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2011/ED-6(lw)

March 8, 2012

Mr. Gary Hooser, Director
Office of Environmental Quality Control
State of Hawaii
State Office Tower, Suite 702
235 South Beretania Street
Honolulu, Hawaii 96813

Dear Mr. Hooser:

Subject: Chapter 343, Hawaii Revised Statutes
Chapter 25, Revised Ordinances of Honolulu
Final Environmental Assessment (EA)

Project:	St. Augustine by-the-Sea Church Master Plan
Applicant:	Roman Catholic Church in Hawaii
Agent:	Helber Hastert & Fee, Planners, Inc.
Location:	130 Ohua Avenue - Waikiki
Tax Map Key:	2-6-26: 12 and 15
Request:	Special Management Area Permit (Major) Special District Permit (Major)
Proposal:	New Damien Museum and Multi-Purpose Building
Determination:	Finding of No Significant Impact (FONSI)

Attached and incorporated by reference is the Final EA prepared by the Applicant for the project. Based on the significance criteria outlined in Title 11, Chapter 200, Hawaii Administrative Rules, we have determined that the preparation of an Environmental Impact Statement (EIS) is not required, and have issued a Finding of No Significant Impact. Please publish this in the March 23, 2012 issue of the OEQC Environmental Notice.

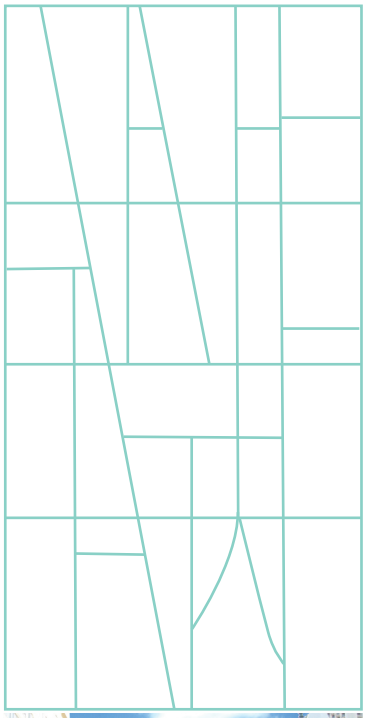
We have enclosed a hard copy of the Final EA, as well as a copy on compact disc. Also, we have attached a completed Office of Environmental Quality Control publication form and project summary, and will submit the same publication form via email. If you have any questions, please contact Lin Wong of our staff at 768-8033.

Very truly yours,

David K. Tanoue, Director
Department of Planning and Permitting

DKT:nw
Enclosures
cc: Ronald A. Sato, AICP, Helber Hastert & Fee, Planners, Inc.
Father Lane Akiona, Roman Catholic Church in Hawaii

Doc. 915742

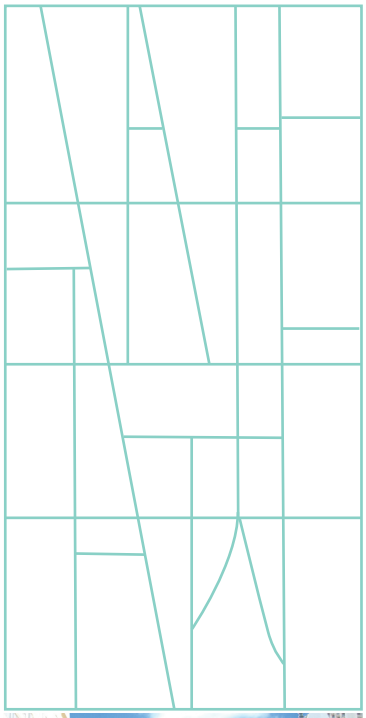


Final Environmental Assessment

ST. AUGUSTINE BY-THE-SEA CHURCH MASTER PLAN

Waikīkī, Oʻahu, Hawaiʻi

March 2012



Final Environmental Assessment

ST. AUGUSTINE BY-THE-SEA CHURCH MASTER PLAN

Waikīkī, Oʻahu, Hawaiʻi

March 2012

Prepared for:
The Roman Catholic Church in Hawaiʻi
St. Augustine By-The-Sea Church

Prepared by: Helber Hastert & Fee *Planners, Inc.*

TABLE OF CONTENTS

Chapter / Section		Page
	TABLE OF CONTENTS	**i**
1	**INTRODUCTION AND PROJECT DESCRIPTION**	**1-1**
1.1	Purpose for Environmental Assessment	1-1
1.2	Project Location and Vicinity	1-4
1.3	Project Site and Existing Conditions	1-6
1.4	Project Need and Objectives	1-11
1.4.1	Need for Project Improvements	1-12
1.4.2	Project Objectives	1-13
1.5	Project Description	1-15
1.5.1	Repair and Minor Alterations	1-15
1.5.2	St. Damien Museum	1-15
1.5.3	Parish Hall	1-17
1.5.4	Landscape Improvements	1-26
1.6	Project Phasing and Estimated Costs	1-26
1.7	Listing of Permits and Approvals	1-27
2	**AFFECTED ENVIRONMENT**	**2-1**
2.1	Geology, Topography and Soils	2-1
2.1.1	Topography	2-2
2.1.2	Soils	2-2
2.2	Natural Hazards	2-4
2.2.1	Earthquake Hazards	2-4
2.2.2	Hurricane Hazards	2-5
2.2.3	Tsunami and Flood Hazards	2-6
2.3	Hydrology	2-7
2.3.1	Hydrogeological Resources	2-7
2.3.2	Surface and Coastal Waters	2-9
2.4	Botanical and Faunal Resources	2-9
2.4.1	Existing Botanical Resources	2-9
2.4.2	Existing Avifauna and Faunal Resources	2-10
2.5	Air Quality	2-10
2.6	Noise	2-11
2.7	Visual Resources	2-12
2.8	Historic, Archaeological, and Cultural Resources	2-13
2.8.1	Historic and Archaeological Resources	2-13
2.8.2	Results of Fieldwork	2-14
2.8.3	Description of Historic Properties and Significance	2-18
2.8.4	Cultural Resources	2-21
2.9	Social and Economic Factors	2-21

Chapter / Section **Page**

2.10 Infrastructure Facilities 2-24
2.10.1 Water Facilities 2-24
2.10.2 Wastewater Facilities 2-24
2.10.3 Drainage Facilities 2-25
2.10.4 Solid Waste Facilities 2-25
2.10.5 Transportation Facilities 2-27
2.11 Public Facilities and Utilities 2-29
2.11.1 Educational Facilities 2-29
2.11.2 Medical Facilities 2-29
2.11.3 Recreational Facilities 2-30
2.11.4 Police and Fire Protection 2-31
2.11.5 Electrical and Communication Facilities 2-31

3 ENVIRONMENTAL CONSEQUENCES 3-1
3.1 Geology, Topography and Soils 3-1
3.2 Natural Hazards 3-2
3.2.1 Earthquakes 3-2
3.2.2 Hurricanes 3-2
3.2.3 Tsunami and Flooding 3-3
3.3 Hydrology 3-3
3.3.1 Hydrogeological Resources 3-3
3.3.2 Surface and Coastal Waters 3-4
3.4 Botanical and Faunal Resources 3-5
3.5 Air Quality 3-5
3.6 Noise 3-6
3.7 Visual Resources 3-7
3.8 Historic, Archaeological, and Cultural Resources 3-8
3.9 Social and Economic Factors 3-10
3.9.1 Economic and Fiscal Factors 3-10
3.9.2 Social Factors 3-12
3.10 Infrastructure Facilities 3-12
3.10.1 Water Facilities 3-12
3.10.2 Wastewater Facilities 3-13
3.10.3 Drainage Facilities 3-14
3.10.4 Solid Waste Facilities 3-16
3.10.5 Transportation Facilities 3-16
3.11 Public Facilities and Utilities 3-19
3.11.1 Educational Facilities 3-19
3.11.2 Medical Facilities 3-19
3.11.3 Recreational Facilities 3-19
3.11.4 Police and Fire Protection 3-20
3.11.5 Electrical and Communication Facilities 3-20

Chapter / Section **Page**

3.12 Secondary and Cumulative Impacts 3-21
3.12.1 Secondary Effects 3-21
3.12.2 Cumulative Impacts 3-21

4 CONFORMANCE WITH EXISTING STATE AND COUNTY PLANS, POLICIES, AND CONTROLS 4-1
4.1 State Land Use District 4-1
4.2 Chapter 344, HRS, State Environmental Policy 4-1
4.3 City Primary Urban Center Development Plan 4-5
4.4 City Zoning Regulations 4-11
4.4.1 Consistency with District Objectives 4-11
4.4.2 Consistency with Development Standards 4-16
4.4.3 City Land Use Approvals Required 4-20
4.5 City Special Management Area 4-21

5 ALTERNATIVES CONSIDERED 5-1
5.1 No Action Alternative 5-1
5.2 Delayed Action Alternative 5-2
5.3 Project Design Alternatives 5-2
5.3.1 Rehabilitate Existing Buildings Alternative 5-2
5.3.2 New Multi-Purpose Building Along ʻŌhua Avenue Alternative 5-3
5.3.3 Reduced Footprint for New Multi-Purpose Building Alternative 5-4

6 CONSULTED AGENCIES AND ORGANIZATIONS 6-1
6.1 Pre-Assessment Consultation 6-1
6.2 Presentations to Organizations 6-2
6.2.1 Waikīkī Neighborhood Board 6-2
6.2.2 Oʻahu Island Burial Council 6-3
6.3 Draft EA Comments 6-4

7 FINDINGS AND ANTICIPATED DETERMINATION 7-1
7.1 Findings 7-1
7.2 Anticipated Determination 7-4

8 REFERENCES 8-1

APPENDICES

Appendix

APPENDIX A ..... Assessment Consultations

A-1 Waikīkī Neighborhood Board No. 9
Regular Meeting Minutes; Tuesday, May 11, 2010

A-2 State Department of Land and Natural Resources; State Historic Preservation Division
Approved Meeting Minutes of the O‘ahu Island Burial Council;
Wednesday, April 14, 2010

A-3 Pre-Assessment Consultation Comments and Responses

A-4 Draft EA Comments and Responses

APPENDIX B ..... Photos of Existing Project Site

APPENDIX C ..... Archaeological Reports

C-1 Archaeological Inventory Survey for St. Augustine by-the-Sea
Master Plan Project (April 2011)
Prepared by: Cultural Surveys Hawai‘i, Inc.

C-2 Burial Treatment Plan for SIHP# 50-80-14-7136 and St. Augustine by-the-Sea
Master Plan Project (April 2011)
Prepared by: Cultural Surveys Hawai‘i, Inc.

APPENDIX D ..... Engineering Reports

D-1 Utilities Report (September 2010)
Prepared by: Sam O. Hirota, Inc.

D-2 Preliminary Drainage Report; St. Augustine by-the-Sea
Master Plan (August 2010); Revised November 2011
Prepared by: Sam O. Hirota, Inc.

APPENDIX E ..... Traffic Report

E-1 Traffic Planning Support for Environmental Assessment; St. Augustine By-the-Sea Church Master Plan (January 2012)
Prepared by: Phillip Rowell and Associates

LIST OF FIGURES

Figure		Page
1.1	Project Location Map	1-5
1.2	Project Vicinity Map	1-7
1.3	Tax Map	1-8
1.4	Existing Site Plan	1-10
1.5	Conceptual Site Plan	1-16
1.6	St. Damien Museum Floor Plan and Elevations	1-18
1.7	Visual Simulation of St. Damien Museum	1-19
1.8	Parish Hall Floor Plan (1st and 2nd Floors)	1-21
1.9	Parish Hall Floor Plan (3rd and Main Floors)	1-22
1.10	Parish Hall Elevation Drawings	1-23
1.11	Visual Simulation of New Parish Hall Building (‘Ōhua Avenue)	1-24
1.12	Visual Simulation of New Parish Hall Building (Kealohilani Avenue)	1-25
2.1	Soil Survey Map	2-3
2.2	FIRM Map	2-8
2.3	Subsurface Test Trenches Map	2-17
2.4	Existing Drainage Conditions	2-26
3.1	Proposed Drainage Conditions	3-15
4.1	City Primary Urban Center Development Plan Land Use Map	4-6
4.2	City Waikīkī Special District Map	4-12
4.3	Proposed Open Space Under Master Plan	4-19
4.4	City Special Management Area Map	4-22

LIST OF TABLES

Table		Page
1.1	Project Summary	1-2
1.2	Summary of Existing and Projected Activities at St. Augustine by-the-Sea Church	1-12
2.1	State and Federal Ambient Air Quality Standards	2-11
2.2	Summary of U.S. Census Demographic Data (2000)	2-23
3.1	State DOH Community Noise Level Classification of Zoning Districts and Maximum Permissible Sound Levels	3-6
3.2	Trip Generation for Project	3-18
4.1	Project Consistence with Waikīkī Special District Development Standards (Resort Mixed Use Precinct)	4-17
4.2	Summary of Off-Street Parking Requirements	4-20

CHAPTER 1
INTRODUCTION AND PROJECT DESCRIPTION

The Roman Catholic Church in Hawai‘i is proposing to implement improvements to their St. Augustine by-the-Sea (St. Augustine) Church property in accordance with a new master plan. This master plan considered the existing condition of their facilities and the future needs for the parish.

While the master plan identifies improvements to repair or renovate existing facilities (such as roofing, parking, security, exterior accessibility, and signage), new facilities are also planned. These facilities consist of: 1) a new St. Damien Museum located along the Kalākaua Avenue frontage of the church's property; and 2) a new multi-purpose building to serve as a redeveloped parish hall and office space, along with additional parking. The existing parish hall building will be demolished under this project. This project is referred to as the "St. Augustine by-the-Sea Church Master Plan."

1.1 Purpose for Environmental Assessment

This project triggers the State environmental review process under Chapter 343, Hawai‘i Revised Statutes (HRS) because the new St. Damien Museum and multi-purpose building occur in the Waikīkī Special District. The proposed action is also located within the City and County of Honolulu's (City) Special Management Area (SMA) and will require a SMA Use Permit (Major) from the City Council. Therefore, this project is also subject to the State's environmental review process under Chapter 25 (SMA), Revised Ordinances of Honolulu (ROH), as amended.

Applicant and Approving Agency

Helber Hastert & Fee, Planners, Inc. (HHF) is serving as the "Authorized Agent" on behalf of the Roman Catholic Church in Hawai‘i (Applicant) in the preparation of this environmental document. The project is an "Applicant Action" under the State's environmental review regulations. A summary of pertinent project information is included in Table 1.1.

A Draft Environmental Assessment (Draft EA) was prepared pursuant to Chapter 343, Environmental Impact Statements, HRS, as amended (State of Hawai‘i, 2007), and Title 11, Chapter 200, (Environmental Impact Statement Rules) of the State Department of Health's (DOH) Administrative Rules, as amended (State of Hawai‘i, 1996). This Draft EA was published in the September 8, 2011 issue of the State Office of Environmental Quality Control's *The Environmental Notice*. The 30-day public comment period for this Draft EA ended on October 8, 2011.

Table 1.1 Project Summary

Project Name:	St. Augustine by-the-Sea Church Master Plan Project
Applicant:	Roman Catholic Church in Hawai‘i St. Augustine by-the-Sea Church 130 ‘Ōhua Avenue Honolulu, Hawai‘i 96815 Telephone: (808) 973-9788 Contact: Father Lane Akiona
Authorized Agent:	Helber Hastert & Fee, Planners, Inc. Pacific Guardian Center, Makai Tower 733 Bishop Street, Suite 2590 Honolulu, Hawai‘i 96813 Telephone: (808) 545-2055 Contact: Mr. Ronald A. Sato, AICP
Approving Agency:	Department of Planning and Permitting City and County of Honolulu
Project Location:	Waikīkī, City and County of Honolulu
Tax Map Key:	(1) 2-06-026: 012 and 015
Project Area:	The project site consist of two parcels totaling 50,060 square feet (1.15 acres) in size.
Project Description:	The Roman Catholic Church in Hawai‘i is proposing to implement improvements to their St. Augustine by-the-Sea Church property in accordance with a new master plan that considered the existing condition of their facilities and future needs for their parish. The master plan identified repair and renovation improvements to existing facilities (such as roofing, parking, security, exterior accessibility, and signage), and also included new facilities consisting of: 1) a St. Damien Museum located along the Kalākaua Avenue frontage of the church’s property; and 2) a multi-purpose building to serve as a Parish Hall and office space, along with additional parking. The existing parish hall building will be demolished under this project.
Existing Use:	The project site is used for activities conducted by the St. Augustine by-the-Sea Church. Existing facilities include a rectory, parish hall, and the church sanctuary. Primary vehicular access to the site is from ‘Ōhua Avenue, however, additional driveway connections are present at Kalākaua Avenue and Kealohilani Avenue.
State Land Use District Classification:	Urban District
Primary Urban Center Development Plan:	Resort
Special Management Area:	The project area is within the Special Management Area.
City Zoning District:	Waikīkī Special District; Resort Mixed Use Precinct.

This Final Environmental Assessment (Final EA) has subsequently been prepared based upon the published Draft EA and review comments received. A Negative Declaration, also referred to as a Finding of No Significant Impact (FONSI), is warranted for this project based upon these results. Copies of comment letters received from consulted parties and responses to them are included in Appendix A, and this process is discussed in more detail later in Chapter 6.

Applicant Background

St. Augustine Church is a parish of the Roman Catholic Church in Hawai‘i. It falls under the jurisdiction of the Diocese of Honolulu and its Bishop. Staff for the church is by the Congregation of the Sacred Hearts of Jesus and Mary. This church ministers to residents of the island along with mainland and international visitors being located in Waikīkī. Visitors make up a large portion of the parish. The parish has custody of artifacts and other objects related to St. Damien. These artifacts are displayed in an office serving as a temporary museum on the second floor of an adjacent commercial building that has a Burger King and ABC Store downstairs that opened before the end of 2011.

In 1839, a small Catholic chapel was built in Waikīkī “in the Hawaiian style,” likely consisting of posts and thatch on the beach near the present Kalākaua Avenue. This chapel was re-built 15 years later (in 1854) by Father Modestus Favens, SS.CC., at that beach location in Western-style wooden framing. The size of this chapel was about 20 feet by 40 feet with a steeple. This chapel quickly developed into the thriving parish community of St. Augustine with the influx of many military personnel to the area during and after the Spanish American War. Improvements to the chapel were made later by putting in flooring, galvanized roofing, and lattice walls.

This church site on the beach served its purpose for many years, until the site was exchanged for a piece of land on what is now ‘Ōhua Avenue, which was then no more than a lane. About 1860, under the leadership of Father Modestus Favens, the church moved to its present location along ‘Ōhua Avenue. Eventually, Bishop Buistan Ropert approved plans to build a larger and more permanent church at this ‘Ōhua Avenue site, which was constructed and blessed on the feast day of St. Augustine in 1901.

Waikīkī has since become a major tourist destination, and the number of parishioners and visitors continued to grow. Subsequently, the church was enlarged and renovated in 1910 and again in 1925. In 1920, the church also acquired a right-of-way access to Kalākaua Avenue. The present church, which replaced the earlier structure, was designed by architect George W. McLaughlin and built in 1962.

1.2 Project Location and Vicinity

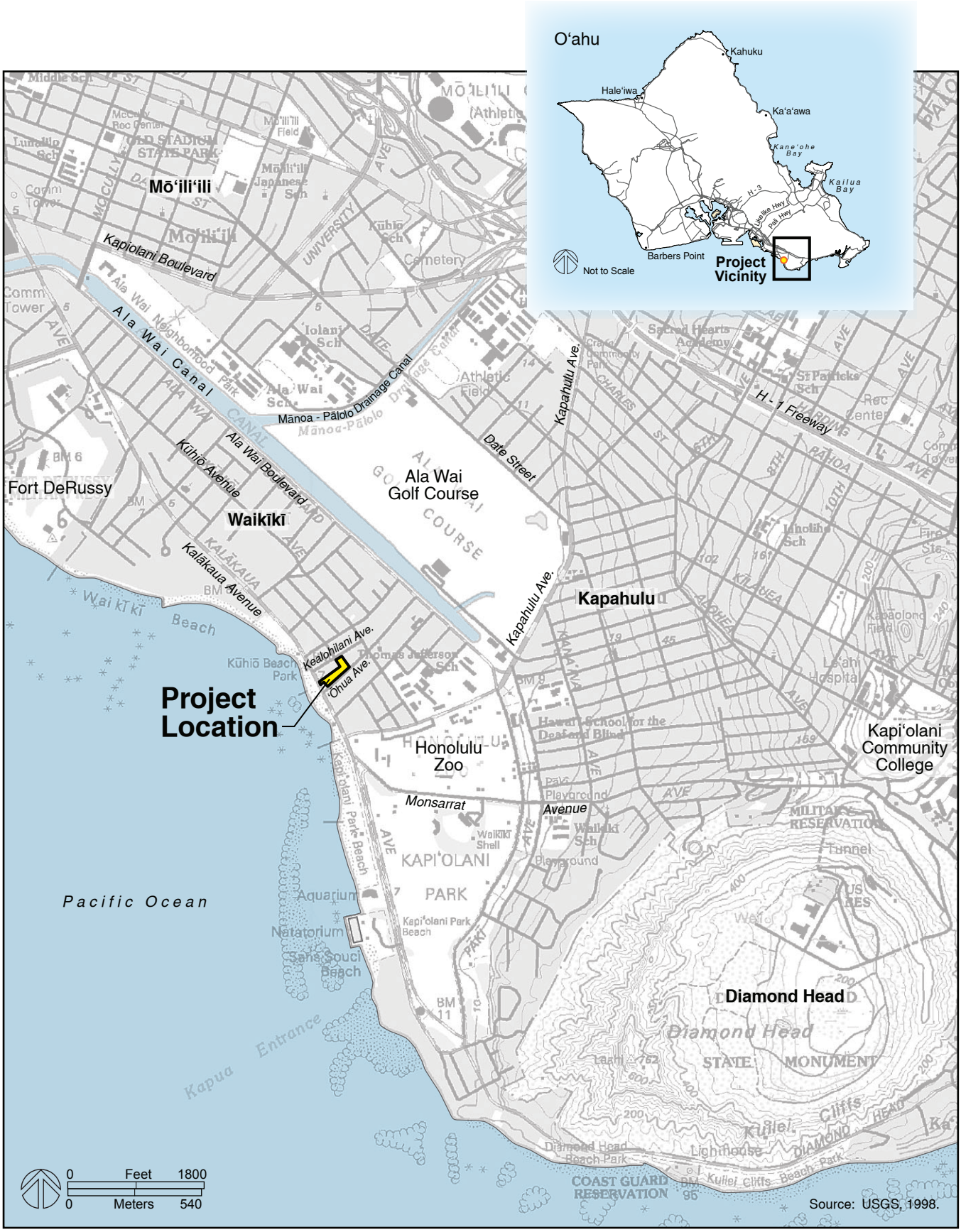
The improvements proposed for St. Augustine Church would occur within their property comprised of two adjacent parcels located in the Waikīkī resort area on the southeastern end of the Island of O‘ahu (TMK 2-06-026: 012 and 015). This project site is situated at the intersection of Kalākaua Avenue with ‘Ōhua Avenue. The street address for St. Augustine Church is 130 ‘Ōhua Avenue. Figure 1.1 is a graphic showing the location of the project.

The primary vehicular thoroughfares in the immediate area of the project site are Kalākaua Avenue and Kūhiō Avenue that run in an east-west direction through Waikīkī. There are several minor streets generally running in a north-south, or *mauka-makai*, direction throughout Waikīkī providing vehicular connections between Kalākaua Avenue and Kūhiō Avenue. ‘Ōhua Avenue is a one-way minor street bordering the project site running in a *makai* direction and Kealohilani Avenue is a two-way minor street located on the western end of the site as shown on Figure 1.1.

Exhibit 1.1 Photos of 1) Waikīkī Beach Marriott Resort and Spa Along ‘Ōhua Avenue; and 2) ABC Store/Burger King Along Kalākaua Avenue

Waikīkī is located within the City’s Primary Urban Center (PUC) Development Plan area. This development plan area encompasses most of urban Honolulu, and is generally bounded to the north (inland or *mauka*) by the southern flanks of the Ko‘olau Mountain Range and to the south (seaward or *makai*) by the shoreline. This district extends from Āliamanu Crater near Red Hill in the west to Wai‘alae-Kāhala in the east.

The PUC area has a firmly established urban character consisting of suburban-like residential communities surrounding the metropolitan area of downtown Honolulu, and the Waikīkī resort area. Moving further inland towards the Ko‘olau Mountains are a number of valleys where predominantly residential communities such as Moanalua, Kalihi, Pauoa, Mānoa, and Pālolo, are located. The major commercial and business districts of Honolulu are also located within the PUC area.



PROJECT LOCATION MAP **Figure 1.1**

ST. AUGUSTINE-BY-THE-SEA CHURCH MASTER PLAN
WAIKĪKĪ, O'AHU, HAWAI'I

Existing Surrounding Uses

Uses in the surrounding vicinity consist predominantly of visitor-oriented uses and activities situated within the Waikīkī resort area. Kūhiō Beach Park and various recreational amenities are located along the shoreline across Kalākaua Avenue. The Waikīkī Beach Marriott Resort and Spa takes the entire block located across (east) the project site on ʻŌhua Avenue (Exhibit 1.1). The Pacific Beach Hotel takes the entire block on the western side of the project site along Kealohilani Avenue. Figure 1.2 has an aerial photo showing existing uses and Appendix B provides photos of the surrounding area.

Adjacent to the church site along Kalākaua Avenue at the corner of ʻŌhua Avenue is a commercial building that has a Burger King fast food restaurant and ABC Store. The Foster Tower condominium is located immediately west of the project site at the corner of Kalākaua Avenue with Kealohilani Avenue. This 126-unit condominium is primarily used as a rental for residents or visitors with an owner occupancy of about 26 percent. A restaurant and gift shops are located on the street level in this condominium. A parking lot serving the Waikīkī Beach Marriott Resort and Spa is adjacent to the project site on the northern (*mauka*) side.

1.3 Project Site and Existing Conditions

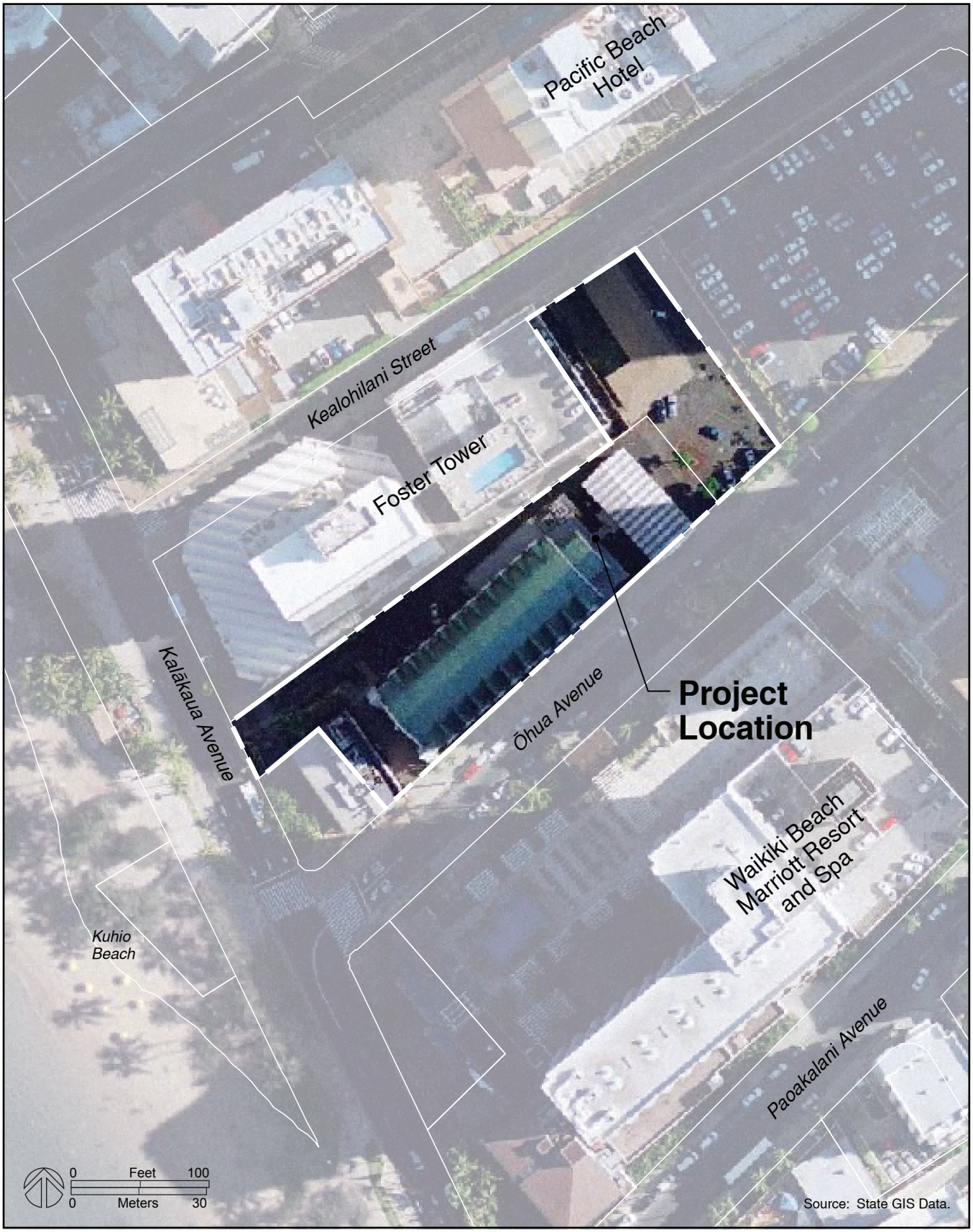
Property Information

The St. Augustine Church project site is comprised of two contiguous lots identified as Tax Map Key (TMK) 2-06-026: 012 and 015. Parcel 12 has an area of 34,709 square feet and Parcel 15 has an area of 15,351 square feet. Together, the project site totals 50,060 square feet (1.15 acre). Both parcels are owned by the Roman Catholic Church in Hawaiʻi. The Tax Map showing these parcels is shown on Figure 1.3.

Parcel 12 is a generally rectangular shaped property along ʻŌhua Avenue. As shown on Figure 1.3, a portion of this property is situated between the ABC Store/Burger King commercial building (Parcel 13) and the Foster Tower condominium (Parcel 14). Parcel 15 of the project site is a smaller rectangular-shaped property between both ʻŌhua Avenue and Kealohilani Avenue.

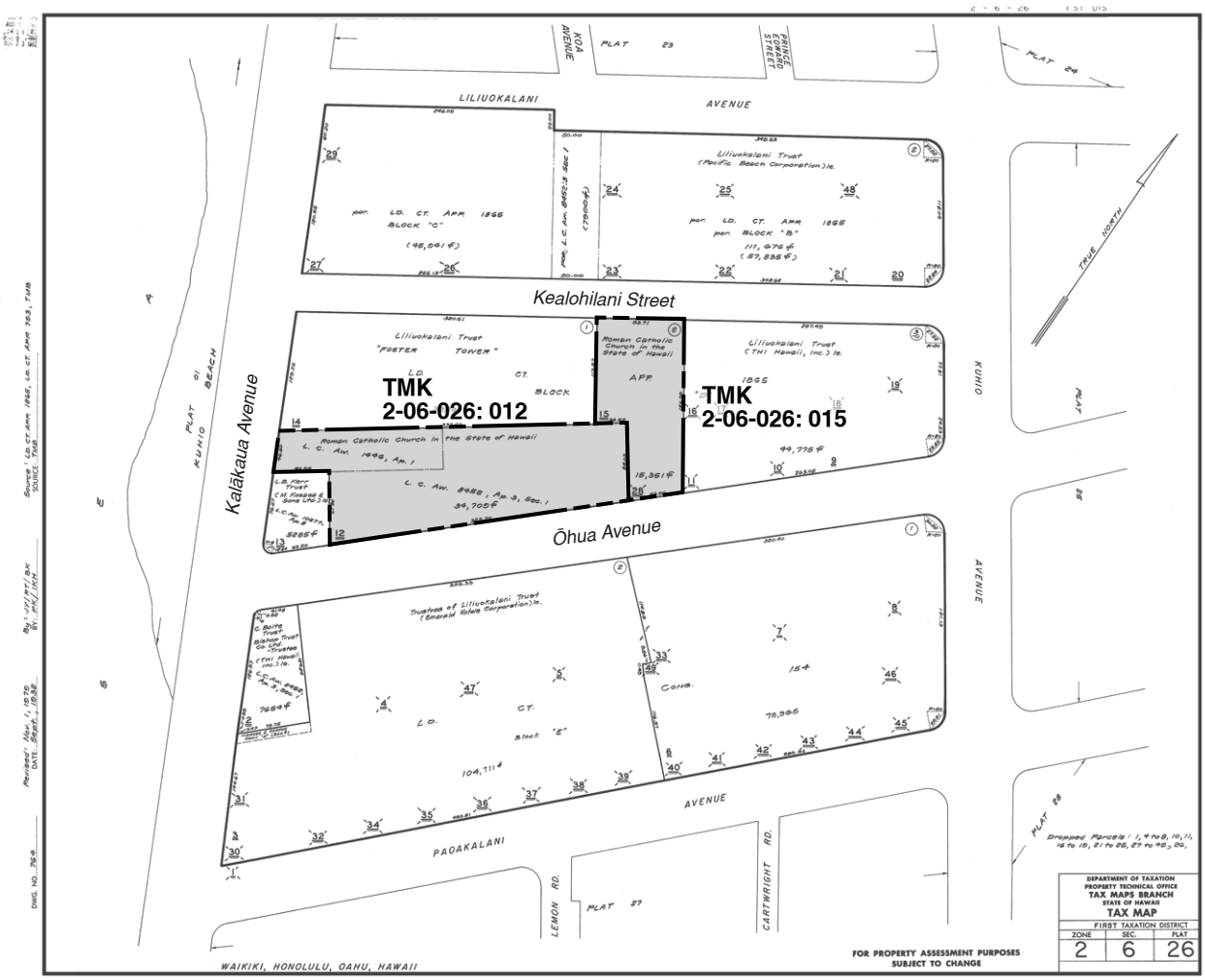
Existing Conditions and Facilities

The project site has driveway connections providing vehicular access from three streets: 1) Kalākaua Avenue; 2) ʻŌhua Street; and 3) Kealohilani Street. A driveway connecting to Kalākaua Avenue is routed along the western side of the project site along the church connecting to a parking lot at the rear of the property. Another vehicular access onto this property is from ʻŌhua Avenue leading directly into this rear parking lot. This parking lot also has a third connection directly onto Kealohilani Avenue. The entrances onto Kalākaua Avenue and



PROJECT VICINITY MAP **Figure 1.2**

ST. AUGUSTINE-BY-THE-SEA CHURCH MASTER PLAN
WAIKĪKĪ, O'AHU, HAWAI'I



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TAX KEY

Figure 1.3

ST. AUGUSTINE-BY-THE-SEA CHURCH MASTER PLAN
WAIKĪKĪ, O'AHU, HAWAI'I

Kealohilani Avenue are usually gated but are periodically opened during larger church functions to facilitate traffic flow. Figure 1.4 shows the existing site plan for this site, and Appendix B includes photos of existing conditions.

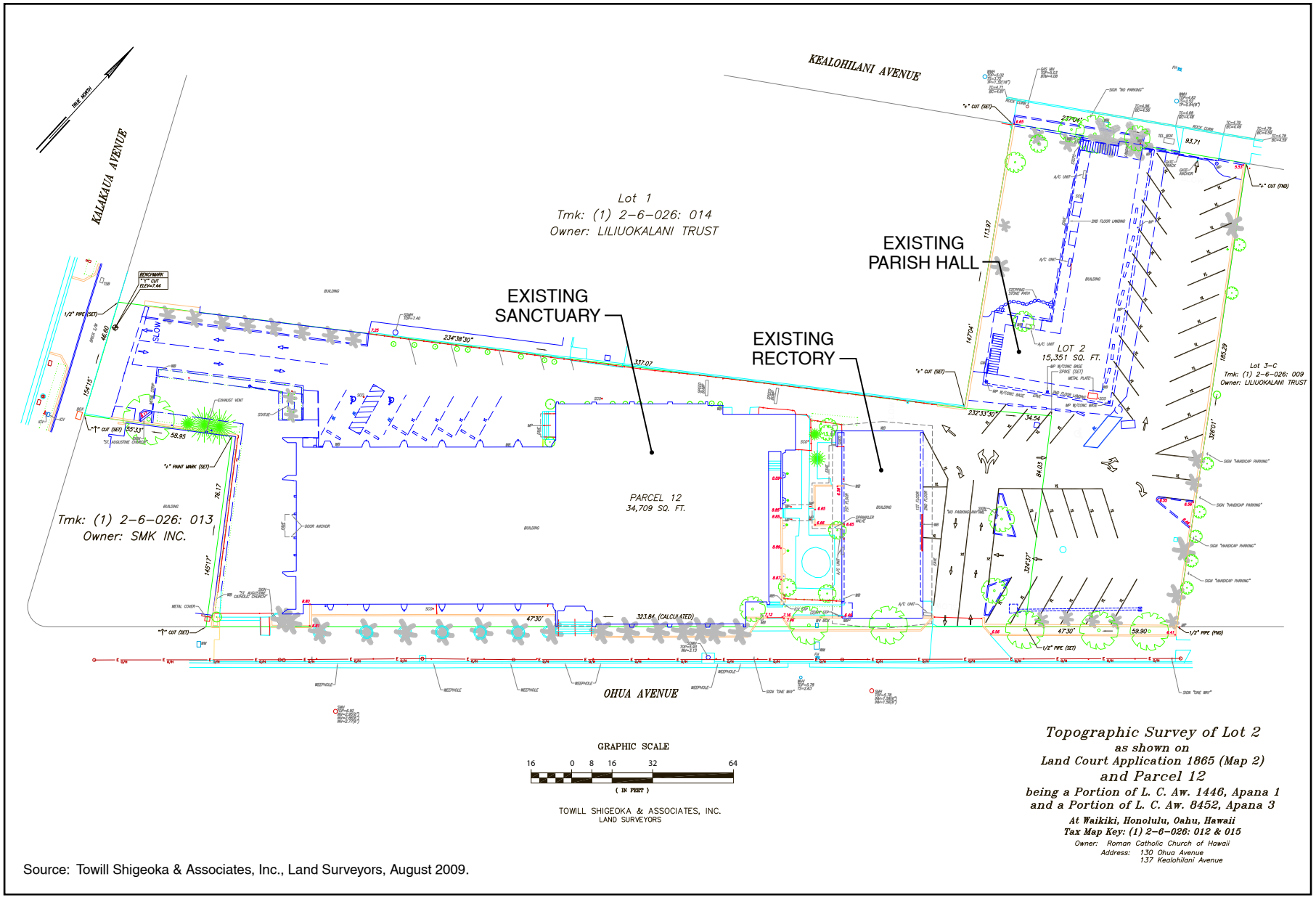
Exhibit 1.2 Photo of St. Augustine Church and Driveway Looking *Mauka* from Kalākaua Avenue

The project site is flat and does not contain any unique or unusual topographic or physical conditions. Existing facilities include the church (see Exhibit 1.2), a rectory, and parish hall. Public pedestrian entrances to the church are located on Kalākaua Avenue and ʻŌhua Avenue. The project site presently contains 43 standard parking stalls and 3 accessible stalls that are predominantly located in the rear (*mauka* end) of the property. Some stalls are located along a driveway next to the church leading to Kalākaua Avenue.

Exhibit 1.3 Photo of Parish Hall and Parking Lot Area Looking West Across Parcel 15

The largest lot (Parcel 12) making up the project site contains the church and rectory building which were constructed in 1962. This property also shares frontage on Kalākaua Avenue with the commercial property (ABC Store/Burger King) located immediately in front of the main entrance to the church. The rectory is located immediately behind (*mauka*) the church, and consists of a two-story building. This building is used as housing for the church's clergy in addition to functioning as the administrative office for the church. It is also used as temporary housing for visiting clergy.

The rear lot (Parcel 15) contains the parish hall (see Exhibit 1.3) which is a multi-purpose facility that was constructed in 1959 based upon City records. This two-story apartment building was formerly used as a walk-up apartment, and is now used for office space, meeting rooms, kitchen, temporary housing for visiting clergy and volunteers, and storage space. It was also previously used for displaying St. Damien artifacts. The church plans to open a temporary museum (Damien and Marianne Heritage Center) at the end of 2011 using office space above the ABC Store until the permanent St. Damien Museum building is constructed.



Source: Towill Shigeoka & Associates, Inc., Land Surveyors, August 2009.

EXISTING SITE PLAN

ST. AUGUSTINE-BY-THE-SEA CHURCH MASTER PLAN
WAIKĪKĪ, O'AHU, HAWAI'I

Figure 1.4

A landscaped courtyard with covered patio is located between the rectory and church. An open lawn area is located next to the parish hall. The parking lot contains trees in planters and some groundcover at the perimeter. Other landscaping on the property includes trees and hedges at the front entrance to the church, and trees along the driveway and around the main church building.

The church generally holds services on a daily basis Monday thru Saturday at 7:00 a.m. and at 5:00 p.m. Services held on Sundays usually occur at 6:30 a.m., 8:00 a.m., 10:00 a.m., and at 5:00 p.m. Morning services on weekdays generally averages less than 100 persons and the afternoon services less than 50 persons. Weekend services draws larger attendances generally ranging from about 150 to 450 persons, with the Sunday 10:00 a.m. services being the largest. About 80 percent of those attending church services consist of visitors from the Waikīkī resort area, and the vast majority of people walk to the church. During weekend services, driveway entrance locations along Kalākaua Avenue and Kealohilani Avenue are used for vehicles. A summary of these various church activities is provided in Table 1.2.

Other activities held at the church include weddings, occasional funerals, and other community related services. Between 40 and 60 weddings are held a year (about once a week) occurring on both weekdays and weekends. About 66 percent (2/3) of these weddings are for visitors from out-of-State getting married in Hawai‘i, with the remaining 34 percent consisting of weddings for residents. Out-of-State weddings tend to be smaller, averaging about 50 attendees. Local weddings are larger with most of them averaging about 100 attendees or less. About six (6) funerals are held a year on either weekdays or weekends depending upon the family's circumstances. About 100 persons or less usually attend the funerals.

A *hula halau* conducts classes twice a week at the parish hall starting in the early evening (6:00 p.m.); religious education classes are held for new members or members needing instruction for sacraments on Sundays; and a choir conducts practices once a week starting in the early evening (6:00 p.m.). The parish hall is used by parish members for committee meetings. The Knights of Columbus, Altar Rosary Society, and the Parish Finance and Pastoral Council hold monthly meetings. These are usually held on weekends or early evening on weekdays. Other community organizations may use facilities for meetings upon request.

1.4 Project Need and Objectives

The St. Augustine Church has not undergone any major exterior renovations or improvements since its construction in 1962. The only exceptions have been minor repairs and alterations to buildings (ex. electrical) and infrastructure modifications. Therefore, the church, rectory, and parish hall structures have essentially remained unchanged since their construction almost 50 years ago.

Table 1.2
Summary of Existing and Projected Activities at St. Augustine by-the-Sea Church

Description of Church Activities	Days of Activity (Weekday / Weekend)	Start Time of Activities	Existing Approximate Average Number of Attendees	Description of Projected Activities
Church Services	Weekdays (Daily) Weekends (Saturday) Weekend (Sunday)	7:00 a.m. 5:00 p.m. 5:00 p.m. 6:30 a.m. 8:00 a.m. 10:00 a.m. 5:00 p.m.	100 50 300 160 300 450 300	Up to 15% increase in the number of attendees per service (ranges from 8 up to 68 attendees)
Wedding Ceremonies	Weekdays & Weekends 40 to 60 Events Annually • 66% Visitor Events • 34% Resident Events	Various	Visitor Events (66%) 50 Resident Events (34%) 100	46 to 69 Events Annually (Between 6 to 9 additional)
Funeral Services	Weekdays & Weekends About 6 Annually	Various	100	No change anticipated
Religious Classes	Sunday	9:00 a.m. and 3:30 p.m.	30	Up to 15% increase in number of attendees (5 additional)
Hula Halau Classes	Tuesday & Wednesday	Early Evening (6:00 p.m.)	20 to 30	May increase from 2 to 4 classes per week (weekday only)
Choir Practices	Wednesday	Evening (8:00 p.m.)	20 to 30	May increase from 1 to 3 classes per week (weekday only)
Parish Committee Meetings	Once a Month on Weekdays	Early Evening (6:00 p.m.)	20 to 30	No change anticipated
Other Community Organization Meetings	Monthly on Weekdays (2 – 3 meetings per month)	Early Evening (6:00 p.m.)	20 to 30	May increase up to 5 meetings per month (weekday only)

Source: St. Augustine by-the-Sea Church

1.4.1 Need for Project Improvements

Since 1962, the number of visitors to the church have increased substantially due to the growing resident population in the Honolulu area along with the increased number of visitors to O‘ahu. The growing parish has resulted in increased demand for church services and facilities. This includes increased requests for services such as weddings and funerals. The future needs of the parish also have to be planned for, as membership continues to grow along with the number of visitors to the island.

The St. Augustine Church also has custody of many artifacts and other objects related to St. Damien. Saint Damien of Moloka‘i was a Roman Catholic priest from Belgium and member of the Congregation of the Sacred Hearts of Jesus and Mary. He earned recognition for his ministry to people with Hansen’s disease (also known as leprosy) between 1873 and 1889, who had been placed under a government-sanctioned medical quarantine on the island of Moloka‘i. After 16 years caring for the physical, spiritual, and emotional needs of those in the colony, he eventually contracted and died of the disease, and was widely considered a “martyr of charity.” He is only the ninth person recognized as a Saint by the Catholic Church to have lived and work in what is now the United States. The Roman Catholic Church (Pope Benedict XVI) canonized St. Damien of Moloka‘i in Rome on October 11, 2009.

In recognition of the significance related to canonization, the Roman Catholic Church would like to make these artifacts and objects available for viewing by the public. These items are being displayed temporarily in an office in the adjacent commercial building that is serving as a temporary museum (Damien and Marianne Heritage Center) until the new proposed Museum is completed. In addition, artifacts and information associated with Mother Marianne Cope are also planned to be included with this museum, as her advancement toward sainthood has been recently supported by Pope Benedict XVI.

The current parish hall building is not adequate to support the increasing services supported by the church, and is not appropriate for this use since it was originally constructed for use as an apartment building. There is a need for additional and improved office space for church staff and storage space to accommodate the increasing activities held there now and in the future. There is also a need for increased on-site parking for members and guests during services or functions held. Off-site parking is limited in the area with some metered parking stalls available on ‘Ōhua Avenue.

1.4.2 Project Objectives

The Roman Catholic Church initiated development of a master plan for St. Augustine Church to: 1) analyze existing conditions to identify facilities needing repair or upgrades; and 2) address the future needs of the parish. Based upon this master plan, a new St. Damien Museum is planned along with a new multi-purpose building to serve as their redeveloped Parish Hall to meet the future needs of members. Additional off-street parking will also be provided.

The new St. Damien Museum (“Museum”) will address the St. Augustine Church’s project objectives by allowing artifacts and objects related to St. Damien to be appropriately displayed along with providing related informational materials and exhibits. This Museum may also allow other historic objects associated with the St. Augustine Church to be displayed while providing needed space for administration activities, storage, and archives. Project criteria established for the success of this Museum are:

1. Siting and visibility of the Museum are essential to support the financial viability of Museum;

2. Siting the Museum in the most visible location on the property that has the highest amount of pedestrian traffic;
3. Pedestrian traffic is intended as the primary source of visitors to the Museum; and
4. Museum's design should complement the church sanctuary and be fitting to bestow the honor warranted for St. Damien.

A new multi-purpose building will address the St. Augustine Church's long-term project objective of supporting their parish by providing improved and expanded facilities, office and storage space, and additional parking. This new Parish Hall will replace the existing parish hall building and provide considerably more on-site parking for activities. This new multi-story building will also have sufficient space for offices, storage, meeting rooms, and an improved kitchen. The building would be large enough to accommodate various functions and other events addressing current facility limitations and thereby better accommodate the Church's future needs. Project criteria established for the success of this new Parish Hall are:

1. Design of the building should be large enough to accommodate long-term needs of Church operations and activities which support community organizations;
2. Vehicular access into and out from this building should utilize ʻŌhua Avenue as the main entrance and Keoalohilani Avenue as a secondary driveway;
3. Siting of building and its design should allow for providing an increase in on-site parking stalls;
4. Design of multi-purpose building should complement the existing site.

With project improvements, a slight increase in the level of activities occurring at St. Augustine by-the-Sea Church may occur due to the church's increased popularity and status with the new St. Damien Museum and Parish Hall. Table 1.2 included a description of projected increases for the various activities occurring at the Church.

An increase in the number of persons attending church services of up to 15 percent is projected. However, the current schedule of weekday and weekend services being held would not change. The vast majority of persons attending these services would continue to be visitors to the State which presently account for 80 percent of all attendees.

The number of wedding ceremonies held is projected to increase up to 15 percent resulting in 6 to 9 additional ceremonies a year. The distribution between visitor and local weddings is expected to remain the same along with the average number of attendees at these ceremonies. Wedding receptions would not be held at the new parish hall. The number of funeral services is not expected to change with the project.

Religious classes held on Sundays could have an increase in attendance of up to 15 percent due to improved facilities with the parish hall as shown on Table 1.2. *Hula halau* classes presently occur twice a week and may increase up to four days a week. Choir practices may increase from once a week up to three times a week. No changes are expected to the number of parish

committee meetings with the project. Community organizations have monthly meetings that presently occur two to three times a month, and this could increase up to five times a month. Thus, the number of these classes or meetings held may increase with the project, but the average number of attendees is projected to remain about the same.

1.5 Project Description

A master plan prepared in 2008 for the St. Augustine Church identified various repair work and minor improvements needed for existing buildings along with other site improvements. The master plan also identified developing a new St. Damien Museum building and redeveloping the parish hall by providing a new multi-purpose building with three levels of parking. A summary is provided below for the repair and other minor improvements being implemented for existing facilities. This repair work is exempt under both the SMA regulations and Waikīkī Special District regulations. A preliminary conceptual site plan showing the new Museum and Parish Hall multi-purpose building is shown on Figure 1.5.

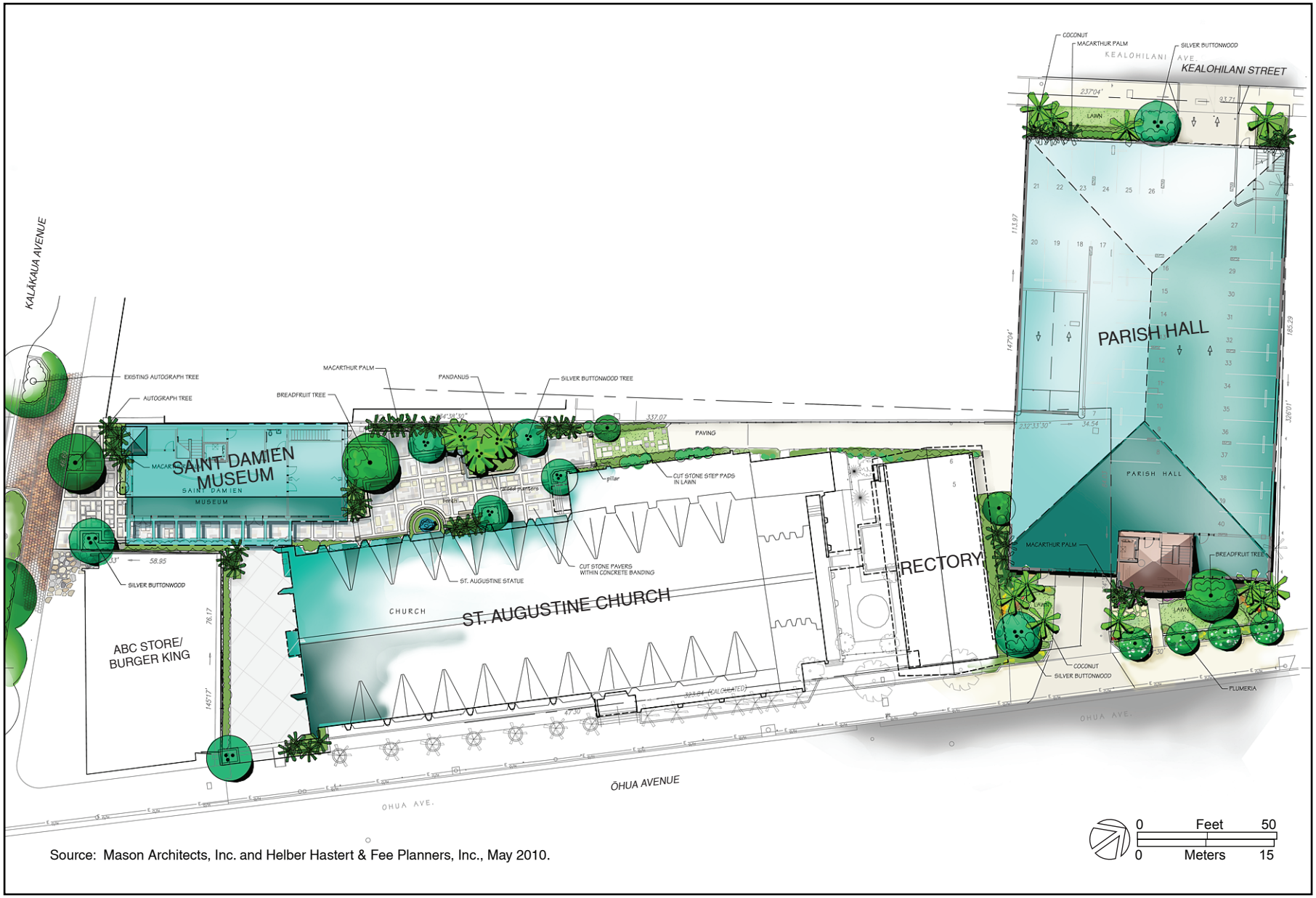
1.5.1 Repair and Minor Alterations

The assessment of Church facilities identified various repair work and minor alterations. This work consists of both exterior and interior work for the existing church and rectory along with general site modifications that include parking striping, exterior accessibility, and signage. A summary of these non-interior improvements is provided.

1. Parking. Resurface and restripe existing parking lot if construction of redeveloped Parish Hall is delayed.
2. Walkways and Stairs. Reconstruct accessible ramps to church to better meet accessibility standards. Install upgraded handrails.
3. Signage. Provide signage for accessible route and parking stalls. Improve existing signage on site.
4. Rectory. Install continuous handrails on stairways. Provide signage for building.

1.5.2 St. Damien Museum

The new St. Damien Museum is planned to be a two-story building located along Kalākaua Avenue, and would be setback 20 feet from the Church property line. The site plan on Figure 1.5 shows the location of the Museum near the Kalākaua Avenue sidewalk for convenient pedestrian access and visibility. This new building will eliminate the existing driveway access to Kalākaua Avenue. There is no side yard setback next to the adjoining Foster Tower condominium property. The building's footprint would be about 3,000 square feet in size. The total floor area for two floors would be about 5,500 square feet.



Source: Mason Architects, Inc. and Helber Hastert & Fee Planners, Inc., May 2010.

CONCEPTUAL SITE PLAN

ST. AUGUSTINE-BY-THE-SEA CHURCH MASTER PLAN
WAIKĪKĪ, O'AHU, HAWAI'I

Figure 1.5

Figure 1.6 shows preliminary floor plans for this Museum. The ground floor would have an open *loggia*[1] serving as an entrance feature into the building. This floor would have sales and exhibit areas, offices, and meeting rooms. The second floor would have additional exhibit space, office or storage room, and an archives room. An elevator and stairs will provide access between floors. Figure 1.6 also shows elevation drawings for this building. As shown on the drawings, the building would have a gable roof and is designed to have features complementing the St. Augustine Church's existing design. Figure 1.7 shows a visual simulation of what the Museum may look like from Kalākaua Avenue.

This Museum would display artifacts and other religious objects associated with St. Damien that are in the church's possession. Other religious objects associated with St. Augustine Church's history may be included with Museum displays. Educational and other informational material would be available at the Museum. A staff of about five (5) persons is expected to operate the Museum on a daily basis, and this may consist of employees and volunteers.

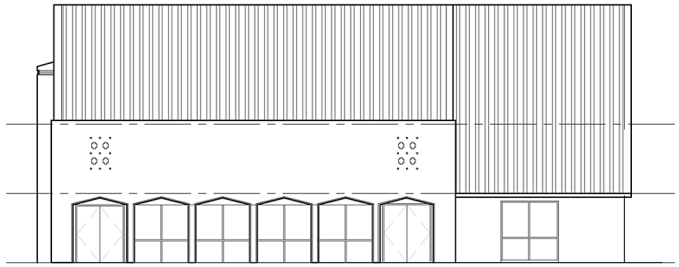
1.5.3 Parish Hall

The existing parish hall building will be demolished and a new four-story multi-purpose building constructed with three floors of parking and a fourth floor with facilities to serve as the new Parish Hall (referred to as Parish Hall). Figure 1.5 showed the location of the Parish Hall which encompasses most of the existing rear parking lot and existing parish hall. This building will be set back 15 feet from the property lines along Kealohilani Avenue and ʻŌhua Avenue. There is no side yard setback next to the adjoining (*mauka*) property used as a parking lot. Primary vehicular access to the parking structure would continue to be from ʻŌhua Avenue with Kealohilani Avenue used as a secondary access.

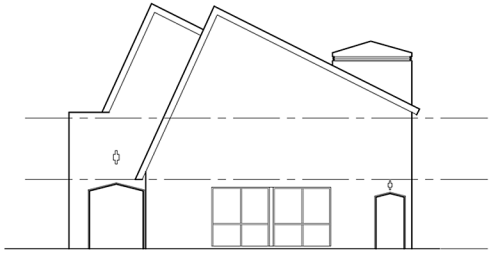
The building's footprint would be about 14,785 square feet in size, however, the total floor area would only be about 17,755 square feet, with parking taking up the rest of the building. The existing parish hall being demolished has a floor area of about 4,700 square feet. Therefore, the net increase in floor area would be about 13,055 square feet. A summary of the building's floor area calculations is provided below. .

[1] Loggia is the term used for an architectural feature, originally of Italian design; often a gallery or corridor at ground level, sometimes higher, on the facade of a building and open to the air on one side, where it is supported by columns.

MAKAI ELEVATION

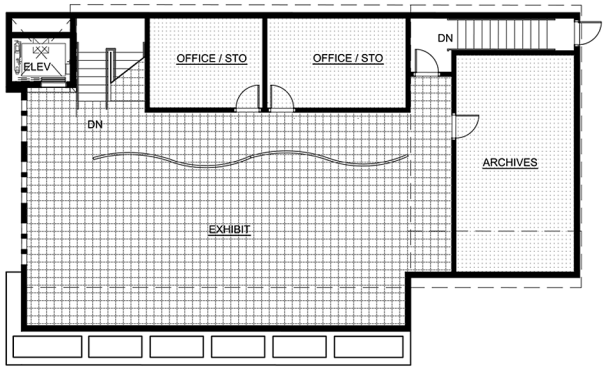


EAST ELEVATION

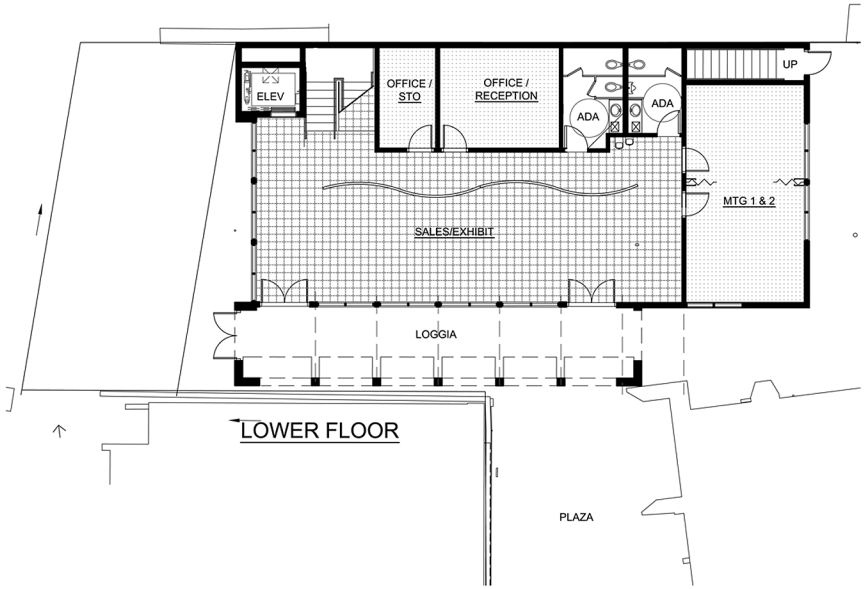


MAUKA ELEVATION

A1 SAINT DAMIEN MUSEUM - EXTERIOR ELEVATIONS
1/8" = 1'-0"
REF FROM:
0 4' 8' 16'



UPPER FLOOR



LOWER FLOOR

A3 SAINT DAMIEN MUSEUM - FLOOR PLANS
1/8" = 1'-0"
REF FROM:
0 4' 8' 16'

Source: Mason Architects Inc., June 2011.

ST. DAMIEN MUSEUM FLOOR PLAN AND ELEVATIONS

Figure 1.6

ST. AUGUSTINE-BY-THE-SEA CHURCH MASTER PLAN
WAIKĪKĪ, O'AHU, HAWAI'I

Source: Mason Architects Inc., May 2010.

VISUAL SIMULATION OF ST. DAMIEN MUSEUM

Figure 1.7

ST. AUGUSTINE-BY-THE-SEA CHURCH MASTER PLAN
WAIKĪKĪ, O'AHU, HAWAI'I

Description	Floor Area (sf)	Non-Floor Area (sf)
First Floor		
1. Office/Storage Room	985	
2. Parking Area/Ramps		13,800
Second Floor		
1. Office/Storage Room	985	
2. Parking Area/Ramps		13,800
Third Floor		
1. Office/Storage Room	985	
2. Parking Area/Ramps		13,800
Fourth Floor (Parish Hall)		
1. Assembly Area	5,590	
2. Offices, Storage, Kitchen	5,925	
3. Covered Lanais/Stairs and Lobby	3,270	
Summary Totals	17,740	41,400

Figures 1.8 to 1.10 show preliminary floor plans and elevation drawings for the multi-purpose building. The primary pedestrian entrance into this building will be from ʻŌhua Avenue where an elevator and stairs are located. Stairs are also located on the Kealohilani Avenue side of the building. Figure 1.9 conceptually shows this building having a hipped roof, and designed to complement the Church's design. Figure 1.11 shows a visual simulation of what the building may look like along ʻŌhua Avenue. Figure 1.12 shows a visual simulation of this building from Kealohilani Avenue. As shown by these simulations, the building will be aesthetically designed to look less like a typical parking structure and will be articulated with no large, blank walls. Landscaping will be added to soften views of the structure, including vertical form trees along the mauka building wall as shown on the visual simulation.

A total of 113 parking stalls would be provided on the first three floors of this building which will result in an increase of 67 parking stalls from the current 46 parking stalls (a 146% increase). However, 61 parking stalls will be required for this project as determined by the City, so 52 additional stalls are being provided above this requirement. Table 4.2 in Chapter 4 includes a detailed listing of parking requirements. There is space of about 985 square feet available on each of the first three floors for use as storage or other administrative office use.

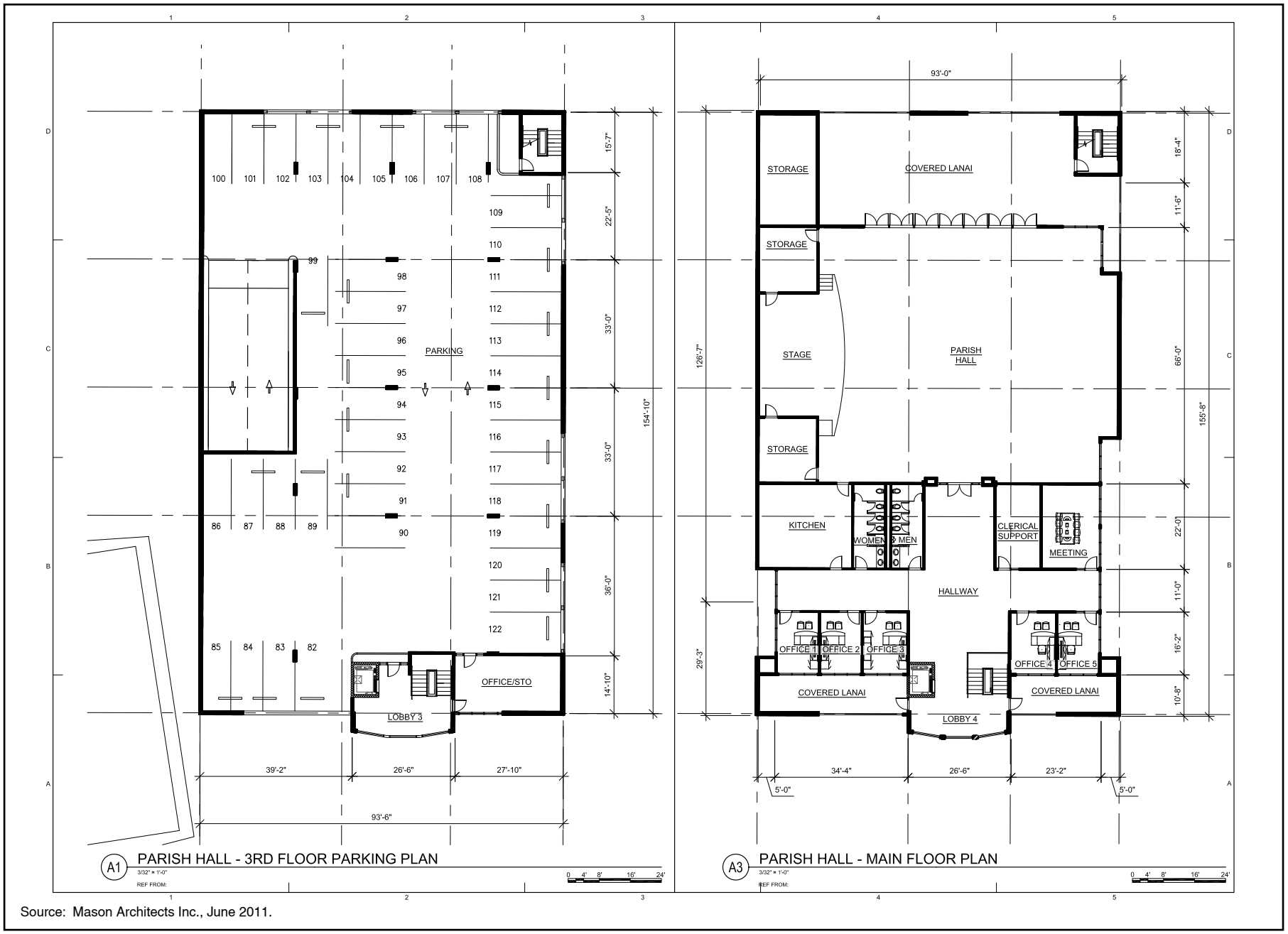
The fourth floor would be the main floor which will consist of the Parish Hall facilities. About 5,925 square feet of floor area would be used for various functions and administrative activities. Covered lanais of about 3,270 square feet would be provided with the largest open lanai overlooking Kealohilani Avenue. This floor would include five offices, a meeting room, storage space, kitchen, and restrooms. The main feature would be a large Parish Hall of about 5,590 square feet with a stage to conduct various activities.

Source: Mason Architects Inc., June 2011.

PARISH HALL FLOOR PLAN 1ST AND 2ND FLOORS

Figure 1.8

ST. AUGUSTINE-BY-THE-SEA CHURCH MASTER PLAN
WAIKĪKĪ, O'AHU, HAWAI'I



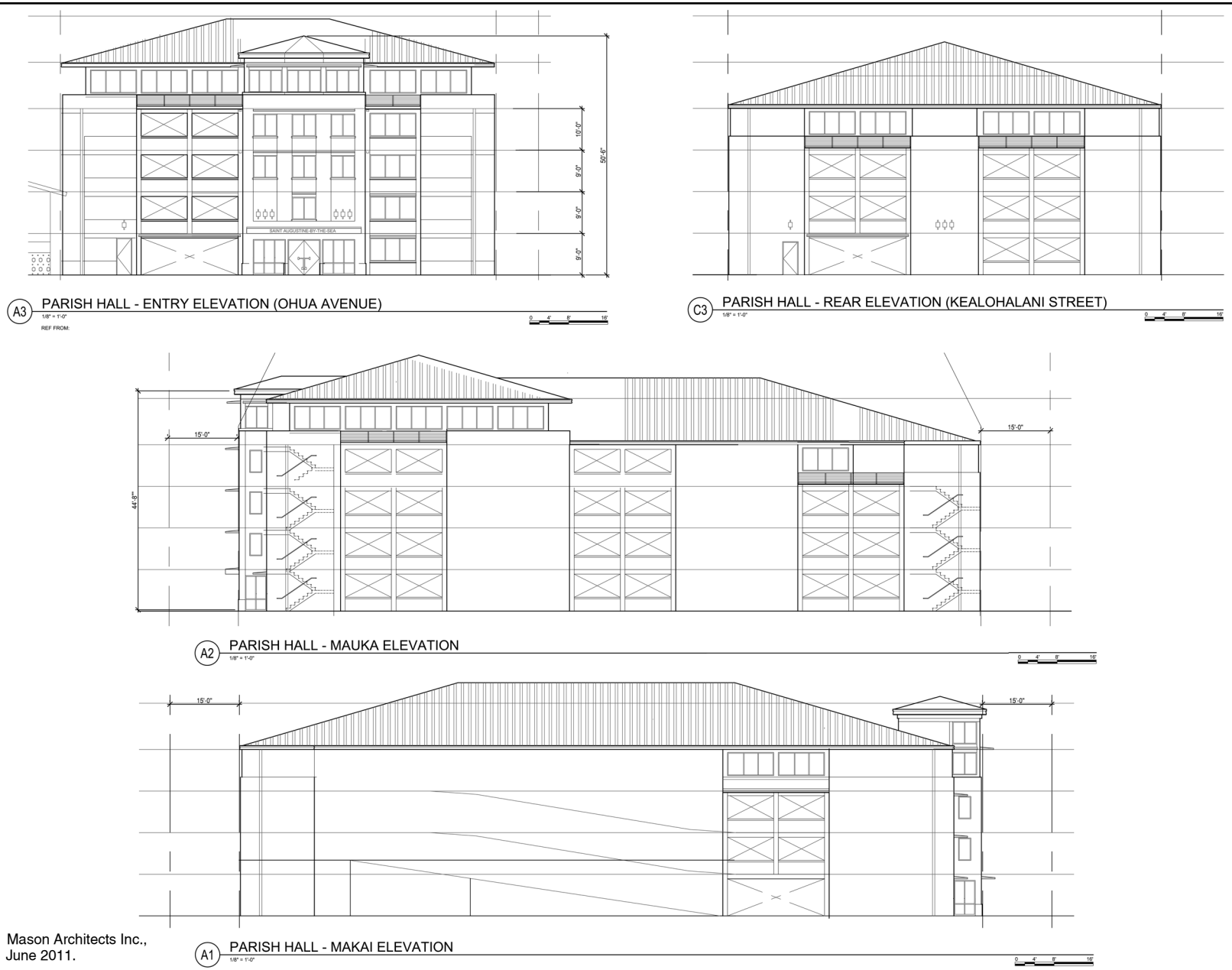
Source: Mason Architects Inc., June 2011.

PARISH HALL FLOOR PLAN 3RD AND MAIN FLOORS

Figure 1.9

ST. AUGUSTINE-BY-THE-SEA CHURCH MASTER PLAN

WAIKĪKĪ, O'AHU, HAWAI'I



Source: Mason Architects Inc., June 2011.

PARISH HALL ELEVATION DRAWINGS

Figure 1.10

ST. AUGUSTINE-BY-THE-SEA CHURCH MASTER PLAN

WAIKĪKĪ, O'AHU, HAWAI'I

Source: Mason Architects Inc., May 2010.

VISUAL SIMULATION OF NEW PARISH HALL BUILDING ʻŌHUA AVEUNE **Figure 1.11**

ST. AUGUSTINE-BY-THE-SEA CHURCH MASTER PLAN
WAIKĪKĪ, OʻAHU, HAWAIʻI

Source: Mason Architects Inc., December 2011.

VISUAL SIMULATION OF NEW PARISH HALL BUILDING KEALOHILANI AVEUNE **Figure 1.12**

ST. AUGUSTINE-BY-THE-SEA CHURCH MASTER PLAN

WAIKĪKĪ, O'AHU, HAWAI'I

1.5.4 Landscape Improvements

Landscape improvements are an integral element of the proposed project, and landscaping will result in an overall increase of open space. An existing yard next to the existing parish hall building will be removed; however, other open space areas will be created. The additional landscaped area created is estimated to increase the open space of the project site from 18 percent (9,400 square feet) to 30 percent (15,500 square feet) with full implementation of the project.

The ʻŌhua Avenue entrance to the new Parish Hall building is planned to be landscaped and improved with signage to serve as an entry feature into the property. Landscaping will also be provided along Kealohilani Avenue for the new Parish Hall. The *mauka* side of this building facing the existing parking lot will be landscaped with vertical form trees to further soften views along this side. The visual simulations (Figures 1.11 and 1.12) conceptually show landscaping improvements planned for this building.

Landscaping and other open space improvements would also occur within the street setback area along Kalākaua Avenue for the Museum. The present driveway to Kalākaua Avenue routed along the Church from the rear parking lot will also be eliminated. Therefore, the open area created between the Museum and Church sanctuary along with the existing driveway will be landscaped to create new open space. Figure 1.5 previously showed these open space areas.

1.6 Project Phasing and Estimated Costs

Preliminary design for this project has been completed as part of this environmental review process. Preparation of construction plans would occur after completing the environmental review process and obtaining necessary entitlements. This environmental review and entitlement process is projected to be completed by the end of 2012. Therefore, final design work and obtaining necessary ministerial permits would likely be completed in mid-2014.

The first phase of the project implemented would be construction of the new St. Damien Museum. The second phase implemented would be the new Parish Hall. Repair work for the church property has already been initiated, and work will continue pending the approvals of the new buildings. Therefore, new construction would likely commence in 2014 with completion of the new Museum by early 2016. The redeveloped Parish Hall is expected to be completed about 2018 pending availability of funding.

The estimated probable construction costs for the Museum is $2.8 million and Parish Hall is $11.3 million, respectively. Therefore, a total construction cost of $14.1 million is projected.

1.7 Listing of Permits and Approvals

A listing of required discretionary land use approvals and ministerial permits for this project is provided.

State of Hawai‘i Permits

National Pollutant Discharge Elimination System (NPDES) Permit - Construction Activities
Construction Noise Permit

City and County of Honolulu

Special Management Area Use Permit (Major)
Waikīkī Special District Permit (Major)
Conditional Use Permit (Minor) – Joint Development
Building Permits
Grading, Grubbing, Trenching Permits
Street Usage Permit

CHAPTER 2
AFFECTED ENVIRONMENT

Climate

The State of Hawai‘i climate is relatively moderate throughout the island chain, although, some differences in conditions may occur from one location to another due to the mountainous topography associated with each island. Annual and daily variation in temperature depends to a large degree on elevation above sea level, distance inland, and exposure to the trade winds. On O‘ahu, the Ko‘olau and Wai‘anae mountain ranges are oriented almost perpendicular to the trade winds, which account for much of the variation in local climatology.

O‘ahu’s temperatures have small seasonal variation such that the temperature range averages only 7 degrees between the warmest months (August and September) and the coolest months (January and February) and about 12 degrees between day and night. Based upon historic data from a recording station in Waikiki, average annual temperatures range from a low of 69 to a high of 85 degrees Fahrenheit throughout the year. Annual rainfall averages about 23.8 inches per year. Monthly average rainfall varies from a low of generally less than 1 inch of rainfall during the summer (June to August), and less than 4 inches during the winter periods (November to January) (WRCC 2010).

Winds are predominantly “trade winds” from the east-northeast except for occasional periods when “Kona” storms generate strong winds from the south, or when the trade winds are weak and land breeze to sea breeze circulations develop. Wind speeds typically vary between 5 and 15 miles per hour providing relatively good ventilation much of the time. Lower velocities (less than 10 mph) occur frequently when the usual northeasterly trade winds tend to fall giving way to light, variable wind conditions through the winter and on into early spring.

2.1 Geology, Topography and Soils

The Island of O‘ahu is entirely volcanic in terms of geologic origin. Throughout time, the volcanic landscape of Oahu has been subject to the natural forces of erosion and sedimentation, resulting in such physiographic features as beaches, reefs, coastal plains, saddles, dunes, uplands, cliffs and valleys. The Island of O‘ahu is a volcanic doublet, formed of the Wai‘anae Range on the west and the younger Ko‘olau Range on the east. Both are the eroded remnants of great shield volcanoes that have lost most of their original shield outlines and are now long narrow ridges shaped largely by erosion.

The project site is situated along the coastal plain in Waikiki located near the coastline. This area is geologically composed of beach and dune sand along the shoreline and limestone (reefs and dunes) adjacently inland.

2.1.1 Topography

The topography of the project site and immediate area is generally flat which is consistent with surrounding areas in Waikīkī. Elevations vary from a little over 5 feet above mean sea level (AMSL) to about 7.5 feet near Kalākaua Avenue. The existing church and other buildings within the project site are slightly elevated above the ground. There are no unique geologic features or topographic conditions present on the two properties.

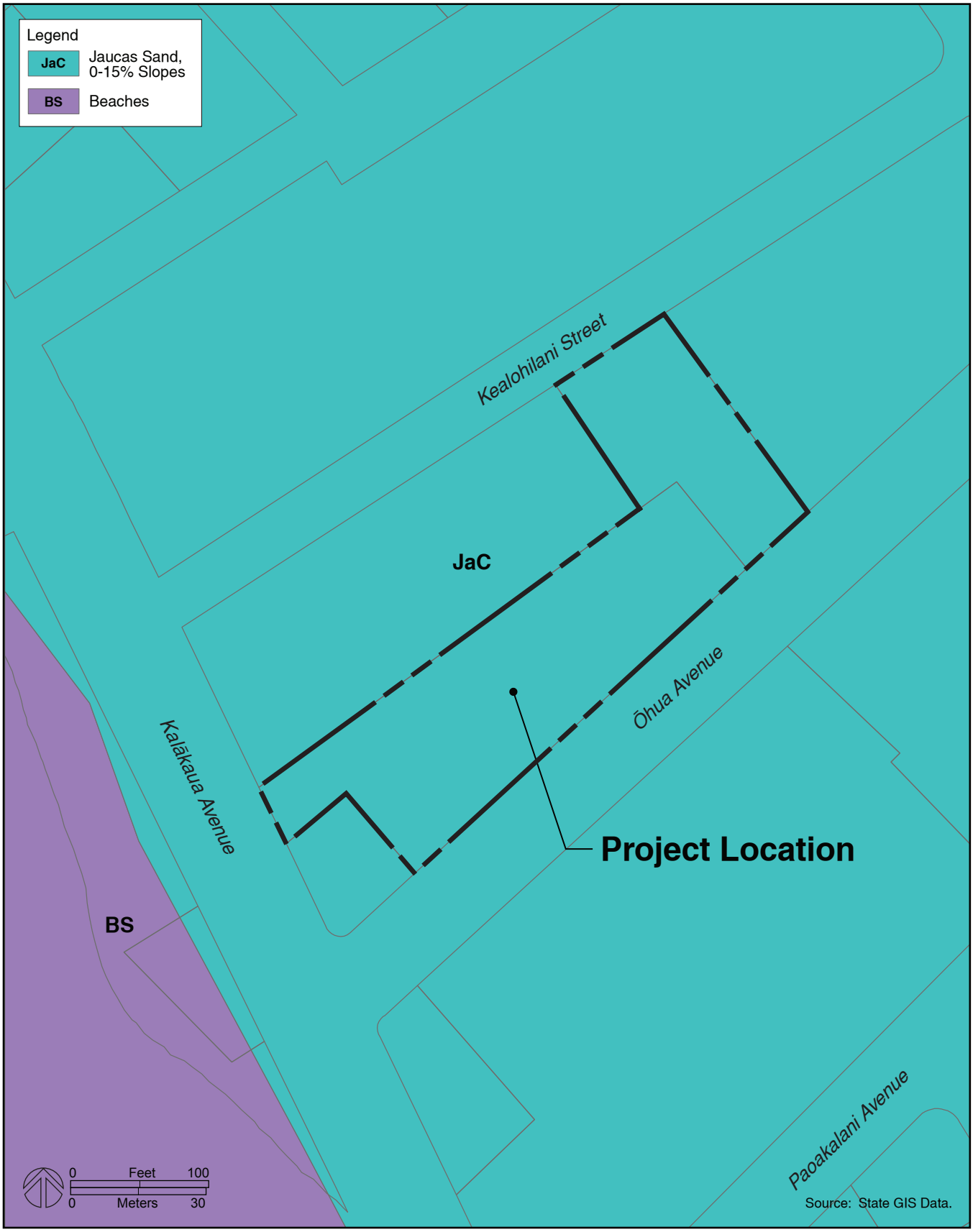
2.1.2 Soils

The U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (formerly the Soil Conservation Service) classifies soils within the project site and immediate surrounding area as Jaucas Sand (JaC). This Jaucas series consists of excessively drained, calcareous soils that occur as narrow strips on coastal plains, adjacent to the ocean. They developed in wind and water deposited sand from coral and seashells. Figure 2.1 graphically shows the soils classification for this area, and a description of this soil type is provided below.

- Jaucas sand, 0 to 15 percent slopes. The slope range for this soil is 0 to 15 percent, but in most places does not exceed 7 percent. The representative profile of this soil is single grain, pale brown to very pale brown, sandy, and more than 60 inches deep. The surface layer is dark brown due to accumulation of organic matter and alluvium. The soil is neutral to moderately alkaline throughout the profile. Permeability is rapid, and runoff is very slow to slow. The hazard of water erosion is slight, but wind erosion is a severe hazard where vegetation has been removed. Workability is slightly difficult because the soil is loose and lacks stability for use by equipment (SCS, 1972).

Land Study Bureau Classification. The University of Hawai‘i Land Study Bureau’s (LSB) Detailed Land Classification--Island of O‘ahu classifies land type for all lands other than those in the urban district, which are not considered to have the potential to produce crops. Land type classifications provide for an overall crop productivity rating, with and without irrigation, and for selected crop productivity ratings for seven crops. Overall LSB ratings range from A to E, with A representing the class of highest productivity and E the lowest. The project site is designated as “N” (not classified) because it is within Urban District areas.

Agricultural Lands of Importance to the State of Hawai‘i. The State Department of Agriculture’s Agricultural Lands of Importance to the State of Hawaii (ALISH), established a classification system for identification of agriculturally important lands to the State of Hawai‘i. Three classes of lands are established which are: 1) prime, 2) unique, and 3) other. Lands not included under this system are “unclassified”. The project site along with the surrounding area is “Unclassified” and of no agricultural importance.



SOILS SURVEY MAP

Figure 2.1

ST. AUGUSTINE-BY-THE-SEA CHURCH MASTER PLAN
WAIKĪKĪ, O'AHU, HAWAI'I

2.2 Natural Hazards

This section addresses natural hazards applicable to the project. Of the potential natural hazards, only earthquakes, hurricane, and tsunami flooding hazards are applicable. There are no other known potential urban-related hazards applicable to project site such as airport clear zones, nuisances, or other hazardous waste issues associated with the project site.

2.2.1 Earthquake Hazards

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

Volcanism is the source of energy for approximately 95 percent of the earthquakes on the Island of Hawai‘i. The central region encompassing the islands of Maui and O‘ahu are subject to seismicity generally related to tectonic activity on the seafloor near the Hawaiian Islands. Tectonic activity capable of generating hazardous earthquakes is related to seafloor fractures and suspected faults around the islands. The northwestern region consisting of Kaua‘i and Ni‘ihau has experienced tremors from earthquakes originating farther south, but no known seismic activity has originated among these northern islands. The earthquake risk for these northwestern islands was evaluated as minimal (USGS 2002).

The largest seismic areas pertinent to O‘ahu are the Moloka‘i Seismic Zone and the Diamond Head Fault as shown on Exhibit 2.1. The Diamond Head Fault passes through Koko Crater and extends along the seafloor northeast of O‘ahu. Several earthquakes of 4.0 to 5.0 magnitude have been detected along this fault. The Molokai Fracture Zone is an extension of a transform fault from the East Pacific Rise that extends from Molokai to the Gulf of California. This fracture is tectonic in origin and suspected to contribute to central region seismicity associated with an active seafloor. Because two known earthquakes (1871 and 1938) have occurred along the fracture, it is referred to as the Molokai Seismic Zone (USGS 2002).

Most of the earthquakes that have occurred in the past have been volcanic earthquakes causing little or no damage to the other islands. Available historical data indicates that the number of major earthquakes occurring have generally been fewer and of lower magnitude than those on other islands such as Hawai‘i. Strong earthquakes of magnitude 5 or higher, based on the Richter Scale, can cause property damage and endanger lives. The exhibit provided identifies the recent (since 1950) significant earthquakes occurring in the Hawaiian Islands (USGS 2002).

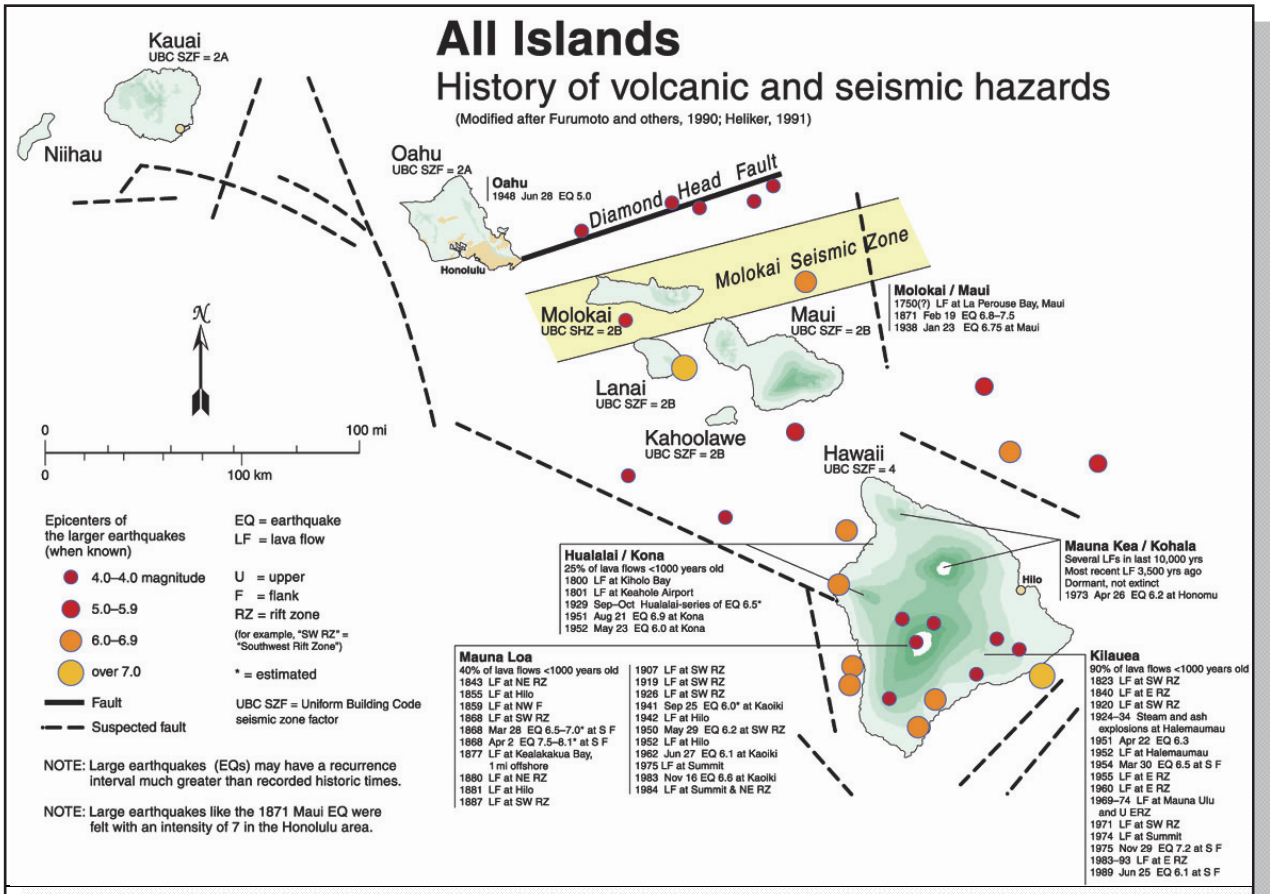


Exhibit 2.1 History of Volcanic and Seismic Hazards (USGS, 2002)

The U.S. Geological Survey's *Atlas of Natural Hazards in the Hawaiian Coastal Zone* (USGS, 2002) assigned seismic hazard intensity ratings for all islands on a scale from 1 to 5 with 1 representing lowest hazard and 5 the highest. The southern half of O‘ahu extending from Mākaha east around Diamond Head and Makapu‘u Head and north up to Kāne‘ohe Bay was assigned a volcanic/seismic risk ranking of 3 due to the proximity to the Moloka‘i Seismic Zone. The remainder of the island is ranked a 2 with respect to the volcanic/seismic hazard (USGS 2002). The St. Augustine Church project site is thus situated within this southern half and has a risk ranking of 3 similar to other properties in this Waikīkī area.

2.2.2 Hurricane Hazards

Hurricanes are one type of tropical cyclone affecting the State that also includes tropical storms and tropical depressions. Hurricanes are tropical storms with winds equal to or greater than 74 miles per hour. They have affected every island in the State and can cause major damage and injury usually resulting from high winds, marine over-wash, heavy rains, and other intense small-scale winds and high waves.

Between 1970 and 1992, 105 tropical cyclones were identified in the central Pacific region resulting in an average of 4.5 storms per year. Not all of these storms directly passed thru the State, and actual hurricane strikes on the Hawaiian Islands are relatively rare in the modern record. More commonly, near-misses that generate large swells and moderately high winds causing varying degrees of damage are the result of hurricanes passing close to the islands (USGS 2002). Exhibit 2.2 graphically shows the paths of hurricanes affecting the Hawaiian Islands.

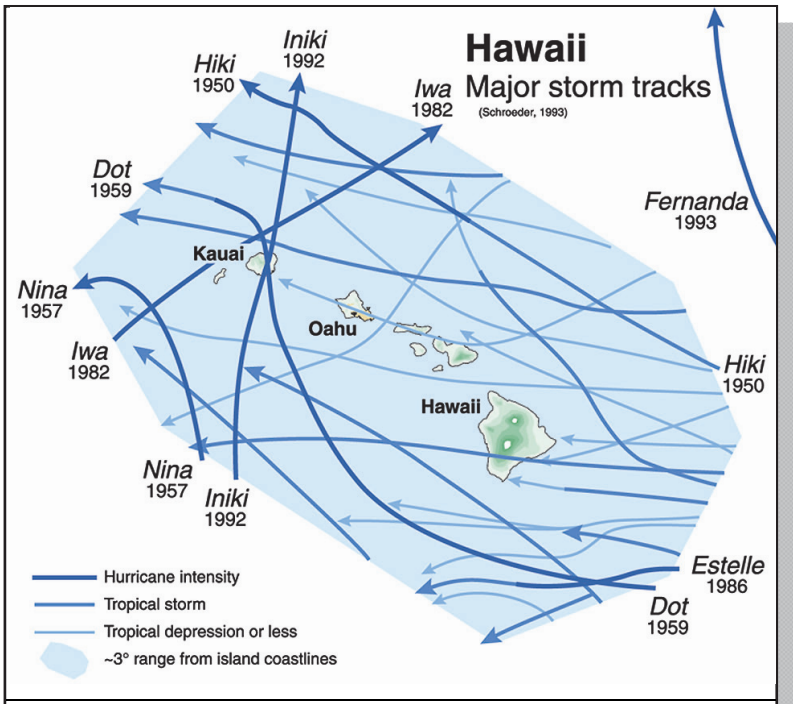


Exhibit 2.2 Major Storm Tracks (USGS, 2002)

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

2.2.3 Tsunami and Flood Hazards

Tsunamis are caused by a sudden movement of the seafloor that generates a series of waves which travel across the ocean until they reach a coastline. Seafloor movements may include faulting, landslides, or submarine volcanic eruptions. Landslides originating either under the sea or above sea level and then sliding into the water may also generate a tsunami. Tsunamis manifest themselves as either large breaking waves, often largest around headlands where they are concentrated by wave refraction, or as rapidly rising sea level like a flooding tide. The high degree of volcanism and seismic instability in and around the Pacific Ocean has contributed to a history of tsunami occurrences.

The coastline of the Hawaiian Islands is thus under the continuous threat of tsunami inundation because this region is one of the most geologically active regions on Earth. The geography of the shoreline often plays an important role in the form of the tsunami. Tsunami waves may be very large in an embayment, actually experiencing amplification in long funnel-shaped bays. Fringing and barrier reefs appear to have a mitigating influence on tsunamis by dispersing the wave energy (USGS 2002).

The present tsunami evacuation zone for the project area based upon recently updated State Civil Defense maps extends inland from the shoreline almost up to Ala Wai Boulevard approximately 0.25 miles inland from the project site. The evacuation zone thus encompasses the entire block that has the St. Augustine Church property along with all other properties *makai* of Kūhiō Avenue. The project site also falls within the coverage of existing warning sirens.

Floods caused by heavy rainfall and strong winds normally occur during the winter months with January typically being the most frequent flood period. Heavy rainfall can also be associated with the tropical storm and hurricane season between the months of June and October. Areas subject to recurrent rainstorm floods are generally the coastal plains and flood plains (USGS 2002).

Flood Insurance Rate Maps (FIRM) prepared by FEMA identifies flood areas in the vicinity of the project area. Based upon the FIRM No. 15003C0368G (revised January 19, 2011), the St. Augustine Church project site is designated as Zone X determined to be located outside the 500-year flood. The shoreline and surrounding areas are within the 100-year flood plains designated Zones VE, AE and A. Figure 2.2 graphically shows the project site in relation to the FIRM for the area.

