 1.00

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	2	93	4	172	510	62
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	2	93	4	172	510	62
Percent Heavy Vehicles	2	--	--	2	--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	1	1	0	1	1	0
Configuration	L		TR	L		TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	1	0	58	16	0	1
Peak Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	1	0	58	16	0	1
Percent Heavy Vehicles	2	2	2	2	2	2
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	L	L		LTR			LTR	
v (vph)	2	172		59			17	
C(m) (vph)	1001	1496		945			256	
v/c	0.00	0.11		0.06			0.07	
95% queue length	0.01	0.39		0.20			0.21	
Control Delay	8.6	7.7		9.1			20.1	
LOS	A	A		A			C	
Approach Delay				9.1			20.1	
Approach LOS				A			C	

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: CL
Agency/Co.:
Date Performed: 11/19/2008
Analysis Time Period: PM Peak
Intersection:
Jurisdiction:
Units: U. S. Customary
Analysis Year: Existing
Project ID:
East/West Street: Keaahala Rd
North/South Street: Pookela St
Intersection Orientation: EW Study period (hrs): 1.00

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	0	268	1	57	113	3
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	0	268	1	57	113	3
Percent Heavy Vehicles	2	--	--	2	--	--
Median Type/Storage	Undivided /					
RT Channelized?						
Lanes	1	1	0	1	1	0
Configuration	L		TR	L		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	163	36	0	0
Peak Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	0	0	163	36	0	0
Percent Heavy Vehicles	2	2	2	2	2	2
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	L	L		LTR			LTR	
v (vph)	0	57		163			36	
C(m) (vph)	1473	1295		830			389	
v/c	0.00	0.04		0.20			0.09	
95% queue length	0.00	0.14		0.73			0.31	
Control Delay	7.4	7.9		10.4			15.2	
LOS	A	A		B			C	
Approach Delay				10.4			15.2	
Approach LOS				B			C	

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: CL
Agency/Co.:
Date Performed: 11/19/2008
Analysis Time Period: AM Peak
Intersection:
Jurisdiction:
Units: U. S. Customary
Analysis Year: Existing
Project ID:
East/West Street: Keaahala Rd
North/South Street: Access Road
Intersection Orientation: EW Study period (hrs): 1.00

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume				152	0	205
Peak-Hour Factor, PHF				1.00	1.00	1.00
Hourly Flow Rate, HFR				152	0	205
Percent Heavy Vehicles		--	--	2	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes				0	0	0
Configuration				LTRLR		
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume		15	46	32	16	
Peak Hour Factor, PHF		1.00	1.00	1.00	1.00	
Hourly Flow Rate, HFR		15	46	32	16	
Percent Heavy Vehicles		2	2	2	2	
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No	/		/
Lanes		1	0	0	1	
Configuration			TR		LT	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LTR			TR	LT		
v (vph)		152			61	48		
C(m) (vph)		1623			834	527		
v/c		0.09			0.07	0.09		
95% queue length		0.31			0.24	0.30		
Control Delay		7.4			9.7	12.5		
LOS		A			A	B		
Approach Delay				9.7			12.5	
Approach LOS				A			B	

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: CL
Agency/Co.:
Date Performed: 11/19/2008
Analysis Time Period: PM Peak
Intersection:
Jurisdiction:
Units: U. S. Customary
Analysis Year: Existing
Project ID:
East/West Street: Keaahala Rd
North/South Street: Access Road
Intersection Orientation: EW Study period (hrs): 1.00

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume				52	0	24
Peak-Hour Factor, PHF				1.00	1.00	1.00
Hourly Flow Rate, HFR				52	0	24
Percent Heavy Vehicles		--	--	2	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes				0	0	0
Configuration				LTRLR		
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume		3	170	72	5	
Peak Hour Factor, PHF		1.00	1.00	1.00	1.00	
Hourly Flow Rate, HFR		3	170	72	5	
Percent Heavy Vehicles		2	2	2	2	
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No	/		/
Lanes		1	0	0	1	
Configuration			TR		LT	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LTR			TR	LT		
v (vph)		52			173	77		
C(m) (vph)		1623			1077	663		
v/c		0.03			0.16	0.12		
95% queue length		0.10			0.57	0.39		
Control Delay		7.3			9.0	11.1		
LOS		A			A	B		
Approach Delay				9.0			11.1	
Approach LOS				A			B	

APPENDIX D

CAPACITY ANALYSIS CALCULATIONS
PROJECTED YEAR 2011 PEAK HOUR TRAFFIC ANALYSIS

HCS+: Signalized Intersections Release 5.3

Analyst: CL	Inter.:
Agency:	Area Type: All other areas
Date: 11/19/2008	Jurisd:
Period: AM Peak	Year : Year 2011
Project ID:	
E/W St: Keaahala Rd	N/S St: Kahekili Hwy