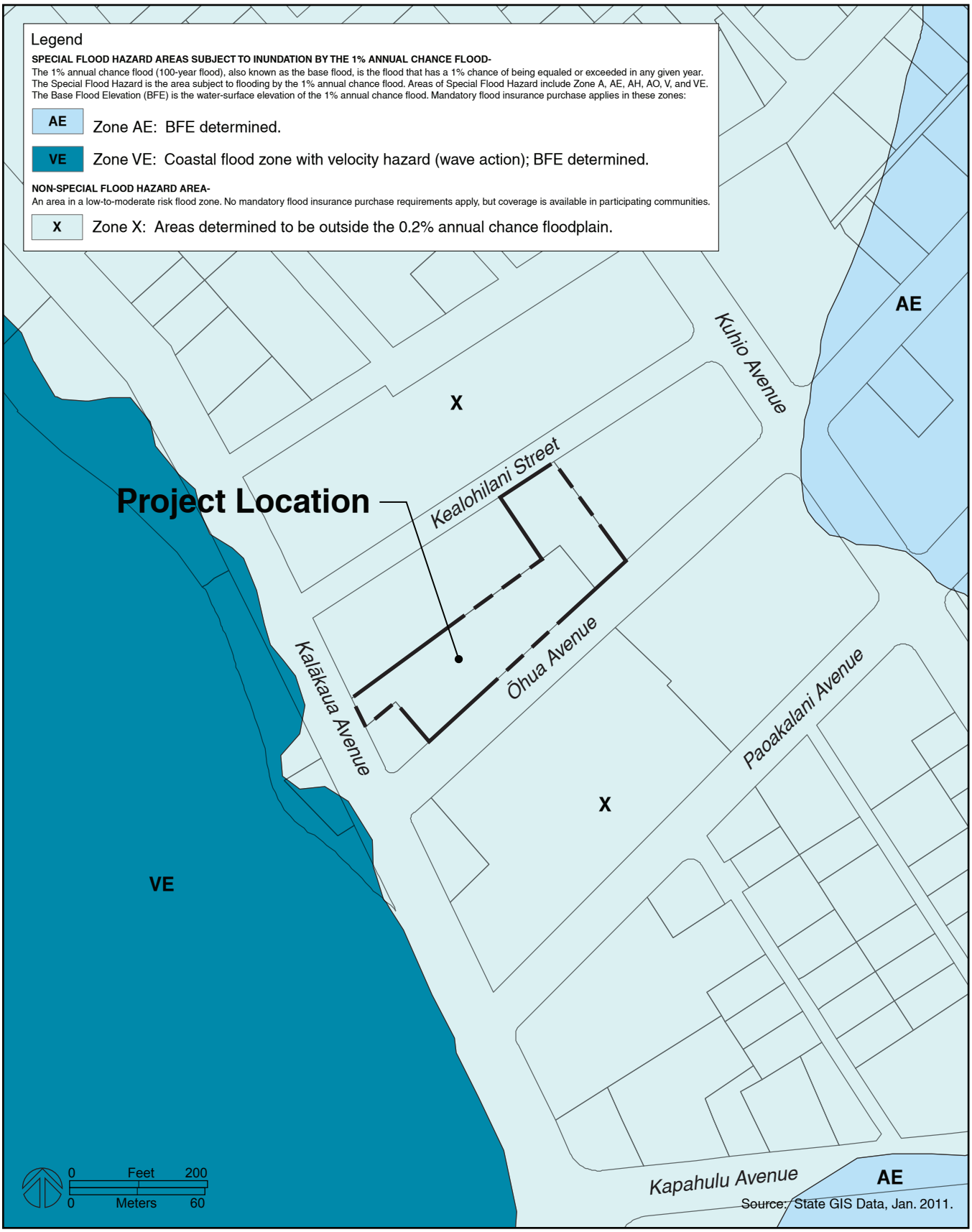
2.3 Hydrology

This section discusses the regional hydrology present in the project area which includes ground water and surface water resources.

2.3.1 Hydrogeological Resources

The State Department of Land and Natural Resources (DLNR), Commission on Water Resource Management (CWRM) has established ground water hydrologic units to provide a consistent basis for managing ground water aquifers. Under the State's Water Resource Protection Plan, an aquifer coding system classifies the island's aquifers to identify and describe these aquifers. This system is comprised of Aquifer Sectors, and then Aquifer Systems located within these sectors.

The Waikīkī area is within the Honolulu Aquifer Sector (301) which is further divided into five aquifer systems which are the Palolo, Nuʻuanu, Kalihi, Moanalua, and Waiʻalae. The project site is located within the Pālolo Unit (30101) (CWRM 2008). This system generally spans in a *mauka-makai* direction from the ridgeline of the Koʻolau Mountains to the shoreline, and from Diamond Head to Ala Moana Beach Park. The Honolulu Aquifer Sector has an estimated sustainable yield of 50 million gallons per day (mgd) and the Palolo Unit has a sustainable yield of 5 mgd (CWRM 2008).



FLOOD INSURANCE RATE MAP

Figure 2.2

ST. AUGUSTINE-BY-THE-SEA CHURCH MASTER PLAN
WAIKĪKĪ, O'AHU, HAWAI'I

The estimated sustainable yield in each aquifer system of the Honolulu Sector is for a large basal aquifer in Koʻolau volcanics. High level dike and perched ground waters drain into the basal lenses from small aquifers in the mountainous regions. A wide coastal plain is the surface of a thick, effective sedimentary caprock which forced the original ground water head to rise to 42 feet above sea level before balance was attained between inflow and outflow.

2.3.2 Surface and Coastal Waters

There are no perennial or intermittent streams present in the immediate vicinity of the project site since it is located within the urbanized Waikīkī resort district. The Ala Wai Canal situated 0.25 miles inland (*mauka*) of the project area and Waikīkī resort area is the primary surface water feature that disposes drainage from inland areas. Completed in 1928, this canal effectively intercepted a number of streams that previously flowed through Waikīkī eventually discharging into the ocean. There are no extant physical geological conditions present within or adjacent to the project site where runoff from streams would occur because the area is urbanized and stream flow is intercepted by the Ala Wai Canal. Subsequently, there are also no aquatic resources present in the immediate vicinity of the project area.

The St. Augustine Church property borders the inland (*mauka*) right-of-way of Kalākaua Avenue which separates resort uses from Kūhiō Beach on the other side. Coastal waters in the Waikīkī area are designated as "Class A" based upon the State Department of Health's (DOH) Water Quality Standards Map for Oʻahu. The objective of Class A water use is to protect recreational purposes and aesthetic enjoyment. Any other use is permitted as long as it is compatible with the protection and propagation of fish, shellfish, and wildlife, and with recreation use in these waters. Based upon the State DOH water quality standards (Chapter 11-54, HAR), these waters are not to act as receiving waters for any discharge which has not received the best degree of treatment or control compatible with the criteria established for that class.

The Waikiki Marine Life Conservation District (MLCD) was established in 1988 for the ocean area on the eastern end of Waikīkī Beach under Title 13-36, HAR. This area is about 76 acres and generally extends from the Kapahulu Groin up to the Natatorium War Memorial, and from the high-water mark seaward about 500 yards or to the edge of the fringing reef, whichever is greater. This Waikīkī MLCD prohibits fishing in this area, taking or injuring any marine life, or possessing any device that may be used for the taking of marine life. It is also prohibited to take or alter any sand, coral or other geological feature or specimen in this area.

2.4 Botanical and Faunal Resources

2.4.1 Existing Botanical Resources

Existing vegetation within the project site is limited due to the church's urbanized environment. The church, rectory building, parish hall building, and parking lot with driveway encompass most of the property. The only vegetated areas consist of an open grassed lawn next to the parish hall building and a small garden between the church and rectory. Other vegetation includes

landscaping trees near the driveway entrance on Kalākaua Avenue, within the parking lot, and along the perimeter of the property.

None of the vegetation within this project site are known to be Federal- or State-listed threatened or endangered, or candidate threatened or endangered botanical species. All are introduced species used as part of landscaping improvements for the existing church site.

2.4.2 Existing Avifauna and Faunal Resources

The urbanized character of this project site does not provide suitable habitat for mammals or avifauna. Vegetation on the project site consists predominantly of introduced trees, hedges, and grass used for landscaping, and there are no wetlands present on the property or in the immediate vicinity that may serve as important nesting or foraging habitat for endangered or threatened species. Therefore, no avian species listed as endangered, threatened, proposed, or as a candidate species by the U.S. Fish and Wildlife Service or by the State of Hawai‘i under its endangered species program are known to be present on the project site or in the immediate vicinity of the church project site. The project site is also not located within a State designated Natural Area Reserve.

Avian species present on the project site would likely consist of introduced species such as various types of pigeons and doves, babblers, silvereyes, saltators, and cardinals. Mammals present on the project site would likely consist of feral mammals typical of the surrounding Waikīkī resort area such as rats or feral cats. No mammals were observed at the project site during a recent visit to the property in March 2010.

2.5 Air Quality

Federal ambient air quality standards (AAQS) have been established by the U.S. Environmental Protection Agency (EPA) for six criteria pollutants: carbon monoxide (CO), nitrogen dioxide (NO2), sulfur dioxide (SO2), lead (Pb), ozone (O3), and concentrations of particulate matter less than 10 microns (PM10) and 2.5 microns (PM2.5). For selected criteria pollutants, the State of Hawai‘i has established ambient air quality standards that are somewhat more stringent than the federal standards under Title 11, Chapter 59, HAR. Table 2.1 presents a summary of the federal and Hawaii ambient air quality standards that apply to the proposed project area.

Air quality in the State can be generally characterized as relatively clean and low in pollution. Excluding the exceedances due to the continued volcanic activity on the Island of Hawai‘i, the State of Hawai‘i was in attainment of all National ambient air quality standards in 2008 (DOH, 2009). Tradewinds that are predominant throughout the year typically carry emissions and other air pollutants from inland areas out toward the ocean.

Table 2.1
State and Federal Ambient Air Quality Standards

Air Pollutant	Averaging Time	Hawaii AAQS	Federal (NAAQS)	
			Primary	Secondary
Carbon Monoxide (CO)	1-hour	9 ppm	35 ppm	--
	8-hour	4.4 ppm	9 ppm	--
Lead (Pb)	Quarterly	1.5 μg/m^3	1.5 μg/m^3	1.5 μg/m^3
Nitrogen Dioxide (NO_2)	Annual	0.04 ppm	0.053 ppm	0.053 ppm
Ozone (O_3)	8-hour	0.08 ppm	0.075 ppm	0.075 ppm
Particulate Matter ≤10 micrometers in diameter (PM_{10})	Annual	50 μg/m^3	--	--
	24-hour	150 μg/m^3	150 μg/m^3	150 μg/m^3
Particulate Matter ≤2.5 micrometers in diameter ($PM_{2.5}$)	Annual	--	15 μg/m^3	15 μg/m^3
	24-hour	--	35 μg/m^3	35 μg/m^3
Hydrogen Sulfide (H_2S)	1-hour	0.025 ppm	--	--
Sulfur Oxides (SO_2)	Annual	0.03 ppm	0.03 ppm	--
	24-hour	0.14 ppm	0.14 ppm	--
	3-hour	0.50 ppm	--	0.50 ppm

Source: State Department of Health, 2008

Present air quality in the project area is primarily affected by vehicle emissions, and to a lesser extent by distant industrial and natural sources. Much of the particulate emissions on O‘ahu originate from area sources such as mineral products industry and agriculture. Sulfur oxides are emitted almost exclusively from point sources such as power plants and refineries. Nitrogen oxides emissions emanate predominantly from industrial point sources.

Within the immediate vicinity of the project site, air quality is primarily affected by vehicular-related emissions in the form of carbon monoxide (CO) generated by traffic along Kalākaua Avenue, ‘Ōhua Avenue, and other nearby roadways. Vehicular traffic along Kalākaua Avenue encounters periodic congestion at the intersection with ‘Ōhua Avenue generating increased concentrated emissions of CO. However, such occurrences are not expected to exceed the State’s one hour AAQS for CO (9 ppm), and would be well within the National AAQS. Therefore, present carbon monoxide emissions from vehicular traffic should not be an issue affecting air quality associated with the project site and immediate area.

2.6 Noise

Existing dominant noise sources in the project area would consist of the wind and ocean, occasional distant aircraft flybys, vehicular traffic, and human voices from visitor activities occurring in this resort area. Vehicular traffic along Kalākaua Avenue and ‘Ōhua Avenue would be the primary noise source at the project site due to the amount of vehicular traffic that occurs in Waikīkī.

The majority of noise generated from existing activities on the project site would be human voices and vehicular traffic in the parking lot during church functions held there. These activities are scheduled only during certain times of the day and should not cause excessive noise. Other administrative or related activities conducted should not generate much audible noise since they would occur within existing buildings.

There are no noise sensitive resources present within the immediate vicinity of this project site because it is located within the Waikīkī resort area. Adjacent uses include commercial uses, the Waikīkī Beach Marriott Hotel and Pacific Beach Hotel.

2.7 Visual Resources

This section identifies existing visual resources that are associated with the project site and Waikīkī resort area. Various references were used to assist in identifying visual resources associated with Waikiki along with public viewing locations. Sources identified consisted of: 1) the City's Primary Urban Center (PUC) Development Plan, 2) Waikīkī Special District under the City's *Land Use Ordinance*, and 3) a City *Coastal View Study* (Chu and Jones 1987).

Visual Resources References

The Primary Urban Center (PUC) Development Plan, adopted under Ordinance 04-14, presents guidelines, polices, and conceptual schemes that serve as a policy guide for more detailed zoning, maps, and regulations. Panoramic views of natural features and landmarks identified under a Significant Panoramic Views Map depict the vantage points and orientation of major panoramic views of objects within the Primary Urban Center.

There were no significant panoramic east-west, *mauka-makai*, or continuous views identified on or near the project site. No significant panoramic views were identified from Kalākaua Avenue or ʻŌhua Avenue near the project site (DPP, 2004).

Under the City's *Land Use Ordinance*, the Waikīkī Special District established under Section 21-9.80 of the ROH prescribes prominent view corridors. Several streets and locations identified significant public views of Waikīkī landmarks, the ocean, and mountains from public vantage points. The only public view noted that is pertinent to the project site is the following:

- *Continuous ocean views along Kalākaua Avenue, from Kūhiō Beach to Kapahulu Avenue.*

A *Coastal View Study* (Chu and Jones, 1987) was completed in 1987 for the City's Department of Land Utilization (now known as the Department of Planning and Permitting) that inventoried significant coastal views and coastal land forms which together make up the scenic shoreline resources on Oʻahu. The study identified views from public viewing points and coastal roadways within the City's Special Management Area.

Applicable coastal resources identified in this study were the shoreline and Waikīkī Beach. Kūhiō Beach Park fronting the project area has important coastal and recreational resources from which vivid pedestrian views can be enjoyed. The continuous *makai* view of this shoreline was identified along Kalākaua Avenue from Kūhiō Beach to the Natatorium War Memorial.

Existing Views

The St. Augustine Church project site is located on the *mauka* (inland) side of Kalākaua Avenue and therefore does not affect existing views of Kūhiō Beach Park and the ocean from this roadway. The Church is situated behind an existing commercial building located at the corner of Kalākaua Avenue and ʻŌhua Avenue. A driveway from the project site connecting to Kalākaua Avenue allows views of the shoreline as shown on Exhibit 2.3.

Exhibit 2.3. South and Southwest Views of Shoreline from Project Site Driveway Along Kalākaua Avenue

2.8 Historic, Archaeological, and Cultural Resources

An archaeological inventory survey was conducted for this project by Cultural Surveys Hawaiʻi, Inc. (CSH), and their report is included in Appendix C. The archaeological inventory survey scope was designed in accord with State Historic Preservation Division (SHPD) rules governing standards for archaeological inventory surveys and reports (HAR 13-13-276).

2.8.1 Historic, Archaeological and Cultural Resources

Summary of Historical Background

In the centuries before the arrival of Europeans, the *ahupuaʻa* of Waikīkī was an intensely used area with abundant natural and cultivated resources. This included an expansive system of irrigated taro fields supporting a large population. In the nineteenth century, after a period of depopulation, Waikīkī was reanimated by the Hawaiian *aliʻi*, the foreigners residing there, and by the farmers continuing to work the irrigated field system, which had been converted from taro

to rice. This farming continued up to the first decades of the 20th century until the Waikīkī reclamation project, which resulted in the construction of the Ala Wai Canal, drained the remaining ponds and irrigated fields.

Previous archaeological reports have documented numerous pre- and post-contact human burials throughout the Waikīkī area, many within close proximity to the project area. There were 22 burials encountered at the intersection of Kealohilani and Kalākaua Avenues and an additional 7 burials encountered at the intersection of ʻŌhua and Kalākaua Avenues. Isolated pre-contact burials and burial clusters in Waikīkī have been found primarily in sandy deposits, just above the water table and below historic-era fill materials.

Archaeological studies within Waikīkī and in the vicinity of the project area have also recorded the presence of subsurface cultural deposits of both pre- and post-contact provenance. These deposits have generally remained intact despite the years of construction activity that have altered the entire Waikīkī area.

Historic Status of Existing Parish Hall Building

The existing parish hall building was constructed in 1959 replacing several wood cottages with a two-story masonry apartment building. This building will be demolished and replaced with a new Parish Hall. The building is over 50 years of age making it eligible for evaluation as a historic resource. However, the structure lacks the significance and integrity required for listing on the State or National Register of Historic Places.

The building is not representative of major trends or events in the history of Hawaiʻi or the United States, nor is it associated with the lives of significant persons, and it has no potential to yield information important in prehistory or history. Further, it is not a representative example of a building type or the work of a master, and is not known to have cultural significance to an ethnic group. Information on this building has also been included in the archaeological inventory survey report prepared for this project.

2.8.2 Results of Fieldwork

Fieldwork consisted of performing both a ground penetrating radar (GPR) survey and subsurface testing. This fieldwork was performed in phases over several months with multiple GPR surveys and subsurface testing events conducted.

GPR Testing Results

GPR surveying was conducted within the project area usually prior to subsurface testing in an attempt to define the local stratigraphy and to prospect for buried cultural deposits. A total of nine (9) locations within the project area were surveyed with GPR in phases as summarized below.

1. Six (6) locations were surveyed (Survey Area 1 – 6) with GPR prior to conducting the first phase of subsurface testing.
2. Two (2) additional locations were later surveyed (Survey Area 7 and 8) following the second phase of subsurface testing.
3. One final location was surveyed (Survey Area 9) prior to the fourth phase of subsurface testing within the area proposed for an elevator shaft serving the St. Damien Museum.

In general, the GPR surveying was successful as subsurface anomalies were able to be accurately located and maximum depth "visibility" (i.e. radar wave penetration) reached approximately 100 centimeters (cm) below the surface. GPR surveying appeared to be able to define the local stratigraphy through the presence of subtle horizontal banding. Identified subsurface anomalies within the project area were of varying size, distribution, and prominence. Being within urbanized Waikīkī, observed anomalies could correspond to subsurface features associated with modern urbanization, such as: backfilled machine excavations, abandoned or in-use utility lines, buried building foundations, and miscellaneous construction debris. However, observed anomalies may also correspond to buried archaeological deposits including: fire pits, refuse pits, midden and artifact concentrations, and human burials based upon the background research results for Waikīkī.

Of note were anomalies observed within Survey Areas 7 and 8. These areas were surveyed with GPR following the second phase of subsurface testing that resulted in the identification of two human burials (SIHP -7136, Features A & B). Both of these burials extended beyond the extent of the test excavation in which they were observed. Based on GPR data from Survey Area 8, it appeared that burial pits associated with human interment can be detected. These burial pits appeared as isolated anomalies that were fairly ephemeral, consisting of well defined, but weakly expressed hyperbolas located approximately 70 cm below the existing ground surface. These anomalies contrast to ones associated with subsurface utilities and/or other solid objects (i.e., concrete slabs, basalt boulders, etc.) which tend to be very pronounced, and consist of clusters of anomalies as opposed to isolated ones.

GPR depth profiles indicated that the soils within the project area were relatively uniform, consisting of a single sediment type. The exception was the presence of subtle horizontal banding observed from 0 to 25 cm below surface. It is believed that this narrow horizontal banding corresponds to asphalt and underlying fill associated with the driveways and parking lots present throughout the project area.

Survey Areas 1, 2, 3 and 7 had prominent and concentrated anomalies within these locations observed from 0 to 100 cm below surface suggesting the presence of extensive prior subsurface disturbance. Such disturbance is likely associated with machine excavation for the installation of utilities or other various construction activities (ex. grading, or building construction). Anomalies observed in these survey areas clearly indicated the presence of elongated linear anomalies that have a high probability to be associated with utility lines or drainage systems.

Subsurface Testing Results

Subsurface testing within the project area was performed in four phases, occurring between August 2010 and March 2011. A total of 11 test trenches (Trench 1-11) were excavated within the project areas proposed for the Saint Damien Museum and redeveloped Parish Hall structure. Figure 2.3 shows the location of these test trenches.

The initial phase of subsurface testing included the excavation of six test trenches (Trench 1-6). Four of the six test trenches (Trench 1, 2, 5, and 6) were located within the proposed footprint of the Parish Hall structure with the remaining two test trenches (Trench 3 and Trench 4) located within the proposed footprint of the Saint Damien Museum.

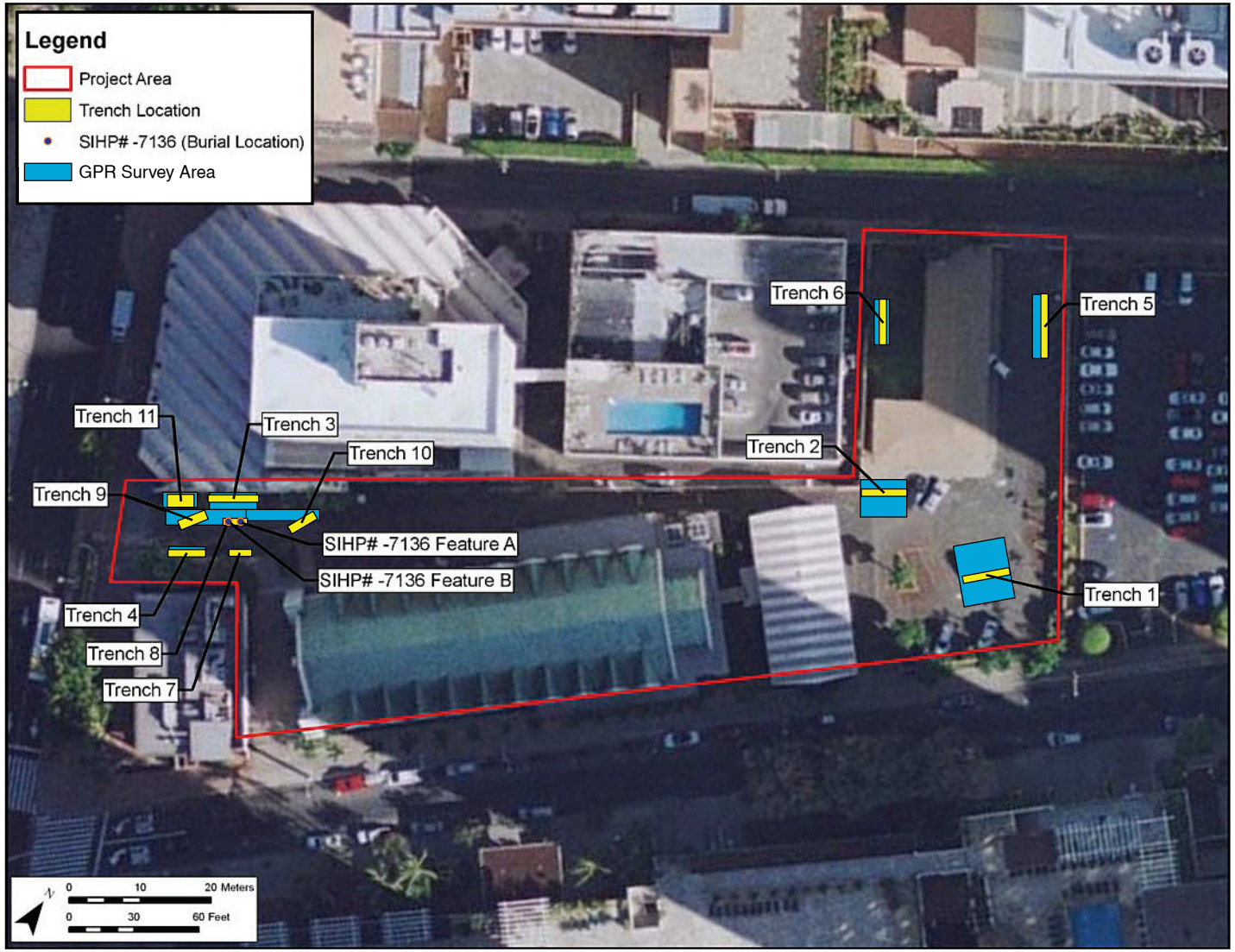
A buried, culturally-enriched sand A-horizon (cultural layer) was identified within each of the six initial test trenches and designated State Inventory of Historic Properties (SIHP) # 50-80-14-7135. Disarticulated human skeletal remains, consisting of a radius, three tarsal bones, and several rib fragments were identified during the hand excavation of Trench 3 within SIHP# 50-80-14-7135.

Numerous pre-contact and historic-era artifacts were also encountered throughout the cultural layer and collected for laboratory analysis along with bulk sediment samples containing charcoal and/or carbonized plant remains. The discovery of disarticulated human skeletal remains within SIHP# 50-80-14-7135 prompted a subsequent phase of subsurface testing within the proposed Museum footprint.

The second phase of subsurface testing included the excavation of two test trenches (Trench 7 and Trench 8) that were positioned immediately south of Trench 3. SIHP# 50-80-14-7135, a buried, culturally-enriched sand A-horizon, was encountered within Trench 7 and Trench 8. Two human interments (SIHP# 50-80-14-7136 Feature A and B) were identified within well-defined burial pits located within Trench 8. The discovery of human interments prompted a subsequent phase of subsurface testing.

The third phase of subsurface testing included the excavation of two trenches (Trench 9 and 10), which were positioned to the west and east of Trench 3. SIHP# 50-80-14-7135, a buried, culturally-enriched sand A-horizon, was encountered within Trench 9 and 10.

A fourth phase of subsurface testing was then conducted after consultation with cultural descendants of Waikīkī. This final testing included the excavation of one trench (Trench 11) which was positioned within the proposed elevator shaft location for the Saint Damien Museum. A highly disturbed portion of SIHP# 50-80-14-7135 (cultural layer) was encountered.



Source: Cultural Surveys Hawai'i Archaeological Inventory Survey, April 2011.

SUBSURFACE TEST TRENCHES

ST. AUGUSTINE-BY-THE-SEA CHURCH MASTER PLAN
WAIKĪKĪ, O'AHU, HAWAI'I

Figure 2.3

2.8.3 Description of Historic Properties and Significance

The inventory survey investigation and documentation of the project area's historic properties has provided sufficient information for significance evaluations. Significance is determined after evaluation of the historic property in light of the five broad criteria used by the Hawai'i State Register of Historic Places (HAR 13-284-6). The criteria consist of the following.

- A Historic property reflects major trends or events in the history of the state or nation.
- B Historic property is associated with the lives of persons significant in our past.
- C Historic property is an excellent example of a site type.
- D Historic property has yielded or may be likely to yield information important in prehistory or history.
- E Historic property has cultural significance to an ethnic group, including, but not limited to, religious structures, burials, and traditional cultural properties.

SIHP# 50-80-14-7135 (Cultural Layer)

SIHP# 50-80-14-7135 is a buried, culturally-enriched sand A-horizon (cultural layer). This site was evaluated significant under Criterion D (have yielded, or may likely yield information important in prehistory of history) of the Hawai'i Register of Historic Places evaluation criteria. It was identified within all subsurface test excavations of the project area. The lateral limits of the subsurface cultural layer have not been established because it extends beyond the boundaries of the project area. A summary of this historic property is provided.

Formal Type:	Subsurface Cultural Layer
Functional Interpretation:	Activity Area
Number of Features:	1
Age:	Pre- and Post-Contact
Current Dimensions:	Identified within all subsurface test excavations within the 1.15-acre project area (lateral limits not established)
Location:	Trenches 1-10

Disarticulated human skeletal remains were encountered within Trench 3 of this cultural layer, and consisted of most of a radius, three tarsal (foot) bones, and two rib fragments. The remains were encountered within Stratum III (cultural layer) at a depth of approximately 145 cm below surface. The incomplete, disarticulated remains indicate a secondary deposit, likely due to previous disturbance of a burial. There were no grave goods or artifacts in direct association with the disarticulated remains. Per consultation with SHPD, the disarticulated human skeletal remains were recovered for interim curation on the Church premises.

A total of 63 accessioned artifacts were collected within this cultural layer. Ten of the artifacts were considered to be of traditional Hawaiian origin, likely dating to the pre-contact period, and consisted of ground stone tools, basalt flakes, and a coral file. These traditional Hawaiian

artifacts were only observed in the southwestern (*makai*) portion of the project area, within Trenches 3, 4, 8 and 9.

The remaining 53 accessioned artifacts collected during subsurface excavation were considered to be post-contact or historic period artifacts. These consisted of various diagnostic or representative glass, ceramic, and metal items. The artifacts collected from SIHP# -7135 provide additional temporally diagnostic information indicating that this cultural layer was utilized as an activity area from the pre-contact period through the mid 20th century.

Faunal osseous material was also identified within Trenches 2 to 5, 7, and 9 to 11. Faunal species represented amongst identifiable bone fragments included cow (*Bos taurus*), pig (*Sus scrofa*), dog (*Canis familiaris*), and unknown species of bird and fish. The faunal assemblage collected consists largely of historically-introduced species dominated by butchered cow or pig bones suggesting that the majority of the faunal osseous material was likely discarded or buried during the post-contact period.

Additionally, pit features of varying depths and dimensions were observed, extending from the base of the cultural layer (SIHP# 50-80-14-7135) to within naturally-occurring Jaucas sand. These pit features could reflect natural depressions of the former land surface and/or be associated with man-made excavations. Two of these pit features, located within Trench 8, were observed to contain human burials (discussed under SIHP# 50-80-14-7136 Feature A and B). The remainder of the pit features contained sediment that was consistent with the sediment observed within the cultural layer. These features did not contain diagnostic information warranting them to be assigned as formal features of a historic property.

SIHP# 50-80-14-7136 (Human Interment)

SIHP# 50-80-14-7136 is a complex consisting of two in situ human burials (Feature A and B). This site was evaluated significant under Criterion D (have yielded, or may likely yield information important in prehistory of history) and Criterion E (value to native Hawaiian people or to another ethnic group due to associations with cultural practices). A summary of this historic property is provided.

Formal Type:	Complex (Human Interment)
Functional Interpretation:	Burial
Number of Features:	2
Age:	Post-Contact
Current Dimensions:	Minimally 4.2 meter N/S by 3.1 meter E/W
Location:	Trench 8

SIHP# 50-80-14-7136 Feature A (Burial 1)

This feature is a human burial that was encountered in the northern portion (*mauka*) of Trench 8 during the second phase of subsurface excavation performed in the project area. This trench is located approximately 2.5 meters southeast of the disarticulated remains encountered in Trench 3. Feature A was evidenced at a depth of 87 cm within a burial pit approximately 60 cm wide that extended from the top of Stratum III (cultural layer) to within Stratum IV (Jaucas sand).

Once encountered, only a portion of the skeletal remains was exposed in order to determine the position of the burial. Based on the findings of the partial exposure, Feature A appears to represent a complete, previously undisturbed inhumation. The position of the skeletal remains was determined to be supine (fully-extended) with the cranium oriented toward the SE and the postcrania to the NW with the femora extending into the northwest sidewall of Trench 8. Therefore, the foot elements could not be accounted-for to exclude them as the disarticulated remains encountered in Trench 3; however, the arm elements appeared to be intact and undisturbed.

No evidence of coffin wood was observed during the partial exposure of the skeletal remains. A necklace similar to that observed within SIHP# -7136 Feature B, consisting of small purple, green, red, and black glass beads was observed in situ over the neck area. No other associated grave goods or artifacts were observed within the burial pit feature. A preliminary osteological analysis of the in situ burial suggests that the individual was possibly an older adult female, and an assessment of ethnicity suggests likely Polynesian. The burial position and necklace indicates that SIHP# -7136 Feature A is likely a post-contact human burial.

SIHP# 50-80-14-7136 Feature B (Burial 2)

This feature is a human burial that was encountered in the southwestern portion (*makai*) of Trench 8 during the second phase of subsurface excavation in the project area. The burial is located approximately 2.5 m southeast of the disarticulated remains encountered in Trench 3. Feature B was evidenced at a depth of 96 cm within a burial pit that extended from the base of Stratum III (cultural layer) to within Stratum IV (Jaucas sand).

Once encountered, only minimal excavation proceeded in the area in order to partially expose elements and determine the position of the burial without disturbing the remains. Only the upper portion of the burial, from the upper arm and the upper back to the cranium, extends into Trench 8. The exposed skeletal remains of Feature B appear to represent a previously undisturbed inhumation. However, as the lower arms and hands, and below the chest extend into the southwest sidewall, it was not possible to exclude disturbance to the lower half of the skeletal remains. As such, the disarticulated remains from Trench 3 cannot be excluded as originating from this individual.

The remains were in a prone position. The burial position is estimated to be semi-flexed as the lower arms and hands were not encountered in a flexed position near the upper body. An elaborate beaded necklace consisting of numerous purple, green, black, and red small glass beads was observed around the neck area. All of the beads were loose due to complete degradation of the material used to string them. No other grave goods or associated artifacts were observed within the burial pit feature. A preliminary osteological analysis of the visible in situ remains suggests an adult female individual, likely of Polynesian ethnicity. The burial position and necklace indicates that SIHP# -7136 Feature B is likely a post-contact human burial.

Following the procedures of Chapter 6E-43, HRS and Chapter 13-300, HAR, the human burials associated with SIHP# 50-80-14-7136 were determined by SHPD to be over 50 years old and likely Native Hawaiian. As a result, the treatment of previously identified Native Hawaiian burials on O‘ahu falls under the jurisdiction of the O‘ahu Island Burial Council (OIBC).

2.8.4 Cultural Resources

The project site is not known to have any traditional native Hawaiian cultural practices occurring on the property that may be affected by the proposed improvements. Such traditional cultural practices include modern-day subsistence activities (ex. fishing, *limu* gathering, etc.), gathering of plants or other vegetation for cultural activities (ex. lei making) or healing, or religious activities. Present religious activities occurring on the property are associated with the Roman Catholic Church. The parish hall is used by certain community organizations for various activities which includes *hula halau* practices. The project site does not provide access to other restricted or sensitive areas in order to conduct traditional cultural practices.

2.9 Social and Economic Factors

Information on the existing social characteristics of the project area in relation to the Waikīkī resort district was obtained from the U.S. Census Bureau’s Census 2000 data. A 2010 update of census data was performed by the U.S. Census Bureau and some data is starting to be released. The Waikīkī resort area is located within the Honolulu Census Designated Place (CDP) and generally comprises six census tracts as shown on Exhibit 2.4. The church project site is within the Koa Avenue Census Tract (CT 18.01) of this CDP. A summary of demographic characteristics from census tracts making up the Waikīkī area is compared with the Honolulu CDP and is shown on Table 2.2.

The 2000 census data shows that the Waikīkī district makes up a little over 5 percent of the population (19,759 persons) from the Honolulu CDP. The percentage of the population between 18 to 64 years old is higher in Waikīkī at about 73 percent compared with 63 percent in the Honolulu CDP. Also, the number of children (17 years and under) living in Waikīkī is much lower. The resident population in Waikīkī has a higher percentage of White and lower percentages of Asian, Native Hawaiian or other Pacific Islander, and those of two or more races compared with the Honolulu CDP.

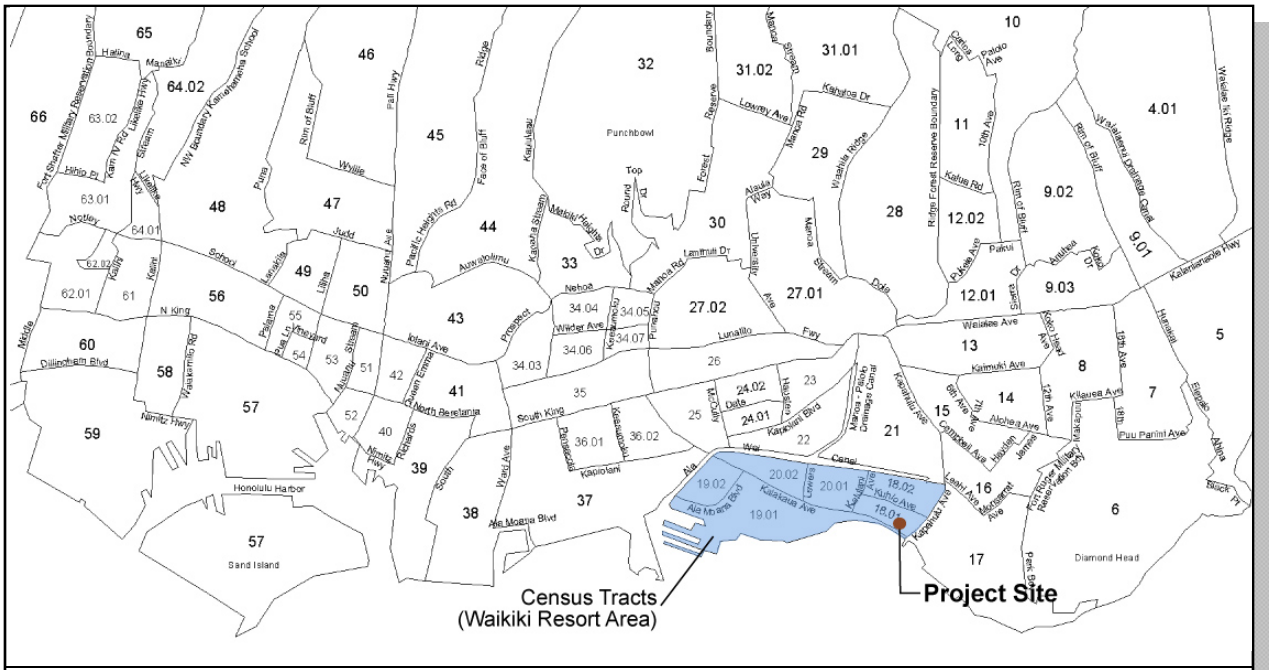


Exhibit 2.4
U.S. Census Tracts of Waikīkī Resort Area

The number of households in Waikīkī is about 8 percent (11,385 households) of the Honolulu CDP indicating smaller average household size. The percentage of family and non-family households were fairly consistent between Waikīkī and the Honolulu CDP. However, the percentage of households in Waikīkī with children was only 10 percent which is significantly lower than that of Honolulu (28%). Waikīkī also has a noticeably lower percentage of households with individuals 65 years and older at 23.5 percent compared to 32.3 in Honolulu. Waikīkī's resident population can thus be characterized as having a larger number of adults and singles. Households with families tend to have less children as compared with Honolulu.

The percentage of renter-occupied housing units in Waikīkī is also higher than Honolulu which can be expected because it is a resort-oriented location. Thus, a higher number of housing units in Waikīkī function as investment housing for owners as compared to suburban subdivisions which would be more owner-occupied housing. This is also evident in the higher number and percentage of vacant housing units in Waikīkī (46% versus 29%) that are used for seasonal, recreational, or occasional use. The Honolulu CDP has almost three times the number of vacant housing units (18,326 versus 6,994) than Waikīkī, but over 12 times the number of households. This supports the more transient and resort oriented characteristic of Waikīkī compared to Honolulu. Regarding employment status, Waikīkī is generally consistent with the Honolulu CDP. However, household income in Waikīkī is notably lower than Honolulu with a higher percentage of households earning between $10,000 and $49,999 likely due to a greater number of singles living in units.

Table 2-2
Summary of U.S. Census Demographic Data (2000)

Description	Waikīkī Area Census Tracts (18.01, 18.02, 19.01, 19.02, 20.01, 20.02, 21.01, 21.02)		Honolulu CDP	
	Number	Percent	Number	Percent
POPULATION	**19,759**		**371,657**	
AGE				
Under 5 years	726	3.7	18,896	5.1
5 to 17 years	1,096	5.5	52,576	14.2
18 to 64 years	14,271	72.2	233,928	62.9
65 years and older	3,666	18.6	66,257	17.8
Median age			39.7	
RACE				
White	8,687	44.0	73,093	19.7
Black or African American	486	2.5	6,038	1.6
American Indian and Alaska Native	66	0.3	689	0.2
Asian	7,709	39.0	207,588	55.9
Native Hawaiian or Other Pacific Islander	994	5.0	25,457	6.8
Some other race	228	1.2	3,318	0.9
Two or more races	1,589	8.0	55,474	14.9
HOUSEHOLDS	**11,385**		**140,337**	
Family households	7,292	64.1	87,374	62.3
Non-family households	4,093	35.9	52,963	37.7
Households with individuals under 18 years	1,149	10.1	39,308	28.0
Households with individuals 65 years and over	2,675	23.5	45,352	32.3
HOUSING TENURE AND OCCUPANCY				
Occupied housing units	11,377		140,337	
Owner-occupied housing units	3,770	33.1	65,861	46.9
Renter-occupied housing units	7,607	66.9	74,476	53.1
Vacant housing units	6,994		18,326	
For seasonal, recreational, or occasional	3,246	46.4	5,237	28.6
EMPLOYMENT STATUS				
Population 16 years and older	18,178		308,618	
In labor force	10,461	57.6	187,467	60.7
Not in labor force	7,717	42.4	121,151	39.3
INCOME (in 1999)				
Less than $10,000	1,832	16.1	13,795	9.8
$10,000 to $49,999	8,058	54.7	62,740	44.7
$50,000 to $99,999	2,395	21.0	40,012	28.5
$100,000 or more	932	8.2	23,854	17.0
Median household income	$30,924 (Average)		$45,112	

Source: U.S. Census Bureau, Census 2000

At the project site, the surrounding character of the community and uses are similar and consistent with the rest of Waikīkī. Commercial uses are present along Kalākaua Avenue. The Waikīkī Beach Marriott Resort and Spa is across the church along ‘Ōhua Avenue, and the Pacific Beach Hotel takes the entire block on the western side of the project site along Kealohilani

Avenue. The Foster Tower condominium is located adjacent to the project site, and is comprised of both owner-occupied and renter-occupied units.

At the St. Augustine Church project site, the church's priest and other clergy live on the property in the rectory. The rectory has a few studios to serve as temporary housing for visiting clergy. There are no commercial uses or businesses operating on this church site because it is used for the non-profit Catholic Church organization.

2.10 Infrastructure Facilities

2.10.1 Water Facilities

An engineering assessment of water system requirements was conducted by Sam O. Hirota, Inc., and a utilities report is included in Appendix D. The City Board of Water Supply (BWS) provides potable water service to the project site along with surrounding areas through a series of existing interconnected waterlines generally routed along roadways. The Saint Augustine Church site is serviced by two water meters. Parcel 12, which includes the church and rectory, is serviced by a 1.5-inch meter connected to a 12-inch water main routed within ʻŌhua Avenue. Parcel 15 which includes the existing parish hall is serviced by a 1.5-inch meter connected to a water main on Kealohilani Avenue.

The total water demand generated by existing Saint Augustine Church facilities is estimated to be about 2,150 gallons per day (gpd) based upon the BWS's *Water System Standards* domestic consumption planning guidelines. Under this guideline, an average daily demand of 120 gallons per 1,000 square feet of space (commercial/residential mix) was used for the existing parish hall. An average of 400 gallons per unit (multi-family low rise) was used for the existing rectory (4 units).

2.10.2 Wastewater Facilities

The City Department of Environmental Services operates and maintains a sanitary sewer system serving Waikīkī. This sewer system conveys wastewater collected to the City's Sand Island Wastewater Treatment Plant (WWTP) for treatment and disposal. This treatment plant serves the Honolulu area generally extending from Kuliʻouʻou in East Honolulu to Moanalua, and is designed to treat an average flow of 82 million gallons per day (mgd).

The project site is currently serviced by four sewer laterals. Parcel 15 (parish hall) is serviced by a lateral connecting to a gravity main routed within Kealohilani Avenue. Parcel 12 (church, rectory) has three laterals that connect to a gravity main routed within ʻŌhua Avenue. The project site is estimated to presently generate about 2,470 gpd of wastewater primarily associated with the existing parish hall.

2.10.3 Drainage Facilities

A preliminary drainage report prepared by Sam O. Hirota, Inc. for this project is included in Appendix D. Storm water runoff in the project area is collected and discharged at various locations along the shoreline via the City's storm water drainage system. This system consists of a system of catch basins, inlets and outlets, manholes, and piping which are located within existing roadways to collect and dispose of storm water. Along 'Ōhua Avenue, the City has catch basins, manholes and a concrete pipe to collect and transport runoff. Along Kealohilani Avenue near the project site, storm water generally sheet flows along the road toward Kalākaua Avenue.

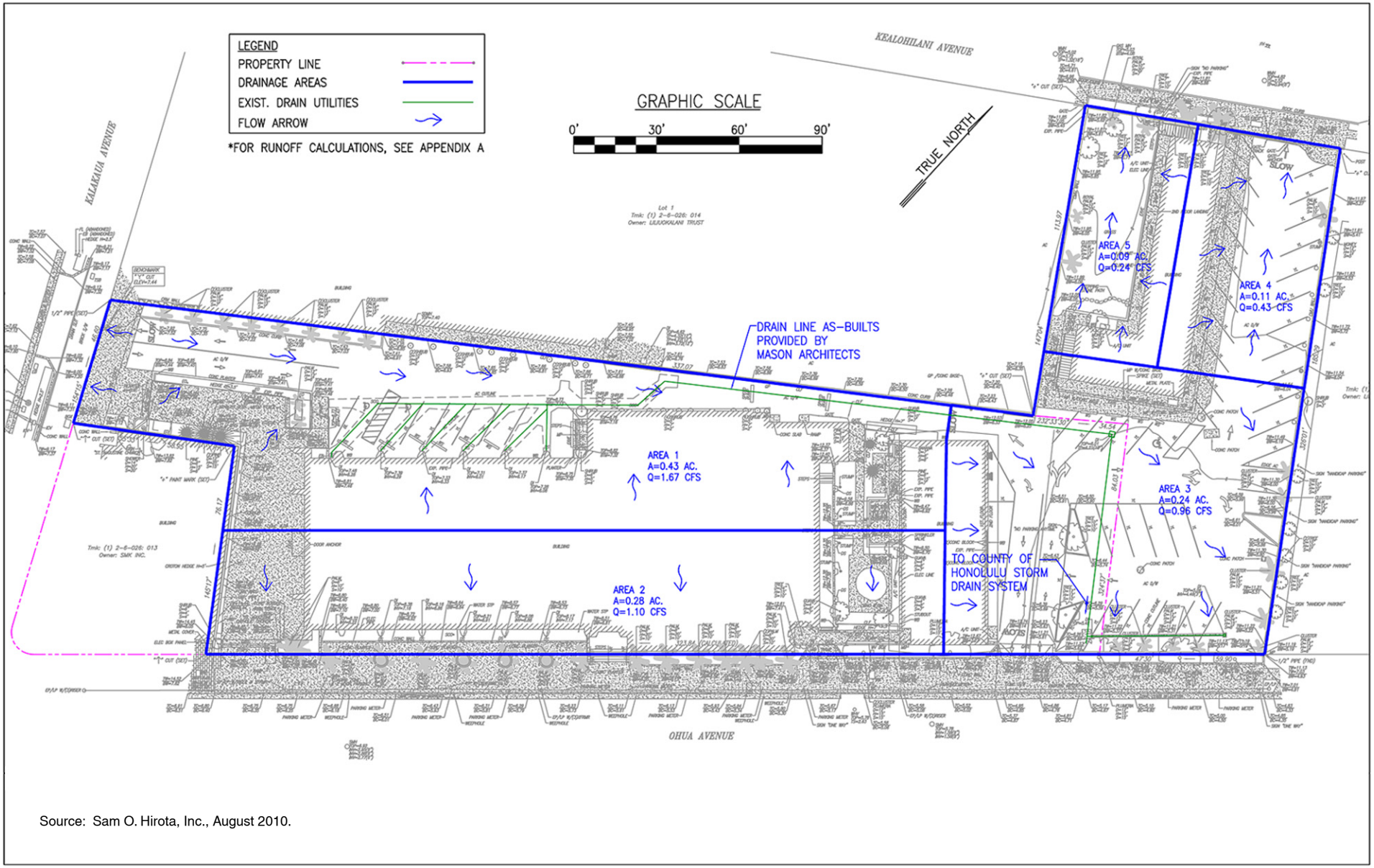
Within the project site, existing underground drainage lines carry storm water from portions of the property to inlets connected to the City's drainage system along 'Ōhua Avenue. Other areas have runoff sheet flowing toward Kealohilani Avenue. Concrete walls border the northeastern (Marriott parking lot) and northwestern (Foster Tower condominium) sides of the site preventing storm water from discharging in those directions. The ABC store/Burger King building bordering the southern corner of the project site also prevents discharges into that area. Therefore, on-site storm water from these areas are collected in inlets serving the site's drainage system.

Existing runoff generated from the project site calculated for a 10-year, 1-hour storm event was determined to be 4.40 cubic feet per second (cfs). Figure 2.4 shows the present drainage patterns within the project site along with calculated quantities.

Storm runoff from the church building is captured through a series of downspouts. Runoff from the southern portion of the church building exits the site through weep holes in the curb on 'Ōhua Avenue, while the northern portion is collected within the site's drainage system and discharged into the City's system. Runoff from the rectory building sheet flows in a southeastern direction exiting the site through a pedestrian entrance onto 'Ōhua Avenue. Some runoff generated from the existing parish hall percolates within the adjacent grassed area while remaining runoff sheet flows in a northerly direction towards Kealohilani Avenue.

2.10.4 Solid Waste Facilities

The City Department of Environmental Services' Refuse Division provides municipal solid waste curbside collection for all single-family residences and a limited number of multi-family properties, non-residential customers, and City agencies on the island. Bulky items are collected on a monthly basis and either recycled or delivered to the Waimanalo Gulch Landfill. Green waste is collected every other week and composted by a private company.



Source: Sam O. Hirota, Inc., August 2010.

EXISTING DRAINAGE CONDITIONS

ST. AUGUSTINE-BY-THE-SEA CHURCH MASTER PLAN
WAIKĪKĪ, O'AHU, HAWAI'I

Figure 2.4

The project site is located within the City's Honolulu collection district. This district includes generators such as the downtown business district and Waikīkī resort area whose collection services are taken care of mostly by private haulers. Most private haulers deliver their waste directly to the City's H-POWER facility or the Waimanalo Gulch Sanitary Landfill.

The Honolulu Program of Waste Energy Recovery (H-POWER) energy recycling plant is a waste-to-energy (WTE) facility operated by the City located in the Campbell Industrial Park in Kapolei. Approximately 90 percent of the volume and 70 to 75 percent of the weight of solid waste received at H-POWER is diverted from the landfill, and converted into renewable electric energy. The ash and residue from H-POWER are delivered to the Waimanalo Gulch Landfill.

The Waimanalo Gulch Landfill located in Kapolei is owned by the City and is the only permitted landfill accepting solid waste on O'ahu. This landfill accepts: 1) non-combustible municipal solid waste; and 2) ash and residue from the H-POWER facility. Construction and demolition waste are not permitted at either H-POWER or the Waimanalo Gulch Sanitary Landfill, and is taken to the privately-owned PVT Nānākuli Construction and Demolition Material Landfill in Nānākuli (R.W. Beck, Inc., October 2008).

Municipal solid waste presently generated from church activities are collected by a private company for disposal. This waste is taken to the H-POWER facility for recycling into energy. The composition of waste generate is similar to residential waste with the majority consisting of organics (food), paper, and plastics.

2.10.5 Transportation Facilities

Existing Transportation Facilities

A traffic assessment letter report (January 2012) was prepared by Phillip Rowell and Associates to address traffic conditions. A copy of this report is included in Appendix E. Existing transportation facilities in the area of the project site consist of City roadways as there are no State highway facilities in the immediate project area. The Waikīkī resort area is served by an integrated roadway system comprised of Kalākaua Avenue routed along the coastline in a one-way northwest-to-southeast (Honolulu to Diamond Head) direction and Ala Wai Boulevard running in a one-way southeast-to-northwest (Diamond Head to Honolulu) direction. Kūhiō Avenue is a two-way roadway running in between and parallel to these two roadways providing access within Waikīkī.

Kapahulu Avenue is located at the eastern end of Waikīkī and generally runs in a *mauka-makai* (east-west) direction providing vehicular connections to Kalākaua Avenue, Kūhiō Avenue, and Ala Wai Boulevard. 'Ōhua Avenue and Kealohilani Avenue are City minor streets bordering the project site. These roads run in a *mauka-makai* direction providing vehicular access between Kalākaua Avenue and Kūhiō Avenue. Pedestrian traffic along Kalākaua Avenue is heavy and 'Ōhua Avenue also has moderate pedestrian traffic.

Near the project site, Kalākaua Avenue consists of three lanes and intersects with both Kealohilani Avenue and ʻŌhua Avenue forming signalized T-intersections. Kūhiō Avenue is a two-way, four-laned roadway that intersects Kealohilani Avenue forming a signalized T-intersection. Kealohilani Avenue is a two-way, two-laned street running between Kalākaua Avenue and Kūhiō Avenue, and no on-street parking is permitted. Kūhiō Avenue also has a signalized intersection with ʻŌhua Avenue.

ʻŌhua Avenue is one-way (*mauka* to *makai* direction), single-laned street running from Ala Wai Boulevard to Kalākaua Avenue. Along the church project site, ʻŌhua Avenue has on-street metered parking on both sides and forms two left-turn lanes at its approach with Kalākaua Avenue. A section of this road generally extending between Kalākaua Avenue and the Church's gated pedestrian entrance is designated a freight loading and unloading zone only. Vehicles have been observed consistently violating this restriction by parking in this loading zone.

Existing Traffic Conditions

Traffic conditions along Kalākaua Avenue in the vicinity of the project site are fairly good. During the weekday afternoon peak hour (4:15 – 5:15 p.m.), traffic volumes at the intersection with Kaʻiulani Avenue, three blocks away from the project site, were about 1,300 vehicles spread over three lanes. Kūhiō Avenue had traffic volumes of about 600 vehicles on the eastbound approach and 340 vehicles on the westbound approach at the intersection with Kaʻiulani Avenue. Approaches operated at Level-of-Service (LOS) "C" or better at this intersection (Kusao & Kurahashi, Inc., February 2010). Near the project area, estimated traffic volumes along Kalākaua Avenue during the weekday and Saturday afternoon peak hours (4:00 to 5:00 p.m.) were about 1,265 vehicles and 1,050 vehicles, respectively (Rowell, January 2012).

Traffic conditions at the intersection of ʻŌhua Avenue with Kalākaua Avenue also operated fairly well due to the low volume of traffic using that road. Vehicles using ʻŌhua Avenue would primarily be associated with uses along that street which are the St. Augustine Church, Waikīkī Beach Marriott Resort and Spa, and on-street parking. Traffic counts taken along ʻŌhua Avenue by Phillip Rowell and Associates during the weekday afternoon and Saturday afternoon peak hours were 230 vehicles and 210 vehicles, respectively (Rowell, January 2012).

The intersection of Kalākaua Avenue with ʻŌhua Avenue was observed to operate at an acceptable level-of-service during the weekday and Saturday afternoon peak hours. The queues present on ʻŌhua Avenue due to the traffic signal were relatively short and cleared every cycle observed. No queues were observed to back up beyond the entrance to the Waikīkī Beach Marriott Resort and Spa parking garage situated *makai* (west) of the Church's ʻŌhua Avenue entrance. At least two large tour buses were observed in the longer queues. This means that the ʻŌhua Avenue driveway to the Church's parking lot is not blocked by queues from the traffic signal at Kalākaua Avenue (Rowell, January 2012).

Counts were also taken of the Church's parking lot during the 10:00 a.m. Sunday service that usually has the largest attendance. These counts were performed on Sunday, December 11th and 18th, 2011. The parking lot was full both times with three to four vehicles double-parked for a total of about 50 vehicles in the parking lot. Based on observations from the traffic counts, parking lot counts, and reconnaissance of the adjacent streets, the Sunday morning traffic along the streets adjacent to the Church (Kalākaua Avenue and ʻŌhua Avenue) was also less than either Friday or Saturday afternoon traffic.

Public Transit

The City operates a public bus transit system that is called TheBus. Bus service is provided along Kalākaua Avenue and Kūhiō Avenue that includes both the City Express (Route B) and Country Express (Route E) routes. About 14 non-express bus routes occur along Kūhiō Avenue in the vicinity of ʻŌhua Avenue. There is no bus stop in the immediate vicinity of the church's existing driveway onto Kalākaua Avenue. TheBus does not provide bus service along ʻŌhua Avenue and Kealohilani Avenue.

TheHandi-Van is a City public transit service for persons with disabilities who are unable to use the City's bus service. TheHandi-Van service is generally available island wide from Monday to Sunday from 4:00 a.m. through 1:00 a.m. All-day service (24 hours per day) is available in areas located within 0.75 miles of TheBus Routes 2 and 40. TheHandi-Van fare is $2.00 per one-way passenger trip, and advanced reservations are required. TheHandi-Van 24-hour transit service is provided in the vicinity of the project site which is within the service area of TheBus Route 2 that runs along Kūhiō Avenue.

2.11 Public Facilities and Utilities

2.11.1 Educational Facilities

The St. Augustine Church project site is within the State Department of Education's (DOE) Kaimuki Complex Area. This complex includes 10 public schools comprised of Kaimuki High School, two middle schools, and seven elementary schools. Thomas Jefferson Elementary School is the closest to the project site located about 0.20 miles *mauka* along Kapahulu Avenue at the intersection with Ala Wai Boulevard. This school has an enrollment of about 370 students and has 24 teachers and 5 administrative staff.

2.11.2 Medical Facilities

There are no existing major medical facilities in the immediate vicinity of the project site. There are two medical facilities located about 1.4 miles away which are the Diamond Head Health Center and Lēʻahi Hospital. Emergency medical services are available at Kaiser Permanente's Honolulu Clinic, Straub Clinic and Hospital, Kapiʻolani Medical Center for Women and Children, and the Queen's Medical Center, located several miles away in the Kakaʻako and downtown urban area of the island.

The Diamond Head Health Center (DHHC) is a specialty clinic providing testing, diagnosis, and treatment of sexually transmitted diseases (STDs) to the community. Adjacent to the DHHC is Lē‘ahi Hospital. Established in the 1900’s by the Victoria Hospital Association, Lē‘ahi Hospital is now part of the Hawaii Health Systems Corporation. The hospital has 179 beds to serve as a nursing home certified as a skilled nursing facility and intermediate care facility, and also has 9 beds for acute tuberculosis treatment.

2.11.3 Recreational Facilities

There are several major recreational facilities located in the general area of the project site which consists of beach parks, City parks, and other facilities. *Makai* of the project site across Kalākaua Avenue is Kūhiō Beach Park which has several recreational features. West of this beach park is Grey’s Beach and to the east is Queen’s Surf Beach. *Mauka* of the project area across the Ala Wai Canal is the City’s Ala Wai Golf Course. The City’s Kapi‘olani Regional Park and Honolulu Zoo, and the Waikīkī Aquarium are located east of the project area. Brief descriptions of these various facilities are provided.

1. Kūhiō Beach Park. This beach park stretches along Kalākaua Avenue generally between the Kapahulu Groin on the eastern end and the Moana Hotel on the western end. The beach has picnic tables, restrooms, showers, a snack bar, and concessions renting surfboards, bodyboards, snorkeling gear, beach chairs, umbrellas, and other sports and beach equipment. An offshore retaining wall, referred to as “Slippery Wall” creates a sheltered swimming area making it a popular beach for families. The “Kapahulu Groin” is a popular pedestrian walkway extending into the ocean. Kūhiō Beach is part of the Waikīkī Historic Trail that predominantly runs along the shoreline and inland areas of Waikīkī. In the project area, this trail includes features such as the “Waikīkī” historic marker, Prince Kūhiō statue, and Duke Kahanamoku statue.
2. Grey’s Beach. This beach park extends from Kūhiō Beach westbound along the shoreline up to the Halekūlani Hotel.
3. Ala Wai Golf Course. This City golf course is an 18-hole, par 70 course located on the *mauka* side of the Ala Wai Canal. This course is used heavily by residents, and hosts about 145,000 rounds a year.
4. Waikiki Aquarium. The Waikiki Aquarium is part of the University of Hawai‘i and is located along the shoreline adjacent to the Natatorium War Memorial. The aquarium exhibits more then 450 species of aquatic animals and plants and it receives more then 350,000 visitors a year.
5. Kapi‘olani Regional Park. This City-owned regional park of over 165 acres is located about 0.25 miles east of the project site along Kapahulu Avenue. This park includes several attractions and facilities such as the Honolulu Zoo, the Kapi‘olani Park Bandstand, the Waikiki Shell Amphitheater, baseball and softball

diamonds, soccer fields, a rugby field, tennis courts, an archery range, and snack bars. It also includes Queen's Surf Beach and Kapiʻolani Beach which generally extends eastbound from the Kapahulu Groin to the Waikiki Aquarium. The Waikiki Marine Life Conservation District covers the ocean area along this beach.

2.11.4 Police and Fire Protection

The Honolulu Police Department provides services to the Waikīkī area through District 6 (Waikīkī) of the Central Patrol Bureau. This district is the smallest police district on the island and generally covers the Waikīkī resort area between Ala Moana Beach Park and Kapiʻolani Park. The command and administrative offices serving this district are located at the department's Alapai headquarters. The Waikīkī police substation is located on Kalākaua Avenue fronting Waikīkī Beach and is staffed by patrol personnel.

The Honolulu Fire Department has several fire stations located near the Waikīkī resort area. The project site located within the department's Battalion 2 area which generally extends from East Honolulu (Makapuʻu Point) to the Makiki and Kakaʻako area. The fire station nearest to the project site is the Waikīkī/Kapahulu Station #7 located at the corner of Kapahulu Avenue and Paki Avenue less than 0.50 miles away. Other fire stations in the general vicinity include the McCully/Mōʻiliʻili Station #29, Pāwaʻa Station #2, and Kaimukī Station #5 that are about 1.0 to 1.5 miles away. The Waikīkī Fire Station is equipped with a 5-person engine, and a 5-person quint (combination pumper/ladder truck).

2.11.5 Electrical and Communication Facilities

Electrical services are provided to the project site and surrounding areas via Hawaiian Electric Company's (HECO) distribution lines. Electrical lines serving the project area are brought in via overhead sub-transmission lines located on utility poles along ʻŌhua Avenue.

Telecommunication and cable television services are provided to the project site by Verizon Hawaii and Oceanic Time Warner Cable, respectively. These services are transmitted via overhead lines situated on electrical sub-transmission poles routed along ʻŌhua Avenue in the project area.

CHAPTER 3
ENVIRONMENTAL CONSEQUENCES

3.1 Geology, Topography and Soils

Construction of the proposed improvements would occur within relatively confined areas of the church property which are: 1) in the rear where the parking lot and parish hall are located; and 2) at the front entrance of the church where the driveway onto Kalākaua Avenue is located. No significant impacts to the present geology and topography associated with this site are expected from construction of the project. There are no unique or significant geological land formations present on the property that would be affected. No major cut or fill activities are anticipated that would significantly alter present geologic land forms.

Improvements would be constructed on land that has already been disturbed and graded as part of the church's initial parking lot, parish hall, and driveway. Therefore, minimal grading and only minor excavations for building foundations are anticipated because the existing topography of the site is already level. Therefore, this project should not have a significant long-term impact on the site's existing geology, topography, or soil conditions.

Short-Term Construction Effects

Construction of the project would inevitably involve temporary land-disturbing activities that cause minor short-term effects and nuisances. Such effects may be associated with soil erosion during periods of heavy rainfall or high winds. Soils on the project site are Jaucas Sand (JaC) which has rapid permeability and very slow to slow runoff, thereby decreasing potential soil erosion. Therefore, construction activities would not have a significant impact on the environment, and standard construction best management practices are available to mitigate such effects which are discussed further.

Various mitigation measures will be incorporated into the project's design to minimize potential short-term erosion impacts during such construction activities. Such measures will be instituted following site-specific assessments, incorporating structural and non-structural Best Management Practices (BMPs), as deemed appropriate. Erosion control measures considered may include: use of temporary sprinklers in non-active construction areas; stationing water trucks nearby during construction to provide sprinkling in active areas; use of temporary silt fencing, sand bags, or screens; or thorough watering of disturbed areas after construction activity has ceased for the day.

However, the actual measures implemented will be developed during the final design of this project, and would comply with the City's erosion and sedimentation control regulations. Design plans will be submitted to pertinent City agencies for ministerial review and approval. If applicable, State Department of Health (DOH) National Pollutant Discharge Elimination System (NPDES) permits would be obtained.

The contractor will work with Church officials to determine an area to be used for staging. The contractor will also implement necessary measures such as temporary chain-link fences to protect materials and construction-related equipment from theft or vandalism. To ensure the safety of pedestrians near the site, construction areas would be clearly marked and temporary fences used to keep unauthorized persons out.

3.2 Natural Hazards

The project will not significantly increase the risk of human health or property due to exposure to natural hazards, and discussion of the project's effects and susceptibility to natural hazards is provided.

3.2.1 Earthquakes

Most of the earthquakes that have occurred in the State were volcanic earthquakes causing little or no damage on the Island of O‘ahu. O‘ahu is periodically subject to episodes of seismic activity of varying intensity due to its proximity to the Moloka‘i Seismic Zone and the Diamond Head Fault. However, earthquakes cannot be avoided or predicted with any degree of certainty, and an earthquake of sufficient magnitude (greater than 5 on the Richter Scale) may cause structural or other damage to the project improvements.

The proposed building improvements would be structurally designed and constructed in accordance with the City's building code. Therefore, the susceptibility of being damaged from an earthquake would be no different from other structures or buildings present in the surrounding Waikīkī resort area.

3.2.2 Hurricanes

The three major elements that make a hurricane hazardous are: 1) strong winds and gusts, 2) large waves and storm surge, and 3) heavy rainfall (FEMA 1993). Impacts from hurricanes can be severe and lead to beach erosion, large waves, high winds, and marine over-wash, despite the fact that the hurricane may have missed a particular island (USGS 2002). Study of the aftermath of Hurricane Iniki found that a significant threat related to hurricane overwash along the coastline in the Hawaiian Islands is due to water-level rise from wave forces rather than wind forces.

A hurricane of significant strength and high winds passing directly over or close to the Island of O‘ahu could cause damage to the project improvements along with other existing uses in the surrounding area. One element of a hurricane that may cause damages to the project improvements are strong winds and gusts. The project site is also situated near the coastline making it susceptible to damage from wave forces from a hurricane of significant strength. Heavy rainfall from a hurricane should not seriously affect the project improvements because the site is not located within a flood area.

To minimize potential hurricane damages to the project, new buildings and structures would be designed and constructed in conformance to applicable building codes. Therefore, the risk of potential damage from high winds or overwash should be minimized. Therefore, the property should be at no greater risk of damage than other commercial and resort buildings in the Waikīkī area.

3.2.3 Tsunami and Flooding

The project site is not located within a designated flood area based upon the FIRM. Therefore, project improvements should not be subject to significant damage from potential flooding events that occur in the Waikīkī area.

The updated tsunami evacuation area extending further inland past Kūhiō Avenue encompasses the entire project area along with other properties in the surrounding area. The new buildings could be subject to some damage from a tsunami of sufficient wave height. However, both buildings would be concrete and steel reinforced structures minimizing potential damages from waves.

To minimize potential damages from a tsunami or flooding, new buildings and structures would be designed and constructed in conformance to applicable building codes and consideration given to incorporating other flood mitigation design measures. Therefore, the risk of potential damage from these hazards should be minimized and of no greater risk of damage than other commercial and resort buildings in the surrounding Waikīkī area.

Vertical evacuation in this area is allowed to the third floor and above for multi-story concrete and steel reinforced structures. As a result, the four-story Parish Hall building will support vertical evacuation. Written procedures will be developed addressing evacuation procedures to further increase personal safety for personnel residing or visiting the church site. The storage of critical data and records on the third floor and above will also be considered.

3.3 Hydrology

3.3.1 Hydrogeological Resources

There are no sources beneath the project site or in the immediate vicinity providing domestic water supply to the Honolulu Board of Water Supply. Therefore, construction of project improvements will not significantly impact the underlying aquifer or its sustainable yields. Proposed buildings would be constructed over the site's existing grade, with minimal excavation, with the exception of necessary footings for foundation support. Therefore, improvements should not significantly affect the geological features of the underlying aquifer which is close to seawater.

Construction of the new Parish Hall with parking structure will eliminate a small lawn area of about 2,000 square feet next to the existing parish hall building. However, an overall increase in

open space area will be created by the project due to the elimination of the paved driveway to Kalākaua Avenue. Setback areas for new buildings from roadways also create additional open space. Existing open space on the property will increase from about 18 percent to 30 percent with the project and include increased landscaping on the site. This will decrease the present amount of impervious surface on the project site allowing for increased infiltration of runoff.

This improvement will increase the amount of potential localized groundwater recharge occurring at the project site. Although the aquifer under the project site is not used for domestic water supply due to its location along the coastline, the project will still have a positive impact over existing conditions. The project should not have long-term impacts adversely affecting the sustainable yield of the underlying aquifer system nor contaminate potable water sources. The change is expected to be negligible and ultimately inconsequential to the overall function of the area's natural hydrological system.

3.3.2 Surface and Coastal Waters

Construction activities should not have significant short-term impacts on coastal resources and water quality resulting from soil runoff. There are no streams or other surface water features present within the project site or in the immediate vicinity. Existing runoff from the site presently discharges into the City's existing drainage system serving this area.

It is expected that the contractor will minimize stormwater runoff during construction by implementing best management practices in accordance with project design plans and applicable regulations. These plans would be reviewed and approved by pertinent agencies prior to construction. Therefore, impacts on coastal waters and water quality should be minimal or minor because the contractor will employ approved measures to prevent runoff from construction areas along with complying with other related permit conditions.

Development of this project should not have a significant long-term affect on Kuhio Beach situated across Kalākaua Avenue. The profile of pollutants discharged from the site once improvements are completed should be of the same composition as existing runoff. There should be no hazardous pollutants in stormwater runoff generated from the project site that may significantly affect water quality or aquatic resources present in Kuhio Beach. In accordance with the State DOH Water Quality Standards (Chapter 11-54, HAR), drainage improvements would be reviewed and approved by the City so that discharges into receiving waters have received the best degree of treatment or control compatible with the Class A criteria.

The project would not affect the Waikiki Marine Life Conservation District located on the eastern end of Waikīkī Beach. The project does not involve shoreline recreation or marine related activities such as fishing which may affect that MLCD. As previously discussed, design plans would incorporate appropriate measures to address stormwater runoff and minimize effects on water quality and marine resources.

3.4 Botanical and Faunal Resources

Project improvements should not have an impact on botanical resources because the majority of the project site is paved. The only non-paved areas affected would be the lawn area next to the existing parish hall building and a narrow landscaped area fronting Kalākaua Avenue. These areas consist of grass with a few landscape trees that would not be significantly impacted when removed. Other potential botanical resources affected would be introduced species of trees and vegetation used as part of on-site landscaping. None of the vegetation within this project site are known to be Federal- or State-listed threatened or endangered, or candidate threatened or endangered botanical species. Landscaping improvements would be incorporated into the project's design plans to replace the existing landscape plants affected by the improvements.

The project should not have an impact on avian species or mammals present on the project site. Avian species present generally consist of introduced species such as various types of pigeons, doves, and cardinals which are prevalent within the entire Waikīkī resort area. There are no avian species listed as endangered, threatened, proposed, or as a candidate species by the U.S. Fish and Wildlife Service or by the State of Hawai‘i under its endangered species program present on the project site or in the immediate vicinity that would be affected by improvements.

Project improvements should also have no impact on mammals present on the property since these likely consist of feral mammals typical of the surrounding Waikīkī resort area such as rats or feral cats.

3.5 Air Quality

Minor short-term impacts on air quality from construction activities would predominantly be associated with fugitive dust emissions and to a lesser extent exhaust emissions from on-site construction equipment. Fugitive dust emissions would generally arise from dirt moving activities associated with site clearing, grading, and ground preparation. Such emissions are expected to be minimal because construction would involve relatively minimal grading and excavation activities, and would be temporary in nature.

State air pollution controls prescribed under the DOH's rules (Chapter 11-59, HAR "Ambient Air Quality Standards" and Chapter 11-60.1, HAR "Air Pollution Control") prohibit visible emissions of fugitive dust from construction activities at the property line. Therefore, a dust control plan prepared and implemented by the contractor will require compliance with these regulations. Dust control measures could include implementing a watering program or using wind screens. Other measures include good construction management practices at the job site (ex. road cleaning or tire washing program), and the paving or surfacing with rocks of bare areas when practicable. Engine exhaust emissions from construction vehicles can be minimized via the proper operation and maintenance of all equipment.

During operational activities, the project may result in some increased vehicle traffic on Kalākaua Avenue, ‘Ōhua Avenue, and Kealohilani Avenue during church events held such as periodic weddings, regular mass, etc. However, the majority of the parish is comprised of visitors to O‘ahu who are staying in Waikīkī, which greatly reduces the number of vehicles traveling to the project site. Other daily administrative activities conducted at the church should have minimal effect on vehicular traffic in the area.

Any increase in traffic volume attributable to the project is not expected to affect the level of service at the intersections of Kalākaua Avenue with ‘Ōhua Avenue and Kealohilani Avenue. Carbon monoxide concentrations are not expected to exceed State standards. Therefore, the project should not result in a significant impact on air quality. In addition, Federal air pollution control regulations require new motor vehicles to be equipped with emission control devices that reduce emissions significantly compared to several years ago. Amendments to the Clean Air Act required further emission reductions which have been phased in since 1994. The added restrictions on emissions from new motor vehicles will lower average emissions each year as more and more older vehicles leave the State’s roadways.

3.6 Noise

Noise from construction activities is regulated under Title 11, Chapter 46 (Community Noise Control) of the State DOH’s Administrative Rules. The zoning district classification and maximum permissible sound levels are summarized in Table 3.1 below. The project falls under the Class B zoning district category that applies to properties zoned for commercial and resort types of land uses.

Table 3.1
State DOH Community Noise Level
Classification of Zoning Districts and Maximum Permissible Sound Levels

Zoning District	Maximum Permissible Sound Levels (dBA)	
	Daytime (7 a.m. to 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)
Class A: Includes all areas equivalent to lands zoned residential, conservation, preservation, public space, open space, or similar type.	55	45
Class B: Includes all areas equivalent to lands zoned for multi-family dwellings, apartment, business, commercial, hotel, resort, or similar type.	60	50
Class C: Includes all areas equivalent to lands zoned agriculture, country, industrial, or similar type.	70	70

The maximum permissible noise level for this site under Class B is 60 dBA at the property line during daytime and 50 dBA during nighttime. Construction activities are not planned to be scheduled at night. Construction activities will temporarily increase ambient noise levels within the vicinity of the work area. The project would involve some excavation, grading, construction of new buildings, and supporting infrastructure that will generate some audible noise.

Actual noise levels produced would depend on the methods employed throughout construction. Earthmoving equipment such as bulldozers and diesel-powered trucks would probably be the loudest equipment used during construction. Typical ranges of construction equipment noise vary between 70 and 95 dBA. Measures to control construction noise include the use of mufflers on power equipment and vehicles.

Construction activities are expected to be limited to regular workday hours (7:00 a.m. to 3:30 p.m., Monday through Friday). If required, additional measures can be implemented such as erecting noise barriers along the project site to reduce the effects on surrounding areas. Thus, construction activities should not result in a significant impact. If necessary, a community noise permit for construction activities would be obtained from the State DOH to allow these activities. This permit includes restrictions to help mitigate the potential noise impacts resulting from short-term construction activities.

The project should not generate significant long-term noise impacts on the surrounding environment. The new St. Damien Museum would be open for visitors during established business hours. However, noise-generating sources would primarily be human voices that would occur within the building. Noise sources generated from the new Parish Hall would similarly be human voices or music occurring during periodic functions held there. Such activities would occur within the building and should not have a long-term significant impact. There are no existing noise sensitive land uses (ex. schools and hospitals) in the immediate vicinity or adjacent to the project site that may be affected by noise resulting from facility operations. Surrounding uses consist of commercial and visitor oriented uses.

3.7 Visual Resources

The concepts established in characterizing visual quality from the City's *Coastal View Study* (Chu 1987) were used to assess the visual impacts resulting from this project. Visual qualities associated with scenic resources were evaluated using three factors: 1) visual vividness, 2) unity, and 3) intactness. Using these criteria, the visual impact of the project was evaluated based upon the degree of change to an existing view or alteration of a scenic resource.

Based upon the City references and resources previously discussed in Section 2.7, the only important visual resources applicable to this project identified were the shoreline and Waikīkī Beach (Kūhiō Beach Park fronts the project area across Kalākaua Avenue). A continuous ocean view of Kuhio Beach along Kalākaua Avenue was an important public view identified.

The proposed improvements will not have a significant impact on these existing visual resources or public views of the shoreline from Kalākaua Avenue. The project site is located on the *mauka* (inland) side of Kalākaua Avenue. Therefore, new buildings will be located *mauka* of Kalākaua Avenue and would not create viewing obstructions toward Kūhiō Beach or change the present views or character of this shoreline.

The new Parish Hall building and parking structure is situated in the rear of the property behind the church sanctuary, and will be screened from views along Kalākaua Avenue. Therefore, this building will not interfere with public views of the shoreline from Kalākaua Avenue. The new St. Damien Museum would be located along Kalākaua Avenue, but would not change the existing character of Kūhiō Beach. This building would be a two-story structure that is well below the 220-foot height limit allowed for this property. The building's design would be similar in character to the design features of the present Church, and appropriate landscaping will provide visual relief from the built environment. Consequently, the visual vividness, unity, and intactness of Kūhiō Beach Park will be retained.

3.8 Historic, Archaeological, and Cultural Resources

Under State regulations, there are two possible effect determinations under historic preservation review: 1) "no historic properties affected" and 2) "effect, with proposed mitigation commitments." Based upon the results of the fieldwork conducted, construction of the proposed project will affect historic properties identified. The St. Damien Museum building footprint is located over the area where two burials and some bone fragments have been identified. The new Parish Hall site would not have a significant impact on historic sites. Therefore, "effect, with proposed mitigation commitments" is recommended for this project. Mitigation measures proposed will reduce the project's effect on significant historic properties and consist of the following.

1. Burial Treatment Plan. SIHP# 50-80-14-7136, consisting of two in situ human burials (Feature A and B), will be treated in accordance with Chapter 13-300, HAR. In order to alleviate the project's effect on previously identified human burials, a project specific burial treatment plan has been approved by the O'ahu Island Burial Council (OIBC) on June 8, 2011. The burial treatment plan incorporated input from the OIBC, SHPD, and recognized lineal and cultural descendants.
2. Archaeological Monitoring. It is possible that additional historic properties, potentially including human burials and non-burial archaeological deposits, may be encountered during project construction. In order to mitigate any potential damage to yet unidentified historic properties, project construction is recommended to proceed under an archaeological monitoring program.

   This monitoring program will facilitate the identification and proper treatment of any additional burials that might be discovered during project construction, and will gather additional information regarding the project's non-burial archaeological

deposits, should any be discovered. The archaeological monitoring program will begin with an archaeological monitoring plan prepared for the review and approval of the SHPD prior to the beginning of construction. On-site monitoring of all initial ground disturbance is planned, and any deviation from this protocol would follow consultation with and written concurrence from the SHPD.

If burial remains are discovered during archaeological monitoring of project construction, they will be treated in accordance with Hawai‘i State burial law regarding inadvertent burial discoveries (HAR Chapter 13-300-40). Following these regulations, burial treatment of inadvertent burial finds will be determined by SHPD in consultation with recognized cultural descendants.

Burial Treatment Plan

A burial treatment plan was prepared, submitted to the SHPD and OIBC for review, and approved by the OIBC. A copy of this plan is included in Appendix C along with the SHPD approval letter dated August 8, 2011. This burial treatment plan incorporated input from the OIBC, SHPD, and recognized cultural descendants of Waikīkī. Consultation regarding the project's development, archaeological inventory survey results, and proposed burial treatment options were discussed with these parties. This burial treatment plan reflects the input received from these various concerned parties. A summary of these consultation efforts follows.

1. Presentations on the status and progress of testing work on this project were made to the OIBC at their meetings held on April 14, 2010, September 8, 2010, November 10, 2010, January 12, 2011 and March 9, 2011.
2. Meetings with cultural descendants of Waikīkī were held at the church property on February 1, 2011 and April 18, 2011 to discuss the findings and treatment measures that should be incorporated in the burial treatment plan.
3. In consultation with the SHPD and OIBC, outreach to previously identified cultural descendants of Waikīkī was conducted to notify them of the burials and to consult with them on treatment measures. Efforts included newspaper advertising in the *Star Advertiser* in November 2010, and in the January 2011 edition of *Ka Wai Ola o OHA*. Mail-outs to cultural descendants of Waikīkī occurred in November 2010, January 2011 and April 2011.
4. The burial treatment plan was approved by the OIBC at their meeting held on June 8, 2011. This plan was initially presented to the OIBC at their meeting held on May 11, 2011. No major comments were received on the proposed plan and treatment measures from the OIBC or the public in attendance at these meetings.

Preservation in-place is proposed with the new Saint Damien Museum to be constructed over the two known burials of SIHP # 50-80-14-7136. The burials would remain in place and be entombed under the floor of the central portion of the proposed two-story Museum. This action is commensurate with the wishes of Father Lane Akiona of Saint Augustine Church, and

supports the practices of the Church regarding entombment beneath a Church as being honorific. This treatment is in accord with the wishes of SHPD, the OIBC, and previously recognized cultural descendants of the burials at Saint Augustine Church.

In consultation with cultural descendants, additional measures will be incorporated to protect the burials during construction activities.

1. A concrete (or concrete masonry unit) rectangular-shaped, low (approximately 16" high) perimeter wall crypt will be set around the two, to-be-left-in-place, burials. This low wall would provide for protection from accidental horizontal intrusion and other construction related activities that would be occurring in the immediate vicinity for Museum construction.
2. A steel plate or two will be placed on top of this perimeter crypt construction during much of the construction to provide additional protection.
3. The human skeletal remains recovered from a disturbed context in the immediate vicinity of the two burials will be re-interned to a location situated between the two burials.

Saint Augustine Church would be responsible for treatment of the burials during construction of the Saint Damien Museum and for the duration of the existence of the Museum. Contractors and construction workers would be informed of the burials and asked to respect their presence during construction activities. In order to provide perpetual protection for the Burial Preserve area, the Church will record the Burial Preserve area location with the State of Hawai‘i, Bureau of Conveyances. This recordation would create an encumbrance on the specific property (TMK: [1] 2-6-026:012) to run with the land in perpetuity.

3.9 Social and Economic Factors

3.9.1 Economic and Fiscal Factors

This section discusses the effects of the project on both the County and State's economic and fiscal factors. Construction of the proposed project will have different effects in relation to the City and the State of Hawai‘i's finances. The project would not generate any new permanent full-time jobs. A manager hired by the church to operate the current temporary Museum will continue with the new Museum when completed. Other staff working at the Museum will be comprised of volunteers, and space in the new Parish Hall will be occupied by current staff and volunteers. Therefore, the primary economic and fiscal effects would be associated with short-term construction jobs that will generate a small minor positive economic impact.

The estimated construction cost for this project of $14.10 million would create construction jobs during the duration of construction activities, as well as industries that support and service construction activities directly and indirectly. Three broad types of jobs are distinguished below:

- Direct jobs are immediately involved with construction of a project or with its operations.
- Indirect jobs are created as businesses directly involved with a project purchase goods and services in the local economy.
- Induced jobs are created as workers spend their income for goods and services.

Direct construction jobs would typically consist of on-site laborers, tradesmen, mechanical operators, supervisors, etc. These new jobs created would also generate additional personal income for construction workers that are the wages paid directly to them or operational employees associated with a development. Direct construction jobs created would also stimulate indirect and induced employment and spending of wages within other industries on the island such as retail, restaurants, material distributors, and other related businesses supporting the construction industry. These construction jobs would be filled by residents from the Island of O‘ahu employed within the construction industry.

Based upon the construction budget and a 4-year timeframe for completion, the project is estimated to create a total of about 66 direct new jobs over the entire construction period resulting in about 16 new direct construction jobs annually. This would generate approximately 64 indirect and induced jobs over the entire construction period or about 16 jobs annually. Thus, a total employment impact of about 32 jobs annually (direct, indirect, induced) would be generated by this project, or about 130 total jobs over the entire construction period. These jobs would create a relatively small but positive impact in employment for the island.

These new construction jobs would generate additional personal income for construction workers totaling about $1.1 million per year or $4.3 million over the entire project. Indirect and induced income would also be generated on the order of $0.9 million a year, or $3.7 million over the entire project. This additional income would have a minor positive impact to residents on O‘ahu. The potential additional jobs created from construction activities would provide additional personal income to individuals that would also support indirect and induced employment within the City from the spending of these wages. However, these indirect and induced effects would be rather minimal and thus not generate a significant effect on the local economy.

Fiscal impacts would primarily involve additional tax revenue generated to the State from construction of this project. Tax revenue sources for State government are composed primarily of general excise taxes (GET) on development costs and construction materials, along with corporate income tax, and personal income tax from construction workers. The $14.1 million construction budget expended for the project’s construction is estimated to generate about $2.1 million in tax revenue to the State. These construction related tax revenues would have a minor positive effect on the State’s fiscal condition because of the short-term increase in revenue associated with construction activities.

City revenues are primarily limited to tax revenues on privately-owned property and improvements. The annual City property tax required for this project site is only $200 for both parcels because it is used by a non-profit organization. The improvements constructed will increase the property's assessed value, however, the property assessment exemption amount would continue to cover the entire amount resulting in the same tax requirement. Therefore, this project should have minimal or no effect on the current or future levels of County tax revenues being generated.

3.9.2 Social Factors

The proposed project will not impact the number of housing units in this Waikīkī resort area because no housing units are planned and none will be replaced. There are no new visitor units included with this project, and no in-migration of individuals to O'ahu would result due to the project. Therefore, this project will not impact the existing resident population in the Waikīkī area.

This project would have minimal if any effect on the present character of the project site and surrounding Waikīkī resort area which is visitor oriented. The new Museum and Parish Hall building would change the character of the project site, but this should not negatively impact the character of this area or community. The improvements would have a positive benefit by providing better facilities for the church to serve their parish and the larger community in conducting their activities.

The new Museum located along Kalākaua Avenue will provide an improved venue for both visitors and residents interested in learning more about St. Damien and his life of selfless service along with viewing artifacts in the church's possession. The project would provide an appropriate and respectful setting honoring St. Damien.

The new Parish Hall and parking structure building would be larger and taller than the current building situated at the rear of the church property. However, this new building should not negatively affect the character of the community or significantly impact surrounding land uses. The building would be well within the height limit and designed with features complementing the existing church. A large multi-story parking structure for the Foster Tower condominium is already adjacent to the existing parish hall. Other surrounding uses similarly consist of large tall buildings associated with the Waikīkī Beach Marriott Resort and Spa, Foster Tower, and Pacific Beach Hotel.

3.10 Infrastructure Facilities

3.10.1 Water Facilities

An engineering assessment of water system requirements was conducted by Sam O. Hirota, Inc., and a utilities report is included in Appendix D. The assessment evaluated water system conditions and determined the following:

1. The water meter on Kealohilani Avenue produces a water demand of 38 gallons per minute (gpm) based on 81.5 fixture units throughout the existing parish hall building. The renovated Parish Hall will decrease the number of fixtures required to 57 and subsequently decrease the water demand to 31 gpm.
2. The water meter on ʻŌhua Street produces a water demand of 35 gpm based on 70.0 fixture units between the existing church and rectory building. The addition of the new St. Damien Museum on this parcel will add 33 new fixture units increasing the total number of fixtures required to 103 and subsequently increase water demand to 44 gpm.

Therefore, the project would generate a slight net increase in water demand by increasing the number of total fixture units from 151.5 to 160.0 units (a 5.6% increase). The existing 1.5-inch water meters serving the project site from Kealohilani Avenue and ʻŌhua Street would be adequate because each water meter can handle up to 100 gpm. The projected demands for the ʻŌhua Avenue and Kealohilani Avenue meters would be 44 and 31 gpm, respectively.

The average daily demand for potable water is projected to increase from about 2,150 gpd to 3,340 gpd with the project. This was based upon the BWS's domestic consumption planning guidelines of 120 gallons per 1,000 square feet of space applicable to the new Museum and Parish Hall. This increase would not have a significant impact on the City BWS's water system and ability to provide water service in the area.

A City BWS comment letter, dated April 20, 2010 and included in Appendix A, stated that their existing water system is adequate to accommodate the project. Design plans will be coordinated with the BWS for review and approval during the design phase and necessary ministerial permits will be obtained. The applicant will also be required to pay the water system facilities charges when water is made available for this project.

3.10.2 Wastewater Facilities

Project improvements will change the present amount of wastewater generated on the church site. Based upon the engineering assessment for wastewater (included in Appendix D), the project would generate a slight net increase in wastewater flows due to the new St. Damien Museum. The total wastewater flows projected would increase from 2,470 gpd to 2,795 gpd (a 13% increase) as summarized below.

1. The new St. Damien Museum will increase wastewater flows by about 325 gpd.
2. Three residents at the existing parish hall will relocate to the rectory increasing flows from this existing building by 240 gpd.
2. The new Parish Hall will decrease existing wastewater flows by 240 gpd because of the three residents relocating from the existing parish hall to the rectory.

The small increase in wastewater generated by the new Museum would not have a significant impact on the City's existing wastewater system. The existing parish hall will have a decrease in wastewater flows, therefore, the existing Kealohilani Avenue sewer lateral will be adequate. The

proposed Museum will use the existing lateral that services the rectory. Therefore, the three existing ʻŌhua Avenue laterals will have an increase of 565 gpd (325 gpd from Museum and 240 gpd from residents relocating to rectory) and would be adequate. The City also approved a sewer connection for this project on June 29, 2010.

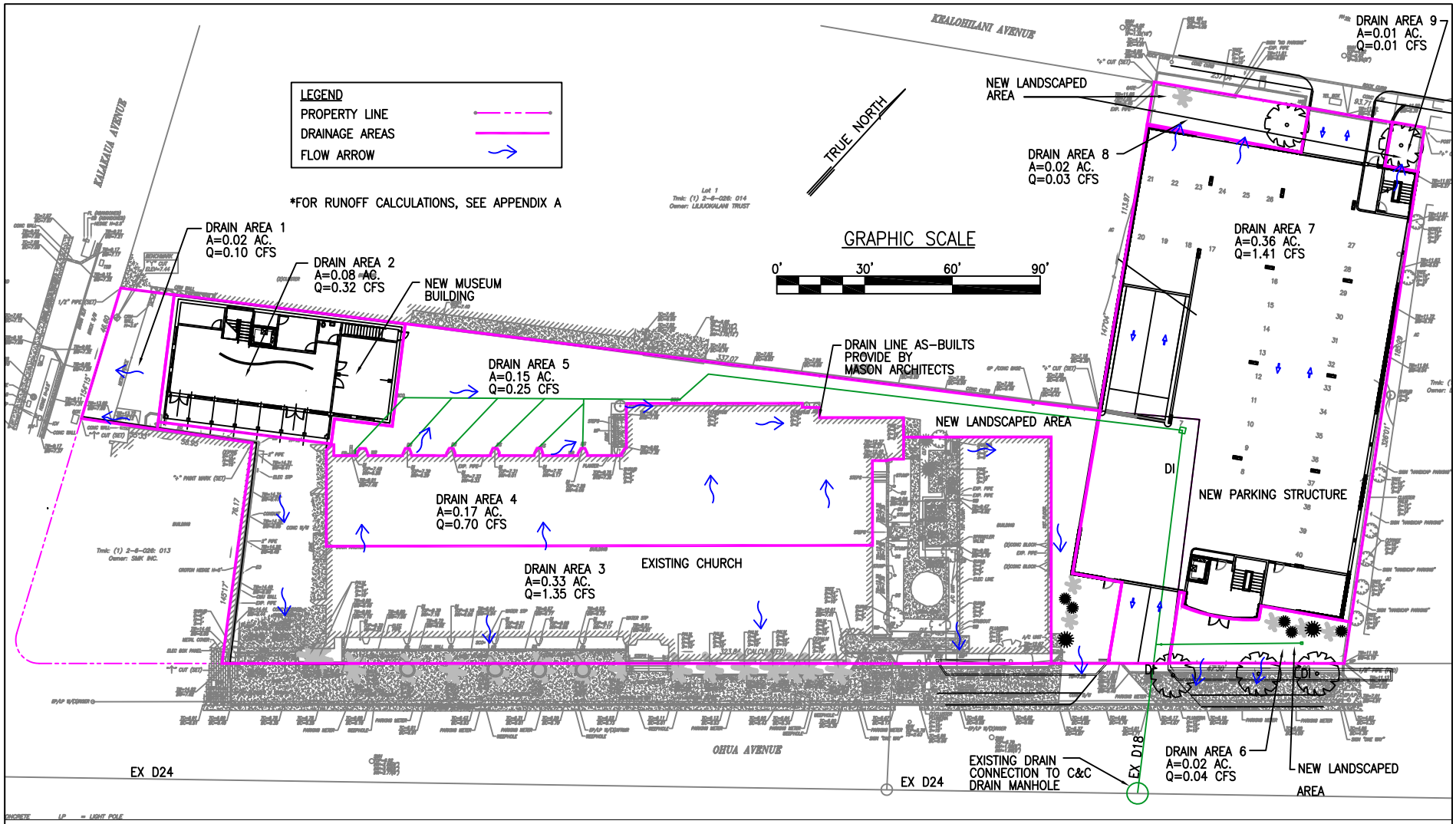
3.10.3 Drainage Facilities

Project improvements will modify existing drainage conditions within the project site. Runoff calculations for a 10-year, 1-hour storm event with project improvements is projected to total 4.20 cfs. This total reflects a decrease in storm water runoff of 0.20 cfs discharged from the site which is about 5 percent under existing conditions. There would be no net increase storm water discharged from the project site, and no improvements to the City's existing storm drainage system are anticipated. Runoff calculations are included in the drainage report in Appendix D, and Figure 3.1 shows the proposed drainage conditions.

This decrease in storm water runoff from the site is due to new open space and landscaped areas incorporated into the design plans. The project site is currently almost completely paved with driveways, parking area, and existing buildings. Only about 18 percent of the site is presently comprised of open space. With project improvements, open space on the site will increase to about 30 percent, with much of it being landscaped pervious areas. As a result, more areas would be established to allow storm water runoff to percolate within landscaped areas before being discharged into the City's storm drain system or adjacent roadways. The project will thus have a positive beneficial impact on drainage facilities.

Storm runoff from a portion of the church's roof will continue to be collected through a series of downspouts and exit through weep holes in the curb on ʻŌhua Avenue. The remainder of storm water runoff from the church's roof will continue being collected through the site's existing drainage system and released into the City storm drain system. Runoff from the existing rectory building will continue to sheet flow in a southeastern direction discharging onto ʻŌhua Avenue. However, some runoff will percolate into the soil through a newly created landscaped area fronting the new Parish Hall entrance along ʻŌhua Avenue.

The Museum will have a roof drainage system to collect runoff that will be discharged into a new landscaped area allowing for some percolation into the ground before being collected in the site's existing drainage system. A small amount of runoff from the Museum will generally sheet flow toward Kalākaua Avenue. Additional drain inlets will be constructed and utilized as an overflow line to connect to the City's system. Runoff from the Parish Hall with parking structure will be captured through a piped system and filtered before being released into the City's storm drain system.



Source: Sam O. Hirota, Inc., December 2011.

PROPOSED DRAINAGE CONDITIONS

ST. AUGUSTINE-BY-THE-SEA CHURCH MASTER PLAN
WAIKĪKĪ, O'AHU, HAWAI'I

Figure 3.1

3.10.4 Solid Waste Facilities

Demolition of the existing parish hall building along with construction of the new Museum and Parish Hall with parking structure will generate solid waste that is typical of construction-related activities. Construction waste generated will be a short-term impact, and consist primarily of vegetation, rocks, concrete, and other debris created from clearing, excavation, and other related building construction activities. Construction and demolition waste generated would be disposed of by the contractor in conformance with agency regulations at the privately-owned PVT Nānākuli Construction and Demolition Material Landfill if not permitted at either H-POWER or the Waimanalo Gulch Sanitary Landfill.

Municipal solid waste generated by church activities associated with the project would continue to be collected by a private company for disposal and thus not affect the City's collection operations. A private company will dispose of the waste generated in the same manner that current waste from the church is processed.

Waste generated by church activities could increase above present levels with the new St. Damien Museum along with added functions held at the new Parish Hall. This increase should be minor in comparison to other resort activities and operations occurring in Waikīkī, and consequently, have minimal impact on municipal solid waste facilities. The composition of waste generated should be more similar to residential waste with the majority consisting of organics (food), paper, and plastics that can be taken to the H-POWER facility for recycling into energy.

3.10.5 Transportation Facilities

The project's construction will inevitably result in some short-term and temporary impacts to traffic along 'Ōhua Avenue and other surrounding roadways in the immediate vicinity of the project site. Construction related traffic will result from the movement of slow-moving heavy construction vehicles and equipment. Additional traffic would occur from construction workers traveling to and from the job site.

However, any additional traffic delays are not expected to have a significant impact on traffic facilities or operations because construction workers generally arrive before the weekday morning commuter peak hour and leave before the afternoon peak hour starts at about 4:15 p.m. Any lane closures would be re-opened before the afternoon commuter period, and would not begin until after the morning commuter period. Construction activities would also be temporary until work is completed. A Street Usage Permit would be obtained from the City if any temporary closure of a traffic lane or sidewalk is required during construction.

A traffic control plan will be developed during the project's design phase for implementation by the contractor after ministerial review and approval by the City. Project construction may require the closure of a lane along Kealohilani Avenue due to the movement of heavy equipment

to the site or construction activities along driveways, and the traffic control plan will address this. If necessary, off-duty police would be hired to assist with traffic control. The Waikīkī Neighborhood Board and area businesses and residents are also planned to be notified of construction activities prior to initiation.

The most frequent activity presently occurring are daily church services. As discussed in Section 1.3, mass services on weekdays are held at 7:00 a.m. and 5:00 p.m. The large majority of the parish attending weekday services is comprised of visitors (80%) staying in Waikīkī, and the vast majority walk to the church. The typical number of people attending these weekday services averages less than 100 persons in the morning and less than 50 persons during afternoon services. The number of persons attending these services, and resulting trips, should not significantly change with the project.

The Church is projected to have a staff of less than 10 persons (mainly volunteers) in total for both the St. Damien Museum and Parish Hall. The Museum would not be open during the morning peak hour, therefore, the majority of project generated traffic during this time period would primarily consist of employees and volunteers working at the Museum or administrative offices for the Church. After the morning peak hour, the majority of visitors to the Museum would likely be pedestrians walking along Kalākaua Avenue. Therefore, the project should not have a significant impact on traffic along ʻŌhua Avenue and at its intersection with Kalākaua Avenue during this weekday morning peak hour.

Other activities occurring at the St. Augustine Church site were identified on Table 1.2. These activities generally occur in the early evening that is after the weekday afternoon peak hour. With the new Parish Hall, these activities (ex. choir practice, meetings) may increase slightly due to improved facilities and the additional on-site parking planned would adequately accommodate vehicles. However, additional activities or use of the Parish Hall by community groups would not occur during the weekday morning peak hour and should be scheduled in the early evening similar to current activities which will be after the weekday afternoon peak hour.

Table 3.2 shows an estimate of future traffic generated by the project based upon the traffic assessment (Appendix E). The project is estimated to generate a total of 32 new vehicle trips associated with the site during both the weekday and Saturday afternoon peak hour. During the weekday afternoon peak hour, the higher traffic movement would be vehicles leaving the site (22 cars). During the Saturday afternoon peak hour, the distribution of traffic would be more balanced with the higher traffic movement being vehicles entering the site (17 cars). Therefore, the project improvements should not have a long-term significant impact on transportation facilities or traffic conditions in the vicinity. The project will also eliminate the existing driveway on Kalākaua Avenue having a positive effect by eliminating conflicts with both pedestrians and vehicles exiting this driveway.

Table 3.2
Trip Generation for Project

NEW PARISH HALL		General Office Building Land Use (710) 12.150 (1,000 sf GFA)		Assembly Area (LU Code 560) 5.590 (1,000 sf GFA)				
Peak Period and Directional Movement		Trips 1,000 sf Or Percentage	Trips	Trips 1,000 sf Or Percentage	Trips	Total Trips Generated	Percent of New Trips	Total New Trips
Weekday PM Peak Hour	Total	1.49	18	1.41	8	26		19
	Inbound	17%	3	59%	5	8	74%	6
	Outbound	83%	15	41%	3	18		13
Saturday PM Peak Hour	Total	0.41	5	3.54	20	25		19
	Inbound	54%	3	71%	14	17	74%	13
	Outbound	46%	2	29%	6	8		6

NEW MUSEUM		Museum 5.500 (1,000 sf GFA)		SUMMARY OF TOTAL NEW TRIPS		
Peak Period and Directional Movement		Trips 1000 sf Or Percentage	Trips	**Parish Hall**	**New Museum**	**Total New Trips**
Weekday PM Peak Hour	Total	2.38	13	**19**	**13**	**32**
	Inbound	27%	4	**6**	**4**	**10**
	Outbound	73%	9	**13**	**9**	**22**
Saturday PM Peak Hour	Total	2.38	13	**19**	**13**	**32**
	Inbound	27%	4	**13**	**4**	**17**
	Outbound	73%	9	**6**	**9**	**15**

Effects on Public Transit

Construction of project improvements should have minimal long-term and short-term construction impact on the City's bus service. There are no bus service routes along both ʻŌhua Avenue and Kealohilani Avenue. Therefore, any construction traffic occurring along those roadways should not adversely impact surrounding bus service routes or bus stops. Construction activities are not expected to occur along Kalākaua Avenue, and there is no existing bus stop in the immediate vicinity of the church's existing driveway where the new Museum will be constructed. The contractor will notify the City Department of Transportation Services (DTS) and Oʻahu Transit Services, Inc. (OTS) of the scope of construction activities and any street, sidewalk, or lane closures prior at least two weeks prior to the start of construction.

Construction activities should also have minimal short-term construction related impacts on the City TheHandi-Van operations. Such services need to be scheduled in advance with individual riders, and drop-off and pick-up locations can be established at convenient sites in the area. The contractor will notify the City DTS and OTS prior to the start of construction.

Once completed, the project should similarly have minimal, if any, negative impact on the City's bus service. Bus routes will not be impacted by the improved driveways serving the new Parish Hall along ʻŌhua Avenue and Kealohilani Avenue. The existing driveway along Kalākaua Avenue will be eliminated with the new Museum, and thus have a beneficial effect by further reducing any conflicts with bus routes along that roadway.

3.11 Public Facilities and Utilities

3.11.1 Educational Facilities

Project improvements planned are expected to have no long-term impact on educational facilities in the surrounding area. The project does not involve any new housing units that may generate new students attending schools in the area. Therefore, the project will not increase student enrollment or place additional demands on existing school faculty and administration.

3.11.2 Medical Facilities

Project improvements planned should have minimal long-term impact on medical facilities in the surrounding area. The project does not involve any new housing units that would generate new residents or visitors to the island that would place increased demands on medical service from nearby facilities.

3.11.3 Recreational Facilities

The project is not expected to have a significant impact on existing recreational facilities in the area because improvements would be constructed within the church's property located *mauka* of Kalākaua Avenue. Existing recreational facilities noted are located along the shoreline *makai* of Kalākaua Avenue. Therefore, activities conducted at the church should not impact access to or use of beach park facilities or the operations of other recreational facilities (ex. Ala Wai Golf Course). The St. Damien Museum planned along Kalākaua Avenue would provide an added educational and cultural attraction for both residents and visitors that will have an overall beneficial positive effect enhancing their experience of Waikīkī.

Construction activities would not involve the use of these recreational facilities or impede existing activities conducted there. Design of the project would include developing appropriate erosion control plans and best management practices to minimize potential runoff from entering surrounding coastal waters. Appropriate agencies would be responsible to review and approve design plans as part of ministerial permits obtained. Thus, implementation of requirements would provide sufficient measures to minimize impacts on these shoreline recreational facilities.

3.11.4 Police and Fire Protection

This project should have minimal impact on the police department's operations or ability to provide adequate protection services to the Waikīkī community either during construction or upon completion of the project. The project will not increase the resident population living in this area or the number of visitors staying in this area. The project will not change the range of activities already occurring on this project site.

Off-duty police staff may be hired to assist in directing traffic during short-term construction activities, if required. However, this assistance will likely be minimized since the majority of the construction activities will occur within the project site.

The project should have minimal impact on the Fire Department's operations or ability to provide fire protection services to the church and surrounding Waikīkī community. The new Museum and Parish Hall with parking structure will be designed to meet City fire and building code requirements. Appropriate design plans will also be coordinated with the Fire Department for their review during the project's design phase.

3.11.5 Electrical and Communication Facilities

The proposed project will generate an increase in demand for electrical and communication services attributable to the Museum and new Parish Hall. This increase is expected to have a minor impact on HECO's distribution infrastructure or power generation facilities. Additional demand for communication service should also not have a significant impact on Oceanic Time Warner Cable or phone companies providing service in this area.

No improvements to HECO's existing distribution lines along 'Ōhua Avenue and in the surrounding area are anticipated. No other improvements to utility companies with underground lines or overhead lines on these utility poles are expected. Appropriate coordination will be conducted with HECO and other pertinent utility companies during the project's design to ensure appropriate service and on-site improvements are provided. This would include the review and approval of design plans by these utility companies so that service can be properly programmed and planned.

3.12 Secondary and Cumulative Impacts

3.12.1 Secondary Effects

Secondary effects, also referred to as indirect effects, are effects caused by a project, but occur later in time or farther removed in distance than direct impacts but are still reasonably foreseeable. Such effects may include impacts on environmental resources or public facilities that occur from a project's influence on land use. For example, a new housing development would have a secondary impact on the State's consumption of fossil fuels as a result of the increase in solid waste removal routes necessary to serve the new homes. Secondary impact assessments are concerned with impacts that are sufficiently "likely" to occur and not with the speculation of any impact that can be conceived of or imagined.

The proposed project is not expected to have any secondary impacts on the resident population, land use patterns, public facilities, infrastructure, or the natural environment in the immediate area and surrounding Waikīkī resort area. The project involves only a new St. Damien Museum and a new multi-story building serving as an improved Parish Hall with parking structure on the church's site. These improvements do not include additional residential housing or visitor units that will increase the resident or visitor population in the area. As a result, the project would not significantly affect public facilities or result in the need for improved infrastructure facilities serving this area as discussed in previous sections of this document.

The project should not influence changes in the existing land use pattern of the immediate area that is already developed with hotels and commercial uses in this urbanized area of Waikīkī. Any future renovations, redevelopment, or modifications to existing hotels or businesses in this area would be due to economic reasons and not due to the church improvements.

Construction of this project will generate short-term construction jobs that are not expected to result in any permanent in-migration of workers to the island of O‘ahu to fill these jobs. It is anticipated that qualified local contractors on O‘ahu would be used for the project's construction. Therefore, construction of the project should not contribute to significant secondary impacts associated with in-migration of workers.

3.12.2 Cumulative Impacts

Cumulative impacts are typically defined as the effects on the environment which result from the incremental impact of a project when added to past, present, and reasonably foreseeable future actions within the study year. The estimation of future impacts is important for cumulative impact analysis. However, the focus must be on "reasonably foreseeable" actions that are those likely to occur or probable rather than those that are merely possible or subject to speculation. The prediction of reasonably foreseeable impacts thus requires judgment based on information obtained from reliable sources such as approved development or construction plans, entitlements, and similar documents.

The discussion of impacts presented within this document has provided information to assist in addressing the applicable cumulative effects associated with the project and other reasonably foreseeable future actions being implemented. The St. Augustine Church improvements should not have significant cumulative impacts on the surrounding environment. Most of the effects are confined to the project site, would not require off-site infrastructure improvements, and are short-term (construction effects). The following is a list of other known developments occurring within the project area that would be completed before 2017 (project completion date).

1. Park Shore Waikīkī Hotel Renovations. Exterior renovations are planned to this hotel located at the corner of Kalākaua Avenue with Kapahulu Avenue two blocks east of the project site. Renovations include new planters and landscaping, painting, illuminated ground signs, new overhead canopy at the porte cochere, adding water features, and other building improvements (Philip K. White & Associates, July 2009).

   The Park Shore Waikīkī Hotel only involves renovation improvements and would not increase hotel units resulting in long-term effects. Therefore, cumulative effects from this work would mainly be associated with short-term construction activities.

2. Waikiki Beach Maintenance. The State Department of Land and Natural Resources is proposing to restore and maintain the 1,700-foot-long segment of Waikiki Beach between the Kuhio Beach seawall and the Royal Hawaiian groin. Approximately 24,000 cubic yards of sand would be recovered from offshore deposits, and pumped to the shoreline where it would be placed along the beach. The project would widen the beach by about 40 feet restoring the beach to its approximate 1982 width (Sea Engineering, Inc., February 2010).

   The Waikīkī Beach maintenance work would be conducted off-shore for sand replenishment so there should not be any cumulative long-term effects on land-based resources and infrastructure facilities with the exception of activities occurring on the beach. This maintenance work also needs to acquire several discretionary approvals and obtain funding which may delay this beyond the 2013 study year. If it does occur before 2013, cumulative effects should mainly be associated with short-term construction activities.

3. Princess Kaʻiulani Renovation and Replacement Tower for Moana Surfrider Hotel Diamond Head Tower. The Princess Kaʻiulani site will be renovated and redeveloped by demolishing the Princess and Kaʻiulani towers and other structures and developing a new 34-story condo-hotel. The existing Ainahau Tower would be renovated, and new retail shops, recreational amenities, and support service facilities constructed. The Diamond Tower of the Moana Surfrider Hotel would be replaced with a new 26-story hotel and residential

tower. New retail shops, recreational amenities, and support service facilities are also planned (Kusao & Kurahashi, Inc., February 2010). Improvements are planned to be completed within three years after obtaining necessary entitlements and ministerial approvals. Therefore, many of the improvements could be completed by the 2013 study year.

Development plans for the Princess Ka‘iulani and Moana Surfrider sites involve several improvements and upgrades to those hotel sites which were covered in the Final EIS prepared for them. Several mitigative measures were identified in the Final EIS to address that development’s effects on physical resources (ex. archaeology), and infrastructure (sewer and traffic).

Short-Term Constructed Related Effects

Cumulative impacts would be associated with temporary construction activities, since the timing of the proposed project may occur concurrently with other developments in the surrounding area. This situation would contribute to increased temporary disruptions and nuisance effects such as increased runoff, noise, dust, and construction worker traffic. However, implementation of the measures discussed in other sections of this document would reduce these temporary impacts.

Construction of the other developments in the project area would inevitably involve temporary land-disturbing activities that may result in some soil erosion during periods of heavy rainfall or high winds. Various mitigation measures in the form of site specific best management practices will be incorporated into the design plans for each of these other projects to minimize potential short-term erosion impacts during such construction activities. Contractors would also comply with other regulations and agency requirements (ex. DOH noise regulations, etc.). Therefore, the cumulative effect from these activities should not be significant and would be temporary.

Effects on Physical and Natural Environment

The St. Augustine Church project would affect less than a half-acre of land within the existing developed site. Improvements would have minimal affect on the various physical resources and natural environment such as soils, topography, botanical, faunal, natural hazards, and hydrology as discussed in the respective sections of this document. An archaeological monitoring plan will be conducted during ground disturbing construction activities to mitigate potential effects on subsurface resources. When evaluated with other known developments occurring in the area, the project should have no significant cumulative impacts on these various physical resources and natural environment.

The Park Shore Waikīkī Hotel plans renovations that do not involve major changes to their existing site and subsequent effects on the physical and natural environment. The Princess Ka‘iulani and Moana Surfrider redevelopment work involves larger modifications to existing developed sites in Waikīkī. This hotel redevelopment requires more site work and changes, and

the Final EIS prepared for that development addressed the effects on resources and identified the mitigative measures to be implemented.

The Waikīkī Beach maintenance project would affect shoreline and marine resources more directly than the other developments because it involves activities on the beach and in the ocean to collect the sand. These activities would not affect inland soils, topography, botanical, or other non-marine resources. The environmental assessment prepared for that project addressed these effects and necessary mitigative measures to be implemented.

Effects on Social and Economic Factors

All the projects identified would contribute to the overall economic environment by creating temporary construction jobs and wages. This will have a positive impact on State fiscal factors with the addition of General Excise taxes, corporate taxes, individual income taxes, and other taxes related to industries supporting construction activities such as manufacturers and distributors. The St. Augustine Church project would not affect City property values for the property because it is a non-profit organization. The Waikīkī Beach maintenance project would also not affect City property values since it involves government-owned property (Kuhio Beach) that is not generating property tax revenue. However, the Park Shore Waikīkī Hotel, Princess Ka‘iulani, and Moana Surfrider improvements should improve property values along with the economic viability of those operations creating positive effects on both City as well as State finances.

The St. Augustine Church project would have minimal, if any, affect on the resident or visitor population because it does not involve adding new housing or visitor units. It would not induce changes to the surrounding land use patterns, character of the community, or cause significant social impacts as discussed in this document. Therefore, this project should not have significant cumulative impacts on these social factors given the other developments planned in the area.

The Waikīkī Beach maintenance improvement does not involve new housing or visitor units, but it should support the viability of Waikīkī as a resort destination by improving beach amenities. The Park Shore Waikīkī Hotel renovation similarly does not change existing hotel units, and should have minimal affect on social factors. The redevelopment of the Princess Ka‘iulani and Moana Surfrider sites will change the number and type of visitor units in that area, and the Final EIS addressed those changes and affects.

Effects on Infrastructure and Public Facilities

The St. Augustine Church project would have minimal affect on existing infrastructure facilities serving the site and immediate area along with public facilities. No off-site improvements would be required due to this project as discussed in various sections of this document. No significant cumulative impacts are expected on existing school facilities, medical facilities, and police and fire protection services. The project improvements would not generate additional residents

migrating to O‘ahu and would not create additional demands on these facilities or the activities and services provided. Therefore, the project should not have significant cumulative impacts on these facilities given the other developments planned in the area.

The Waikīkī Beach maintenance improvement would not involve changes to existing infrastructure facilities and would not affect public facilities with the exception of the Kūhiō Beach Park since it involves beach restoration work. The Park Shore Waikīkī Hotel only plans renovation work to existing facilities that would have only minor effect on infrastructure facilities and should not affect public facilities.

The redevelopment of the Princess Ka‘iulani and Moana Surfrider sites will involve changes to infrastructure facilities serving those sites. Necessary improvements were addressed in the Final EIS, and implementation of measures would mitigate impacts that are also subject to agency approvals. The addition of the St. Augustine Church project would not change the improvements needed to infrastructure facilities serving these hotel sites.

CHAPTER 4
CONFORMANCE WITH EXISTING STATE AND COUNTY PLANS, POLICIES, AND CONTROLS

This chapter discusses the project's conformance with the State Land Use District regulations, State Environmental Policy (Chapter 344, HRS), and the regulations, policies, and goals set forth by the City's Primary Urban Center Development Plan, Special Management Area (Chapter 205A, HRS), and Land Use Ordinance.

4.1 State Land Use District

Pursuant to Chapter 205, HRS, all lands in the State of Hawai‘i are classified by the State Land Use Commission (LUC) into four major districts which are referred to as State Land Use Districts. These four land use districts are the Urban, Rural, Agricultural, and Conservation Districts.

The State LUC's Land Use District Boundary Map for Waikīkī shows that the proposed St. Augustine Church project site and surrounding areas are classified as being within the State's "Urban District." Thus, under Chapter 205, HRS, Urban District lands on the Island of O‘ahu are regulated by the ordinances and regulations of the City and County of Honolulu.

4.2 Chapter 344, HRS, State Environmental Policy

This section discusses the project's conformance and consistency with the pertinent goals, policies, and guidelines described under Chapter 344, HRS, State Environmental Policy.

Section 344-3(1). Conserve the natural resources, so that land, water, mineral, visual, air and other natural resources are protected by controlling pollution, by preserving or augmenting natural resources, and by safeguarding the State's unique natural environmental characteristics in a manner which will foster and promote the general welfare, create and maintain conditions under which humanity and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of the people of Hawaii.

> **Discussion:** The project will be consistent with this policy as discussed throughout the various sections of this document. The new St. Damien Museum and Parish Hall will be constructed within an already built environment and thus not have significant impacts on unique natural resources. These improvements will be designed and constructed to minimize impacts, control pollutants during construction by implementing best management practices, and include review and approval of plans by pertinent regulatory agencies. The Museum improvements would generate positive effects for residents and visitors through education about a key figure in Hawaiian history (St. Damien). The

Parish Hall will support the church's activities allowing the church to better meet future social and charitable needs for their parish and the greater community.

Section 344-3(2). Enhance the quality of life by:

A. Setting population limits so that the interaction between the natural and manmade environments and the population is mutually beneficial.

B. Creating opportunities for the residents of Hawaii to improve their quality of life through diverse economic activities which are stable and in balance with the physical and social environments.

C. Establishing communities which provide a sense of identity, wise use of land, efficient transportation, and aesthetic and social satisfaction in harmony with the natural environment which is uniquely Hawaiian.

D. Establishing a commitment on the part of each person to protect and enhance Hawaii's environment and reduce the drain on nonrenewable resources

Discussion: The proposed project would be consistent with these environmental policies regarding the quality of life. The church improvements would have minimal, if any effect, on the existing or future resident population in Waikīkī and will not adversely impact the interaction between natural and man-made environments. Construction activities would create short-term job opportunities to improve the quality of life for residents employed in the construction industry and would generate indirect benefits to other businesses. Improvements would increase the church's sense of identify within Waikīkī and the island. The physical design of the new facilities would provide aesthetic balance with the natural environment, including the incorporation of sustainability concepts to reduce the use of non-renewable resources.

Section 344-4. Guidelines:

1. Population.

A. Recognize population impact as a major factor in environmental degradation and adopt guidelines to alleviate this impact and minimize future degradation;

B. Recognize optimum population levels for counties and districts within the State, keeping in mind that these will change with technology and circumstance, and adopt guidelines to limit population to the levels determined.

Discussion: The proposed project would not affect the existing or future resident population in Waikīkī or elsewhere in the State. Proposed improvements do not involve construction of any new homes or visitor units, and short-term construction jobs are expected to be filled by Hawai'i residents. Therefore, resident population will not be affected by in-migration.

2. Land, water, mineral, visual, air, and other natural resources

A. Encourage management practices which conserve and fully utilize all natural resources;

B. Promote irrigation and waste water management practices which conserve and fully utilize vital water resources;

D. Encourage management practices which conserve and protect watersheds and water sources, forest, and open space areas;

G. Promote the optimal use of solid wastes through programs of waste prevention, energy resource recovery, and recycling so that all our wastes become utilized.

Discussion: The proposed project would be consistent with these guidelines because the improvements would not adversely impact natural resources. Buildings will be designed to incorporate sustainability concepts to reduce the use of non-renewable resources and conserve water, and best management practices will incorporate measures to protect the environment. Landscape irrigation will be designed to conserve water resources. Project improvements would not significantly impact natural resources such as watersheds, forest preserves, wildlife preserves, or unique ecological preserves. As part of the project's sustainable design, the church's operations will incorporate feasible measures to recycle waste, minimize energy use, and minimize waste generation.

3. Flora and fauna

A. Protect endangered species of indigenous plants and animals and introduce new plants or animals only upon assurance of negligible ecological hazard.

B. Foster the planting of native as well as other trees, shrubs, and flowering plants compatible to the enhancement of our environment.

Discussion: This project would not impact endangered plants or animals since none are known to be present on the project site or within the immediate surrounding area. Design plans would not introduce new plants or animals to the area that may contribute to an ecological hazard on flora or fauna in the region. Landscape improvements will incorporate the use of native plants and vegetation.

4. Parks, recreation, and open space

A Establish, preserve and maintain scenic, historic, cultural, park and recreation areas, including the shorelines, for public recreational, educational, and scientific uses.

B. Protect the shorelines of the State from encroachment of manmade improvements, structures, and activities.

C. Promote open space in view of its natural beauty not only as a natural resource but as an ennobling, living environment for its people.

Discussion: The project will not adversely impact scenic or park and recreation areas, and will not encroach into shoreline areas as discussed in this document. Historic or cultural resources should not be adversely impacted by construction activities as mitigative measures will be implemented as prescribed under a burial treatment plan

approved by the O‘ahu Island Burial Council. Project improvements will actually increase the amount of open space and landscaping present on the church property.

5. *Economic development.*
   - A. *Encourage industries in Hawaii which would be in harmony with our environment;*
   - E. *Establish visitor destination areas with planning controls which shall include but not be limited to the number of rooms;*

Discussion: The St. Augustine Church is a non-profit religious organization that provides community services for their parish along with social services that benefits the larger community (ex. soup kitchen, practice facility for hula hālau, etc.). These operations are harmonious with the environment and community. Project improvements do not involve any new homes or visitor units that would impact the Waikīkī visitor destination area. However, the new Museum will add a new attraction that will appeal to many visitors interested in the history of Hawai‘i and the story of St. Damien.

6. *Energy.*
   - A. *Encourage the efficient use of energy resources.*

Discussion: Buildings will be designed to incorporate sustainability concepts to reduce the use of non-renewable resources and efficient use of energy resources.

7. *Community life and housing.*
   - B. *Develop communities which provide a sense of identity and social satisfaction in harmony with the environment and provide internal opportunities for shopping, employment, education, and recreation;*
   - E. *Recognize community appearances as major economic and aesthetic assets of the counties and the State; encourage green belts, plantings, and landscape plans and designs in urban areas; and preserve and promote mountain-to-ocean vistas.*

Discussion: Project improvements will support Waikīkī’s identity as a major resort destination and enhance the church’s presence in the community. The new Museum and redeveloped Parish Hall will provide improved community benefits and new educational opportunities for visitors associated with St. Damien and other related cultural materials. Improvements will be designed to be compatible with the church site and design characteristics along with the surrounding area. Additional open space and landscaping added will improve the aesthetic value of the church property.

9. *Education and culture.*
   - A. *Foster culture and the arts and promote their linkage to the enhancement of the environment.*

Discussion: The new Museum will foster the culture and arts associated with St. Damien and other related cultural materials included. The redeveloped Parish Hall with improved facilities will also support culture and arts activities presently occurring.

10. Citizen participation

B. Provide for expanding citizen participation in the decision making process so it continually embraces more citizens and more issues.

Discussion: The environmental review process undertaken for this project allowed for public and government agency input during the review of the Draft EA. Public consultation efforts help provide decision-makers with a diverse array of information and comments to consider when evaluating this project.

4.3 City Primary Urban Center Development Plan

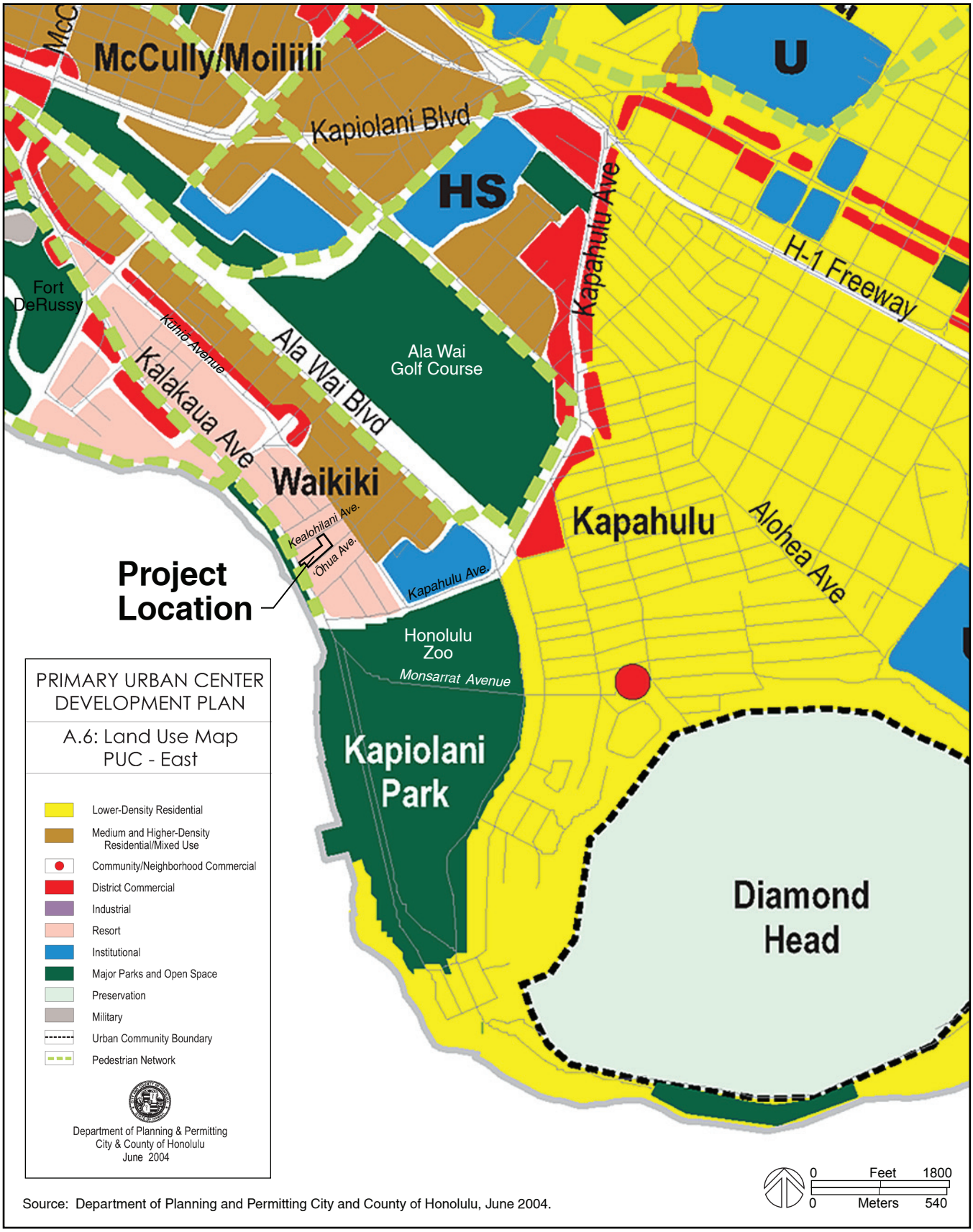
The City and County of Honolulu's Development Plan (DP) program provides a relatively detailed framework for implementing the City's *General Plan* objectives and policies for the growth and development of O'ahu at a regional level. The DP program established eight geographical DP areas, one of which is the Primary Urban Center (PUC), which is where the project site is located. The PUC extends from Pearl City in the west to Wai'alae-Kahala in the east. The Primary Urban Center Development Plan was adopted in June 2004 as Ordinance No. 04-14, ROH. The project site is designated as "Resort" on this development plan's land use map (A.6: Land Use Map PUC – East).

This section discusses the project's conformance and consistency with the pertinent policies and guidelines of the City's PUC Development Plan. The Land Use Map for PUC East designates the project site and immediate surrounding area as a Resort use (Figure 4.1).

Section 3.1.2. Policies:

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

1. <u>Preserve historic and cultural sites</u>. Preserve and protect sites that have high preservation value because of their good condition or unique features. Protection includes planning and design of adjacent uses to avoid conflicts or abrupt contrasts that detract from or destroy the physical integrity and historic or cultural value of the site. Retain, whenever possible, significant vistas associated with historic, natural and man-made features. Allow adaptive reuse of historic buildings to serve a new function and/or enhance interpretive value without destroying the historic value of a site.



Source: Department of Planning and Permitting City and County of Honolulu, June 2004.

CITY PRIMARY URBAN CENTER DEVELOPMENT PLAN LAND USE **Figure 4.1**

ST. AUGUSTINE-BY-THE-SEA CHURCH MASTER PLAN
WAIKĪKĪ, O'AHU, HAWAI'I

Discussion: The project's design will include preserving previously identified burials in place within the project site (beneath the Museum) and implementing additional measures under an approved burial treatment plan to protect burials during construction activities as discussed in Chapter 3. Other mitigative measures, such as archaeological monitoring, would be incorporated into design plans and construction activities to minimize damages to other potential burials or cultural artifacts that may be encountered during construction.

2. *Preserve panoramic views of natural landmarks and the urban skyline. Preserve views of the Koolau and Waianae Mountain Ranges, Punchbowl, Diamond Head, Pearl Harbor and other natural landmarks. Maintain important view corridors within and across urban Honolulu and keep Downtown as the most prominent feature of the urban skyline. Views along the Pearl Harbor shoreline and the Pearl Harbor Historic Trail toward the mountains, shoreline, significant landmarks, and adjacent communities should be created and maximized wherever possible and appropriate.*

Discussion: Project improvements will not significantly impact panoramic views of important natural landmarks from Kalākaua Avenue or from within the church site. The design of the new Parish Hall will be compatible with the church and architecturally screens the three floors of parking.

3. *Improve access to shoreline and mountain areas. Provide continuous lateral access along the Honolulu waterfront and around the East Loch of Pearl Harbor, where urban activity is most intense. Maintain access to mountain hiking trails and increase opportunities for nature education and camping.*

Discussion: Project improvements will not impact lateral access along Kalākaua Avenue or other access routes to the shoreline. Improvements occur only within the church's property. The project will enhance amenities provided along Kalākaua Avenue for pedestrians by providing a new Museum supporting cultural activities in Waikīkī.

Section 3.1.3.1 Historic and Cultural Sites

1. *Preserve the architectural character, landscape setting and visual context of historic landmarks through appropriate zoning standards and development controls, as necessary, and public outreach programs such as design guidelines for the maintenance, renovation or expansion of older dwellings.*

Discussion: Project improvements will be designed and constructed in conformance with City zoning and development standards prescribed under the Waikīkī Special District. The architectural character of the new Museum and Parish Hall has been designed to complement the character of the existing St. Augustine Church.

Section 3.1.3.3 Urban Skyline and Mauka-Makai Views

1. *Maintain the visual prominence of important districts by allowing a greater height and massing of buildings, such as in the Downtown area.*
2. *Apart from Downtown and other central Honolulu locations, promote mid-rise or low-rise scale for new buildings.*
3. *Preserve and enhance significant mauka or makai view corridors along major collector streets indicated in Figure 3.1 through a combination of zoning controls and streetscape improvements.*

Discussion: The design of the new Museum and Parish Hall maintains the visual prominence of the Waikīkī resort area and is consistent with development standards for Waikīkī. The Museum enhances the St. Augustine Church's presence along Kalākaua Avenue and complements the church's design character. The design of the Parish Hall with parking structure blends with other buildings along ʻŌhua Avenue. These buildings will be two and four-stories in height promoting the low- and mid-rise scale for the neighborhood. The improvements will not significantly impact *mauka* or *makai* view corridors along Kalākaua Avenue.

Section 3.1.3.4 Makai Access

1. *Provide continuous lateral shoreline access for pedestrians extending from Diamond Head to Nuuanu Stream, around Keehi Lagoon, and from Neal S. Blaisdell Park through Aiea Bay State Recreation Area.*
   - *Construct walkways along the Waikiki and Kakaako-Honolulu waterfronts.*

Discussion: The project will not impact lateral shoreline access for pedestrians along Kalākaua Avenue or waterfront walkways. The new Museum will provide visitors and residents with an additional important historical and cultural amenity along this shoreline area. It will also remove an existing church driveway and minimize vehicle and pedestrian conflicts.

Section 3.1.3.7 Other Urban Open Spaces

1. *Maintain significant trees and landscaped open space within institutional campuses, cemeteries and other open-space uses that are visible from public right-of-ways.*
2. *Enhance the entries and street frontages of cemeteries and campuses with trees and landscaping.*

Discussion: The project will increase open space on the church property and provide additional landscaping. Existing areas of the site being affected predominantly consist of pavement for a driveway and parking lot. The church's current vehicular entrance from ʻŌhua Avenue will be improved with additional open space and landscaping enhancing this street frontage.

Section 3.2.2.1 Neighborhood Planning

1. *Promote mixed land uses. Office, retail, and community service uses can coexist with residential uses; and there are a number of opportunities for them to support each other. In traditional single-family neighborhoods, groupings of small stores provide convenient service and a place to meet neighbors. In the PUC's in-town neighborhoods, both residential and office development support retail and other services. Neighborhoods with a strong mix of uses have activity 24 hours a day. Residences providing "eyes on the street" contribute to neighborhood safety.*
2. *Make streets "pedestrian-friendly." There are many opportunities to create street environments that invite pedestrian use, such as widening sidewalks, planting trees to provide shade and buffer pedestrians from vehicular traffic, and narrowing intersections to provide shorter and safer pedestrian crossings. The Land Use Maps (Maps A.4, A.5 and A.6) show primary pedestrian routes. These streets and others identified through neighborhood planning should be given high priority for pedestrian improvement.*

Discussion: The project supports mixed land use within the Waikīkī resort area. The church will add another important cultural amenity for residents and visitors with the new Museum, and the Parish Hall provides improved facilities for community activities. Improvements will support a more pedestrian friendly street by eliminating an existing driveway connection with Kalākaua Avenue. The Museum will have an open and attractive entrance for pedestrians. The sidewalk along 'Ōhua Avenue will also be improved with the new Parish Hall due to increased open space and landscaping planned.

Section 3.4.2.2 Visitor Facilities

1. *Adopt and implement a plan for a vibrant and livable Waikiki. This plan needs to address the quality of the resident experience as well as the quality of the visitor experience. Based on development parameters set by the Waikiki Special District, the plan should encompass mobility, the quality of the street environment for pedestrians, public spaces, the scale and design of new buildings, and Waikiki's relationship to the Convention Center and neighboring districts.*

Discussion: The project supports a vibrant and livable Waikīkī community with the addition of the Museum providing a new cultural amenity for the public. The redeveloped Parish Hall will support the church's activities and provide improved facilities for community organizations. The improvements support mobility, enhances the street environment for both vehicles and pedestrians, and increases open space and landscaping. The scale of buildings are complementary with existing surrounding uses and have been appropriately designed.

Section 4.1.2 Policies (Water)

1. *Integrate resource management of all potable and nonpotable water sources, including groundwater, stream water, storm water, and wastewater effluent.*
2. *Adapt water conservation practices in the design of new developments and modification of existing uses, including landscaped areas.*

Discussion: The project will not significantly impact potable and non-potable water sources, and water conservation practices will be incorporated in the church's operations to the extent practicable. The new facilities will comply with City design standards addressing stormwater runoff, and increased open space and landscaping planned will provide greater opportunities to reduce runoff discharges.

Section 4.2.2 Policies (Wastewater)

1. *Implement wastewater collection system improvements to provide adequate service and sound facilities to existing neighborhoods and timely increases in system capacity to areas planned to undergo improvement or change in use.*

Discussion: The project will implement on-site wastewater system improvements that are already connected to the City's sewer system. Project improvements will not significantly impact the City's wastewater collection system, and a sewer connection has already been approved for this project.

Section 4.3.2 Policies (Electrical Power)

1. *Promote and implement energy conservation measures and integrated resource planning.*

Discussion: The design of proposed facilities will support energy conservation practices with the use of low volume water fixtures, day lighting, natural ventilation, and low-energy electrical fixtures.

Section 4.5.2 Policies (Solid Waste)

1. *Reduce the solid waste stream by encouraging recycling and reuse.*

Discussion: Church activities are planned to incorporate efforts to reduce solid waste by encouraging recycling and reuse.

Section 4.6.2 Policies (Stormwater)

1. *Require methods of retaining or detaining stormwater for gradual release into the ground as the preferred strategy for the management of stormwater. Where feasible, utilize open spaces including parking lots, landscaped areas, parks, and golf courses to detain or infiltrate stormwater flows to reduce their volume and runoff rates. (City Council Resolution No. 94-296).*

2. *Manage stormwater flows through best management practices to minimize stormwater runoff and peak discharge rates.*

Discussion: Drainage improvements for this project will comply with City policy and design requirements. Open space and landscaped areas will be utilized for stormwater infiltration to the extent practicable. Best management practices will be implemented during construction activities to minimize storm water runoff and discharges.

4.4 City Zoning Regulations

The project site is located within the Waikīkī Special District and is regulated by Section 21-9.80 of the LUO. Ordinance 11-30, approved by the City Council and effective as of December 14, 2011, amended provisions of the LUO pertaining to the Waikīkī Special District. Figure 4.2 shows the zoning precincts established within this special district, and the project site is situated within the Resort Mixed Use Precinct. The purpose of a special district is to guide development to protect and enhance the physical and visual aspects of certain areas within the community in need of restoration, preservation, redevelopment or rejuvenation for the benefit of the community as a whole. These special district regulations supplement existing development standards and requirements prescribed under the LUO.

Permitted uses and structures within the Waikīkī Special District are identified under Table 21-9.6(A) of the LUO. The proposed Parish Hall is considered a "meeting facility" use within the Resort Mixed Use Precinct and is permitted. The St. Damien Museum is considered an "art gallery and museum" use and is also permitted.

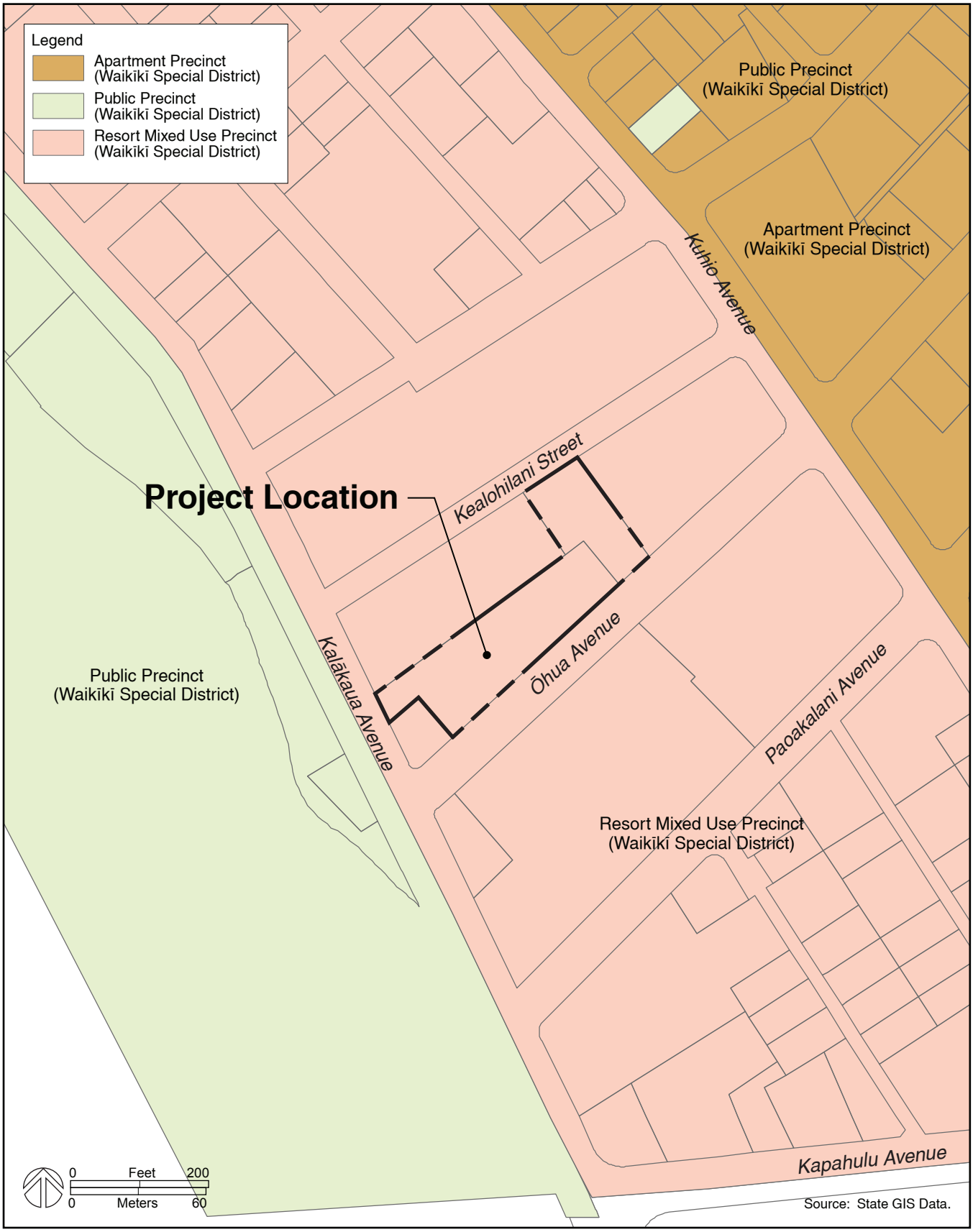
4.4.1 Consistency with District Objectives

A discussion of the project's consistency with the pertinent objectives for the Waikīkī Special District (Section 21-9.80-1) is provided. In summary, the project's purpose and proposed design will be consistent with and support these applicable objectives.

1. *Promote a Hawaiian sense of place at every opportunity.*

   Discussion: The project will promote a Hawaiian sense of place particularly with the new St. Damien Museum serving as an important historical and cultural attraction for both residents and visitors to the State.

2. *Guide development and redevelopment in Waikiki with due consideration to optimum community benefits. These shall include the preservation, restoration, maintenance, enhancement and creation of natural, recreational, educational, historic, cultural, community and scenic resources.*



CITY WAIKĪKĪ SPECIAL DISTRICT MAP **Figure 4.2**

ST. AUGUSTINE-BY-THE-SEA CHURCH MASTER PLAN
WAIKĪKĪ, O'AHU, HAWAI'I

Discussion: The project consists of redevelopment of the St. Augustine by-the-Sea Church site to provide a new Museum and Parish Hall that will include improved facilities to allow the church to better service its parish members and community organizations and activities. Improvements will provide a new educational, historic, and cultural attraction with the Museum.

3. *Provide for a variety of compatible land uses which promote the unique character of Waikiki, emphasizing mixed uses.*

Discussion: There has been a Catholic church present in Waikīkī since 1839, and this church was moved to the current project site in 1860. Since then, Waikīkī has evolved into a world-class resort visited by travelers from around the world. As Waikīkī has grown, the St. Augustine by-the-Sea Church has also evolved to better serve residents and visitors. Therefore, Waikīkī included the presence of a Catholic Church for over 170 years, contributing to the diversity, uniqueness, and character of this resort area. The improvements for the Parish Hall and new Museum are important adaptations for the Church to better serve its parishioners, allowing it to continue being a meaningful presence in Waikīkī.

4. *Support efficient use of multimodal transportation in Waikiki, reflecting the needs of Waikiki workers, businesses, residents, and tourists. Encourage the use of public transit rather than the private automobile, and assist in the efficient flow of traffic.*

Discussion: Project improvements support the efficient use of multimodal transportation in Waikīkī with the new Museum conveniently and effectively situated along the Kalākaua Avenue frontage for easy access by pedestrians and those using the TheBus. The large majority of visitors to the Church consist of visitors that either walk or use public transit to get to this site, and improvements will support this. The Parish Hall will also include sufficient parking to better accommodate the needs of their congregation and reduce the demand placed on street parking in the area that can be more easily used for businesses, residents, and tourists.

5. *Provide for the ability to renovate and redevelop existing structures which otherwise might experience deterioration. Waikiki is a mature, concentrated urban area with a large number of nonconforming uses and structures. The zoning requirements of this special district should not, therefore, function as barriers to desirable restoration and redevelopment lest the physical decline of structures in Waikiki jeopardize the desire to have a healthy, vibrant, attractive and well-designed visitor destination.*

Discussion: The project involves redeveloping the Church's existing apartment building that is used as their present parish hall into a modern facility with parking. The Catholic Church has been a part of Waikīkī since 1839, and existing structures were built prior to 1962. As a result, the existing development is non-conforming because structures do not comply with current front yard and minimum open space requirements. However, project improvements and redevelopment of the site will reduce the non-conformity with district development standards being consistent with this objective. The ability to upgrade the Church's facilities on-site, and reduce nonconformities, will contribute to the overall well-being of Waikīkī as a whole.

6. *Enable the city to address concerns that development maintain Waikiki's capacity to support adequately, accommodate comfortably, and enhance the variety of worker, resident and visitor needs.*

Discussion: The project is consistent with this objective as the City DPP is able to address such concerns as the approving agency for this environmental assessment and other land use entitlements from both the City DPP and the City Council. The approval of this project will facilitate improved services to the Church parishioners and create a cultural attraction (St. Damien Museum) of international interest.

7. *Provide opportunities for creative development capable of substantially contributing to rejuvenation and revitalization in the special district, and able to facilitate the desired character of Waikiki for areas susceptible to change.*

Discussion: The project involves an opportunity for development of important Church facilities and the new Museum that will provide a new educational and cultural attraction in Waikīkī contributing to the rejuvenation and revitalization of this district and facilitating the desired character of Waikiki. The design of the Museum and Parish Hall buildings are complementary with existing Church facilities, and are intended to complement the historic and cultural character of the overall church site. The parking structure portion of the Parish Hall has been designed to look less like a typical parking structure, and landscaping will be added to further soften its appearance.

8. *Encourage architectural features in building design which complement Hawaii's tropical climate and ambience, while respecting Waikiki's urbanized setting. The provision of building elements such as open lobbies, lanais, and sunshade devices is encouraged.*

Discussion: The architectural design of the Museum and Parish Hall buildings are complementary with the Church's existing facilities and sanctuary. The Museum is planned to have an open *loggia* serving as an entrance feature from Kalākaua Avenue, and a gable roof complementing the church sanctuary. The Parish Hall includes a large open air lanai on the 4th floor along with other lanais on each floor of the parking structure. The Parish Hall building is also designed to be lower in height than the sanctuary and reduce impacts on the historic and cultural character of the site. An increase in landscaped areas will improve the microclimate in the area, and reduce storm water runoff.

9. *Maintain, and improve where possible: mauka views from public viewing areas in Waikiki, especially from public streets; and a visual relationship with the ocean, as experienced from Kalakaua Avenue, Kalia Road and Ala Moana Boulevard. In addition, improve pedestrian access, both perpendicular and lateral, to the beach and the Ala Wai Canal.*

Discussion: The Museum will be situated along Kalākaua Avenue for easy pedestrian access and allow views of the ocean across this roadway. An existing driveway onto Kalākaua Avenue will be eliminated improving pedestrian access in the area of the project due to the removal of conflicts with vehicular traffic. The Parish Hall's design will also provide *mauka* views from the large open lanai.

10. *Maintain a substantial view of Diamond Head from the Punchbowl lookouts by controlling building heights in Waikiki that would impinge on this view corridor.*

Discussion: The project would not adversely impact views of Diamond Head from Punchbowl lookouts. The height of the Museum and Parish Hall would be well below the 220-foot height limit allowed for this site.

11. *Emphasize a pedestrian-orientation in Waikiki. Acknowledge, enhance and promote the pedestrian experience to benefit both commercial establishments and the community as a whole. Walkway systems shall be complemented by adjacent landscaping, open spaces, entryways, inviting uses at the ground level, street furniture, and human-scaled architectural details. Where appropriate, open spaces should be actively utilized to promote the pedestrian experience.*

Discussion: The Museum supports a pedestrian-orientation in Waikīkī by being situated along Kalākaua Avenue for easy pedestrian access. An existing driveway onto Kalākaua Avenue will be eliminated, improving pedestrian flow due to the removal of conflicts with vehicular traffic. The two-story Museum is designed for pedestrian access, and will have an open *loggia* serving as an inviting pedestrian entrance feature from Kalākaua Avenue. Landscaping will be provided fronting this entrance to further improve its visual appearance. The

Parish Hall will also have a large landscaped open space area fronting its main entrance along ʻŌhua Avenue, thus contributing to the ground level amenities for pedestrians.

12. *Provide people-oriented, interactive, landscaped open spaces to offset the high-density urban ambience. Open spaces are intended to serve a variety of objectives including visual relief, pedestrian orientation, social interaction, and fundamentally to promote a sense of "Hawaiianness" within the district. Open spaces, pedestrian pathways and other ground level features should be generously supplemented with landscaping and water features to enhance their value, contribute to a lush, tropical setting and promote a Hawaiian sense of place.*

    Discussion: The Museum is designed to have a pedestrian-oriented landscaped main entrance along Kalākaua Avenue that would serve as an inviting pedestrian entrance feature. The open *loggia* design and landscaping support ground level features contributing to this experience and providing visual relief. The Parish Hall also has a large landscaped open space area fronting its main entrance along ʻŌhua Avenue for pedestrians. In addition, there will be a contemplative garden to replace an existing driveway to provide a peaceful area for those visiting the site.

4.4.2 Consistency with Development Standards

Waikīkī Special District development standards are specified under Table 21-9.6(B) of the LUO, and Table 4.1 summarizes the project's consistency with these standards. The existing parish hall building was constructed in 1959, and the present St. Augustine Church and rectory were constructed in 1962. Therefore, these buildings are "nonconforming structures" because they were legally constructed prior to the adoption of the LUO in October 1986 but presently do not comply with the front yard setback requirement under the Waikīkī Special District development standards.

<u>Yard Setback Requirements</u>

The St. Augustine Church project site is unique in that it has three front yards along Kalākaua Avenue, ʻŌhua Avenue, and Kealohilani Street. The church sanctuary meets the 20-foot front yard setback from Kalākaua Avenue because it is sited behind an existing commercial building (ABC Store and Burger King restaurant) The church sanctuary and rectory buildings do not meet the 15-foot front yard setback along ʻŌhua Avenue. No changes to these buildings are planned under this proposed project.

Table 4.1
Project Consistency with Waikīkī Special District Development Standards
(Resort Mixed Use Precinct)

Development Standard		Discussion on Project Consistency
Minimum Lot Area.	10,000 sf	TMK parcels 12 and 15 have lot areas greater than 10,000 sf. The total area of the project site is 50,060 sf.
Minimum Lot Width And Depth	50 ft	Both TMK parcels 12 and 15 meet the minimum lot width and depth requirements.
Yards - Front	15 – 20 ft	The Church, Rectory, and Parish Hall are legally non-conforming structures that do not meet the Front Yard setback requirement. The project site has three front yards associated with Kalākaua Avenue, ʻŌhua Avenue, and Kealohilani Street. The new St. Damien Museum building will meet the 20-foot yard setback from Kalākaua Avenue. The new Parish Hall and parking structure will meet the 15-foot yard setback from Kealohalani Street and ʻŌhua Avenue. No changes would occur to the church sanctuary and rectory building, and they will continue as non-conforming structures not meeting the front yard setback.
Yards – Side / Rear	0 ft	Both TMK parcels 12 and 15 have multiple Front Yards. Therefore, all other yards are considered Side Yards. Existing buildings and new buildings planned will meet this yard setback requirement.
Maximum Density	2.33 (FAR calculation)	A total maximum density allowed for the site was estimated to be approximately 116,400 square feet of floor area based upon the recently amended district standards (Ordinance 11-30). This estimate included the lot area, 50 percent of the abutting right-of-way area along ʻŌhua Avenue, and floor area bonus for open space being provided. The total floor area of existing church sanctuary, rectory and parish hall buildings is 21,760 sf and is within the maximum density. With the proposed project, the total floor area will be 40,702 sf that is within the maximum density requirement. The project proposes a Floor Area Ratio (FAR) of only 0.81.
Minimum Open Space	0%	Under the current development standards, amended under Ordinance 11-30, there is no minimum open space requirement under the Resort Mixed Use Precinct. Existing open space on the project site is about 18%. The total amount of open space will increase to 30% with the project.
Maximum Height	220 feet	Existing buildings are well within this height limit, and the new buildings planned will be within this limit.
Transitional Height Setback	1 foot for each 10 feet in height above 40 feet	Existing buildings meet this transitional height setback requirement. The new St. Damien Museum will not exceed 40 feet in height, and the redeveloped Parish Hall with parking structure will meet this height setback requirement.

The existing parish hall does not meet the 15-foot front yard setback along Kealohilani Street. Construction of the new Parish Hall with parking structure will require demolishing the existing parish hall building. This new Parish Hall multi-purpose building will comply with the front yard setback requirement of 15 feet from Kealohilani Street and ʻŌhua Avenue. The new St. Damien Museum building will comply with the 20-foot front yard setback requirement from Kalākaua Avenue.

Off-Street Parking Requirements

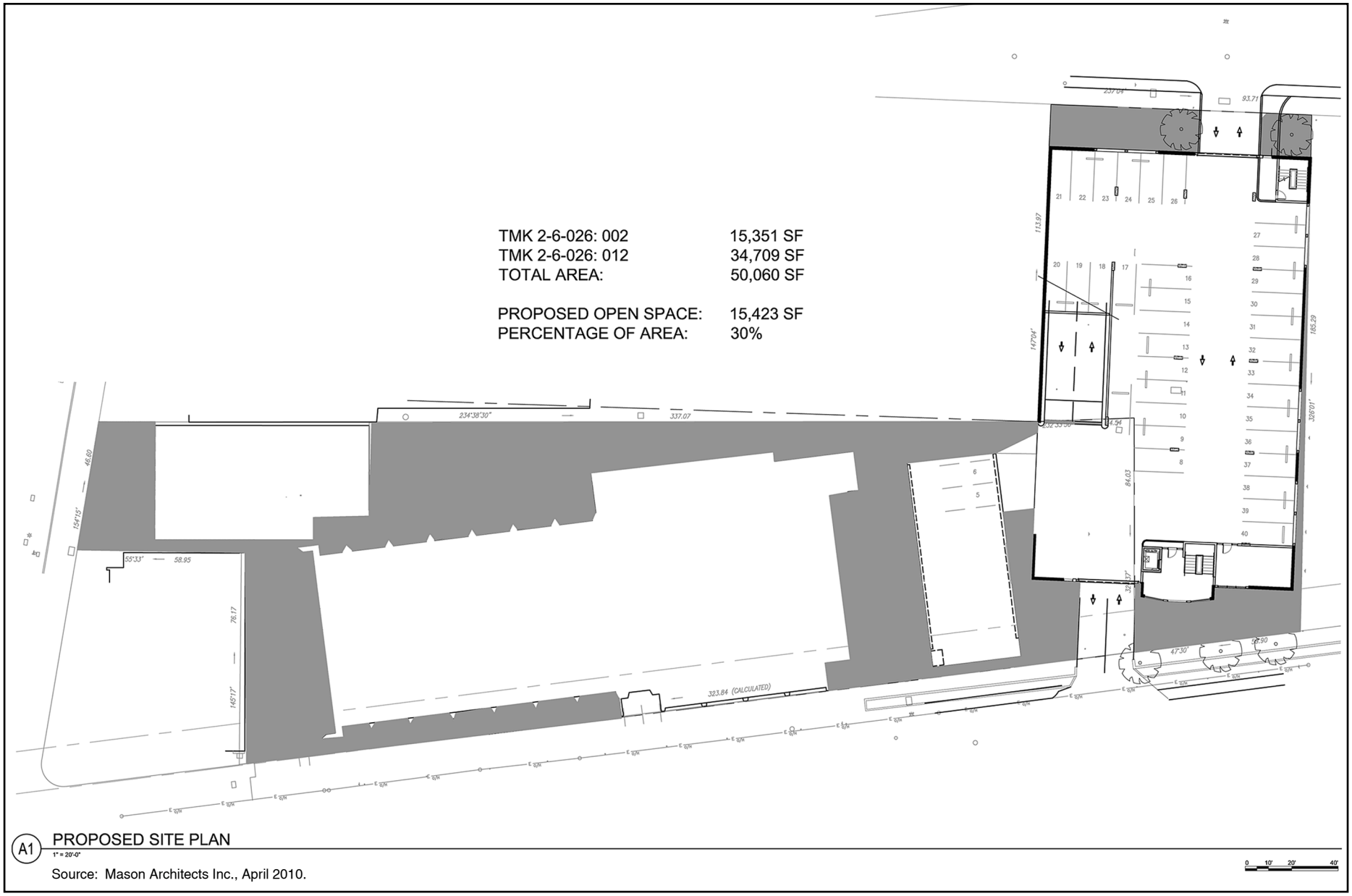
A total of 46 parking stalls are currently provided within the St. Augustine Church property. Based upon the City LUO parking requirements under the Waikīkī Special District (Table 21-6.3), only eight (8) parking stalls are required. Under Section 21-9.80-4(h) of the LUO, ground floor and basement uses, other than dwelling uses, are exempt from off-street parking requirements. Therefore, the church sanctuary and first floor of the existing parish hall building are exempt from parking requirements. This exemption is also confirmed in a pre-assessment consultation comment letter received from the City DPP (dated May 11, 2010) included in Appendix A. Table 4.2 summarizes off-street parking requirements for this project based upon the LUO and October 12, 2011 comment letter from the City DPP (included in Appendix A).

The number of parking stalls required will change with the project due to the addition of the St. Damien Museum and new Parish Hall. Table 4.2 shows the resulting parking requirements. A total of 61 parking stalls will now be required, and 113 parking stalls are being provided within the parking structure of the new Parish Hall. Therefore, the project will meet the new parking requirement and provide 52 additional parking stalls that may be made available for public use. The actual parking stalls required will be determined based upon final design plans to be reviewed and approved by the City during the project's design phase.

Minimum Open Space Requirements

Under recent changes to the Waikīkī Special District development standards (Ordinance 11-30), there is no minimum open space requirement for the project site. Currently, 9,375 square feet (18%) of the site qualifies as open space. The new buildings proposed will allow for some redesign of the project site and eliminate the present driveway to Kalākaua Avenue. Additional landscaping and open space areas have also been incorporated into the overall site plan. Therefore, the project will increase the total amount of open space on the property from 18 percent to 30 percent (15,423 sf). Figure 4.3 shows the total new open space area being created under this project.

Consequently, a Variance from the City's minimum open space requirement based upon the previous Waikīkī Special District regulations will not be necessary now for this project due to the present amended development standards (Ordinance 11-30). Information on the Variance from the open space requirements discussed in the Draft EA published is no longer applicable and has been eliminated in this Final EA document.



PROPOSED OPEN SPACE UNDER MASTER PLAN

Figure 4.3

ST. AUGUSTINE-BY-THE-SEA CHURCH MASTER PLAN
WAIKĪKĪ, O'AHU, HAWAI'I

Table 4.2
Summary of Off-Street Parking Requirements

Description of Building	Description of Use	Floor Area (sf) / Dwelling Units (DU)	Off-Street Parking Requirement	Number of Parking Stalls
Existing Conditions				
1. Church Sanctuary	Church Services & Activities	12,465	Exempt	0
2. Parish Hall	1st Floor – Meeting Rooms 2nd Floor - Apartments	2,331 4 Units	Exempt 1 per DU	0 4
3. Rectory	1st Floor – Parking and Apartment 2nd Floor - Apartments	2 Units 2 Units	1 per DU 1 per DU	2 2
		Parking Stalls Required		**8**
Proposed Project				
1. Church Sanctuary	Church Services & Activities	12,465	Exempt	0
2. Rectory	1st Floor – Parking and Apartment 2nd Floor - Apartments	2 Units 2 Units	1 per DU 1 per DU	2 2
3. New Parish Hall (Multi-Purpose Building)	1st Floor – Parking and Office 2nd Floor – Parking and Office 3rd Floor – Parking and Office 4th Floor – Parish Hall - Large Covered Lāna‘i - Assembly Hall & Meeting Room	985 985 985 8,125	Exempt Accessory to Parish Hall Accessory to Parish Hall1 per 200 sf	0 0 0 41
4. St. Damien Museum	1st Floor – Offices and Display Area 2nd Floor - Offices and Display Area	2,932 2,932	Exempt 10 for first 1,000 sf 1 per 300 sf in excess	0 16
		Parking Stalls Required		**61**

4.4.3 City Land Use Approvals Required

The Museum and Parish Hall will require a Major Special District Permit under the Waikīkī Special District regulations. A Conditional Use Permit (Minor) for the joint development of two or more adjacent zoning lots will also be required.

<u>Conditional Use Permit (Minor) Requirement</u>

Section 21-5.380 of the City’s LUO states that a proposed project will be considered and treated as one zoning lot when it is developed on two or more zoning lots. A Conditional Use Permit

(Minor) is required to undertake such a development if the owner(s) or lessees believe that the joint development of their property would result in a more efficient use of land. An application for a Conditional Use Permit (Minor) for this project will be submitted to the City DPP, and more information will be included in that application.

Waikīkī Special District Permit (Major) Requirement

The proposed St. Damien Museum and Parish Hall are considered permitted uses within the Resort Mixed Use Precinct under Table 21-9.6(A) of the LUO. However, Table 21-9.6(C) identifies specific categories of projects within the Waikīkī Special District that are classified as major, minor, or exempt. Under this Table, the proposed St. Damien Museum and Parish Hall buildings are not classified as either Exempt or Minor uses. Therefore, an application for a Major Special District Permit under the Waikīkī Special District regulations will be submitted to the City DPP, and more information will be included in that application.

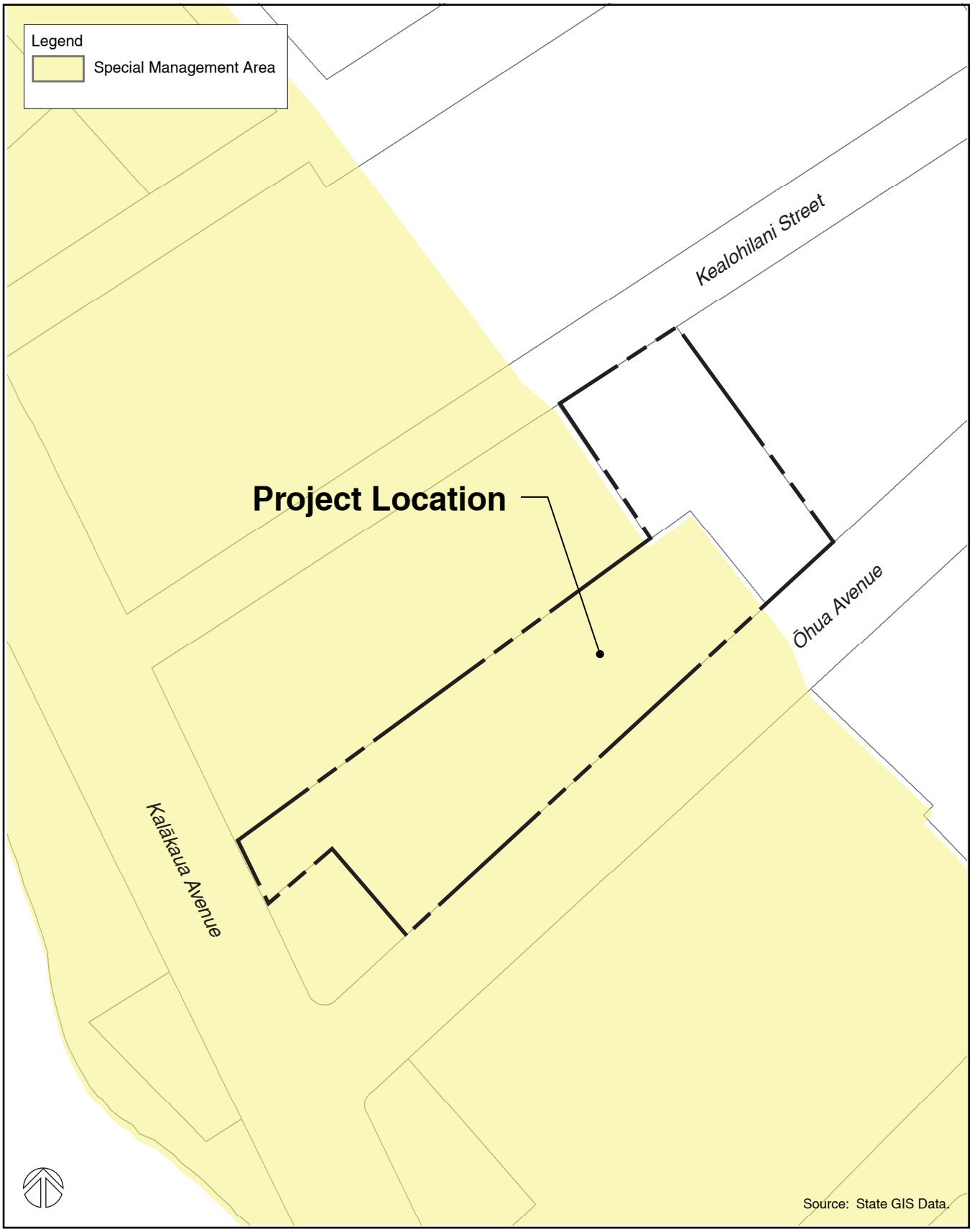
4.5 City Special Management Area

The majority of the project site is located within the City's Special Management Area (SMA), and Figure 4.4 shows the site in relation to the established SMA area. Therefore, the proposed master plan improvements for this project will be subject to the requirements of Chapter 25, ROH. The City's SMA process is intended to comply with the State's Coastal Zone Management (CZM) policies and regulations prescribed under Chapter 205A, HRS which originate from the Federal Coastal Zone Management Act (CZMA) of 1972. The State's CZM objectives and policies under Chapter 205A, HRS are incorporated within the City's SMA regulations.

A Special Management Area Use Permit (Major) will be required for the project. The proposed project's consistency with applicable SMA objectives and policies, as set forth in Chapter 205A-2, HRS, and pertinent review guidelines under Section 25-3.2, ROH are discussed below.

A. Objectives:

1. *Provide coastal recreational opportunities accessible to the public.*
2. *Protect, preserve, and where desirable, restore those natural and man-made historic and pre-historic resources in the coastal zone management area that are significant in Hawaiian and American history and culture.*
3 *Protect valuable coastal ecosystems, including reefs, from disruption and minimize adverse impacts on all coastal ecosystems.*
4. *Provide public or private facilities and improvements important to the State's economy in suitable locations.*
5. *Reduce hazard to life and property from tsunami, storm waves, stream flooding, erosion, subsidence, and pollution.*
6. *Protect beaches for public use and recreation.*



CITY SPECIAL MANAGEMENT AREA MAP **Figure 4.4**

ST. AUGUSTINE-BY-THE-SEA CHURCH MASTER PLAN
WAIKĪKĪ, O'AHU, HAWAI'I

B. Policies:

1. Recreational Resources:

b. Provide adequate, accessible, and diverse recreational opportunities in the coastal zone management area by;

ii. Requiring replacement of coastal resources having significant recreational value, included but not limited to surfing sites, fishponds, and sand beaches, when such resources will be unavoidably damaged by development; or requiring reasonable monetary compensation to the State for recreation when replacement is not feasible or desirable;

iii. Providing and managing adequate public access, consistent with conservation of natural resources, to and along shorelines with recreational value;

vi. Adopting water quality standards and regulating point and nonpoint sources of pollution to protect, and where feasible, restore the recreational value of coastal waters;

Discussion: The project will not adversely affect coastal resources with significant recreational value because improvements would be constructed within the property located *mauka* of Kalākaua Avenue. Existing recreational facilities are located along the shoreline *makai* of Kalākaua Avenue and the project will not impact access to or use of beach park facilities. The St. Damien Museum building along Kalākaua Avenue will provide an added cultural attraction for both residents and visitors. The project should not adversely impact water quality of shoreline areas fronting the property. Drainage plans will be appropriately designed and reviewed by the City for approval.

2. Historic Resources:

a. Identify and analyze significant archaeological resources;

b. Maximize information retention through preservation of remains and artifacts or salvage operations; and

c. Support state goals for protection, restoration, interpretation, and display of historic resources.

Discussion: As discussed in Chapter 3, an archaeological inventory survey identified and assessed significant historic resources present within the property, and mitigative measures in accordance with an approved burial treatment plan will be implemented to prevent significant impacts to these resources. Such efforts support the State goals for protection of historic resources. The new Museum will also support these goals by providing a place to display and interpret historic materials associated with St. Damien.

3. *Scenic and Open Space Resources:*
   a. *Identify valued scenic resources in the coastal zone management area;*
   b. *Ensure that new developments are compatible with their visual environment by designing and locating such developments to minimize the alteration of natural landforms and existing public views to and along the shoreline;*
   c. *Preserve, maintain, and, where desirable, improve and restore shoreline open space and scenic resources.*

Discussion: Valued scenic resources in the project area were identified and addressed in this document. The new facilities have been designed to be compatible with the visual environment of Waikīkī and the existing St. Damien Church. The project will not have significant impacts on shoreline open space and scenic resources.

4. *Coastal Ecosystems:*
   c. *Preserve valuable coastal ecosystems, including reefs, of significant biological or economic importance;*
   e. *Promote water quantity and quality planning and management practices that reflect the tolerance of fresh water and marine ecosystems and maintain and enhance water quality through the development and implementation of point and nonpoint source water pollution control measures.*

Discussion: The project will not adversely impact valuable coastal ecosystems. Best management practices will be implemented to minimize short-term construction related effects.

5. *Economic uses;*
   a. *Concentrate coastal dependent development in appropriate areas;*
   b. *Ensure that coastal dependent development such as harbors and ports, and coastal related development such as visitor industry facilities and energy generating facilities, are located, designed, and constructed to minimize adverse social, visual, and environmental impacts in the coastal zone management area; and*

Discussion: Project improvements will occur within property already used for church related activities in Waikīkī. Buildings and site improvements will be designed to minimize adverse social, visual, and environmental impacts as discussed in this document.

6. *Coastal hazards:*
   b. *Control development in areas subject to storm wave, tsunami, flood, erosion, hurricane, wind, subsidence, and point and nonpoint source pollution hazards.*
   c. *Ensure that developments comply with requirements of the Federal Flood Insurance Program;*

Discussion: The project site is located within a tsunami evacuation area, and will be designed to meet applicable City building code requirements. Both new buildings would be concrete and steel reinforced structures minimizing potential damages from waves. The new four-story Parish Hall building will support vertical evacuation in the event of a tsunami, and other procedures will be developed to further increase personal safety for personnel residing or visiting the Church. The project site is not situated within a designated flood area.

7. *Managing Development:*
   c. *Communicate the potential short- and long-term impacts of proposed significant coastal developments early in their life-cycle and in terms understandable to the general public to facilitate public participation in the planning and review process.*

Discussion: This environmental assessment addresses the short and long-term impacts of project improvements, and its distribution during the public review process supports communication of information to the public. Other efforts have been implemented to facilitate public participation and input on this development. Such efforts included consultations with Waikīkī cultural descendants, presentations to the O‘ahu Island Burial Council, and an appearance before the Waikīkī Neighborhood Board.

8. *Public participation;*
   a. *Promote public involvement in coastal zone management processes;*

Discussion: The processing of this environmental document allows for public participation to address comments and concerns associated with the project. The EA will also comply with this policy through its use in the submittal of a Special Management Area Use Permit for the proposed project. The processing of this application will involve consultation with the Waikīkī Neighborhood Board and a public hearing held by the City DPP, as well as the review and approval by the City Department of Planning and Permitting and City Council, to ensure the project’s consistency with coastal management policies.

9. Beach protection;

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

Discussion: The Museum and redeveloped Parish Hall are located inland from the shoreline setback line, and will not affect natural shoreline processes. Kalākaua Avenue separates this project site from the beach.

C. Review Guidelines (Section 25-3.2, ROH)

a) All development in the special management area shall be subject to reasonable terms and conditions set by the council to ensure that:

1) Adequate access, by dedication or other means, to publicly owned or used beaches, recreation areas and natural reserves is provided to the extent consistent with sound conservation principles;

2) Adequate and properly located public recreation areas and wildlife preserves are reserved;

3) Provisions are made for solid and liquid waste treatment, disposition and management which will minimize adverse effects upon special management area resources; and

4) Alterations to existing land forms and vegetation; except crops, and construction of structures shall cause minimum adverse effect to water resources and scenic and recreational amenities and minimum danger of floods, landslides, erosion, siltation or failure in the event of earthquake.

Discussion: The Applicant is open to reasonable terms and conditions to allow the project to be consistent with applicable SMA policies. Based upon the assessment results, no unique terms or conditions should be required for this project. The church site is open to the public and parish members for services and other activities conducted that will continue with this project. The site does not affect access to public beaches, recreation areas, or natural reserves which are currently provided by surrounding roadways and sidewalks. The project would not negatively affect public recreation areas and wildlife preserves. Solid waste would continue to be disposed of using a private contractor, and wastewater facilities would be connected to the City's existing sewer system. No major alterations to existing land forms would occur with this project as the site is already developed. Project improvements would increase open space and landscaping over present conditions. Construction of the project is not expected to have an adverse effect on water resources along with scenic and recreational amenities as discussed in this document. Best management practices would be implemented by the contractor in compliance with permit conditions. Improvements will not create a potential for flooding, landslides, erosion, siltation, or structural failure in the event of an earthquake.

b) No development shall be approved unless the council has first found that:

1) The development will not have any substantial, adverse environmental or ecological effect except as such adverse effect is minimized to the extent practicable and clearly outweighed by public health and safety, or compelling public interest. Such adverse effect shall include, but not be limited to, the potential cumulative impact of individual developments, each one of which taken in itself might not have a substantial adverse effect and the elimination of planning options;

2) The development is consistent with the objectives and policies set forth in Section 25-3.1 and area guidelines contained in HRS Section 205A-26;

3) The development is consistent with the county general plan, development plans and zoning. Such a finding of consistency does not preclude concurrent processing where a development plan amendment or zone change may also be required.

Discussion: The project should not have any substantial adverse environmental or ecological impact based upon the assessment results addressed in this document. Necessary mitigative measures to minimize project related effects have been identified in various sections. This assessment also includes evaluating the potential cumulative impact from this project on the environment. The project would be consistent with the pertinent SMA objectives and policies as previously addressed. Proposed improvements would be consistent with the City's development plan for the primary urban center as discussed in a previous section. The project would also be consistent with the Waikīkī Special District zoning established for this resort area, and proposed project uses are considered permitted uses and structures under this zoning district. Existing buildings were constructed in 1962 and earlier, and they are "nonconforming structures" because they were legally constructed prior to the adoption of the LUO in October 1986. As a result, they presently do not comply with the front yard setback requirement under the Waikīkī Special District development standards. The project will allow some redesign of the site so that the new Parish Hall building will meet the front yard setback, increase open space on the site, and eliminate the existing driveway at Kalākaua Avenue reducing traffic and pedestrian conflicts.

c) The council shall seek to minimize, where reasonable:

1) Dredging, filling or otherwise altering any bay, estuary, salt marsh, river mouth, slough or lagoon;

2) Any development which would reduce the size of any beach or other area usable for public recreation;

3) Any development which would reduce or impose restrictions upon public access to tidal and submerged lands, beaches, portions of rivers and streams within the special management area and the mean high tide line where there is no beach;

4) *Any development which would substantially interfere with or detract from the line of sight toward the sea from the state highway nearest the coast; and*

5) *Any development which would adversely affect water quality, existing areas of open water free of visible structures, existing and potential fisheries and fishing grounds, wildlife habitats, or potential or existing agricultural uses of land.*

Discussion: The project would not significantly impact the various factors identified under this review guideline, and no unique measures or conditions should be required. Project improvements would have no effect on several of these factors which include: 1) the dredging, filling, or altering of any bay, estuary, salt marsh, river mouth, slough, or lagoon; 2) reducing the size of any beach or area used for public recreation; 3) reducing access or imposing restrictions on public access to tidal and submerged lands, beaches, rivers and streams; and 4) fisheries and fishing grounds, wildlife habitats, and existing agricultural uses of land.

CHAPTER 5
ALTERNATIVES CONSIDERED

Alternatives considered for the new Museum and Parish Hall consisted of: 1) not implementing the project (No Action Alternative); 2) delaying construction of the project; 3) alternative site location for the Museum; and 4) alternative designs for the redeveloped Parish Hall. In summary, the No Action and Delayed Action alternatives were dropped from further consideration because they would not adequately address the project need and objectives. Other siting alternatives for the Museum were eliminated because they negatively affect the economic feasibility of the Museum. Alternative designs for the redeveloped Parish Hall were eliminated because the proposed design best supports the church's objectives and operations.

5.1 No Action Alternative

The No Action Alternative would involve not proceeding with development of a new St. Damien Museum and Parish Hall multi-purpose building. Repairs and renovation improvements included under the master plan would be implemented because they do not require additional land use entitlements. The office space on the second floor of the ABC and Burger King building which is used as a temporary Museum display area would need to continue under this alternative.

This alternative was eliminated from further consideration because it would not meet the project need and objectives. This project is being initiated because the church needs to improve facilities to better accommodate increased demand for church services by residents and visitors. St. Augustine Church has not experienced any major renovations or significant improvements since its construction in 1962. The number of visitors to this church has increased substantially over the years due to a growing resident population along with increased numbers of visitors. There is a need for additional and improved office space for church staff and storage, and to accommodate the increasing activities held there now and in the future. There is also a need for increased on-site parking during services or functions held. Therefore, not implementing improvements to redevelop the existing parish hall would not support these needs or church objectives.

The St. Augustine Church has custody of many artifacts and other objects related to St. Damien and wants to make them available for viewing by the public which supports the church's mission. Therefore, a new Museum is needed to allow these artifacts and objects to be properly displayed for the public especially in recognition of the recent canonization for St. Damien. The use of an office upstairs in an adjacent commercial building is only intended as a temporary display location because it does not provide the desired level of exhibition, nor the needed public accessibility. Therefore, not implementing construction of a new stand-alone Museum was eliminated from further consideration as an alternative.

5.2 Delayed Action Alternative

The Delayed Action Alternative would involve postponing construction of the new Museum and Parish Hall to some date in the future. Under this scenario, the same conditions identified under the No Action Alternative would continue until a date in the future, and the church would not be able to meet the existing and future needs of their parish and the public. Delaying construction to some date in the future would also result in higher construction costs due to inflation. Finally, there are no significant environmental issues associated with the project that would benefit from delaying action on the project. Therefore, this alternative was eliminated from further consideration because the same concerns as those stated in the No-Action Alternative would persist.

5.3 Project Design Alternatives

Alternative designs to proposed improvements were initially developed and evaluated for consideration. However, these alternatives were eliminated from further consideration because they would not adequately address the project need and accommodate the project objectives and criteria.

5.3.1 Rehabilitate Existing Buildings Alternative

This alternative proposed to rehabilitate the existing rectory and parish hall buildings to meet the project objectives. The second floor of the existing parish hall building was considered being extended over the parking area leading to the Kealohilani Avenue driveway to increase second floor space without eliminating existing parking stalls. The rectory would be renovated to accommodate housing space that has to be relocated from the existing parish hall building.

The Museum would be situated within a portion of the existing ground floor parish hall that only has 2,331 square feet of space. Remaining areas of this ground floor would need to accommodate a kitchen and office space. Therefore, the Museum would be limited in space to about 1,200 square feet. The second floor of this building would serve as multi-purpose space, storage, classroom, and offices.

This alternative was eliminated from consideration because it does not adequately meet the project criteria established for both the St. Damien Museum and Parish Hall, and will not meet the long-term needs of the parish and church. The Museum would have limited space to operate. Therefore, it would have restricted direct street frontage accessibility and have virtually no visibility from pedestrian traffic, especially along Kalākaua Avenue. Furthermore, the existing parish hall was designed as a two-story walk-up apartment building, and it does not provide a suitable character for a Museum honoring St. Damien. The lack of visibility and pedestrian traffic access along Kalākaua Avenue would not reasonably support the desired goal of maximum exposure for the Museum and St. Damien.

The existing parish hall only has a floor area of 2,331 square feet on each of the two floors (4,662 sf total). Thus, extending the second floor over the parking lot would only add about 2,000 square feet of floor area. This is not sufficient to provide enough space to effectively support church functions and operations, activities, and community organization activities in the long-term. There would also be no opportunity to increase on-site parking within the property. The cost to renovate the existing rectory and improve the existing parish hall to add limited space is not practicable or justified.

5.3.2 New Multi-Purpose Building Along ʻŌhua Avenue Alternative

This alternative considered developing a new three-story multi-purpose building along ʻŌhua Avenue. The existing rectory and parish hall building would be replaced by this new building that would be rectangular in shape and oriented along ʻŌhua Avenue. This new building would have about 15,000 square feet of floor area with a footprint of about 6,400 square feet, and reflect a net increase of about 5,700 square feet because the existing rectory and parish hall will be replaced.

A portion of the ground floor would be used for the rectory (about 2,100 sf) with the majority of this ground level being left open to accommodate vehicular driveway access into the site from ʻŌhua Avenue and for parking. The Museum would be two-stories (second and third floor) and have about 3,800 square feet of floor area. Remaining areas of the building would serve as space for offices, multi-purpose area, storage, and a kitchen if daily lunches are still provided to those in need. There would be minimal change to the present number of parking stalls provided under this alternative.

This alternative was eliminated from consideration because it does not sufficiently meet the project criteria established for both the St. Damien Museum and Parish Hall, and will not meet the long-term needs of the parish and church. The Museum would have more space than other alternatives, but would be limited in providing accessory space needed for Museum operations such as offices, meeting rooms, and storage, as compared to the proposed project. This alternative would have virtually no visibility from pedestrian traffic particularly along Kalākaua Avenue, which is a major concern. Street frontage accessibility will be along ʻŌhua Avenue, but, initial access would still have to occur from the second floor instead of at ground level. The lack of high visibility and pedestrian traffic access along Kalākaua Avenue would not reasonably support the desired goal of maximum exposure for the Museum and St. Damien.

This alternative will increase the net floor area, but it will result in the loss of housing units presently provided unless additional multi-purpose space is eliminated. This situation would still create an inappropriate design with tenant rooms located adjacent to office and multi-purpose rooms used for church and community activities.

Additional space will still not be adequate to effectively support church functions and operations, and community organization activities in the long-term. There would be no opportunity to increase off-site parking within this project site, and additional parking would need to be provided with the increase in floor area on the site. The cost to construct this new multi-purpose building alternative to add limited space is not practicable or justified given the design constraints.

5.3.3 Reduced Footprint for New Multi-Purpose Building Alternative

This alternative considered developing the new multi-purpose building (Parish Hall) using a smaller building footprint to address comments from the City Department of Planning and Permitting on the Draft EA. The purpose of this alternative would be an attempt to increase the amount of open space that can be provided on the project site up to 50 percent that was the minimum open space development standard under the Waikīkī Special District prior to the recent amendments to these regulations under Ordinance 11-30. The existing Church buildings are nonconforming structures and collectively provide about 18 percent open space on the property. Buildings and other non-open space areas (e.g. driveways) would need to total less than 25,030 square feet in area to meet the district's development standard.

The existing sanctuary is about 12,500 square feet and the existing rectory and new Museum would encompass another 5,100 square feet of area. This totals 17,600 square feet leaving only 7,430 square feet of area remaining for the Parish Hall plus driveways to both ʻŌhua Avenue and Kealohilani Avenue. This alternative would require the new Parish Hall with parking structure to be constructed within a building footprint of about 4,800 to 5,000 square feet or less. Remaining area would be used for the two driveways to side streets one of which could extend 70 to 100 feet into the site.

The parking ramps with circulation, lobby (with elevator), and stairs needed to serve the parking structure portion of the building encompass a significant area of the total footprint for each floor of the structure allowing for about 8 to 10 parking stalls per floor. The parish hall assembly area would need to be reduced from that presently proposed, the large covered lanai would need to be significantly reduced or eliminated, and other facilities (offices, meeting room, kitchen, etc.) would need to be provided on another floor due to the constrained building footprint area. This building would therefore need to increase in height up to about 13 stories tall.

This alternative was eliminated from consideration because it does not sufficiently meet the project criteria established for the Parish Hall, would have increased environmental impacts, and will not effectively and economically meet the long-term needs of the parish and church. The Parish Hall building associated with this alternative would far exceed the height of the sanctuary creating a potential negative historic and cultural impact. The Church sanctuary and its design serve as an architecturally important historic feature of this property, and the 13-story tall building would visually impact the sanctuary and culturally affect this church site. Coordination

with the SHPD was conducted by the project's architect as part of the project's preliminary design that resulted in the need to keep the height of new buildings shorter than the sanctuary.

The tall building required under this alternative would conflict with the *Waikīkī Special District Design Guidelines* (DPP, May 2002) concerning appropriate orientation and form of building design. Under this guideline document, buildings with a series of graduated, stepped, forms are preferred as opposed to what would occur under this alternative. The proposed action's Parish Hall building design of four stories would be more consistent with this design guideline and minimize impacts on the Church's sanctuary. Splitting parish hall facilities over two floors would result in inefficient operations for the Church. Construction costs would also be higher for this alternative and is thus not cost effective for constructing so many floors for so few parking stalls on each.

Therefore, this alternative is not prudent or feasible to implement as compared to the proposed action. Under the Waikīkī Special District objectives (Section 21-9.80-1(f)), it acknowledges that Waikiki is a mature, concentrated urban area with a large number of nonconforming uses and structures. Consequently, it states that the zoning district's requirements should not function as barriers to desirable restoration and redevelopment. The project would be consistent with this special district objective, and the although the project plans under the proposed action do not meet the minimum open space development standard due to existing nonconforming structures, it would still reduce the nonconformity by increasing the amount of open space from 18 to 30 percent.

CHAPTER 6
CONSULTED AGENCIES AND ORGANIZATIONS

Consultation with various government agencies and community organizations has been conducted for this project as part of the process in preparing this document. Such efforts consisted of distributing pre-assessment consultation letters to several agencies and organizations to obtain their input and comments on the project identifying issues that should be addressed along with the publication of the Draft EA for public review and comment. These consultation efforts are discussed in this Chapter, and copies of comments received are included in Appendix A of this document.

6.1 Pre-Assessment Consultation

Consultation with various government agencies and community organizations was undertaken to obtain information on agency requirements and potential project issues so that they could be addressed in this environmental document. Consulted parties are listed below and those providing responses are identified with a "»" symbol. Copies of written comments received and responses to these comments are included in Appendix A. Pertinent comments were also addressed in the appropriate sections of this document.

Federal Agencies

» U.S. Department of Army, Corps of Engineers

State of Hawai‘i

Department of Business, Economic Development and Tourism (DBEDT)
- DBEDT, Director
- DBEDT, Office of Planning

Department of Education
» Department of Health
Department of Land and Natural Resources (DLNR)
- DLNR, Chairperson
- » DLNR, Land Division
- » DLNR, State Historic Preservation Division
- DLNR, O‘ahu Island Burial Council

» Department of Transportation
» Office of Hawaiian Affairs

City and County of Honolulu

» Board of Water Supply
» Department of Community Services

» Department of Design and Construction
» Department of Emergency Management
Department of Enterprise Services
Department of Environmental Services
» Department of Facility Maintenance
Department of Parks and Recreation
» Department of Planning & Permitting

City and County of Honolulu (continued)

» Department of Transportation Services
» Honolulu Fire Department
» Honolulu Police Department

Utilities and Organizations

Councilmember Charles Djou
Hawaiian Electric Company, Inc.
» Hawaiian Telcom
Historic Hawai‘i Foundation
» Oceanic Time Warner Cable
Waikīkī Business Improvement District
Waikīkī Improvement Association
Waikīkī Neighborhood Board No. 9

6.2 Presentations to Organizations

Pre-assessment consultation efforts included a presentation to the Waikīkī Neighborhood Board. Several presentations were made to the O‘ahu Island Burial Council to discuss the project, and the findings of archaeological field work, progress updates, and the burial treatment plan. A summary of comments received from these presentations is provided.

6.2.1 Waikīkī Neighborhood Board

A presentation on the project was given to the Waikīkī Neighborhood Board at their meeting held on May 11, 2010. Prior to this presentation, a site visit with a representative from the Board was held in March 2010 as requested by the Board’s Chair. A copy of pertinent pages from their published minutes is included in Appendix A. The Board unanimously approved a motion to support the improvements planned for the St. Augustine Church. Some questions and comments received from Board members included the following:

1. It was clarified that there was a zero setback distance from the church's *mauka* property line.
2. On a weekday basis, the church will make about 79 parking stalls available for public use for a fee.
3. A commercial building in front of the church along Kalākaua Avenue is owned by ABC Stores, and an office upstairs in that building will be used as a temporary Museum for St. Damien artifacts until the new Museum is completed.
4. It was clarified that the archives in the new Museum will probably be primarily of St. Damien. St. Augustine Church has some St. Damien archives on the property and more will be forwarded to them from other churches.

6.2.2 O‘ahu Island Burial Council

Several presentations were made to the O‘ahu Island Burial Council (OIBC) at their monthly meetings held between April 2010 and June 2011. Presentations were made to brief council members about the project and to provide updates on archaeological fieldwork conducted. Attendance at other meetings was associated with identifying lineal and cultural descendants of the project area and discussing a proposed burial treatment plan.

Project team attendance occurred at meetings held on April 14, 2010, September 8, 2010, November 10, 2010, March 9, 2011, May 11, 2011, and June 8, 2011. A copy of pertinent pages from published OIBC minutes from the April 2010 meeting is included in Appendix A. Minutes from the other meetings are presently not available. A summary of comments received from these meetings is provided.

1. A presentation was made to the OIBC at the April 14, 2010 meeting to apprise members of the project improvements and planned archaeological testing work planned. No major comments were received by members.
2. At the September 8, 2010 meeting, an update on subsurface testing work was given. Members were notified that some disarticulated human skeletal remains were encountered in one of the trenches and consultation with SHPD was conducted to address this find. Further consultation was to occur with SHPD to address additional subsurface testing to be conducted based upon the present findings. No major comments were received by members.
3. At the November 8, 2010 meeting, an update on additional subsurface testing work conducted was given. Members were notified that two burials were encountered in one of the trenches and consultation with SHPD was conducted to address additional subsurface testing work requirements. Legal notices would be published to notify possible lineal and cultural descendants about the findings. The OIBC suggested that notices be sent out to currently recognized cultural descendants of Waikīkī. This was conducted after obtaining contact information from SHPD.

4. At the March 9, 2011 meeting, an update on further subsurface testing work conducted was given. Recognition of applicants as cultural descendants for this project was taken up by the OIBC. The OIBC was also informed that a meeting was conducted on February 1, 2011 with various cultural descendants of Waikīkī to discuss treatment of the burials, and a burial treatment plan was being prepared. No major comments were received by project team members, but OIBC members did have questions for SHPD on procedures concerning the handling of disarticulated human skeletal remains.
5. At the May 11, 2011 meeting, the draft burial treatment plan was presented to the OIBC. Members were also briefed on another meeting held with cultural descendants on April 18, 2011 to discuss burial treatment measures. Preservation-in-place was being recommended and additional measures would be implemented to minimize impacts to the burials during construction activities. No major comments were received by members.
6. At the June 8, 2011 meeting, the OIBC approved the burial treatment plan prepared for this project which calls for preservation-in-place with additional mitigative measures to be implemented to minimize impacts to the burials during construction activities.

6.3 Draft EA Comments

The Draft EA for this St. Augustine by-the-Sea Church Master Plan Project was published in the September 8, 2011 issue of the State Office of Environmental Quality Control's *The Environmental Notice* initiating a 30-day public comment period that ended on October 8, 2011. Copies of the Draft EA were distributed to the following parties for review and comments or notification of its availability was provided.

Those parties that submitted comments are indicated by "»" next to them. Comment letters received from these parties along with corresponding response letters are included in Appendix A. This Final EA has incorporated additional information in response to comments received on the Draft EA.