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	1	1	1	0	1	3	0	1	3	0
LGConfig	L	T	R	L	TR		L	TR		L	TR	
Volume	51	53	75	116	253	100	309	899	113	102	1607	228
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
RTOR Vol			8			10			11			23

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4		5	6	7	8
EB Left	A				NB Left	A	A		
Thru	A				Thru		A	A	
Right	A				Right		A	A	
Peds					Peds				
WB Left	A				SB Left	A			
Thru	A				Thru			A	
Right	A				Right			A	
Peds					Peds				
NB Right					EB Right				
SB Right					WB Right				
Green	43.0					30.0	10.0	57.0	
Yellow	4.0					0.0	0.0	4.0	
All Red	1.0					0.0	0.0	1.0	

Cycle Length: 150.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	157	548	0.32	0.29	43.3	D		
T	534	1863	0.10	0.29	39.4	D	40.8	D
R	454	1583	0.15	0.29	40.0	D		
Westbound								
L	386	1346	0.30	0.29	42.2	D		
TR	513	1789	0.67	0.29	50.6	D	48.5	D
Northbound								
L	497	1863	0.62	0.27	50.8	D		
TR	2349	5260	0.43	0.45	28.5	C	33.7	C
Southbound								
L	373	1863	0.27	0.20	51.2	D		
TR	1995	5251	0.91	0.38	51.4	D	51.3	D

Intersection Delay = 44.6 (sec/veh) Intersection LOS = D

HCS+: Signalized Intersections Release 5.3

Analyst: CL
Agency:
Date: 11/19/2008
Period: PM Peak
Project ID:
E/W St: Keaahala Rd

Inter.:
Area Type: All other areas
Jurisd:
Year : Year 2011

N/S St: Kahekili Hwy

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	1	1	1	1	1	0	1	3	0	1	3	0
LGConfig	L	T	R	L	TR		L	TR		L	TR	
Volume	190	116	284	57	102	140	158	1934	158	78	964	103
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
RTOR Vol			28			14			16			10

Duration 1.00 Area Type: All other areas

Signal Operations

Phase Combination	1	2	3	4		5	6	7	8
EB Left	A				NB Left	A	A		
Thru	A				Thru		A	A	
Right	A				Right		A	A	
Peds					Peds				
WB Left	A				SB Left	A			
Thru	A				Thru			A	
Right	A				Right			A	
Peds					Peds				
NB Right					EB Right				
SB Right					WB Right				
Green	47.0					30.0	5.0	58.0	
Yellow	4.0					0.0	0.0	4.0	
All Red	1.0					0.0	0.0	1.0	

Cycle Length: 150.0 secs

Intersection Performance Summary

Appr/ Lane Grp	Lane Group Capacity	Adj Sat Flow Rate (s)	Ratios v/c	Ratios g/C	Lane Group Delay	Lane Group LOS	Approach Delay	Approach LOS
Eastbound								
L	284	905	0.67	0.31	50.9	D		
T	584	1863	0.20	0.31	37.9	D	44.7	D
R	496	1583	0.52	0.31	43.1	D		
Westbound								
L	380	1214	0.15	0.31	37.3	D		
TR	535	1708	0.43	0.31	41.4	D	40.5	D
Northbound								
L	435	1863	0.36	0.23	48.7	D		
TR	2220	5286	0.94	0.42	51.2	D	51.1	D
Southbound								
L	373	1863	0.21	0.20	50.4	D		
TR	2038	5271	0.52	0.39	35.5	D	36.5	D

Intersection Delay = 45.6 (sec/veh) Intersection LOS = D

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: CL
Agency/Co.:
Date Performed: 11/19/2008
Analysis Time Period: AM Peak
Intersection:
Jurisdiction:
Units: U. S. Customary
Analysis Year:
Project ID:
East/West Street: Keaahala Rd
North/South Street: Pookela St
Intersection Orientation: EW Study period (hrs): 1.00

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	2	93	4	172	511	62
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	2	93	4	172	511	62
Percent Heavy Vehicles	2	--	--	2	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	1	1	0	1	1	0
Configuration	L	TR		L	TR	
Upstream Signal?	No			No		

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	1	0	58	16	0	1
Peak Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	1	0	58	16	0	1
Percent Heavy Vehicles	2	2	2	2	2	2
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	L	L		LTR			LTR	
v (vph)	2	172		59			17	
C(m) (vph)	1000	1496		945			256	
v/c	0.00	0.11		0.06			0.07	
95% queue length	0.01	0.39		0.20			0.21	
Control Delay	8.6	7.7		9.1			20.1	
LOS	A	A		A			C	
Approach Delay				9.1			20.1	
Approach LOS				A			C	

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: CL
Agency/Co.:
Date Performed: 11/19/2008
Analysis Time Period: PM Peak
Intersection:
Jurisdiction:
Units: U. S. Customary
Analysis Year: Year 2011
Project ID:
East/West Street: Keaahala Rd
North/South Street: Pookela St
Intersection Orientation: EW Study period (hrs): 1.00

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	0	268	1	57	114	3
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	0	268	1	57	114	3
Percent Heavy Vehicles	2	--	--	2	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	1	1	0	1	1	0
Configuration	L		TR	L		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	163	36	0	0
Peak Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	0	0	163	36	0	0
Percent Heavy Vehicles	2	2	2	2	2	2
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	L	L		LTR			LTR	
v (vph)	0	57		163			36	
C(m) (vph)	1471	1295		830			388	
v/c	0.00	0.04		0.20			0.09	
95% queue length	0.00	0.14		0.73			0.31	
Control Delay	7.4	7.9		10.4			15.2	
LOS	A	A		B			C	
Approach Delay				10.4			15.2	
Approach LOS				B			C	

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: CL
Agency/Co.:
Date Performed: 11/19/2008
Analysis Time Period: AM Peak
Intersection:
Jurisdiction:
Units: U. S. Customary
Analysis Year: Year 2011
Project ID:
East/West Street: Keaahala Rd
North/South Street: Access Road
Intersection Orientation: EW Study period (hrs): 1.00

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume				152	0	206
Peak-Hour Factor, PHF				1.00	1.00	1.00
Hourly Flow Rate, HFR				152	0	206
Percent Heavy Vehicles		--	--	2	--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes				0	0	0
Configuration					LTR	LR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume		15	46	32	16	
Peak Hour Factor, PHF		1.00	1.00	1.00	1.00	
Hourly Flow Rate, HFR		15	46	32	16	
Percent Heavy Vehicles		2	2	2	2	
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No	/		/
Lanes		1	0	0	1	
Configuration			TR		LT	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LTR			TR	LT		
v (vph)		152			61	48		
C(m) (vph)		1623			834	526		
v/c		0.09			0.07	0.09		
95% queue length		0.31			0.24	0.30		
Control Delay		7.4			9.7	12.5		
LOS		A			A	B		
Approach Delay				9.7			12.5	
Approach LOS				A			B	

HCS+: Unsignalized Intersections Release 5.3

TWO-WAY STOP CONTROL SUMMARY

Analyst: CL
Agency/Co.:
Date Performed: 11/19/2008
Analysis Time Period: PM Peak
Intersection:
Jurisdiction:
Units: U. S. Customary
Analysis Year: Year 2011
Project ID:
East/West Street: Keaahala Rd
North/South Street: Access Road
Intersection Orientation: EW Study period (hrs): 1.00

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume				53	0	24
Peak-Hour Factor, PHF				1.00	1.00	1.00
Hourly Flow Rate, HFR				53	0	24
Percent Heavy Vehicles		--	--	2	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes				0	0	0
Configuration				LT		R
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume		3	170	72	5	
Peak Hour Factor, PHF		1.00	1.00	1.00	1.00	
Hourly Flow Rate, HFR		3	170	72	5	
Percent Heavy Vehicles		2	2	2	2	
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes		1	0	0	1	
Configuration			TR	LT		

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LTR			TR	LT		
v (vph)		53			173	77		
C(m) (vph)		1623			1077	661		
v/c		0.03			0.16	0.12		
95% queue length		0.10			0.57	0.40		
Control Delay		7.3			9.0	11.2		
LOS		A			A	B		
Approach Delay				9.0			11.2	
Approach LOS				A			B	

Appendix E

City Council Approval of Amendment Request to PRU

December 5, 2008

OFFICE OF THE CITY CLERK
CITY AND COUNTY OF HONOLULU
HONOLULU, HAWAII 96813-3077 / TELEPHONE 768-3810

DENISE C. DE COSTA
CITY CLERK

December 5, 2008

Mr. Ronald Sato
Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, HI 96826

Dear Mr. Sato:

This is to inform you that Resolution 08-258, amending Resolution No. 94-87, CD1, to allow Windward Community College to obtain building permits for improvements covered by the plan review use permit granted by Resolution 94-87, CD1, was adopted by the Council of the City and County of Honolulu at its meeting on Wednesday, December 3, 2008.