<u>Federal Agencies</u>

» U.S. Department of Army, Corps of Engineers
U.S. Department of Interior, Fish and Wildlife Services

<u>State of Hawai'i</u>

» Department of Accounting and General Services
Department of Business, Economic Development and Tourism (DBEDT)
DBEDT, Director
» DBEDT, Office of Planning
» Department of Defense
» Department of Education

State of Hawai‘i (continued)

Department of Health (DOH)
- DOH, Director
- DOH, Clean Water Branch
- DOH, Environmental Planning Office
- » DOH, Indoor and Radiological Health Branch

Department of Land and Natural Resources (DLNR)
- DLNR, Chairperson
- » DLNR, Land Division
- » DLNR, Division of Aquatic Resources
- » DLNR, Division of Boating and Ocean Recreation
- » DLNR, Engineering Division
- » DLNR, Office of Conservation and Coastal Lands
- » DLNR, State Historic Preservation Division
- DLNR, O‘ahu Island Burial Council

» Department of Transportation

Office of Hawaiian Affairs

City and County of Honolulu

» Board of Water Supply

Department of Emergency Management

Department of Environmental Services

» Department of Facility Maintenance

» Department of Planning & Permitting

» Department of Transportation Services

» Honolulu Fire Department

» Honolulu Police Department

Utility Companies, Elected Officials, Community Organizations, and Individuals

Hawaiian Electric Company, Inc.

Councilmember Stanley Chang, District 4

Waikīkī Neighborhood Board No. 9
- Chairperson
- » Mr. Jeff Merz (Boardmember)

Foster Tower

Historic Hawai‘i Foundation

Pacific Beach Hotel

Queen Liliuokalani Trust

SMK, Inc.

Waikīkī Beach Marriott Resort and Spa
Waikīkī Business Improvement District
Waikīkī Improvement Association
Mr. and Mrs. Van Horn Diamond
Ms. Paulette Kalekini
Mr. Manny Kuloloio
Satellite City Hall No. 1 (Ala Moana)
Waikīkī Public Library

CHAPTER 7
FINDINGS AND ANTICIPATED DETERMINATION

To determine whether a proposed action may have a significant effect on the environment, the Approving Agency needs to consider every phase of the action, the expected primary and secondary consequences, cumulative effect, and the short- and long-term effects. The Approving Agency's review and evaluation of the proposed action's effect on the environment would result in a determination of whether: 1) the action would have a significant effect on the environment, and an Environmental Impact Statement Preparation Notice should be issued, or 2) the action would not have a significant effect warranting a Finding of No Significant Impact (FONSI).

7.1 Findings

This section discusses the project's relation to the 13 Significance Criteria established under the State Department of Health's, Administrative Rules Title 11, Chapter 200.

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

Proposed improvements would not result in the irrevocable commitment to loss or destruction of any natural or cultural resource. Project improvements will involve a commitment of existing developed land already used by the church. Implementation of a burial treatment plan and recommended mitigative measures prepared in consultation with SHPD, OIBC, and cultural descendants will mitigate effects on historic resources and ensure their preservation.

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

The project would not curtail the range of beneficial uses associated with this privately-owned church property. The property is presently used for church related services and activities, and these activities will continue to occur along with being enhanced by project improvements.

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

The improvements would not conflict with the State's long-term environmental policies or goals and guidelines as expressed in Chapter 344, HRS. A discussion of the project's consistency with applicable guidelines is provided in Chapter 4 of this document.

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

The project will provide minor short-term economic benefits in the form of construction jobs and additional tax revenue to the State. It will also provide minor longer-term economic benefits supporting the mission and operations of the church. The church presently provides important social benefits to the Waikīkī community that would continue with the project. Such benefits include providing daily lunches for those in need, allowing community organizations to use their Parish Hall rooms for meetings and activities, and conducting normal church activities such as daily services, weddings, etc. Project improvements would support the church's ability to better meet the long-term needs and activities of their parish and the public. This project is not expected to significantly affect traditional native Hawaiian cultural practices or other traditional cultural practices occurring in the surrounding area. Mitigative measures being implemented under a burial treatment plan, along with archaeological monitoring during construction, will minimize construction related impacts on subsurface sites.

(5) Substantially affect public health;

The project would not substantially affect public health as discussed in various sections of this document. Short-term construction-related effects would be mitigated by complying with pertinent State or City regulations and conditions of ministerial permits obtained. Best management practices will also be implemented as part of construction activities.

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

The project should not have any substantial secondary impacts on the social environment, infrastructure facilities, and public facilities. Improvements do not involve adding residential housing or visitor accommodation units that may generate population changes and increase demands on public facilities. The project should not contribute to in-migration of residents to the island.

(7) Involve a substantial degradation of environmental quality;

The project would not contribute to a substantial degradation to the quality of the surrounding environment. Improvements are limited to construction of the new Museum and Parish Hall within the existing already urbanized church property. Necessary upgrades to infrastructure will be coordinated with the City which includes continued connection to the municipal sewer system for wastewater treatment and disposal. Appropriate mitigative measures will be implemented to address impacts on the environment in coordination with appropriate government agencies. This includes implementing best management practices during construction to minimize erosion and other short-term impacts in compliance with ministerial permits and conditions.

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

This project involves the construction of the new Museum and Parish Hall as described in this EA. Impacts associated with these improvements were addressed, and are mainly associated with construction activities. Cumulative impacts from these improvements were considered and addressed in relation to other developments planned in the vicinity as discussed in Chapter 3. In evaluating environmental impacts, it was determined that the project should not contribute to a significant cumulative effect on the environment. This project does not involve the commitment for larger actions on the St. Augustine Church property.

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

There are no known endangered, threatened, or rare botanical resources on the project site, or faunal and avifaunal species inhabiting the property that may be affected by construction activities or operation of the improved church facilities. The property is already urbanized with development of the present church facilities, paved parking, and driveways. Necessary control measures and best management practices would be implemented to minimize runoff and other potential short-term impacts associated with construction activity. Thus, the project is not expected to substantially affect rare, threatened, or endangered species or potential habitat for such species.

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

The project should not result in a detrimentally significant impact on air, water quality, or ambient noise levels. Impacts associated with these factors would be limited to short-term construction activities. However, such impacts are expected to be minor due to the small amount of excavation and type of construction activities planned. To further minimize impacts, construction activities would be subject to applicable State and City regulations and permit conditions.

(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 not located in a flood plain. The site is within the City's updated tsunami evacuation area, however, the new Parish Hall will be more than three stories tall and can support vertical evacuation of the area. Written procedures will be developed addressing evacuation procedures to further increase personal safety. The project site is not located along the beach as Kalākaua Avenue separates the property from Waikīkī beach. The project site is not an erosion-prone area, and structures will be designed in compliance with applicable City building codes and standards.

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

The proposed Museum and Parish Hall should not affect scenic vistas or viewplanes as discussed in this document. New buildings will comply with City setback requirements and will be well under the maximum height limit allowed for this property. The Parish Hall will be appropriately designed to be visually compatible with the surrounding urban area and will not look like typical parking structures.

(13) Require substantial energy consumption

The project will not require substantial energy consumption or increased capacity of supporting electrical facilities. Improvements planned are minor and can be serviced using existing electrical distribution facilities and power generating sources. Design plans will be appropriated coordinated with Hawaiian Electric Company, Inc.

7.2 Anticipated Determination

A Finding of No Significant Impact (FONSI) determination should be warranted for the St. Augustine by-the-Sea Church Master Plan Project based upon the information provided in this Final EA. The results of the assessments conducted have determined that the proposed project should not have a significant impact on the surrounding environment. Evaluation of project effects also included review of comments received on the Draft EA from agencies and the public. The findings supporting this determination are based upon the previous discussion of the project's affect on the environment in relation to the 13 Significance Criteria.

CHAPTER 8
REFERENCES

Chu, Michael S., Robert B. Jones. 1987. *Coastal View Study*. City and County of Honolulu, Department of Land Utilization. Honolulu, Hawai‘i.

City and County of Honolulu (City). 1990. *Revised Ordinances of Honolulu, as amended*. Honolulu, Hawai‘i.

City and County of Honolulu, Department of Planning and Permitting (City). June 2004. Primary Urban Center Development Plan. On-line version. [http://www.honoluludpp.org/planning/DevSust_PrimaryUrbanCenter.asp]. Honolulu, Hawai‘i.

Commission on Water Resource Management (CWRM). June 2008. *Water Resources Protection Plan, Hawai‘i Water Plan*. Department of Land and Natural Resources, State of Hawai‘i. Prepared by Wilson Okamoto Corporation. Honolulu, Hawai‘i.

Department of Education (DOE). November 2009. *Thomas Jefferson Elementary School; School Status and Improvement Report; School Year 2008-09*. System Evaluation and Reporting Section, Systems Accountability Office, Office of the Superintendent, State of Hawai‘i. Honolulu, Hawai‘i.

Department of Health (DOH). August 2009. *State of Hawai‘i Annual Summary 2008 Air Quality Data*. State of Hawai‘i. Clean Air Branch. Honolulu, Hawaii.

Department of Planning and Permitting (DPP). May 2002. *Waikīkī Special District Design Guidelines.* City and County of Honolulu, Honolulu, Hawai‘i.

Federal Emergency Management Agency (FEMA). 1993. *Hazard Mitigation Report, Hurricane Iniki. In Response to the September 12, 1992 Federal Disaster Declaration*. FEMA-961-DR-HI. San Francisco, California.

Kusao and Kurahashi, Inc. February 2010. *Final Environmental Impact Statement; Princess Ka‘iulani Renovation and Development and the Replacement of the Moana Surfrider Hotel Diamond Head Tower with a New Tower*. Prepared for Kyo-ya Hotels & Resorts, LP. Honolulu, Hawai‘i.

Macdonald, Gordon A., Abbott, Agatin T., and Peterson, Frank L. 1983. *Volcanoes in the Sea, The Geology of Hawaii.* Second Edition. University of Hawai‘i Press. Honolulu, Hawai‘i.

Philip K. White and Associates. July 2009. *Special Management Area Use Permit (SMP Major); Final Environmental Assessment for the Proposed Renovations to the Park Shore Waikiki Hotel*. Honolulu, Hawaii.

Philip Rowell and Associates (Rowell). January 2012. *Traffic Planning Support for Environmental Assessment; St. Augustine By-the-Sea Church Master Plan.* Honolulu, Hawaii.

R.W. Beck, Inc. October 2008. *Integrated Solid Waste Management Plan Update*. Prepared for City and County of Honolulu. Honolulu, Hawaii.

Sea Engineering, Inc. February 2010. *Draft Environmental Assessment Waikiki Beach Maintenance*. Prepared for Department of Land and Natural Resources, State of Hawai‘i. Honolulu, Hawaii.

Department of Health. Community Noise Control. Chapter 11-46, Hawai‘i Administrative Rules. On-line version. State of Hawai‘i. [http://www.hawaii.gov/health/about/rules/11-46.pdf].

Department of Health. Water Quality Standards. Chapter 11-54, Hawai‘i Administrative Rules. On-line version. State of Hawai‘i. [http://www.hawaii.gov/health/about/rules/11-54.pdf].

Department of Health. Solid Waste Management Control. Chapter 11-58.1, Hawai‘i Administrative Rules. On-line version. State of Hawai‘i. [http://www.hawaii.gov/health/about/rules/11-58.pdf]

Department of Health. Ambient Air Quality Standards. Chapter 11-59, Hawai‘i Administrative Rules. On-line version. State of Hawai‘i. [http://www.hawaii.gov/health/about/rules/11-59.pdf].

Department of Health. Air Pollution Control. Chapter 11-60.1, Hawai‘i Administrative Rules. On-line version. State of Hawai‘i. [http://www.hawaii.gov/health/about/rules/11-60-1.pdf].

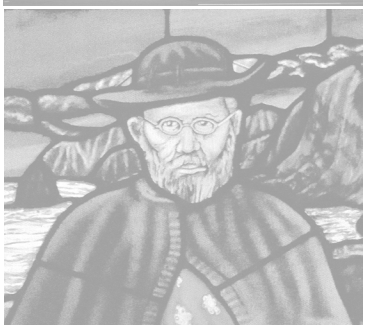
State of Hawaii. *Hawaii Administrative Rules*. Title 11, Department of Health, Chapter 54, Water Quality Standards. 2004 (as amended).

State of Hawaii. *Hawaii Revised Statutes*. Chapter 343, Environmental Impact Statements. 1998 (as amended).

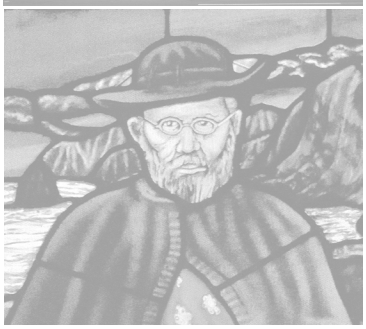
U.S. Department of Agriculture, Soil Conservation Service (SCS). August 1972. *The Soil Survey of the Islands of Kauai, Oahu, Maui, Molokai and Lanai, State of Hawaii*. In cooperation with the University of Hawaii, Agricultural Experiment Station. Washington, D.C.

U.S. Department of the Interior, Geological Survey (USGS). January 2002. *Atlas of Natural Hazards in the Hawaiian Coastal Zone*. Prepared by Fletcher, Charles H., Grossman, Eric E., Richmond, Bruce M., and Gibbs, Ann E. in cooperation with University of Hawai‘i, State Office of Planning, and National Oceanic and Atmospheric Administration. Geologic Investigations, Series I-2761. U.S. Government Printing Office.

Western Regional Climate Center (WRCC). 2007. National Oceanic and Atmospheric Administration, U.S. Department of Commerce. Historical Climate Information. Climate Data Summary. [http://www.wrcc.dri.edu/index.html]



APPENDICES



APPENDIX A

Assessment Consultations

APPENDIX A-1

Waikīkī Neighborhood Board No. 9

Regular Meeting Minutes;
Tuesday, May 11, 2010

WAIKIKI NEIGHBORHOOD BOARD NO. 9

c/o NEIGHBORHOOD COMMISSION • 530 SOUTH KING STREET ROOM 406 • HONOLULU, HAWAII, 96813
PHONE (808) 768-3710 • FAX (808) 768-3711 • INTERNET: http://www.honolulu.gov

DRAFT REGULAR MEETING MINUTES
TUESDAY, MAY 11, 2010
WAIKIKI COMMUNITY CENTER

CALL TO ORDER: Chair Robert Finley called the meeting to order at 7:05 p.m. with a **quorum of 13 members present.** Note – This 17-member Board requires nine (9) votes for a quorum and to take official Board action. Chair Finley announced the Waikiki Neighborhood Board video records it's meetings and will be aired on Olelo Channel 54, Friday nights at 9:00 p.m. If residents do not want to be seen on the recording, it is suggested to contact the public official or Board member directly.

Members Present – Jo-Ann Adams (arrived 7:10 p.m.) , Helen Carroll, Francine Dudoit-Tagupa, Louis Erteschik, Robert Finley, Walt Flood, Richard Personius, Michael Peters, Jim Poole, Christopher Rector, Mary Simpson, Mark Smith, and Charles Torigoe.

Members Absent – Leslie Among and Jeff Apaka.

VACANCY: One vacancy in Sub District 1 was filled at this meeting.

Guests – Burton Barr, Benjamin Sadoski, Dave Cooper, Ray Gruntz, Bulla Eastman, Lynette Eastman, Kurt Tsue (Board of Water Supply); Capt. Dan Defries, Firefighters Blake Takahashi, and Mitch Degeus (Honolulu Fire Department); C. Francis Chun; Jeremy Low, Candace Van Buren (Representative Scott Nishimoto's Office aide); Sgt. G. Ishihama, Sgt. M. Rodriguez, and Officer N. Wharton (Honolulu Police Department); Bill and Helen Sincatt; Dane Wicker (Councilmember Charles Djou's Office aide), Jan Bappe, Dan Ide, Keith Kiuchi (Honey Bee), Daisy Murai (Waikiki Residents Association), Reverence Lane Akiona (St. Augustine's Church), Ronald Sato and Scott Aser (Helbert,Haskell and Fee), Barbara Shyler, Rick Egged (Waikiki Improvement Association), State Representative Tom Brower, Dave Mostroux, Corey Dillman, Keith Rollman (Mayor's Representative), Rachel Simmons, and Gloria Gaines (Neighborhood Commission Office staff).

FILLING OF VACANCY IN SUB DISTRICT 1: Two residents were nominated for the vacancy in Sub District 1.

J. Poole nominated Rachel Simmons, a past Board member, resident manager of the Polynesian Plaza, senior property manager for Shidler Group; an active member of Building Owner/Manager Association, active member of Waikiki Improvement Association, and a long time resident. **H. Carroll nominated Burton Barr,** who is active in the community; attends all board meetings; is a member of the Waikiki Yacht Club; and his main concern is the Ala Wai Boat Harbor.

At 7:10 p.m., Jo-Ann Adams arrived; **14 members present.**

The Board APPOINTED Rachel Simmons to fill the vacancy in Sub District 1 after a roll call vote. 11-3-0. (**R. Simmons:** J. Adams, F. Dudoit-Tagupa, L. Erteschik, R. Finley, W. flood, J. Merz, R. Personius, M. Peters, J. Poole, M. Simpson, and M. Smith. **B. Barr:** H. Carroll, C. Rector, and C. Torigoe).

At 7:12 p.m., Chair Finley called a recess for the administering of the oath-of-office to R. Simmons by the Neighborhood Assistant; the meeting resumed at 7:15 p.m.

CITY MONTHLY REPORTS:

Honolulu Fire Department (HFD) – Capt. Dan DeFries reported the following information:

- Statistics for Month of April – There were a total of 4 fires and 103 medical emergencies. There were no unusual incidents reported.
- Fire Safety Tip – The risk of wild land fires increases as summer approaches. If witnessing someone starting a fire or behaving suspiciously, make a mental and/or documented note that would assist officials in apprehending the alleged arsonist. Call 911 to report any suspicious activity.

APPROVAL OF THE APRIL 13, 2010 REGULAR MEETING MINUTES: Chair Finley announced the April 12, 2010 Regular Meeting Minutes are incomplete and deferred.

BOARD BUSINESS:

St. Augustine by the Sea Church Project Master Plan – Ronald Sato, Scott Ascer, Lane Akiona, and Barbara Shyler, presented members of the site plan for St. Augustine by the Sea Church. There are three phases to the plan are repairs, a museum, and a redevelopment of the Parish:

1. First Phase – The first phase includes all repairs, a museum, and redevelopment of the Parish. Improvements include repair or renovating existing facilities such as roofing, parking, security, exertior accessibility, and signage.
2. Second Phase - A St. Damien museum consist of a two-story building for exhibit areas, offices, meeting room and storage for archives located along Kalakaua Avenue.
3. Third Phase – The existing Parish Hall will be demolished and redeveloped into a four-story building consisting of three parking levels, and a fourth level for the new parish hall and office space. There will 122 parking stalls on three floors.

Questions, comments, and concerns followed:

1. Mauka Property Line – The Mauka side building will be up to the property line; there is zero set back.
2. Parking Stalls Availability – On a weekday basis, all 79 parking stalls will be available for the general public for a fee.
3. Commercial Building – The commercial building in front of the church between the church and Kalaukaua Avenue is owned by ABC Stores, Paul Kusasa. A portion of the building is being used as a temporary museum. It is hopeful that Kusasa will someday sell the building or donate it to the church.
4. Damien Museum – It was clarified that the archives will be of St. Damien only. St. Augustine Church has some St. Damien archives on the property and more will be forwarded with the help of the sister church on topside Molokai. St. Augustine Church is also working with Sister Marion from Seracruse for artifacts.

Erteschik moved and Flood seconded to support St. Augustine Church Project and was ADOPTED BY UNANANIMOUS CONSENT, 14-0-0(Ayes: Adams, Carroll, Dudoi-Tagupa, Erteschik, Finley, Flood, Merz, Personius, Peters, Poole, Rector, Simpson, Smith, and Torigoe).

REPORTS:

Treasurer's Report – Treasurer Peters reported for April 2010 that the total Operating account balance to date was $433.68. The report was filed.

Legislation Committee Report – Erteschik highlighted bills that passed through legislation: Senate Bill 466 related to leaf blowers passed with restricted hours to operating a leaf blower; Senate Concurrent Resolution 182 for a noise task force introduced by Sen. Galuteria; and HB2318 homeless turf bill passed.

Sub District 1 Report – No report.

Sub District 2 Report – Flood reported the $500 fine for violating bulk pick up will be charged to resident manager and need to inform tenants to bulky items out into the street after 6p.m., the day before the scheduled pick up day; people are still walking dogs without a leash; pedestrians are now texting on their phones while in crosswalk; and now that more businesses are closing, more graffiti is occurring with repeated calls to HPD to remove the graffiti.

Sub District 3 Report – Merz commented on the noise issue with motorcycles and suggested that HPD's legislative liaison explain HPD's reason for opposing the noise legislation.

Chair Report – Chair Finley is working with the City and Sheraton Waikiki and will waive the $5,000 fee to host a Candidate Night for Governor. The event will be at the Sheraton Waikiki on July 29, 2010. The forum will be for candidates running for Mayor and Governor. Board members were asked to prepare questions for candidates and indicate if questions are for one or more candidates to answer. Chair Finley will collect and review all the questions with a moderator for the evening. The Chair's questions will pertain to Waikiki.

ANNOUNCEMENTS:

- Next meeting on Tuesday, June 8, 2010 at 7:00 p.m. at the Waikiki Community Center.
- View this meeting on Olelo Channel 54 Friday nights at 9:00 p.m.
- View on line at: http://olelo.granicus.com/ViewPublisher.php?view_id=25

ADJOURNMENT: The meeting adjourned at 9:20 p.m.

Recorded & Submitted By: Gloria Gaines, Neighborhood Assistant

Reviewed By: Robert Finley, Chair

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APPENDIX A-2

State Department of Land and Natural Resources
State Historic Preservation Division

Approved Meeting Minutes of the
O‘ahu Island Burial Council
Wednesday, April 14, 2010

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 PRESERVATION DIVISION

APPROVED MINUTES OF THE O'AHU ISLAND BURIAL COUNCIL

DATE: **Wednesday, April 14, 2010**

TIME: **10:00 A.M. to 2:00 P.M.**

PLACE: **DEPARTMENT OF LAND AND NATURAL RESOURCES**
DLNR Board Room, 1151 PUNCHBOWL STREET, ROOM 132
HONOLULU, HAWAI'I 96813

I. CALL TO ORDER. Chairman McKeague called the meeting to order at 10:10 a.m.

II. ROLL CALL. Quorum was established with the attendance of seven commissioners present: Steve Hoag, Kehaulani Kruse, Aaron Mahi, Kawika McKeague, Cy Bridges, Alice Greenwood, and Shad Kane. Later arrivals were Abad (10:15 a.m.) and Quiteves (10:30 a.m.). Andy Keliikoa left a message he was unable to attend due to a last minute work emergency that morning.

III. INTRODUCTION OF COUNCIL MEMBERS & SHPD STAFF

OIBC Members In Attendance:	Kawika McKeague	Cy Bridges	Aaron Mahi	
Alice Greenwood	Andy Keliikoa	Steve Hoag	Shad Kane	
Kehau Abad	Kehaulani Kruse	Leimaile Quiteves		
OIBC Members Excused:	Andy Keliikoa, Hinaleimoana Falemei			

SHPD Staff: Pua Aiu, Administrator
Nancy McMahon, Deputy SHPO/State Archaeologist
Mike Vitousek, Archaeology Intern
Phyllis Coochie Cayan, History & Culture Branch Chief

Attorney General Staff: Deputy AG Randall Ishikawa

be a May 4th stakeholders meeting to discuss the NPS report. The SHPD has been grateful for volunteers from several architectural and archaeological firms who helped do filing and organized the SHPD library. There continues to be volunteers through the summer months to address these concerns.

There was no public comment on this item.

B. St. Augustine-by-the-Sea Church Master Plan Project, Waikiki, O'ahu. TMK: (1) 2-06-026:012 and 015. Information/Discussion/Recommendation.

Ron Asato briefed the council on a master plan project for the St. Augustine-by-the-Sea Church in Waikiki. This historic church has a museum for Saint Damien and Mother Marianne and is connected with the Kalaupapa mission. The church proposes a three-story parking area and a new parish hall. There was no cemetery on this parcel. The Catholic Church had an 1839 site on Kuhio Beach which was moved to its King Street cemetery. There is no cemetery on the church current parcel. Culture Surveys Hawaii Inc. is the archaeology firm and they are prepping for an Environmental Assessment as part of an Environmental Inventory Survey. An AIS is under review before they begin and that information will be shared with the OIBC when it is ready.

Kai Markell of OHA added that the OIBC should ask for maps of the Kuhio Beach Board of Water Supply Widening project as there were at least ten burials left in place which is across the street (or in that general area) from the church. Shideler of CSH acknowledged that the sediment at the church parcel is all jaucus sands.

Note: For item C and D that pursuant to sections 92-4, 92-5(a) (4) (8), and 6E-43.5, Hawaii Revised Statues (HRS), and upon compliance with the procedures set forth in section 92-4, HRS, the council may go into a closed meeting to consult with its attorneys on questions and issues pertaining to the Council's powers, duties, privileges, immunities and/or liabilities.

C. Department's recommendation regarding recognition of Michael Kumukauoha Lee as a Cultural Descendant to Known Burials at One'ula Beach, Honouliuli Ahupua'a, 'Ewa Moku. TMK: (1) 9-1-011:001 to 001: 9-1-012: 008,009,011,012,013, 016,017.

SHPD staff read into the record the department's recommendation to recognize Michael Kumukauoha Lee as a cultural descendant to known burials at One'ula Beach, Honouliuli Ahupua'a, 'Ewa Moku at the TMKs listed herein.

Mr. Michael K. Lee shared with the OIBC his background and genealogy to these known burials in the aforementioned place and TMKs. Mr. Lee notes that he:

- Is a practicing limu la'au specialist with concerns that the limu there is being destroyed by the Haseko project that drains into the limu grounds.
- It is his genealogy that links him to that place whereby Lee has asked Haseko to remove the retaining dam which is damaging the limu grounds at Honouliuli.
- Did a year's research of his family connections to these known burials and has

IX. INADVERTENT BURIALS REPORT FOR MONTH OF FEBRUARY/MARCH/APRIL, 2010.

A. Waste Water Treatment System Project at AOA Hanohano Hale, Punalu'u, O'ahu. TMK: (1) 5-3-008:001.

McMahon reported that this project is to comply with the law to put in a sewer system to replace old cesspools. This project inadvertently disturbed 12 sets of human burials. The Hanohano family that once owned the land have come together to work with all stakeholders to malama na iwi in a designated burial site.

B. Royal Hawaiian Shopping Center, Waikiki, O'ahu. TMK: (1) 2-6-02:18
McMahon reported there were three inadvertent finds of human fragments in a utility trench work at the shopping center. These inadvertent finds are being safely and securely stored under the care of Manu Boyd, RHSC Cultural Director until a reinterment date and site is designated.

C. Kailua Town Center Phase 3 Project, Kailua, O'ahu. TMK: (1) 4-2-038: por. 021, 022, 029-032, 062 & 063.

Mr. Alani Apio, community consultant to this project reported that the various recognized claimants and ka 'ohana in Kailua are working to malama na iwi in a permanent designated burial site. The burials are securely stored in the project's care until reinterment is scheduled. The 'ohana claimants in Kailua will do the protocol.

D. Hauula Community Park, Waste Water Sewer Improvement Project, Hauula, O'ahu. TMK: (1) 5-4-009: por.007.

McMahon reported that the two inadvertent burials finds on this project is being securely stored until reinterment is scheduled.

X. ANNOUNCEMENTS

A. Reminder to OBIC commissioners to file their Ethics Commission forms.
A timely reminder to those who received letters from the Ethics Commission to file.

B. OIBC vacancies effective June 30, 2010.
Councilmember Kehaulani Kruse will end her two terms (8 years) next month.
Applications are available for interested persons.

XI. ADJOURNMENT

Motion by Aaron Mahi, seconded by Leimaile Quiteves to adjourn the meeting. Vote: Unanimous ayes. Motion to adjourn the meeting passed unanimously. The meeting adjourned at 2:45 p.m.

Meeting minutes submitted by Phyllis Coochie Cayan .....June 3, 2010 #

APPENDIX A-3

Pre-Assessment Comment Letters
And Responses

From: Klein, Amy S POH [Amy.S.Klein@usace.army.mil]
Sent: Wednesday, May 19, 2010 10:55 AM
To: Ronald Sato
Subject: St. Augustine-by-the-Sea Pre-Assessment Consultation

Dear Mr. Sato

Thank you for providing the Corps of Engineers Regulatory Program opportunity to comment on the St. Augustine-by-the-Sea Church Master Plan, at Waikiki, Honolulu, Oahu, Hawaii.

Section 10 of the Rivers and Harbors Act (Section 10) of 1899 requires that a Department of the Army (DA) permit be obtained from the U.S. Army Corps of Engineers (Corps) prior to undertaking any construction, dredging, and other activities occurring in, over, or under navigable waters of the U.S. Section 404 of the Clean Water Act (Section 404) of 1972 requires that a DA permit be obtained for the discharge (placement) of dredge and/or fill material into waters of the U.S., including wetlands.

Based on the information provided, it does not appear that navigable waters (i.e. Pacific Ocean) are present at the project site. Therefore, Section 10 authorization would not be required. The Corps does not have sufficient information to determine if there are waters of the U.S. present at the project site or if such waters are proposed for impact, which may require authorization under Section 404. Based on the project location, however, it appears unlikely that waters of the U.S. are present.

When developing the Environmental Assessment, we recommend you include any information regarding any potential waterbodies, including wetlands, drainage ditches, gulches, streams, ponds, etc., if they may be impacted by any of the proposed project components as well as the nature of those impacts and any associated mitigation (avoidance, minimization, and compensation) for those impacts. Note that only the Corps has authority to determine if a waterbody is jurisdictional. If a waterbody may be proposed for impact, please submit a jurisdictional determination request to our office. You will also need to submit an application to and receive authorization from our agency prior to conducting any regulated activity in waters of the U.S. (additional guidance available if needed).

If there are no waterbodies present and proposed for impact then there is no need to submit the draft EA to the Corps for review/comment since we will have no regulatory authority over the project.
If you have any questions regarding this e-mail or the Regulatory Program, please do not hesitate to call or e-mail me.

Best Regards,

Amy

Amy Klein
Project Manager
U.S. Army Corps of Engineers - Honolulu District Regulatory Program, Building 230 Fort Shafter, Hawaii 96858
p: (808) 438-7023
f: (808) 438-4060

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http://per2.nwp.usace.army.mil/survey.html

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Helber Hastert & Fee
Planners, Inc.

July 21, 2011

30th ANNIVERSARY 1980 - 2010

Ms. Amy Klein, Project Manager
Regulatory Branch
Corps of Engineers
U.S. Department of the Army, Honolulu District
Fort Shafter, Hawai‘i 96858-5440

Dear Ms. Klein:

St. Augustine-by-the-Sea Church Master Plan Project
Draft Environmental Assessment Pre-Assessment Consultation
Waikīkī, Honolulu, O‘ahu, Hawai‘i
TMK (1) 2-06-026: 012 & 015

Thank you for your email of May 19, 2010 providing comments as part of pre-assessment consultation efforts for the preparation of the Draft Environmental Assessment (Draft EA) for the subject project.

There are no navigable waters present on the project site, and thus Section 10 authorization will not be required for this project. There are no other waterbodies, such as streams, wetlands, drainage ditches, etc., that would fall under the Corps of Engineers regulatory jurisdiction present on the project site or planned to be impacted by the project improvements. As a result, authorization under Section 404 will not be required.

We appreciate your comments, and a copy of the published Draft EA will not be submitted to the Corps of Engineers as indicated in your email because there is no regulatory authority over this project.

Thank you for your participation in this process. If you need additional information, please contact me by phone at 545-2055, or by email at rsato@hhf.com.

Sincerely,

HELBER HASTERT & FEE, Planners

Ronald A. Sato, AICP
Senior Planner

Pacific Guardian Center, Makai Tower | 733 Bishop Street, Suite 2590 | Honolulu, Hawaii 96813
Telephone: 808.545.2055 | Facsimile: 808.545.2050 | www.hhf.com | e-mail: info@hhf.com

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

RECEIVED
MAY 13 2010
HELBER, HASTERT & FEE PLANNERS

May 11, 2010

Helber Hastert & Fee Planners, Inc.
733 Bishop Street Suite 2590
Honolulu, Hawaii 96813

Attention: Mr. Ronald A. Sato, AICP

Ladies and Gentlemen:

Subject: Pre-Assessment Consultation for Draft Environmental Assessment for St. Augustine-by-the-Sea Church Master Plan 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 Division of Aquatic Resources, Division of Boating & Ocean Recreation, Engineering 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
Acting Administrator

LINDA LINGLE
GOVERNOR OF HAWAII

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

APR 14 PM03:07 ENGINEERING

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

April 13, 2010

MEMORANDUM

RECEIVED
LAND DIVISION
2010 APR 21 A 9:57
DEPT. OF LAND & NATURAL RESOURCES
STATE OF HAWAII

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

FROM: Charlene Unoki
SUBJECT: Pre-Assessment Consultation for Draft Environmental Assessment for St. Augustine-by-the Sea Church Master Plan Project
LOCATION: Island of Oahu
APPLICANT: Helber Hastert & Fee Planners, Inc.

Transmitted for your review and comment on the above referenced document. We would appreciate your comments on this document. Please submit any comments by May 10, 2010.

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.
(✓) Comments are attached.

Signed:
Date: 4/20/10

DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION

LD/Morris Atta
REF: Pre-AssessmentConsultationForDEAforSt.Augustine-by-the-SeaChurchMasterPlanProject Oahu.014

COMMENTS

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

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

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

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

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

( ) Mr. Robert Sumimoto at (808) 523-4254 or Mr. Mario Siu Li at (808) 523-4247 of the City and County of Honolulu, Department of Planning and Permitting.
( ) Mr. Frank DeMarco at (808) 961-8042 of the County of Hawaii, Department of Public Works.
( ) Mr. 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 project water demands and infrastructure required to meet water demands. Please note that the implementation of any State-sponsored projects requiring water service from the Honolulu Board of Water Supply system must first obtain water allocation credits from the Engineering Division before it can receive a building permit and/or water meter.

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

( ) Additional Comments: _____

( ) Other: _____

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

Signed: _____
CARTY S. CHANG, ACTING CHIEF ENGINEER

Date: 4/20/10

LINDA LINGLE
GOVERNOR OF HAWAII

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

RECEIVED
LAND DIVISION
2010 APR 19 A 10: 17
DEPT. OF LAND & NATURAL RESOURCES
STATE OF HAWAII

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION
POST OFFICE BOX 621
HONOLULU, HAWAII 96809

AQUATIC RESOURCES: 3014

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

April 13, 2010

MEMORANDUM

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

RECEIVED
APR 14 2010
AQUATIC RESOURCES

FROM: Charlene Unoki
SUBJECT: Pre-Assessment Consultation for Draft Environmental Assessment for St. Augustine-by-the Sea Church Master Plan Project
LOCATION: Island of Oahu
APPLICANT: Helber Hastert & Fee Planners, Inc.

Transmitted for your review and comment on the above referenced document. We would appreciate your comments on this document. Please submit any comments by May 10, 2010.

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.
( ) Comments are attached.

Signed: _____
Date: 4-16-10

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

April 13, 2010

MEMORANDUM

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

RECEIVED
LAND DIVISION
2010 APR 16 P 3:21
DEPT. OF LAND & NATURAL RESOURCES
STATE OF HAWAII

FROM: Charlene Unoki
SUBJECT: Pre-Assessment Consultation for Draft Environmental Assessment for St. Augustine-by-the Sea Church Master Plan Project
LOCATION: Island of Oahu
APPLICANT: Helber Hastert & Fee Planners, Inc.

Transmitted for your review and comment on the above referenced document. We would appreciate your comments on this document. Please submit any comments by May 10, 2010.

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: 4/16/10

APR14'10PM12:16BOR DIV

Helber Hastert & Fee
Planners, Inc.

July 21, 2011

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

30th ANNIVERSARY 1980 - 2010

Dear Mr. Atta:

St. Augustine-by-the-Sea Church Master Plan Project
Draft Environmental Assessment Pre-Assessment Consultation
Waikīkī, Honolulu, O'ahu, Hawai'i
TMK (1) 2-06-026: 012 & 015

Thank you for your letter dated May 11, 2010 providing comments as part of pre-assessment consultation efforts for the preparation of the Draft Environmental Assessment (Draft EA) for the subject project. Our responses address the comments from each division.

Engineering Division

We concur with the division's determination that the project is located within Zone X under the Flood Insurance Rate Map for the project area.

Division of Aquatic Resources

We note this division had no comments.

Division of Boating and Ocean Recreation

We note this division had no comments.

Thank you for your participation in this process. If you need additional information, please contact me by phone at 545-2055, or by email at rsato@hhf.com.

Sincerely,

HELBER HASTERT & FEE, Planners

Ronald A. Sato, AICP
Senior Planner

Pacific Guardian Center, Makai Tower | 733 Bishop Street, Suite 2590 | Honolulu, Hawaii 96813
Telephone: 808.545.2055 | Facsimile: 808.545.2050 | www.hhf.com | e-mail: info@hhf.com

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:
EMD / CWB

04063PMT.10

April 29, 2010

RECEIVED
MAY - 4 2010
HELBER, HASTERT & FEE
PLANNERS

Mr. Ronald A. Sato, AICP
Helber Hastert & Fee, Planners
Pacific Guardian Center, Makai Tower
733 Bishop Street, Suite 2590
Honolulu, Hawaii 96813

Dear Mr. Sato:

SUBJECT: Draft Environmental Assessment (DEA) Pre-Assessment Consultation
St. Augustine-by-the-Sea Church Master Plan Project
Waikiki, Honolulu, Island of Oahu, Hawaii

The Department of Health (DOH), Clean Water Branch (CWB), has reviewed the subject letter dated April 12, 2010, 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 the discharge 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 a Notice of Intent (NOI) form:

   a. Hydrotesting water effluent.

   b. 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. 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 not listed in Item 2 above or wastewater discharging into Class 1 or Class AA 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. Please note that all discharges related to the project construction or operation activities, whether or not a NPDES permit coverage is required, must comply with the State's Water Quality Standards. Noncompliance with water quality requirements contained in HAR, Chapter 11-54, and/or permitting requirements, specified in HAR, Chapter 11-55, may be subject to penalties of $25,000 per day per violation.

Please note that the CWB prefers to receive a copy of the Draft EA for the subject project in a pdf file format on a CD rather than the other paperless option offered. 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.

Sincerely,

Alec Wong

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

MT:ml

c: Office of Environmental Quality Control, DOH
DOH - EPO # I-3141 [via email only]

Helber Hastert & Fee
Planners, Inc.

July 21, 2011

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

Dear Mr. Wong:

St. Augustine-by-the-Sea Church Master Plan Project
Draft Environmental Assessment Pre-Assessment Consultation
Waikīkī, Honolulu, O‘ahu, Hawai‘i
TMK (1) 2-06-026: 012 & 015

Thank you for your letter dated April 29, 2010 providing comments as part of pre-assessment consultation efforts for the preparation of the Draft Environmental Assessment (Draft EA) for the subject project. Our responses are numbered to correspond to your comments.

1. The project will comply with the criteria identified, and the Draft EA will address probable impacts on State waters.
2. National Pollutant Discharge Elimination System (NPDES) general permit coverage will be obtained for project construction activities. Separate Notice of Intent forms will be submitted for each type of discharge at least 30 calendar days prior to the start of the discharge activity.
3. No discharges of construction related storm water or wastewater will occur within Class 1 or Class AA waters. Therefore, an individual NPDES permit would not be required.
4. Project construction activities and operational activities conducted at St. Augustine-by-the-Sea Church will comply with the State’s water quality standards.

As requested, the Draft EA will be distributed to the Clean Water Branch as a pdf file on a CD. Thank you for your participation in this process. If you need additional information, please contact me by phone at 545-2055, or by email at rsato@hhf.com.

Sincerely,

HELBER HASTERT & FEE, Planners

Ronald A. Sato, AICP
Senior Planner

Pacific Guardian Center, Makai Tower | 733 Bishop Street, Suite 2590 | Honolulu, Hawaii 96813
Telephone: 808.545.2055 | Facsimile: 808.545.2050 | www.hhf.com | e-mail: info@hhf.com

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:

STP 8.0098

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

May 10, 2010

RECEIVED
MAY 14 2010
HELBER, HASTERT & FEE
PLANNERS

Mr. Ronald A. Sato, AICP
Helber, Hastert & Fee Planners, Inc.
733 Bishop Street, Suite 2590
Honolulu, Hawaii 96813

Dear Mr. Sato:

Subject: St. Augustine-by-the Sea Church Master Plan Project
Draft Environmental Assessment Pre-Assessment Consultation

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

DOT understands that the subject project proposes to construct a new 2-story 5,870 square foot museum, demolish an existing 2-story building & replacing it with a new 4-story 14,470 square foot building with 122 parking stalls. Primary vehicle access to the project is from Ohua Avenue, however; there are driveway connections to Kalakaua Avenue and Kealohilani Avenue.

Given the project's location, DOT does not anticiapte any significant, adverse impacts to its transportation facilties.

DOT appreciates the opportunity to provide comments. If there are any other questions, please contact Mr. David Shimokawa of the DOT Statewide Transportation Planning Office at telephone number (808) 587-2356.

Very truly yours,

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

Helber Hastert & Fee
Planners, Inc.

July 21, 2011

30th ANNIVERSARY 1980 - 2010

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

Dear Mr. Okimoto:

St. Augustine-by-the-Sea Church Master Plan Project
Draft Environmental Assessment Pre-Assessment Consultation
Waikīkī, Honolulu, O'ahu, Hawai'i
TMK (1) 2-06-026: 012 & 015

Thank you for your department's letter dated May 10, 2010 providing comments as part of pre-assessment consultation efforts for the preparation of the Draft Environmental Assessment (Draft EA) for the subject project.

We note that no significant adverse impacts to State transportation facilities is anticipated by your department.

Thank you for your participation in this process. If you need additional information, please contact me by phone at 545-2055, or by email at rsato@hhf.com.

Sincerely,

HELBER HASTERT & FEE, Planners

Ronald A. Sato, AICP
Senior Planner

Pacific Guardian Center, Makai Tower | 733 Bishop Street, Suite 2590 | Honolulu, Hawaii 96813
Telephone: 808.545.2055 | Facsimile: 808.545.2050 | www.hhf.com | e-mail: info@hhf.com

PHONE (808) 594-1888

COPY

FAX (808) 594-1865

STATE OF HAWAI'I
OFFICE OF HAWAIIAN AFFAIRS
711 KAPI'OLANI BOULEVARD, SUITE 500
HONOLULU, HAWAI'I 96813

HRD10/4934

April 28, 2010

Ronald A. Sato, AICP
Herbert, Hastert & Fee Planners, Inc.
733 Bishop Street, Suite 2590
Honolulu, Hawai'i 96813

Re: Pre- Draft Environmental Assessment consultation
St. Augustine-by-the-Sea Church Master Plan Project
Waikiki, O'ahu

Aloha e Ronald Sato,

The Office of Hawaiian Affairs (OHA) is in receipt of you April 12, 2010 letter seeking comments ahead of a draft environmental assessment (EA) for the St. Augustine-by-the-Sea Church Master Plan Project (project). It is our understanding the project has two main components: 1. Construction of a new building for a St. Damien Museum; and 2. Demolition of an existing building and construction of a new multi-purpose building.

Numerous burials have been identified in Waikīkī during projects involving ground disturbing activities. While the potential for this situation during this specific project is unclear to us at this time, we do advocate that appropriate community consultation, archaeological and historical review and if warranted, approved archaeological investigations occur during the draft EA process.

We look forward to the opportunity to review the draft EA and provide additional comments at that time. We would appreciate receiving the draft EA on a CD in a pdf file format. Should you have any questions, please contact Keola Lindsey, at (808) 594-0244 or keolal@oha.org.

'O wau iho nō me ka 'oia'i'o,

Clyde W. Nāmu'o
Chief Executive Officer

Helber Hastert & Fee
Planners, Inc.

July 21, 2011

30th ANNIVERSARY 1980 - 2010

Mr. Clyde W. Nāmu'o, Chief Executive Officer
Office of Hawaiian Affairs
State of Hawai'i
711 Kapi'olani Boulevard, Suite 500
Honolulu, Hawai'i 96813

Dear Mr. Nāmu'o:

St. Augustine-by-the-Sea Church Master Plan Project
Draft Environmental Assessment Pre-Assessment Consultation
Waikīkī, Honolulu, O'ahu, Hawai'i
TMK (1) 2-06-026: 012 & 015

Thank you for your letter dated April 28, 2010 providing comments as part of pre-assessment consultation efforts for the preparation of the Draft Environmental Assessment (Draft EA) for the subject project.

We are aware that several burials have been previously identified in Waikīkī as part of other projects. An archaeological inventory survey with subsurface testing has been completed for this project. Two burials were identified during the fieldwork, and a burial treatment plan was prepared and approved by the O'ahu Island Burial Council (OIBC) at their June 8, 2011 meeting. This burial treatment plan was prepared in consultation with the OIBC, cultural descendants of Waikīkī, and the State Historic Preservation Division. Further information on this subject will be included in the Draft EA.

As requested, the Draft EA will be distributed to your agency as a pdf file on a CD. Thank you for your participation in this process. If you need additional information, please contact me by phone at 545-2055, or by email at rsato@hhf.com.

Sincerely,

HELBER HASTERT & FEE, Planners

Ronald A. Sato, AICP
Senior Planner

Pacific Guardian Center, Makai Tower | 733 Bishop Street, Suite 2590 | Honolulu, Hawaii 96813
Telephone: 808.545.2055 | Facsimile: 808.545.2050 | www.hhf.com | e-mail: info@hhf.com

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

June 16, 2010

Ronald A. Sato, AICP, Senior Planner
Helber, Hastert & Fee Planners, Inc.
733 Bishop Street, Suite 2590
Honolulu, Hawaii 96813

LOG NO: 2010.1807
DOC NO: 1006MD06
Archaeology
Architecture

Dear Mr. Sato:

SUBJECT: Chapter 6E-42 Historic Preservation Review –
Draft EA Pre-Assessment Consultation, St. Augustine-by-the-Sea Church
Waikīkī Ahupuaʻa, Honolulu (Kona) District, Island of Oʻahu
TMK: (1) 2-6-026:012 & 015

Thank you for the opportunity to comment on the aforementioned project, which we received on April 13, 2010. We apologize for the delay in our reply. The Church is proposing a Master Plan that involves improvements to a portion of the church parcels around the existing Parish House and construction of a new St. Damien's Museum.

Please note that an archaeological inventory survey for this project is pending; we are waiting for revisions to the proposed archaeological inventory survey plan, which has not yet been accepted by SHPD. St. Augustine's Church was built in 1962 following designs by Honolulu architect George McLaughlin. It is of exceptional architectural significance.

If you have questions about this letter please contact Morgan Davis at (808) 896-0514 or via email to: morgan.e.davis@hawaii.gov.

Aloha,

Nancy McMahon

Nancy McMahon, Deputy SHPO/State Archaeologist
and Historic Preservation Manager
State Historic Preservation Division

Cc: Coochie Cayan, SHPD Culture & History Branch Chief

RECEIVED
JUN 18 2010
HELBER, HASTERT & FEE
PLANNERS

Helber Hastert & Fee
Planners, Inc.

July 21, 2011

30th ANNIVERSARY 1980 - 2010

Dr. Pua Aiu, Administrator
State Historic Preservation Division
Department of Land and Natural Resources
State of Hawaiʻi
601 Kamokila Boulevard, Room 555
Kapolei, Hawaiʻi 96707

Dear Dr. Aiu:

St. Augustine-by-the-Sea Church Master Plan Project
Draft Environmental Assessment Pre-Assessment Consultation
Waikīkī, Honolulu, Oʻahu, Hawaiʻi
TMK (1) 2-06-026: 012 & 015

Thank you for your department's letter dated June 16, 2010 providing comments as part of pre-assessment consultation efforts for the preparation of the Draft Environmental Assessment (Draft EA) for the subject project.

An archaeological inventory survey with subsurface testing has been completed for this project. Two burials were identified during the fieldwork, and a burial treatment plan was prepared and approved by the Oʻahu Island Burial Council (OIBC) at their June 8, 2011 meeting. Additional information on this subject will be included in the Draft EA. We concur that the St. Augustine-by-the-Sea Church is of architectural significance and project improvements will not adversely affect this church. The St. Damien museum is being designed to complement the architectural character of the church.

Thank you for your participation in this process. If you need additional information, please contact me by phone at 545-2055, or by email at rsato@hhf.com.

Sincerely,

HELBER HASTERT & FEE, Planners

Ronald A. Sato, AICP
Senior Planner

Pacific Guardian Center, Makai Tower | 733 Bishop Street, Suite 2590 | Honolulu, Hawaii 96813
Telephone: 808.545.2055 | Facsimile: 808.545.2050 | www.hhf.com | e-mail: info@hhf.com

BOARD OF WATER SUPPLY

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

April 20, 2010

MUFI HANNEMANN, Mayor

RANDALL Y. S. CHUNG, Chairman
SAMUEL T. HATA
WILLIAM K. MAHOE
THERESIA C. McMURDO
ADAM C. WONG

JEOFFREY S. CUDIAMAT, Ex-Officio
BRENNON T. MORIOKA, Ex-Officio

WAYNE M. HASHIRO, P.E.
Manager and Chief Engineer

DEAN A. NAKANO
Deputy Manager

Mr. Ronald A. Sato, AICP
Helber Hastert & Fee Planners, Inc.
733 Bishop Street, Suite 2590
Honolulu, Hawaii 96813

RECEIVED
APR 27 2010
HELBER, HASTERT & FEE PLANNERS

Dear Mr. Sato:

Subject: Your Letter Dated April 12, 2010 Requesting Comments on the Draft Environmental Assessment for St. Augustine-by-the-Sea Church Master Plan, TMK 2-6-26:12 & 15

Thank you for the opportunity to comment on the proposed renovation master plan.

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.

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

Very truly yours,

PAUL S. KIKUCHI
Chief Financial Officer
Customer Care Division

Water for Life . . . Ka Wai Ola

Helber Hastert & Fee
Planners, Inc.

July 21, 2011

30th ANNIVERSARY 1980 - 2010

Mr. Paul S. Kikuchi, Chief Financial Officer
Customer Care Division
Board of Water Supply
City and County of Honolulu
630 South Beretania Street
Honolulu, Hawai'i 96813

Dear Mr. Kikuchi:

St. Augustine-by-the-Sea Church Master Plan Project
Draft Environmental Assessment Pre-Assessment Consultation
Waikīkī, Honolulu, O'ahu, Hawai'i
TMK (1) 2-06-026: 012 & 015

Thank you for your department's letter dated April 20, 2010 providing comments as part of pre-assessment consultation efforts for the preparation of the Draft Environmental Assessment (Draft EA) for the subject project.

We acknowledge your determination that the existing water system is presently adequate to accommodate the proposed project. Design plans will be coordinated with the Board of Water Supply for review and approval as part of the project's design phase. We understand that final decision on water availability will be confirmed when the building permit application is submitted.

The church will also be required to pay water system facility charges. On-site fire protection requirements will be coordinated with the Fire Department.

Thank you for your participation in this process. If you need additional information, please contact me by phone at 545-2055, or by email at rsato@hhf.com.

Sincerely,

HELBER HASTERT & FEE, Planners

Ronald A. Sato, AICP
Senior Planner

Pacific Guardian Center, Makai Tower | 733 Bishop Street, Suite 2590 | Honolulu, Hawaii 96813
Telephone: 808.545.2055 | Facsimile: 808.545.2050 | www.hhf.com | e-mail: info@hhf.com

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
Phone: (808) 768-8480 • Fax: (808) 768-4567
Web site: www.honolulu.gov

MUFI HANNEMANN
MAYOR

CRAIG I. NISHIMURA, P.E.
DIRECTOR

COLLINS D. LAM, P.E.
DEPUTY DIRECTOR

May 10, 2010

RECEIVED
MAY 13 2010
HELBER, HASTERT & FEE
PLANNERS

Mr. Ronald A. Sato
HELBER, HASTERT AND FEE, PLANNERS
733 Bishop Street, Suite 2590
Honolulu, Hawaii 96813

Dear Mr. Sato:

Subject: St. Augustine- by- the – Sea Church Master Plan Project Draft Environmental Assessment / Pre- Assessment Consultation
Waikiki, Honolulu, Oahu, Hawaii TMK: (1) 2-06-026:012&015

Thank you for inviting us to review the Environmental Assessment Pre-Assessment Consultation.

The applicant should check with the Department of Planning and Permitting, Wastewater Branch for the adequacy of sewers.

Should you have any questions, please contact Jay Hamai at 768-8480.

Very truly yours,

Craig I. Nishimura, P.E.
FOR Director

CN:pg(361970)

Helber Hastert & Fee
Planners, Inc.

July 21, 2011

30th ANNIVERSARY 1980 - 2010

Mr. Collins Lam, P.E., Director
Department of Design and Construction
City and County of Honolulu
650 South Beretania Street, 11th Floor
Honolulu, Hawai'i 96813

Dear Mr. Lam:

St. Augustine-by-the-Sea Church Master Plan Project
Draft Environmental Assessment Pre-Assessment Consultation
Waikīkī, Honolulu, O'ahu, Hawai'i
TMK (1) 2-06-026: 012 & 015

Thank you for your department's letter dated May 10, 2010 providing comments as part of pre-assessment consultation efforts for the preparation of the Draft Environmental Assessment (Draft EA) for the subject project.

Regarding the adequacy of sewers, our civil engineer has been coordinating with the City on this matter, and sewer connection for this project was approved last year.

Thank you for your participation in this process. If you need additional information, please contact me by phone at 545-2055, or by email at rsato@hhf.com.

Sincerely,

HELBER HASTERT & FEE, Planners

Ronald A. Sato, AICP
Senior Planner

Pacific Guardian Center, Makai Tower | 733 Bishop Street, Suite 2590 | Honolulu, Hawaii 96813
Telephone: 808.545.2055 | Facsimile: 808.545.2050 | www.hhf.com | e-mail: info@hhf.com

DEPARTMENT OF EMERGENCY MANAGEMENT
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET
HONOLULU, HAWAII 96813

Mufi Hannemann
MAYOR

Melvin N. Kaku
DIRECTOR

April 19, 2010

RECEIVED
APR 20 2010
HELBER, HASTERT & FEE
PLANNERS

Helber, Hastert & Fee Planners, Inc.
Attention: Ronald A. Sato, AICP
733 Bishop Street, Suite 2590
Honolulu, Hawaii 96813

Dear Mr. Sato:

Subject: St. Augustine-by-the-Sea Church Master Plan Project
Draft Environmental Assessment Pre-Assessment Consultation
Waikiki, Honolulu, O'ahu, Hawai'i TMK (1) 2-06-026: 012 & 015

We have completed our initial assessment of your proposed St. Augustine-by-the-Sea Church Plan Project which shows that the entire project site will fall within the tsunami evacuation zone map for Waikiki which is being updated by the City and County of Honolulu. Although a public map for Waikiki that reflects this change is not yet available, for your planning purposes, the proposed tsunami evacuation zone for your proposed project TMK runs up past Kuhio Avenue and encompasses the entire block. Please also be aware that although the Coastal Flood Zone will remain unchanged, the new tsunami evacuation maps is anticipated to be published by the end of this calendar year which will show your proposed project site within the updated tsunami evacuation zone.

Therefore, we recommend your project planning include notification phases and written procedures to address the evacuation of personnel who visit or reside on your proposed project site. Should your project include construction of multi-story concrete and steel reinforced structures that are three stories or more, we recommend your planning should consider vertical evacuation to the *third floor or above* for their personal safety when a tsunami

warning is issued. Your emergency plans should also ensure that critical data and records are similarly stored at the third floor and above to ensure their safekeeping.

Sincerely,

Melvin N. Kaku
Director

Helber Hastert & Fee
Planners, Inc.

July 21, 2011

Mr. Melvin N. Kaku, Director
Department of Emergency Management
City and County of Honolulu
650 South Beretania Street, Basement
Honolulu, Hawai‘i 96813

Dear Mr. Kaku:

St. Augustine-by-the-Sea Church Master Plan Project
Draft Environmental Assessment Pre-Assessment Consultation
Waikīkī, Honolulu, O‘ahu, Hawai‘i
TMK (1) 2-06-026: 012 & 015

Thank you for your department’s letter dated April 19, 2010 providing comments as part of pre-assessment consultation efforts for the preparation of the Draft Environmental Assessment (Draft EA) for the subject project.

We confirm that the St. Augustine-by-the-Sea Church site is situated within the tsunami evacuation zone based upon your finalized map for the area. The project will include planning to address notification and evacuation procedures for personnel in the event of a tsunami. The new four-story parish hall will be constructed of concrete and steel reinforced structures above three stories tall, and can be considered for use as vertical evacuation. Critical data and records will also be considered for storage at the third floor and above for safekeeping. The Draft EA will address these issues.

Thank you for your participation in this process. If you need additional information, please contact me by phone at 545-2055, or by email at rsato@hhf.com.

Sincerely,

HELBER HASTERT & FEE, Planners

Ronald A. Sato, AICP
Senior Planner

Pacific Guardian Center, Makai Tower | 733 Bishop Street, Suite 2590 | Honolulu, Hawaii 96813
Telephone: 808.545.2055 | Facsimile: 808.545.2050 | www.hhf.com | e-mail: info@hhf.com

DEPARTMENT OF COMMUNITY SERVICES
CITY AND COUNTY OF HONOLULU
715 SOUTH KING STREET, SUITE 311 ● HONOLULU, HAWAII 96813 ● AREA CODE 808 ● PHONE: 768-7762 ● FAX: 768-7792

MUFI HANNEMANN
MAYOR

DEBORAH KIM MORIKAWA
DIRECTOR

ERNEST Y. MARTIN
DEPUTY DIRECTOR

April 22, 2010

RECEIVED
APR 26 2010
HELBER, HASTERT & FEE
PLANNERS

Ronald A. Sato, Senior Planner
Helber Hastert & Fee
733 Bishop Street, Suite 2590
Honolulu, Hawaii 96813

Dear Mr. Sato:

Subject: St. Augustine-by-the-Sea Church Master Plan Project
Draft Environmental Assessment (EA) Pre-Assessment
Consultation

We have reviewed your letter of April 12, 2010, regarding a proposal to build a St. Damien Museum on Kalakaua Avenue and a new multipurpose building containing a parking garage and a new parish hall.

We have no comments on the proposed project at this time.

When the draft EA is available, we can access a web-based database to review the document.

Sincerely,

Deborah Kim Morikawa
Director

DKM:cm

Helber Hastert & Fee
Planners, Inc.

July 21, 2011

30th ANNIVERSARY 1980 - 2010

Mr. Samuel E. H. Moku, Director
Department of Community Services
City and County of Honolulu
715 South King Street, Suite 311
Honolulu, Hawai'i 96813

Dear Mr. Moku:

St. Augustine-by-the-Sea Church Master Plan Project
Draft Environmental Assessment Pre-Assessment Consultation
Waikīkī, Honolulu, O'ahu, Hawai'i
TMK (1) 2-06-026: 012 & 015

Thank you for your department's letter dated April 22, 2010 providing comments as part of pre-assessment consultation efforts for the preparation of the Draft Environmental Assessment (Draft EA) for the subject project.

We note your department has no comments at this time.

Thank you for your participation in this process. If you need additional information, please contact me by phone at 545-2055, or by email at rsato@hhf.com.

Sincerely,

HELBER HASTERT & FEE, Planners

Ronald A. Sato, AICP
Senior Planner

Pacific Guardian Center, Makai Tower | 733 Bishop Street, Suite 2590 | Honolulu, Hawaii 96813
Telephone: 808.545.2055 | Facsimile: 808.545.2050 | www.hhf.com | e-mail: info@hhf.com

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

RECEIVED
JUN - 4 2010
HELBER, HASTERT & FEE PLANNERS

MUFI HANNEMANN
MAYOR

JEOFFREY S. CUDIAMAT, P.E.
DIRECTOR AND CHIEF ENGINEER

GEORGE "KEOKI" MIYAMOTO
DEPUTY DIRECTOR

IN REPLY REFER TO:
DRM 10-443

June 2, 2010

Mr. Ronald A. Sato, AICP
Herbert, Hastert & Fee Planners
733 Bishop Street, Suite 2590
Honolulu, Hawaii 96813

Dear Mr. Fee:

Subject: St. Augustine-by-the-Sea Church Master Plan Project
Draft Environmental Assessment (DEA)
Pre-Assessment Consultation

Thank you for the opportunity to review and comment on the pre-assessment for the DEA for the proposed improvements within the St. Augustine-by-the-Sea Church property.

We have no comments to offer as the proposed improvements will be within privately-owned land and will have negligible impact on our facilities and operations.

Any associated improvements within the right of way of City-owned Kalakaua Avenue, Ohua Avenue and Kealohilani Avenue should be constructed in accordance with City and County of Honolulu Standard Details.

We would request a copy of the DEA in CD form for future review.

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

Sincerely,

Jeoffrey S. Cudiamat, P.E.
Director and Chief Engineer

Helber Hastert & Fee
Planners, Inc.

July 21, 2011

30th ANNIVERSARY 1980 - 2010

Mr. Westley K.C. Chun, Ph.D., P.E., Director
Department of Facility Maintenance
City and County of Honolulu
1000 Uluohia Street, Suite 215
Kapolei, Hawai'i 96707

Dear Dr. Chun:

St. Augustine-by-the-Sea Church Master Plan Project
Draft Environmental Assessment Pre-Assessment Consultation
Waikīkī, Honolulu, O'ahu, Hawai'i
TMK (1) 2-06-026: 012 & 015

Thank you for your department's letter dated June 2, 2010 providing comments as part of pre-assessment consultation efforts for the preparation of the Draft Environmental Assessment (Draft EA) for the subject project.

We note your department had no comments since the project will have negligible impact to the department's facilities and operations. Any improvements within the rights-of-way of Kalākaua Avenue, 'Ōhua Avenue, or Kealohilani Avenue will be constructed in accordance with City standards.

As requested, the Draft EA will be distributed to your agency as a pdf file on a CD. Thank you for your participation in this process. If you need additional information, please contact me by phone at 545-2055, or by email at rsato@hhf.com.

Sincerely,

HELBER HASTERT & FEE, Planners

Ronald A. Sato, AICP
Senior Planner

Pacific Guardian Center, Makai Tower | 733 Bishop Street, Suite 2590 | Honolulu, Hawaii 96813
Telephone: 808.545.2055 | Facsimile: 808.545.2050 | www.hhf.com | e-mail: info@hhf.com

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) 768-6041
DEPT. WEB SITE: www.honoluludpp.org • CITY WEB SITE: www.honolulu.gov

MUFI HANNEMANN
MAYOR

DAVID K. TANOUE
DIRECTOR

ROBERT M. SUMITOMO
DEPUTY DIRECTOR

RECEIVED
MAY 12 2010
HELBER, HASTERT & FEE
PLANNERS

May 11, 2010

2010/ELOG-754(JP)
UDB Misc

Mr. Scott Ezer, Principal
Helber Hastert & Fee Planners, Inc.
733 Bishop Street, Suite 2590
Honolulu, Hawaii 96813

Dear Mr. Ezer:

Subject: Pre-Assessment Consultation for a Draft Environmental Assessment
St. Augustine by-the-Sea Church Master Plan
Tax Map Key 2-6-26: 12 &15

This is in response to your request for pre-assessment consultation (received April 13, 2010) regarding the off-street parking and open space requirements for the above project. We have the following review comments:

1. We would concur with your assessment of Section 21-9.80-4(h) of the Land Use Ordinance (LUO) with regards to the existing church sanctuary, that it would be considered as a ground floor use and exempt from providing off-street parking. Without knowing the floor areas for the proposed multi-purpose building and existing church, we could not assess your parking calculations.

2. We would also concur that a variance would be necessary in order to allow less than the required 50% open space in the Resort Mixed Use Precinct. The Draft Environmental Assessment (DEA) should include some discussions on why a variance from the open space requirement would be necessary. Discuss and show how there would be no other viable alternative to the proposed project other than to provide less than the required open space. Without knowing how the proposal would meet the three tests of hardship for a variance, it would be difficult for us to make a determination as to whether or not such a request would be supported by the department.

Please include our department in your consultation process for the DEA.

Thank you for the opportunity to comment on your proposed project. If we can be of further assistance, please contact Joan Pawsat of our Urban Design Branch at 768-8056.

Very truly yours,

Anthony X. Chung

FOR David K. Tanoue, Director
Department of Planning and Permitting

DKT:cs

Helber Hastert & Fee
Planners, Inc.

July 21, 2011

30th ANNIVERSARY 1980 - 2010

Mr. David K. Tanoue, Director
Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 7th Floor
Honolulu, Hawai'i 96813

Dear Mr. Tanoue:

St. Augustine-by-the-Sea Church Master Plan Project
Draft Environmental Assessment Pre-Assessment Consultation
Waikīkī, Honolulu, O'ahu, Hawai'i
TMK (1) 2-06-026: 012 & 015

Thank you for your department's letter dated May 11, 2010 providing comments as part of pre-assessment consultation efforts for the preparation of the Draft Environmental Assessment (Draft EA) for the subject project.

We confirm your department's determination that the existing church sanctuary is considered a ground floor use and is exempt from providing off-street parking. Information on off-street parking requirements for the project will be included in the Draft EA.

We also acknowledge that a variance will be required to allow less than the required 50 percent open space in the Resort Mixed Use Precinct. The Draft EA will discuss why this variance will be necessary and address why there is no other viable alternative than providing less than the required open space.

Thank you for your participation in this process. If you need additional information, please contact me by phone at 545-2055, or by email at rsato@hhf.com.

Sincerely,

HELBER HASTERT & FEE, Planners

Ronald A. Sato, AICP
Senior Planner

Pacific Guardian Center, Makai Tower | 733 Bishop Street, Suite 2590 | Honolulu, Hawaii 96813
Telephone: 808.545.2055 | Facsimile: 808.545.2050 | www.hhf.com | e-mail: info@hhf.com

DEPARTMENT OF PARKS AND RECREATION
CITY AND COUNTY OF HONOLULU
1000 ULUOHIA STREET, SUITE 309 • KAPOLEI, HAWAII 96707
TELEPHONE: (808) 768-3003 • FAX: (808) 768-3053 • CITY WEB SITE: www.honolulu.gov

MUFI HANNEMANN
MAYOR

LESTER K. C. CHANG
DIRECTOR

RICHARD HARU
DEPUTY DIRECTOR

April 23, 2010

RECEIVED
APR 29 2010
HELBER, HASTERT & FEE
PLANNERS

Mr. Ronald A. Sato, AICP
Helber, Hastert & Fee Planners, Inc.
733 Bishop Street, Suite 2590
Honolulu, Hawaii 96813

Dear Mr. Sato:

Subject: Draft Environmental Assessment
Pre-Assessment Consultation
St. Augustine-by-the Sea Church Master Plan Project

Thank you for the opportunity to review and comment at the Pre-Assessment Consultation Stage of the Environmental Assessment for the St. Augustine-by-the-Sea Church Master Plan Project.

The Department of Parks and Recreation has no comment as the proposed project will not impact any program or facility of the department. You may 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.

Sincerely,

LESTER K. C. CHANG
Director

LKCC:jr
(361827)

Helber Hastert & Fee
Planners, Inc.

July 21, 2011

30th ANNIVERSARY 1980 - 2010

Mr. Gary B. Cabato, Director
Department of Parks and Recreation
City and County of Honolulu
1000 Uluohia Street, Suite 309
Kapolei, Hawai'i 96707

Dear Mr. Cabato:

St. Augustine-by-the-Sea Church Master Plan Project
Draft Environmental Assessment Pre-Assessment Consultation
Waikīkī, Honolulu, O'ahu, Hawai'i
TMK (1) 2-06-026: 012 & 015

Thank you for your department's letter dated April 23, 2010 providing comments as part of pre-assessment consultation efforts for the preparation of the Draft Environmental Assessment (Draft EA) for the subject project.

We note your department has no comment on the project as it will not impact any program or facility of your department. We will also remove your department as a consulting party on this environmental review process as requested.

Thank you for your participation in this process. If you need additional information, please contact me by phone at 545-2055, or by email at rsato@hhf.com.

Sincerely,

HELBER HASTERT & FEE, Planners

Ronald A. Sato, AICP
Senior Planner

Pacific Guardian Center, Makai Tower | 733 Bishop Street, Suite 2590 | Honolulu, Hawaii 96813
Telephone: 808.545.2055 | Facsimile: 808.545.2050 | www.hhf.com | e-mail: info@hhf.com

DEPARTMENT OF TRANSPORTATION SERVICES
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 3RD FLOOR
HONOLULU, HAWAII 96813
Phone: (808) 768-8305 • Fax: (808) 768-4730 • Internet: www.honolulu.gov

MUFI HANNEMANN
MAYOR

WAYNE Y. YOSHIOKA
DIRECTOR

SHARON ANN THOM
DEPUTY DIRECTOR

KENNETH TORU HAMAYASU
DEPUTY DIRECTOR

TP4/10-362040R

May 14, 2010

RECEIVED
MAY 17 2010
HELBER, HASTERT & FEE
PLANNERS

Mr. Ronald A. Sato, AICP
Helber, Hastert & Fee Planners, Inc
733 Bishop Street, Suite 2590
Honolulu, Hawaii 96813

Dear Mr. Sato:

Subject: Environmental Assessment (EA) Pre-Assessment Consultation
St. Augustine by the Sea Master Plan
Tax Map Key: 2-6-26:12, 15

This responds to your letter dated April 12, 2010, requesting a pre-consultation and comments in preparing the Draft Environmental Assessment (DEA) for the subject project.

Our Traffic Engineering Division offers the following comments:

- The DEA should address the traffic impact and possible mitigation measures for City Streets by conducting a traffic impact study. The study should include a discussion of potential traffic disruption during construction periods (i.e. lane closures, equipment movement etc.) and proposed mitigation measures to resolve construction impacts to traffic.
- A Street Usage Permit from our department is required for construction work that may require the temporary closure of any City street, traffic lane, or sidewalk.
- The proposed driveways on Ohua and Kealohilani Streets should be constructed to meet City standards.
- The driveway on Kalakaua Avenue should be indicated on the project plans.

Our Public Transit Division offers the following comments:

- The construction traffic may impact bus service along Kuhio and Kalakaua Avenues. The DEA should include a description of Public Transit serving the general area of your project, the impact of your project on Public Transit during construction, and the impact of your project on Public Transit as a result of the completed project.
- Basic information on bus routes and operating schedules are available on our websites: www.thebus.org and www.honolulu.gov/dts. For more details, you may contact our staff at 768-8370.
- The project must comply with the appropriate provisions of the Americans with Disabilities Act (ADA). On-site and internal traffic should be designed to facilitate the City's TheHandi-Van's 31' turning radius and 10'6" height clearance.
- Pre-construction notes shall include the following transit note: "This project will affect bus routes and paratransit operations, therefore, the Contractor shall notify the Department of Transportation Services, Public Transit Division at 768-8396 and Oahu Transit Services, Inc. (bus operations: 848-4578 or 848-6016 and paratransit operations: 454-5041 or 454-5020) of the scope of work, location, proposed closure of any street, traffic lane, sidewalk, or bus stop and duration of project at least two weeks prior to construction."

Prior to the start of the project, the affected Neighborhood Board, residents, and businesses should be informed about the scope and duration of the project.

Should you have any questions on the matter, you may contact Ms. Virginia Bisho of my staff at 768-5461.

Very truly yours,

WAYNE Y. YOSHIOKA
Director

Helber Hastert & Fee
Planners, Inc.

July 21, 2011

30th ANNIVERSARY 1980 - 2010

Mr. Wayne Y. Yoshioka, Director
Department of Transportation Services
City and County of Honolulu
650 South King Street, 3rd Floor
Honolulu, Hawai'i 96813

Dear Mr. Yoshioka:

St. Augustine-by-the-Sea Church Master Plan Project
Draft Environmental Assessment Pre-Assessment Consultation
Waikīkī, Honolulu, O'ahu, Hawai'i
TMK (1) 2-06-026: 012 & 015

Thank you for your department's letter dated May 14, 2010 providing comments as part of pre-assessment consultation efforts for the preparation of the Draft Environmental Assessment (Draft EA) for the subject project.

The Draft EA will address the traffic impact likely resulting from the project, and will identify mitigative measures if appropriate. Likely traffic disruptions during construction periods will also be addressed in the document. A Street Usage Permit will be obtained if required for the temporary closure of any City street, traffic lane, or sidewalk. Proposed driveway improvements on 'Ōhua Avenue and Kealohilani Avenue will be designed and constructed to meet City standards. The existing driveway on Kalākaua Avenue will be indicated on project plans.

Construction traffic is not anticipated to adversely impact bus service along Kūhiō and Kalākaua Avenues, and the Draft EA will address this temporary condition along with the long-term effects resulting from completion of the project. This will include a description of public transit serving the general project area. We appreciate the information provided on bus routes and operating schedules.

The project will be designed to comply with appropriate provisions of the Americans with Disabilities Act. Pre-construction notes will include the transit note described in your letter. Prior to the start of construction activities, the Waikīkī Neighborhood Board and area residents and businesses will be informed of the project and construction duration.

Pacific Guardian Center, Makai Tower | 733 Bishop Street, Suite 2590 | Honolulu, Hawaii 96813
Telephone: 808.545.2055 | Facsimile: 808.545.2050 | www.hhf.com | e-mail: info@hhf.com

Thank you for your participation in this process. If you need additional information, please contact me by phone at 545-2055, or by email at rsato@hhf.com.

Sincerely,

HELBER HASTERT & FEE, Planners

Ronald A. Sato, AICP
Senior Planner

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

ROLLAND J. HARVEST
DEPUTY FIRE CHIEF

May 6, 2010

RECEIVED
MAY 10 2010
HELBER, HASTERT & FEE
PLANNERS

Mr. Ronald Sato, AICP
Senior Planner
Helber Hastert & Fee Planners, Inc.
Pacific Guardian Center, Makai Tower
733 Bishop Street, Suite 2590
Honolulu, Hawaii 96813

Dear Mr. Sato:

Subject: Draft Environmental Assessment Preassessment Consultation
St. Augustine-by-the-Sea Church Master Plan Project
Honolulu, Oahu, Hawaii
Tax Map Keys: 2-6-026: 012 and 015

In response to your letter dated April 21, 2010, regarding the above-mentioned subject, the Honolulu Fire Department reviewed the information provided and has no objections to the proposed project.

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

Sincerely,

for KENNETH G. SILVA
Fire Chief

KGS/SY:bh

Helber Hastert & Fee
Planners, Inc.

July 21, 2011

30th ANNIVERSARY 1980 - 2010

Ms. Lynette Yoshida, Senior Manager
Network Engineering and Planning
Hawaiian Telcom
P.O. Box 2200
Honolulu, Hawai'i 96841

Dear Ms. Yoshida:

St. Augustine-by-the-Sea Church Master Plan Project
Draft Environmental Assessment Pre-Assessment Consultation
Waikīkī, Honolulu, O'ahu, Hawai'i
TMK (1) 2-06-026: 012 & 015

Thank you for your company's letter dated April 22, 2010 providing comments as part of pre-assessment consultation efforts for the preparation of the Draft Environmental Assessment (Draft EA) for the subject project.

We note your department has no comments to the project at this time. As suggested, we will be coordinate with Hawaiian Telcom as appropriate during the project's design phase.

Thank you for your participation in this process. If you need additional information, please contact me by phone at 545-2055, or by email at rsato@hhf.com.

Sincerely,

HELBER HASTERT & FEE, Planners

Ronald A. Sato, AICP
Senior Planner

Pacific Guardian Center, Makai Tower | 733 Bishop Street, Suite 2590 | Honolulu, Hawaii 96813
Telephone: 808.545.2055 | Facsimile: 808.545.2050 | www.hhf.com | e-mail: info@hhf.com

Hawaiian Telcom

April 22, 2010

RECEIVED
APR 26 2010
HELBER HASTERT & FEE
PLANNERS

Helber Hastert & Fee, Planners
Pacific Guardian Center, Makai Tower
733 Bishop Street, Suite 2590
Honolulu, Hawaii 96813
Attention: Mr. Ronald A. Sato, ACIP

Dear Mr. Sato:

Subject: **St. Augustine-by-the-Sea Church Master Plan Project - Draft Environmental Assessment Pre-Assessment Consultation**

Thank you for the opportunity to review and comment on the Draft Environmental Assessment Pre-Assessment Consultation for the subject project.

Hawaiian Telcom does not have any comments to offer at this time. Please continue to include us during the design stages of the project.

If you have any questions or require assistance in the future on this project, please call Les Loo at 546-7761.

Sincerely,

Lynette Yoshida
Senior Manager - OSP Engineering
Network Engineering & Planning

cc: File [Waikiki]

PO Box 2200 • Honolulu • Hi 96841

Helber Hastert & Fee
Planners, Inc.

July 21, 2011

30th ANNIVERSARY 1980 - 2010

Mr. Lionel Aguiar, OSP Engineer
Oceanic Time Warner Cable
200 Akamainui Street
Mililani, Hawai'i 96789-3999

Dear Mr. Aguiar:

St. Augustine-by-the-Sea Church Master Plan Project
Draft Environmental Assessment Pre-Assessment Consultation
Waikīkī, Honolulu, O'ahu, Hawai'i
TMK (1) 2-06-026: 012 & 015

Thank you for your company's letter dated April 14, 2010 providing comments as part of pre-assessment consultation efforts for the preparation of the Draft Environmental Assessment (Draft EA) for the subject project.

We confirm that Oceanic Time Warner Cable is presently providing television and internet service to the church site. The design architect will coordinate with Oceanic as appropriate during the project's design phase which will include reviewing construction plans.

Existing cable television service to the church should not be impacted, while the new buildings will require your services. Preliminary drawings will be submitted to your company during the design phase for review.

Thank you for your participation in this process. If you need additional information, please contact me by phone at 545-2055, or by email at rsato@hhf.com.

Sincerely,

HELBER HASTERT & FEE, Planners

Ronald A. Sato, AICP
Senior Planner

Pacific Guardian Center, Makai Tower | 733 Bishop Street, Suite 2590 | Honolulu, Hawaii 96813
Telephone: 808.545.2055 | Facsimile: 808.545.2050 | www.hhf.com | e-mail: info@hhf.com

200 Akamainui Street
Mililani, Hawaii 96789-3999
Tel 808-625-2100
Fax 808-625-5888

OCEANIC TIME WARNER CABLE

April 14, 2010

Helber Hastert & Fee
733 Bishop Street, Suite 2590
Honolulu, Hawaii 96813

Attention: Ronald A. Sato

Project: St. Augustine-by-the-Sea Church
Master Plan Project

Subject: CATV Comments & Requirements

Mr. Sato,

Oceanic Time Warner Cable is presently providing TV and Road Runner service to the church. I will need a set of the prelim drawings to better access what our requirements will be. Will the existing CATV service to the church be impacted by the work that will be done? Will the new buildings require our services? Usually we have a preliminary drawing to provide a review and comment followed by a set of the final drawings. Please provide us with a set of prelim drawing as soon as they are available for review and comment.

Sincerely,

Lionel Aguiar
OSP Engineer
Oceanic Time Warner Cable

Helber Hastert & Fee
Planners, Inc.

July 21, 2011

30th ANNIVERSARY 1980 - 2010

Mr. Lionel Aguiar, OSP Engineer
Oceanic Time Warner Cable
200 Akamainui Street
Mililani, Hawai'i 96789-3999

Dear Mr. Aguiar:

St. Augustine-by-the-Sea Church Master Plan Project
Draft Environmental Assessment Pre-Assessment Consultation
Waikīkī, Honolulu, O'ahu, Hawai'i
TMK (1) 2-06-026: 012 & 015

Thank you for your company's letter dated April 14, 2010 providing comments as part of pre-assessment consultation efforts for the preparation of the Draft Environmental Assessment (Draft EA) for the subject project.

We confirm that Oceanic Time Warner Cable is presently providing television and internet service to the church site. The design architect will coordinate with Oceanic as appropriate during the project's design phase which will include reviewing construction plans.

Existing cable television service to the church should not be impacted, while the new buildings will require your services. Preliminary drawings will be submitted to your company during the design phase for review.

Thank you for your participation in this process. If you need additional information, please contact me by phone at 545-2055, or by email at rsato@hhf.com.

Sincerely,

HELBER HASTERT & FEE, Planners

Ronald A. Sato, AICP
Senior Planner

Pacific Guardian Center, Makai Tower | 733 Bishop Street, Suite 2590 | Honolulu, Hawaii 96813
Telephone: 808.545.2055 | Facsimile: 808.545.2050 | www.hhf.com | e-mail: info@hhf.com

APPENDIX A-4

Draft EA Comments And Responses

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

REPLY TO
ATTENTION OF:

September 16, 2011

Regulatory Branch

File Number POH-2010-00116

Helber, Hastert & Fee, Planners, Inc.
Attention: Ronald A. Sato
Pacific Guardian Center, Makai Tower
733 Bishop Street, Suite 2590
Honolulu, Hawaii 96813

NO PERMIT REQUIRED

Dear Mr. Sato:

We have received your letter dated August 29, 2011 requesting Department of the Army (DA) review and comment on the Draft Environmental Assessment for the proposed St. Augustine-by-the-Sea Church Master Plan at 130 Ohua Avenue, TMK (1) 2-6-002:012 & :015, Waikiki, Island of Oahu, Hawaii. We have completed our review of the submitted document pursuant to Section 10 of the Rivers and Harbors Act of 1899 (Section 10) and Section 404 of the Clean Water Act (Section 404) and have determined the **subject property consists entirely of uplands and is absent of any waters of the U.S. under the regulatory jurisdiction of the Corps**.

For your information, Section 10 requires that a DA permit be obtained from the U.S. Army Corps of Engineers (Corps) prior to undertaking any construction, dredging, or other activity occurring in, over, or under or affecting navigable waters of the U.S. For tidal waters, the shoreward limit of the Corps' jurisdiction extends to the Mean High Water Mark. Section 404 requires that a DA permit be obtained for the discharge (placement) of dredged and/or fill material into waters of the U.S., including wetlands. For tidally influenced waters, in the absence of adjacent wetlands, the shoreward limit of the Corps' jurisdiction extends to the High Tide Line, which in Hawai'i may be approximated by reference to the Mean Higher High Water Mark. For non-tidal waters, the lateral limits of the Corps' jurisdiction extend to the Ordinary High Water Mark or the approved delineated boundary of any adjacent wetlands.

Based on the information submitted in the dEA, we anticipate the proposed **church facility improvements and construction will not result in the discharge of fill material into waters of the U.S. therefore, a DA permit will not be required**. This determination does not relieve you of the responsibility to obtain any other permits, licenses, or approvals that may be required under County, State, or Federal law for your proposed work.

Thank you for contacting us regarding this project and providing us with the opportunity to comment. Should you have any questions, please contact Ms. Jessie Pa'ahana via e-mail at *Jessie.K.Paahana@usace.army.mil*. You are encouraged to provide comments on your experience with the 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

Helber Hastert & Fee
Planners, Inc.

February 1, 2012

Mr. George P. Young, P.E., Chief
Regulatory Branch
U.S. Army Corps of Engineers, Honolulu District
Department of the Army
Fort Shafter, Hawai‘i 96858-5440

Dear Mr. Young:

Subject: St. Augustine-by-the-Sea Church Master Plan Project
Draft Environmental Assessment Comments
Waikīkī, Honolulu, O‘ahu, Hawai‘i
TMK (1) 2-06-026: 012 & 015

Thank you for your letter dated September 16, 2011 providing comments on the published Draft Environmental Assessment (Draft EA) for the subject project.

We confirm your determination that the project site consists entirely of uplands, and is absent of any waters of the U.S. under the regulatory jurisdiction of the Corps of Engineers. Therefore, construction of proposed church improvements will not result in the discharge of fill material into waters of the U.S., and subsequently a Department of Army permit is not required for this project.

Thank you for your participation in this process. If you need additional information, please contact me by phone at 545-2055, or by email at rsato@hhf.com.

Sincerely,

HELBER HASTERT & FEE, Planners, Inc.

Ronald A. Sato, AICP
Associate

NEIL ABERCROMBIE
GOVERNOR

BRUCE A. COPPA
COMPTROLLER

JAN S. GOUVEIA
DEPUTY COMPTROLLER

STATE OF HAWAI'I
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
P.O. BOX 119, HONOLULU, HAWAI'I 96810-0119

(P)1211.1

SEP 14 2011

Mr. Ronald A. Sato, AICP
Helber Hastart & Fee, Planners, Inc.
Pacific Guardian Center, Makai Tower
733 Bishop Street, Suite 2590
Honolulu, Hawai'i 96813

Dear Mr. Sato:

Subject: Draft Environmental Assessment
St. Augustine-by-the-Sea Church Master Plan
TMK: 2-6-26:12 and 15

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

If you have any questions, please call me at 586-0400 or have your staff call Mr. Alva Nakamura of the Public Works Division at 586-0488.

Sincerely,

BRUCE A. COPPA
State Comptroller

c: C&C DPP; Urban Design Branch

Helber Hastert & Fee
Planners, Inc.

February 1, 2012

Ms. Jan S. Gouveia, Acting State Comptroller
Department of Accounting and General Services
State of Hawai‘i
P.O. Box 119
Honolulu, Hawai‘i 96810-0119

Dear Ms. Gouveia:

Subject: St. Augustine-by-the-Sea Church Master Plan Project
Draft Environmental Assessment Comments
Waikīkī, Honolulu, O‘ahu, Hawai‘i
TMK (1) 2-06-026: 012 & 015

Thank you for your department’s letter dated September 14, 2011 providing comments on the published Draft Environmental Assessment (Draft EA) for the subject project.

We confirm that the project does not impact any of your department’s project or existing facilities in the area.

Thank you for your participation in this process. If you need additional information, please contact me by phone at 545-2055, or by email at rsato@hhf.com.

Sincerely,

HELBER HASTERT & FEE, Planners, Inc.

Ronald A. Sato, AICP
Associate

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

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

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

October 18, 2011

Mr. Ronald A. Sato, AICP
Helber Hastart & Fee, Planners, Inc.
Pacific Guardian Center, Makai Tower
733 Bishop Street, Suite 2590
Honolulu, Hawaii 9613

via email: rsato@hhf.com

SUBJECT: Draft Environmental Assessment for St. Augustine-by-the-Sea Church Master Plan for the New Damien Museum and Multi-Purpose Building - 130 Ohua Avenue, Waikiki, Honolulu, Oahu; TMK: (1) 2-6-26: 12 & 15

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 com nents.

At this time, enclosed are comments from (a) Division of Aquatic Resources; (b) Division of Boating & Ocean Recreation; (c) Engineering Division; (d) Office of Conservation & Coastal Lands; and (e) Land Division – Oahu District on the subject matter. Should you have any questions, please feel free to call Darlene Nakamura at 587-0417. Thank you.

Sincerely,

Russell Y. Tsuji
Land Administrator

Enclosures
cc: Department of Planning and Permitting
Attention: Ms. Lin Wong (w/copies)

No. of Pages: 9

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

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

AMX
JKV
Dar 4050

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

September 26, 2011

MEMORANDUM

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

RECEIVED
SEP 28 2011
AQUATIC RESOURCES

FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: Draft Environmental Assessment for St. Augustine-by-the-Sea Church Master Plan for the New Damien Museum and Multi-Purpose Building
LOCATION: 130 Ohua Avenue, Waikiki, Honolulu, Oahu; TMK: (1) 2-6-26: 12 and 15
APPLICANT: Helber Hastart & Fee, Planners, Inc. on behalf of St. Augustine-by-the-Sea Church

Transmitted for your review and comment on the above referenced document. We would appreciate your comments on this document. Please submit any comments by October 4, 2011.

Only one (1) copy of the CD is available for your review in Land Division office, Room 220.

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 Darlene Nakamura at 587-0417. Thank you.

Attachments

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

Signed: [signature]
Date: 06 OCT 2011

cc: Central Files

October 6, 2011

To: Robert Nishimoto, Program Manager
Division of Aquatic Resources

Through: Alton Miyasaka, Technical Assistant
Division of Aquatic Resources

From: Jo-Anne N. Kushima, Aquatic Biologist

Subject: Draft Environmental Assessment for St. Augustine-by-the-Sea Church Master Plan for the New Damien Museum and Multi-Purpose Building

Comments Requested By: Russell Y. Tsuji, Land Administrator

Date of Request: September 26, 2011 Date Received: September 28, 2011

Summary of Project

Title: Draft Environmental Assessment for St. Augustine-by-the-Sea Church Master Plan for the New Damien Museum and Multi-Purpose Building

Project By: Helber Hastart & Fee, Planners, Inc. on behalf of St. Augustine-by-the-Sea Church

Location: 130 Ohua Avenue, Waikiki, Honolulu, Oahu; TMK: (1) 2-6-26: 12 and 15

Brief Description:

The Roman Catholic Church in Hawai'i is proposing to implement improvements to their St. Augustine-by-the-Sea (St. Augustine) Church property in accordance with a new master plan. The plan takes into consideration, the existing condition of their facilities and the future needs of the parish.

The plan identifies improvements that need repair and renovations to existing facilities such as roofing, parking, security, exterior accessibility and signage. New facilities such as a new Damien Museum located along the Kalakaua Avenue frontage of the church's property, a new multi-purpose building to serve as a redeveloped parish hall and office space along with additional parking are also planned.

This project triggers the State environmental review process under Chapter 343, Hawai'i Revised Statues (HRS) because the new St. Damien Museum and multi-purpose building is to be situated in the Waikiki Special District. Additionally, the proposed activity is to take place within the

City and County of Honolulu's (City) Special Management Area (SMA) and will require a SMA Use Permit (Major) from the City Council.

Comments:
The applicant provides a detailed review of the environment at and surrounding the project site. There are no perennial or intermittent streams or aquatic resources present in the immediate vicinity of the proposed project. The coastal waters in the area are designated Class A. State Department of Health (DOH) Water Quality Standards Map for Oahu define Class A waters as that protecting recreational purposes and aesthetic enjoyment of the waters. These waters are not receiving waters for discharge.

The applicant states that the project will not have significant long-term effects on Kuhio Beach. The pollutants discharge from the site after the improvements are completed should be the same composition as the present run-off. Hazardous pollutants generated from the project that would significantly affect water quality or aquatic resources present in Kuhio Beach are not expected to occur.

The proposed project does not involve the shoreline or marine related activities that might impact the Waikiki MLCD which is in near proximity. The applicant states that the design plans for the project will incorporate appropriate measures to address storm water runoff and minimize effects on the water quality and marine resources.

A decrease in the storm water runoff from the property after the improvements are completed is anticipated. The decrease in runoff would be due to new open space and landscaped areas that are incorporated in the design plans. The project increases the open space about 30 percent. Much of this is landscaped and allows storm water runoff to percolate within the landscaped areas before being discharged into the City storm drain system.

The project will not adversely affect the coastal resources with significant recreational value as the improvement activity and construction is to be confined within the property of the proposed project which is located mauka of Kalakaua Avenue. Access or use of existing recreational facilities located along the shoreline makai of Kalakaua Avenue will not be impacted by the project. Additionally, the project will not adversely impact water quality of the shoreline areas fronting the property. The drainage plans for the property improvements will be designed and submitted for review by the C&C for approval.

The project will not adversely impact valuable coastal ecosystems. The applicant proposes to use Best Management Practices to minimize any short-term construction related effects to the surrounding environment.

A finding of No Significant Impact (FONSI) determination should be warranted for St. Augustine Church Master Plan. Results of the assessments conducted and provided in the Draft Environmental Assessment for this project have determined that the proposed project should not have significant impacts to the surrounding marine environment or aquatic resources.

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

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

RECEIVED
LAND DIVISION

2011 SEP 29 P 3:00

DEPT. OF LAND &
NATURAL RESOURCES
STATE OF HAWAII

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

September 26, 2011

MEMORANDUM

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

FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: Draft Environmental Assessment for St. Augustine-by-the-Sea Church Master Plan for the New Damien Museum and Multi-Purpose Building
LOCATION: 130 Ohua Avenue, Waikiki, Honolulu, Oahu; TMK: (1) 2-6-26: 12 and 15
APPLICANT: Helber Hastart & Fee, Planners, Inc. on behalf of St. Augustine-by-the-Sea Church

Transmitted for your review and comment on the above referenced document. We would appreciate your comments on this document. Please submit any comments by October 4, 2011.

Only one (1) copy of the CD is available for your review in Land Division office, Room 220.

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 Darlene Nakamura at 587-0417. Thank you.

Attachments

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

Signed: [signature]
Date: 9/28/11

cc: Central Files

A4-11

SEP20'11PM12:07BOR DIV

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

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

'11 SEP 28 AM 11:53

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

September 26, 2011

MEMORANDUM

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

RECEIVED
LAND DIVISION
2011 SEP 30 P 2:48
DEPT. OF LAND & NATURAL RESOURCES
STATE OF HAWAII

FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: Draft Environmental Assessment for St. Augustine-by-the-Sea Church Master Plan for the New Damien Museum and Multi-Purpose Building
LOCATION: 130 Ohua Avenue, Waikiki, Honolulu, Oahu; TMK: (1) 2-6-26: 12 and 15
APPLICANT: Helber Hastart & Fee, Planners, Inc. on behalf of St. Augustine-by-the-Sea Church

Transmitted for your review and comment on the above referenced document. We would appreciate your comments on this document. Please submit any comments by October 4, 2011.

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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 Darlene Nakamura at 587-0417. Thank you.

Attachments

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

Signed: _____
Date: 9/30/11

cc: Central Files

DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION

LD/DarleneNakamura
RE: DEANewDamienMuseum
Oahu.859

( ) 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. Frank DeMarco at (808) 961-8042 of the County of Hawaii, Department of Public Works.

( ) Mr. Francis Cerizo at (808) 270-7771 of the County of Maui, Department of Planning.

( ) Ms. Wynne Ushigome at (808) 241-4890 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 comment dated April 20, 2010, which was included in the Draft Environmental Assessment, still apply.

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

Signed: _____
for CARTY S. CHANG, CHIEF ENGINEER

Date: 9/30/11

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

DID WE REVIEW THIS ALREADY?

RECEIVED
LAND DIVISION
2011 SEP 30 P 2:46
DEPT. OF LAND & NATURAL RESOURCES STATE OF HAWAII

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

OFFICE OF CONSERVATION AND COASTAL LANDS
2011 SEP 27 P 3:12
DEPT. OF LAND & NATURAL RESOURCES STATE OF HAWAII

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION
POST OFFICE BOX 621
HONOLULU, HAWAII 96809

September 26, 2011

MEMORANDUM

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

FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: Draft Environmental Assessment for St. Augustine-by-the-Sea Church Master Plan for the New Damien Museum and Multi-Purpose Building
LOCATION: 130 Ohua Avenue, Waikiki, Honolulu, Oahu; TMK: (1) 2-6-26: 12 and 15
APPLICANT: Helber Hastart & Fee, Planners, Inc. on behalf of St. Augustine-by-the-Sea Church

Transmitted for your review and comment on the above referenced document. We would appreciate your comments on this document. Please submit any comments by October 4, 2011.

Only one (1) copy of the CD is available for your review in Land Division office, Room 220.

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 Darlene Nakamura at 587-0417. Thank you.

Attachments

NOT IN CONSERVATION LANDS. ALL WORK MAUKA OF SHORELINE

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

Signed: [signature]
Date: 9/30/2011

cc: Central Files

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

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

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

September 26, 2011

MEMORANDUM

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

FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: Draft Environmental Assessment for St. Augustine-by-the-Sea Church Master Plan for the New Damien Museum and Multi-Purpose Building
LOCATION: 130 Ohua Avenue, Waikiki, Honolulu, Oahu; TMK: (1) 2-6-26: 12 and 15
APPLICANT: Helber Hastart & Fee, Planners, Inc. on behalf of St. Augustine-by-the-Sea Church

Transmitted for your review and comment on the above referenced document. We would appreciate your comments on this document. Please submit any comments by October 4, 2011.

Only one (1) copy of the CD is available for your review in Land Division office, Room 220.

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 Darlene Nakamura at 587-0417. Thank you.

Attachments

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

Signed: TK
Date: 9/28/2011

cc: Central Files

Helber Hastert & Fee
Planners, Inc.

February 1, 2012

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

Dear Mr. Tsuji:

Subject: St. Augustine-by-the-Sea Church Master Plan Project
Draft Environmental Assessment Comments
Waikīkī, Honolulu, O‘ahu, Hawai‘i
TMK (1) 2-06-026: 012 & 015

Thank you for your letter dated October 18, 2011 providing comments on the published Draft Environmental Assessment (Draft EA) for the subject project. Our responses address the comments from each division.

Division of Aquatic Resources

We confirm that there are no perennial or intermittent streams or aquatic resources present in the immediate vicinity of the project site, and that the coastal waters in the area are designated Class A. We concur with the other comments stated in this division's memo that consist of information described in the Draft EA. We agree that the project will not adversely impact valuable coastal ecosystems, and that a Finding of No Significant Impact determination should be warranted for this project.

Division of Boating and Ocean Recreation

We note this division had no comments.

Engineering Division

We note the division's prior comment, dated April 20, 2010, is still applicable. That comment noted the project site is located within Zone X under the Flood Insurance Rate Map, and that the National Flood Insurance Program does not regulate developments within Zone X.

Office of Conservation and Coastal Lands

We note this division had no comments or objections to the proposed project.

Land Division – O‘ahu District

We note this division had no comments on the proposed project.

Thank you for your participation in this process. If you need additional information, please contact me by phone at 545-2055, or by email at rsato@hhf.com.

Sincerely,

HELBER HASTERT & FEE, Planners, Inc.

Ronald A. Sato, AICP
Associate

NEIL ABERCROMBIE
GOVERNOR

MAJOR GENERAL DARRYLL D. M. WONG
DIRECTOR OF CIVIL DEFENSE

EDWARD T. TEIXEIRA
VICE DIRECTOR OF CIVIL DEFENSE

PHONE (808) 733-4300
FAX (808) 733-4287

STATE OF HAWAII
DEPARTMENT OF DEFENSE
OFFICE OF THE DIRECTOR OF CIVIL DEFENSE
3949 DIAMOND HEAD ROAD
HONOLULU, HAWAII 96816-4495

October 4, 2011

RECEIVED
OCT - 6 2011
HELBER, HASTERT & FEE
PLANNERS

Mr. Ronald A. Sato, AICP
Helber, Hastrat & Fee, Planners, Inc.
Pacific Gaurdian Center, Makai Tower
733 Bishop Street, Suite 2590
Honolulu, Hawaii 96813

Dear Mr. Sato:

St. Augustine-by-the-Sea Church Master Plan
Draft Environmental Assessment (DEA)

Thank you for the opportunity to comment on the subject project.

On review of the copy of the DEA provided, our determination that the subject project lies within a tsunami evacuation zone is consistent with the information provided in Chapter 2, Affected Environment. The present location of the project as described appears to fall within the coverage area of existing warning sirens.

Located outside and in the near vicinity of Flood Insurance Rate Map Flood Zones VE and A, we strongly recommend the incorporation of flood mitigation measures in the planning and design phase of the project. The possible historic designation of the subject property may require the implementation of additional mitigation measures, and we defer to the appropriate State and Federal agencies as to appropriate mitigation measures for any archeological, cultural, historical and environmental impacts.

If you have any questions please contact Ms. Dawn Johnson at (808) 733-4300, extension 555.

Sincerely,

EDWARD T. TEIXEIRA
Vice Director of Civil Defense

c: Department of Planning and Permitting, Urban Design Branch, City & County of Honolulu

Helber Hastert & Fee
Planners, Inc.

February 1, 2012

Major General Darryll Wong, Adjutant General
Office of the Director of Civil Defense
Department of Defense
State of Hawai‘i
3949 Diamond Head Road
Honolulu, Hawai‘i 96816-4495

Dear Major Wong:

Subject: St. Augustine-by-the-Sea Church Master Plan Project
Draft Environmental Assessment Comments
Waikīkī, Honolulu, O‘ahu, Hawai‘i
TMK (1) 2-06-026: 012 & 015

Thank you for your department’s letter dated October 4, 2011 providing comments on the published Draft Environmental Assessment (Draft EA) for the subject project.

We note the Draft EA correctly identifies the project as being within the updated tsunami evacuation zone, and for confirming that the project falls within the coverage area of existing warning sirens. The project’s design phase will consider applicable flood mitigation design measures necessary for new buildings. Appropriate coordination with the State Historic Preservation Division would continue to be conducted during the project’s design phase.

Thank you for your participation in this process. If you need additional information, please contact me by phone at 545-2055, or by email at rsato@hhf.com.

Sincerely,

HELBER HASTERT & FEE, Planners, Inc.

Ronald A. Sato, AICP
Associate

NEIL ABERCROMBIE
GOVERNOR

KATHRYN S. MATAYOSHI
SUPERINTENDENT

STATE OF HAWAI`I

DEPARTMENT OF EDUCATION

P.O. BOX 2360

HONOLULU, HAWAI`I 96804

OFFICE OF THE SUPERINTENDENT

September 16, 2011

Mr. Ronald A. Sato, AICP
Helber Hastert & Fee, Planners, Inc.
Pacific Guardian Center, Makai Tower
733 Bishop Street, Suite 2590
Honolulu, Hawaii 96813

Dear Mr. Sato:

Subject: Draft Environmental Assessment for the St. Augustine-by-the-Sea Church Master Plan, TMK 2-6-26:12 and 15

The Department of Education (DOE) has reviewed the Draft Environmental Assessment for the St. Augustine-by-the-Sea Church Master Plan.

The DOE has no comment to offer.

Thank you for the opportunity to provide comments. If you have any questions, please call Jeremy Kwock of the Facilities Development Branch at 377-8301.

Very truly yours,

Kathryn S. Matayoshi
Superintendent

KSM:jmb

c: David K. Tanoue, Director, Department of Planning and Permitting
Stephen Schatz, CAS, Kaimuki/McKinley/Roosevelt Complex Area
Randolph G. Moore, Assistant Superintendent, OSFSS

AN AFFIRMATIVE ACTION AND EQUAL OPPORTUNITY EMPLOYER

Helber Hastert & Fee
Planners, Inc.

February 1, 2012

Ms. Kathryn S. Matayoshi, Superintendent
Department of Education
State of Hawai‘i
P.O. Box 2360
Honolulu, Hawai‘i 96804

Dear Ms. Matayoshi:

Subject: St. Augustine-by-the-Sea Church Master Plan Project
Draft Environmental Assessment Comments
Waikīkī, Honolulu, O‘ahu, Hawai‘i
TMK (1) 2-06-026: 012 & 015

Thank you for your department’s letter dated September 16, 2011 providing comments on the published Draft Environmental Assessment (Draft EA) for the subject project.

We note your department has no comments to offer on this project.

Thank you for your participation in this process. If you need additional information, please contact me by phone at 545-2055, or by email at rsato@hhf.com.

Sincerely,

HELBER HASTERT & FEE, Planners, Inc.

Ronald A. Sato, AICP
Associate

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

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

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

In reply, please refer to
File:

RECEIVED
SEP 30 2011
HELBER, HASTERT & FEE
PLANNERS

September 28, 2011

Mr. Ronald A. Sato, AICP
Helber Hastart & Fee, Planners, Inc.
Pacific Guardian Center, Makai Tower
733 Bishop Street, Suite 2590
Honolulu, HI 96813

Dear Mr. Sato:

This correspondence is in response to your request for comments for the Draft Environmental Assessment (EA) for the project St. Augustine by the Sea Church Master Plan located at 130 Ohua Avenue, Waikiki.

Project activities shall comply with the following Administrative Rules of the Department of Health:

- Chapter 11-46 Community Noise Control
- Chapter 11-501 Asbestos Requirements
- Chapter 11-503 Fees for Asbestos Removal & Certification
- Chapter 11-504 Asbestos Abatement Certification Program

Should you have any questions, please contact me at (808) 586-4701.

Sincerely,

for Jeffrey M. Eckerd
Acting Program Manager
Indoor and Radiological Health Branch

C: Mr. David Tanoue, Department of Planning and Permitting

Helber Hastert & Fee
Planners, Inc.

February 1, 2012

Mr. Jeffrey M. Eckerd, Acting Program Manager
Indoor and Radiological Health Branch
Department of Health
State of Hawai‘i
P.O. Box 3378
Honolulu, Hawai‘i 96801-3378

Dear Mr. Eckerd:

Subject: St. Augustine-by-the-Sea Church Master Plan Project
Draft Environmental Assessment Comments
Waikīkī, Honolulu, O‘ahu, Hawai‘i
TMK (1) 2-06-026: 012 & 015

Thank you for your department’s letter dated September 28, 2011 providing comments on the published Draft Environmental Assessment (Draft EA) for the subject project.

The project’s design will incorporate applicable provisions of the various Administrative Rules of the State Department of Health identified in your letter.

Thank you for your participation in this process. If you need additional information, please contact me by phone at 545-2055, or by email at rsato@hhf.com.

Sincerely,

HELBER HASTERT & FEE, Planners, Inc.

Ronald A. Sato, AICP
Associate

NEIL ABERCROMBIE
GOVERNOR
RICHARD C. LIM
DIRECTOR
MARY ALICE EVANS
DEPUTY DIRECTOR
JESSE K. SOUKI
DIRECTOR
OFFICE OF PLANNING

DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

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

Telephone: (808) 587-2846
Fax: (808) 587-2824

Ref. No. P-13402

September 13, 2011

Mr. Ronald A. Sato, AICP
Helber Hastart & Fee, Planners, Inc.
Pacific Guardian Center, Makai Tower
733 Bishop Street, Suite 2590
Honolulu, Hawaii 96813

Dear Mr. Sato:

We have the following comments on the Draft Environmental Assessment (DEA) for St. Augustine by-the-Sea Church Master Plan Project, Waikiki, City and County of Honolulu.

Hawaii Revised Statutes (HRS) Chapter 205A requires all State and County agencies to enforce the coastal zone management (CZM) objectives and policies. According to the DEA, page 4-18, the majority of the project site is located within the special management area (SMA), and a SMA permit will be required for the project. The purpose of the SMA permit is to assure that the development within the SMA is designed and carried out in compliance with the CZM objectives and policies, and the SMA guidelines. Therefore, Section 4.5 City Special Management Area, should be revised to discuss the project's relationship to the Hawaii CZM Act, and include an assessment as to how the proposed project conforms to each of the HRS Chapter 205A, CZM objectives and their supporting policies.

If there are any other questions about this, please contact Shichao Li of our CZM Program at 587-2841.

Sincerely,

Jesse K. Souki
Director

c: Mr. Richard C. Lim, DBEDT
Mr. Gary Hooser, QEQC

Helber Hastert & Fee
Planners, Inc.

February 1, 2012

Mr. Jesse K. Souki, Director
Office of Planning
Department of Business, Economic Development & Tourism
State of Hawai‘i
P.O. Box 2359
Honolulu, Hawai‘i 96804

Dear Mr. Souki:

Subject: St. Augustine-by-the-Sea Church Master Plan Project
Draft Environmental Assessment Comments
Waikīkī, Honolulu, O‘ahu, Hawai‘i
TMK (1) 2-06-026: 012 & 015

Thank you for your department’s letter dated September 13, 2011 providing comments on the published Draft Environmental Assessment (Draft EA) for the subject project.

Section 4.5 will be revised to clarify the project’s relationship to the Hawai‘i Coastal Zone Management (CZM) Act. The Draft EA did address the project’s conformance with applicable CZM objectives and policies as several policies were not pertinent to this project. Nevertheless, this section will be revised as appropriate.

Thank you for your participation in this process. If you need additional information, please contact me by phone at 545-2055, or by email at rsato@hhf.com.

Sincerely,

HELBER HASTERT & FEE, Planners, Inc.

Ronald A. Sato, AICP
Associate

BOARD OF WATER SUPPLY

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

PETER B. CARLISLE, MAYOR

RANDALL Y. S. CHUNG, Chairman
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THERESIA C. McMURDO
DUANE R. MIYASHIRO
ADAM C. WONG

WESTLEY K.C. CHUN, Ex-Officio
GLENN M. OKIMOTO, Ex-Officio

DEAN A. NAKANO
Acting Manager

September 8, 2011

Mr. Ronald A. Sato, AICP
Helber Hastert & Fee Planners, Inc.
733 Bishop Street, Suite 2590
Honolulu, Hawaii 96813

Dear Mr. Sato:

Subject: Letter Dated August 29, 2011 Requesting Comments on the Draft Environmental Assessment for St. Augustine-by-the-Sea Church Master Plan, TMK 2-6-26:12 & 15

Thank you for the opportunity to comment on the proposed renovation master plan.

The comments in our letter of April 20, 2010, which is included in the document, are still applicable.

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

Very truly yours,

for SUSAN UYESUGI
Program Administrator
Customer Care Division

Water for Life . . . Ka Wai Ola

Helber Hastert & Fee
Planners, Inc.

February 1, 2012

Ms. Susan Uyesugi, Program Administrator
Customer Care Division
Board of Water Supply
City and County of Honolulu
630 South Beretania Street
Honolulu, Hawai‘i 96843

Dear Ms. Uyesugi:

Subject: St. Augustine-by-the-Sea Church Master Plan Project
Draft Environmental Assessment Comments
Waikīkī, Honolulu, O‘ahu, Hawai‘i
TMK (1) 2-06-026: 012 & 015

Thank you for your department’s letter dated September 8, 2011 providing comments on the published Draft Environmental Assessment (Draft EA) for the subject project.

We acknowledge your comments from an earlier April 20, 2010 letter that was included in the Draft EA is still applicable. The Draft EA also included our response to the April 20, 2010 letter. Design plans will be coordinated with the Board of Water Supply for review and approval as part of the project’s design phase.

Thank you for your participation in this process. If you need additional information, please contact me by phone at 545-2055, or by email at rsato@hhf.com.

Sincerely,

HELBER HASTERT & FEE, Planners, Inc.

Ronald A. Sato, AICP
Associate

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

PETER B. CARLISLE
MAYOR

WESTLEY K.C. CHUN, PH.D., P.E., BCEE
DIRECTOR AND CHIEF ENGINEER

KENNETH A. SHIMIZU
DEPUTY DIRECTOR

IN REPLY REFER TO:
DRM 11-703

September 12, 2011

Mr. Ronald A. Sato, AICP
Helbert Hastert & Fee, Planners, Inc.
733 Bishop Street, Suite 2590
Honolulu, Hawaii 96813

Dear Mr. Sato:

Subject: Draft Environmental Assessment (DEA)
St. Augustine by the Sea Church Master Plan
130 Ohua Avenue, Waikiki, TMK: 2-6-26:12 and 15

Thank you for the opportunity to review and comment on the DEA dated August 29, 2011 for the subject project.

We do not have any comments and do not need a hard copy of the DEA.

Should you have any questions, please call Lan Yoneda of the Division of Road Maintenance, at 768-3600.

Sincerely,

Westley K.C. Chun, Ph.D., P.E., BCEE
Director and Chief Engineer

cc: Department of Planning and Permitting

Helber Hastert & Fee
Planners, Inc.

February 1, 2012

Dr. Westley K.C. Chun, P.E., Director and Chief Engineer
Department of Facility Maintenance
City and County of Honolulu
1000 Uluohia Street, Suite 215
Kapolei, Hawai‘i 96707

Dear Dr. Chun:

Subject: St. Augustine-by-the-Sea Church Master Plan Project
Draft Environmental Assessment Comments
Waikīkī, Honolulu, O‘ahu, Hawai‘i
TMK (1) 2-06-026: 012 & 015

Thank you for your department’s letter dated September 12, 2011 providing comments on the published Draft Environmental Assessment (Draft EA) for the subject project.

We note your department had no comments on this project and does not need a hard copy of the environmental document.

Thank you for your participation in this process. If you need additional information, please contact me by phone at 545-2055, or by email at rsato@hhf.com.

Sincerely,

HELBER HASTERT & FEE, Planners, Inc.

Ronald A. Sato, AICP
Associate

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) 768-6041
DEPT. WEB SITE: www.honoluludpp.org • CITY WEB SITE: www.honolulu.gov

PETER B. CARLISLE
MAYOR

DAVID K. TANOUE
DIRECTOR

JIRO A. SUMADA
DEPUTY DIRECTOR

2011/ED-49(lw)

October 12, 2011

RECEIVED
OCT 17 2011
HELBER, HASTERT & FEE
PLANNERS

Mr. Ronald A. Sato, AICP
Helber Hastert & Fee Planners, Inc.
733 Bishop Street, Suite 2590
Honolulu, Hawaii 96813

Dear Mr. Sato:

Subject: Draft Environmental Assessment
St. Augustine by-the-Sea Church Master Plan
130 Ohua Avenue - Waikiki
Tax Map Key 2-6-26: 12 and15

We have reviewed the Draft Environmental Assessment (DEA) for the above project and offer the following comments:

Planning Division (PD)

The Primary Urban Center Development Plan (PUC DP) Land Use Map shows the project site located in a Resort Area, which is compatible with the church and museum uses at the site. Smaller institutional uses, such as churches, are allowed in most zoning districts (including Resort Mixed Use Precinct), subject to appropriate zoning controls.

Wastewater Branch (WB)

Due to the capacity of the downstream sewers, approval is conditioned on the demolition of the existing structure on Parcel 15 (see 2010/SCA-0432 for conditional approval).

Traffic Review Branch (TRB)

1. The amount of vehicular traffic generated by the church activities, such as services and wedding ceremonies, should be quantified and the actual needs of the church relating to parking demands during various periods of the day should be assessed. As needed, a traffic impact analysis report (TIAR) should be prepared.

2. An approved construction management plan (CMP) will be needed prior to the issuance of demolition/building permits.

3. An approved traffic management plan (TMP) will be needed prior to the issuance of a (temporary) certificate of occupancy.

Civil Engineering Branch (CEB)

1. There are no records on file indicating that a drain connection license has ever been issued for the existing connections into the City's MS4 (i.e., drainage system). Submit a drain connection application to CEB.

2. Appendix D – Drainage. Provide a summary of directional flows, i.e., City and County, Sheetflow (east, south, north). Based on the information provided, flows entering into a piped system and eventually connecting to the City's system increases from 2.63 cfs to 4.03 cfs. This would represent an adverse impact to the existing City infrastructure as well as the adjoining properties currently being serviced by the drain lines. Please provide a discussion of how this increased load to the existing infrastructure will be mitigated.

Urban Design Branch (UDB)

1. It is stated on Page 1-12 of the DEA that the growing parish has resulted in increased demand for church services and facilities, including increased requests for services such as weddings and funerals. What is the projected increase for such services? Will the new parish hall be used for receptions or other wedding- or funeral-related activities? Summary information on funerals should also be included in Table 1.2.

2. It is noted on the same page that the need for a larger parish hall is to address current facility limitations and accommodate the increasing activities held there now and in the future. Clarify what is meant by "increasing activities." Are they to increase in frequency and number of attendees for current activities? These increasing activities should be described in Table 1.2 and added to the projections for the new parish hall.

3. A cursory review of the floor plans indicates the floor area will be more than 17,000 square feet (including the covered lanai's on the fourth floor and the lobby, office/storage, and stairway in each of three parking floors) versus the 9,000 noted in the DEA. Please clarify the discrepancy and include a breakdown of the floor are a tabulations.

4. The off-street parking requirement for museums in the Waikiki Special District is 1 per 300 square feet or fraction thereof in excess of 1,000 square feet, but no less than 10. Based on the proposed upper floor area of 2,932 square feet, a total of 16 parking spaces will be required (10 spaces for the first 1,000 square feet and six spaces for the remaining floor area). For the new parish hall building, we have determined that parking will be assessed for the parish hall, the larger covered lanai, and the meeting room on the fourth floor. The remaining spaces, including the offices, kitchen, and hallway, are considered accessory to the parish hall and will not be assessed parking. Please revise the parking calculations accordingly.

5. Conditional Use Permit (CUP) No. 2011/CUP-41 was approved on June 21, 2011, to allow 10 parking spaces on the subject site to be designated as off-site parking for Parcel 13, where a temporary Damien/Marianne Heritage Center is proposed. Please clarify the Applicant's intent for the CUP upon completion of the proposed museum, since it would eliminate the need for the CUP.

6. It should be disclosed in the section relating to Off-Street Parking Requirements that 79 parking stalls will be made available for public use for a fee on weekdays. Pending clarification of off-street parking requirements for the site, please be advised that only parking spaces in excess of required parking may be made available for public use.

7. The DEA states that information on compliance with the Waikiki Special District regulations will be included in the Special District (Major) Permit application for the project. As the DEA is triggered by the site's location within Waikiki, in addition to its location within the Special Management Area (SMA), the DEA should provide descriptions of the proposed action within the context of the goals and objectives of the Waikiki Special District Design Guidelines.

8. The DEA should include visual simulations showing the mauka and rear elevations of the new parish hall building, in addition to the visual simulation showing the front elevation. Also, please confirm that its makai elevation is not readily visible from Kalakaua Avenue. As the proposed building is highly visible from Kuhio Avenue, Ohua Avenue, and Kealohalani Street, additional landscaping should be considered to screen the parking areas, as well as building articulation to create visual interest and reduce the building bulk.

9. Consider the alternative of a new parish hall with a smaller footprint but set back from the mauka and makai property lines to increase proposed open space, and include a discussion of it under "Alternatives Considered" section. The proposed increase in floor area (from 4,700 square feet to an estimated 17,000 square feet) and parking stalls (from 46 to 113) is significant; and the lot coverage will also increase considerably. Even if 50 percent open space is not practical or feasible as you noted in the DEA, the discussion should explain why a reduced building footprint resulting in more open space is not considered, or provide more information to justify the significant increase in off-street parking stalls, of which a majority will be considered excess parking and available for public uses on weekdays.

Should you have any questions, please contact Lin Wong of our staff at 768-8033.

Very truly yours,

David K. Tanoue, Director
Department of Planning and Permitting

DKT:nw
Doc. 883557

Helber Hastert & Fee
Planners, Inc.

February 1, 2012

Mr. David K. Tanoue, Director
Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 7th Floor
Honolulu, Hawai‘i 96813

Dear Mr. Tanoue:

Subject: St. Augustine-by-the-Sea Church Master Plan Project
Draft Environmental Assessment Comments
Waikīkī, Honolulu, O‘ahu, Hawai‘i
TMK (1) 2-06-026: 012 & 015

Thank you for your department’s letter dated October 12, 2011 providing comments on the published Draft Environmental Assessment (Draft EA) for the subject project. Our responses address the comments from each division.

Planning Division

We confirm the project site is located within the Resort Area of the Primary Urban Center Development Plan, and proposed uses are compatible with this land use designation.

Wastewater Division

We confirm that the previous sewer approval was conditioned upon the demolition of the existing parish hall building.

Traffic Review Branch

Information on the vehicular traffic generated by church activities along with parking demands will be included in the Final Environmental Assessment (Final EA). A traffic impact analysis report is not warranted for this project, however, a traffic engineer will be providing information to address these comments that will be incorporated in the Final EA.

We confirm that an approved construction management plan and traffic management plan will be needed prior to the issuance of demolition/building permits and certificate of occupancy. These plans will be submitted to the City for review and approval during the project’s design phase.

Civil Engineering Branch

A drainage connection application will be submitted to the City for review and approval.

The drainage report will also be revised to address the department's comments, and clarification of the proposed flows will be provided. Under existing conditions, 2.63 cfs from the roof and parking lot drainage area flows to the existing drain manhole from the on-site piped system. Under proposed conditions, only 2.15 cfs will flow to the same manhole (0.70 cfs from roofs, 1.41 cfs from the parking structure, and 0.04 cfs from small landscaped areas). The difference is due to proposed Drain Area 5 being landscaped and drained by surface drainage instead of piped drainage onto 'Ōhua Avenue. Thus, there is an overall decrease of 0.20 cfs (about 5%) from the total site stormwater runoff (from 4.40 cfs to 4.20 cfs), and proposed conditions should not result in an adverse impact to the City's existing storm drain system.

Urban Design Branch

The Final EA will include information on the potential increases in church related services. Overall, the project is not expected to generate a significant increase in the demand for church services and facilities. We would like to clarify that the project includes a redeveloped parish hall because the existing parish hall will be demolished under this project. The new parish hall will not be used for wedding or funeral receptions. Information on funerals will be added to the table as requested.

The Final EA will discuss any increases in activities at the project site with the redeveloped parish hall. The floor area mentioned was based upon information used in assessing parking requirements. This information will be revised based upon the department's comment on parking requirements, and a breakdown in the floor area provided. The parking calculations will be revised based upon the City's determination of off-street parking requirements for the museum and parish hall.

Upon completion of the new museum under this project, the existing Conditional Use Permit (2011/CUP-41) for the temporary Damien/Marianne Heritage Center would not be necessary. Thus, this existing CUP can be revoked at that time.

We confirm your department's determination that the existing church sanctuary is considered a ground floor use and is exempt from providing off-street parking. Information on off-street parking requirements for the project will be included in the Final EA.

The Final EA will be revised to address the off-street parking requirements that can be made available for public use for a fee that are in excess of required parking stalls.

The Final EA will include descriptions of the proposed action with the context and the goals and objectives of the Waikīkī Special District Design Guidelines.

A visual simulation showing the mauka and rear elevations of the parish hall will be included in the Final EA as requested. The new parish hall should not be readily visible from Kalākaua Avenue because the St. Damien Museum and sanctuary are situated on the makai end of the property and screens mauka views. The parish hall would not have a detrimental visual effect as it has been designed to be complementary with the church site. Architectural treatment, including articulations, color changes, and vertical form trees do not leave a viewer with the impression of this building being a parking structure as indicated in the visual simulation.

The project's proposed increase in floor area and parking is not considered significant since a maximum density of 112,184 square feet with associated parking is permitted under the Waikīkī Resort Mixed Use Precinct development standards. The total floor area proposed for the project site with improvements would only be about 36 percent of the maximum allowed, and the development is well under the maximum height allowed of 220 feet.

The off-street parking requirements for this project would be 61 stalls, and the 113 stalls proposed, although more than the requirement, is reasonable to address the Church's needs and operations. Currently, the more popular Sunday services have about 50 cars being parked within the property and occasionally accommodates over 80 cars. Also, the Waikīkī Special District development standards exempts ground floor uses from these parking requirements. Otherwise, the Church sanctuary would require about 50 or more parking stalls bringing the total requirement close to what is being proposed.

Having a slightly smaller building footprint for the parish hall would still not meet the 50 percent open space standard for the site. However, the project will significantly increase the amount of open space on the site from 18 percent to 30 percent, thereby reducing its nonconformity. Discussion of this will be incorporated in the Final EA.

Thank you for your participation in this process. If you need additional information, please contact me by phone at 545-2055, or by email at rsato@hhf.com.

Sincerely,

HELBER HASTERT & FEE, Planners, Inc.

Ronald A. Sato, AICP
Associate

DEPARTMENT OF TRANSPORTATION SERVICES

CITY AND COUNTY OF HONOLULU

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

PETER B. CARLISLE
MAYOR

WAYNE Y. YOSHIOKA
DIRECTOR

KAI NANI KRAUT, P.E.
DEPUTY DIRECTOR

TP9/11-432190R

October 4, 2011

RECEIVED
OCT - 6 2011
HELBER, HASTERT & FEE
PLANNERS

Mr. Ronald A. Sato, AICP
Helber Hastart & Fee, Planners, Inc.
Pacific Guardian Center, Makai Tower
733 Bishop Street, Suite 2590
Honolulu, Hawaii 96813

Dear Mr. Sato:

Subject: Draft Environmental Assessment (DEA) Saint Augustine-by-the-Sea Church Master Plan; Tax Map Key (TMK): 2-6-26: 12 and 15

This responds to your letter of August 29, 2011, requesting our comments concerning this proposed project.

Our Traffic Engineering Division's (TED) previous comments in May, 2010, have been addressed and they have no further comments.

Our Public Transit Division (PTD) has the following comments:

- Page 2-28 of the DEA, section 2.10.5, Transportation Facilities, Public Transit, needs to include a description of paratransit (TheHandi-Van) operations and services. Your DEA should include a description of the impact of your project on Public Transit bus and paratransit operations during construction. Basic information is available on our websites: www.thebus.org and www.honolulu.gov/dts. For more details, you may contact our staff at 768-8370.

- Construction notes should include the following note regarding transit:

  "This project may affect bus routes, bus stops, and paratransit operations, therefore, the Contractor shall notify the Department of Transportation Services, Public Transit Division at 768-8396 and Oahu Transit Services, Inc. (bus operations: 848-4578 or 852-6016 and paratransit operations:

454-5041 or 454-5020) of the scope of work, location, proposed closure of any street, traffic lane, sidewalk, or bus stop and duration of project at least two weeks prior to construction."

We also note on page 2-27, section 2.10.5, Transportation Facilities at paragraph 1, line 3, the DEA states "The Waikiki resort area is served by a couplet roadway system…" The road network in this area is highly integrated and is not considered a "couplet" system.

On page 2-28 of the DEA, same section, at paragraph 2, it only describes the afternoon peak hour. The DEA should also address all the other various peak hours in Waikiki, such as a.m. and p.m., lunch, and weekend, especially Saturday evenings.

In discussing the Public Transit operations and services, the DEA should describe which bus routes serve the vicinity.

Thank you for the opportunity to review this matter. Should you have any further questions, please contact Michael Murphy of my staff at 768-8359.

Very truly yours,

WAYNE Y. YOSHIOKA
Director

cc: Department of Planning and Permitting
Urban Design Branch

Helber Hastert & Fee
Planners, Inc.

February 1, 2012

Mr. Wayne Y. Yoshioka, Director
Department of Transportation Services
City and County of Honolulu
650 South King Street, 3rd Floor
Honolulu, Hawai‘i 96813

Dear Mr. Yoshioka:

Subject: St. Augustine-by-the-Sea Church Master Plan Project
Draft Environmental Assessment Comments
Waikīkī, Honolulu, O‘ahu, Hawai‘i
TMK (1) 2-06-026: 012 & 015

Thank you for your department’s letter dated October 4, 2011 providing comments on the published Draft Environmental Assessment (Draft EA) for the subject project. Our responses address the comments from each division.

Traffic Engineering Division

We note this division’s previous comments of May 2010 have been addressed and they have no further comments.

Public Transit Division

A description of the paratransit operations and services and the project’s impact on operations during construction will be added to the Final Environmental Assessment (Final EA) as noted. This will include describing which bus routes serve the vicinity.

The construction notes provided will be added to design plans prepared. Section 2.10.5 will also be revised to indicate the road network is not a couplet system. The Final EA will address other peak hours as appropriate.

Thank you for your participation in this process. If you need additional information, please contact me by phone at 545-2055, or by email at rsato@hhf.com.

Sincerely,

HELBER HASTERT & FEE, Planners, Inc.

Ronald A. Sato, AICP
Associate

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

PETER B. CARLISLE
MAYOR

KENNETH G. SILVA
FIRE CHIEF

EMMIT A. KANE
DEPUTY FIRE CHIEF

RECEIVED
SEP 30 2011
HELBER, HASTERT & FEE PLANNERS

September 26, 2011

Mr. Ronald Sato, AICP
Helber Hastert & Fee Planners, Inc.
Pacific Guardian Center, Makai Tower
733 Bishop Street, Suite 2590
Honolulu, Hawaii 96813

Dear Mr. Sato:

Subject: Draft Environmental Assessment
St. Augustine-by-the-Sea Church Master Plan
New Damien Museum and Multipurpose Building
130 Ohua Avenue - Waikiki
Tax Map Keys: 2-6-026: 012 and 015

In response to a letter from Mr. David Tanoue of the City and County of Honolulu's Department of Planning and Permitting (DPP) dated August 29, 2011, regarding the above-mentioned subject, the Honolulu Fire Department (HFD) reviewed the material provided and requires that the following requirements be met:

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 contact Battalion Chief Socrates Bratakos of our Fire Prevention Bureau at 723-7151 or sbratakos@honolulu.gov.

Sincerely,

KENNETH G. SILVA
Fire Chief

KGS/SY:cn

cc: DPP

Helber Hastert & Fee
Planners, Inc.

February 1, 2012

Mr. Kenneth G. Silva, Chief
Honolulu Fire Department
City and County of Honolulu
636 South Street
Honolulu, Hawai‘i 96813-5007

Dear Mr. Silva:

Subject: St. Augustine-by-the-Sea Church Master Plan Project
Draft Environmental Assessment Comments
Waikīkī, Honolulu, O‘ahu, Hawai‘i
TMK (1) 2-06-026: 012 & 015

Thank you for your department’s letter dated September 26, 2011 providing comments on the published Draft Environmental Assessment (Draft EA) for the subject project.

A fire apparatus access road will be accommodated as indicated in compliance with the 1997 Uniform Fire Code. Adequate water supply meeting fire flow requirements will be accommodated with this project, and coordinated with the Board of Water Supply. No improvements to fire hydrants and water mains in the project area are expected from this project. Civil drawings will be submitted to your department for review and approval during the project’s design phase.

Thank you for your participation in this process. If you need additional information, please contact me by phone at 545-2055, or by email at rsato@hhf.com.

Sincerely,

HELBER HASTERT & FEE, Planners, Inc.

Ronald A. Sato, AICP
Associate

POLICE DEPARTMENT

CITY AND COUNTY OF HONOLULU

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

PETER B. CARLISLE
MAYOR

LOUIS M. KEALOHA
CHIEF

DAVE M. KAJIHIRO
MARIE A. McCAULEY
DEPUTY CHIEFS

OUR REFERENCE DAT-LS

October 5, 2011

RECEIVED
OCT - 5 2011
HELBER, HASTERT & FEE
PLANNERS

Mr. Ronald A. Sato, AICP
Helber Hastart & Fee, Planners, Inc.
Pacific Guardian Center, Makai Tower
733 Bishop Street, Suite 2590
Honolulu, Hawaii 96813

Dear Mr. Sato:

This is in response to a letter from the City Department of Planning and Permitting (DPP) dated August 29, 2011, regarding the Draft Environmental Assessment for the St. Augustine-by-the-Sea Church Master Plan project.

This project may cause an increase in calls for police service because of the anticipated traffic congestion during the construction phase. However, once the project is completed, it should have no significant impact on the facilities or services of the Honolulu Police Department.

If there are any questions, please call Major Ron Bode of District 6 (Waikiki) at 529-3361.

Sincerely,

LOUIS M. KEALOHA
Chief of Police

By ACTING ASSISTANT CHIEF FOR
DEBORA A. TANDAL
Assistant Chief of Police
Support Services Bureau

cc: Urban Design Branch, DPP

Helber Hastert & Fee
Planners, Inc.

February 1, 2012

Mr. Louis M. Kealoha, Chief
Honolulu Police Department
City and County of Honolulu
801 South Beretania Street
Honolulu, Hawai‘i 96813

Dear Mr. Kealoha:

Subject: St. Augustine-by-the-Sea Church Master Plan Project
Draft Environmental Assessment Comments
Waikīkī, Honolulu, O‘ahu, Hawai‘i
TMK (1) 2-06-026: 012 & 015

Thank you for your department’s letter dated October 5, 2011 providing comments on the published Draft Environmental Assessment (Draft EA) for the subject project.

The project’s construction activities will be coordinated with pertinent City agencies and your department as appropriate to minimize traffic disruptions. We note that this project should not significantly impact your facilities or services once construction is completed.

Thank you for your participation in this process. If you need additional information, please contact me by phone at 545-2055, or by email at rsato@hhf.com.

Sincerely,

HELBER HASTERT & FEE, Planners, Inc.

Ronald A. Sato, AICP
Associate

September 19, 2011

Helber, Hastert and Fee Planners, Inc.
Pacific Guardian Center, Makai Tower
733 Bishop Street, Suite 2590
Honolulu, HI 96813

Office of Environmental Quality Control
235 South Beretania Street, Suite 702
Honolulu, HI 96813

Re: **Draft Environmental Assessment**
Roman Catholic Church in Hawaii – St. Augustine By-the-Sea Church
Master Plan Project

Thank you for including the Waikiki Neighborhood Board in the review process for the above-referenced project. Institutions such as yours are a valued part of our neighborhood and St. Augustine By-the-Sea has played an integral part in the growth, change and now resurgence of Waikiki. The addition of the St. Damien museum adds a unique cultural feature to our neighborhood and further enhances the visitor/resident experience. Following are comments on the draft Environmental Assessment.

Page 3-4 Surface and Coastal Waters
Your NPDES permit with its Best Management Practices will ensure that construction impacts to shore waters are negligible. To address post-construction drainage, we recommend that you consider utilizing permeable pavement, dry wells, catchment systems or natural filtering swales to minimize the quantity and maximize the quality of the water that flows to our shoreline and near shore waters.

Page 3-12 Water Facilities
This construction project provides an ideal opportunity to implement water saving mechanisms throughout the entirety of your property. The Waikiki Neighborhood Board requests that you explore and exhaust all water-saving features such as xeriscape landscaping, storm drainage catchment/recycling, ultra low flow fixtures and green roofs, especially on top of any proposed new buildings.

Page 3-14 Drainage Facilities
See Page 3-4 comments above. We recommend installation of a green roof on buildings to cleanse and slow the water flows from the property and to reduce the urban heat island effect.

Page 3-16 Solid Waste Facilities
Reuse as much of the demolition materials as possible, during the construction phase. A reduction in waste materials leaving the construction site will result in better air quality, less noise, less construction traffic and less solid waste in our County's limited landfill space. Once operational, a robust recycling program for the church would result in a reduction of the solid waste stream leaving the property.

Page 3-17 Affects on Public Transit
The B-Express and E line buses traverse Kalakaua Avenue and utilize a bus stop a few blocks 'Ewa of your proposed museum. Once your project is completed, please encourage visitors to

walk, bicycle or take the aforementioned buses to visit your enhanced facilities. Please consider incentivizing walking and transit use for both visitors and employees. Some options to achieve this may be offering visitor discounts to non-drivers, providing bus line information in your visitor brochures and to your employees, and providing free, secure bicycle parking facilities at the museum. The promotion of transit, walking and biking and the de-emphasis on personal vehicle use, is consistent with a full range of official policies adopted for Waikiki and its 'pedestrian first' status. These efforts at reducing vehicle use will also help mitigate your anticipated impacts to traffic.

Page 3-19 Electrical and Communications Facilities
The implementation of the master plan does not automatically have to result in an increase in demand for energy at the site. As with water use, consider using this expansion as an opportunity to exhaust all efficiency and alternative energy options on the site. Ideas to consider at your property include the use of solar water heaters, micro-turbine (canister-type) windmills, incorporation of green roofs, free parking for hybrid/electric vehicles, use of photovoltaics and smart metering.

Page 3-23 Effects on Infrastructure and Public Facilities
Many Waikiki businesses are members of the Waikiki Improvement Association and/or Business Improvement District (BID). These associations assess themselves to pay for enhanced features in Waikiki, beyond those provided by the City. These enhancements are enjoyed by all properties, residents and visitors, whether they are members of the associations or not. If not already members, we suggest that St. Augustine By-the-Sea consider joining the WIA and BID so as to contribute to the maintenance of the neighborhood and its enhancements.

Page 4-4 Economic Development
This section of the draft EA mentions the soup kitchen operation as 'harmonious with the environment and the community' under the discussion of economic development. While the Board appreciates the long tradition of charity work within your church organization, our community is concerned with the proliferation of free meal distribution programs in Waikiki, the increasingly negative effect it has on our larger community, and the efficacy of these programs in addressing homelessness and its associated issues. We are committed to working with the State and the City under their recently-initiated comprehensive programs to address the needs of the homeless, mentally ill and unemployed on Waikiki streets. We are requesting that you coordinate with State and County agencies and channel your resources through them, exclusively.

Page 4-13 Parking Requirements
Based on the discussion in this section, only 54 parking spaces are required under the LUO for implementation of the full master plan development. Yet, you are proposing over twice that amount of parking to be built in a parking structure. This amount of parking will result in increased noise, traffic and air pollution at the site and may even induce more vehicle trips. Please elaborate on why this quantity of parking is being planned at the site and what is proposed to mitigate traffic impacts from increased vehicle trips.

4-16 Variance
The Waikiki Neighborhood Board will comment formally on the variance if and when a formal application has been submitted to DPP and reviewed. Ensure that the Waikiki Neighborhood Board is in receipt of this application or is made aware of it, at the time of its submittal.

General Comment: The Waikiki Neighborhood Board values the addition of sustainable, low impact, smart technology infill development in our community. These developments not only

demonstrate leadership in appropriate environmental stewardship, they save substantial amounts of money for the property owner over the lifecycle of the structures and provide needed relief to our resources and overtaxed infrastructure. To that end, we request that you pursue LEED certification (or some other industry acknowledgement for responsible development and efficiency) for your project.

Mahalo for your consideration of the above comments on the Draft EA.

Sincerely,

Jeff Merz AICP, LEED AP
Waikiki Neighborhood Development Review

Helber Hastert & Fee
Planners, Inc.

February 1, 2012

Mr. Robert J. Finley, Chair
Waikīkī Neighborhood Board No. 9
c/o Neighborhood Commission
City and County of Honolulu
530 South King Street, Room 406
Honolulu, Hawai‘i 96813

Dear Mr. Finley:

Subject: St. Augustine-by-the-Sea Church Master Plan Project
Draft Environmental Assessment Comments
Waikīkī, Honolulu, O‘ahu, Hawai‘i
TMK (1) 2-06-026: 012 & 015

Thank you for the letter dated September 19, 2011 from Mr. Merz on behalf of the Board providing comments on the published Draft Environmental Assessment (Draft EA) for the subject project.

The NPDES Permit obtained for construction of the project will include pertinent best management practices. The project will result in an overall decrease of 0.20 cfs of total site stormwater runoff (about 5%), and open landscaped areas will be utilized for drainage. Other suggestions will be considered as part of the project's design.

Appropriate water saving features will be considered as part of the project's design such as low flow fixtures. A green roof will be considered, but is not anticipated to be appropriate for this project at this time because the design of buildings need to be complementary with the existing church sanctuary.

Reuse of demolition materials will be considered as part of the project's design phase. Recycling measures would be incorporated into the operations of the church facilities as appropriate.

Regarding public transit, the majority of visitors to the museum are expected to continue and consist of visitors walking within Waikīkī or using public transit. Exposure along Kalākaua Avenue was an important consideration for the museum's location along this frontage. The suggested options will be considered during the project's design.

Coordination with Hawaiian Electric Company will be conducted during the project's design phase to determine appropriate electrical facilities and equipment. The church will evaluate and consider whether it is appropriate to become of member of the associations noted.

The church's participation in the distribution of meals for the homeless is part of their mission and responsibilities in caring for all. Coordination with both State and City agencies and other organizations in Waikīkī that are helping address the homeless situation will continue.

The number of off-street parking requirements will increase based upon new information received from the City. The amount of parking planned would accommodate the needs of the church which occasionally fills the entire parking lot during popular Sunday services. The additional parking above that required by the City is not expected to have a significant effect on noise, traffic, or air pollution at the site. Another Board member also expressed support for additional parking in Waikīkī at a recent presentation. The Final EA will address traffic effects in more detail.

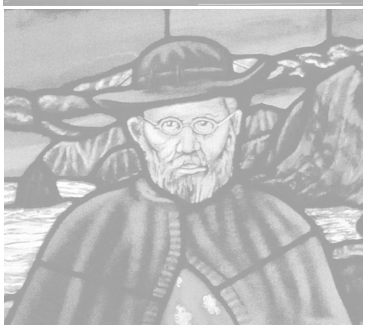
The Waikīkī Neighborhood Board will be notified about the Variance application when it is filed as part of the City's normal processing procedures. We appreciate your comment about LEED certification, and the project's design will incorporate sustainable and smart technology where applicable and feasible. However, project improvements are not expected to apply for such certification at this time.

Thank you for your participation in this process. If you need additional information, please contact me by phone at 545-2055, or by email at rsato@hhf.com.

Sincerely,

HELBER HASTERT & FEE, Planners, Inc.

Ronald A. Sato, AICP
Associate



APPENDIX B

Photos of Existing Project Site

Photo A: East View of Kalakaua Avenue Driveway Entrance and Proposed St. Damien Museum Site.

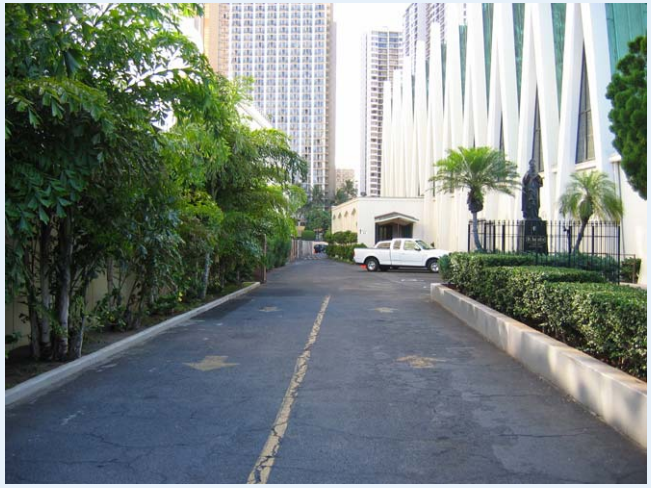


Photo B: Northeast View of Proposed St. Damien Museum Project Site.

Photo C: Northeast View of St. Augustine by-the-Sea Church.

Photo D: East View of Entrance to Church Sanctuary and Portion of Site for Proposed St. Damien Museum.

PHOTOS OF ST. AUGUSTINE BY-THE-SEA CHURCH SITE

Figure B.1

ST. AUGUSTINE-BY-THE-SEA CHURCH MASTER PLAN
WAIKĪKĪ, O'AHU, HAWAI'I

Photo A: North View of Commercial Building (Burger King) Fronting Church Along Kalakaua Avenue.

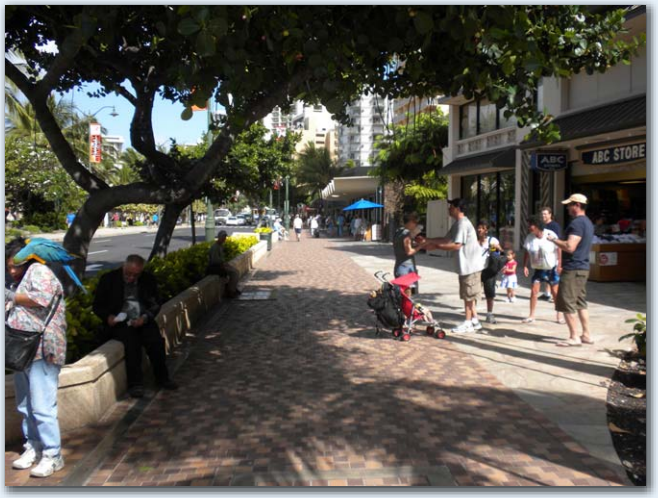


Photo B: Northwast View of Sidewalk Along Kalakaua Avenue.

Photo C: Southwest View of Driveway Behind Church Adjacent to Foster Tower.

Photo D: Northwest View of Existing Parish Hall and Parking Lot Area Planned for New Multi-Purpose Building.

PHOTOS OF ST. AUGUSTINE BY-THE-SEA CHURCH SITE

Figure B.2

ST. AUGUSTINE-BY-THE-SEA CHURCH MASTER PLAN
WAIKĪKĪ, O'AHU, HAWAI'I

Photo A: North View of Lawn Area by Existing Parish Hall Building.

Photo B: Northeast View of Existing Church from Ohua Avenue.

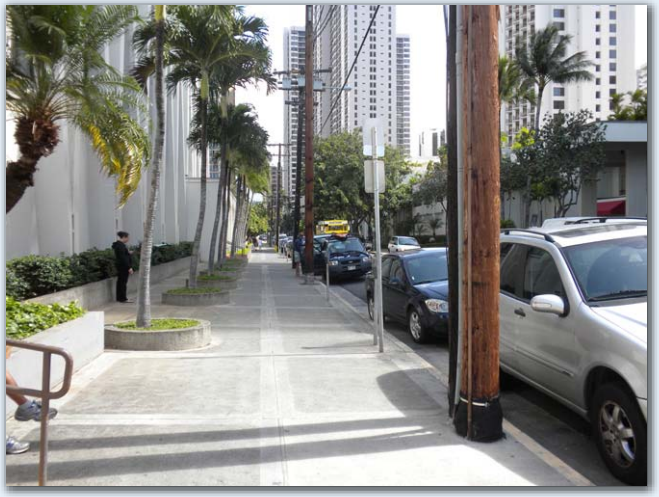


Photo C: Northeast View of Ohua Avenue Sidewalk Along Church.

Photo D: Southwest View of Ohua Avenue Sidewalk and Main Driveway Entrance.

PHOTOS OF ST. AUGUSTINE BY-THE-SEA CHURCH SITE

Figure B.3

ST. AUGUSTINE-BY-THE-SEA CHURCH MASTER PLAN
WAIKĪKĪ, O'AHU, HAWAI'I

Photo A: Northwest View of Parking Lot and Driveway Exit to Kealohilani Avenue.

Photo B: South View of Driveway Exit from Kealohilani Avenue.

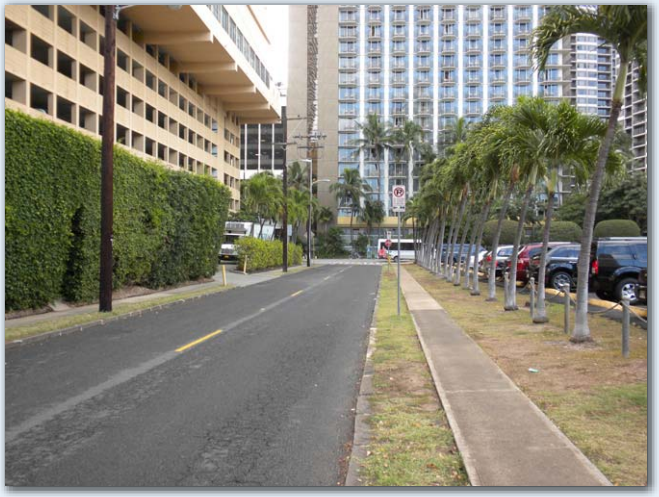


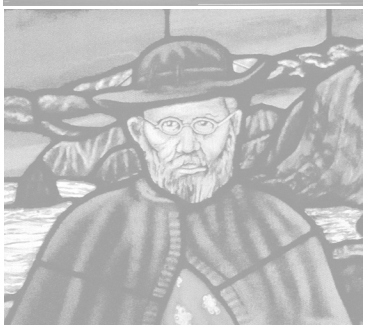
Photo C: Northeast View Along Kealohilani Avenue.

Photo D: Southwest View Along Kealohilani Avenue.

PHOTOS OF ST. AUGUSTINE BY-THE-SEA CHURCH SITE

Figure B.4

ST. AUGUSTINE-BY-THE-SEA CHURCH MASTER PLAN
WAIKĪKĪ, O'AHU, HAWAI'I



APPENDIX C

Archaeological Reports

APPENDIX C-1

Archaeological Inventory Survey for
St. Augustine-by-the-Sea Master Plan Project
April 2011

Prepared By:
Cultural Surveys Hawai‘i, Inc.

Draft

Archaeological Inventory Survey for the St. Augustine-by-the Sea Master Plan Project, Waikīkī Ahupuaʻa, Honolulu (Kona) District, Island of Oʻahu TMK: [1]-2-6-026:012 & 015

Helber Hastert & Fee Planners, Inc.

Prepared by

Trevor M. Yucha, B.S.,

Josephine M. Paolello, M.S.,

and

Hallett H. Hammatt, Ph.D.

Cultural Surveys Hawaiʻi, Inc.

Kailua, Hawaiʻi

(Job Code: WAIKIKI 54)

April 2011

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Management Summary

Reference	Archaeological Inventory Survey for the St. Augustine-by-the-Sea Master Plan Project, Waikīkī Ahupuaʻa, Honolulu (Kona) District, Island of Oʻahu, TMK [1] 2-6-26:012 & 015 (Yucha et al. 2011).
Date	April 2011
Project Number (s)	Cultural Surveys Hawaiʻi Inc. (CSH) Project No. WAIKIKI 54
Investigation Permit Number	CSH completed the fieldwork component of the archaeological inventory survey (AIS) under Hawaiʻi State Historic Preservation Division/Department of Land and Natural Resources (SHPD/DLNR) permit No. 10-10 and No. 11-17, issued per Hawaiʻi Administrative Rules (HAR) Chapter 13-13-282. CSH presently operates under permit No. 11-17.
Project Location	The project area comprises TMK [1] 2-6-26: 012 & 015 and is bounded to the north by a parking lot adjacent to Kūhiō Avenue, to the east by ʻŌhua Avenue, to the west by Kealohilani Avenue, and to the south by Kalākaua Avenue. The project area is depicted on the 1998 U.S. Geological Survey 7.5-minute series topographic map, Honolulu Quadrangle.
Land Jurisdiction	Private; Roman Catholic Church of Hawaiʻi
Agencies	SHPD/DLNR
Project Description	The proposed development includes the construction of the Saint Damien Museum fronting Kalākaua Avenue (footprint approx. 3,157 sq. ft.) and redevelopment of the existing Parish Hall in the north corner of the church property (footprint approx. 13,160 sq. ft.).
Project Acreage	Approximately 1.15 acres
Area of Potential Effect (APE)	The APE for the current AIS investigation is defined as the entire 1.15-acre project area.
Historic Preservation Regulatory Context	This document was prepared to support the proposed project's historic preservation review under Hawaiʻi Revised Statutes (HRS) Chapter 6E-42 and HAR Chapter 13-13-284. In consultation with SHPD/ DLNR, the AIS investigation was designed to fulfill the State requirements for an AIS, per HAR Chapter 13-13-276. This study follows an Archaeological Inventory Survey Plan for the St. Augustine-by-the-Sea Master Plan Project, Waikīkī Ahupuaʻa, Honolulu (Kona) District, Island of Oʻahu, TMK [1]-2-6-26:012 & 015 (Hammatt, Thurman and Shideler 2010) reviewed and accepted by the State Historic Preservation Division in a review dated July 19, 2010 (Log No. 2010.2412, Doc No. 1007MD05)

Fieldwork Effort	The fieldwork component was accomplished between August 3, 2010 and March 17, 2011 by a crew of CSH archaeologists including Douglas Borthwick, B.A., Trevor Yucha, B.S., Douglas Thurman, B.A., Josephine Paolello, M.S., Jon Tulchin, B.A., Jeffrey Fong, M.A., Kelly Burke, M.Sc., Kendy Altizer, B.A. and David Shideler M.A. This effort required approximately 25 person-days to complete. All fieldwork was carried out under the overall supervision of Hallett H. Hammatt, Ph.D. (principal investigator).
Number of Historic Properties Identified	Two (2)
Historic Properties Recommended Eligible to the Hawai‘i Register of Historic Places (Hawai‘i Register)	SIHP# 50-80-14-7135, activity area SIHP# 50-80-14-7136, human interment (2)
Historic Properties Recommended Ineligible to the Hawai‘i Register	None
Burial Ethnicity and Treatment Jurisdiction	The SHPD/DLNR has agreed the burial features are believed to be over 50 years old and most likely Native Hawaiian. In consultation with the SHPD/DLNR, CSH has moved forward in consulting with all previously recognized cultural descendants of Waikīkī. Consultation and preparation of a Burial Treatment Plan are on-going.
Effect Recommendation	CSH’s project specific effect recommendation is “effect, with proposed mitigation commitments.” The recommended mitigation measures will reduce the project’s effect on significant historic properties that were identified within the project area and be pro-active in addressing possible community concerns.

Mitigation Recommendation	The current archaeological inventory survey has documented two historic properties that are recommended Hawai‘i Register-eligible. Mitigation recommendations are as follows: SIHP# 50-80-14-7136, consisting of two in situ human burials (Feature A and B), will be treated in accordance with HAR 13-300. In order to alleviate the project’s effect on what are now termed “previously identified” human burials, a project specific burial treatment plan (a requirement of HAR 13-300) should be prepared for consideration of the O‘ahu Island Burial Council (OIBC). The burial treatment plan will incorporate the appropriate input from the OIBC, SHPD/DLNR, and recognized lineal and cultural descendants. This archaeological inventory survey represents a good-faith effort to identify and document the historic properties within the project area. Due to inherent limitations of any sampling strategy, it is possible that additional historic properties, potentially including additional human skeletal remains and non-burial archaeological deposits, may be encountered during project-related development. In order to mitigate any potential damage to known documented or yet unidentified historic properties, it is recommended that project construction proceed under an archaeological monitoring program. This monitoring program will facilitate the identification and proper treatment of any additional burials that might be discovered during project construction, and will gather additional information regarding the project’s non-burial archaeological deposits, should any be discovered.

Table of Contents

Management Summary i

Section 1 Introduction 1

1.1 Project Background 1
1.2 Scope of Work 1
1.3 Environmental Setting 6
1.3.1 Natural Environment 6
1.3.2 Relationship of Project Area to Former Shorelines 7
1.3.3 Built Environment 7

Section 2 Methods 9

2.1 Field Methods 9
2.1.1 Ground Penetrating Radar Survey 9
2.1.2 Subsurface Excavation 11
2.1.3 Use of Historic Human Remains Detection Dogs 12
2.1.4 Documentation of Stratigraphy 12
2.1.5 Sampling 13
2.2 Laboratory Methods 13
2.2.1 Wood Taxa Identification 13
2.2.2 Radiocarbon Analysis 13
2.3 Document Review 14
2.4 Consultation 14

Section 3 Background Research 15

3.1 Traditional and Historical Background 15
3.1.1 Pre-Contact to 1800s 15
3.1.2 Mid- to Late-1800s 17
3.1.3 1900s 24
3.2 Previous Archaeological Research 33
3.3 Background Summary and Predictive Model 37

Section 4 Results of Fieldwork 39

4.1 Ground Penetrating Radar 39
4.1.1 Summary 39
4.1.2 GPR Data Analysis 41
4.2 Results of Subsurface Testing 64
4.3 Stratigraphic Summary 67
4.4 Test Trench Documentation 67
4.4.1 Trench 1 67
4.4.2 Trench 2 71
4.4.3 Trench 3 71
4.4.4 Trench 4 76
4.4.5 Trench 5 76
4.4.6 Trench 6 84
4.4.7 Trench 7 84
4.4.8 Trench 8 84

4.4.9 Trench 9 93
4.4.10 Trench 10 93
4.4.11 Trench 11 93
4.5 Historic Property Descriptions 102
4.5.1 SIHP# 50-80-14-7135 102
4.5.2 SIHP# 50-80-14-7136 103

Section 5 Results of Laboratory Analysis 106

5.1 Artifact Analysis 106
5.1.1 Traditional Hawaiian Artifacts 106
5.1.2 Historic Artifacts 113
5.1.3 A Unique Find of an Ivory Bird Gaming Piece from Alaska 117
5.2 Faunal Analysis 121
5.3 Wood Taxa Identification 121
5.4 Radiocarbon Analysis 123

Section 6 Overview of Initial Consultation 125

Section 7 Summary and Interpretation 126

Section 8 Significance Assessments 128

Section 9 Project Effect and Mitigation Recommendations 129

9.1 Project Effect 129
9.2 Mitigation Recommendations 129
9.2.1 Burial Treatment Plan 129
9.2.2 Archaeological Monitoring 129
9.3 Disposition of Materials 129

Section 10 References Cited 131

Appendix A Land Commission Awards 1

Land Commission Award 1446 1
Land Commission Award 01452 3
Land Commission Award 1453 5
Land Commission Award 01454 7
Land Commission Award 01455 9
Land Commission Award 01457 11
Land Commission Award 01458 13
Land Commission Award 2027 16
Land Commission Award 02843 17
Land Commission Award 08452*O 18
Land Commission Award 10677 22

Appendix B Consultation with Cultural Descendants of Waikīkī 1

List of Figures

Figure 1. 1998 U. S. Geological Survey 7.5-Minute Series Topographic Map, Honolulu Quadrangle, showing the location of the current project area 1
Figure 2. Tax Map Key (TMK) 2-6-026, showing the location of the current project area 2
Figure 3. Aerial photograph (source: World Imagery 2009), showing the location of the current project area 3
Figure 4. Site plan map showing the existing infrastructure within the current project area (source: Mason Architects) 4
Figure 5. Site plan map showing the proposed development within the current project area (source: Mason Architects) 5
Figure 6. Overlay of Soil Survey of the State of Hawai‘i (Foote et al. 1972), indicating sediment types within and surrounding the current project area (source: Soils Survey Geographic Database [SSUGRO] 2001, U.S. Department of Agriculture) 8
Figure 7. GPR suitability map (source: National Resource Conservation Service) showing the location of the project area 10
Figure 8. Portion of the 1855 map of Honolulu to Koko Head by La Passe showing the current project area within the densely populated area of Waikīkī 18
Figure 9. Portion of the 1897 map of Honolulu by Monsarrat showing rice fields and an early alignment of ‘Ōhua Avenue in the vicinity of the current project area 20
Figure 10. Portion of the 1881 Hawaiian Government survey map by S.E. Bishop map showing LCA’s within and in the vicinity of the current project area 22
Figure 11. Portion of the 1881 Hawaiian Government survey map by W.D. Alexander showing a church in the vicinity of the current project area 25
Figure 12. 1910 U.S. Coast Guard Engineers map showing a church and several others structures within and in the vicinity of the current project area 26
Figure 13. 1914 Sanborn Fire Insurance map showing St. Augustine’s Church and other structures within the current project area 28
Figure 14. 1927 Sanborn Fire Insurance map showing St. Augustine’s Church (mistakenly labeled “St. Anthony’s Church”) and other structures within the current project area 29
Figure 15. Photograph (circa 1930) showing St. Augustine Church and an adjacent structure (source: Bunson 1977:151) 31
Figure 16. 1957 photograph of Waikīkī from Diamondhead (source: Bishop Museum) 32
Figure 17. Aerial photograph (source: World Imagery 2009), showing previous archaeological studies conducted in the vicinity of the current project area 34
Figure 18. Aerial photograph (source USGS Orthoimagery 2005) showing the locations of GPR survey areas 40
Figure 19. Representative GPR profile collected at Survey Area 1 42
Figure 20. Horizontal slice maps collected at Survey Area 1 43
Figure 21. GPR profile collected at Survey Area 2 45
Figure 22. Horizontal slice maps collected at Survey Area 2 46
Figure 23. GPR profile collected at Survey Area 3 47
Figure 24. Horizontal slice maps collected at Survey Area 3 48
Figure 25. GPR profile collected at Survey Area 4 50
Figure 26. GPR profile collected at Survey Area 5 51

Figure 27. Horizontal slice maps collected at Survey Area 5 52
Figure 28. GPR profile collected at Survey Area 6 53
Figure 29. Horizontal slice maps collected at Survey Area 6 55
Figure 30. GPR profile collected at Survey Area 7 56
Figure 31. Horizontal slice map, Survey Area 7 57
Figure 32. GPR Profile 1 collected at Survey Area 8 59
Figure 33. GPR Profile 2 collected at Survey Area 8 60
Figure 34. Horizontal slice maps collected at Survey Area 8 61
Figure 35. GPR profile collected at Survey Area 9 62
Figure 36. Horizontal slice maps collected at Survey Area 9 63
Figure 37. Aerial photograph (source: World Imagery 2009), showing Test Trench 1-11 and SIHP# -7136 Feature A-C 65
Figure 38. Proposed site plan, showing Test Trench 1-11 and SIHP# -7136 Feature A-C 66
Figure 39. Trench 1 overview, view to south 68
Figure 40. Trench 1, profile of southeast wall, view to southeast 68
Figure 41. Trench 1, stratigraphic profile of southeast wall 69
Figure 42. Trench 1, overview of Stratum II and Stratum III interface, view is southwest 70
Figure 43. Trench 1, plan view of Stratum II and Stratum IV interface 70
Figure 44. Trench 2 overview, view to southwest 72
Figure 45. Trench 2, profile of southeast wall, view to southeast 72
Figure 46. Trench 2, stratigraphic profile of southeast wall 73
Figure 47. Trench 3 overview, view to north 74
Figure 48. Trench 3, profile of northwest wall, view to northwest 74
Figure 49. Trench 3, stratigraphic profile of northwest wall 75
Figure 50. Trench 3, plan view of Stratum III 76
Figure 51. Trench 4 overview, view to north 77
Figure 52. Trench 4, profile of northwest wall, view to northwest 77
Figure 53. Trench 4, stratigraphic profile of northwest wall 78
Figure 54. Trench 5 overview, view to east 80
Figure 55. Trench 5, profile of northeast wall, view to northeast 80
Figure 56. Trench 5, stratigraphic profile of northeast wall 81
Figure 57. Trench 5 overview of the Stratum II and Stratum III interface, view to southeast 83
Figure 58. Trench 5, plan view of Stratum II and Stratum III interface 83
Figure 59. Trench 6 overview, view to northwest 85
Figure 60. Trench 6, profile of southwest wall, view to southwest 85
Figure 61. Trench 6, stratigraphic profile of southwest wall 86
Figure 62. Trench 6, overview of the Stratum II and Stratum III interface 87
Figure 63. Trench 6, plan view of Stratum II and Stratum III interface 87
Figure 64. Trench 7 overview, view to north 88
Figure 65. Trench 7, profile of northeast wall, north 88
Figure 66. Trench 7, stratigraphic profile of northwest wall 89
Figure 67. Trench 7, overview of the Stratum III and Stratum IV interface, view to south 90
Figure 68. Trench 7, plan view of Stratum III and Stratum IV interface 90
Figure 69. Trench 8, profile of southeast wall, view to west 91
Figure 70. Trench 8, stratigraphic profile of southeast wall 91

Figure 71. Trench 8, plan view of Stratum IV 92
Figure 72. Trench 9 overview, view to southwest 94
Figure 73. Trench 9 profile, view to southwest 94
Figure 74. Trench 9, stratigraphic profile of northwest wall 95
Figure 75. Trench 9, overview of the Stratum III and Stratum IV interface, view to northeast 96
Figure 76. Trench 9, plan view of Stratum III and Stratum IV interface 96
Figure 77. Trench 10 overview, view to north 97
Figure 78. Trench 10 profile, view to southwest 97
Figure 79. Trench 10, stratigraphic profile of northwest wall 98
Figure 80. Trench 10, overview of the Stratum III and Stratum IV interface, view to north 99
Figure 81. Trench 10, plan view of Stratum III and Stratum IV interface 99
Figure 82. Trench 11 overview, view to southwest 100
Figure 83. Trench 11 profile, view to north 100
Figure 84. Trench 11, stratigraphic profile of northwest wall 101
Figure 85. Traditional Hawaiian artifacts encountered within SIHP# 50-80-14-7135 111
Figure 86. Traditional Hawaiian artifacts encountered within SIHP# 50-80-14-7135 112
Figure 87. Intact glass bottles encountered within SIHP# 50-80-14-7135 115
Figure 88. Accession #3, a glass bottle fragment encountered within SIHP# 50-80-14-7135 116
Figure 89. Accession #5, ceramic vessel fragments encountered within SIHP# 50-80-14-7135 116
Figure 90. Accession #53, ivory or bone figurine encountered within SIHP# 50-80-14-7135 118
Figure 91. Photograph of an indigenous Alaskan bird figure collected during Captain James Cook’s voyages throughout the Pacific (source: Harry Haase, Göttingen Collection) 119
Figure 92. Photograph showing an indigenous Alaskan bird figure (lower right) attached to a Tongan ornament collected during Captain James Cook’s voyages throughout the Pacific (source: Otago Museum, Dunedin) 119
Figure 93. “Ivory Birds” walrus ivory gambling game pieces from the Castle Hill workshop area, Building 1 Sitka, Alaska (from http:dnr.alaska.gov/parks/oha/castlehill/chptseven.htm)120
Figure 94. Results of radiocarbon analysis of Beta-288158 124
Figure 95. Text for consultation letter with Cultural Descendants of Waikīkī (11/18/2010) page 11
Figure 96. Consultation letter with Cultural Descendants of Waikīkī page 2 2
Figure 97. Burial Notice published in the *Star-Advertiser* 11/10/2010, 11/12/2010 & 11/14/20105
Figure 98. Burial Notice published in January 2011 edition of *Ka Wai Ola o OHA* 6
Figure 99. January 27, 2011 outreach letter 7
Figure 100. April 7 2011 outreach letter 8

List of Tables

Table 1. GPR Data Collection Parameters 11
Table 2. Land Commission Awards Within and in the Vicinity of the Current Project Area 23
Table 3. Previous Archaeological Studies located in the Vicinity of the Current Project Area 35
Table 4. Strata Observed within Trench 1 69
Table 5. Strata Observed within Trench 2. 73
Table 6. Strata Observed within Trench 3. 75
Table 7. Strata Observed within Trench 4 79
Table 8. Strata Observed within Trench 5 82
Table 9. Strata Observed within Trench 6 86
Table 10. Strata Observed within Trench 7. 89
Table 11. Strata Observed within Trench 8. 92
Table 12. Strata Observed within Trench 9 95
Table 13. Strata Observed within Trench 10 98
Table 14. Strata Observed within Trench 11 101
Table 15. Traditional Hawaiian Artifacts Collected from SIHP# 50-80-14-7135 107
Table 16. Historic Artifacts Collected within SIHP# 50-80-14-7135 107
Table 17. Wood taxa results (adapted from Murakami 2010) 122
Table 18. Results of radiocarbon analysis of Beta-288158 124
Table 19. List of Previously Recognized Waikīkī Descendants Consulted 3

Section 1 Introduction

1.1 Project Background

At the request of Helber Hastert & Fee Planners, Inc., Cultural Surveys Hawai‘i, Inc., (CSH) conducted an archaeological inventory survey (AIS) for the St. Augustine-by-the-Sea Master Plan project, Waikīkī Ahupua‘a, Kona District, Island of O‘ahu (TMK: [1] 2-6-026: 012 & 015). The project area is bounded to the north by a parking lot adjacent to Kūhiō Avenue, to the east by ‘Ōhua Avenue, to the west by Kealohilani Avenue, and to the south by Kalākaua Avenue (Figure 1 to Figure 5). The project area is depicted on the 1998 U.S. Geological Survey 7.5-minute series topographic map, Honolulu Quadrangle.

The project area is privately owned by the Roman Catholic Church of Hawai‘i. The project area comprises approximately 1.15 acres. Proposed development within the project area includes the construction of the Saint Damien Museum fronting Kalākaua Avenue (footprint approx. 3,157 sq. ft) and the redevelopment of the existing Parish Hall in the north corner of the church property (footprint approx. 13,160 sq. ft). The area of potential effect (APE) for the current AIS investigation is defined as the entire 1.15-acre project area.

This document was prepared to support the proposed project's historic preservation review under Hawai‘i Revised Statutes (HRS) Chapter 6E-42 and HAR Chapter 13-13-284. In consultation with SHPD/DLNR, the AIS investigation was designed to fulfill the State requirements for an AIS, per HAR Chapter 13-13-276. This study follows an *Archaeological Inventory Survey Plan for the St. Augustine-by-the-Sea Master Plan Project, Waikīkī Ahupua‘a, Honolulu (Kona) District, Island of O‘ahu, TMK [1]-2-6-26:012 & 015* (Hammatt, Thurman and Shideler 2010) reviewed and accepted by the State Historic Preservation Division in a review dated July 19, 2010 (Log No. 2010.2412, Doc No. 1007MD05).

1.2 Scope of Work

The following archaeological inventory survey scope of work was designed to satisfy the Hawai‘i state requirements for archaeological inventory surveys (Hawai‘i Administrative Rules [HAR] Chapter 13-276 and Chapter 13-275/284):

1) Historic and archaeological background research, including a search of historic maps, written records, Land Commission Award documents, and the reports from prior archaeological investigations. This research was focused on the specific project area’s past land use, with general background on the pre-contact and historic settlement patterns of the *ahupua‘a* and district. This background information was used to compile a predictive model for the types and locations of historic properties that could be expected within the project area.
2) Based on the environment of the project area and the results of the background research, subsurface testing with a combination of hand and backhoe excavation to identify and document subsurface historic properties that would not be located by surface pedestrian inspection as deemed appropriate. Appropriate samples from these excavations were

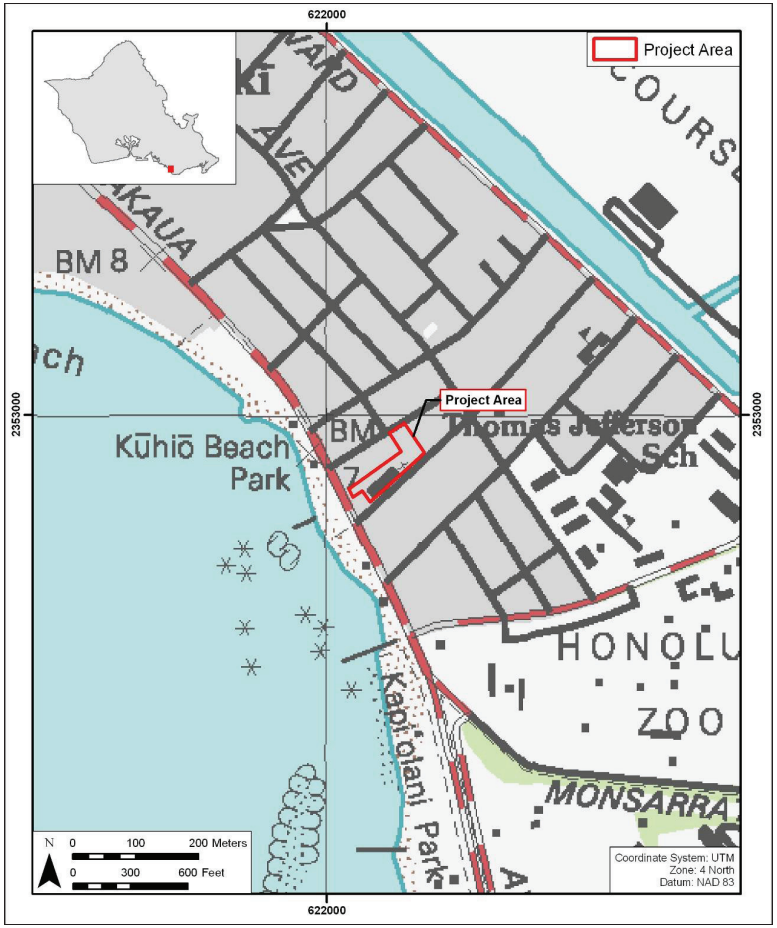

Figure 1. 1998 U. S. Geological Survey 7.5-Minute Series Topographic Map, Honolulu Quadrangle, showing the location of the current project area

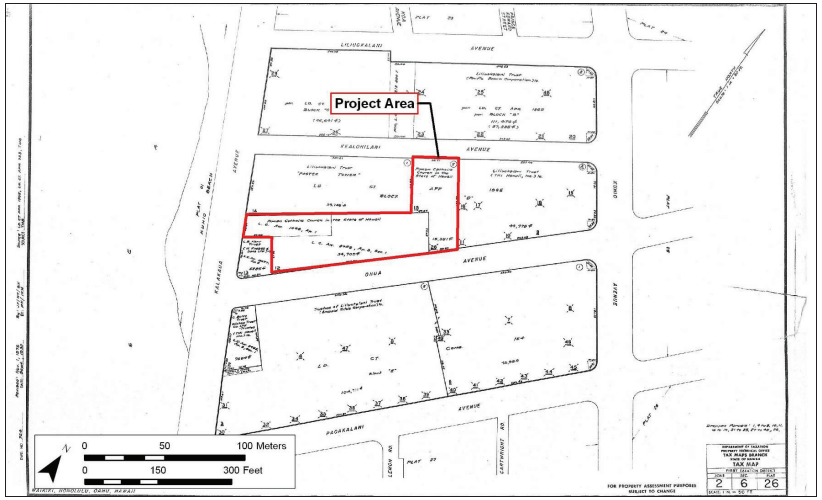

Figure 2. Tax Map Key (TMK) 2-6-026, showing the location of the current project area

Figure 3. Aerial photograph (source: World Imagery 2009), showing the location of the current project area

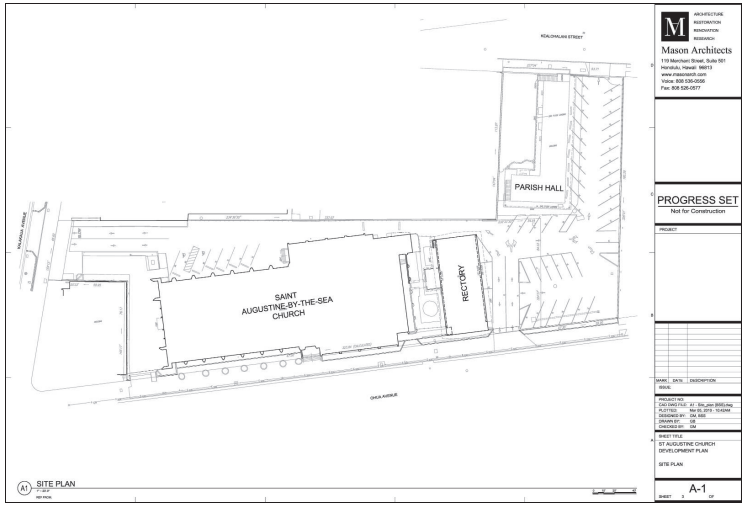

Figure 4. Site plan map showing the existing infrastructure within the current project area (source: Mason Architects)

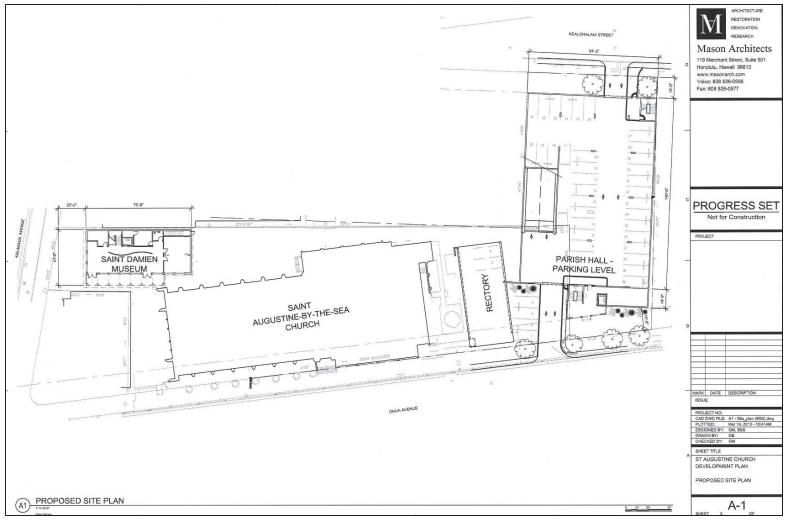

Figure 5. Site plan map showing the proposed development within the current project area (source: Mason Architects)

analyzed for cultural and chronological information. All subsurface historic properties identified were documented to the extent possible, including geographic extent, content, function/derivation, age, interrelationships, and significance.

3) As appropriate, consultation with knowledgeable individuals regarding the project area's history, past land use, and the function and age of the historic properties documented within the project area.
4) As appropriate, laboratory work to process and gather relevant environmental and/or archaeological information from collected samples.
5) Preparation of an inventory survey report, which includes the following:
   a) A project description;
   b) A section of a USGS topographic map showing the project area boundaries and the location of all recorded historic properties;
   c) Historical and archaeological background sections summarizing prehistoric and historic land use of the project area and its vicinity;
   d) Descriptions of all historic properties, including selected photographs, scale drawings, and discussions of age, function, laboratory results, and significance, per the requirements of HAR 13-276. Each historic property will be assigned a Hawai‘i State Inventory of Historic Properties number;
   e) If appropriate, a section concerning cultural consultations [per the requirements of HAR 13-276-5(g) and HAR 13-275/284-8(a)(2)].
   f) A summary of historic property categories, integrity, and significance based upon the Hawai‘i Register of Historic Places criteria;
   g) A project effect recommendation;
   h) Treatment recommendations to mitigate the project's adverse effect on any historic properties identified in the project area that are recommended eligible to the Hawai‘i Register of Historic Places.

This scope of work includes full coordination with the SHPD/DLNR and county relating to archaeological matters. This coordination takes place after consent of the owner or representatives.

1.3 Environmental Setting

1.3.1 Natural Environment

The ancient land division of Waikīkī extended on the west from the land called Kou (old name for Honolulu) to Maunalua (Hawai‘i Kai). On modern maps, the western boundary of this *ahupua‘a* would extend from Pi‘ikoi and Sheridan Streets, the *mauka* (mountain) border would extend from Tantalus to the peak of Kōnāhuanui, along the crest of the Ko‘olau Range to the border with Maunalua. The ocean constituted the *makai* (seaward) border. One section of this *ahupua‘a* was the coastal area, backed by a large marshland. The marshland extended from the

volcanic craters of Lē‘ahi (Diamond Head) and the Kaimukī dome (where the present day Kaimukī fire station is built) to the east. The *mauka* boundary of the marshland is where Kapahulu Park is located today, which then runs along the foot of Mānoa Valley into the districts of Kamō‘ili‘ili and Makiki, ending at the junction of Wilder and Pi‘ikoi Streets, then turning again to the sea. This marshy area was about 3 miles long and 1 mile wide, enclosing approximately 2,000 acres (Kanahele 1986:5-6).

The project area is located on the flat plain of Waikīkī, which generally is less than 4.5 m (15 ft) above sea level (Davis 1989:5). The U.S. Department of Agriculture (USDA) Soil Survey classifies the project area's sediments as Jaucas Sand 0 to 15 percent slopes (JaC) (Figure 6), which are described as "excessively drained, calcareous soils…developed in wind- and water-deposited sand from coral and seashells" (Foote et al. 1972:48). Rainfall averages less than 30 inches of rain per year (Armstrong 1983:62). Currently, vegetation in the general area includes introduced exotics, such as MacArthur Palm, coconut, and a variety of ornamental shrubs. Until approximately 1920 Hamohamo Stream, (also called Kukaunahi Stream), was approximately 75 m to the southeast of the project area (see Figures 9, 19, 12 & 13).

1.3.2 Relationship of Project Area to Former Shorelines

It would not be surprising if the sandy coastline in the immediate vicinity of the project area was dynamic in such close proximity to the mouth of a significant stream (the mouth of former Hamohamo Stream, also called Kukaunahi Stream, was approximately 75 m to the southeast of the project area – see Figure 9). Our overlays of the project area on historic maps indicates that the shoreline in the vicinity of the project area has been relatively static since as far back as 1855 (see Figure 8). There are lines of evidence suggesting there had been an eroding shoreline previously. Land Commission Awards 1446 to Na‘a and 10677 to Pupuka indicate other land owners on the seaward (*makai*) side (see Appendix A). Early maps (see Figure 9) indicate the sea coming right up to the Waikīkī Beach Road (present Kalākaua Avenue alignment) whereas the beach road was typically set back at least a few meters from the coast. Both of these lines of evidence suggest that the shoreline may have extended slightly further out in pre-Contact times. This is assessed as not having a significant effect on the probability and nature of archaeological resources likely to be present.

1.3.3 Built Environment

St. Augustine-by-the-Sea Church is located within urban Honolulu at the eastern end of the Waikīkī resort area. It is surrounded by modern urban development including high-rise hotels, streets, sidewalks, and utility infrastructure (see Figure 3). Foster Tower is immediately to the west with the Pacific Beach Hotel further to the west across Kealohilani Avenue. The Marriott Hotel is to the east across ‘Ōhua Avenue. Kalākaua Avenue, the main thoroughfare for coastal Waikīkī, bounds St. Augustine-by-the-Sea to the south separating the church from Kūhiō Beach Park. An approximately 1 acre ground level parking lot lies inland (north of the project area) extending north to Kūhiō Avenue.

The current project area is relatively level and includes the seaward portion of an asphalt and concrete driveway extending along the northwest side of the main church sanctuary, an asphalt parking lot in the north corner of the church lands, the existing Parish Hall, and a lawn on the southwest side of the existing Parish Hall.

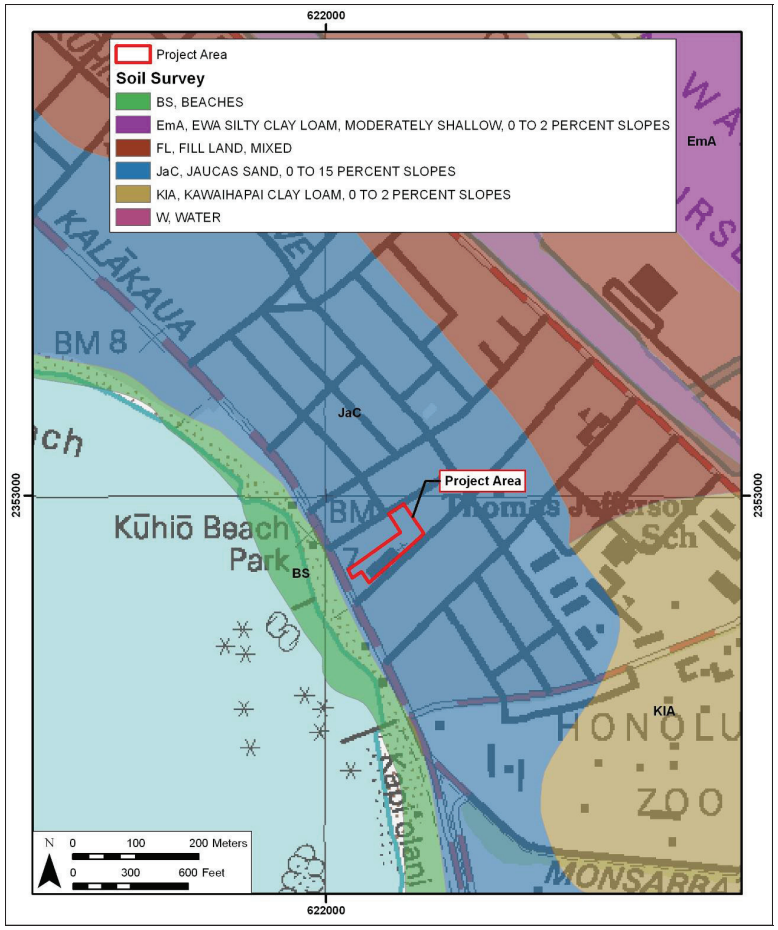

Figure 6. Overlay of Soil Survey of the State of Hawai‘i (Foote et al. 1972), indicating sediment types within and surrounding the current project area (source: Soils Survey Geographic Database [SSUGRO] 2001, U.S. Department of Agriculture)

Section 2 Methods

2.1 Field Methods

During the current archaeological inventory survey, field methods were performed in accordance with the research design of a SHPD/DLNR-approved archaeological inventory survey plan, prepared by CSH (Hammatt et al. 2010).

2.1.1 Ground Penetrating Radar Survey

2.1.1.1 Survey Methodology

The GPR survey was performed using a Geophysical Survey Systems, Inc. (GSSI) SIR-3000 system equipped with 400 MHz antenna. This is a bistatic system, in which electromagnetic energy in the radar frequency range is transmitted into the ground via a sending antenna. Radar energy is reflected off of the subsurface matrix and is then received by another, paired antenna. Reflected energy is sampled and the travel time (in nanoseconds) of the individual reflection waves is recorded. Wave propagation speed varies depending on the nature of the subsurface medium. Any changes in density or electromagnetic properties within the stratigraphic column may cause observable variations in reflection intensity. Reflection features may include discrete objects, stratigraphic layering, or other subsurface anomalies.

The GPR survey was conducted using single-run transects to generate two-dimensional (2D) depth profiles and horizontal depth slices (i.e. plan view maps of subsurface anomalies at selected depths below the surface). GPR data collection parameters (Table 1) were held constant throughout the survey under the assumption that soil conditions were relatively consistent across the survey area. A dielectric constant[1] of 8 was utilized in anticipation of the presence of sand within the project area based on the USGS soil survey of the area (Foote et al. 1972).

The effectiveness of GPR is highly dependent on local soil conditions. The high signal attenuation rate of many soil types restricts the depth of radar penetration and therefore limits the effectiveness of GPR surveys. The National Resource Conservation Service (NRCS) produced maps indicating the relative suitability of GPR applications throughout the U.S. The GPR suitability data was generated based on U.S. Department of Agriculture (USDA) soil survey data. Figure 7 shows the project area on the NRCS GPR Suitability Map for Hawai‘i. The survey area is shown to primarily traverse lands in the high suitability category. This is likely due to the presence of uniform sediments (i.e., Jaucas sands) throughout the entire project area (Foote et al. 1972). Additionally, the project area is not situated directly along the coast, which likely limits amount of salt deposition and water saturation within the project area sediments, which are known to increase the conductivity of the soils causing limited depth “visibility” and inaccurate data collection.

[1] The measure of the ability of a material to store a charge from an applied electromagnetic field and then transmit that energy. In general, the greater the dielectric constant of a material, the slower radar energy will move through it. The dielectric constant is a measurement of how well radar energy will be transmitted to depth.

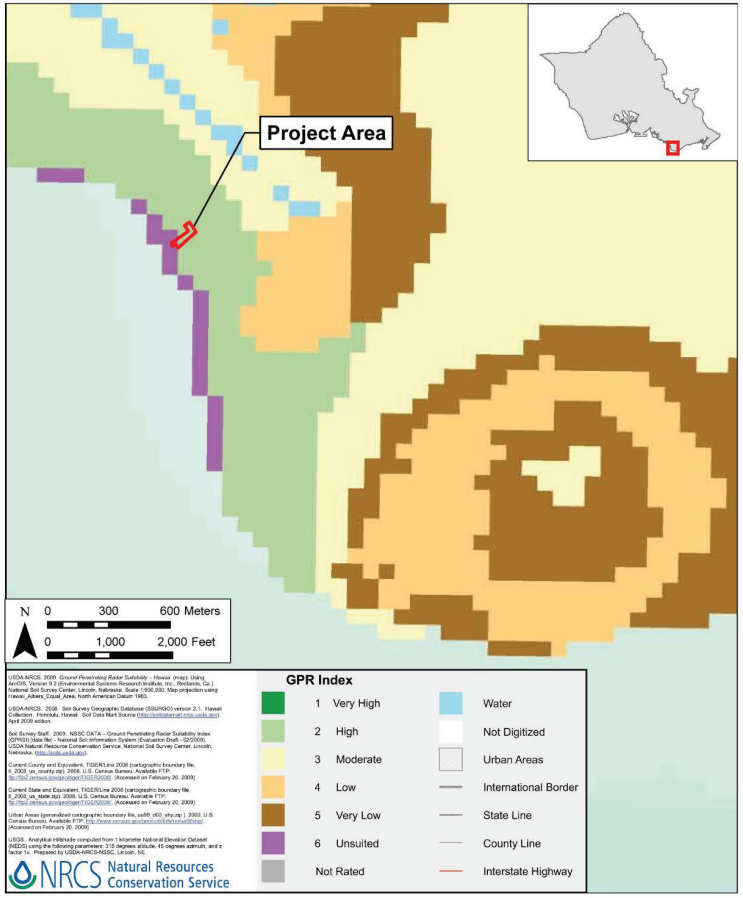

Figure 7. GPR suitability map (source: National Resource Conservation Service) showing the location of the project area

Table 1. GPR Data Collection Parameters

Parameter	Settings
Antenna	400 MHz
Samples per Scan	512
Format	16-bit
Depth	2 meters
Dielectric	8
Soil	Type 2
Scans per Unit	50/m

2.1.1.2 Post-processing

All collected radar data was post-processed using the following software: RADAN 6.6, GPR Process, and Surfer 9. Position correction was utilized to remove unwanted surface “noise” from GPR profiles. A Horizontal High Pass Finite Impulse Response “Boxcar” (Background Removal) filter was not utilized in order to retain the image of recorded stratigraphic layers. Horizontal slicing of GPR data was conducted utilizing 30 cm depth intervals. Horizontal slices were not generated for portions of GPR data that was distorted and/or attenuated due to environmental conditions and disturbances. In general, useful GPR data collected for the current study was located between 0 and 100 cmbs.

2.1.2 Subsurface Excavation

In total, subsurface testing within the project area included the excavation of eleven test trenches (Trench 1-11) and was performed in four separate phases of fieldwork occurring between August 2, 2010 and March 17, 2011.

The initial phase of subsurface testing (August 2 to August 5, 2010) included the excavation of six test trenches (Trench 1-6) within the project area. Four of the six initial test trenches (Trench 1,2, 5, and 6) were located within the proposed footprint of the Parish Hall parking structure with the remaining two test trenches (Trench 3 and 4) being located within the proposed footprint of the Saint Damien Museum. The discovery of disarticulated human skeletal remains in a secondary context within Trench 3 prompted a subsequent phase of testing within the proposed Saint Damien Museum footprint.

The second phase of subsurface testing (September 23 to September 24, 2010) included the excavation of two test trenches (Trench 7 and 8), which were positioned immediately south of Trench 3 within the proposed Saint Damien Museum footprint. The discovery of two in situ human interments (SIHP# 50-80-14-7136 Feature A and B) within Trench 8 again prompted a subsequent phase of subsurface testing in the immediate area.

The third phase of subsurface testing (October 18 to October 21, 2010) included the excavation of two test trenches, Trench 9 and Trench 10, which were positioned to the east and west of Trench 8, respectively.

The fourth phase of subsurface testing (March 16 to March 17, 2011) included the excavation of one double-wide test trench, Trench 11, which was positioned southwest of Trench 3 and northwest of Trench 9.

With the exception of Trench 6, excavation of each test trench was initiated with the assistance of a backhoe, which was used to remove asphalt, concrete and overlying fill sediments. With the bulk of overlying fill sediments removed, the remainder of the each trench was hand-excavated to natural sterile soil or to the water table. Trench 6, located within the back lawn of the Parish Hall, could not be accessed by the backhoe and was therefore entirely excavated by hand to natural sterile soil.

CSH archaeologists leveled and cleaned the base and sidewalls of each trench in order to identify any potential cultural features. Sand deposits were carefully removed, by hand, in thin layers in order to reduce any disturbance to potential cultural deposits or human burials. Following documentation, the remainder of natural sterile soil within accessible test trenches was removed to the coral shelf using a backhoe. CSH archaeologists monitored all backhoe excavation that occurred during subsurface testing.

2.1.3 Use of Historic Human Remains Detection Dogs

Prior to the third phase of subsurface excavation (Trench 9 and 10) within the project area, a forensic canine investigation was conducted within portions of the proposed St. Damien Museum footprint. The investigation involved the use of two teams, each team consisting of a handler and a trained historical human remains detection (HHRD) dog. The teams were supplied by the Institute for Canine Forensics (ICF), of Woodside, California:

> Canines trained to alert on specific scents have long been utilized in law enforcement, military and search and rescue work. The Historical Human Remains Detection (HHRD) dog is trained and certified for one purpose: to locate historic and prehistoric burials. Its specialized training makes it a unique remote sensing resource for archaeologists. The dog is taught to search in a slow, methodical style with a passive alert. The HHRD dogs are trained purposely to a lower threshold of scent, which enables them to locate the more fragile scent from old burials. . . . [The HHRD] program was developed with the assistance of anthropologists and archaeologists to ensure that our dogs are appropriate for the job. [Hammond and Morris 2009]

Following the forensic canine investigation, Trench 9 and Trench 10 were positioned in areas were the forensic canines alerted to the possible presence of subsurface human burials.