Sincerely,

Beverly Mau

for DENISE C. DE COSTA
City Clerk

hc

Attachment

CITY COUNCIL
CITY AND COUNTY OF HONOLULU
HONOLULU, HAWAII

No. 08-258

RESOLUTION

AMENDING RESOLUTION NO. 94-87,CD1, TO ALLOW WINDWARD COMMUNITY COLLEGE TO OBTAIN BUILDING PERMITS FOR IMPROVEMENTS COVERED BY THE PLAN REVIEW USE PERMIT GRANTED BY RESOLUTION NO. 94-87, CD1.

WHEREAS, by Resolution No. 94-87, CD1, adopted on May 4, 1994, the City Council granted a Plan Review Use Permit (File No. 92/PRU-3) for a Five-Year Master Plan to construct new buildings and renovate existing buildings, and to develop related infrastructure improvements at the Windward Community College (the "Applicant"), located at 45-720 Keaahala Road, Kaneohe, Oahu, also identified as Tax Map Key 4-5-23: 14; and

WHEREAS, Condition 8 of Resolution No. 94-87, CD1, states that no building permit shall be issued for construction which is covered by this Plan Review Use (PRU) and for which PRU approval is required, after the fifth anniversary of the date of the adoption of this Resolution, unless an amendment to the Resolution to permit the construction or a new PRU approval from the City Council for the construction is obtained; and

WHEREAS, the fifth anniversary date was May 4, 1999 and the Department of Planning and Permitting (DPP) extended the anniversary date for which building permits could be issued to May 4, 2002; and

WHEREAS, the Applicant complied with the PRU conditions related to roadway improvements, sewers, urban design plan and a parking implementation plan but could only complete a portion of the approved master plan improvements; and

WHEREAS, the Applicant requests to amend Resolution No. 94-87, CD1, to eliminate Condition 8 and allow building permits to be obtained for the remainder of the originally approved master plan improvements; now, therefore,

BE IT RESOLVED by the Council of the City and County of Honolulu that Resolution No. 94-87, CD1, is amended by eliminating Condition 8 in its entirety; and

BE IT FURTHER RESOLVED that the remaining conditions of Resolution No. 94-87, CD1, shall remain in effect; and

ZONING D 811

CITY COUNCIL
CITY AND COUNTY OF HONOLULU
HONOLULU, HAWAII

No. 08-258

RESOLUTION

BE IT FINALLY RESOLVED by the Council of the City and County of Honolulu that copies of this Resolution be transmitted to Henry Eng, FAICP, Director of Planning and Permitting, Ronald Sato, Wilson Okamoto Corporation, 1907 South Beretania Street, Suite 400, Honolulu, Hawaii 96826 and Jeff Hunt, Windward Community College, 45-720 Keaahala Road, Kaneohe, Hawaii 96744.

INTRODUCED BY:

Barbara Marshall (br)

DATE OF INTRODUCTION:

NOV 10 2008

Honolulu, Hawaii

Councilmembers

CITY COUNCIL
CITY AND COUNTY OF HONOLULU
HONOLULU, HAWAII
CERTIFICATE

RESOLUTION 08-258

Introduced: 11/10/08 By: BARBARA MARSHALL (BR) Committee: ZONING

Title: RESOLUTION AMENDING RESOLUTION NO. 94-87, CD1, TO ALLOW WINDWARD COMMUNITY COLLEGE TO OBTAIN BUILDING PERMITS FOR IMPROVEMENTS COVERED BY THE PLAN REVIEW USE PERMIT GRANTED BY RESOLUTION NO. 94-87, CD1.

Links: RES08-258

ZONING	11/18/08	CR-341 – RESOLUTION REPORTED OUT OF COMMITTEE FOR SCHEDULING OF PUBLIC HEARING AND ADOPTION CONCURRENTLY. (CURRENT DEADLINE: 1/5/09)
PUBLISH	11/22/08	PUBLIC HEARING NOTICE PUBLISHED IN THE HONOLULU STAR BULLETIN.
COUNCIL/PUBLIC HEARING	12/3/08	PUBLIC HEARING CLOSED. CR-341 AND RESOLUTION 08-258 WERE ADOPTED.

APO Y CACHOLA Y DELA CRUZ Y DJOU Y GARCIA Y
KOBAYASHI Y MARSHALL E OKINO Y TAM Y

I hereby certify that the above is a true record of action by the Council of the City and County of Honolulu on this RESOLUTION.

for Denise Mau
DENISE C. DE COSTA, CITY CLERK

TODD APO, CHAIR AND PRESIDING OFFICER

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