2.1.4 Documentation of Stratigraphy

The stratigraphic profile of each test excavation was drawn and photographed. The observed sediments were described using standard USDA soil description observations/terminology. Sediment descriptions included: Munsell color; texture; consistency; structure; plasticity; cementation; origin of sediments; descriptions of any inclusions, such as cultural material and/or roots and rootlets; lower boundary distinctiveness and topography; and other general

observations. Where stratigraphic anomalies were exposed, these were carefully represented on the trench excavation profile.

2.1.5 Sampling

When cultural features were identified, they were included on plan and/or profile maps, photographed, and carefully excavated with hand tools to reveal their nature and content. Bulk sediment samples were collected from several cultural features for laboratory analysis and potential submission for carbon dating analysis.

2.2 Laboratory Methods

Following the completion of fieldwork, all collected material was analyzed using standard archaeological laboratory techniques. Traditional Hawaiian and historic cultural material collected in the field was returned to the CSH laboratory to be sorted, identified, measured, and quantified. In general, artifact analysis focused on establishing, to the greatest extent possible, material type, formal/functional type, cultural affiliation, and/or age of manufacture. A catalog of all collected material was prepared and is presented in Section 5, Results of Laboratory Analysis below. Upon completion of the project, all material collected during subsurface testing will remain at the CSH Waimānalo Office until a permanent facility is determined, based on consultation with the landowner and the SHPD/DLNR.

2.2.1 Wood Taxa Identification

Following the completion of fieldwork, two bulk sediment samples, collected from Trench 5, Pit Feature 6 and Trench 6, Pit Feature 27, containing observable pieces of charcoal and/or carbonized plant remains were sent to the International Archaeological Research Institute, Inc. (IARII) for processing and wood taxa identification. The samples of charcoal and/or carbonized plant remains that were collected from each bulk sediment sample were viewed under magnification of a dissecting microscope. The samples were compared with anatomical characteristics of known woods in the Pacific Islands Wood Collection at the Department of Botany, University of Hawai‘i, and published descriptions (Murakami 2010). The taxa identification of the wood samples provided useful information for interpreting the environmental and cultural history of the project area, and aided in the selection of a single sample for radiocarbon analysis. The results of wood taxa identification are presented in Section 5, Results of Laboratory Analysis below.

2.2.2 Radiocarbon Analysis

Following the completion of wood taxa identification, a 1.1 gram (g) sample of carbonized *‘Ōhi‘a lehua* (*Metrosideros polymorpha*) that was collected within a bulk sediment sample from Trench 6, Pit Feature 27 was sent to Beta Analytic, Inc. of Miami, Florida for radiocarbon dating analysis. The sample was analyzed using the Accelerator Mass Spectrometer (AMS) method. The conventional radiocarbon age determined by Beta Analytic, Inc. was calibrated to calendar ages using the OxCal calibration program, Version 4.1, developed by the University of Oxford Radiocarbon Accelerator Unit (ORAU), and available as share-ware over the Internet.

2.3 Document Review

Background research included: a review of previous archaeological studies on file at the SHPD/DLNR library; review of historical documents at Hamilton Library of the University of Hawai‘i at Mānoa, 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; study of historic maps at the Hawai‘i State Land Survey Division; and study of historic maps and photographs at the CSH library. This research provided the environmental, cultural, historic, and archaeological background for the project area. The sources consulted were used to formulate a predictive model regarding the expected types and locations of historic properties that may be located in the project area.

2.4 Consultation

Preliminary consultation was carried out with the Roman Catholic Church Diocese of Honolulu.

Initial consultation with the SHPD was carried out in the context of the preparation of an *Archaeological Inventory Survey Plan for the St. Augustine-by-the-Sea Master Plan Project, Waikīkī Ahupua‘a, Honolulu (Kona) District, Island of O‘ahu, TMK [1]-2-6-26:012 & 015* (Hammatt, Thurman and Shideler 2010) reviewed and accepted by the SHPD/DLNR in a review dated July 19, 2010 (Log No. 2010.2412, Doc No. 1007MD05). Following the discovery of human skeletal remains, further consultation was carried out with the SHPD/DLNR archaeology and culture and history branches. Repeated consultations have been held with the O‘ahu Island Burial Council. A good faith effort at consultation has been undertaken with all the previously recognized cultural descendants of Waikīkī for whom contact information is available. Results of consultation to date are reported in Section 6 and Appendix B of this study.

Section 3 Background Research

3.1 Traditional and Historical Background

3.1.1 Pre-Contact to 1800s

Waikīkī, by the time of the arrival of Europeans in the Hawaiian Islands during the late eighteenth century, had long been a center of population and political power on O‘ahu. According to Martha Beckwith (1940), by the end of the fourteenth century, Waikīkī had become "the ruling seat of the chiefs of O‘ahu." The preeminence of Waikīkī continued into the eighteenth century and is betokened by Kamehameha's decision to reside there upon wresting control of O‘ahu by defeating the island's chief, Kalanikūpule. The nineteenth century Hawaiian historian John Papa ‘Ī‘ī (1959), himself a member of the *ali‘i*, described the king's Waikīkī residence:

> Kamehameha's houses were at Pua‘ali‘ili‘i, *makai* of the old road, and extended as far as the west side of the sands of ‘Āpuakehau. Within it was Helumoa where Ka‘ahumanu *mā* went to while away the time. The king built a stone house there, enclosed by a fence.

‘Ī‘ī further noted that the "place had long been a residence of chiefs. It is said that it had been Kekuapoi's home, through her husband Kahahana, since the time of Kahekili."

Chiefly residences, however, were only one element of a complex of features which were able to sustain a large population that characterized Waikīkī up to pre-contact times. Beginning in the fifteenth century, a vast system of irrigated taro fields was constructed, extending across the littoral plain from Waikīkī to lower Mānoa and Pālolo valleys. This field system - an impressive feat of engineering the design of which is traditionally attributed to the chief Kalamakua - took advantage of streams descending from Makiki, Mānoa and Pālolo valleys which also provided ample fresh water for the Hawaiians living in the *ahupua‘a*. Water was also available from springs in nearby Mō‘ili‘ili and Punahou. Closer to the Waikīkī shoreline, coconut groves and fishponds dotted the landscape. A sizeable population developed amidst this Hawaiian-engineered abundance. Captain George Vancouver, arriving at "Whyteete" in 1792, captured something of this profusion in his journals:

> On shores, the villages appeared numerous, large, and in good repair; and the surrounding country pleasingly interspersed with deep, though not extensive valleys; which, with the plains near the sea-side, presented a high degree of cultivation and fertility.
>
> [Our] guides led us to the northward through the village, to an exceedingly well-made causeway, about twelve feet broad, with a ditch on each side.
>
> This opened our view to a spacious plain, which, in the immediate vicinity of the village, had the appearance of the open common fields in England; but, on advancing, the major part appeared to be divided into fields of irregular shape and figure, which were separated from each other by low stone walls, and were in a very high state of cultivation. These several portions of land were planted with the

> eddo or *taro* root, in different stages of inundation; none being perfectly dry, and some from three to six or seven inches under water. The causeway led us near a mile from the beach, at the end of which was the water we were in quest of. It was a rivulet five or six feet wide, and about two or three feet deep, well banked up, and nearly motionless; some small rills only, finding a passage through the dams that checked the sluggish stream, by which a constant supply was afforded to the *taro* plantations.
>
> [We] found the plain in a high state of cultivation, mostly under immediate crops of *taro*; and abounding with a variety of wild fowl, chiefly of the duck kind...The sides of the hills, which were at some distance, seemed rocky and barren; the intermediate vallies, which were all inhabited, produced some large trees, and made a pleasing appearance. The plain, however, if we may judge from the labour bestowed on their cultivation, seemed to afford the principal proportion of the different vegetable productions on which the inhabitants depend for their subsistence (Vancouver, 1798: I, 161-164).

Umu, or artificial reefs built in areas lacking naturally occurring coral or rock shelters, may have been built *makai* of the current project area. These structures of rock and coral were loosely stacked to allow seaweed to grow to attract fish and have been found throughout the islands. Although *umu* have not been found in Waikīkī, Kanahele (1995:46) suggests that since the Ku‘ekaunahi Stream is sandy and lacks coral, it is likely *umu* were built to attract fish. Kanahele (1995:46) additionally suggests that a *ko‘a*, sacred shrine dedicated to the fish god Kū‘ula, may have been built “near the mouths of the Pi‘inaio, ‘Āpuakēhau and Ku‘ekaunahi streams, where fish were particularly abundant.”

Further details of the exuberant life that must have characterized the Hawaiians use of the lands that included the *ahupua‘a* of Waikīkī are given by Archibald Menzies, a naturalist accompanying Vancouver's expedition:

> The verge of the shore was planted with a large grove of cocoanut palms, affording a delightful shade to the scattered habitations of the natives. Some of those near the beach were raised a few feet from the ground upon a kind of stage, so as to admit the surf to wash underneath them. We pursued a pleasing path back to the plantation, which was nearly level and very extensive, and laid out with great neatness into little fields planted with taro, yams, sweet potatoes and the cloth plant. These, in many cases, were divided by little banks on which grew the sugar cane and a species of *Draecena* without the aid of much cultivation, and the whole was watered in a most ingenious manner by dividing the general stream into little aqueducts leading in various directions so as to be able to supply the most distant fields at pleasure, and the soil seemed to repay the labour and industry of these people by the luxuriancy of its productions. Here and there we met with ponds of considerable size, and besides being well stocked with fish, they swarmed with water fowl of various kinds such as ducks, coots, water hens, bitterns, plovers and curlews. (Menzies 1920:23-24)

However, the traditional Hawaiian focus on Waikīkī as a center of chiefly and agricultural activities on southeastern O‘ahu was soon to change - disrupted by the same Euro-American

contact which produced the first documentation (including the records cited above) of that traditional life. The *ahupua‘a* of Honolulu - with the only sheltered harbor on O‘ahu - became the center for trade with visiting foreign vessels, drawing increasing numbers of Hawaiians away from their traditional environments. The shift in pre-eminence is illustrated by the fact that Kamehameha moved his residence from Waikīkī to Honolulu. Indeed, by 1828, Levi Chamberlain describing a journey into Waikīkī would note:

> Our path led us along the borders of extensive plats of marshy ground, having raised banks on one or more sides, and which were once filled with water, and replenished abundantly with esculent fish; but now overgrown with tall rushes waving in the wind. The land all around for several miles has the appearance of having once been under cultivation. I entered into conversation with the natives respecting this present neglected state. They ascribed it to the decrease of population (Chamberlain 1957:26).

An 1855 map of Honolulu to Koko Head by La Passe indicates that the area within and in the vicinity of the current project area remained densely populated (Figure 8). The map also shows agricultural fields northeast (*mauka*) of the current project area.

3.1.2 Mid- to Late-1800s

As the 19th century progressed, Waikīkī was becoming a popular site among foreigners – mostly American – who had settled on O‘ahu. An 1865 article in the *Pacific Commercial Advertiser* mentioned a small community that had developed along the beach. The area continued to be popular with the *ali‘i* and several notables had residences there. A visitor to O‘ahu in 1873 described Waikīkī as “a hamlet of plain cottages, whither the people of Honolulu go to revel in bathing clothes, mosquitoes, and solitude, at odd times of the year” (Bliss 1873).

In the mid-1870s, the Waikīkī area below Diamond Head may be characterized as comprised of seasonal duck ponds and stands of algeroba (*kiawe*) on an open plain. That landscape was altered dramatically when Kapi‘olani Park was created by a consortium of prominent businessmen that included Archibald Cleghorn, John O. Dominis, and James Makee. The park stockholders acquired the property through a lease with two landholders of the area, King Kalākaua who leased approximately 150 acres in the land known as Kaneloa, and a Swedish-born immigrant to Hawai‘i named Allen Herbert, who leased the neighboring parcel of Kapua. The park was dedicated on June 11, 1877 (Kamehameha Day) and was named for King Kalākaua’s wife, Queen Kapi‘olani. Its original configuration included an open field and horse racing track, surrounded by private estates. As Robert Weyeneth notes, the original park was not intended for the general public:

> Kapi‘olani Park was established by a private corporation whose stockholders were chiefly interested in developing an exclusive residential retreat. The intention was not to create a site for public recreation. For its first two decades, the park was operated by the Kapiolani Park Association. . . . The Association was founded at a meeting on 8 November 1876, with a two-fold purpose: (1) building residences for its stockholders along the ocean at Waikīkī and on the slopes of Diamond Head and (2) laying out a first-class horse-racing track as the focal point of this new suburb [Weyeneth 1991:4].

Figure 8. Portion of the 1855 map of Honolulu to Koko Head by La Passe showing the current project area within the densely populated area of Waikīkī

At the northwest end of the park - i.e., the area of the present Honolulu Zoo - the park association transformed the two nondescript ponds:

To “reclaim” the marshy wetlands at the park entrance, Makee and Cleghorn proposed to create a picturesque water landscape. Through construction of a system of ditches and canals, they drained sufficient water from this portion of the park to create a collection of small islands and shallow ponds. Although the waterways were routinely criticized as stagnant breeding grounds for “limu moss,” the general effect was considered agreeable. Erecting rude wooden bridges enabled visitors to meander among the islands. The largest piece of dry land created from the former swamp was called Makee Island after the first Association president, and it became a favorite spot for picnics (Weyeneth 1991:12).

As the sugar industry throughout the Hawaiian kingdom expanded in the second half of the nineteenth century, the need for increased numbers of field laborers prompted passage of contract labor laws. In 1852, the first Chinese contract laborers arrived in the islands. Contracts were for five years, and pay was three dollars a month plus room and board. Upon completion of their contracts, a number of the immigrants remained in the islands, many becoming merchants or rice farmers. As was happening in other locales, in the 1880s, groups of Chinese began leasing and buying (from the Hawaiians of Waikīkī) former taro lands for conversion to rice farming. The taro lands’ availability throughout the islands in the late 1800s reflected the declining demand for taro as the native Hawaiian population diminished.

The Hawaiian Islands were well positioned for rice cultivation. A market for rice in California had developed as increasing numbers of Chinese laborers immigrated there since the mid-nineteenth century. Similarly, as Chinese immigration to the islands also accelerated, a domestic market opened.

> The primary market for both husked rice and paddy raised in all parts of the Hawaiian Islands was in Honolulu. The number of Chinese in the islands created a large home demand.
>
> In 1880 the home market was made more secure by an increase in the duty on rice imported into Hawai‘i to 1½ cents on paddy and 2½ cents on hulled rice. It resulted in further checking the importation of foreign rice and giving an immense impetus to the home product [Coulter and Chun 1937:13].

By 1892, Waikīkī had 542 acres planted in rice, representing almost 12% of the total 4,659 acres planted in rice on O‘ahu. Most of the former taro *lo‘i* converted to rice fields were located *mauka* (inland) of the present Ala Wai Boulevard. An 1897 map by Monsarrat depicts rice fields approximately 150 m east of the current project area (Figure 9). The 1897 map also shows small portion of ‘Ōhua Avenue extending *mauka* from the coastal Waikīkī Road, which was renamed Kalākaua Avenue in 1905 (Grant 1996:21).

3.1.2.1 The 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*

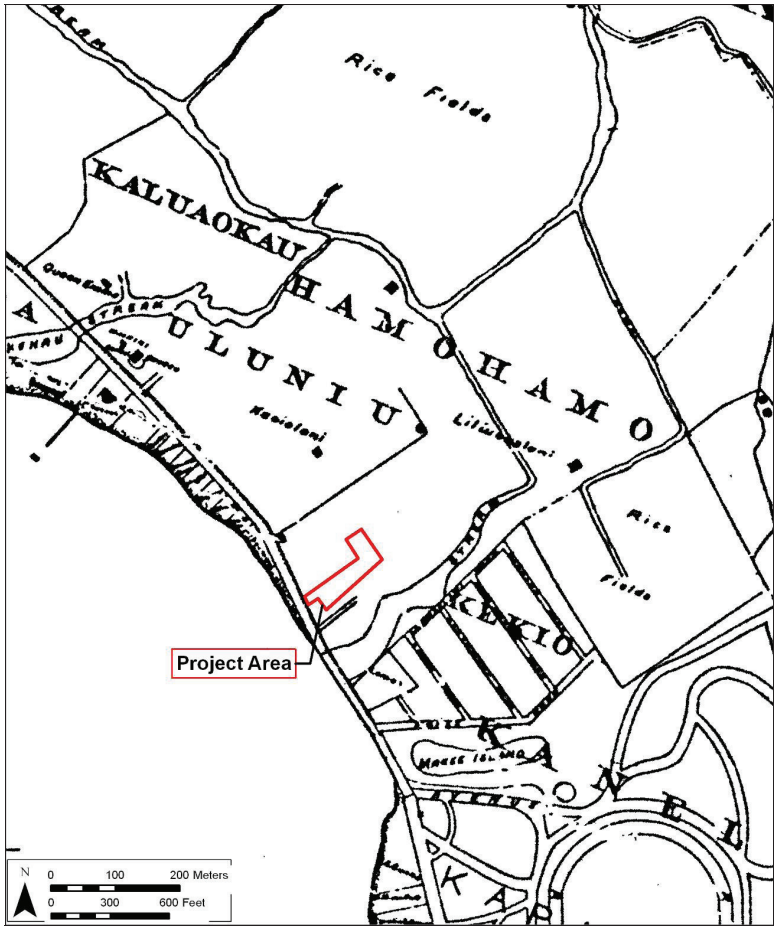

Figure 9. Portion of the 1897 map of Honolulu by Monsarrat showing rice fields and an early alignment of ‘Ōhua Avenue in the vicinity of the current project area

awards (individual land parcels) in 1850. It is through records for Land Commission Awards (LCA) generated during the Māhele that the first specific documentation of life in Hawai‘i, as it had evolved up to the mid-nineteenth century come to light. Although many Hawaiians did not submit or follow through on claims for their lands, the distribution of LCAs can provide insight into patterns of residence and agriculture. Many of these patterns of residence and agriculture probably had existed for centuries past. By examining the patterns of *kuleana* (commoner) LCA parcels in the vicinity of the project area, insight can be gained to the likely intensity and nature of Hawaiian activity in the area.

An 1881 Hawaiian Government survey map by S.E. Bishop, with locations of LCA parcels indicated, provides a record of the physical landscape of Waikīkī before the transformations of the twentieth century (Figure 10). LCA records for the awards shown on the map document house lots near the shore with associated taro *lo‘i* [irrigated plots] located inland and house lots adjacent to inland taro *lo‘i*. The current project area includes portions of three LCAs, 8452, 1446, and 2027, with several other LCAs located in the immediate vicinity (Table 2).

LCA 8452 was granted to Ana Keohokālole and includes the majority of the current project area. Testimony given by Ana Keohokālole indicates that there were seven *lo‘i* present. These *lo‘i* were likely located within the vicinity of the *muliwai* or lagoonal back waters of Ku‘ekaunahi Stream (see Figure 10). The 1881 S.E. Bishop map also depicts two structures within LCA 8452 in the vicinity of the current project area.

LCA documentation indicates that the project area and its vicinity were under mixed land use consisting of taro cultivation, pasture lands, and house lots.

3.1.2.2 Early History of the Roman Catholic Church in Waikīkī

Robert Schoofs’ “*Pioneers of the Faith*,” a book on the history of the Catholic Mission in Hawai‘i, relates that, “When, in 1839, religious freedom was finally granted, the Catholics at Waikiki built a small chapel in the Hawaiian style” (Schoofs 1978:62). Schoofs relates that:

> …[Catholics] would gather there to pray or listen to the instructions of Father Walsh and Brother Melchior, their catechist… [but that] Holy Mass Seldom was celebrated there. Catholics from Waikiki were expected to go to the Fort Street Church to fulfill their Sunday obligation. Even so there were days, such as the anniversary of the confessor’s release from slave labor, when Holy Mass was celebrated in the makeshift chapel at Waikiki. Thus we read in different diaries that Mass was offered in the Waikiki cemetery, this being specifically mentioned probably because its little chapel had been erected on the very spot where the confessors had suffered and where some lay buried.
>
> Old records also state that in 1854 a small frame chapel was built on the beach, on what is now Kalākaua Avenue . This served its purpose for many years, until the site was exchanged for a piece of land on Ohua Avenue, which was then no more than a lane. There Father Modestus Favens, SS.CC. erected another chapel, mostly from the lumber of a vessel wrecked off Diamond Head (Schoofs 1978:62-63).

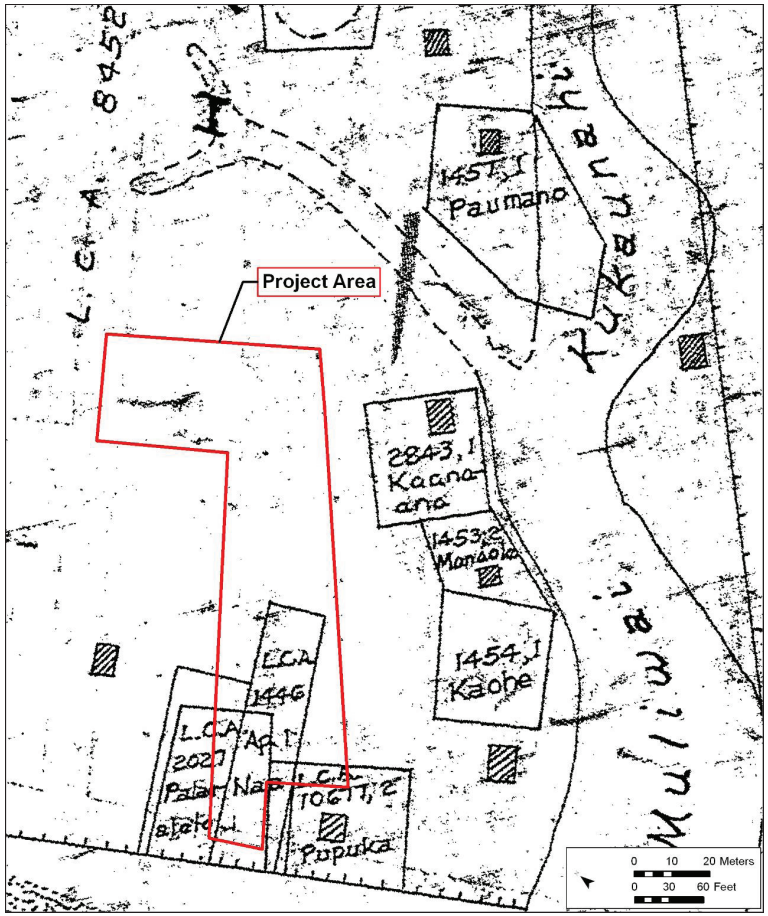

Figure 10. Portion of the 1881 Hawaiian Government survey map by S.E. Bishop map showing LCA’s within and in the vicinity of the current project area

Table 2. Land Commission Awards Within and in the Vicinity of the Current Project Area

LCA #	Claimant	Name of Land	Land Use
1446	Naa	Kamo‘okahi	2 taro *lo‘i* in taro, 1 bullrush *lo‘i* 2 bullrush ‘*auwai* Without house or fence; 0.28 acres
1452	Haau	Hamohamo	2 *lo‘i* A *kula,* A bank of an *‘auwai* and a house lot with a house but no fence; 0.96 acres
1453	Manaole	Kanukuaula (Kanakaaula); Hamohamo	2 *lo‘i,* a stream, a small *kula*, and a house lot; 0.07 & 0.8 acres
1454	Kaohe	Kamo‘okahi	2 *lo‘i,* three sections of a stream or *‘auwai*, a *kula*, and a house lot; 1.88 acres
1455	Pelekane	Hamohamo	1 *lo‘i,* and a house lot; 0.53 acres
1457	Paumano	Hamohamo	2 *lo‘i,* a section of *‘auwai*, a *kula*, and a house lot; 1.75 acres
1458	Kapea	Hamohamo	1 *lo‘i* 2 *kula,* A bank of an *‘auwai* and a house lot with 2 houses; 0.92 acres
2027	Palaua-lelo	Mokahi, Hamohamo	3 *lo‘i* in taro, 4 bullrush *lo‘i &* 2 *‘auwai* A house at Hamohamo and a *hau* tree ; 0.73 acres
2843	Kaanaana	Hamohamo	1 *lo‘i* A *kula*, a house
8452 O	Keohokā-lole	Hamohamo	No details; 99.68 acres
10677	Pupuka	Kukahi	1 *lo‘i* in taro a weed-grown *lo‘i,* a pond, A *kula,* a house lot

Thus it appears there was a church and cemetery near the present Kalākaua Avenue as early as 1854, which was later rebuilt under the direction of Father Modestus Favens at or in the vicinity of the present-day St. Augustine Church on ‘Ōhua Avenue (Schoofs 1978). The earliest depiction of a church in this vicinity appears on an 1881 island-wide Hawaiian Government survey map by W.D. Alexander (Figure 11). The map also depicts several structures in the vicinity of the current project area as well as a coconut grove to the northeast (*mauka*) of the project area.

Schoofs goes on to relate that regular celebrations of the Holy Mass at the Waikīkī Catholic Church did not begin until the Spanish American war (1898-1901) when:

> American troops were encamped near Diamond Head, among them a great number of Catholics. At their request Father Valentine H. Franck, SS.CC., celebrated Mass every Sunday in the small chapel in Waikiki, although but half of the men could be accommodated in it.
>
> It was decided to raise a temporary but much larger chapel. With plenty of eager hands at work, it took less than a week to erect the new building. There was nothing fancy about the new chapel, which was reduced to its simplest form – four joists resting upon twelve underpinnings. A number of uprights and rafters made up its skeleton. For wall and roof covering coconut fronds were used. Up front a fairly large cross was the only feature that suggested a place of worship.
>
> Bishop Gulstan Ropert blessed this primitive chapel and entrusted it to the care of Father Valentine. Regular services were held for a very fervent congregation of islanders and servicemen. Later a wooden floor was put in and the coconut fronds serving as wall covering were replaced by lattice work, while a galvanized roof afforded better protection against the rain….
>
> The Catholics of Waikiki … soon decided to finance the erection of a more permanent and dignified edifice, only one feature of the former structure being retained – its lattice work. Upon its completion, Bishop Gulstan Ropert blessed it and forthwith offered Holy Mass in it. This was on August 28, 1901, the feast of St. Augustine, to whom the new chapel was accordingly dedicated. (Schoofs 1978:63)

Thus it appears that between circa 1898 and the middle of 1901 the church architecture was undergoing almost continuous improvement.

3.1.3 1900s

During the early 20th century, St. Augustine Church continued to expand in order to meet the needs of a growing Catholic presence on O‘ahu including an increase in tourists into Waikīkī. Schoofs (1978:64) writes, “To accommodate the increasing number of the faithful, St. Augustine’s had to be twice enlarged, first in 1910 and then again in 1925”. It was during this time that the church also purchased a right-of-way to Kalākaua Avenue (Schoofs 1978:64). A 1910 U.S. Coast Guard Engineers map depicts rice fields, ponds, banana plantations, and other orchards within approximately 150 m of the current project area that extend *mauka* into Mō‘ili‘ili (Figure 12). The map shows that during the early 20th century, the project area and its vicinity

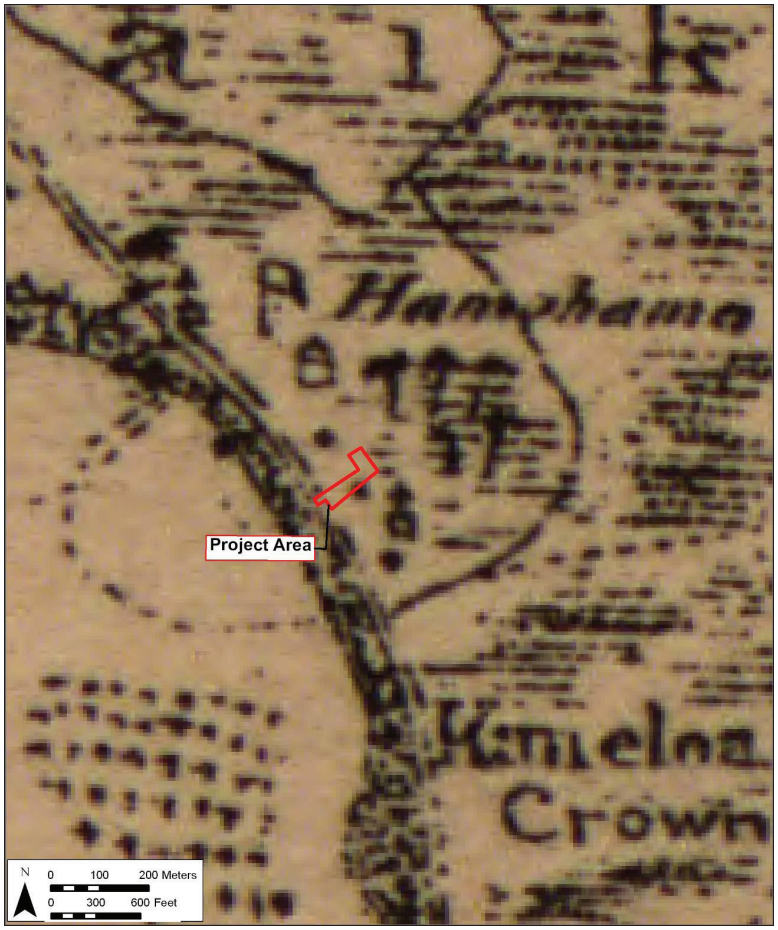

Figure 11. Portion of the 1881 Hawaiian Government survey map by W.D. Alexander showing a church in the vicinity of the current project area

Figure 12. 1910 U.S. Coast Guard Engineers map showing a church and several others structures within and in the vicinity of the current project area

were still primarily agricultural lands. Ōhua Avenue extends from Kalākaua Avenue along the northeastern project area boundary. The 1910 U.S. Coast Guard Engineers map also depicts a church (black rectangle with cross symbol) located midway along the northern project area boundary (see Figure 12). While the location of the church on the 1910 map may be accurate, it seems more likely that the church (St. Augustine's) was actually located within the current project area and depicted on the 1910 map as a large rectangular structure in the center of the project area (southeast of the map-designated church). This rectangular structure closely matches the location of St. Augustine Church depicted on a 1914 Sanborn Fire Insurance map (Figure 13). Regardless of which depiction is accurate, the inclusion of the church on the 1910 and 1914 maps likely reflects the "more permanent and dignified edifice" (Schoofs 1978:63) erected in 1901.

During the 1920's Waikīkī landscape would be transformed when the construction of the Ala Wai Drainage Canal – begun in 1921 and completed in 1928 – resulted in the draining and filling in of the remaining ponds and irrigated fields of Waikīkī. The canal was one element of a plan to urbanize Waikīkī and the surrounding districts:

> The [Honolulu city] planning commission began by submitting street layout plans for a Waikīkī reclamation district. In January 1922 a Waikīkī improvement commission resubmitted these plans to the board of supervisors, which, in turn, approved them a year later. From this grew a wider plan that eventually reached the Kapahulu, Mō‘ili‘ili, and McCully districts, as well as lower Makiki and Mānoa...
>
> The standard plan for new neighborhoods, with allowances for local terrain, was to be that of a grid, with 80-foot-wide streets crossing 70-foot-wide avenues at right angles so as to leave blocks of house lots about 260 by 620 feet. Allowing for a 10-foot-wide sidewalk and a 10-foot right-of-way [alley] down the center of each block, there would be twenty house lots, each about 60 by 120 feet, in each block [Johnson 1991:311].

In 1927 Father Emile Roger was transferred to St. Augustine becoming the first resident priest. Father Emile saw to the construction of a "medium-sized hall, patterned on the lattice work of the church, which was to serve as a kindergarten in the day time and as a meeting place for parochial organizations in the evening", which was opened in 1929 (Schoofs 1978:65). A 1927 Sanborn Fire Insurance map shows St. Augustine Church, mistakenly labeled as "St. Anthony's Church, within the current project area (Figure 14). The 1927 Sanborn map appears to show an enlarged (elongated) footprint of St. Augustine Church when compared to the 1914 Sanborn map (see Figure 13 and Figure 14). This enlarged footprint may account for the expansion of the church in 1925 described by Schoofs (1978:64). Expansion continued the following year when a six-grade school was opened on land purchased on the opposite (southeastern) side of Ōhua Avenue (Schoofs 1978:65). Newly created land tracts following the Ala Wai Canal's construction spurred a rush of development in the 1930's. An article in the Honolulu Star-Bulletin in 1938 extolled the area's progress:

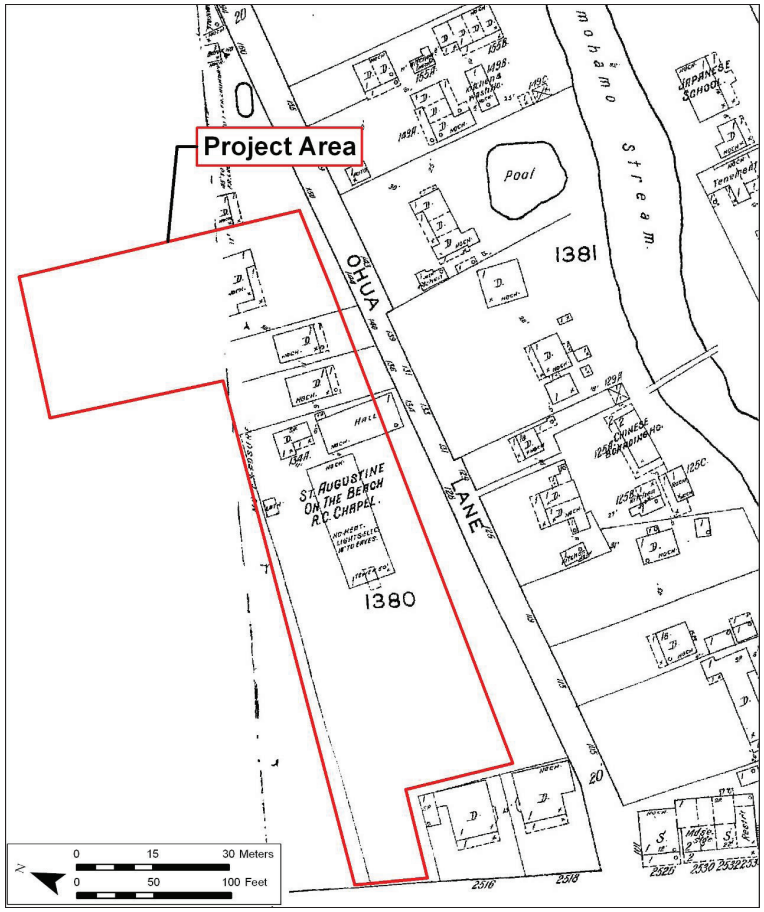

Figure 13. 1914 Sanborn Fire Insurance map showing St. Augustine's Church and other structures within the current project area

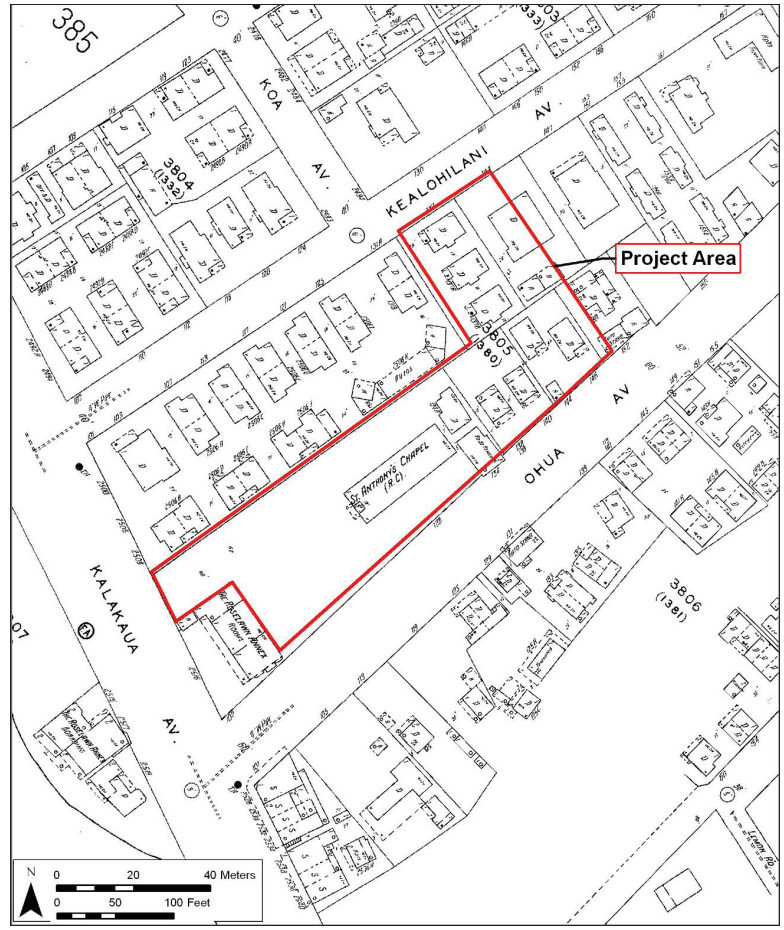

Figure 14. 1927 Sanborn Fire Insurance map showing St. Augustine's Church (mistakenly labeled "St. Anthony's Church") and other structures within the current project area

> The expansion of apartment and private residence construction is no secret. Examination of building permits will show that more projects have been completed during the past year, and more are now underway in this area, than in any other section of the territory.
>
> These developments are being made by island residents who have recognized the fact that Waikīkī presents the unparalleled possibility for safe investment with excellent return. (Newton 1938:10)

A circa 1930’s photograph of St. Augustine Church (Figure 15) shows the location of the church and another adjacent structure that is identified as a “Hall” on the 1914 Sanborn map and indicated “To Be Removed” on the 1927 Sanborn map (see Figure 13 and Figure 14).

The entrance of the United States into World War II following the Japanese bombing of Pearl Harbor on December 7, 1941 put on hold plans for the development of Waikīkī as a tourist destination. Until the war’s end in 1945, the tourist trade was non-existent “...since the Navy controlled travel to and from Hawai‘i and did not allow pleasure trips” (Brown 1989:141). For the duration of the war, Waikīkī was transformed into a recreation area for military personnel.

> It was not the same Waikīkī as before the war, though; barbed wire barricades now lined its sands, and there were other changes too. Fort DeRussy became a huge recreation center, with a dance hall called Maluhia that attracted thousands of men at a time. The Moana Hotel continued to function, but many other establishments and private homes in the area were taken over by the military [Brown 1989:141].

By the early 1950s, Waikīkī had become fully urbanized and Kalākaua Avenue extended along the coast to the base of Diamond Head (Figure 16). Foster Towers, located immediately adjacent to the northern boundary of the current project area, was the first high rise to be built in Waikīkī in the 1960s. Completed in 1962, it was also the first building to block the view of Diamond Head (Hibbard and Franzen 1986:139).

The existing Parish Hall of St. Augustine Church was constructed in 1959 on lands subleased from the Lili‘uokalani Trust by the Walter Coombs Estate and Pauline Spector. The two-story masonry apartment building (Building Permit #15989) replaced several wood cottages that were built in the 1920s, which are depicted on the 1927 Sanborn Fire Insurance map (see Figure 14).

In 1962, St. Augustine Church was replaced with a French-Gothic style building, the largest church built in Hawai‘i at the time.

Recently, extensive renovations have been undertaken to preserve the church. Since 2003, structural damage repair, interior upgrades, and general restoration have been ongoing.

The high rise hotels surrounding the project area, including the Waikiki Marriot, Waikiki Banyan, Prince Kuhio, and Pacific Beach Hotel, were all built within the past 40 years.

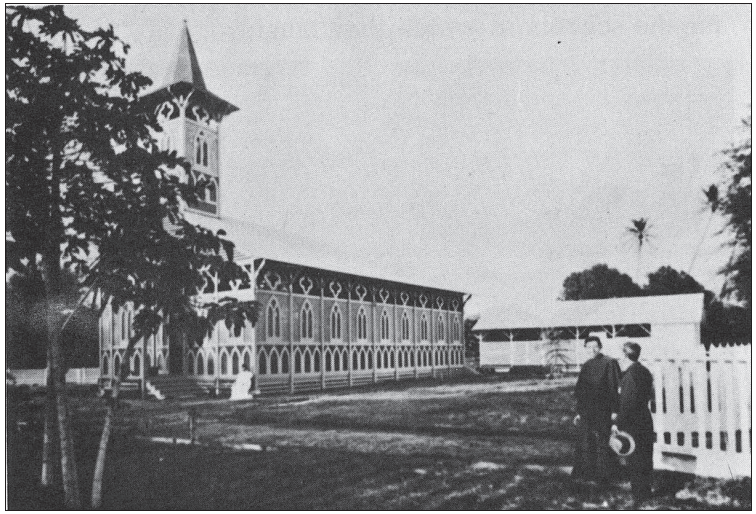

Figure 15. Photograph (circa 1930) showing St. Augustine Church and an adjacent structure (source: Bunson 1977:151)

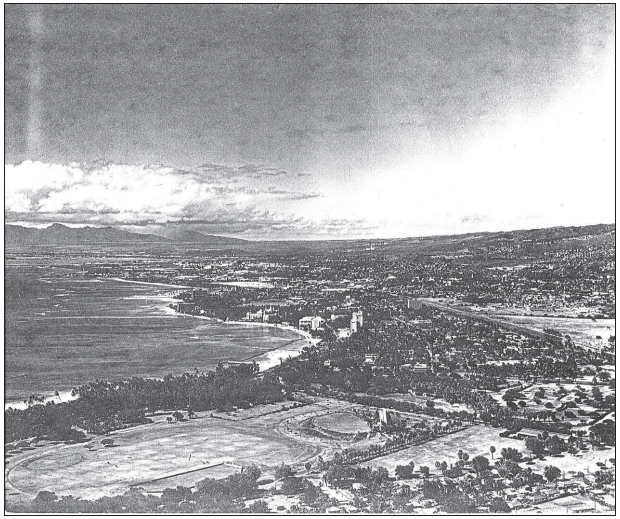

Figure 16. 1957 photograph of Waikīkī from Diamondhead (source: Bishop Museum)

3.2 Previous Archaeological Research

The locations of archaeological studies conducted in the vicinity of the current project area are illustrated in Figure 17 and summarized in Table 3. The following is a summary of these archaeological studies.

International Archaeological Research Institute, Inc. performed archaeological monitoring and data recovery at the Pacific Beach Hotel Office Annex (Beardsley and Kaschko 1997). Two traditional Hawaiian burials were discovered inadvertently and removed. Intact buried traditional Hawaiian cultural deposits were encountered, including a late pre-contact habitation layer, which contained pits, fire pits, post molds, artifacts, and food debris. The artifacts included basalt and volcanic glass flakes and cores, a basalt adze and adze fragments, worked pearl shells, a coral file and abraders, and a pearl shell fishhook fragment. The deposit was assigned SIHP# 50-80-14-4224. Additionally, a late nineteenth century trash pit was discovered, which contained a variety of ceramics, bottles, and other materials.

From November 1999 to October 2000, CSH encountered 44 human burials, with associated cultural deposits, during archaeological monitoring of excavations for a waterline project on Kalākaua Avenue between Ka‘iulani and Monsarrat Avenues (Perzinski et al. 2000; Winieski et al. 2002). Except for previously disturbed partial burials in fill, the bulk of the burials were encountered within a coralline sand matrix. The burials were designated SIHP# 50-80-14-5856 to -5862. A major cultural habitation layer was designated SIHP# 50-80-14-5940. Additionally, remnant light gauge rail from the Honolulu Transit trolley system was encountered (SIHP# 50-80-14-5942).

Two in situ and two previously disturbed human burials were encountered by Pacific Legacy during archaeological mitigation at the site of a new Burger King (Cleghorn 2001a) and an adjoining ABC Store (Cleghorn 2001b). The finds were located at the intersection of ‘Ōhua Avenue and Kalākaua Avenue (Cleghorn 2001a and 2001b). Because of their proximity to five burials encountered during the Kalākaua waterline project (see Winieski et al. 2002), they were included in the previously assigned SIHP # 50-80-14-5861. Three of these burials were recovered, and one was left in place. Volcanic glass fragments were found in association with one of the burials. A cultural layer was also observed that contained moderate to heavy concentrations of charcoal and fragments of volcanic glass. Historic-era artifacts, including a bottle fragment, plastic and glass buttons, a ceramic fragment, and metal fragments also were encountered within fill materials.

During archaeological monitoring by CSH for the Waikīkī Force Main Replacement project, scattered human remains were encountered in an excavation on ‘Ōhua Avenue (Winieski and Hammatt 2001). The remains included the proximal end and mid-shaft of a human tibia, the mid-shaft of a fibula, a patella, the distal end and mid-shaft of a femur, and small unidentified fragments. These remains occurred within a coralline sand matrix that had been heavily disturbed by previous construction and by the on-going construction project. No precise location for the original burial site was identified. The disturbed burial was assigned SIHP# 50-80-14-5797. In a test probe adjacent to the excavation on ‘Ōhua Avenue, a dog burial was encountered in a pit feature originating in an upper fill layer. An associated metal collar indicated that the deposition was historic.

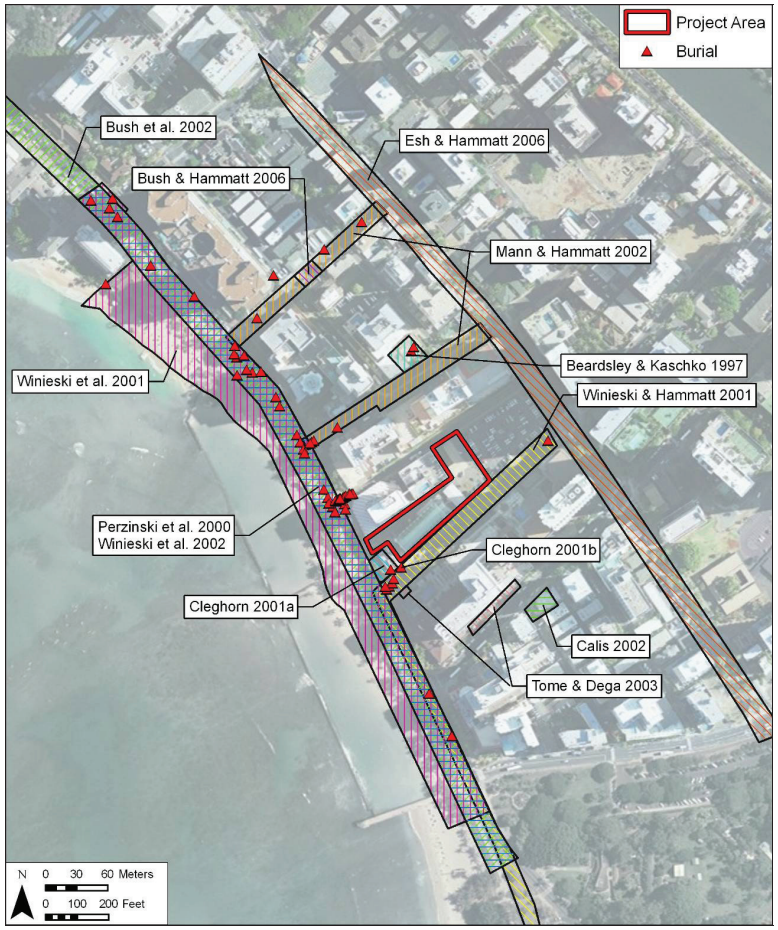

Figure 17. Aerial photograph (source: World Imagery 2009), showing previous archaeological studies conducted in the vicinity of the current project area

Table 3. Previous Archaeological Studies located in the Vicinity of the Current Project Area

Reference	Type of Investigation	Location	Results
Beardsley and Kaschko 1997	Archaeological Monitoring and Data Recovery	Pacific Beach Hotel Office Annex	Traditional Hawaiian cultural deposit and 2 human burials (SIHP# 50-80-14-4224); 3 ^{14}C dates
Perzinski et al. 2000	Burial Findings	Kalākaua Ave between Ka‘iulani and Monsarrat Ave	Documented 44 sets of human remains (SIHP# 50-80-14-5856 to -5862); 37 disinterred, 7 left in place; believed to be Native Hawaiian, interred prior to 1820
Cleghorn 2001a and b	Mitigation	Burger King & ABC Store Construction Site	Encountered 4 human burials while locating a buried sewer-line; assimilated with SIHP# 50-80-14-5861; recovered 3 of the 4 burials
Winieski and Hammatt 2001	Monitoring Report	‘Ōhua Ave and Kūhiō Ave	Disturbed, disarticulated human remains encountered; possibility that Hawaiian or Historic materials and other human burials may be present within the project area
Winieski et al. 2001	Monitoring Report	Kūhiō Beach	Skeletal remains of 10 individuals (SIHP# 50-80-5858, -5862, and -5863), 6 disinterred, only 2 located in situ; 4 indigenous artifacts, none in situ; discontinuous cultural layer; historic seawall
Bush et al. 2002	Monitoring Report	Kalākaua Ave between Ala Moana Blvd and Kapahulu Ave	Encountered 4 human burials likely pre-contact native Hawaiians (SIHP# 50-80-5856 Feature C, -5860 Feature U and V, and -5864); several historic trash pits; entire pig within an *imu* pit (estimated date, A.D. 1641-1671); gleyed much associated with former ponds
Mann and Hammatt 2002	Monitoring Report	Lili‘uokalani Ave and Uluniu Ave	Five burial finds of 6 individuals (in situ burial assigned SIHP# 50-80-14-6369, burial 5 assimilated with -5859); 2 historic trash pits
Winieski et al. 2002	Monitoring Report	Kalākaua Ave between Ka‘iulani and Monsarrat Ave	Report of 44 human burials (SIHP# 50-80-14-5856 to -5862), 37 disinterred (see Perzinski et al. 2000); habitation layer; remnant fragment of Honolulu Transit trolley system

Reference	Type of Investigation	Location	Results
Calis 2002	Monitoring Report	Lemon Road	No significant finds
Tome and Dega 2003	Monitoring Report	Waikīkī Marriot	One disturbed, isolated possible human bone fragment found
Esh and Hammatt 2006	Monitoring Report	Kūhiō Ave, from Kalākaua Ave to Ka‘iulani St	No significant finds
Bush and Hammatt 2006	Monitoring Report	Uluniu Avenue	No significant finds

CSH performed archaeological monitoring of the Kūhiō Beach Extension/Kalākaua Promenade project and ten human burials were encountered (Winieski et al. 2001). Only two of the burials were located in situ within naturally deposited calcareous beach sand while, the other eight previously were disturbed. These two burials along with two others were left in place, and they were assigned SIHP# 50-80-14-5858. The other six burials were disinterred and the burial sites were designated SIHP# 50-80-14-5862 and -5863. Additionally, a major cultural layer was found and documented (SIHP# 50-80-14-5940), apparently part of the same major cultural layer associated with the waterline project between Ka‘iulani and Monsarrat Avenues (see Winieski et al. 2002). Also, a portion of an historic seawall (SIHP# 50-80-14-5948) was encountered near the intersection of Kapahulu and Kalākaua Avenues.

CSH inadvertently encountered four sets of human remains during excavation activities relating to the Waikīkī Anti-Crime Street Lighting Improvement project along portions of Kalākaua Avenue (Bush et al. 2002). The first burial was encountered on Kalākaua Avenue, just before Dukes Lane, and assigned SIHP# 50-80-14-5864. The burial was left in place, and the light post was repositioned. The second burial was encountered at the intersection of Kalākaua Avenue and Ka‘iulani Avenue. Earlier, during archaeological monitoring for the water mains project, two burials were encountered in the immediate area of the second burial find and assigned SIHP# 50-80-14-5856 features A and B. Due to the close proximity to the previously encountered burials, the second burial was assigned the same SIHP# 50-80-14-5856, and designated feature C. Burials 3 and 4 were recovered at the intersection of Kalākaua Avenue and Kealohilani, near an area of concentrated burials assigned SIHP# 50-80-14-5860 during monitoring for the water mains project. Consequently, burials 3 and 4 were also assigned SIHP# 50-80-5860, features U and V. In addition to human remains, pre-contact deposits, historic and modern rubbish concentrations, and pond sediments also were encountered. An entire pig was found within an *imu* pit, and it was dated to between A.D. 1641 and 1671. The find appeared to be isolated, and it was not related to any habitation layer or cultural material.

In 2001 and 2002, CSH performed archaeological monitoring for the installation of 8- and 12-inch water mains on Lili‘uokalani Avenue and Uluniu Avenue (Mann and Hammatt 2002). During the course of monitoring, five burial finds, consisting of six individuals, were recorded within the project area. Four burial finds were recorded on Uluniu Avenue; three of these

inadvertent finds were in fill sediment. Due to the nature of the three burial finds in fill, it was concluded that no SIHP number would be assigned to these three previously disturbed burials. The single in situ burial encountered on Uluniu Avenue was assigned SIHP# 50-80-14-6369. The fifth burial, consisting of two individuals in fill material, was located on Lili‘uokalani Avenue. Since three burials had been found in the immediate vicinity during a previous project that had been assigned to SIHP# 50-80-14-5859 (see Winieski et al. 2002), the two new individuals were recorded as Feature H of this previously recorded historic property. Two historic trash pits also were located in the project area. One historic trash pit (SIHP# 50-80-14-6372) *mauka* of the intersection of Uluniu Ave and Prince Edward Street yielded early 1900s habitation information. The second historic trash pit (SIHP#50-80-14-6398) was encountered on Lili‘uokalani Ave, and it contained 1800s to mid 1950s habitation information.

In 2002, Scientific Consultant Services, Inc. completed an archaeological monitoring report for the ABC Store No. 35 Lemon Road fence wall construction project (Calis 2002). Three glass bottles or diagnostic bottle fragments were encountered that dated to the mid-nineteenth century. No historic properties were identified.

In May 2003, Scientific Consultant Services, Inc. monitored construction along the east (Paokalani Avenue) and west (‘Ōhua Avenue) flanks of the Waikiki Marriott Hotel in Waikīkī (Tome and Dega 2003). One fragment of possible human osseous material was recovered from the project area near the intersection of Ōhua Avenue and Kalākaua Avenue. It was found in association with modern trash debris and imported fill matrices, suggesting a secondary context.

CSH conducted archaeological monitoring for landscaping improvements along Kuhio Avenue, from Kalākaua Avenue to Ka‘iulani Street in Waikīkī (Esh and Hammatt 2006). No archaeological remains were encountered with the exception of in situ dog (*Canis familiaris)* remains. The dog remains were not associated with any cultural material. No SIHP number was assigned.

In 2006, CSH completed archaeological monitoring for the installation of service gas lines and meter at 125 Uluniu Avenue (Bush and Hammatt 2006). No historic properties were identified.

3.3 Background Summary and Predictive Model

Historical background research included study of archival sources, LCAs and historic maps, as well as a review of past archaeological research in the vicinity to construct a history of land use. From these sources, a predictive model was developed to give a general idea of pre-contact and historic coastal land use patterns in the coastal area of Waikīkī.

The *ahupua‘a* of Waikīkī in the centuries before the arrival of Europeans was an intensely used locale with abundant natural and cultivated resources - including an expansive system of irrigated taro fields - supporting a large population that included the highest-ranking *ali‘i*. In the nineteenth century, after a period of depopulation, Waikīkī was reanimated by the Hawaiian *ali‘i*, the foreigners residing there, and by the farmers continuing to work the irrigated field system, which had been converted from taro to rice. This farming continued up to the first decades of the 20th century until the Waikīkī reclamation project drained the remaining ponds and irrigated fields.

Previous and on-going archaeological reports have documented numerous pre- and post contact human burials throughout the Waikīkī area and within close proximity to the current project area (see Figure 17). Especially relevant to the present project area are 22 burials that were encountered at the intersection of Kealohilani and Kalākaua Avenues (Winieski et al. 2002) and an additional seven burials that were encountered at the intersection of ‘Ōhua and Kalākaua Avenues (Cleghorn 2001a, 2001b; Winieski et al. 2002). Isolated pre-contact burials and burial clusters in Waikīkī have been found primarily in sandy deposits, just above the water table and below historic-era fill materials. It is likely that pre- and/or post-contact burials will be found if intact Jaucas sand deposits are encountered below the twentieth century fills likely to be in the project area.

Archaeological studies within Waikīkī and in the vicinity of the project area have recorded the presence of subsurface cultural deposits of both pre- and post-contact provenance. These deposits have generally remained intact despite the years of construction activity that have altered the entire Waikīkī area. During archaeological monitoring of Kalākaua, Kealohilani, Ōhua Avenues mentioned above, intact cultural deposits were encountered (Cleghorn 2001a, 2001b; Winieski et al. 2002). It is likely that pre- and post-contact subsurface cultural deposits will be encountered within the current project area beneath twentieth century fill layers.

Section 4 Results of Fieldwork

4.1 Ground Penetrating Radar

A ground penetrating radar (GPR) survey was conducted within the project area prior to subsurface testing in an attempt to define the local stratigraphy and to prospect for buried cultural deposits. Six discrete locations (Survey Area 1-6) within the project area were surveyed with GPR (Figure 18) prior to the first phase of subsurface testing. Two locations (Survey Area 7 & 8) were surveyed with GPR following the second phase of subsurface testing which resulted in the identification of two human burials (SIHP 50-80-14-7136, Features B and C; see Section 4.4 below). One additional location (Survey Area 9) was surveyed with GPR prior to the fourth phase of subsurface testing within the proposed St. Damien Museum elevator shaft.

Two-dimensional depth profiles and horizontal slice maps of GPR data collected at each survey area were analyzed. The depth profiles consist of a subsurface profile of the GPR data, illustrating the entire range of subsurface radar penetration that was possible during the survey, while the horizontal slices are similar to plan view maps taken at arbitrary depth intervals, and are useful for displaying the general shape and spatial distribution of recorded subsurface anomalies.

4.1.1 Summary

In general, the GPR survey was successful as subsurface anomalies were able to be accurately located and maximum depth “visibility” (i.e. radar wave penetration) reached approximately 100 cm below the surface. Additionally, the GPR appeared to be able to define the local stratigraphy through the presence of subtle horizontal banding illustrated within GPR depth profiles.

Identified subsurface anomalies within the project area were of varying size, distribution, and prominence. Due to the project area’s location within urban Waikīkī, observed anomalies could correspond to subsurface features associated with modern urbanization, such as: backfilled machine excavations, abandoned or in-use utility lines, buried building foundations, and miscellaneous construction debris. However, background research has indicated that the project area was also intensively utilized by both pre- and post-contact populations, thus indicating that the observed anomalies may also correspond to buried archaeological deposits including: fire pits, refuse pits, midden and artifact concentrations, and human burials. The interpretation of these anomalies prior to ground-truthing via excavation is not an exact science, but rather an educated guess based on an analysis of the size, distribution, and prominence of observed anomalies and incorporating that data with background research of the project area’s prior land use history. A detailed analysis of the observed anomalies per survey area follows this general discussion below (see GPR Data Analysis section).

Of note are anomalies observed within Survey Area 7 and 8. As noted above, these areas were surveyed with GPR following the second phase of subsurface testing which resulted in the identification of two human burials (SIHP -7136, Features A & B). Both of these burials extended beyond the extent of the test excavation (Trench 8) in which they were observed, and thus provided an excellent opportunity to prospect for subsurface anomalies that may be

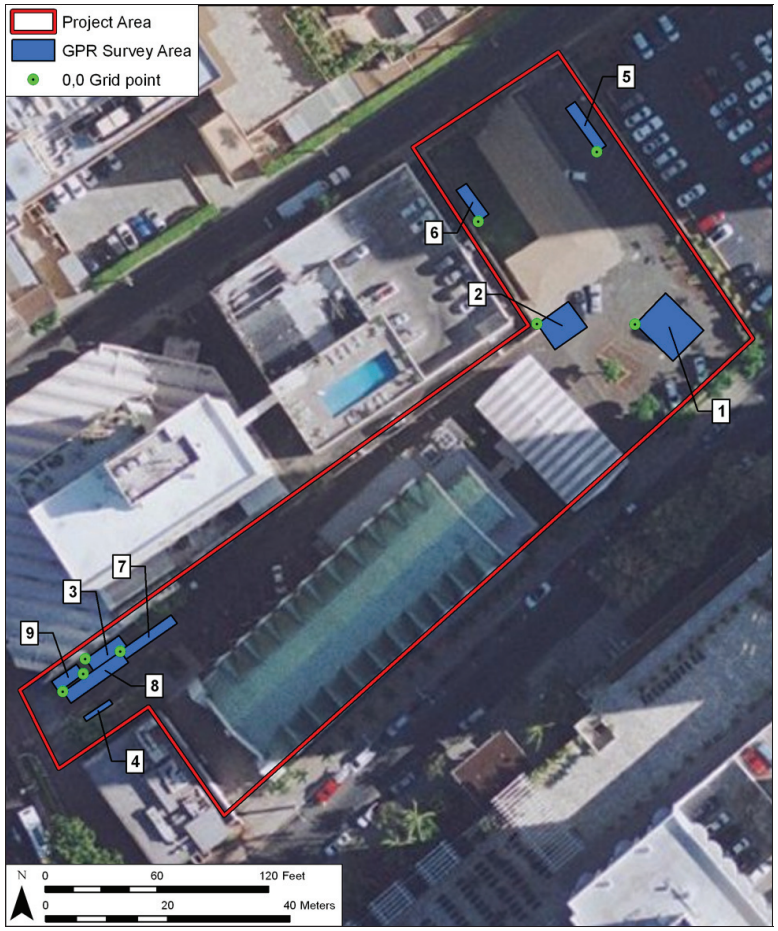

Figure 18. Aerial photograph (source USGS Orthoimagery 2005) showing the locations of GPR survey areas

associated with the undisturbed portions of these burials. Based on GPR data from Survey Area 8, it appears that burial pits associated with human interment can be detected. These burial pits appear as isolated anomalies that are fairly ephemeral, consisting of well defined, but weakly expressed hyperbolas located approximately 70 cm below the existing ground surface (see Survey Area 8 discussion below). These anomalies contrast to ones associated with subsurface utilities and/or other solid objects (i.e., concrete slabs, basalt boulders, etc.) which tend to be very pronounced and consist of clusters of anomalies as opposed to isolated ones.

In regard to project area stratigraphy, GPR depth profiles indicated that the soils within the project area were relatively uniform, consisting of a single sediment type. The exception was the presence of subtle horizontal banding observed from 0 to 25 cmbs within the GPR depth profiles. It is believed that this narrow horizontal banding corresponds to asphalt and underlying fill associated with the driveways and parking lots present throughout the project area. Of note were Survey Area 1, 2, 3 and 7, prominent and concentrated anomalies within these locations suggested the presence of extensive prior subsurface disturbance, likely associated with machine excavation for the installation of utilities or other various construction activities (i.e., land reclamation, grading, or building construction). These disturbances were observed from 0 to 100 cmbs. Additionally, anomalies observed in these survey areas clearly indicate the presence of elongated linear anomalies that have a high probability to be associated with utility lines or drainage systems.

4.1.2 GPR Data Analysis

4.1.2.1 Survey Area 1

Survey Area 1 was located near the northeastern corner of the project area, with an existing asphalt parking lot (see Figure 18). The survey area measured approximately 8 m by 6 m, and involved the collection of 17, 6 m long transects spaced 25 cm apart.

GPR depth profiles collected at Survey Area 1 indicate the presence of prominent subsurface anomalies just below the surface at depths ranging from 20 to 30 cm (Figure 19). These anomalies appear to have a solid consistency, possibly depicting metal or basalt objects, and may correspond to utility lines, buried structural foundations, or naturally deposited boulders.

A review of horizontal slice maps indicates the presence of numerous anomalies of varying size, distribution, and prominence (Figure 20). Slice maps from 0-60 cmbs indicate the possible presence of utility lines and buried cultural deposits (see Figure 20). Possible utility lines are represented by linear distributions of anomalies, while potential cultural deposits consist of random clusters of ephemeral anomalies.

The slice map ranging from 60-90 cmbs shows a large mass of anomalies situated in the northwestern corner of Survey Area 1 (see Figure 20). This may be an indication of a large subsurface disturbance such as a backfilled machine excavation or the structural remnants of a former building.

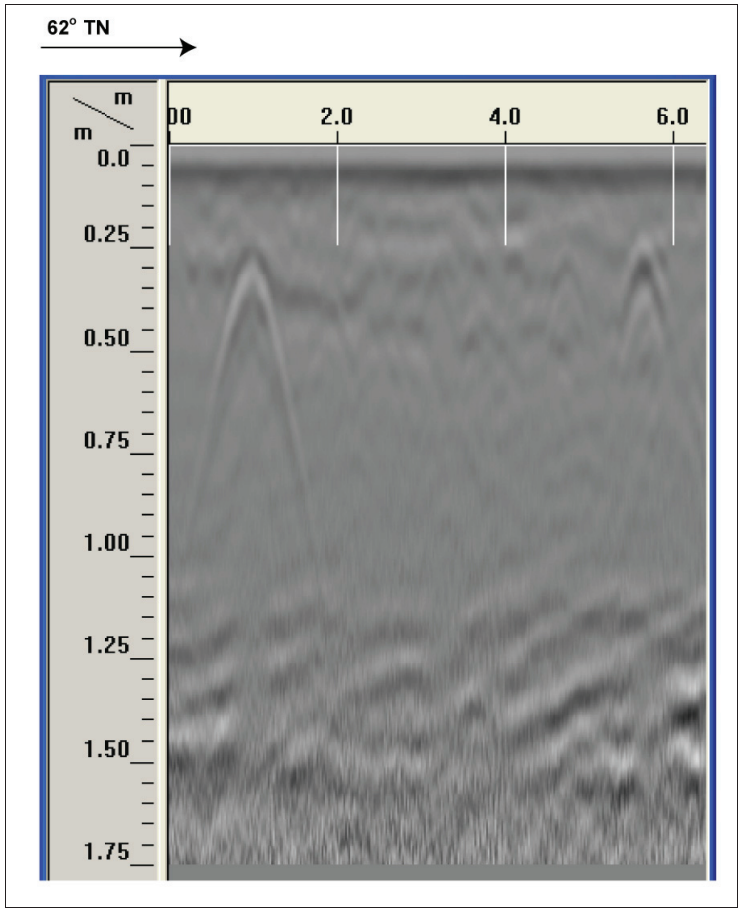

Figure 19. Representative GPR profile collected at Survey Area 1

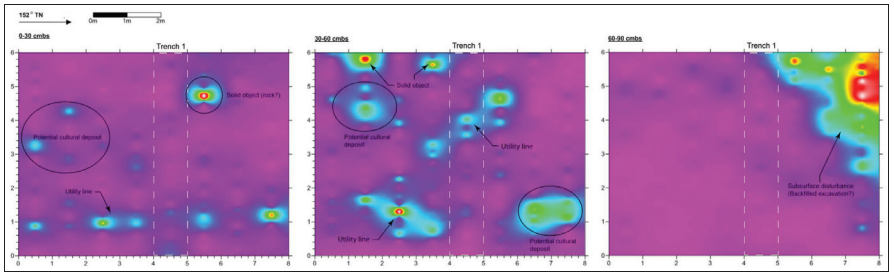

Figure 20. Horizontal slice maps collected at Survey Area 1

4.1.2.2 Survey Area 2

Survey Area 2 was located approximately 18 m west of Survey Area 1, with an existing asphalt parking lot (see Figure 18). The survey area measured approximately 6 m by 4 m, and involved the collection of nine, 6 m long transects spaced 25 cm apart.

GPR depth profiles collected at Survey Area 2 identified a large concentration of subsurface anomalies within the eastern portion of the survey area (Figure 21). Also of note was the presence of irregular horizontal banding, which was discontinuous and not parallel. Both of these GPR features indicate extensive subsurface disturbance via machine excavation with the potential of imported fill material and/or a buried concrete slab being present. It should be noted that a concrete storm drain was situated within the southern portion of this survey area, and that all of the GPR features observed are likely associated within the drain and its construction.

Horizontal slice maps corroborate the analysis generated from the depth profiles. Horizontal slice maps at depths ranging from 0-90 cmbs show extensive subsurface disturbance in the form of anomalies, which area either large in size or are very prominent (Figure 22). These anomalies could correspond to backfilled excavations and imported fill material (represented by clusters of anomalies that are large in size) or correspond with utility lines, structural remnants, and construction debris (represented by prominent anomalies corresponding to dense objects).

4.1.2.3 Survey Area 3

Survey Area 3 was located near the southwestern corner of the project area, within an existing asphalt driveway just *mauka* of Kalākaua Avenue (see Figure 18). The survey area measured approximately 7 m by 3 m, and involved the collection of seven, 7 m long transects spaced 25 cm apart.

GPR depth profiles collected at Survey Area 3 indicate the presence of imported fill layers which extend beyond the fill associated with asphalt driveway/parking lot construction noted throughout the project area. This is based on prominent horizontal banding observed from 0 to 50 cm below the surface (Figure 23). Ephemeral anomalies were observed from 30-60 cmbs. These may correspond to cultural deposits, but most likely are associated with utilities or construction debris associated with the fill layers. These features, which would normally be represented by prominent anomalies, have probably been obscured due to the absence of uniform stratigraphy in this area, making accurate GPR collection difficult.

Horizontal slice maps at depths ranging from 0-90 cmbs show extensive subsurface disturbance in the form of anomalies, which area either large in size or are very prominent (Figure 24). These anomalies could correspond to backfilled excavations and imported fill material (represented by clusters of anomalies that are large in size) or correspond with utility lines, structural remnants, and construction debris (represented by prominent anomalies corresponding to dense objects).

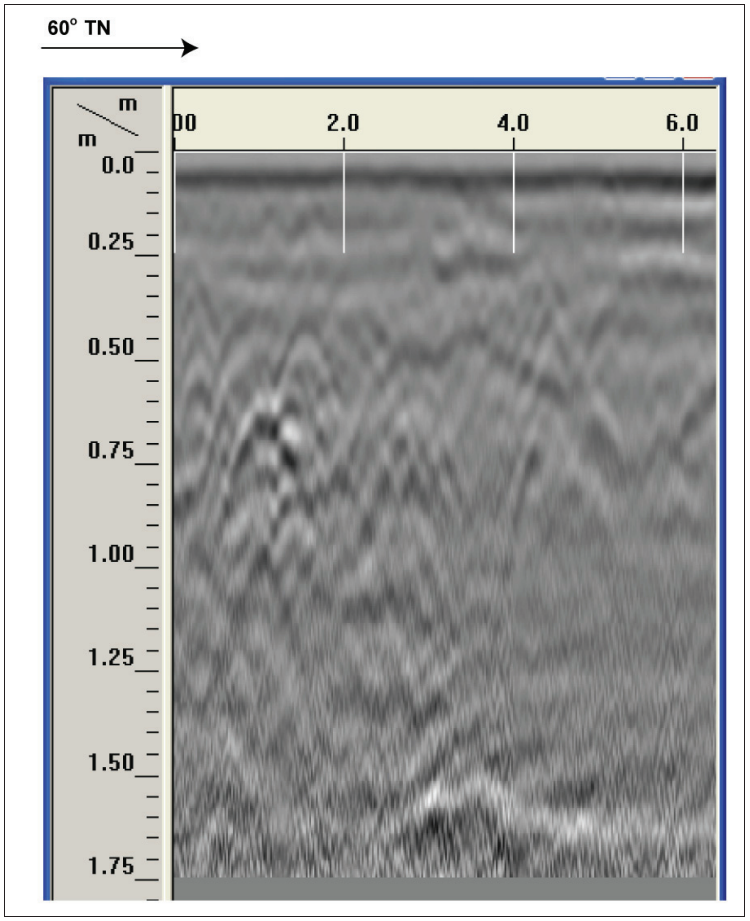

Figure 21. GPR profile collected at Survey Area 2

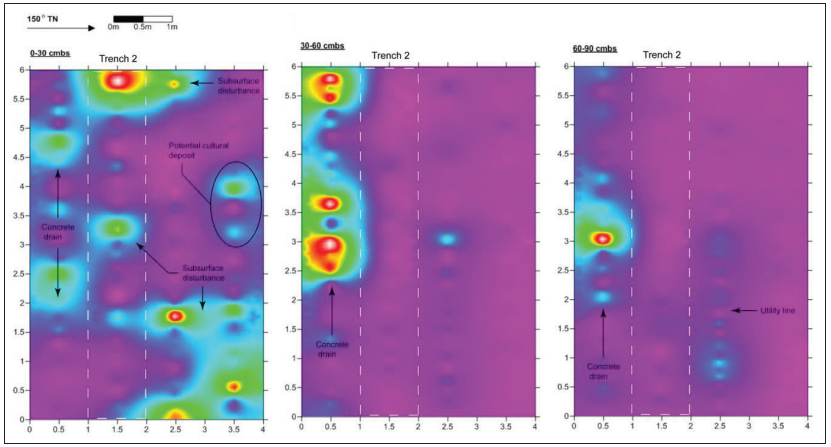

Figure 22. Horizontal slice maps collected at Survey Area 2

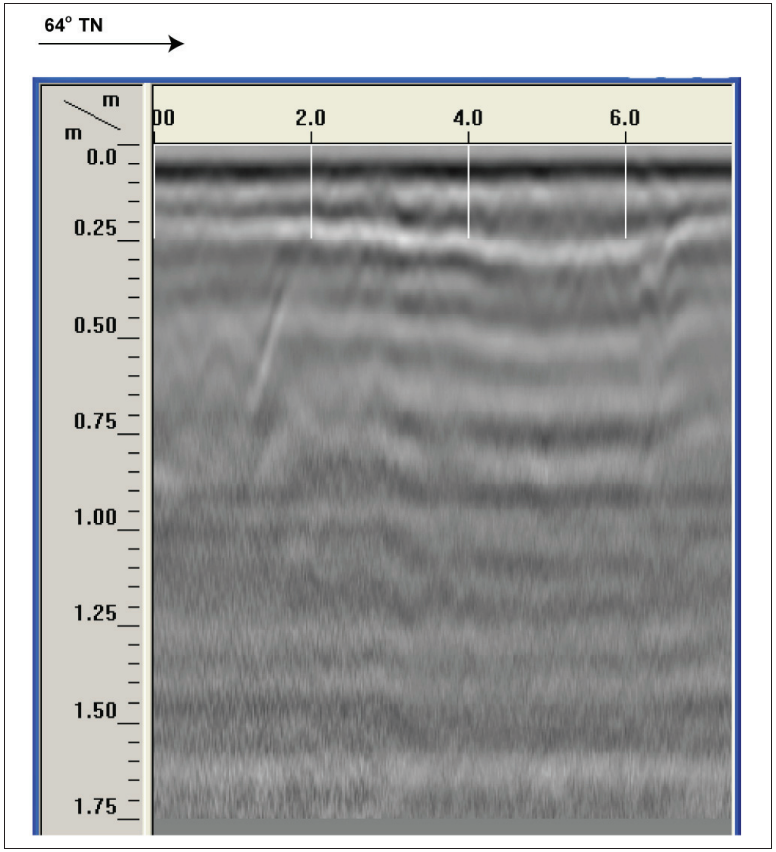

Figure 23. GPR profile collected at Survey Area 3

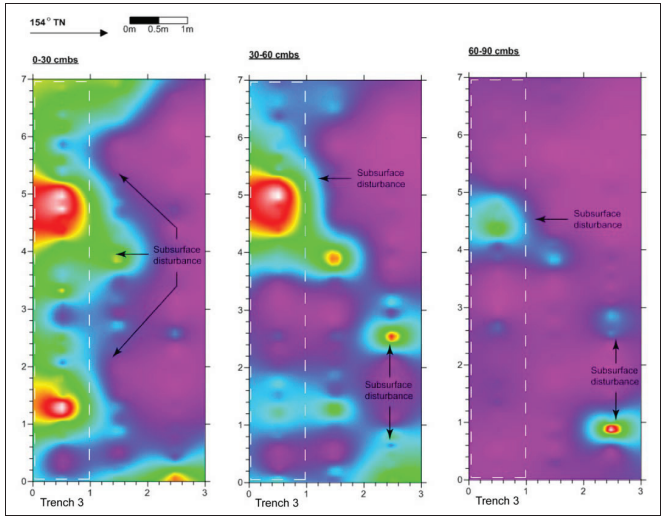

Figure 24. Horizontal slice maps collected at Survey Area 3

4.1.2.4 Survey Area 4

Survey Area 4 was located near the southwestern corner of the project area, within a concrete walkway just *mauka* of Kalākaua Avenue (see Figure 18). GPR survey at this location consisted of a single 7 m long transect. Minimal GPR survey was conducted in anticipation of limited results due to the presence of a thick concrete slab overlying the immediate area.

As anticipated the GPR survey at Survey Area 4 was limited by the presence of a thick concrete slab. The GPR depth profile shows numerous prominent anomalies within a tightly packed row. This signature is typical of concrete and corresponds to the rebar present within the concrete (Figure 25). These anomalies obscured any other subsurface features that may have been present below the concrete slab.

4.1.2.5 Survey Area 5

Survey Area 5 was located near the northwestern corner of the project area, within an existing asphalt driveway just southwest of Kealohilani Avenue (see Figure 18). The survey area measured approximately 9 m by 2 m, and involved the collection of five, 9 m long transects spaced 25 cm apart.

GPR depth profiles collected at Survey Area 5 indicate the presence of numerous subsurface anomalies ranging from 20 to 65 cmbs (Figure 26). These anomalies appear to be fairly ephemeral and may correspond to buried cultural deposits or naturally deposited cobbles. It could also represent the presence of a buried A-horizon (former land surface), with the anomalies corresponding to the natural topography (i.e., an uneven, undulating land surface) prior to grading.

A review of horizontal slice maps indicates the presence of a large prominent anomaly at the northwestern end of the survey area, which could correspond to prior disturbance in the form of a backfilled excavation (Figure 27). The remainder of the study area shows the presence of numerous ephemeral anomalies distributed primarily at the southeastern end of the study area and may correspond to buried cultural deposits or naturally deposited cobbles (see Figure 27).

4.1.2.6 Survey Area 6

Survey Area 6 was located in the northern portion of the project area, within a grassy lawn (see Figure 18). The survey area measured approximately 6 m by 2 m, and involved the collection of five, 6 m long transects spaced 25 cm apart.

GPR depth profiles collected at Survey Area 6 indicate poor radar wave penetration with maximum visibility reaching 80 cmbs (Figure 28). Radar “visibility” was also poor at this location as evidenced by anomalies that were barely visible and overall hazy data readout (i.e., the depth profile). Poor GPR performance at this location could be due to the survey area’s location within an actively maintained lawn. The lawn could have been recently watered and/or fertilized, both actions resulting in radar wave signal attenuation causing limited depth penetration and inaccurate data collection. Limited GPR results could also be attributed to varying fill layers at this location.

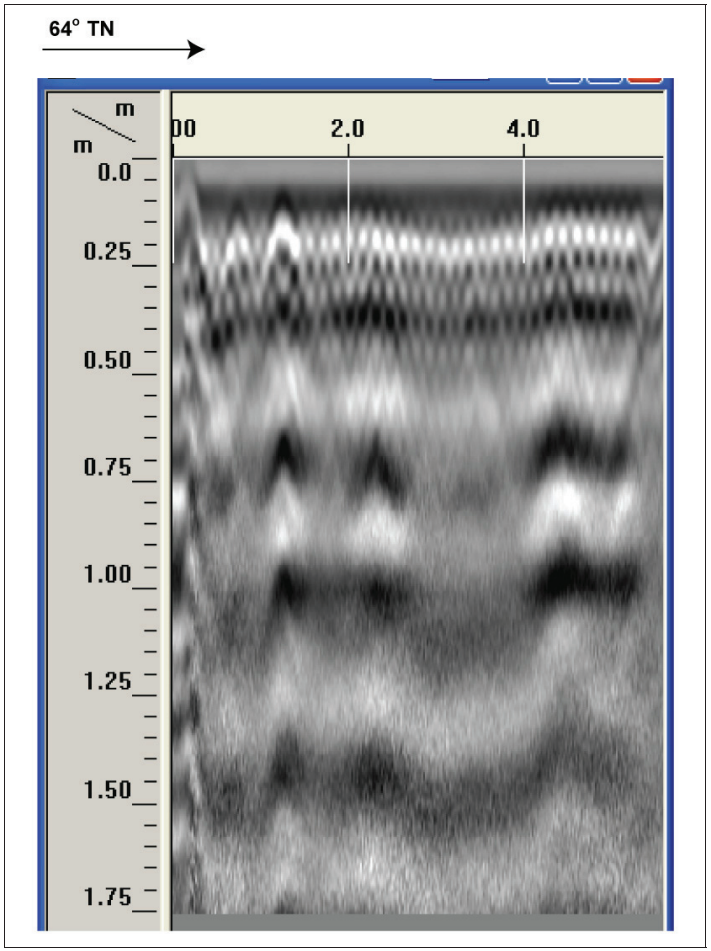

Figure 25. GPR profile collected at Survey Area 4

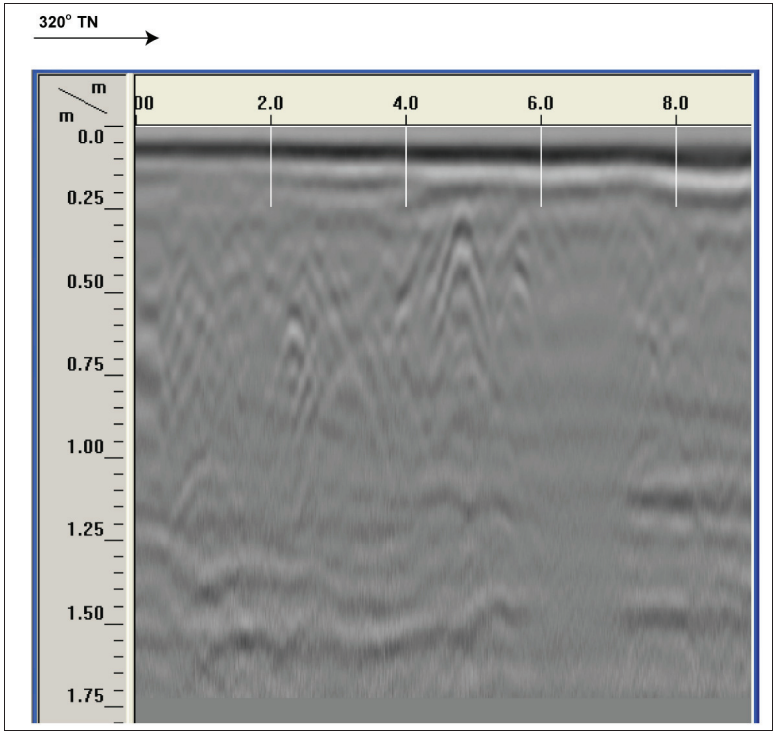

Figure 26. GPR profile collected at Survey Area 5

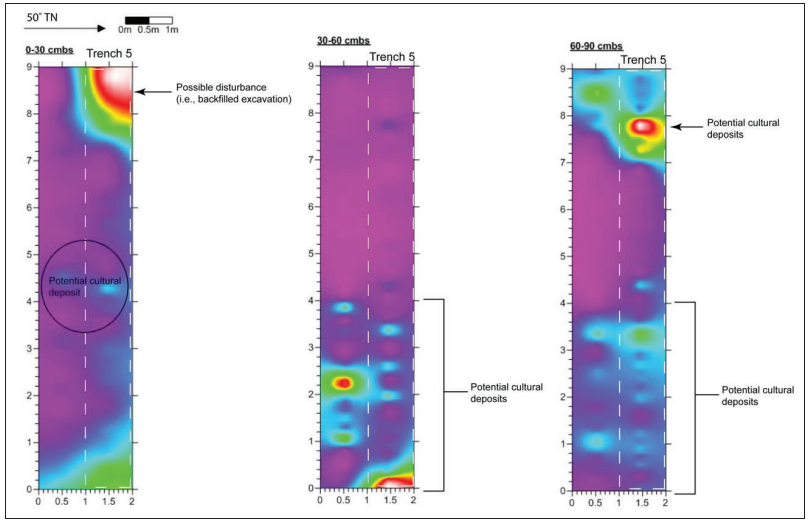

Figure 27. Horizontal slice maps collected at Survey Area 5

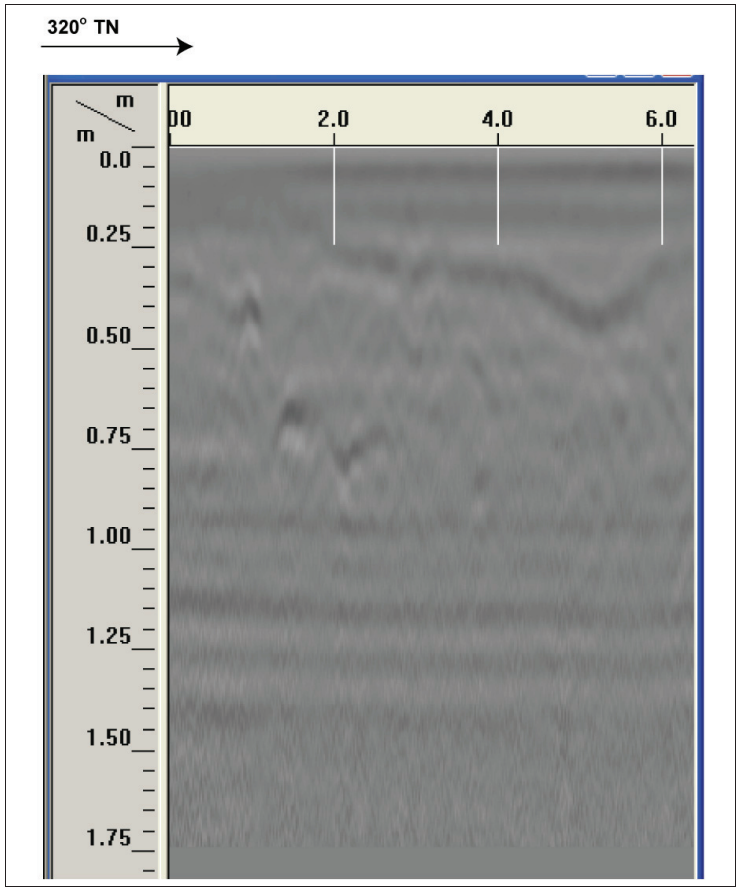

Figure 28. GPR profile collected at Survey Area 6

A review of horizontal slice maps indicate the presence of large masses of anomalies throughout the survey area, which could correspond to prior disturbance in the form of a backfilled excavations or imported fill layers (Figure 29). However, based on the factors previously mentioned above, the GPR data at this location is likely compromised and should be interpreted with caution.

4.1.2.7 Survey Area 7

Survey Area 7 was located near the southwestern corner of the project area, within an existing asphalt driveway just northwest of Kalākaua Avenue (see Figure 18). The survey area measured approximately 13 m by 2 m, and involved the collection of nine, 13 m long transects spaced 25 cm apart.

GPR depth profiles collected at Survey Area 7 indicate the presence of numerous subsurface anomalies ranging from 10 to 100 cmbs (Figure 30). A clustering of anomalies and stratigraphic irregularities from 25 to 50 cmbs appear to indicate prior subsurface disturbance associated with subsurface utility line installation. Of note is an isolated anomaly at the northeastern end of the survey area at a depth of 75 cmbs. This anomaly is similar to ones identified within Survey Area 8 (see below) which were determined to be associated with human burials.

Horizontal slice maps generated from data collected at Survey Area 7 are consistent with the data presented in the depth profiles. Subsurface anomalies observed from 0 to 75 cmbs appear to be associated with previous subsurface disturbance, while an isolated anomaly at the northeastern end of the survey area may be associated with a human burial (Figure 31).

4.1.2.8 Survey Area 8

Survey Area 8 was located near the southwestern corner of the project area, and is adjacent to the southwestern edge of Survey Area 7 (see Figure 18). The survey area measured approximately 13 m by 2.5 m, and involved the collection of 11, 13 m long transects spaced 25 cm apart.

Survey Area 8 encompassed Trench 8, which was excavated prior to GPR survey. During excavation of Trench 8 two human burials were identified (SIHP 50-80-14-7136, Features B and C). Both burials extended beyond the boundaries of Trench 8, and thus GPR survey was conducted in this area in an attempt to define the “GPR signature” (i.e., subsurface anomalies or stratigraphic irregularities) associated with human burials in the area.

GPR depth profiles collected at Survey Area 8 were able to identify two distinct subsurface anomalies occurring immediately southwest of Trench 8. It is believed that these two anomalies are associated with one of the human burials (SIHP -7136A) identified during excavation. The anomalies are fairly ephemeral, consisting of well defined, but weakly expressed hyperbolas located approximately 70 cm below the existing ground surface (Figure 32). It is likely that these anomalies correspond to the burial pit fill, which was compacted and mottled with silt, in contrast to the surrounding Jaucas sand matrix, which was unconsolidated and contained no silt deposits.

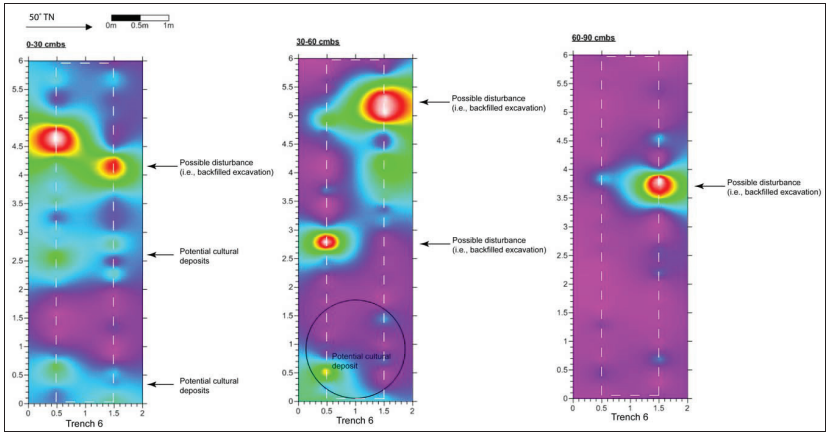

Figure 29. Horizontal slice maps collected at Survey Area 6

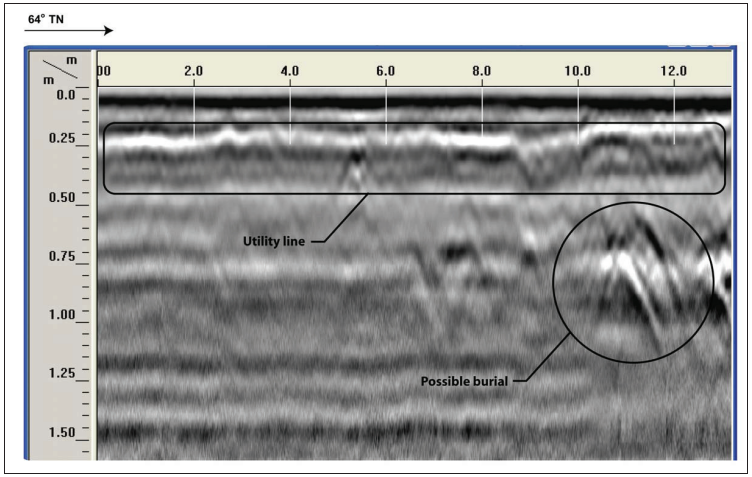

Figure 30. GPR profile collected at Survey Area 7

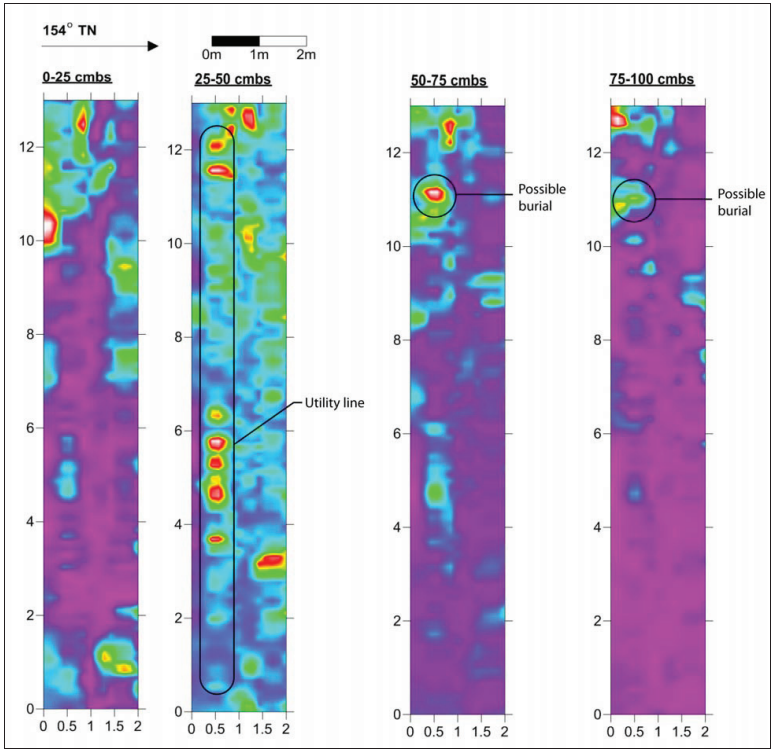

Figure 31. Horizontal slice map, Survey Area 7

It should be noted that no anomalies were identified in association within SIHP -7136B. This may indicate that the burial did not extend much further beyond Trench 8 or that the burial pit fill did not vary enough from the surrounding Jaucas sand to be registered by the GPR. Either way this illustrates that GPR alone should not be the only methodology employed when attempting to locate unmarked graves. Subsurface testing is the only method in which the presence of subsurface cultural deposits can be confirmed. However, GPR is useful as an initial step in the subsurface testing process, and should be used to when delineating potential locations for testing.

Based on data collected in the immediate vicinity of Trench 8, an anomalie was noted that could be a burial located at the *makai* (southwest) end of Survey Area 8. Depth profiles collected at this location indicate the presence of a well defined, but weakly expressed hyperbola similar to the ones associated with SIHP -7136A (burial) (Figure 33). Thus there is a possibility that this anomaly is associated with a burial and/or burial pit. However, it should be noted that anomalies observed in Survey Area 9 (discussed below) did not prove to be burials (no human skeletal remains were observed in Trench 9). The close similarity of the readouts of Figure 33 and Figure 35 may be noted.

Horizontal slice maps generated from data collected at Survey Area 8 are consistent with the data presented in the depth profiles. Subsurface anomalies associated with the previous excavation of Trench 8 along with known and potential burials are illustrated (Figure 34).

4.1.2.9 Survey Area 9

Survey Area 9 was located near the southwestern corner of the project area, within an exisiting asphalt driveway just *mauka* of Kalākaua Avenue (see Figure 18). The survey area measured 5 m by 2 m, and involved the collection of nine, 5 m long transects spaced 25 cm apart.

GPR depth profiles collected at Survey Area 9 indicate the presence of imported fill layers which extend beyond the fill associated with asphalt driveway/parking lot construction noted throughout the project area. This is based on prominent horizontal banding observed from 0 to 100 cm below the surface (Figure 35).

Horizontal slice maps at depths ranging from 0-120 cmbs show extensive subsurface disturbance in the form of anomalies, which are either large in size or are very prominent (Figure 36). These anomalies could correspond to backfilled excavations and imported fill material (represented by clusters of anomalies that are large in size) or correspond with utility lines, structural remnants, and construction debris (represented by prominent anomalies corresponding to dense objects).

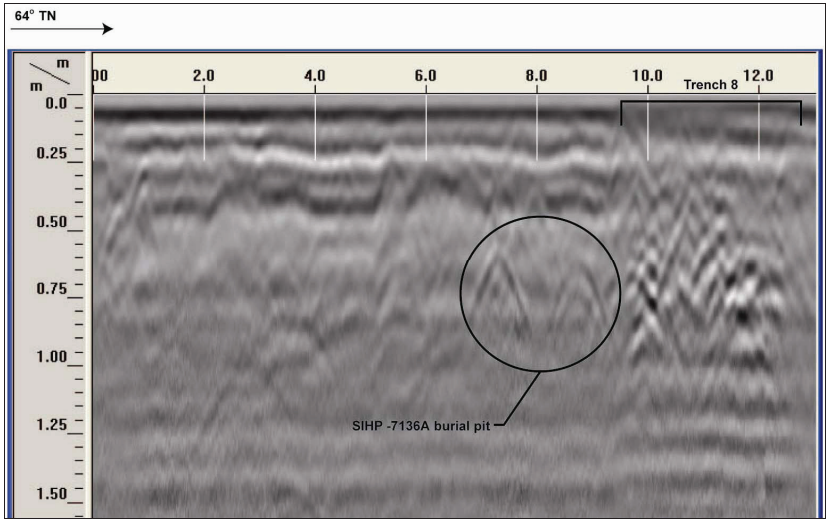

Figure 32. GPR Profile 1 collected at Survey Area 8

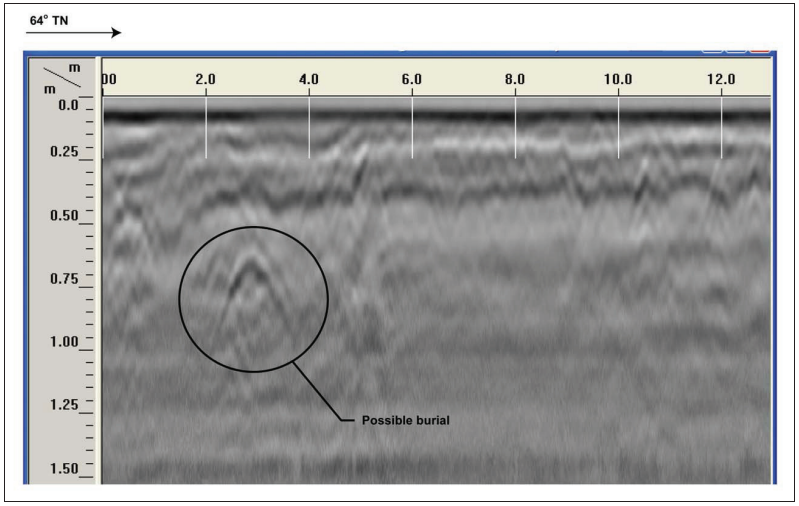

Figure 33. GPR Profile 2 collected at Survey Area 8

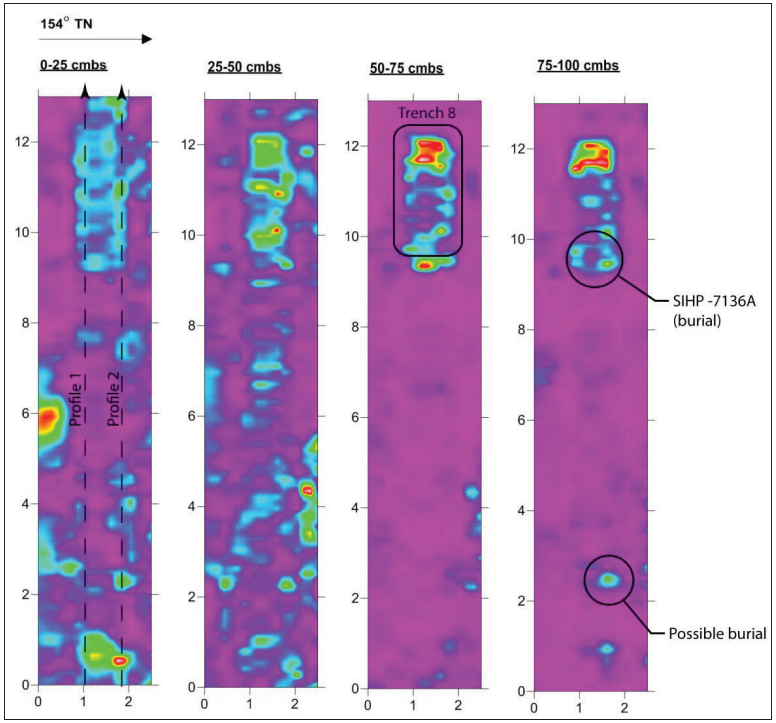

Figure 34. Horizontal slice maps collected at Survey Area 8

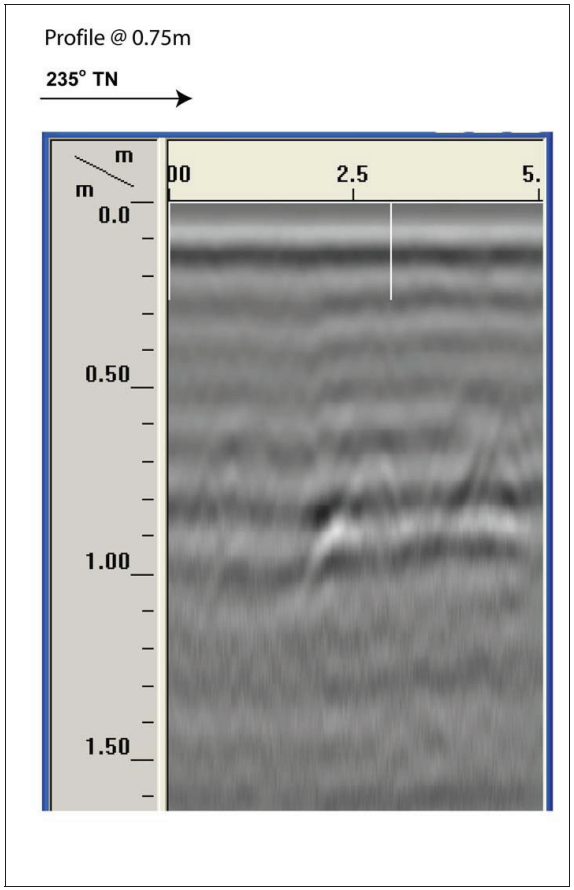

Figure 35. GPR profile collected at Survey Area 9

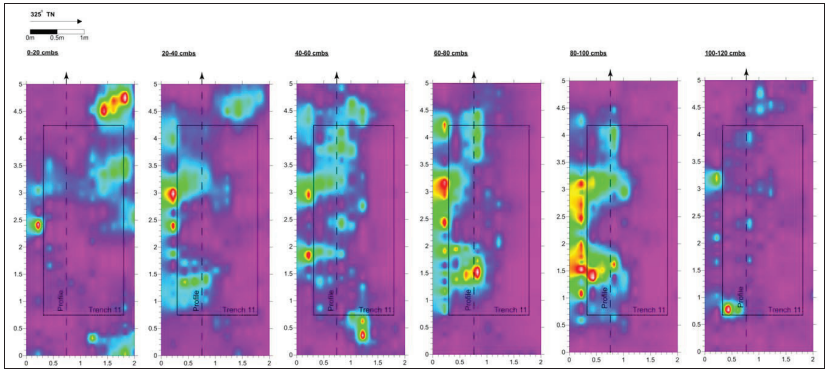

Figure 36. Horizontal slice maps collected at Survey Area 9

4.2 Results of Subsurface Testing

Subsurface testing within the project area was performed in four phases, occurring between August 3, 2010 and March 17, 2011. A total of eleven test trenches (Trench 1-11) were excavated in areas of proposed project-related development including the proposed Saint Damien Museum and Parish Hall parking structure (Figure 37 and Figure 38). Fieldwork and documentation was performed by a crew of three to five alternating CSH archaeologists, Douglas Borthwick, B.A., Trevor Yucha, B.S., Douglas Thurman, B.A., Josephine Paolello, M.S., Jon Tulchin, B.A., Jeffrey Fong, M.A., Kelly Burke, M.Sc., Kendy Altizer, B.A., and David Shideler, M.A. under the overall direction of the project's principal investigator Hallett H. Hammatt, Ph.D. The field work required approximately 21 person-days to complete.

The initial phase of subsurface testing included the excavation of six test trenches (Trench 1-6) within the project area. Four of the six initial test trenches (Trench 1, 2, 5, and 6) were located within the proposed footprint of the Parish Hall parking structure with the remaining two test trenches (Trench 3 and Trench 4) being located within the proposed footprint of the Saint Damien Museum (see Figure 37 and Figure 38).

A buried, culturally-enriched sand A-horizon (cultural layer) was identified within each of the six initial test trenches and designated SIHP # 50-80-14-7135. A detailed description of SIHP# 50-80-14-7135 is presented in Section 4.5, Historic Property Descriptions. Disarticulated human skeletal remains, consisting of a radius, three tarsal bones, and several rib fragments were identified during the hand excavation of Trench 3 within SIHP# 50-80-14-7135. Numerous pre-contact and historic-era artifacts were also encountered throughout the cultural layer and collected for laboratory analysis along with bulk sediment samples containing charcoal and/or carbonized plant remains. The results of laboratory analysis of artifacts and bulk sediment samples are presented in Section 5, Laboratory Analysis. The discovery of disarticulated human skeletal remains within SIHP# 50-80-14-7135 prompted a subsequent phase of testing within the proposed Saint Damien Museum footprint.

The second phase of subsurface testing included the excavation of two test trenches (Trench 7 and Trench 8), which were positioned immediately south of Trench 3 within the proposed Saint Damien Museum footprint (see Figure 37 and Figure 38). SIHP# 50-80-14-7135, a buried, culturally-enriched sand A-horizon, was encountered within Trench 7 and Trench 8. Two human interments (SIHP# 50-80-14-7136 Feature A and B) were identified within well-defined burial pits located within Trench 8. A detailed description of SIHP# 50-80-14-7136 is presented in Section 4.5, Historic Property Descriptions. The discovery of SIHP# 50-80-14-7136 Feature A and B prompted a subsequent phase of subsurface testing within the proposed Saint Damien Museum footprint.

The third phase of subsurface testing included the excavation of two trenches (Trench 9 and 10), which were positioned to the west and east of Trench 3, respectively, within the proposed Saint Damien Museum footprint (see Figure 37 and Figure 38). SIHP# 50-80-14-7135, a buried, culturally-enriched sand A-horizon, was encountered within Trench 9 and 10.

The fourth phase of subsurface testing included the excavation of one trench (Trench 11), which was positioned within the elevator shaft of the proposed Saint Damien Museum (see Figure 37 and Figure 38). A highly disturbed portion of SIHP# 50-80-14-7135 was encountered.

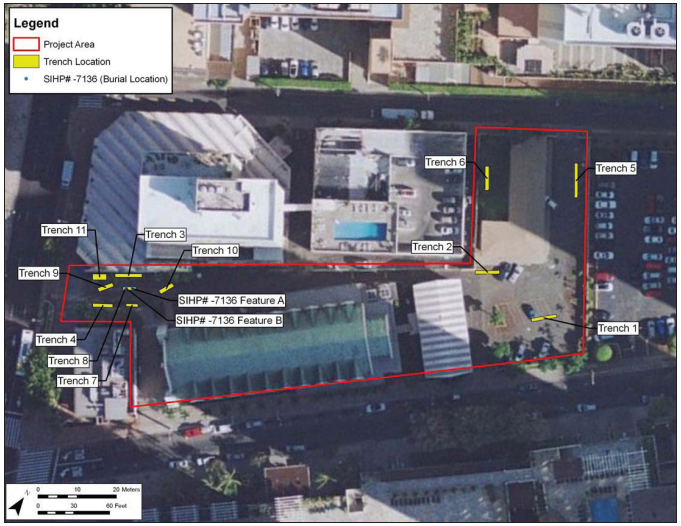

Figure 37. Aerial photograph (source: World Imagery 2009), showing Test Trench 1-11 and SIHP# -7136 Feature A-C

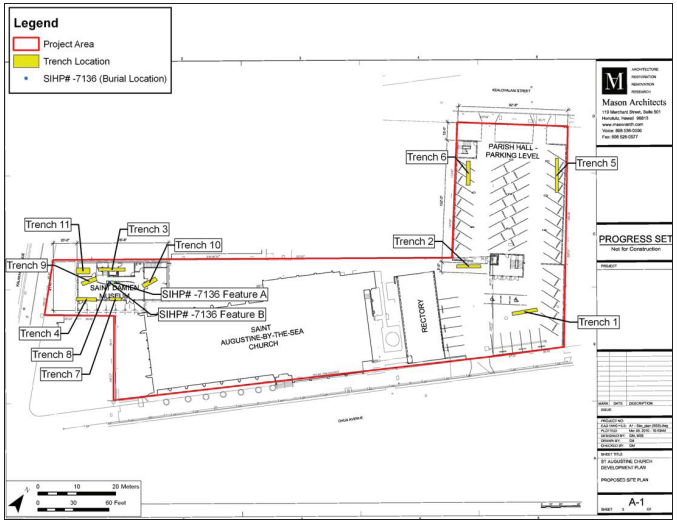

Figure 38. Proposed site plan, showing Test Trench 1-11 and SIHP# -7136 Feature A-C

4.3 Stratigraphic Summary

Test trenches within the project area were located within the open, accessible portions of areas of proposed project-related development. These accessible portions included the church parking lot, portions of the lane that connects to Kalākaua Avenue, the stairway and wheelchair access ramp, and the Parish Hall lawn. Accordingly, the upper-most strata observed within the project area include a relatively uniform layer of asphalt and crushed basalt base course within the parking lot and lane, a thick concrete slab within the stairway and wheelchair access ramp, and sod within the Parish Hall lawn.

In general, the upper-most strata throughout the project area overlies imported fill, a buried and partially disturbed, culturally-enriched sand A horizon (SIHP# 50-80-14-7135, cultural layer), and naturally-occurring Jaucas sand. The base of excavation (BOE) for each trench was determined by the depth of the water table and/or naturally sterile soil. The maximum depth of the ten test trenches ranged from 1.3 m (130 cm) to 2.1 m (210 cm) below ground surface (cmbs). Following proper documentation, all trenches were backfilled and resurfaced.

Observed stratigraphic anomalies included filled areas related to the construction of nearby building foundations and subsurface utility installation, which extend from the modern ground surface or underlying imported fill layers and have partially removed, truncated, and/or re-deposited portions of the cultural layer.

Additionally, pit features of varying depths and dimensions were observed, extending from the base of the cultural layer (SIHP# 50-80-14-7135) to within naturally-occurring Jaucas sand. These pit features could reflect natural depressions of the former land surface and/or be associated with man-made excavations. Two of these pit features, located within Trench 8, were observed to contain human burials (SIHP# 50-80-14-7136 Feature A and B). The remainder of the pit features contained sediment that was consistent with the sediment observed within the cultural layer, which is comprised of dark-stained sand or mottled sand containing sparse charcoal flecking. These features did not contain diagnostic information warranting them to be assigned as formal features of a historic property. Instead, each pit feature was assigned chronological number designations (Pit Feature 1-51) and depicted on trench plan and profile maps that include the depth of origin and base depth of each pit.

4.4 Test Trench Documentation

4.4.1 Trench 1

Trench 1, located in the southeastern corner of the project area, was oriented in an approximate NE-SW direction, and it measured 6.1 m long by 0.95 m wide with a maximum depth or BOE of 1.3 m (Figure 39 to Figure 41 and Table 4). Groundwater was observed at 1.3 m below the surface. The stratigraphy of Trench 1 consisted of a uniform layer of asphalt (Stratum Ia) and crushed basalt base course (Stratum Ib) overlying a previously disturbed cultural layer (Stratum II/SIHP# 50-80-14-7135) and Jaucas Sand (Stratum III). A total of five pit features (Pit Feature 1-5) were observed, originating at the interface of Stratum II and Stratum III (Figure 42 and Figure 43). No cultural material was encountered during the excavation of Trench 1.

Figure 39. Trench 1 overview, view to south

Figure 40. Trench 1, profile of southeast wall, view to southeast

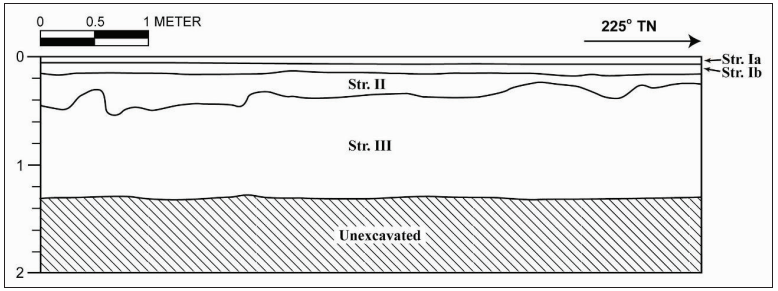

Figure 41. Trench 1, stratigraphic profile of southeast wall

Table 4. Strata Observed within Trench 1

Stratum	Depth (cmbs)	Description of Sediment
Ia	0-10	Asphalt
Ib	5-20	Crushed basalt gravel base course
II	15-53	Buried culturally-enriched A-Horizon (former land surface); 10YR 2/1, black, sparsely mottled (5%) with 10YR 8/4, very pale brown; very fine-grain silty sand; structureless (single-grain); dry, loose consistency; no cementation; non-plastic; mixed origin; abrupt, wavy lower boundary; no roots observed
III	25-130 (BOE)	Jaucas Sand; 10YR 8/4, very pale brown; very fine-grain sand; structureless (single-grain); dry, loose consistency; no cementation; non-plastic; marine origin; no roots observed

Figure 42. Trench 1, overview of Stratum II and Stratum III interface, view is southwest

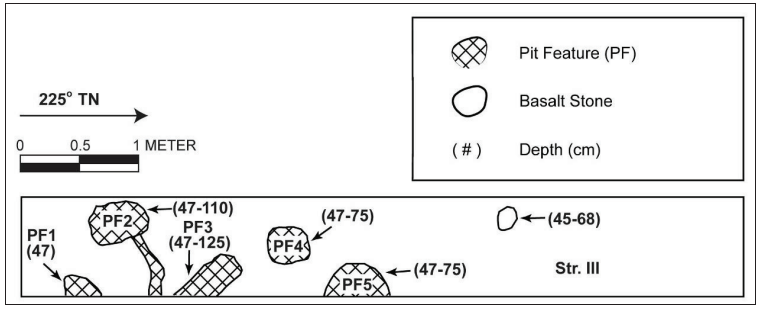

Figure 43. Trench 1, plan view of Stratum II and Stratum IV interface

4.4.2 Trench 2

Trench 2, located along the northwestern boundary of the project area within the parking stalls near the east-facing doors of Parish Hall, was oriented in an approximate NE-SW direction, and it measured 6.1 m long by 0.85 m wide with a BOE of 1.7 m (Figure 44 to Figure 46 and Table 5). Groundwater was observed at 1.6 m below the surface. The stratigraphy of Trench 2 consisted of a uniform layer of asphalt (Stratum Ia) and crushed basalt base course (Stratum Ib) overlying a heavily disturbed sandy loam matrix containing a range of small cobbles to large basalt boulders (Stratum Ic) used to a fill an abandoned utility line in the southern half of the trench, and a disturbed, cultural layer (Stratum II/SIHP# 50-80-14-7135) overlying naturally-occurring Jaucas Sand (Stratum III) in the northern half of the trench.

Historic-era cultural material was recovered from Stratum Ic including diagnostic glass bottles and bottle portions (Acc. #1-3), a non-diagnostic glass bottle fragment (Acc. #4), nails (Acc. #7), and part of a circuit breaker (Acc. #8). Historic-era cultural material was also recovered from Stratum II including multiple fragments of a deep ceramic plate with a decorative green floral pattern (Acc. #5), numerous fragments of a ceramic plate with a decorative green, pink, and orange pattern (Acc. #6), and one ceramic fragment with a green, blue, and yellow floral pattern (Acc. #9). Faunal remains also were encountered from Stratum II.

4.4.3 Trench 3

Trench 3, located near the southwestern corner of the project area within the right-of-way lane onto Kalākaua Ave, was oriented in an approximate NE-SW direction, and it measured 6.9 m long by 0.75 m wide with a BOE of 1.9 m (Figure 47 to Figure 49 and Table 6). Groundwater was observed at approximately 1.85 m below the surface. The stratigraphy of Trench 3 consisted of a uniform layer of asphalt (Stratum Ia) and crushed basalt base course (Stratum Ib) overlying sandy silt (Stratum II), a highly disturbed cultural layer (Stratum III/SIHP# 50-80-14-7135), and Jaucas Sand (Stratum IV).

Disarticulated human skeletal remains, consisting of a largely intact radius fragment, three tarsal (foot) bones, and two rib fragments were collected from Stratum III (SIHP# 50-80-14-7135), at a depth of 145 cmbs, near the central area of the Trench (Figure 50). No distinguishing burial pit feature was observed. The incomplete, disarticulated remains indicate a secondary deposit, likely due to previous disturbance of a burial. In addition, Trench 3 contained faunal remains and pre-contact artifacts consisting of two possible net sinkers (Acc. #10 and #11), a coral file (Acc. #12), and a basalt flake (Acc. #13). Numerous pieces of historic-era artifacts were collected from Trench 3, including mostly glass bottle portions or non-diagnostic glass fragments (Acc. #14 - #28), a painted ceramic figurine portion (Acc. #29), many white ceramic fragments with decorative designs (Acc. #30), various brown ceramic fragments (Acc. #31), and non-diagnostic pieces of corroded metal (Acc. #32).

Figure 44. Trench 2 overview, view to southwest

Figure 45. Trench 2, profile of southeast wall, view to southeast

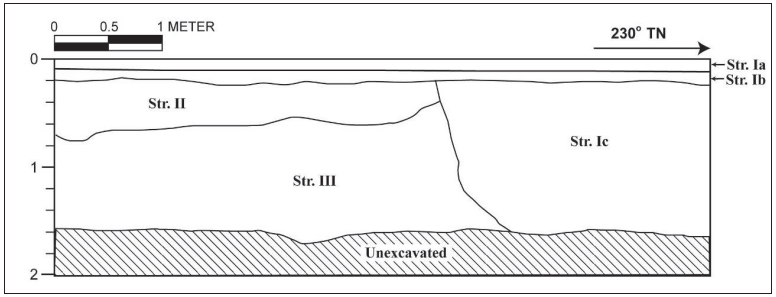

Figure 46. Trench 2, stratigraphic profile of southeast wall

Table 5. Strata Observed within Trench 2.

Stratum	Depth (cmbs)	Description of Sediment
Ia	0-10	Asphalt
Ib	10-25	Crushed basalt gravel base course
Ic	20-160 (BOE)	Fill; contains small cobbles to large boulders, historic trash and construction debris, in a sandy-loam matrix
II	20-80	Buried culturally-enriched A-Horizon (former land surface); 10YR 2/1, black, sparsely mottled (<5%) with 10YR 8/4, very pale brown; very fine-grain silty sand; structureless (single-grain), dry, loose consistency, no cementation; non-plastic; mixed origin; abrupt, wavy lower boundary, no roots observed
III	40-170 (BOE)	Jaucas Sand; 10YR 8/4, very pale brown; very fine-grain sand; structureless (single-grain); dry, loose consistency; no cementation; non-plastic; marine origin; no roots observed

Figure 47. Trench 3 overview, view to north

Figure 48. Trench 3, profile of northwest wall, view to northwest

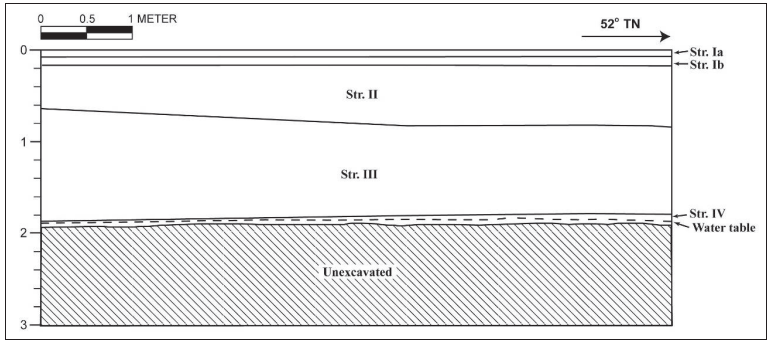

Figure 49. Trench 3, stratigraphic profile of northwest wall

Table 6. Strata Observed within Trench 3.

Stratum	Depth (cmbs)	Description of Sediment
Ia	0-10	Asphalt
Ib	10-18	Crushed basalt gravel base course
II	18-80	Fill; 2.5YR 2.5/4, dark reddish brown; sandy silt; weak grade, medium crumb structure; dry, weakly coherent consistency, no cementation; non-plastic; mixed origin; very abrupt, smooth lower boundary, common fine roots
III	64-183	Buried culturally-enriched A-Horizon (former land surface); 10YR 4/2, dark grayish brown, mottled (40%) with 10YR 8/3, very pale brown; fine-grain sand; structureless (single-grain); moist, loose consistency; no cementation; non-plastic; marine origin; clear, smooth lower boundary, common fine roots
IV	180-190 (BOE)	Jaucas Sand; 10YR 8/3, very pale brown; very fine-grain sand; structureless (single-grain); wet, slightly sticky consistency; no cementation; non-plastic; marine origin; no roots observed

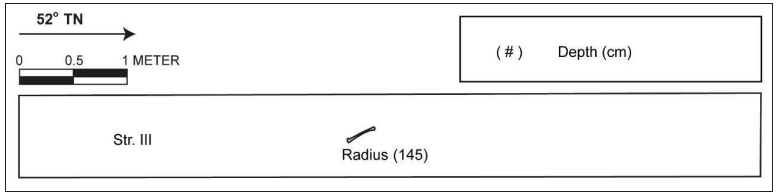

Figure 50. Trench 3, plan view of Stratum III

4.4.4 Trench 4

Trench 4, located in the southwestern corner of the project area adjacent to the right-of-way lane onto Kalākaua Ave, was oriented in an approximate NE-SW direction, and it measured 4.9 m long by 0.85 m wide with a BOE of 2.1 m (Figure 51 to Figure 53 and Table 7). Groundwater was observed at approximately 2.0 m below the surface. The stratigraphy of Trench 4 consisted of a uniform layer of concrete (Stratum Ia), sandy loam landscaping fill (Stratum Ib), and a stratified mix of gravelly loam fill (Stratum Ic) overlying an inclusion of silty sand (Stratum IIa), gravelly loam fill (Stratum IIb), a sandy silt (Stratum III) remnant from a previously disturbed cultural layer (SIHP# 50-80-14-7135), and Jaucas Sand (Stratum IV). Faunal remains and various historic-era artifacts were encountered within Stratum Ic, supporting the disturbance and intermixture of the cultural layer. Historic-era artifacts collected include an intact clear glass "Burnett's Cocoaine" bottle (Acc. #33), a green glass bottle neck fragment (Acc. #36), and decorative green (Acc. #37) and white (Acc. #38) ceramic fragments.

4.4.5 Trench 5

Trench 5, located in the northern corner of the project area, near the Kealohilani St. entrance, was oriented in an approximate NW-SE direction, and it was 8.73 m long and 0.82 m wide with a maximum depth of 1.3 m (Figure 54 to Figure 56 and Table 8). Groundwater was observed at approximately 1.25 m below the surface. The stratigraphy of Trench 5 consisted of a uniform layer of asphalt (Stratum Ia) and crushed basalt base course (Stratum Ib) overlying a partially truncated cultural layer (Stratum II/SIHP# 50-80-14-7135), and Jaucas Sand (Stratum III). A total of twelve pit features (Pit Feature 6-17) were observed, originating at the interface of Stratum II and Stratum III (Figure 60 and Figure 61). A sediment sample from Pit Feature 6 that contained noticeable charcoal flecking was collected and sent to the International Archaeological Research Institute, Inc. (IARII) for wood taxa identification (see Section 5 Laboratory Analysis below). Historic-era artifacts encountered within Stratum II include red brick fragments (Acc. #41) and non-diagnostic corroded metal fragments (Acc. #42).

Figure 51. Trench 4 overview, view to north

Figure 52. Trench 4, profile of northwest wall, view to northwest

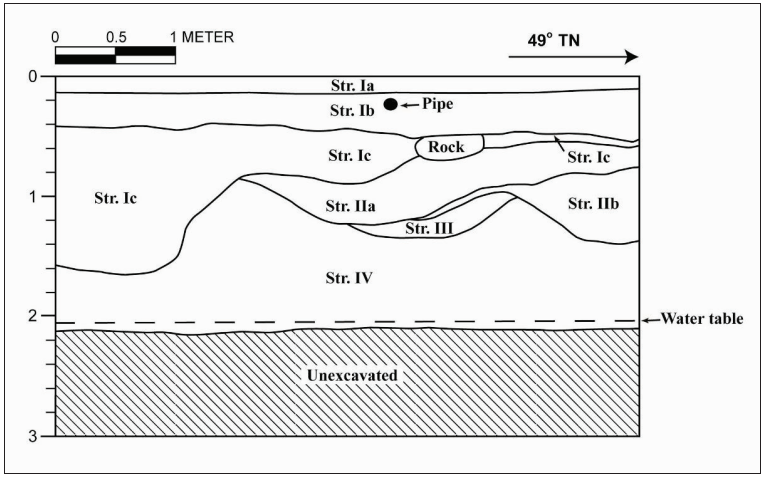

Figure 53. Trench 4, stratigraphic profile of northwest wall

Table 7. Strata Observed within Trench 4

Stratum	Depth (cmbs)	Description of Sediment
Ia	0-12	Concrete
Ib	12-51	Fill; 10YR 3/4, dark yellowish brown; sandy loam; weak grade, medium crumb structure; moist, loose consistency; no cementation; non-plastic; mixed origin; clear, smooth lower boundary; many fine roots
Ic	40-62	Fill; 10YR 5/3, brown, mottled with 10YR 3/2, very dark grayish brown; gravelly loam; moderate grade, coarse crumb structure; dry, slightly hard consistency, no cementation; non-plastic; mixed origin; abrupt, irregular lower boundary, few fine roots
IIa	55-120	7.5YR 5/1, gray; silty sand; structureless (single-grain); dry, hard consistency; no cementation; non-plastic; mixed origin; discontinuous, very abrupt, wavy lower boundary; few fine roots
IIb	75-137	Fill; 10YR 5/3, brown, mottled with 10YR 3/1, very dark gray; gravelly loam; moderate grade, coarse crumb structure; dry, slightly hard consistency, no cementation; non-plastic; mixed origin; discontinuous, abrupt, irregular lower boundary, few fine roots
III	98-133	Buried culturally-enriched A-Horizon (former land surface); 10YR 3/2, very dark grayish brown; sandy silt; structureless (single-grain); dry, weakly coherent consistency; no cementation; non-plastic; mixed origin; discontinuous, abrupt, wavy lower boundary; no roots observed
IV	80-210 (BOE)	Jaucas Sand; 10YR 8/4, very pale brown; very fine-grain sand; structureless (single-grain); dry, loose consistency; no cementation; non-plastic; marine origin; no roots observed

Figure 54. Trench 5 overview, view to east

Figure 55. Trench 5, profile of northeast wall, view to northeast

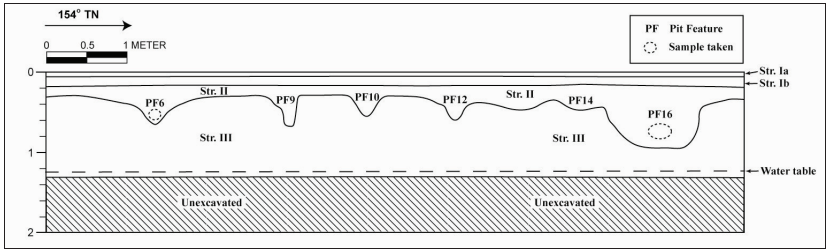

Figure 56. Trench 5, stratigraphic profile of northeast wall

Table 8. Strata Observed within Trench 5

Stratum	Depth (cmbs)	Description of Sediment
Ia	0-8	Asphalt
Ib	8-20	Crushed basalt gravel base course
II	19-95	Buried culturally-enriched A-Horizon (former land surface); 10YR 3/2, very dark grayish brown, mottled (10%) with 10YR 8/4, very pale brown; very fine-grain silty sand; structureless (single-grain); dry, loose consistency; no cementation; non-plastic; mixed origin; abrupt, smooth lower boundary; no roots observed
III	30-130 (BOE)	Jaucas Sand; 10YR 8/4, very pale brown; very fine-grain sand; structureless (single-grain); dry, loose consistency; no cementation; non-plastic; marine origin; diffuse, smooth lower boundary; no roots observed

Figure 57. Trench 5 overview of the Stratum II and Stratum III interface, view to southeast

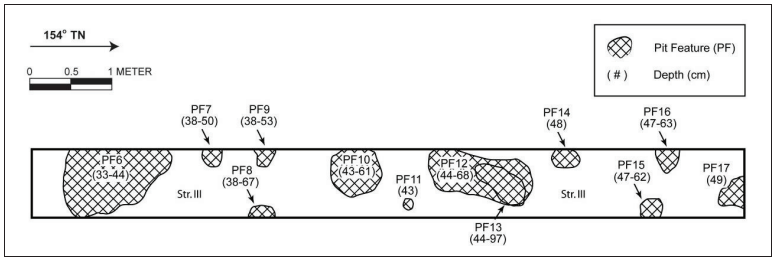

Figure 58. Trench 5, plan view of Stratum II and Stratum III interface

4.4.6 Trench 6

Trench 6, located in the northwest corner of the project area, in the grass yard to the southwest of Parish Hall, was oriented in an approximate NW-SE direction, and it measured 6.0 m long by 1.0 m wide with a BOE of 1.6 m (Figure 59 to Figure 61 and Table 9). Groundwater was observed directly above the BOE at approximately 1.57 m below the surface. The stratigraphy of Trench 6 consisted of loamy clay (Stratum Ia) and silty sand (Stratum Ib) landscaping fill, overlying a buried cultural layer (Stratum II/SIHP# 50-80-14-1735), and Jaucas Sand (Stratum III). A total of twelve pit features (Pit Feature 18-29) were observed, originating at the interface of Stratum II and Stratum III (Figure 62 and Figure 63). A sediment sample from Pit Feature 27 that contained noticeable charcoal flecking was collected and sent to IARII for wood taxa identification (see Section 5 Laboratory Analysis below). Historic-era cultural material was found within Stratum II, including a metal spoon (Acc. #43), the bottom portion of a clear glass bottle (Acc. #44), numerous corroded metal nails (Acc. #45), and a non-diagnostic corroded metal piece (Acc. #46).

4.4.7 Trench 7

Trench 7, located northeast of Trench 4 in the southwestern corner of the project area adjacent to the right-of-way lane onto Kalākaua Ave, was oriented in an approximate NE-SW direction, and it measured 3.0 m long by 1.0 m wide with a BOE of 2.10 m (Figure 64 to Figure 66 and Table 10). Groundwater was observed at approximately 2.05 m below the surface. The stratigraphy of Trench 7 consisted of a uniform layer of concrete (Stratum Ia), sandy loam landscaping fill (Stratum Ib), and clay loam fill (Stratum II), overlying a buried, previously disturbed cultural layer (Stratum III/SIHP# 50-80-14-1735), and Jaucas Sand (Stratum IV). A total of four pit features (Pit Feature 30-33) were observed, originating at the interface of Stratum III and Stratum IV (Figure 67 and Figure 68). One ceramic fragment (Acc. #47) was collected from Stratum III of Trench 7.

4.4.8 Trench 8

Trench 8, located directly east of Trench 3 near the southwestern corner of the project area within the Kalākaua Ave entranceway, was oriented in an approximate NE-SW direction, and it measured 3.0 m long by 1.0 m wide with a BOE of 0.98 m (Figure 69, Figure 70, and Table 11). Excavation was terminated prior to observing groundwater because of the presence of human burials. The stratigraphy of Trench 8 consisted of a uniform layer of asphalt (Stratum Ia) and crushed basalt base course (Stratum Ib) overlying sandy silt (Stratum II), a buried cultural layer (Stratum III/SIHP# 50-80-14-7135), and Jaucas Sand (Stratum IV).

Two distinct features were visible in the lower boundary of Stratum III (cultural layer). Partial excavation into these features exposed one extended human burial (Burial 1/SIHP# 50-80-14-7136 Feature A) at a depth of 87 cmbs in the northern portion (*mauka*) of the trench and one human burial (Burial 2/SIHP# 50-80-14-7136 Feature B) in a semi-flexed, prone (stomach-down) position at a depth of 96 cmbs extending into the southwestern (*makai*) wall (Figure 71). Further details regarding Burials 1 and 2 are discussed in Section 4.5 Historic Property Description below. In addition, Trench 8 contained a manuport (Acc. #48), determined to be a traditional Hawaiian artifact and a historic-era battery core (Acc. #49).

Figure 59. Trench 6 overview, view to northwest

Figure 60. Trench 6, profile of southwest wall, view to southwest

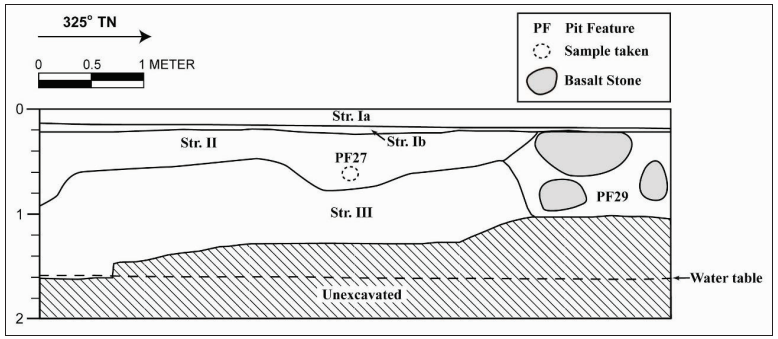

Figure 61. Trench 6, stratigraphic profile of southwest wall

Table 9. Strata Observed within Trench 6

Stratum	Depth (cmbs)	Description of Sediment
Ia	0-15	Landscaping fill; 7.5YR 3/2, dark brown; loamy clay; moderate grade, coarse crumb structure; moist, firm consistency; no cementation; plastic; mixed origin; clear, smooth lower boundary; very fine roots common
Ib	13-20	Landscaping fill; 10YR 5/3, brown; silty sand; structureless (single-grain); moist, very friable consistency; no cementation; non-plastic; mixed origin; clear, smooth lower boundary; few very fine roots
II	18-90	Buried culturally-enriched A-Horizon (former land surface); 10YR 3/1, very dark gray; silty sand; weak grade, fine crumb structure; moist, loose consistency; no cementation non-plastic; mixed origin; very abrupt, wavy lower boundary, no roots observed
III	45-160 (BOE)	Jaucas Sand; 10YR 8/3, very pale brown; very fine-grain sand; structureless (single-grain); moist, loose consistency; no cementation; non-plastic; marine origin; no roots observed

Figure 62. Trench 6, overview of the Stratum II and Stratum III interface

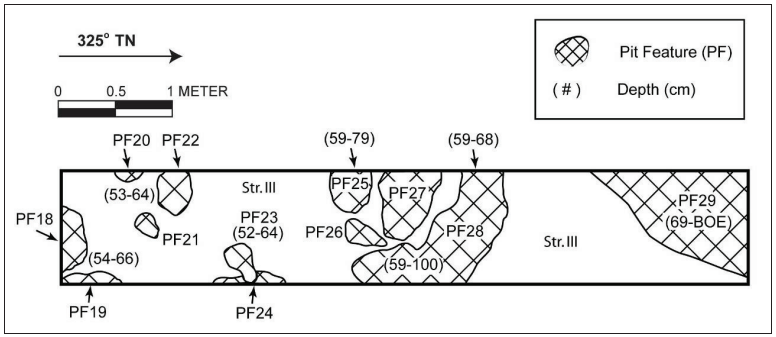

Figure 63. Trench 6, plan view of Stratum II and Stratum III interface

Figure 64. Trench 7 overview, view to north

Figure 65. Trench 7, profile of northeast wall, north

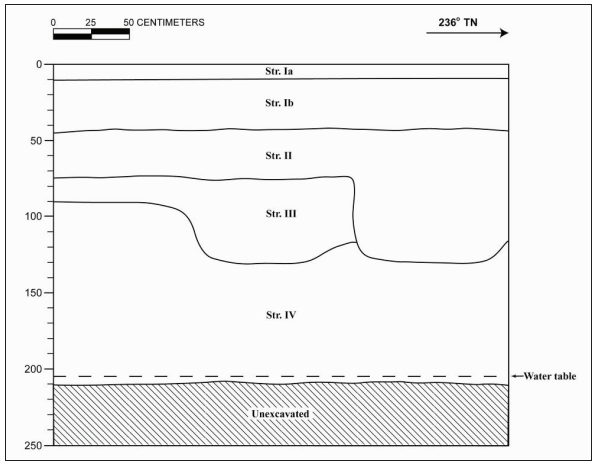

Figure 66. Trench 7, stratigraphic profile of northwest wall

Table 10. Strata Observed within Trench 7.

Stratum	Depth (cmbs)	Description of Sediment
Ia	0-10	Concrete
Ib	10-45	Fill; 10YR 3/4, dark yellowish brown; sandy loam; weak grade, medium crumb structure; moist, loose consistency; no cementation; non-plastic; mixed origin; clear, smooth lower boundary; fine roots common
II	42-130	Fill; 7.5YR 4/3, brown, clay loam; moderate grade, medium crumb structure; dry, hard consistency, no cementation; non-plastic; mixed origin; abrupt, irregular lower boundary, few coarse roots
III	75-130	Buried culturally-enriched A-Horizon (former land surface); 7.5YR 5/1, gray; silty sand; structureless (single-grain); dry, loose consistency; no cementation; non-plastic; mixed origin; abrupt, irregular lower boundary; few medium roots
IV	90-170 (BOE)	Jaucas Sand; 10YR 8/3, very pale brown; very fine-grain sand; structureless (single-grain); moist, loose consistency; no cementation; non-plastic; marine origin; few medium roots

Figure 67. Trench 7, overview of the Stratum III and Stratum IV interface, view to south

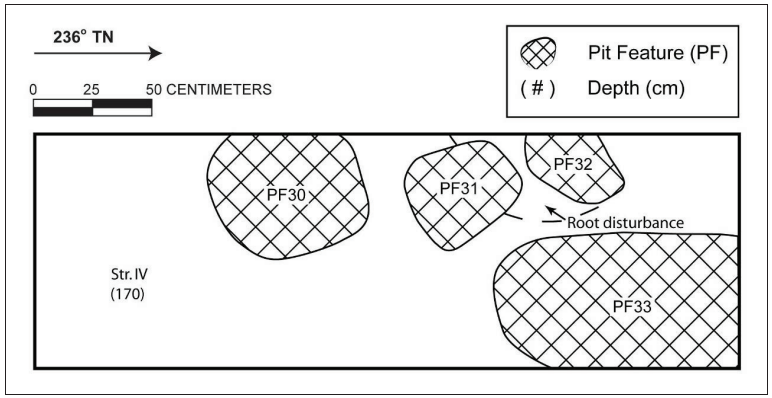

Figure 68. Trench 7, plan view of Stratum III and Stratum IV interface

Figure 69. Trench 8, profile of southeast wall, view to west

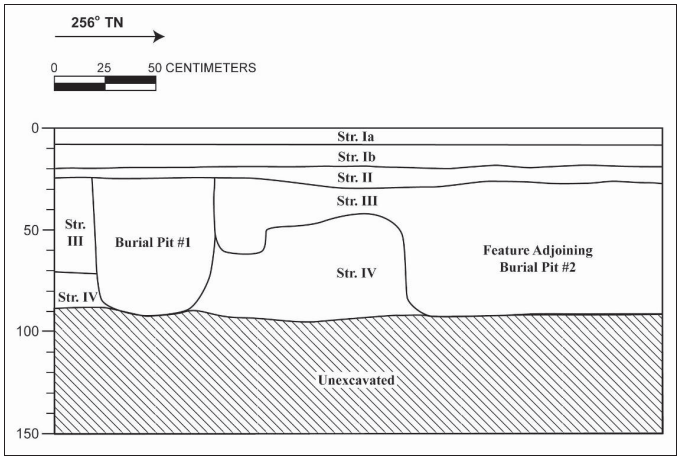

Figure 70. Trench 8, stratigraphic profile of southeast wall

Table 11. Strata Observed within Trench 8.

Stratum	Depth (cmbs)	Description of Sediment
Ia	0-8	Asphalt
Ib	8-20	Crushed basalt base course
II	20-30	Fill; 2.5YR 2.5/4, dark reddish brown; sandy silt; strong grade, medium crumb structure; dry, hard consistency, no cementation; non-plastic; mixed origin; very abrupt, smooth lower boundary, few fine roots
III	25-95	Buried culturally-enriched A-Horizon (former land surface); 7.5YR 5/1, gray; silty sand, structureless (single-grain); dry, weakly coherent consistency; no cementation; non-plastic; mixed origin; clear, irregular lower boundary, common fine roots
IV	50-98 (BOE)	Jaucas Sand; 10YR 8/3, very pale brown; very fine-grain sand; structureless (single-grain); dry, weakly coherent consistency; no cementation; non-plastic; marine origin; no roots observed

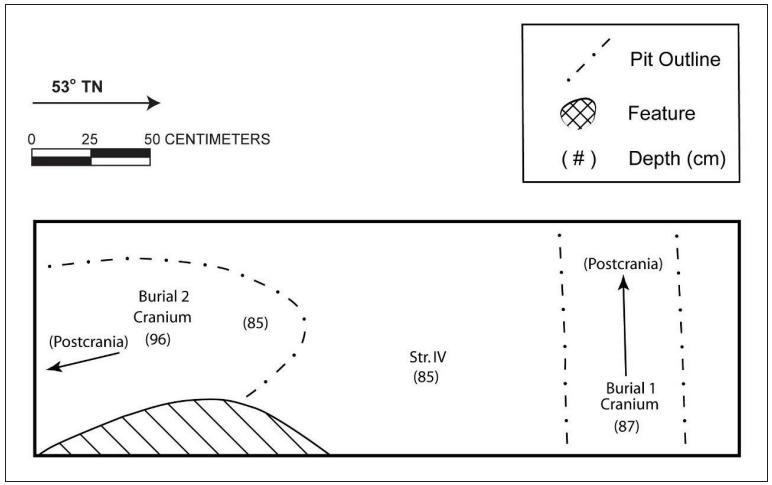

Figure 71. Trench 8, plan view of Stratum IV

4.4.9 Trench 9

Trench 9, located in the southwestern corner of the project area within the Kalākaua Ave entranceway, was oriented in an approximate NE-SW direction, and it measured 3.98 m long by 1.0 m wide with a BOE of 1.43 m (Figure 72 to Figure 74 and Table 12). Due to collapsing of the sidewalls, the BOE was determined before groundwater was observed. The stratigraphy of Trench 9 consisted of a uniform layer of asphalt (Stratum Ia) and crushed basalt base course (Stratum Ib) overlying silty clay loam (Stratum II), a buried cultural layer (Stratum III/SIHP# 50-80-14-1735), and Jaucas Sand (Stratum IV). A total of nine pit features (Pit Feature 34-42) were observed, originating at the interface of Stratum III and Stratum IV (Figure 75 and Figure 76). Artifacts collected from Trench 9 include a basalt flake (Acc. #54) and a historic-era ceramic fragment (Acc. #55). Additionally, marine shell and faunal material were observed.

4.4.10 Trench 10

Trench 10, located in the southwestern corner of the project area, adjacent to the wheelchair access ramp within the Kalākaua Ave entranceway, was oriented in an approximate NE-SW direction, and it measured 3.98 m long by 1.0 m wide with a BOE of 1.6 m (Figure 77 to Figure 79 and Table 13). Due to the instability of the sidewalls, the BOE was determined before groundwater was observed. The stratigraphy of Trench 10 consisted of a uniform layer of asphalt (Stratum Ia) and crushed basalt base course (Stratum Ib) overlying silty clay loam (Stratum II), a buried cultural layer (Stratum III/SIHP# 50-80-14-1735), and Jaucas Sand (Stratum IV). A total of nine pit features (Pit Feature 43-51) were observed, originating at the interface of Stratum III and Stratum IV (Figure 80 and Figure 81). A glass bottle fragment (Acc. #56) was observed within Stratum III. Marine shell and a faunal bone were also observed within Stratum III. Several basalt stones, fire-cracked rock, and a coral cobble were observed at the interface of Stratum III and Stratum IV.

4.4.11 Trench 11

Trench 11, located in the southwestern corner of the project area within the Kalākaua Ave entranceway, was oriented in an approximate NE-SW direction, and it measured 3.5 m long by 1.55 m wide with a BOE of 2.17 m (Figure 82 to Figure 84 and Table 14). Groundwater was observed at approximately 1.14 m below surface. The stratigraphy of Trench 11 consisted of a uniform layer of asphalt (Stratum Ia) and crushed basalt base course (Stratum Ib) overlying clay loam fill (Stratum II), a highly disturbed cultural layer (Stratum III/SIHP# 50-80-14-7135), and Jaucas Sand (Stratum IV). No intact pit features were observed within or extending from the highly disturbed buried cultural layer. Traditional Hawaiian artifacts collected from Stratum III of Trench 11 included a basalt groundstone multi-use tool (Acc. # 57) and a basalt flake (Acc. #58). Historic-era cultural material collected from Stratum III included an ivory figurine (Acc. #53) and numerous glass bottle and ceramic fragments as well as nails and metal fragments.

Figure 72. Trench 9 overview, view to southwest

Figure 73. Trench 9 profile, view to southwest

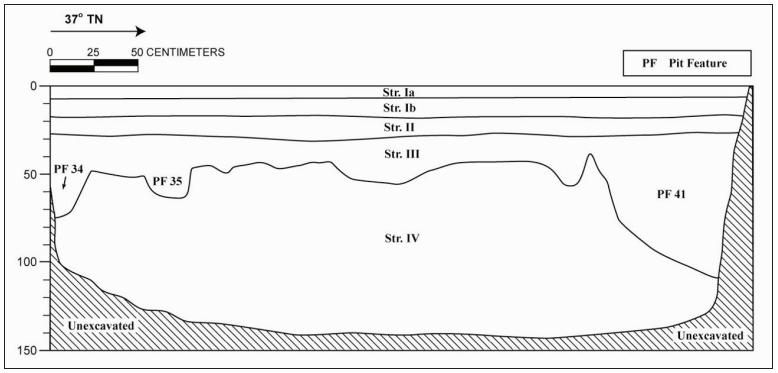

Figure 74. Trench 9, stratigraphic profile of northwest wall

Table 12. Strata Observed within Trench 9

Stratum	Depth (cmbs)	Description of Sediment
Ia	0-7	Asphalt
Ib	7-17	Crushed basalt gravel base course
II	17-32	Fill; 2.5YR 2.5/4, dark reddish brown; silty clay loam; strong grade, medium crumb structure; dry, hard consistency, no cementation; plastic; mixed origin; very abrupt, smooth lower boundary, few fine roots
III	27-55	Buried culturally-enriched A-Horizon (former land surface); 7.5YR 5/1, gray; silty sand; structureless (single-grain); dry, weakly coherent consistency; no cementation; non-plastic; mixed origin; clear, irregular lower boundary; few fine roots; probable mix of Strata II and IV
IV	40-143 (BOE)	Jaucas Sand; 10YR 8/3, very pale brown; very fine-grain sand; structureless (single-grain); dry, weakly coherent consistency; no cementation; non-plastic; marine origin; no roots observed

Figure 75. Trench 9, overview of the Stratum III and Stratum IV interface, view to northeast

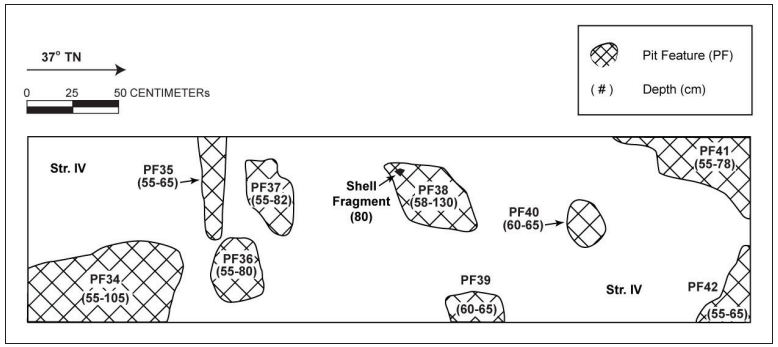

Figure 76. Trench 9, plan view of Stratum III and Stratum IV interface

Figure 77. Trench 10 overview, view to north

Figure 78. Trench 10 profile, view to southwest

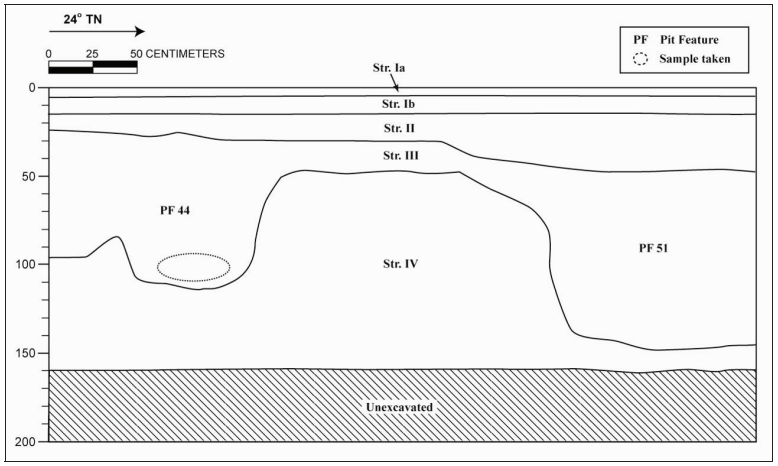

Figure 79. Trench 10, stratigraphic profile of northwest wall

Table 13. Strata Observed within Trench 10

Stratum	Depth (cmbs)	Description of Sediment
Ia	0-5	Asphalt
Ib	5-14	Crushed basalt gravel base course
II	14-48	Fill; 5YR 3/4, dark reddish brown; silt loam; moderate grade, medium crumb structure; moist, firm consistency, no cementation; non-plastic; mixed origin; clear, irregular lower boundary, few fine roots
III	29-53	Buried culturally-enriched A-Horizon (former land surface); 7.5YR 5/1, gray; silty sand; structureless (single-grain); dry, weakly coherent consistency; no cementation; non-plastic; mixed origin; clear, irregular lower boundary; few fine roots; mottled with Stratum IV (see below); previously disturbed
IV	47-160 (BOE)	Jaucas Sand; 10YR 8/3, very pale brown; very fine-grain sand; structureless (single-grain); dry, weakly coherent consistency; no cementation; non-plastic; marine origin; no roots observed

Figure 80. Trench 10, overview of the Stratum III and Stratum IV interface, view to north

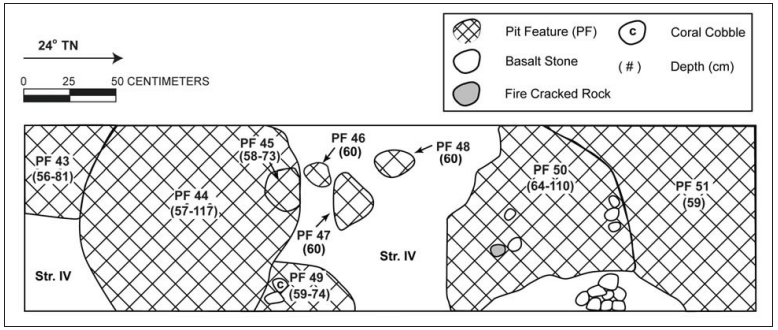

Figure 81. Trench 10, plan view of Stratum III and Stratum IV interface

Figure 82. Trench 11 overview, view to southwest

Figure 83. Trench 11 profile, view to north

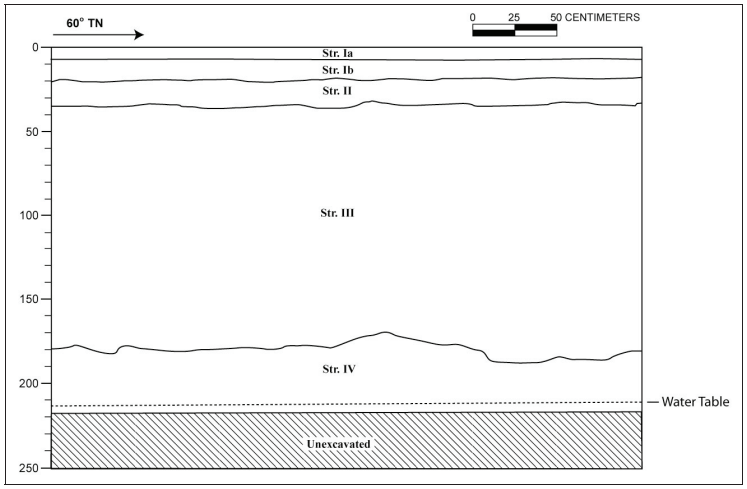

Figure 84. Trench 11, stratigraphic profile of northwest wall

Table 14. Strata Observed within Trench 11

Stratum	Depth (cmbs)	Description of Sediment
Ia	0-8	Asphalt
Ib	8-18	Crushed basalt gravel base course
II	18-35	Fill; 2.5YR 2.5/4, dark reddish brown; sandy silt; weak grade, medium crumb structure; dry, weakly coherent consistency, no cementation; non-plastic; mixed origin; very abrupt, smooth lower boundary, common fine roots
III	35-187	Buried culturally-enriched A-Horizon (former land surface); 10YR 4/2, dark grayish brown, mottled (40%) with 10YR 8/3, very pale brown; fine-grain sand; structureless (single-grain); moist, loose consistency; no cementation; non-plastic; marine origin; clear, smooth lower boundary, common fine roots
IV	170-217 (BOE)	Jaucas Sand; 10YR 8/3, very pale brown; very fine-grain sand; structureless (single-grain); wet, slightly sticky consistency; no cementation; non-plastic; marine origin; no roots observed

4.5 Historic Property Descriptions

4.5.1 SIHP# 50-80-14-7135

Formal Type: Subsurface Cultural Layer
Functional Interpretation: Activity Area
# of Features: 1
Age: Pre- and Post-Contact
Current Dimensions: Identified within all subsurface test excavations within the 1.15-acre project area (lateral limits not established)
Location: Trenches 1-10
Tax Map Key: TMK [1]-2-6-26:012 & 015
Land Jurisdiction: Roman Catholic Church
Description:

SIHP# 50-80-14-7135 is a buried culturally-enriched sand A-Horizon (cultural layer) that was identified within all subsurface test excavations of the project area. The lateral limits of the subsurface cultural layer, which extend beyond the boundaries of the project area, have not been established.

Disarticulated human skeletal remains including most of a radius, three tarsal (foot) bones, and two rib fragments encountered within the SIHP# 50-80-14-7135 cultural layer that was present within Trench 3. The disarticulated human remains were encountered within Stratum III (cultural layer) at a depth of approximately 145 cmbs, near the central area of the Trench (see Figure 50). The incomplete, disarticulated remains indicate a secondary deposit, likely due to previous disturbance of a burial. There were no grave goods or artifacts in direct association with the disarticulated remains. Per consultation with SHPD/DLNR, the disarticulated human skeletal remains were recovered for interim curation on the Church premises.

A total of 63 accessioned artifacts were collected from within the SIHP# 50-80-14-7135 cultural layer. Ten of the artifacts consisting of ground stone tools, basalt flakes, and a coral file were considered to be of traditional Hawaiian origin, likely dating to the pre-contact period. These traditional Hawaiian artifacts were only observed in the southwestern (*makai*) portion of the project area, within Trenches 3, 4, 8 and 9. The remaining 53 accessioned artifacts collected during subsurface excavation were considered to be post-contact or historic period artifacts and consisted of various diagnostic or representative glass, ceramic, and metal items. A detailed summary and analysis of artifacts collected from SIHP# 50-80-14-7135 is presented in Section 5.1 Artifact Analysis below. The artifacts collected from SIHP# -7135 provide additional temporally diagnostic information indicating that SIHP# -7135 was utilized as an activity area from the pre-contact period through the mid 20th century.

Faunal osseous material was identified within SIHP# 50-80-14-7135 in Trenches 2-5, 7, and 9-11. Faunal species represented amongst identifiable bone fragments included cow (*Bos taurus*), pig (*Sus scrofa*), dog (*Canis familiaris*), and unknown species of bird and fish. A detailed summary and analysis of faunal skeletal material collected from SIHP# -7135 is presented in Section 5.2 Faunal Analysis below. The faunal assemblage collected from SIHP# -7135 consists largely of historically-introduced species dominated by butchered cow or

pig bones suggesting that the majority of the faunal osseous material was likely discarded or buried during the post-contact period.

Additionally, pit features of varying depths and dimensions were observed, extending from the base of the cultural layer (SIHP# 50-80-14-7135) to within naturally-occurring Jaucas sand. These pit features could reflect natural depressions of the former land surface and/or be associated with man-made excavations. Two of these pit features, located within Trench 8, were observed to contain human burials (SIHP# 50-80-14-7136 Feature A and B). The remainder of the pit features contained sediment that was consistent with the sediment observed within the cultural layer, which is comprised of dark-stained sand or mottled sand containing sparse charcoal flecking. These features did not contain diagnostic information warranting them to be assigned as formal features of a historic property. Instead, each pit feature was assigned chronological number designations (Pit Feature 1-51) and depicted on trench plan and profile maps that include the depth of origin and base depth of each pit.

In summary, evidence for pre-contact use of SIHP# 50-80-14-7135 is derived from the presence of eight traditional Hawaiian artifacts related to the manufacture of stone tools. Evidence for post-contact use of SIHP# 50-80-14-7135 is derived from the presence of two likely post-contact burials (SIHP# 50-80-14-7136 Feature A and B), butchered faunal osseous material, and 44 historic artifacts that were produced within the late 19th and mid 20th centuries.

4.5.2 SIHP# 50-80-14-7136

Formal Type: Complex (Human Interment)
Functional Interpretation: Burial
# of Features: 2
Age: Post-Contact
Current Dimensions: Minimally 4.2 m N/S by 3.1 m E/W
Location: Trench 8
Tax Map Key: [1] 2-6-26:012
Land Jurisdiction: Roman Catholic Church
Description:

SIHP# 50-80-14-7136 is a complex of human interments consisting of two in situ human burials encountered within Trench 8, designated Burial 1-2/SIHP# -7136 Features A and B (see Figure 37 and Figure 38).

SIHP# 50-80-14-7136 Feature A (Burial 1) is a human burial that was encountered in the northern portion (*mauka*) of Trench 8 on September 24, 2010, during the second phase of subsurface excavation in the project area (see Figure 37 and Figure 38). Trench 8 is located approximately 2.5 m southeast of the disarticulated remains encountered in Trench 3. Feature A was evidenced at a depth of 87 cmbs within a burial pit approximately 60 cm wide that extended from the top of Stratum III (cultural layer) to within Stratum IV (Jaucas sand). The burial pit sediment was composed similar to that of SIHP# -7136 Feature B with mottled brown and very pale brown sand derived from the disturbance to, and mixture of, Stratum III and IV. Once encountered, only a portion of the skeletal remains were exposed in order to determine the position of the burial. Based on the findings of the partial exposure, Feature A appears to represent a complete, previously undisturbed inhumation. The position of the skeletal remains

was determined to be supine (fully-extended) with the cranium oriented toward the SE and the postcrania to the NW with the femora extending into the northwest sidewall of Trench 8. Therefore, the foot elements could not be accounted-for during the partial excavation to exclude them as the disarticulated remains encountered in Trench 3; however, the arm elements appeared to be intact and undisturbed. No evidence of coffin wood was observed during the partial exposure of the skeletal remains. A necklace similar to that observed within SIHP# -7136 Feature B, consisting of small purple, green, red, and black glass beads was observed in situ over the neck area. No other associated grave goods or artifacts were observed within the burial pit feature.

A preliminary osteological analysis of the in situ burial suggests that the individual was possibly an older adult female, and an assessment of ethnicity of SIHP# -7136 Feature A suggests likely Polynesian. All of the postcranial elements appeared to be completely fused, generally indicating an age over 16 years, or an adult individual. None of the incisors or canines were present and there was marked resorption of the alveolar sockets, as well as in areas of several other missing teeth, which indicates previous (antemortem) loss of the teeth. Based on the condition of the dentition, it is suggested that the individual was likely an older adult. The overall size of the cranium appeared slightly robust, although the morphological features of the facial structures (e.g., glabellar region, and supraorbital ridges and margins) appeared to be consistent with female. The observed morphology of the nasal aperture is characteristic of Asiatic and Polynesian ancestries, and includes a moderately wide nasal aperture, low and partially flat nasals, and a small inferior nasal sill with a lack of guttering (Hefner 2009). The slight robusticity of the cranium, in consideration of the female traits, suggests that the individual was likely Polynesian rather than of Asiatic ethnicity. The burial position and necklace indicates that SIHP# -7136 Feature A is likely a post-contact human burial.

SIHP# 50-80-14-7136 Feature B (Burial 2) is a human burial that was encountered in the southwestern portion (*makai*) of Trench 8 on September 24, 2010, during the second phase of subsurface excavation in the project area (see Figure 37 and Figure 38). The burial is located approximately 2.5 m southeast of the disarticulated remains encountered in Trench 3. Feature B was evidenced at a depth of 96 cmbs within a burial pit that extended from the base of Stratum III (cultural layer) to within Stratum IV (Jaucas sand). The burial pit sediment was composed of mottled brown and very pale brown sand derived from the disturbance to, and mixture of, Stratum III and IV. The burial pit feature is ovoid and extends from the southwest wall toward the center area of the trench. The southern edge of the feature appears to be partially bisected by a small portion of a third outline that extends into the southern wall. The burial was encountered while bisecting the larger, central feature. Once encountered, only minimal excavation proceeded in the area in order to partially expose elements and determine the position of the burial without disturbing the remains. Only the upper portion of the burial, from the upper arm (proximal humeral shafts) and the upper back (scapulae, ribs, cervical vertebrae and thoracic vertebrae) to the cranium, extends into Trench 8. The cranium is oriented to the northeast (*mauka*) with the postcrania to the southwest (*makai*). The exposed skeletal remains of Feature B appear to represent a previously undisturbed inhumation. However, as the lower arms and hands, and below the chest extend into the southwest sidewall, it is not possible to exclude disturbance to the lower half of the skeletal remains. As such, the disarticulated remains from Trench 3 cannot be excluded as originating from this individual. The remains were in a prone position with the

anterior side (stomach) down and partially on the left side, and the cranium was on the left anterior side, facing to the right of the body, with the posterior right portion exposed. The burial position is estimated to be semi-flexed as the lower arms and hands were not encountered in a flexed position near the upper body. An elaborate beaded necklace consisting of numerous purple, green, black, and red small glass beads was observed around the neck area. All of the beads were loose due to complete degradation of the material used to string them. No other grave goods or associated artifacts were observed within the burial pit feature.

Although the position of the cranium and mandible partially obscured the facial structures, a preliminary osteological analysis of the visible in situ remains of SIHP# -7136 Feature B suggests an adult female individual, likely of Polynesian ethnicity. The proximal ends of the humeri appeared to be completely fused, generally indicating an age over 16 years. The teeth are heavily worn, which is likely attributed to gritty foods in the diet, and it indicates that the teeth have been in occlusion (fully erupted) for a length of time, further supporting the assessment of an adult individual. The overall shape of the cranium appeared mostly round, with a short anterior-posterior length, and the nasal bone contour appeared to be low and have a flat ‘plateau’ on the superior surface, with a morphology more consistent with Asiatic or Polynesian ancestries (Hefner 2009). The lateral edge of the right supraorbital margin appeared gracile, consistent with a female, yet the overall condition of the cranium was slightly robust to suggest Polynesian rather than an Asiatic ancestry. The burial position and necklace indicates that SIHP# -7136 Feature B is likely a post-contact human burial.

Following the procedures of Hawai`i Revised Statutes (HRS) Chapter 6E-43, and Hawai‘i Administrative Rules (HAR) Chapter 13-300, the human burials associated with SIHP# 50-80-14-7136 were determined by SHPD/DLNR to be over 50 years old and likely Native Hawaiian. As previously identified Native Hawaiian burials on O‘ahu, their treatment falls under the jurisdiction of the O‘ahu Island Burial Council (OIBC).

Section 5 Results of Laboratory Analysis

5.1 Artifact Analysis

Artifacts recovered during subsurface excavation conducted within the project area were cataloged according to provenience and type with a total of 63 accessions. A total of ten artifacts from five test trenches were considered to be of traditional Hawaiian origin, likely dating to the pre-contact period (Table 15). The remaining 53 accessions collected during subsurface excavation were determined to be post-contact or historic period artifacts and consisted of various diagnostic or representative glass, ceramic, and metal items (Table 16). Additional non-diagnostic artifacts, such as metal pieces, and glass or ceramic sherds were noted but not collected if a representative sample existed for analysis. A mixing of pre- and post-contact artifacts was observed within the SIHP# 50-80-14-7135 cultural layer and supports that the layer, within the project area, was likely previously disturbed during grading, filling, and development associated with modern infrastructure (i.e., buildings, roadway, etc.).

5.1.1 Traditional Hawaiian Artifacts

As previously mentioned, a total of ten artifacts collected during subsurface excavation were considered to be of traditional Hawaiian origin, likely dating to the pre-contact period (Figure 85) Although minimal in number, the traditional Hawaiian artifact assemblage provides a representative sample of artifact types including three basalt flakes (Acc. #13, 50. And 58), two possible basalt stone sinkers (Acc. #10 and 11), two basalt ground stone implements (Acc. #34 and 57), a coral file (Acc. #12), a possible hematite slingstone (Acc. #48), and a possible shell bead (Acc. # 35).

Accession #10, collected from the Stratum II-III interface of Trench 3, is a small, porous basalt cobble with a shallow pecked groove that extends intermittently along the center, parallel to the long axis. Accession #10 is interpreted as a possible sinker. The central groove was likely design to hold a rope or chord in place.

Accession #11, collected from the Stratum II-III interface of Trench 3, is a small basalt pebble with a shallow pecked or ground groove that extends around the center, similar to Accession #10. The artifact is relatively small and light, but may have functioned as a sinker. The central groove may have been designed to hold a rope or chord in place.

Accession #12, collected from the Stratum II-III interface of Trench 3, is a pebble-sized piece of coral that has been bifacially ground and shaped to have a linear edge. Portions of Accession #12 appear to have broken following manufacture. The artifact is interpreted as a coral file that was likely used for shaping and producing bone or wood implements.

Accession #13, collected from the Stratum II-III interface of Trench 3, is a fine-grain basalt flake. Accession #13 is considered to be a primary reduction flake, which are defined as generally large and thick with little or no dorsal flake scars and the presence of cortex on the dorsal surface. Primary reduction flakes represent the initial stages of the reductive process of lithic manufacture that involves the detachment of large workable pieces of raw material from a core. Possible use-wear was observed near the distal termination of Accession #13.

Table 15. Traditional Hawaiian Artifacts Collected from SIHP# 50-80-14-7135

Acc. #	Trench	Stratum	Depth (cmbs)	Type	Dimensions (cm)	Mass (g)	Description
10	3	II-III	18-183	Possible Sinker	9.4-x-7.7-x-5.2	476.4	Basalt; Shallow central groove extending intermittently along center, parallel to the long axis
11	3	II-III	18-183	Possible Sinker	2.0-x-2.0-x-1.0	5.6	Basalt; shallow groove extending along center
12	3	II-III	18-183	File	5.2-x-4.0-x-2.7	33.6	Coral; bifacially ground and shaped to a linear edge
13	3	II-III	18-183	Flake	3.9-x-2.5-x-1.3	10.0	Basalt; primary reduction
34	4	Ic/IIa	88	Groundstone	5.7-x-4.8-x-2.7	65.1	Evidence of surface polish; Unknown Function
35	4	Ic/IIa	88	Shell	1.9-x-1.2-x-0.5	0.8	Marine Shell; central perforation
48	8	III	65	Manuport	5.7-x-5.6-x-5.2	339.5	Hematite; possible slingstone
50	9	III	55	Flake	5.5-x-4.6-1.2	35.0	Basalt; secondary reduction
57	11	III	57-83	Groundstone	8.8-x-3.7-x-1.4	45.4	Basalt; bifacially ground and shaped to a linear/beveled edge; Possible multi-use tool
58	11	III	57-83	Flake	2.8-x-2.3-x-0.8	5.4	Basalt; secondary reduction

Table 16. Historic Artifacts Collected within SIHP# 50-80-14-7135

Acc. #	Trench	Stratum	Depth (cmbs)	Type	Function	# of Pieces	Dimensions (cm)	Mass (g)	Probable Age	Description
1	2	II	20-80	Glass Bottle	Container	1	22.0-x-5.7-x-0.5	378.8		Complete; Colorless; Round base; Cup mold bottom; Embossed on base “SUNRISE SODA WORKS CO. LTD.” around base “NET CONTENTS 6½ FLUID OZS” around neck “PATENTED PAID/ REGISTERED”. Soda container.
2	2	II	20-80	Glass Bottle	Container	1	22.5-x-6.7-x-0.5	434.6	post-1820	Complete; Dark amber; Applied lip; Brandy finish; Round base; Embossed on base “10”. Spirit container.
3	2	II	20-80	Glass Bottle Fragment	Container	1	5.8-x-7.8-x-0.7	180.8	1902-1924	Base portion; Colorless; Round base; Cup bottom mold; Embossed around base “P.C.G.W. 2”. Liquid container.
4	2	II	20-80	Glass Bottle Fragment	Container	1	2.0-x-3.1-x-0.8	18.6	Historic	Base fragment, Dark olive; Round base. Liquid container.
5	2	II	20-80	Ceramic Fragments	Dinnerware	8	N/A	371.1	ca. 1899	Fragmented; Green floral design around rim; Maker’s Mark on bottom “HOMER LAUGHLIN/American Beauty”. Deep ceramic plate or flat soup bowl.
6	2	II	20-80	Ceramic Fragments	Dinnerware	15	N/A	342.4	Historic	Fragmented; Pink roses/Green leaves/Green/Orange/Blue design; Ceramic plate.

Acc. #	Trench	Stratum	Depth (cmbs)	Type	Function	# of Pieces	Dimensions (cm)	Mass (g)	Probable Age	Description
7	2	II	20-80	Nails	Construction	3	N/A	40.8	44.3	2 large nails, 1 smaller nail, Rust-corroded; Encrusted sand.
8	2	II	20-80	Possible Breaker Part	Construction	1	3.0-x-3.3-x-1.0	28.6	Historic	Partial; Metal and composite material; Corroded; Adhering sediment. Electrical component for construction.
9	2	II	20-80	Ceramic Fragment	Dinnerware	1	4.7-x-4.7-x-0.3	12.8	Historic	Fragment; Green/Blue/Yellow floral design. Ceramic dinnerware.
14	3	II-III	18-183	Glass Bottle Fragment	Container	1	10.9-x-6.4-x-0.5	244.8	Historic	Base portion; Amber; Round base. Liquid container.
15	3	II-III	18-183	Glass Bottle Fragment	Container	1	7.3-x-3.6-x-0.7	69.0	Historic	Neck portion; Amber. Liquid container.
16	3	II-III	18-183	Glass Bottle Fragments	Container	2	N/A	28.7	Historic	Fragments; Amber; Body fragments. Liquid container.
17	3	II-III	18-183	Glass Bottle Fragment	Container	1	4.2-x-7.2-x-0.6	104.1	Historic	Base portion; Dark olive; Round base with kick-up. Spirit container.
18	3	II-III	18-183	Glass Bottle Fragment	Container	1	6.1-x-7.6-x-0.4	195.2	Historic	Base portion; Very dark olive; Round base with push-up; Embossed "A" on bottom. Liquid container.
19	3	II-III	18-183	Glass Bottle Fragment	Container	1	4.2-x-3.3-x-0.3	23.8	post-1820	Lip portion; Very dark olive; Applied lip. Liquid container.
20	3	II-III	18-183	Glass Bottle Fragment	Container	1	5.0-x-4.6-x-1.5	29.4	Historic	Base fragment; Light green; Round base with kick-up or push-up. Liquid container.
21	3	II-III	18-183	Glass Bottle Fragments	Container	2	6.2-x-7.7-x-0.6	92.4	pre-1870	Base portion (fragments refit); Dark olive; Round base with push-up; Open pontil. Liquid container.
22	3	II-III	18-183	Glass Bottle Fragments	Container	17	N/A	150.4	Historic	Fragments; Dark olive; Body/neck fragments. Liquid containers.
23	3	II-III	18-183	Glass Bottle Fragment	Container	1	7.7-x-3.0-x-.04	31.5	1870s-1920s	Neck portion; Dark olive; Ribbed neck; Tooled finish. Liquid container.
24	3	II-III	18-183	Glass Bottle Fragment	Container	1	4.0-x-6.0-x-0.5	19.9	post-1820	Neck-shoulder portion; Dark olive; Applied lip. Liquid container.
25	3	II-III	18-183	Glass Bottle Fragment	Container	1	5.3-x-2.6-x-0.5	23.3	post-1820	Neck portion; Very dark olive; Applied lip. Liquid container.
26	3	II-III	18-183	Glass Bottle Fragments	Container	2	15.0-x-5.0-x-0.5	67.1	Historic	Body portion (fragments refit); Light aqua; Embossed "CO." near center edge of body fragment. Soda container.
27	3	II-III	18-183	Glass Bottle Fragment	Container	1	2.0-x-4.9-x-0.5	18.1	Historic	Base fragment; Light aqua; Round base with push-up. Soda container.

Acc. #	Trench	Stratum	Depth (cmbs)	Type	Function	# of Pieces	Dimensions (cm)	Mass (g)	Probable Age	Description
28	3	II-III	18-183	Glass Fragment	Container	1	4.9-x-4.9-x-0.2	9.3	Historic	Fragment; Colorless; Curved body with smooth rim; Faint longitudinal etching. Possible drinking glass.
29	3	II-III	18-183	Ceramic	Personal Item	1	4.8-x-3.0-x-1.2	17.2	Historic	Fragment; White ceramic painted orange and green; Figurine with possible hat and clothing.
30	3	II-III	18-183	Ceramic Fragments	Dinnerware/ Container	13	N/A	98.1	Historic	Fragments; Assorted white and decorative designs; Varying thickness. Dinnerware or decorative vessels.
31	3	II-III	18-183	Ceramic Fragments	Container	4	N/A	84.2	Historic	Fragments; Tan/Brown; Glazed; Curved (2); Flat (1); Handle (1). Likely container(s).
32	3	II-III	18-183	Metal	Indeterminate	10	N/A	54.2	Historic	Fragments; Non-diagnostic; Rust-corroded and encrusted sand.
33	4	IIb	88	Glass Bottle	Container	1	17.5-x-6.1-x-0.8	257.1	ca. 1857	Complete; Light aqua; Tooled lip; Ring finish; Blake (rectangular; octagon with angled corners) base with push-up; Embossed vertically "BURNETT'S/COCOAINE" on body; "BURNETT" on side above; "BOSTON" on side below.
36	4	Ic	0-72	Glass Bottle Fragment	Container	1	6.7-x-6.1-x-0.5	28.5	Historic	Fragment; Green; Neck-shoulder portion. Liquid container.
37	4	Ic	0-72	Ceramic Fragments	Container	2	N/A	46.6	Historic	Fragments; Glazed; Green; Applied floral motif on exterior.
38	4	Ic	0-72	Ceramic Fragments	Dinnerware	2	N/A	9.3	Historic	Fragments; White/Decorative floral design.
39	4	Ic	0-72	Nails	Construction	2	N/A	48.6	Historic	Non-diagnostic; Rust-corroded.
40	4	IIb	0-130	Glass Fragment	Dinnerware/ Container	1	4.7-x-2.4-x-0.2	5.0	Historic	Fragment; Clear glass; Decorative design; Curved.
41	5	II	0-30	Brick fragments	Construction	3	N/A	366.5	Historic	Red brick fragments.
42	5	II	0-30	Metal	Construction	3	N/A	1000+	Historic	Large; non-diagnostic; one possibly a pipe portion; Rust-corroded and encrusted sand.
43	6	II	0-70	Metal Spoon	Utensil	1	14.5-x-3.1-x-0.2	22.7	Historic	Complete; Rust and green corrosion; Encrusted sand.
44	6	II	0-70	Glass Bottle Fragment	Container	1	5.2-x-7.1-x-0.7	94.5	Historic	Base fragment; Light aqua; Square base with push-up.
45	6	II	0-70	Nails	Construction	14	N/A	117.5	Historic	Various sizes; Rust-corroded; Non-diagnostic
46	6	II	0-70	Metal	Construction	1	15.5-x-7.9-x-4.2	501.0	Historic	Non-diagnostic; Rust-corroded; Encrusted sand.
47	7	III	135	Ceramic Fragment	Dinnerware	1	3.1-x-3.0-x-0.4	4.3	Historic	Fragment; Glazed; White/decorative paint; Curved.
49	8	III	70	Battery Core	Battery	1	3.7-x-1.2	5.2	Historic	Intact core portion; Tubular/round; Metal.

Acc. #	Trench	Stratum	Depth (cmbs)	Type	Function	# of Pieces	Dimensions (cm)	Mass (g)	Probable Age	Description
51	9		35	Ceramic Fragment	Dinnerware	1	7.2-x-4.2-x-0.4	26.5	Historic	Fragment; White/Blue design on both sides; Curved. Ceramic bowl or cup.
52	10	II/III	50	Glass Bottle Fragment	Container	1	6.7-x-6.5-x-0.6	83.6	Historic	Base portion; Light aqua; Round base with push-up. Liquid container.
53	11	III	37-57	Figurine	Ornament/Personal Item	1	3.9-x-2.1-x-2.0	6.8	Historic	Ivory/Bone; Hand-carved; Possible depiction of animal
54	11	III	37-57	Glass Bottle	Container	1	8.5-x-2.8-x-2.8	39.2	Historic	Complete; Colorless; Flat or patent neck finish; Extract Lip Embossed "1" on base; Possible medicine container
55	11	III	37-57	Ceramic Fragments	Dinnerware	10	N/A	78.9	Historic	Fragments; Various sizes/shapes/patterns; Non-diagnostic
56	11	III	37-57	Nails	Construction	3	N/A	16.4	Historic	Various sizes; Rust-corroded; Non-diagnostic
59	11	III	57-83	Glass Bottle Fragments	Container	8	N/A	19.4	Historic	Body Fragments; Various colors; Non-diagnostic
60	11	III	57-83	Nails	Construction	3	N/A	17.4	Historic	Various sizes; Rust-corroded; Non-diagnostic
61	11	III	57-83	Ceramic Fragments	Dinnerware	6	N/A	39.7	Historic	Fragments; Various sizes/shapes/patterns; Non-diagnostic
62	11	III	57-83	Metal Fragment	Construction	1	3.3-x-1.6-x-0.7	16.0	Historic	Fragment; Lead; Possible stained-glass fixture
63	11	III	57-83	Glass Bottle Fragments	Container	3	N/A	64.2	Historic	Fragments; Light aqua; Embossed portions indicate CONSOLIDATED SODA WATER WORKS LIMITED bottle; Possible soda container

Figure 85. Traditional Hawaiian artifacts encountered within SIHP# 50-80-14-7135

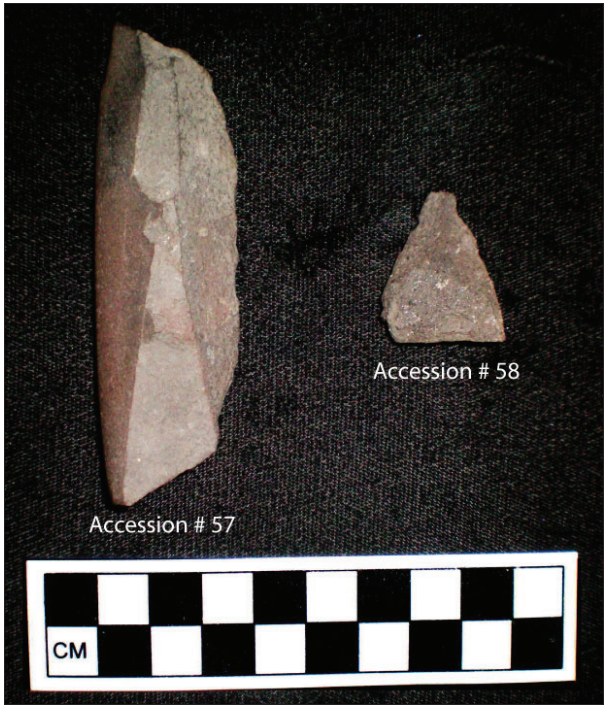

Figure 86. Traditional Hawaiian artifacts encountered within SIHP# 50-80-14-7135

Accession #34, collected from the Stratum Ic-IIa interface of Trench 4, is a porous basalt cobble fragment with evidence of surface polish. Accession #34 appears to have been broken or fire-cracked following manufacture. Due to the post-manufacture damage, the function of Accession #34 is unknown. The poor quality of basalt used to manufacture Accession #34 and the general shape of the artifact is not suggestive of basalt adze production.

Accession #35, collected from the Stratum Ic-IIa interface of Trench 4, is a small marine shell with a central perforation. While the central perforation may have been naturally produced, Accession #35 may have been used as decorative bead.

Accession #48, collected from Stratum III of Trench 8, is a small, hematite cobble and the notably dense stone may have been used as a slingstone. Accession #48 has been transported to the project area from an unknown provenance. A similar slingstone was reported from near the Waikīkī police substation (Winieski et al. 2002:55). Slingstones could relate to warfare or bird hunting.

Accession #50, collected from Stratum III of Trench 9, is a fine-grain basalt flake. Accession #50 is considered to be a secondary reduction flake, which are defined as generally thin and elongated with multiple dorsal flake scars, small platforms, and absence of cortex on the dorsal surface. Secondary reduction flakes represent mid- to late-stages of the reductive process of lithic manufacture, and traditionally may have been the final stage in producing usable expedient flake tools. Possible use-wear was observed along one edge of Accession #50 near the distal termination.

Accession #57, collected from Stratum III of Trench 11, is a fine-grain basalt ground stone implement. Surface polish is present on two converging surfaces forming a linear edge and bevel. The remainder of the surface is unfinished and possibly the result of post-manufacture breakage or wear. Possible use-wear was observed on the worked linear edge of the implement. Accession #57 is considered to be a multi-use tool that may have functioned as a cutting, chopping, or filing instrument.

Accession #58, collected from Stratum III of Trench 11, is a fine grain basalt flake. Accession #58 is considered to be a secondary reduction flake, which are defined as generally thin and elongated with multiple dorsal flake scars, small platforms, and absence of cortex on the dorsal surface. Secondary reduction flakes represent mid- to late-stages of the reductive process of lithic manufacture, and traditionally may have been the final stage in producing usable expedient flake tools.

In addition to these eight traditional Hawaiian artifacts, a number of unmodified, water-rounded basalt cobbles and small boulders were encountered within the SIHP # 50-80-14-7135 cultural layer. These unmodified basalt stones could have been utilized as hammerstones, anvils, or potentially as raw material cores, but lacked any definitive evidence of use-wear or modification.

5.1.2 Historic Artifacts

A total of 53 accessions were cataloged from the subsurface excavation as post-contact or historic period artifacts. Artifacts mostly consist of glass bottles and bottle fragments, ceramic fragments from portions of dinnerware or decorative vessels, nails, and other material that would

be expected within a historically-utilized cultural layer (see Table 16). A majority of the artifacts were located within Trenches 2, 3, and 4. In addition to these artifacts, a number of non-diagnostic historic artifacts, such as metal nails and metal pieces, red brick portions, and unmarked bottle glass fragments were noted during subsurface excavation, but not collected.

Temporally diagnostic artifacts collected within SIHP# 50-80-14-7135 included three intact glass bottles (Acc. #1-2 and #33), several glass bottle fragments (Acc. #3, 19, 21, and 23-25), and portions of a ceramic dinnerware plate (Acc. #5).

An intact, colorless, glass bottle (Acc. #1), collected from Trench 2, is embossed with the manufacturer’s information “SUNRISE SODA WORKS CO., LTD” around the base and “PATENTED PAID/REGISTERED” around the neck (Figure 87). The information likely corresponds to the Sunrise Soda Water Works Co. LTD building located on Robello Lane, Honolulu, HI which is dated 1925.

An intact Burnett’s Cocoaine bottle (Acc. #33) was collected from Trench 4. The bottle glass is light aqua and embossed with “BURNETT’S/COCOAINE” oriented vertically across the body and “BURNETT” embossed vertically on the side above with “BOSTON” embossed vertically on the side below (see Figure 87). The Joseph Burnett Company of Boston began production of Burnett’s Cocoaine hair tonic circa 1857 and it continued to sell for over 40 years (Southborough Historical Society 2008). It is understood that the marketing name for the hair tonic was a play on words related to a new public enthusiasm for the drug cocaine.

An intact dark amber glass bottle (Acc. #2, see Figure 87) and three partial glass bottle neck portions (Acc. #19, 24, and 25) collected within SIHP# 50-80-14-7135, from Trenches 2 and 3, have a diagnostic applied lip finish. After 1820, glass makers began using this method of adding hot glass to finish the lip of a bottle which created a diagnostic seam around the collar as an applied lip. A separate glass bottle neck portion (Acc. #23), collected from Trench 3, has a tooled finish. Glass makers began to use this method after 1880.

A colorless glass bottle fragment (Acc. #3), collected from Trench 2, has “P.C.G.W.2” embossed near the base (Figure 88). This maker’s mark indicates the bottle was manufactured by Pacific Coast Glass Works of San Francisco between 1902 and 1924, after which time the industry and maker’s mark was changed to the Pacific Coast Glass Company (Toulouse 1971:416). A glass bottle base portion (Acc. #21), collected from Trench 3, has a round base with a push-up and a distinguishing open pontil in the center of the bottom. An open pontil is described as a key mid-19th century characteristic, likely pre-dating 1870 (Lindsey 2010).

While several ceramic vessel fragments were collected within SIHP # 50-80-14-7135, only one item (Acc. #5) exhibits temporally diagnostic information. Accession #5 was collected from Trench 2 and consists of eight refitting fragments of a white dinnerware plate with decorative green floral motif around the rim, and a green print maker’s mark on the bottom reading “Homer Laughlin/American Beauty” in a script font with a logo above it consisting of a superimposed H and L (Figure 89). The Homer Laughlin China Company, originally of East Liverpool, Ohio, began production of the American Beauty collection in 1899 (Carnegie Public Library 2010).

Figure 87. Intact glass bottles encountered within SIHP# 50-80-14-7135

Figure 88. Accession #3, a glass bottle fragment encountered within SIHP# 50-80-14-7135

Figure 89. Accession #5, ceramic vessel fragments encountered within SIHP# 50-80-14-7135

5.1.3 A Unique Find of an Ivory Bird Gaming Piece from Alaska

An ivory figurine (Acc. #53) collected from Trench 11 was noted to generally resemble indigenous Alaskan bird figurines that were collected during Captain James Cook’s 18th century voyages throughout the Pacific (Figure 90 to Figure 92). The size, shape, and flat base of Acc. #53 are strikingly similar to these early bird figurines. Acc #53 appears to be composed of ivory or bone and may exhibit metal tool markings.

This artifact was the subject of consultation with Mr. Dave McMahan (Alaska State Archaeologist) who was very helpful and gracious. He indicated that these artifact types are wide spread in west and northwest Alaska and the artifact is pretty much identical to some he found during his recent archaeological investigation of Castle Hill in Alaska. Castle Hill or Noow Tlein, in Sitka, Alaska, is a National Historic Landmark and the historical site of Tlingit and Russian forts. Castle Hill was the administrative capitol for the Russians in Alaska during the 19th century. Mr. McMahan related that these types of artifacts were used as game pieces. To his knowledge the game was of the gambling sort and included a set of these pieces which were thrown onto a surface and then depending on how they landed, flat side down or what not, a gambler won. He asserted that, on the basis of his review of our artifact photo provided, that he is quite sure the artifact is made of walrus ivory. The Castle Hill collection included similar types without ears as well as with ears -as we have.

Mr. McMahan noted that he found coconut husks believed to be from Hawai‘i in an archaeological context dating to around AD 1810-1830 and in several areas of his report he discusses trade contacts with Hawaii (animal importation, phoenix buttons). As for the origin of our artifact, he is leaning towards a Russian contact between Alaska and Hawai‘i in the early 19th century. This is also evidenced by the presence of Fort Elizabeth on Kaua‘i, which dates to around the same time period.

Mr. McMahan provided a photo of ivory bird gaming pieces from the Castle Hill workshop area, Building 1 at Sitka, Alaska, that are almost identical to our Accession #53 artifact (compare Figure 90 to Figure 93).

Mr. McMahan may well be correct that the artifact relates to Russian contact between Alaska and Hawai‘i in the early 19th century. We just note in passing that the contacts between Alaska and Hawai‘i are long and rich with important contacts both earlier and later. The first documented non-Polynesian contact with O‘ahu was the arrival of Cook’s ships *Discovery* and *Resolution* in 1779 having come down from northern Alaska waters. Whaling ships plying the Alaskan coast often included Native Hawaiian sailors and whaling ships often wintered in the Hawaiian Islands between whaling seasons off the Alaskan coast. In the great whaling disaster of 1871 north of the Bering Strait near Point Belcher, for example, no less than four of the whaling vessels lost (the bark *Paia*, the brigs *Kohola* and *Comet* and the ship *Julian*) flew the Hawaiian flag and were home ported in Honolulu. Whalers and sailors of all ethnicities might have been particularly likely transporters of gambling pieces.

Figure 90. Accession #53, ivory or bone figurine encountered within SIHP# 50-80-14-7135

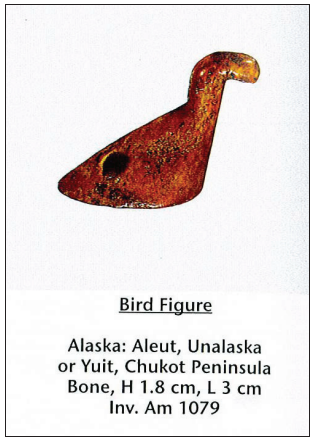

Figure 91. Photograph of an indigenous Alaskan bird figure collected during Captain James Cook’s voyages throughout the Pacific (source: Harry Haase, Göttingen Collection)

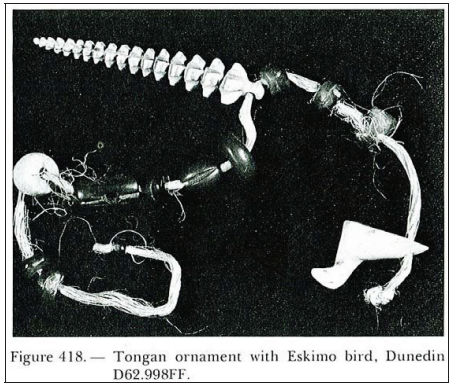

Figure 92. Photograph showing an indigenous Alaskan bird figure (lower right) attached to a Tongan ornament collected during Captain James Cook’s voyages throughout the Pacific (source: Otago Museum, Dunedin)

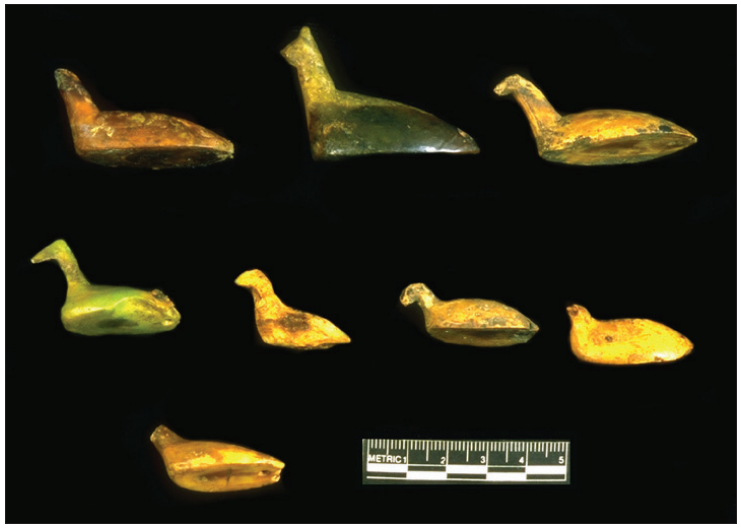

Figure 93. “Ivory Birds” walrus ivory gambling game pieces from the Castle Hill workshop area, Building 1 Sitka, Alaska (from http:dnr.alaska.gov/parks/oha/castlehill/chptseven.htm)

No specific temporal data was collected for the remainder of the historic artifacts collected from the SIHP# 50-80-14-7135 cultural layer, however, it is likely that the majority of these artifacts were produced between the late 19th century and the mid-20th century.

5.2 Faunal Analysis

In addition to traditional Hawaiian and historic artifacts, a total of 230.5 g of faunal osseous remains were observed within the SIHP# 50-80-14-7135 cultural layer from Trenches 2-5, 7, and 9-10. The osseous material is highly fragmented and mostly consists of partial rib, long bone, vertebral, and foot elements. Faunal species identified among the osseous fragments include cow (*Bos Taurus*), pig (*Sus scrofa*), dog (*Canis familiaris*), and unidentified species of bird and fish. Unidentified osseous fragments were determined to be of faunal origin based on size and morphology not consistent with human origin and the presence of butcher marks.

5.3 Wood Taxa Identification

Following the completion of fieldwork, two bulk sediment samples, collected from Trench 5, Pit Feature 6 and Trench 6, Pit Feature 27, containing observable pieces of charcoal and/or carbonized plant remains were sent to the International Archaeological Research Institute, Inc. (IARII) for processing and wood taxa identification. The samples of charcoal and/or carbonized plant remains that were collected from each bulk sediment sample were viewed under magnification of a dissecting microscope. The samples were compared with anatomical characteristics of known woods in the Pacific Islands Wood Collection at the Department of Botany, University of Hawai‘i, and published descriptions (Murakami 2010).

A total of five wood taxa were identified within the sample collected from Trench 5, Pit Feature 6 that include Polynesian-introduced ti (*Cordyline fruticosa*), native *‘akoko* (*Chamaesyce sp.*), palm (Arecaceae) and two unknown taxa (Table 17). In reference to the Arecaceae palm, Murakami (2010) indicates:

> This group of palms includes many that have been introduced to the islands during historic times. Although the anatomy of palms are somewhat variable depending on position on the plant, the anatomy of the charcoal does not resemble the native *Pritchardia* (*loulu*). Similarly, the charcoal does not resemble the trunk wood of coconut.

A total of three wood taxa were identified within the sample collected from Trench 6, Pit Feature 27 that include native *‘ōhi‘a lehua* (*Metrosideros polymorpha*) and two unknown taxa (see Table 17). The 1.1 g sample of *‘ōhi‘a lehua* collected from Pit Feature 27 was sent to Beta Analytic, Inc. of Miami, Florida for radiocarbon dating analysis. The sample was analyzed using the Accelerator Mass Spectrometer (AMS) method.

Table 17. Wood taxa results (adapted from Murakami 2010)

Sample	Provenience	Taxa	Common/Hawaiian Name	Origin/Habitat	Count	Weight (g)
1	Trench 5 Pit Feature 6	*Cordyline fruticosa*	*Kī*, ti	Polynesian Introduction/Shrub	7	0.28
		Chamaesyce sp.	*‘Akoko*	Native/Shrub	1	0.11
		Arecaceae	Palm		1	0.08
		Unknown 1			5	0.68
		Unknown 2			1	0.10
2	Trench 6 Pit Feature 27	*Metrosideros polymorpha*	*‘Ōhi’a lehua*	Native/Tree	8	1.10
		Unknown 3			1	0.21
		Unknown 4			1	0.24

5.4 Radiocarbon Analysis

Following the completion of wood taxa identification, a 1.1 gram (g) sample of carbonized ‘Ōhi‘a lehua (*Metrosideros polymorpha*) that was collected within a bulk sediment sample from Trench 6, Pit Feature 27 was sent to Beta Analytic, Inc. of Miami, Florida for radiocarbon dating analysis. The sample (Beta-288158) yielded two possible date ranges, with a calibrated 2-sigma date of 1800 AD to 1940 AD (66.0%) being the most probable (Table 18 and Figure 94). This date range spans nearly the entire post-contact period, which is expected considering the extent of post-contact land use and population growth within Waikīkī.

Table 18. Results of radiocarbon analysis of Beta-288158

Beta Analytic ID #	Sample Material/ Technique	Provenience	Conventional Radiocarbon Age	C13/C12 Ratio	OxCal Calibrated Calendar Age (2-sigma
Beta-288158	Charred Material	Trench 6, Pit Feature 27	90 +/- 40 BP	-25.3 o/oo	1680 AD – 1770 AD (29.4%) 1800 AD – 1940 AD (66.0%)

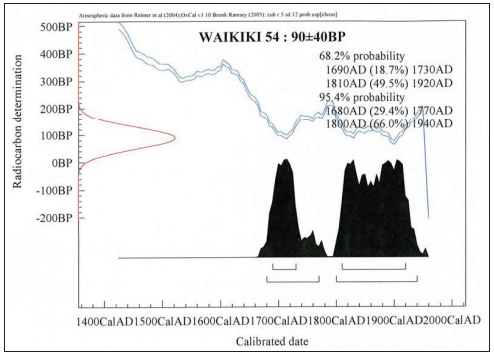

Figure 94. Results of radiocarbon analysis of Beta-288158

Section 6 Overview of Initial Consultation

Preliminary consultation with the Roman Catholic Church Diocese of Honolulu was formally initiated February 4, 2010 and has included Patrick Downes, Marlene De Costa, Nettie Peiler, Walter Yoshimitsu and Father Lane Akiona of the Parish. The request was for information on the early history of the church – particularly any information relating to an indicated former cemetery and/or other burials (Schoof 1978:62) as may be documented in church records.

In a request of March 17, 2010 we inquired regarding possible access to any microfilm or photocopies of documents from certain early leaders of the Waikīkī Roman Catholic Church (including Father Walsh, Brother Melchior, or Father Modestus Favens) from the 1839-1865 timeframe.

Ms. Marlene De Costa responded (3/17/2010):

> In answer to your inquiries, our records do not show that there was a cemetery on this parcel. We have previewed the files in the archives, Parish construction files and cemetery files. The only hope is if we have correspondence from either Fr. Walsh, Brother Melchior or Father Modestus Favens from the 1839-1865 timeframe.

Ms. Nettie Peiler responded (3/25/2010):

> The only correspondence on file referring to: Fr. Walsh, Fr. Favens and Fr., Melchior, are sacramental registers from the parishes they were assigned.

Ms. Marlene De Costa responded (3/25/2010):

> It appears that we have hit a dead end on research that would be valuable to your survey. We wish your firm and St. Augustine the best.

No substantive information above and beyond that available in standard church histories (Yzendoorn 1927, Schoof 1978) has been available.

The Saint Augustine-by-the-Sea Master Plan project was presented to the O‘ahu Island Burial Council meetings of April 14, 2010, September 8, 2010, October 13, 2010, and November 10, 2010.

The Saint Augustine-by-the-Sea Master Plan project was presented to the Waikīkī Neighborhood Board Tuesday, May 11 2010.

E-mail and telephone consultations were held with the SHPD archaeology and/or culture and history branches on 7/12/10, 8/10/10, 8/27/10, 8/30/10, 8/31/10, 9/22/10, 9/24/10, 9/27/10, 10/2/10, 10/7/10, 11/11/10, 12/3/10, 12/16/10, and 1/5/11.

In consultation with the SHPD and OIBC outreach to previously identified cultural descendants of Waikīkī included newspaper advertising (Figure 97 and Figure 98) and was initiated by mail (see Figure 95, Figure 96, Table 19, Figure 99 and Figure 100) and is continuing with meetings on-site.

To date (4/2011) no one has offered any specific information pertaining to archaeological resources or human skeletal remains within the project area.

Section 7 Summary and Interpretation

Historical background research included study of archival sources, LCAs and historic maps, as well as a review of past archaeological research in the vicinity to construct a history of land use. From these sources, a predictive model was developed to give a general idea of pre-contact and historic coastal land use patterns in the coastal area of Waikīkī.

The *ahupua‘a* of Waikīkī in the centuries before the arrival of Europeans was an intensely used locale with abundant natural and cultivated resources - including an expansive system of irrigated taro fields - supporting a large population that included the highest-ranking *ali‘i*. In the nineteenth century, after a period of depopulation, Waikīkī was reanimated by the Hawaiian *ali‘i*, the foreigners residing there, and by the farmers continuing to work the irrigated field system, which had been converted from taro to rice. This farming continued up to the first decades of the 20th century until the Waikīkī reclamation project drained the remaining ponds and irrigated fields.

Archaeological studies within Waikīkī and in the vicinity of the project area have recorded the presence of subsurface cultural deposits of both pre- and post-contact provenance. These deposits have generally remained intact despite the years of construction activity that have altered the entire Waikīkī area. During archaeological monitoring of Kalākaua, Kealohilani, ‘Ōhua Avenues mentioned above, intact cultural deposits were encountered (Cleghorn 2001a, 2001b; Winieski et al. 2002). The current archaeological inventory survey has identified SIHP# 50-80-14-7135, a buried, culturally-enriched sand A-horizon, which includes numerous pre- and post-contact artifacts, disarticulated human skeletal remains, and a total of 51 documented pit features.

Previous and on-going archaeological reports have documented numerous pre-Contact and post-Contact human burials throughout the Waikīkī area and within close proximity to the current project area (see Figure 17). Especially relevant to the present project area are 22 burials that were encountered at the intersection of Kealohilani and Kalākaua Avenues (Winieski et al. 2002) and an additional seven burials that were encountered at the intersection of ‘Ōhua and Kalākaua Avenues (Cleghorn 2001a, 2001b; Winieski, Perzinski, Shideler, et al. 2002). Isolated pre-contact burials and burial clusters in Waikīkī have been found primarily in sandy deposits, just above the water table and below historic-era fill materials. The current archaeological inventory survey has identified two post-contact human burials (SIHP# 50-80-14-7136 Feature A and B), both of which were identified within pits that extend from the overlying buried, culturally-enriched sand A-horizon (SIHP# 50-80-14-7135). Robert Schoofs’ “*Pioneers of the Faith*,” a book on the history of the Catholic Mission in Hawai‘i, suggests that there was a Catholic cemetery at a presently unknown location but seemingly near the present Kalākaua Avenue in the 1840s and 1850s (Schoofs 1978:62-63) (see present Section 3.1.2.2). It is unclear whether the burials and human skeletal remains of SIHP# 50-80-14-7136 relate to that former Catholic burial area or not.

In summary, the results of the current archaeological inventory survey, which has identified one subsurface cultural layer (SIHP# 50-80-14-7135) and one burial complex (SIHP# 50-80-14-7136), are congruent with previous archaeological studies conducted in the vicinity of the current

project area. Archaeological studies, including the current archaeological inventory survey, continue to document the pre- and post-contact land use within Waikīkī.

Section 8 Significance Assessments

The inventory survey investigation and documentation of the project area's historic properties has provided sufficient information for significance evaluations. Significance is determined after evaluation of the historic property in light of the five broad criteria used by the Hawai‘i State Register of Historic Places (HAR 13-284-6). The criteria are the following:

A Historic property reflects major trends or events in the history of the state or nation.

B Historic property is associated with the lives of persons significant in our past.

C Historic property is an excellent example of a site type.

D Historic property has yielded or may be likely to yield information important in prehistory or history.

E Historic property has cultural significance to an ethnic group, including, but not limited to, religious structures, burials, and traditional cultural properties.

SIHP# 50-80-14-7135 is a buried, culturally-enriched sand A-horizon (cultural layer). SIHP# 50-80-14-7135 is evaluated significant under Criterion D (have yielded, or may likely yield information important in prehistory of history) of the Hawai‘i Register of Historic Places evaluation criteria.

SIHP# 50-80-14-7136 is a complex consisting of two in situ human burials (Feature A and B). SIHP# 50-80-14-7136 is evaluated significant under Criterion D (have yielded, or may likely yield information important in prehistory of history) and Criterion E (value to native Hawaiian people or to another ethnic group due to associations with cultural practices) of the Hawai‘i Register of Historic Places evaluation criteria.

Section 9 Project Effect and Mitigation Recommendations

9.1 Project Effect

CSH's project specific effect recommendation is "effect, with proposed mitigation commitments." The recommended mitigation measures will reduce the project's effect on significant historic properties that were identified within the project area and be pro-active in addressing possible community concerns.

9.2 Mitigation Recommendations

To reduce the proposed project's effect on significant historic properties, the following mitigation measures are recommended. These mitigation measures should be completed prior to any land disturbing activities within the project area.

9.2.1 Burial Treatment Plan

SIHP# 50-80-14-7136, consisting of two in situ human burials (Feature A and B), will be treated in accordance with HAR 13-300. In order to alleviate the project's effect on what are now termed "previously identified" human burials, a project specific burial treatment plan (a requirement of HAR 13-300) should be prepared for consideration of the O‘ahu Island Burial Council (OIBC). The burial treatment plan will incorporate the appropriate input from the OIBC, SHPD/DLNR, and recognized lineal and cultural descendants.

9.2.2 Archaeological Monitoring

This archaeological inventory survey represents a good-faith effort to identify and document the historic properties within the project area. Due to inherent limitations of any sampling strategy, it is possible that additional historic properties, potentially including human burials and non-burial archaeological deposits, may be encountered during project-related development. In order to mitigate any potential damage to known documented or yet unidentified historic properties, it is recommended that project construction proceed under an archaeological monitoring program. This monitoring program will facilitate the identification and proper treatment of any additional burials that might be discovered during project construction, and will gather additional information regarding the project's non-burial archaeological deposits, should any be discovered. The archaeological monitoring program will begin with an archaeological monitoring plan to be prepared for the review and approval of the SHPD prior to the beginning of construction. We anticipate on-site monitoring of all initial ground disturbance and that any deviation from this would only follow consultation with and written concurrence from the SHPD.

9.3 Disposition of Materials

Materials collected during the current archaeological inventory survey will remain temporarily curated at the CSH storage facility in Waimānalo, O‘ahu. CSH will make arrangements with the landowner regarding the disposition of this material. Should the

landowner request different archiving of material, an archive location will be determined in consultation with SHPD/DLNR.

In the course of the archaeological inventory survey work disarticulated human skeletal remains including the majority of a radius, three tarsal (foot) bones, and two rib fragments were encountered within the SIHP# 50-80-14-7135 cultural layer that was present within Trench 3. In consultation with the SHPD these remains were recovered and have been curated within a secure facility on the Church property.

At this time (4/2011) the two known burials remain preserved in place pending resolution of treatment in consultation with the SHPD, OIBC, and descendants.

Section 10 References Cited

Armstrong, R. Warwick (ed.)
1983 *Atlas of Hawai‘i*. University of Hawai‘i Press, Honolulu

Beardsley, Felicia, and Michael Kaschko
1997 Archaeological Monitoring and Data Recovery Pacific Beach Hotel Office Annex, Waikiki, O‘ahu. International Archaeological Research Institute, Inc., Honolulu.

Beckwith, Martha
1940 *Hawaiian Mythology*. Yale University Press, New Haven, CT.

Bliss, William R.
1873 A Sea-Side Retreat in the Pacific. *The Pacific and Commercial Advertiser*, February 1, 1873, p. 4.

Borthwick, Douglas, Anthony Bush, Rodney Chiogioji, Hallett Hammatt
2002 Archaeological Inventory Survey of an Approximately 71,000-sq.ft. Parcel in Waikiki, Waikiki Ahupua‘a, Kona District, Island of O‘ahu. Cultural Surveys Hawai‘i, Kailua, Hawai‘i.

Brown, DeSoto
1989 *Hawaii Goes to War: Life in Hawaii from Pearl Harbor to Peace*. Editions Limited, Honolulu.

Bunson, Maggie
1977 *Faith in Paradise: A Century and a Half of the Roman Catholic Church in Hawaii.* Daughters of St. Paul, Boston.

Bush, Anthony R. and Hallett H. Hammatt
2006 Archaeological Monitoring Report for Installation of Service Gas Lines and Meter at 125 Uluniu Avenue, Waikiki Ahupua‘a, Kona District, Island of O‘ahu (TMK (1) 2-6-023:019), Cultural Surveys Hawai‘i, Kailua, HI

Bush, Anthony, John P. Winieski, and Hallett H. Hammatt
2002 Archaeological Monitoring Report for the Waikīkī Anticrime Lighting Improvement Project Phase II (TMK 2-6-1, 2-6-2, 2-6-3, 2-6-5, 2-6-6, 2-6-25, 2-6-16, 2-6-18, 2-6-19, 2-6-22, 2-6-23, 2-6-26, 2-6-27). Cultural Surveys Hawai‘i, Inc., Kailua, Hawai‘i.

Calis, Irene
2002 An Archaeological Monitoring Report for ABC Store No. 35 Lemon Road Fence Wall Construction Project Waikiki Ahupua‘a, Honolulu District, O‘ahu Island, Hawai‘i. Scientific Consultant Services, Honolulu, Hawai‘i.

Carnegie Public Library
2010 Homer Laughlin China Company, 1877 – Present. Electronic document, http://www.carnegie.lib.oh.us/homer, accessed October 25, 2010.

Chamberlain, Levi
1957 Tour Around O‘ahu: 1828. In *Sixty-fifth Annual Report of the Hawaiian Historical Society for the Year 1956*, pp. 2541. Hawaiian Historical Society, Honolulu.

Cleghorn, Paul
2001a Archaeological Mitigation of Waikiki Burger King Construction, TMK: 2-6-026:013 Kona District, Waikiki Ahupua‘a, Island of O‘ahu. Letter to Mr. Roy Yamani (Hawai‘i CIMMS). Pacific Legacy, Honolulu.

2001b Archaeological Mitigation near Waikiki Burger King Construction Site TMK: 2-6-026:012 & 013, Kona District, Waikiki Ahupua‘a, Island of O‘ahu. Letter to Mr. Paul Kosasa (ABC Stores). Pacific Legacy, Honolulu.

Conyers, Lawrence B.
2004 *Ground-Penetrating Radar for Archaeology*. AltaMira Press, Walnut Creek, CA.

Coulter, John Wesley, and Chee Kwon Chun
1937 *Chinese Rice Farmers in Hawaii*. UH Research Publications No. 16. University of Hawai‘i, Honolulu.

Davis, Bertell
1989 Subsurface Archaeological Reconnaissance Survey and Historical Research at Fort DeRussy, Waikīkī, O‘ahu, Hawai‘i. International Archaeological Research Institute, Inc., Honolulu.

Esh, Kelly and Hallett H. Hammatt
2006 Archaeological Monitoring Report for Kūhiō Avenue (Kalākaua to Ka‘iulani), Waikīkī Ahupua‘a, Honolulu District, O‘ahu Island, Hawai‘i TMK [1] 2-6-015, to 022: various parcels) Cultural Surveys Hawai‘i, Kailua Hawai‘i

Foote, Donald E., E.L. Hill, S. Nakamura, and F. Stephens
1972 *Soil Survey of the Islands of Kaua‘i, O‘ahu, Maui, Molokai and Lāna‘i, State of Hawai‘i. U.S. Dept. of Agriculture*. U.S. Government Printing Office, Washington, D.C.

Grant, Glen
1996 *Waikiki Yesteryear*. Mutual Publishing, Honolulu.

Hammatt, Hallett H., Doug Thurman and David W. Shideler
2010 *Archaeological Inventory Survey Plan for the St. Augustine-by-the-Sea Master Plan Project, Waikīkī Ahupua‘a, Honolulu (Kona) District, Island of O‘ahu, TMK [1]-2-6-26:012 & 015* Cultural Surveys Hawai‘i, Kailua, HI.

Hommond, Shirley and Adela Morris
2009 Institute for Canine Forensics. Letter Summary, October 15, 2009

Hefner, Joseph T.
2009 Cranial nonmetric variation and estimating ancestry. *Journal of Forensic Sciences* 54:985-995.

Hibbard, Don and David Franzen
1986 *The View from Diamond Head Royal Residence to Urban Resort*. An Editions Limited Book, Honolulu.

‘Ī‘ī, John Papa
1959 *Fragments of Hawaiian History as Recorded by John Papa ‘I‘ī*. Bishop Museum Press, Honolulu.

Johnson, Donald D.
1991 *The City and County of Honolulu: A Governmental Chronicle*. University of Hawai‘i Press, Honolulu.

Kanahele, George S.
1986 *Ku Kanaka Stand Tall. Search for Hawaiian Values* , University of Hawaii Press, Honoulu, HI.

1995 *Waikīkī 100 B.C. to 1900 A.D. An Untold Story*. The Queen Emma Foundation, Honolulu.

Lindsey, Bill
2010 Pontil marks or scars. Electronic document, http://www.sha.org/bottle/pontil_scars.htm, accessed October 25, 2010.

Mann, Melanie, and Hallett H. Hammatt
2002 Archaeological Monitoring Report for the Installation of 12- and 8-inch Water Mains on Lili‘uokalani Avenue and Uluniu Avenue, Waikīkī Ahupua‘a, Kona District, Island of O‘ahu (TMK 2-6-023, 24, and 26). Cultural Surveys Hawai‘i, Inc., Kailua, Hawai‘i.

Menzies, Archibald
1920 *Hawai‘i Nei 128 Years Ago*. The New Freedom, Honolulu.

Murakami, Gail M.
2010 Radiocarbon Sample Screening, Waikiki 54 Project, O‘ahu Island. Letter Summary. September 16, 2010

Newton, Ronald V.
1938 Waikiki Seen as Area of Active New Development. *Honolulu Star-Bulletin*, 26 March: .10.

Perzinski, Mary, David W. Shideler, John Winieski, and Hallett H. Hammatt
2000 Burial Findings During the Excavation of a 16" Watermain on an Approximately 915 Meter (3,000 Ft.) Long portion of Kalakaua Avenue Between Kai’ulani and Monsarrat Avenues Associated with the Kuhio Beach Extension/Kalakaua Promenade Project, Waikiki Ahupua’a, Kona District, Island of O‘ahu, (TMK 2-6-1, 2-6-22, 2-6-23, 2-6-26, 2-6-27, and 3-1-43). Cultural Surveys Hawai‘i, Kailua, Hawai‘i.

Schoofs, Robert
1978 *Pioneers of the Faith: History of the Catholic Mission in Hawaii (1827-1940).* Revised by Fay Wren Midkiff. Sturgis Printing Co. Inc., Honolulu.

Southborough Historical Society
2008 The Joseph Burnett Company's Personal and Medical Products. Electronic document, http://www.southboroughhistory.org/History/Burnett%20Company/ Medical/ History_of_Burnett_%20Med_%20Prod.htm, accessed November 1, 2010.

Tome, Guerin and Michael Dega
2003 Archaeological Monitoring Report for Construction Work at the Waikiki Marriot, Waikiki, Manoa Ahupua‘a, Honolulu District, O‘ahu Island, Hawai‘i. Scientific Consultant Services, Honolulu.

Toulouse, Julian Harrison
1971 *Bottle Makers and Their Marks*. Thomas Nelson Inc., Camden, New York.

Vancouver, George
1798 *A Voyage of Discovery to the North Pacific Ocean, and Round the World Performed in the years 1790-1795*. Robinsons and Edwards, London.

Weyeneth, Robert R.
1991 *Kapi‘olani Park: A Victorian Landscape of Leisure*. Dept. of Parks and Recreation, City and County of Honolulu.

Winieski, John P., and Hallett H. Hammatt
2001 Archaeological Monitoring Report for the Public Baths Waste Water Pumping Station Force Main Replacement, Waikīkī, Honolulu, O‘ahu, Hawai‘i (TMK 2-6-25, 26, & 27, and 3-1-31, 43). Cultural Surveys Hawai‘i, Kailua, Hawai‘i.

Winieski, John, Mary Perzinski, David Shideler, and Hallett H. Hammatt
2002 Archaeological Monitoring Report for the Installation of a 16-Inch Water Main on an Approximately 915 Meter (3,000 Ft) Long Portion of Kalākaua Avenue Between Ka‘iulani and Monsarrat Avenues Associated with the Kūhiō Beach Extension/Kalākaua Promenade Project, Waikīkī Ahupua‘a, Kona District, Island of O‘ahu (TMK 2-6-1-, 2-6-22, 2-6-23, 2-6-26, 2-6-27, 3-1-43). Cultural Surveys Hawai‘i, Kailua, Hawai‘i.

Winieski, John, Mary Perzinski, Kehaulani Souza, and Hallett H. Hammatt
2001 Archaeological Monitoring Report, The Kuhio Beach Extension/Kalākaua Promenade Project, Waikīkī Ahupua‘a, Kona District, Island of O‘ahu (TMK 2-6-1-, 2-6-22, 2-6-23, 2-6-26, 2-6-27, 3-1-43), Cultural Surveys Hawai‘i, Kailua, Hawai‘i.

Appendix A Land Commission Awards

Land Commission Award 1446

No. 1335, Naa, Waikiki, Oahu, December 9, 1847

N.R. 114-115v3

Greetings to the Land Commissioners: I hereby tell of my land claim at Kamookahi for my two lo`i which are planted in taro, one bulrush lo`i, and two bulrush irrigation ditches.

I was given this place in 1835 by Daniel Kekahuna and have held it peacefully with no objections. I also have a house claim at Waikiki which I have lived at since the time Kinau was living and have lived peacefully with no objections. I have one house there.

NAA X

F.T. 43-44v3

Cl. 1446, Naa, December 11, 1848

Kekoa, sworn, This land I know. It is in Mookai [Mookahi], Waititi, consisting of kalo and upland, having 3 patches and a stream, without house or fence.

Mauka is Paki's land
Waialae is Kahanaumaikai
Makai, Kauhao's
Honolulu, Kalaimoku's

Claimant had this place from Paki is time of Kaahumanu 1st and has held it undisputed tot eh present time, and improved it.

Kahue, sworn, confirmed all the above testimony.

N.T. 366-367v3

No. 1446, Naa, NAA, December 11, 1848

Kekoa, Sworn, I have seen his place at Mookahi in Waikiki consisting of three taro patches and one ditch in one section.

Mauka, Paki

Waialae and Makai, Kahanaumaikai and Kauhao

Honolulu, Kalaimoku.

Naa had received his interest from Paki at the time of Kaahumanu I and to the present time, no one has objected.

Kahue, sworn, Our testimonies are similar.

[Award 1446; R.R. 2557 & R.P. 6239; Kamookahi Waikiki Kona; 1 ap.; 1.02 Acs; R.P. 6239; Hamohamo Waikiki Kona; 1 ap.; .28 Ac.]

Land Commission Award 01452

No. 1452, Haau, Waikiki, Oahu, December 9, 1847

N.R. 117v3

Greetings to the Land Commissioners: I hereby tell of my land claim at Hamohamo in Waikiki. I have two lo`i, a kula, and also a bank of the irrigation ditch. This place is from my wahine, it was her former kane's, and on his death I married her, and that is the reason I acquired this place. I have held it peacefully with no objections.

I also have a house lot claim at Hamohamo from my wahine which I hold peacefully with no objections. I have one house there.

HAAU X

F.T. 48-49v3

Cl. 1452, Haai, December 15, 1848

Kanakaole, sworn, I know this place. It is in Hamohamo, Waititi, consisting of kalo & kula land in two lots.

1. House lot, having one house belonging to claimant and no fence:
Mauka is Keohokalole's land
Waialae is Kaneloa's
Makai is Kaia's
Honolulu, Kaluahinenui.

2. Second lot, one kalo patch:
Mauka is Kaumaka
Waialae is Kapea's
Makai is Ehu's
Honolulu is Hokaea's.

Claimant had both these lots from Keohokalole in 1845 and has ever since held them undisputed. Keohokalole is konohiki of Hamohamo and claimant received the land from him as a man under his rule.

Beretane, sworn, confirmed the testimony as above given. The witnesses after stated that claimant had these lots direct from Hookaea, is under konohiki.

Hookaea wanted.

N.T. 371-372v3

No. 1452, Haau, October 15, 1848

Kanakaole, sworn, I have seen his place at Hamohamo in Waikiki of 1 taro patch and 1 house in two sections.

1. 1 house lot where:
Mauka is Keohokalole's lot
Waialae, Pehu's land
Makai, Hookaea
Honolulu, Kaluahinenui.

One house is here with no fence.

2. 1 taro patch:
Mauka is Kaumaka
Waialae, Kapea's place
Makai, Ehu's place
Honolulu, Hookaea's place.

Hauu's interest is from Keohokalole at the time Kekauluohi died in the year 1845 and he has always lived there. No one objecting. Keohokalole is the konohiki.

Pelekane, sworn, Our testimonies are similar except that Keohokalole had not given these lands directly to Haau but it had been through his servant Hookaea, who had been the custodian

Postponed and will be resumed when Hookaea shall come.

[Award 1452; R.P. 5060; Hamohamo Waikiki Kona; 2 ap.; .96 Ac.]

Land Commission Award 1453

No. 1453, Manaole, Waikiki, Oahu, December 9, 1847
N.R. 117v3

Greetings to the Land Commissioners: I hereby tell of my land claim at Kanukuaula in Waikiki There are two lo`i, a stream, and a small kula, also, which were given me by Paehewa in the time of Kaahumanu I.

I also have a house lot at Hamohamo in Waikiki, which I got at the time when the body of Liholiho was returned /from England/ and I have lived there until this very time with no objections.
MANAOLE X

F.T. 49v3
Cl. 1453, Hanaole (Manaole), December 15, 1848

Kaohe, sworn, I know this place. It is in Kanakaaula in Waititi, and the house lot in Hamohamo.

1. Kalo land of 2 patches, 3 stream & some kula in Kanukaaula.
Mauka is land of Paku
Waialae is Mahuka
Makai is Hookaia's
Honolulu, Kaluahinenui

2. House lot:
Mauka is Kaanaana's
Waialae, Kealiieleele's
Makai, my land
Honolulu, Naa's.

Claimant has one house on this lot but no fence. He had the last lot No. 2 from Aikanaka about the time of the Kauai War (1923) and has held it undisputed ever since. Claimant had the 1st lot from Nalaweha at the same time, and has never been disputed in his possession of either. He cultivates the land to this time.

Kuhewa, sworn, confirms the testimony of Kaohe as above.

This claimant says his name is Manaole, his claim is signed as above H. He did not write it and says it is an error

N.T. 372v3
No. 1453, Manaole, December 15, 1848

Kaohe, sworn, I have seen his place at Kanukuaula in Waikiki of 2 patches, 3 ditches, a pasture and a house lot at Hamohamo.

1. 2 patches, 3 ditches and a pasture at Kanukuaula where:
Mauka is Paku
Waialae, Mahuka
Makai. Hookaea
Honolulu, Kaluahinenui.

2. 1 house lot at Hamohamo.
Mauka is Kaanaana
Waialae, Kealiieleele
Makai, my place
Honolulu, Naa.
One house is for himself and it has no fence.

Nalaweha had given the interest at Kanukuaula during the battle of Kauai in the year 1822, probably. No one had objected. The place at Hamohamo is from Keohokalole given during the battle of Kauai in the year 1822 when Aikanaka was still alive.

Kuewa, sworn, Our testimonies are similar; no one has objected.

[Award 1453; R.P. 2559; Hamohamo Waikiki Kona; 2 ap.; .07 Ac.; Kanukuaula Waikiki Kona; 1 ap.; .8 Ac.]

Land Commission Award 01454

No. 1454, Kaohe, Waikiki, Oahu, December 9, 1847
N.R. 117-118v3

Greetings to the Land Commissioners: I hereby tell of my land claim at Kamookahi in Waikiki. I have two lo`i, three sections of stream and one kula, which were given me by Palaualelo in the time of Kaahumanu I.

I lived there in peace with no objections. There is also a house lot at Hamohamo in Waikiki which I occupied in the time of Kaahumanu I. I have lived since then, with no objections, in peace.
KAOHE X

F.T. 50v3
Cl. 1454, Kaohe, December 15, 1848

Kuhewa, sworn, I know this place. It is in Mookai [Kamookahi] Waititi, consisting of kalo land kula and a house lot in Hamohamo, both in Waititi.

1. house lot, Hamohamo:
Mauka is Manaole's
Waialae is Kinikini's
Makai is Mokulehua's
Honolulu, Naa's.

2. Kalo patches, 2 in one lot in Mookai:
Mauka is Kaluahinenui
Waialae is Umi's
Makai is Kuluwailehua's
Honolulu is Wm Sumner's.

[2a] Two auwais or streams:
Mauka is Pupuka's
Waialae, Palaualelo's
Makai, Pelewale's
Honolulu, Kimo's.

[2b] Kula land.
Mauka is Waiauhia's
Waialae, Kahalehau's
Makai, Umi's
Honolulu is Kaluahinenui's.

Claimant took up the first lot in Hamohamo in time of Kaahumanu 1st and has lived on it and held it ever since undisputed. He has two houses on it, but no fence. Hookaia is konohiki.

Claimant has all the pieces under No. 2 in Mookai from Palaualelo in time of Kaahumanu. He is an old man still living as konohiki of the land and has ever since held these lands undisputed.

Manaole, sworn, confirmed the previous testimony.

N.T. 372v3
No. 1454, Kaohe, December 15, 1848

Kuewa, sworn, I have seen his property at Kamookahi in Waikiki consisting of 2 taro patches, 2 sections of ditches, 1 pasture and 1 house lot with two houses on it. There are four separate sections at Hamohamo.

1. A house lot at Hamohamo:
Mauka is Manaole
Waialae, Kinikini /Jenkins/
Makai, Mokulehua
Honolulu, Naa.

2. 2 taro patches at Kamokahi where:
Mauka is Kaluahinenui
Waialae, Uma
Makai, Kuluwailehua
Honolulu. Keolaloa.

3. 2 ditch sections:
Mauka is Pupuka
Waialae, Palanalelo
Makai, Pelawale;
Honolulu, Kimo.

4. 1 pasture:
Mauka is Waiania
Waialae, Kahalehau
Makai, Uma
Honolulu, Kaluahinenui.

The place at Hamohamo had been vacant, so I built my house there without any objections at the time Kaahumanu was alive. It has not been enclosed. The remaining three sections at Kamookahi are from Palanalelo received at the time of Kaahumanu. Palanalelo is the konohiki for Kamookahi while Hookaea is for Hamohamo; however, no one has objected to his /Kaohe/ lands.

Manaole, sworn, Our testimonies are similar.

[Award 1454; R.P. 2558; Kamookahi Waikiki Kona; 3 ap.; 1.88 Acs]

Land Commission Award 01455

No. 1455, Pelekane, Waikiki, Oahu, December 9, 1847

N.R. 118v3

To the Land Commissioners, Greetings: I hereby tell of my land claim at Hamohamo in Waikiki. I have one lo`i and also a house lot which adjoins my lo`i, which I got in the time of Kaahumanu I. I have held it peacefully with no objections.

PELEKANE X

F.T. 50-51v3

Cl. 1455, Pelekane, December 15, 1848

Iwinui, sworn, I know this land. It is in Hamohamo, Waititi; Kula add kalo land separately, consisting of two patches (one house fenced - no. 3; and kula land - no. 2).

Mauka is Kapea's
Waialae is Hookaia's, Makai also, and Honolulu.

2 koele lot
Mauka is Kahanamaikai [Kahanaumaikai]
Waialae is Kaluahinenui's
Makai, Napahi's
Honolulu is Kaluawailehua's.

Cultivated, but not built upon or fenced.

3. House lot, one house fenced.
Mauka is Hookaia's
Waialae, Kahuka's
Makai, Pelawale's
Honolulu, Kapea's.

Claimant had all these lots form Hookaia in time of Kaahumanu, and has lived there ever since cultivating them to this time without any opposition and in peace.

Kapea, sworn, confirms the testimony as now given.

N.T. 373-374v3

No. 1455, Pelekane, December 15, 1848

Iwinui, sworn, I have seen his place at Hamohamo of 2 patches, 1 pasture and 1 house which has a fence.

1. 2 patches:
Mauka is Kapea
Waialae, Makai and Honolulu, Hookaea.

2. 1 pasture:
Mauka is Kahanauonaikai
Waialae, Kaluahinenui
Makai, Napahi
Honolulu, Kuluwailehua.

3. 1 house lot with 1 house: It has been completely enclosed on all sides.
Mauka is Hookaea
Waialae, Kahula
Makai, Pelawale
Honolulu, Kapea.

The lot has been shared equally with Kapea.

[Award 1455; R.P. 6435; Hamohamo Waikiki Kona; 2 ap.; .53 Ac.]

Land Commission Award 01457

No. 1457, Paumano, Waikiki, Oahu, December 9, 1847

N.R. 119v3

To the Land Commissioners, Greetings: I hereby tell of my land claim at Hamohamo in Waikiki. I have two lo`i, a section of irrigation ditch, and also a kula. Mamala gave me this place in the time of Kaahumanu I. I have occupied it from that time with no objections.

I also have a house lot at Hamohamo. I began to live there in the time of Kaahumanu I. I have not been objected to until this time

PAUMANO

F.T. 51-52v3

Cl. 1457, Paumano, December 15, 1848

Pelekane, sworn, Paumano died lately, and left all his rights to his wife, Kaumaka, who has been his wife since Kaahumanu's time. They have no children and the land was hers at first. The claimant's land is in Hamohamo, Waititi, consisting of kalo and kula & a house lot.

1. House lot:
Mauka is Hohopa's Waialae is Iwinui's
Makai is Kawaaulu's
Honolulu, Ma's.

One house is on this lot in which claimant lives. It is fenced.

2. kalo land, two patches and 1 auwai or stream:
Mauka is Manaole's
Waialae, Kahue's
Makai is Haau's
Honolulu, Koa's.

3. Kula land, cultivated formerly.
Mauka is Kahanaumaikai's
Waialae is Kaluahinenui's
Makai is Napahi's
Honolulu, Kuluwailehua's.

Claimant had these lands from Aikanaka, a high chief, in time of Kuakini before 1821 and has ever since held them undisputed. They have been long in the descent of family rights.

Kapea, sworn, confirmed the testimony given.

N.T. 375v3

No. 1457, Paumano, December 15, 1848

Pelekane, sworn, Paumano had died before the dark moon and his wife had come in to inquire about this interest because this land at Hamohamo had been for Kaumaka's parents and they had no children so at the death of his parents, the land was for him. There are three sections with 2 taro patches, 1 ditch and a pasture.

1. 1 house-lot at Hamohamo:
Mauka is Hohopa
Waialae, Iwinui
Makai, Kawaaulu
Honolulu ma.
One has been enclosed and he /Pahemano/ now lives there.

2. 2 taro patches, 1 ditch section:
Mauka is Manaole
Waialae, Kahue
Makai, Haau
Honolulu, Koa.

3. 1 pasture without a fence where:
Mauka is Kahanaumaikai
Waialae, Kaluahinenui
Makai, Napahi
Honolulu, Kuluwailehua.

He had received this interest from Aikanaka through his parents before the missionaries arrived and he has been comfortable to this time; no one has objected.

Kapea, sworn, Our testimonies are similar, there have been no objections.

[Award 1457; R.P. 1273; Waikiki Kona; 2 ap.; 1.75 Acs; Paumano for Kaumaka]

Land Commission Award 01458

No. 1458, Kapea, Waikiki, Oahu, December 9, 1847

N.R. 119v3

Greetings to the Land Commissioners: I hereby tell of my land claim at Hamohamo in Waikiki. I have one lo`i, two kula, one bank of an irrigation ditch, which I got in the time of Kaahumanu I. I also have a house lot at Hamohamo which I began to occupy in the time of Kaahumanu I, and have lived there since in peace with no objections.

KAPEA X

F.T. 52-53v3

Cl. 1458, Kapea, December 18, 1848

Kaanana, sworn, I know this place. It is in Hamohamo, Waititi, in several lots.

1. House lot, having 2 houses. 1 claimant's 1 Paikane's (this last is a separate claim and accordingly detached in this statement of boundaries). Claimant has one house and it is fenced.

Mauka is Kekuanaoa
Waialae is Kekauonohi (Paikane)
Makai, Keohokalole
Honolulu, Kekuanaoa.

2. One kalo patch:
Mauka is Kaumaka
Waialae, Kahula
Makai, Keohokalole
Honolulu, Kekuanaoa.

3. Kula:
Mauka, W. Sumner
Waialae, Kekuanaoa's, Makai also, & Honolulu.

Claimant had all these lands from Naihe, high Chief in time of Kaahumanu I, and has held them to the present time and cultivated them without dispute. Keohokalole is the konohiki of the land.

Paikane, sworn, and confirmed the above.

(There are two houses and two persons in one fence. The present claimant and Pelekane, See Cl. 1455, the boundaries are separately stated in both claims in the testimony.)

N.T. 374v3

No. 1458 [Kapea & Pelekane]

He had received his interest from Hookaea at the time of Kaahumanu I and I have always lived there to this time; no one has objected.

Kapea, sworn, Our testimonies are similar.

N.T. 375-376v3

No. 1458, Kapea, December 18, 1848

Kaanaana, sworn, I have seen his place at Hamohamo in Waikiki - 1 patch, 1 pasture, 1 ditch section and 1 house lot.

1. 1 house lot where:
Mauka is Kekuanaoa
Waialae, Pelekane
Makai, Keohokalole
Honolulu, Kekuanaoa.
This lot has been divided with the other half for Pelekane, #1455.

2. 1 patch, 1 ditch section where:
Mauka is Kaumaka
Waialae, Kahula
Makai, Keohokalole
Honolulu, Haau.

3. 1 pasture:

Mauka is Keolaloa

Waialae and Makai, also Honolulu, Kekuanaoa.

This interest is from Naihe at the time of Kaahumanu I and to this time, no one has objected.

Pelekane, sworn, Our testimonies are similar.

[Award 1458; R.P. 5954; Hamohamo Waikiki Kona; 2 ap.; .92 Ac.]

Land Commission Award 2027

No. 2027, Palaualelo, Waikiki kai

N.R. 329v3

To the Land Commissioners, Greetings: Be it known to you all that I, the one whose name is below, hereby state my claim for three taro lo`i, four bulrush lo`i, and two irrigation ditches, at Mokahi. There is a house at Hamohamo and one hau tree. I have occupied it from the time of Kaahumanu I, with no objection.

Farewell and thanks

PALAUALELO X

December 21, 1847

F.T. 474v14

No. 2027, Palaualelo, claimant

Kaiho, sworn, say he knows the land of claimant. It is a mooaina called Mookalu in the ili Mookahi, Waikiki, Oahu. It consists of 1 piece of lois, land & Apana 2, 4 house lot in Ponahakeone in Hamohamo, Waikiki, Oahu.

Apana 1 is bounded:
Mauka by the land of Kuewa
Kekeha by the land of Kaukau
Makai by the land of Peleuli
Honolulu by the land of Kahakai.

Apana 2 is bounded:
Mauka by the coconuts in Hamohamo
Kekaha by house lot of Paku
Makai by sea shore
Honolulu by house lot of Kauaohilo

Claimant received his land from Peleuli in the time of Kaahumanu & has held it in quiet until this time.

[Award 2027; R.P. 2575; Hamohamo Waikiki Kona; 1 ap.; .25 Ac.; Pau Waikiki Kona; 1 ap.; .55 Acs]

Land Commission Award 02843

No. 2843, Kaanaana, Waikiki, Oahu, January 11, 1848

N.R. 660-661v3

To the Land Commissioners, Greetings: I hereby state my claim for land at Hamohamo in Waikiki. There is one lo`i and also a house lot. I got these places in the year 1839. In the year 1847 two lo`i were taken by Kapaakea and have not been returned until this time. There is also a kula of mine.

Farewell to you all,

KAANAANA X

[Award 2843; R.P. 6484; Hamohamo Waikiki Kona; 2 ap.; .73 Ac.]

Land Commission Award 08452*O

No. 8452*O, Keohokalole, Waikiki, Oahu, February 5, 1848
N.R. 567-568v5

I, the one whose name is below, hereby state my claims in my lands to enter in the lands of the Mo`i. These are things done by my own hands, with my people.

At Waiomao, one orange tree and my cultivated valley, an `Ili in Waikiki, with seven lo`i.
At Kapiwai are two mala of coffee and one mala of lauhala, one lo`i, and also a cultivated lot.
This in an `Ili in the Ahupua`a of Honolulu, Island of Oahu.
At Makua, on the Island of Oahu, one orange tree.

At Aamakao, an Ahupua`a on the Island of Hawaii, is one lo`i, and a house lot and an orange tree.
In the District of Kau, Ahupua`a of Wailau, is a house lot in the land.
In the Ahupua`a of Kaalaiki is a lot like that /in Wailau/. These are on the Island of Hawaii.

At Lahaina, in Kuhua Ahupua`a, is a mala of lauhala.

At Honouliwai, an Ahupua`a on the Island of Molokai are two orange trees.

At Kula, Island of Maui, Keokea Ahupua`a, there are three small mala of sweet potatoes and one mala of taro, made by our own hands, not by /those of/ the /people of the/ land.
At Kooka, an Ahupua`a in Lahaina, are four coconut trees and a single coconut tree at the shore in the lot of Kualaula, in Kiika, a /total of/ five coconut trees, and some kou trees at Pahoa, which have not been counted, also a hala clump is there, at the seashore.
I am with aloha, respectfully,
KEOHOKALOLE, who affirms this is my name, signed by Z. Kaauwai

F.T. 573v3
No. 8452, Keohokalole

Awahua, sworn, says he knows the House lots claimed by Keohokalole at Kaawaloa, Hawaii. The first one is fenced all round with a stone wall.

It is bounded:
Makai by the sea shore
On Kailua side by the Government land
Mauka by the land of Kahaku and Awahua
and on the other side by the road.

Claimant derived this lot from her ancestors, who held it from very ancient times. There is a stone house and several grass houses in it, belonging to claimant, besides a Tomb.

The second Lot is called "Aeoili" and is fenced all round.
It is bounded:
Makai by Government land
On Kailua side by the same
Mauka the same
On the side next the Pali by the Road.

Claimant derived this lot from her ancestor, who held it from olden times.

Witness knows the three House Lots in Kealakekua claimed by Keohokalole. The first Lot is called "Kulou" and is fenced in.

It is bounded:
Makai by the Sea beach
Kaawaloa side by Government land
Mauka by the Road
South Kona side by a lot belonging to T. Cummings.

The second Lot is called "Kaahaloa" it is enclosed all round, and [is] bounded on:
Kona Hema by a lot belonging to T. Cummings
Mauka by the lot of Nakoko
North Kona by an old Heiau
Makai by the Road.

The third Lot is called "Hailokoalii" and is bounded on:
The south Kona side by an old Heiau
Mauka by a Government Lot & the lot of Ialua
Makai by the Sea Beach
On the other side by a pali.

Claimant inherited these Lots from her ancestors by the mother's side, who possessed them from ancient times.

Kekaalua, sworn, says he knows there lots perfectly & confirms in full the testimony of Awahua.

N.T. 326-327v10
No. 8452, A. Keohokalole; K. Kapaakea

To His Highness, John Young, Minister of Interior
Greetings:
This is to inform you and the Privy Council of my desire to convey some of my lands for the Governments one third in the land which remain as mine. Grant me this, of course, with the approval of the Privy Council

Below is a list of the lands I wish to convey to the government.

Aapueo ahupuaa, Kula, Maui
5 Omaopio ahupuaa, Kula, Maui.
Makehu ahupuaa, Kula, Maui
Kuikuiaeo ahupuaa, Kula, Maui
2 Kailua ahupuaa, Kula, Maui
2 Pukalani ahupuaa, Kula, Maui.
Kukuiula ahupuaa, Kipahulu, Maui.
Alaakua ahupuaa, Kaupo, Maui.

Kanakau ahupuaa, Kona, Hawaii.
Kaipuhao ahupuaa, Kohala, Hawaii.
Halaula ahupuaa, Kohala, Hawaii,
Keahakea ahupuaa, Hamakua, Hawaii.
Kaioula ahupuaa, Kau, Hawaii.
2 Makahakupa ahupuaa, Kau, Hawaii.
Kouhuhuula ahupuaa, Kau, Hawaii.
Pohina ahupuaa, Kau, Hawaii.
Puhalanui ahupuaa, Kau, Hawaii.
Wiliwilinui ahupuaa, Kau, Hawaii.
2 Papohaku ahupuaa, Kau, Hawaii.

The boundaries of all of these lands above have been established.
With appreciation,
(sign) A. Keohokalole

Honolulu, Jan. 3, 1850
To Your Highness, John Young, Minister of Interior
Greetings:

Here is a list of the names of my lands which has been left for me pending for an approval of its distribution.

Kahana ahupuaa, Koolauloa, Oahu.
Hamohamo ili, Waikiki, Oahu.
Malaekahana ahupuaa, Koolauloa, Oahu.

Paeohi ahupuaa, Lahaina, Maui.
2 Koheo ahupuaa, Kula, Maui.
3 Alae ahupuaa, Kula, Maui.
2 Kealahou 3,4, ahupuaaa, Kula, Maui.
Aapueo ahupuaa, Kula, Maui.
Kamehame ahupuaa, Kula, Maui.
Kuikuiaeo ahupuaa, Kula, Maui.
Muolea, Hana, Maui.

Kealakekua, Kona, Hawaii.
Kaawaloa ahupuaa, Kona, Hawaii.
Onouli ahupuaa, Kona, Hawaii.
Keahuolu ahupuaa, Kona, Hawaii.
Pau ahupuaa, Kohala, Hawaii.
Paauhau ahupuaa, Hamakua, Hawaii.
Puna ahupuaa, Puna, Hawaii.
Keaiwa ahupuaa, Kau, Hawaii.
Kawela ahupuaa, Kau, Hawaii.

With appreciation,
A. Keohokalole,
Honolulu, Jan. 3, 1850

Resolved, that the Minister of the Interior be and is hereby authorized to transfer to the list of lands belonging to Keohokalole, Kaapuna, Kona, Hawaii, and Aapueo 2, Kula, Maui, and transfer to the Government and list one of the Alae's in Kula, Maui, in lieu of Aapueo 2, sold by Kapaakea through mistake.

By order of Privy Council
December 22, 1850
Resolved, that the Government shall accept the division of lands of the chiefs as made by them, and those laid off for the Government shall be the government third of their lands.
By order of the King and Council
August 27th, 1850

I hereby certify the foregoing to be true copies of the original documents now on file in this Department.
(sign) A.G. Thruston, Chief Clerk, Interior Department
November 9th, 1853

[Award 8452; (Oahu) R.P. 5616; Malaekahana Koolauloa; 1 ap.; 3280 Acs; R.P. 5616; Kapiwai Pauoa; 1 ap.; 10.5 Acs; R.P. 5588; Hamohamo Waikiki; 3 ap.; 99.68 Acs; Land Patent 8330; Hamohamo Waikiki; 3 ap.; 2.24 Acs; R.P. 4387; Kahana Koolauloa; 1 ap.; 5050 Acs (ahupuaa); (Maui); R.P. 4388; 1 ap. Aapueo Kula Ahupuaa; Alae 3 Kula 1 ap. (ahupuaa), Kamehame Kula, R.P. 4388 & 7453; Kealahou 3-4 Kula; R.P. 4388 & 7453; Koheo 2 Kula Ahupuaa Ap. 19; R.P. 4388; Kukuiaeo Kula; Muolea Hana; 1 ap.; ahupua`a; Paeohi Lahaina; Kukuiokaea Kula Ahupuaa Ap. 7; (Hawaii): Kealakekua S. Kona R.P. 7533 & 3607; Honohina Hilo R.P. 4386 & 7693; Kaawaloa S Kona R.P. 7532 & 4386, & 4385; Onouli S Kona R.P. 4386 & 7146; Keahuolo N. Kona; R.P. 6886; Paauhau Hamakua; Land Patent 8123; Pau N. Kohala; Land Patent 8083; Puua Puna R.P. 7788; Kawela Kau R.P. 6886; Keaiwa Kau; See Award MA 3 for Hamoa Hana award]

Land Commission Award 10677

No. 10677, Pupuka

N.R. 576v4

Greetings to you, kaulakaauwai: Here is my little letter of explanation to you concerning my lo`is here at Kukahi. There is one taro lo`i, one weed-grown lo`I, also a pond, and a kula. The name of it all is Kalihi.

PUPUKA

F.T. 476-477v14

No. 10677, Pupuka, Claimant, Deceased, Paku, heir

Palaualelo, sworn, say[s] he is the konohiki of claimant’s land. It contains 3 lois, 3 auwai in Mookahi, in Waikiki, Oahu. Apana 2. A house lot in Hamohamo, Waikiki.

Apana 1 is bounded:
Mauka by the land of Kalia
Kekaha by the land of Kauko
Makai by the land of Uluoni
Honolulu by the land of Kauai

Apana 2 is bounded:
Mauka by the Uluniu
Kekaha by the house of Nuewa
Makai by the sea shore of Hamohamo kai
Honolulu by the House of Nae.

Claimant received the land from me in the time of Kaahumanu & has held it in quiet ever since.

Naohe, sworn, says the above testimony is true & his own is like it.

[Award 10677; R.P. 4631; Kamookahi Waikiki; 1 ap.; .43 Ac]

Appendix B Consultation with Cultural Descendants of Waikīkī

November 18, 2010

Mr. XX

Subject: Notification to Previously Recognized Lineal and/or Cultural Descendants of Waikīkī of the Discovery of *Iwi Kupūna* During Archaeological Inventory Survey Fieldwork At St. Augustine-by-the-Sea Church, Hamohamo, Waikīkī

Aloha Mr. XX:

St. Augustine-by-the-Sea Church [Hamohamo, Waikīkī Ahupua‘a, Honolulu (Kona) District, Island of O‘ahu, TMK [1]-2-6-26:012 & 15] is moving forward with a Master Plan project including planning for the construction of a new small museum honoring Saint Damien in the *makai/‘ewa* portion of the Church property fronting Kalākaua Avenue and construction of a new Parish Hall in the *mauka* portion of the Church lands.

During the course of an archaeological inventory survey, two intact human burials (and another find of a few human bones in a disturbed context) were identified within the St. Augustine-by-the-Sea Church property under the central portion of the footprint of the proposed Saint Damien Museum under what of long-standing has been a drive-way to Kalākaua Avenue (see attached Figures 1 & 2). The burials remain in place and traffic over the burials has been stopped.

In consultation with the State Historic Preservation Division and the O‘ahu Island Burial Council, St. Augustine-by-the-Sea Church seeks to reach out to all previously recognized lineal and or cultural descendants of Waikīkī for the purposes of:

- Making you aware of this discovery,
- If you feel this matter is your *kuleana*, urging you to consider contacting Phyllis “Coochie” Cayan at the State Historic Preservation Division (SHPD), located at the Kākuhihewa Building, 601 Kamōkila Blvd., Suite 555, Kapolei, Hawai‘i, 96707 [tel. 808-692-8015; fax 808-692-8020] to present information regarding appropriate treatment of the unmarked human remains and file descendancy claim forms and/or provide information to SHPD adequately demonstrating lineal or cultural descent from these specific burials or cultural descent from ancestors buried in the vicinity of this area.

A legal burial notice summarizing the find and the request for concerned parties to come forward within thirty days has been published in the *Star Advertiser* (Figure 3) on November 10, 12, and 14, 2010 and will also be published an upcoming edition of *Ka Wai Ola o OHA*.

We take this issue very seriously and have made no final decisions. If you wish to file a claim as a lineal or cultural descendant, please contact Ms. Cayan at the SHPD directly in this regard. Any written comments received by the Church will be shared verbatim with the O‘ahu Island Burial Council and the State Historic Preservation Division.

Mahalo for your consideration of this matter.

Aloha.

Father Lane Akiona

Figure 95. Text for consultation letter with Cultural Descendants of Waikīkī (11/18/2010) page 1

Previously Recognized Descendants of Waikīkī: **Page 2**

November 11, 2010

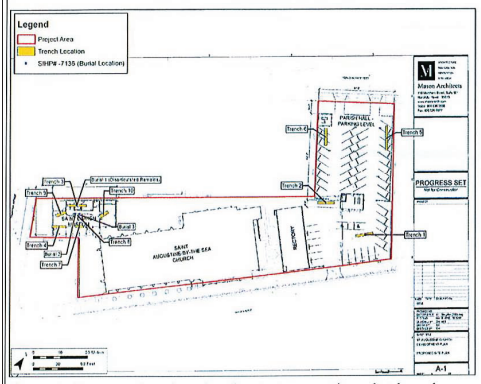

Figure 1. Construction plan showing test excavations that have been excavated within the project area

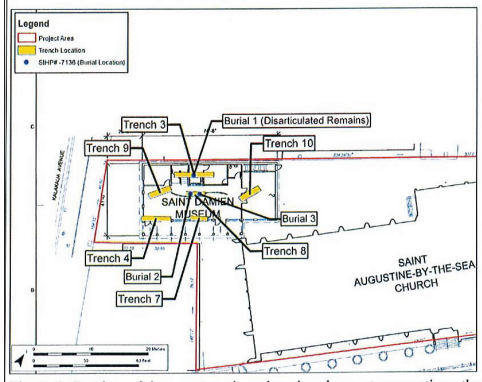

Figure 2. Portion of the construction plan showing test excavations that have been excavated within the proposed Saint Damien Museum footprint and locations of burials

Public Notice **Public Notice**

PUBLIC NOTIICE

NOTICE TO INTERESTED PARTIES IS HEREBY GIVEN that, during the course of an archaeological inventory survey, Cultural Surveys Hawai'i, Inc. identified two human burials within the St. Augustine-by-the-Sea Church property, Hamohamo, Waikiki Ahupua'a, Honolulu (Kona) District, Island of O'ahu, TMK [1]-2-6-26:012

The landowner is Roman Catholic Church [contact: Father Lane Akiona, 923-7024, 130 'Ohua Avenue Honolulu, Hawaii 96815. email - staugustinebythesea@gmail.com].

The Tax Map Key plat map indicates the burials were within Land Commission Award (LCA) 1446 granted to Na'a. Background research indicates that during the *Mahele* these lands were awarded to Ana Keohokalole and that LCA 8452 granted to Ana Keohokalole, LCA 2027 to Palaua-lelo, and LCA 10677 to Pupuka are in the immediate vicinity.

Following the procedures of Hawai'i Revised Statutes (HRS) Chapter 6E-43, and Hawai'i Administrative Rules (HAR) Chapter 13-300, the burial features are believed to be over 50 years old and most likely Native Hawaiian. The burial features have been assigned State Inventory of Historic Properties (SIHP) # 50-80-14- 7136.

The landowner would prefer to keep all burials associated with 50-80-14-7136 within the Church property but seeks to explore re-location to an on-site preserve. The decision to preserve in place or relocate these previously identified human remains shall be made by the O'ahu Island Burial Council and the SHPD in consultation with any recognized lineal and/or cultural descendants, per the requirements of HAR Chapter 13-300-33. The remains' proper treatment shall occur in accordance with HAR Chapter 13-300-38. A burial treatment plan is currently being prepared by Cultural Surveys Hawai'i, Inc. [P.O. Box 1114, Kailua, HI 96724; tel. 808-262-9972; fax 808-262-4950].

SHPD is requesting persons having any knowledge of the identity or history of these human burials to immediately contact Phyllis Coochie Cayan at SHPD, located at the Kakuhihewa Building, 601 Kamokila Blvd., Suite 555, Kapolei, Hawai'i, 96707 [tel. 808-692-8015; fax 808-692-8020] to present information regarding appropriate treatment of the unmarked human remains. All interested parties should respond within thirty days of this notice and file descendancy claim forms and/or provide information to SHPD adequately demonstrating lineal or cultural descent from these specific burials or cultural descent from ancestors buried in the vicinity of this area.

(SA255495 11/10, 11/12, 11/14/10)

Figure 3 Public Notice Asking for Concerned Parties to Come Forward

Figure 96. Consultation letter with Cultural Descendants of Waikīkī page 2

Table 19. List of Previously Recognized Waikīkī Descendants Consulted

CLAIMANT'S NAME
Ahlo, Charles
Arcalas, Cara
Ayau, Eddie
Bates, Cline
Bates, Ke`ala
Battle, Cherie Kahealani Keohokalole
Del Toro, Benjamin
Del Toro, Daniel
Del Toro, Rachel
Del Toro, Samuel
Diamond, A. Van Horn
Gomes, Phoebe
Gomes, Robin
Gora, Amelia K.
Grace, Nadine
Harris, Cy K.
Hatchie, Andrew
Hukiku, Clarence Moses
Kaleikini, Ali`ikaua
Kaleikini. Kala
Kaleikini, No`eau
Kaleikini, Kaanohi Paulette
Kaleikini, Tuahine
Keana'aina, Betty
Keana'aina, Kihei
Keana'aina, Luther
Keana'aina, Michelle
Keana'aina, Noelani
Keana'aina, Regina
Keana'aina, Vicky
Keana'aina, Wilsam
Kekaula, Mary K.
Keli`inoi, Kalahikiola
Keli`inoi, Moani
Keli`ipa`akaua, Chase
Keli`ipa`akaua, Justin
Keohokalole, Adrian Kealoha
Keohokalole, Dennis Ka`imina`auao
Keohokalole, E. Emalia
Keohokalole, James Hoapili
Keohokalole, Jeanine Leikeonaona
Keohokalole, Joseph Moses Keaweaheulu
Keohokalole, Lori Lani
Kini, Debbie Norman

CLAIMANT'S NAME
Kini, Nalani
Koko, Kanaloa
Kuhea, Kealoha
Kuloloio, Manuel
Kuloloio, Manuel
Lew, Haumea
Lopes, Puahone Kini
Lopes, Kamaha`o
Lopes, Leina`ala (Moses-Hukiku)
Lopes, Wilfred
Luka, Alika
Mamac, Violet L. Medeiros
McDonald, Ruby Keana`aina
Medeiros, David
Medeiros, Jim
Medeiros, Jacob L.
Medeiros, Jaimison K.
Medeiros, Jayla A.
Medeiros, Kareen K.
Medeiros, Lincoln K.
Medeiros, Roland
Medeiros Jr., Clarence
Medeiros Sr., Clarence
Norman, Carolyn
Norman, Eileen
Norman, Kaleo
Norman, Keli`inui
Norman, Theodore
Olds, Nalani
Papa, Jr., Richard Likeke
Pascua, Bruce H.
Rash, Regina
Roy, Corbett
Shirai, Jacqueline
Shirai, Jr., Thomas T.
Suzuki, Ashley
Suzuki, Kimberly
Takaki, Miles
Takaki, Moses
Takaki, Tracy
Takizawa, Lorna Medeiros
Theone, Nicole Gulia
Yokooji, Dayleen

Public Notice Public Notice

PUBLIC NOTIICE

NOTICE TO INTERESTED PARTIES IS HEREBY GIVEN that, during the course of an archaeological inventory survey, Cultural Surveys Hawai'i, Inc. identified two human burials within the St. Augustine-by-the-Sea Church property, Hamohamo, Waikiki Ahupua'a, Honolulu (Kona) District, Island of O'ahu, TMK [1]-2-6-26:012

The landowner is Roman Catholic Church [contact: Father Lane Akiona, 923-7024, 130 'Ohua Avenue Honolulu, Hawaii 96815. email - staugustinebythesea@gmail.com].

The Tax Map Key plat map indicates the burials were within Land Commission Award (LCA) 1446 granted to Na'a. Background research indicates that during the *Mahele* these lands were awarded to Ana Keohokalole and that LCA 8452 granted to Ana Keohokalole, LCA 2027 to Palaua-lelo, and LCA 10677 to Pupuka are in the immediate vicinity.

Following the procedures of Hawai'i Revised Statutes (HRS) Chapter 6E-43, and Hawai'i Administrative Rules (HAR) Chapter 13-300, the burial features are believed to be over 50 years old and most likely Native Hawaiian. The burial features have been assigned State Inventory of Historic Properties (SIHP) # 50-80-14- 7136.

The landowner would prefer to keep all burials associated with 50-80-14-7136 within the Church property but seeks to explore re-location to an on-site preserve. The decision to preserve in place or relocate these previously identified human remains shall be made by the O'ahu Island Burial Council and the SHPD in consultation with any recognized lineal and/or cultural descendants, per the requirements of HAR Chapter 13-300-33. The remains' proper treatment shall occur in accordance with HAR Chapter 13-300-38. A burial treatment plan is currently being prepared by Cultural Surveys Hawai'i, Inc. [P.O. Box 1114, Kailua, HI 96724; tel. 808-262-9972; fax 808-262-4950].

SHPD is requesting persons having any knowledge of the identity or history of these human burials to immediately contact Phyllis Coochie Cayan at SHPD, located at the Kakuhihewa Building, 601 Kamokila Blvd., Suite 555, Kapolei, Hawai'i, 96707 [tel. 808-692-8015; fax 808-692-8020] to present information regarding appropriate treatment of the unmarked human remains. All interested parties should respond within thirty days of this notice and file descendancy claim forms and/or provide information to SHPD adequately demonstrating lineal or cultural descent from these specific burials or cultural descent from ancestors buried in the vicinity of this area.

(SA255495 11/10, 11/12, 11/14/10)

Figure 97. Burial Notice published in the *Star-Advertiser* 11/10/2010, 11/12/2010 & 11/14/2010

32 'ianuali2011

NO KA ILINA
BURIAL NOTICES

WAIKĪKĪ AHUPUA'A

NOTICE TO INTERESTED PARTIES IS HEREBY GIVEN that, during the course of an archaeological inventory survey, Cultural Surveys Hawai'i Inc. identified human burials within the St. Augustine-by-the-Sea Church property, Hamohamo, Waikīkī Ahupua'a, Honolulu (Kona) District, Island of O'ahu, TMK [1]-2-6-26:012.

The landowner is Roman Catholic Church [contact: Father Lane Akiona, 923-7024, 130 'Ōhua Ave., Honolulu, HI 96815; email, staugustinebythesea@gmail.com].

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The landowner would prefer to keep all burials associated with 50-80-14-7136 within the Church property but is considering relocation. However, the decision to preserve in place or relocate these previously identified human remains shall be made by the O'ahu Island Burial Council and the SHPD in consultation with any recognized lineal and/or cultural descendants, per the requirements of HAR Chapter 13-300-33. The remains' proper treatment shall occur in accordance with HAR Chapter 13-300-38. A burial treatment plan is currently being prepared by Cultural Surveys Hawai'i Inc. [P.O. Box 1114, Kailua, HI 96724; tel. 808-262-9972; fax 808-262-4950].

SHPD is requesting persons having any knowledge of the identity or history of these human burials to immediately contact Phyllis Coochie Cayan at SHPD, located at the Kākuhihewa Building, 601 Kamōkila Blvd., Suite 555, Kapolei, HI 96707 [tel. 808-692-8015; fax 808-692-8020] to present information regarding appropriate treatment of the unmarked human remains. All interested parties should respond within 30 days of this notice and file descendancy claim forms and/or provide information to SHPD adequately demonstrating lineal or cultural descent from these specific burials or cultural descent from ancestors buried in the vicinity of this area.

KŌLOA AHUPUA'A

All persons having information concerning potential unmarked burials on a roughly 66-acre property (TMK:4-2-8-14:001) in Kōloa Ahupua'a, Kōloa District, Island of Kaua'i are hereby requested to contact Dr. Bob Rechtman, Rechtman Consulting LLC (808) 969-6066, 507A E. Lanikaula St., Hilo, HI 96720, and/or Ms. Phyllis Coochie Cayan, DLNR-SHPD Burial Sites Program (808) 692-8015, 601 Kamokila Blvd. Room 555, Kapolei, HI 96707.

Figure 98. Burial Notice published in January 2011 edition of *Ka Wai Ola o OHA*

St. Augustine Catholic Church

With the servant leadership of the Congregation of the Sacred Hearts of Jesus and Mary since 1854

January 21, 2011

Subject: St. Augustine-by-the-Sea Church Master Plan Project
Notification of Consultation Meeting with Previously Recognized Lineal and/or Cultural Descendants of Waikīkī for the Discovery of *Iwi Kupuna* at St. Augustine-by-the-Sea Church, Hamohamo, Waikīkī

Aloha Mr. XX:

St. Augustine-by-the-Sea Church [Hamohamo, Waikīkī Ahupua'a, Honolulu (Kona) District, Island of O'ahu, TMK [1]-2-6-26:012 & 15] has long been associated with a responsibility to *mālama* the legacy and relics of our beloved St. Damien. This responsibility has caused us to consider how we manage the physical structure of our church, and we have been working on a new Master Plan for St. Augustine that will guide our future and allow us to realize a number of our goals. Foremost among the improvements we hope to construct are a new small museum honoring Saint Damien in the *makai/'ewa* portion of the Church property fronting Kalākaua Avenue and a new Parish Hall in the *mauka* portion of the Church's property.

During the course of an archaeological inventory survey that we needed to prepare in order to support land use approvals for the Master Plan, two intact human burials (and another find of a few human bones in a disturbed context) were identified within the St. Augustine-by-the-Sea Church property under the central portion of the footprint of the proposed Saint Damien Museum under what has been a drive-way access to Kalākaua Avenue for many years. The burials now remain in-place and traffic over the burials has been stopped.

In coordination with the State Historic Preservation Division of the Department of Land and Natural Resources, and the O'ahu Island Burial Council, St. Augustine-by-the-Sea Church seeks to reach out to previously recognized lineal and/or cultural descendants of Waikīkī to consult with them regarding appropriate treatment of the human remains in relation to the proposed project. A meeting to discuss this has been scheduled as indicated below, and we are seeking your *mana'o*.

Tuesday, February 1, 2011
6:30 p.m. to 8:00 p.m.
St. Augustine-by-the-Sea Church (Parish Hall)
130 'Ōhua Avenue
Honolulu, Hawaii 96815
Phone: (808) 923-7024

We look forward to your participation in this consultation meeting. If you have any questions, please contact me at the number listed above.

Mahalo for your consideration of this matter.

Aloha.

Father Lane Akiona

130 'Ōhua Avenue, Honolulu, HI 96815
Tel: (808) 923-7024 Fax: (808) 922-4086
www.staugustinebythesea.org
staugustinebythesea@gmail.com

Figure 99. January 27, 2011 outreach letter

St. Augustine Catholic Church

With the servant leadership of the Congregation of the Sacred Hearts of Jesus and Mary since 1854

April 7, 2011

Ms. Phyllis Coochie Cayan
State Historic Preservation Division
Room 555, Kākuhihewa Building
601 Kamōkila Blvd.
Kapolei Hawaii 96707

Subject: St. Augustine-by-the-Sea Church Master Plan Project

Notification of Consultation Meeting with Previously Recognized Lineal and/or Cultural Descendants of Waikīkī for the Discovery of *Iwi Kupūna* at St. Augustine-by-the-Sea Church, Hamohamo, Waikīkī

Aloha Coochie Cayan:

St. Augustine-by-the-Sea Church [Hamohamo, Waikīkī Ahupua'a, Honolulu (Kona) District, Island of O'ahu, TMK [1]-2-6-26:012 & 15] has long been associated with a responsibility to *mālama* the legacy and relics of our beloved St. Damien. This responsibility has caused us to consider how we manage the physical structure of our church, and we have been working on a new Master Plan for St. Augustine that will guide our future and allow us to realize a number of our goals. Foremost among the improvements we hope to construct are a new small museum honoring Saint Damien in the *makai/'ewa* portion of the Church property fronting Kalākaua Avenue and a new Parish Hall in the *mauka* portion of the Church's property.

During the course of an archaeological inventory survey that we needed to prepare in order to support land use approvals for the Master Plan, two intact human burials (and another find of a few human bones in a disturbed context) were identified within the St. Augustine-by-the-Sea Church property under the central portion of the footprint of the proposed Saint Damien Museum under what has been a drive-way access to Kalākaua Avenue for many years. The burials now remain in-place and traffic over the burials has been stopped.

In coordination with the State Historic Preservation Division of the Department of Land and Natural Resources, and the O'ahu Island Burial Council, St. Augustine-by-the-Sea Church seeks to reach out to previously recognized lineal and/or cultural descendants of Waikīkī to consult with them regarding appropriate treatment of the human remains in relation to the proposed project. A meeting to discuss this has been scheduled as indicated below, and we are seeking your *mana'o*.

Monday, April 18, 2011
6:30 p.m. to 8:00 p.m.
St. Augustine-by-the-Sea Church (Parish Hall)
130 'Ōhua Avenue
Honolulu, Hawaii 96815
Phone: (808) 923-7024

We look forward to your participation in this consultation meeting. If you have any questions, please contact me at the number listed above.

Mahalo for your consideration of this matter.

Aloha.

Father Lane Akiona

130 'Ōhua Avenue, Honolulu, HI 96815
Tel: (808) 923-7024 Fax: (808) 922-4086
www.staugustinebythesea.org
staugustinebythesea@gmail.com

Figure 100. April 7 2011 outreach letter

APPENDIX C-2

Burial Treatment Plan for SIHP #50-80-14-7136 and St. Augustine-by-the-Sea Master Plan Project
April 2011

Prepared By:
Cultural Surveys Hawai‘i, Inc.

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

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

GUY H. KAULUKUKUI
FIRST DEPUTY

WILLIAM M. TAM
DEPUTY DIRECTOR - WATER

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

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION
601 KAMOKILA BLVD., RM. 555
KAPOLEI, HI 96707

August 8, 2011

Hallett H. Hammatt, Ph.D.
Cultural Surveys Hawaii Inc.
P.O. Box 1114
Kailua, Hawaii 96734

LOG NO: 2011. 1224
DOC NO: 1108pc004

Dear Hal Hammett:

SUBJECT: Burial Treatment Plan for SIHP #50-80-14-7136 and the St. Augustine-by-the Sea Master Plan Project, Waikiki Ahupua'a, Honolulu (Kona) District, Island of O'ahu. TMK: (1) 2-6-026:012.

On June 8, 2011, the O'ahu Island Burials Council (OIBC) did unanimously approve the above burial treatment plan (BTP) for SIHP #50-80-14-7136 and the St. Augustine-by-the Sea Master Plan Project at the aforementioned TMK. This plan is the collective work and mana'o (thoughts) of not only the landowner/developer and his consultants, but also expresses the cultural sensitivity to malama na iwi kahiko through several consultation meetings with OIBC-recognized claimants and/or other interested individuals, with the OIBC and the department.

This determination was based on the following:

1. The willingness of the landowner to designate a collective agreed upon preservation area (a crypt within the proposed Damien Museum) for the known "in situ" burials and other inadvertent skeletal fragments for perpetuity,
2. The cultural appropriateness to provide protection for the burials from further disturbance and desecration, and;
3. A burial agreement with the final burial treatment plan will be on file by the landowner at the Department of Land and Natural Resources Bureau of Conveyances.

The SHPD has reviewed the above subject plan and have found that it meets the minimum requirements as stated in Hawaii Revised Statutes (HAR) 13-300-40 (i). The department therefore approves this burial treatment plan as described above and that these known burials will be "in situ" and that those inadvertent skeletal fragments will be reinterred at the designated burial area (a crypt within the proposed Damien museum) as described in the burial treatment plan. Please send a final copy of this plan for our files. Any questions, please contact me at 808-692-8025 or via email at Phyllis.L.Cayan@hawaii.gov

Sincerely,

Phyllis Coochie Cayan

Phyllis Coochie Cayan
History and Culture Branch Chief

cc: Deona Neboa, SHPD O'ahu Island Archaeologist

Final
Burial Treatment Plan for SIHP# 50-80-14-7136 and the St. Augustine-by-the Sea Master Plan Project, Waikīkī Ahupuaʻa, Honolulu (Kona) District, Island of Oʻahu
TMK: [1]-2-6-026:012

Helber Hastert & Fee Planners, Inc.

Prepared by
Hallett H. Hammatt, Ph.D.
and
David W, Shideler, M.A.

Cultural Surveys Hawaiʻi, Inc.
Kailua, Hawaiʻi
(Job Code: WAIKIKI 58)

April 2011

Oʻahu Office
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Maui Office
1993 Main Street
Wailuku, Hawaiʻi 96793
Ph: (808) 242-9882
Fax: (808) 244-1994

Management Summary

Reference	Burial Treatment Plan for SIHP# 50-80-14-7136 and the St. Augustine -by-the-Sea Master Plan Project, Waikīkī Ahupuaʻa, Honolulu (Kona) District, Island of Oʻahu, TMK [1] 2-6-26:012 (Hammatt and Shideler 2011).
Date	April 2011
Project Number (s)	Cultural Surveys Hawaiʻi Inc. (CSH) Project No. WAIKIKI 58
Project Location	The project area comprises TMK [1] 2-6-26: 012 & 015 and is bounded to the north by a parking lot adjacent to Kūhiō Avenue, to the east by ʻŌhua Avenue, to the west by Kealohilani Avenue, and to the south by Kalākaua Avenue. The two burials addressed in this plan, collectively designated as State Inventory of Historic Properties (SIHP) # 50-80-14-7136), are in the west corner of TMK [1] 2-6-026:012, just *mauka* of Kalākaua Avenue. The project area and burials location is depicted on the 1998 U.S. Geological Survey 7.5-minute series topographic map, Honolulu Quadrangle.
Land Jurisdiction	Private; Roman Catholic Church of Hawaiʻi
Agencies	SHPD/DLNR, Oʻahu Island Burial Council
Project Description	The proposed development includes the construction of the Saint Damien Museum fronting Kalākaua Avenue (footprint approx. 3,157 sq. ft.) and redevelopment of the existing Parish Hall in the north corner of the church property (footprint approx. 13,160 sq. ft.).
Project Acreage	Approximately 1.15 acres
Area of Potential Effect (APE)	The APE for the current AIS investigation is defined as the entire 1.15-acre project area.
Historic Preservation Regulatory Context	CSH conducted an archaeological inventory survey for the proposed project (Yucha et al. 2010) that identified two human burials. This burial treatment plan is designed to fulfill the State requirements for burial treatment plans per HAR Chapter 13-300-33. The plan was prepared to provide SHPD, the OIBC, and recognized cultural descendants, with the appropriate information to support the OIBC's determination of appropriate treatment for the project area's previously identified burial remains. It was also prepared to support the project's historic preservation review under HRS Chapter 6E-42 and HAR Chapter 13-284. The plan describes the methods and procedures that will be used to protect and preserve the previously identified burial in perpetuity.
Results of Lineal / Cultural Descendent Search	A burial notice was posted in the January 2011 issue of the *Ka Wai Ola o OHA* and in the *Honolulu Star Advertiser* from November 10 to November 14 (Appendix B) as a good faith notice to identify potential lineal and cultural descendants, as required by HAR 13-300-33. Several meetings have been held with concerned cultural descendants of Waikīkī.

Proposed Burial Treatment	Following substantial consultation with cultural descendants of Waikīkī, this plan advocates preservation in place of the burial designated as SIHP # 50-80-14-7136 under the floor of the proposed Saint Damien Museum.
Burial Preserve Recordation	In order to provide perpetual protection for the Burial Preserve area, the project proponents, acting on behalf of SHPD pursuant to HAR 13-300-38(g), will record the Burial Preserve area location with the State of Hawai‘i Bureau of Conveyances. This recordation would create an encumbrance on the specific TMK parcel (TMK [1] 2-6-026:012) in perpetuity. The burial preserve area recordation with the Bureau of Conveyances will be done upon acceptance of the burial treatment plan and completion of construction. Copies of the recorded document shall be submitted to SHPD, OIBC, and interested parties that participated in the burial treatment consultation process.

Table of Contents

Management Summary i

Section 1 Introduction 1

1.1 Project Background 1
1.2 Environmental Setting 1
1.2.1 Natural Environment 1
1.2.2 Relationship of Project Area to Former Shorelines 6
1.2.3 Built Environment 6

Section 2 Background Research 8

2.1 Traditional and Historical Background 8
2.1.1 Pre-Contact to 1800s 8
2.1.2 Mid- to Late-1800s 10
2.1.3 1900s 17
2.2 Previous Archaeological Research 26
2.3 Background Summary and Predictive Model 30
2.4 Results of Archaeological Inventory Survey 31
2.5 Stratigraphic Summary 34
2.6 Test Trench Documentation 35
2.6.1 Trench 3 35
2.6.2 Trench 8 38
2.7 Historic Property Descriptions 41
2.7.1 SIHP# 50-80-14-7135 41
2.7.2 SIHP# 50-80-14-7136 42
2.8 Overview of Consultation 44
2.9 Summary and Interpretation from the Archaeological Inventory Survey 45
2.10 Significance Assessments from the Archaeological Inventory Survey 46
2.11 Project Effect 47
2.12 Mitigation Recommendations 47
2.12.1 Burial Treatment Plan 47
2.12.2 Archaeological Monitoring 47

Section 3 Proposed Burial Treatment 49

3.1 Statement of Proposed Treatment 49
3.2 Immediate Short-Term Burial Protection Measures 50
3.3 Long-Term Management of the Burial Preserve Area 50
3.4 Burial Preserve Recordation 50
3.5 Treatment of Inadvertent Burial Discoveries 51

Section 4 References Cited 52

Appendix A Land Commission Awards 1

Land Commission Award 1446 1
Land Commission Award 01452 3
Land Commission Award 1453 5
Land Commission Award 01454 7

Land Commission Award 01455 9
Land Commission Award 01457 11
Land Commission Award 01458 13
Land Commission Award 2027 16
Land Commission Award 02843 17
Land Commission Award 08452*O 18
Land Commission Award 10677 22

Appendix B Consultation with Cultural Descendants of Waikīkī..... 1

List of Figures

Figure 1. 1998 U. S. Geological Survey 7.5-Minute Series Topographic Map, Honolulu Quadrangle, showing the location of the current project area 1
Figure 2. Tax Map Key (TMK) 2-6-026, showing the location of the current project area 2
Figure 3. Aerial photograph (source: World Imagery 2009), showing the location of the current project area.....3
Figure 4. Site plan map showing the existing infrastructure within the current project area (source: Mason Architects).....4
Figure 5. Site plan map showing the proposed development within the current project area (source: Mason Architects).....5
Figure 6. Overlay of Soil Survey of the State of Hawai‘i (Foote et al. 1972), indicating sediment types within and surrounding the current project area (source: Soils Survey Geographic Database [SSUGRO] 2001, U.S. Department of Agriculture) 7
Figure 7. Portion of the 1855 map of Honolulu to Koko Head by La Passe showing the current project area within the densely populated area of Waikīkī.....11
Figure 8. Portion of the 1897 map of Honolulu by Monsarrat showing rice fields and an early alignment of ‘Ōhua Avenue in the vicinity of the current project area 13
Figure 9. Portion of the 1881 Hawaiian Government survey map by S.E. Bishop map showing LCA’s within and in the vicinity of the current project area 15
Figure 10. Portion of the 1881 Hawaiian Government survey map by W.D. Alexander showing a church in the vicinity of the current project area 18
Figure 11. 1910 U.S. Coast Guard Engineers map showing a church and several others structures within and in the vicinity of the current project area 19
Figure 12. 1914 Sanborn Fire Insurance map showing St. Augustine’s Church and other structures within the current project area.....21
Figure 13. 1927 Sanborn Fire Insurance map showing St. Augustine’s Church (mistakenly labeled “St. Anthony’s Church”) and other structures within the current project area 22
Figure 14. Photograph (circa 1930) showing St. Augustine Church and an adjacent structure (source: Bunson 1977:151).....24
Figure 15. 1957 photograph of Waikīkī from Diamondhead (source: Bishop Museum).....25
Figure 16. Aerial photograph (source: World Imagery 2009), showing previous archaeological studies conducted in the vicinity of the current project area 27
Figure 17. Aerial photograph (source: World Imagery 2009), showing Test Trench 1-11 and SIHP# -7136 Feature A-C.....32
Figure 18. Proposed site plan, showing Test Trench 1-11 and SIHP# -7136 Feature A-C 33
Figure 19. Trench 3 overview, view to north.....36
Figure 20. Trench 3, profile of northwest wall, view to northwest 36
Figure 21. Trench 3, stratigraphic profile of northwest wall 37
Figure 22. Trench 3, plan view of Stratum III 38
Figure 23. Trench 8, profile of southeast wall, view to west.....39
Figure 24. Trench 8, stratigraphic profile of southeast wall 39
Figure 25. Trench 8, plan view of Stratum IV 40
Figure 26. Text for consultation letter with Cultural Descendants of Waikīkī (11/18/2010).....B-1
Figure 27. Burial Notice published in the *Star-Advertiser* 11/10/2010, 11/12/2010 & 11/14/2010B-4

Figure 28. Burial Notice published in January 2011 edition of *Ka Wai Ola o OHA*.....B-5
Figure 29. January 27, 2011 outreach letter.....B-6
Figure 30. April 7 2011 outreach letter.....B-7
Figure 31. Cultural Descendants of the Saint Augustine-by-the-Sea burials recognized by the SHPD and the OIBC at the March 2011 OIBC meeting – all consulted by mail.....B-8

List of Tables

Table 1. Land Commission Awards Within and in the Vicinity of the Current Project Area.....16
Table 2. Previous Archaeological Studies located in the Vicinity of the Current Project Area....28
Table 3. Strata Observed within Trench 3. 37
Table 4. Strata Observed within Trench 8. 40
Table 5. List of Previously Recognized Waikīkī Descendants Initially Consulted.....B-2

Section 1 Introduction

1.1 Project Background

At the request of Helber Hastert & Fee Planners, Inc., Cultural Surveys Hawai‘i, Inc., (CSH) prepared this Burial Treatment Plan for two human burials identified during an Archaeological Inventory Survey and collectively designated as State Inventory of Historic Properties (SIHP) # 50-80-14-7136 and as part of the St. Augustine-by-the-Sea Master Plan project, Waikīkī Ahupua‘a, Kona District, Island of O‘ahu (TMK: [1] 2-6-026: 012 & 015). The project proponent is the Roman Catholic Church (contact: Father Lane Akiona, St. Augustine-by-the-Sea Church, 130 ‘Ōhua Street, Honolulu Hawai‘i 96815; tel. 923-7024).

The project area is bounded to the north by a parking lot adjacent to Kūhiō Avenue, to the east by ‘Ōhua Avenue, to the west by Kealohilani Avenue, and to the south by Kalākaua Avenue (Figure 1 to Figure 5). The burials addressed in this plan are in the west corner of TMK [1] 2- 6-026:012, at the seaward end of an asphalt driveway on the *‘ewa* side of the property, just *mauka* of Kalākaua Avenue. The project area and burials location are depicted on the 1998 U.S. Geological Survey 7.5-minute series topographic map, Honolulu Quadrangle (Figure 1) and following maps and aerial photo.

The project area is privately owned by the Roman Catholic Church of Hawai‘i. The project area comprises approximately 1.15 acres. Proposed development within the project area includes the construction of the Saint Damien Museum fronting Kalākaua Avenue (footprint approx. 3,157 sq. ft) and the redevelopment of the existing Parish Hall in the north corner of the church property (footprint approx. 13,160 sq. ft). The area of potential effect (APE) for the AIS investigation was defined as the entire 1.15-acre project area.

This burial treatment plan is designed to fulfill the State requirements for burial treatment plans per HAR Chapter 13-300-33. The plan was prepared to provide SHPD, the OIBC, and recognized cultural descendants, with the appropriate information to support the OIBC’s determination of appropriate treatment for the project area’s previously identified burial remains. It was also prepared to support the project’s historic preservation review under HRS Chapter 6E-42 and HAR Chapter 13-284. The plan describes the methods and procedures that will be used to protect and preserve the previously identified burial in perpetuity.

1.2 Environmental Setting

1.2.1 Natural Environment

The ancient land division of Waikīkī extended on the west from the land called Kou (old name for Honolulu) to Maunalua (Hawai‘i Kai). On modern maps, the western boundary of this *ahupua‘a* would extend from Pi‘ikoi and Sheridan Streets, the *mauka* (mountain) border would extend from Tantalus to the peak of Kōnāhuanui, along the crest of the Ko‘olau Range to the border with Maunalua. The ocean constituted the *makai* (seaward) border. One section of this *ahupua‘a* was the coastal area, backed by a large marshland. The marshland extended from the

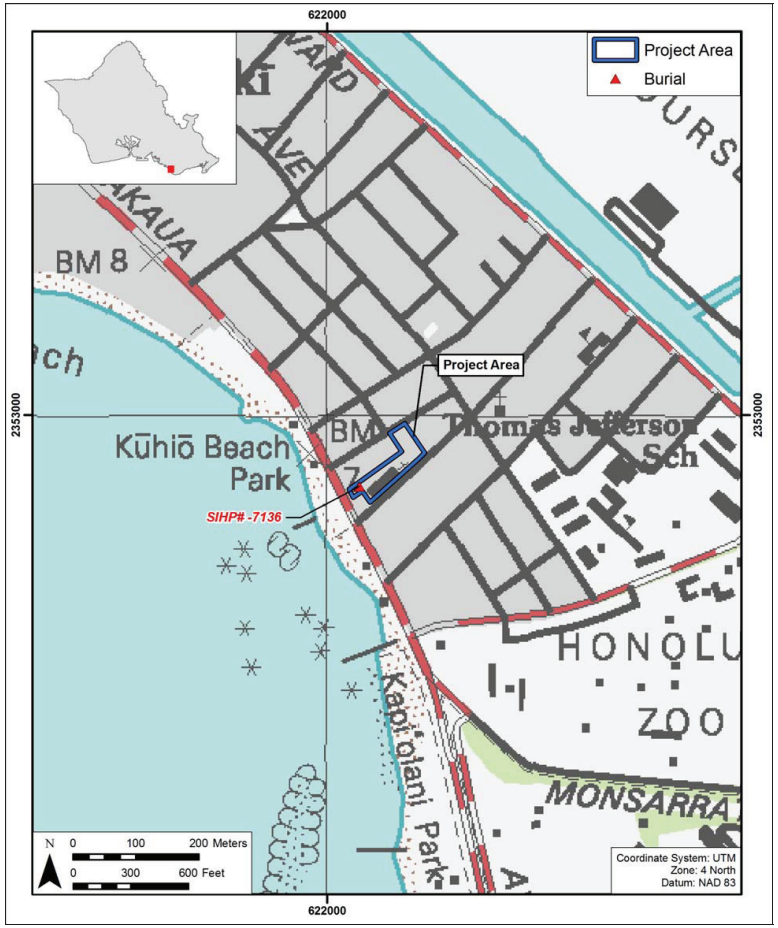

Figure 1. 1998 U. S. Geological Survey 7.5-Minute Series Topographic Map, Honolulu Quadrangle, showing the location of the current project area

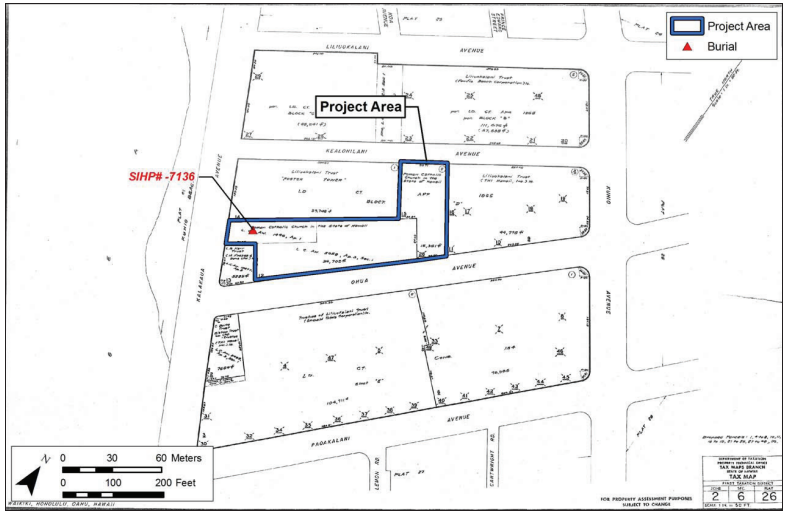

Figure 2. Tax Map Key (TMK) 2-6-026, showing the location of the current project area

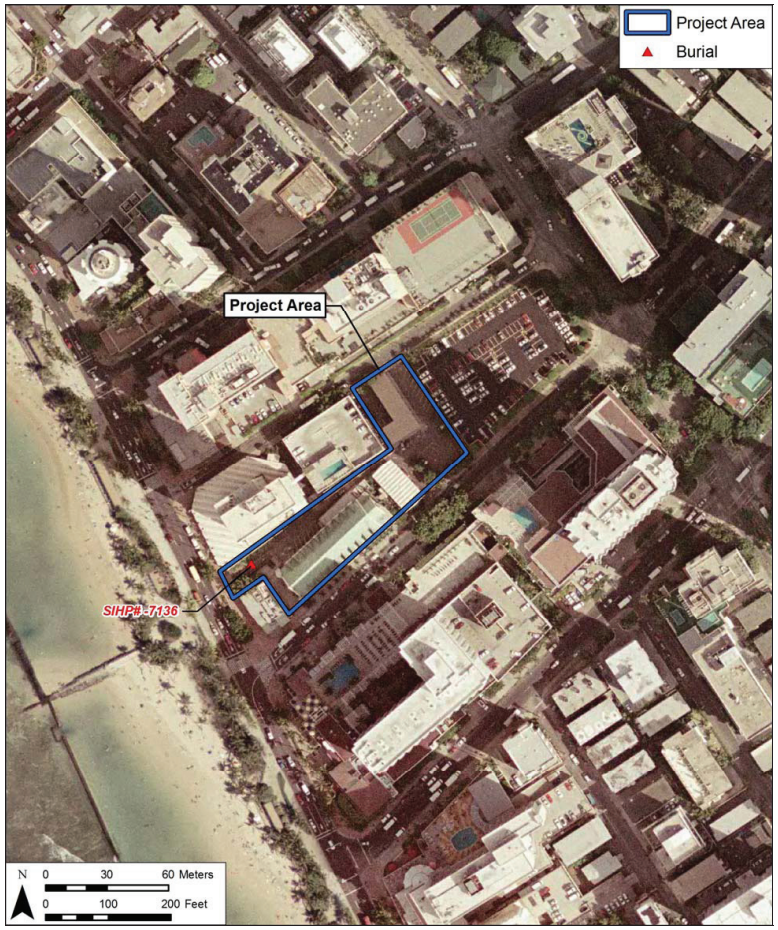

Figure 3. Aerial photograph (source: World Imagery 2009), showing the location of the current project area

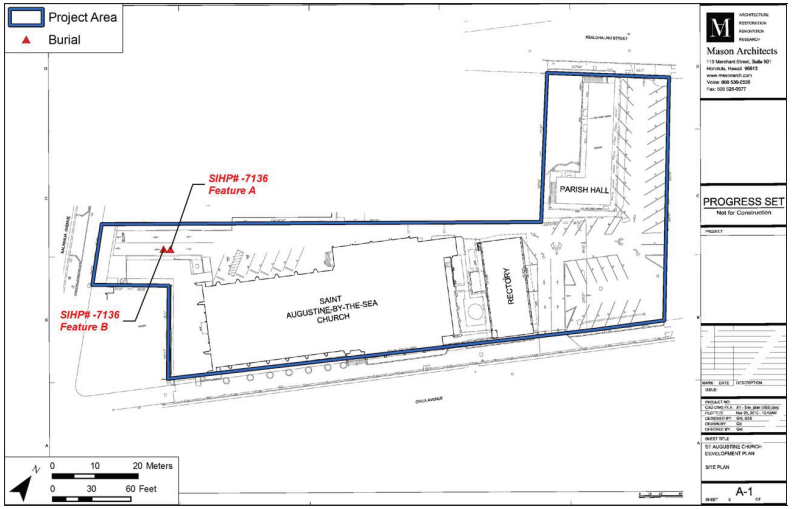

Figure 4. Site plan map showing the existing infrastructure within the current project area (source: Mason Architects)

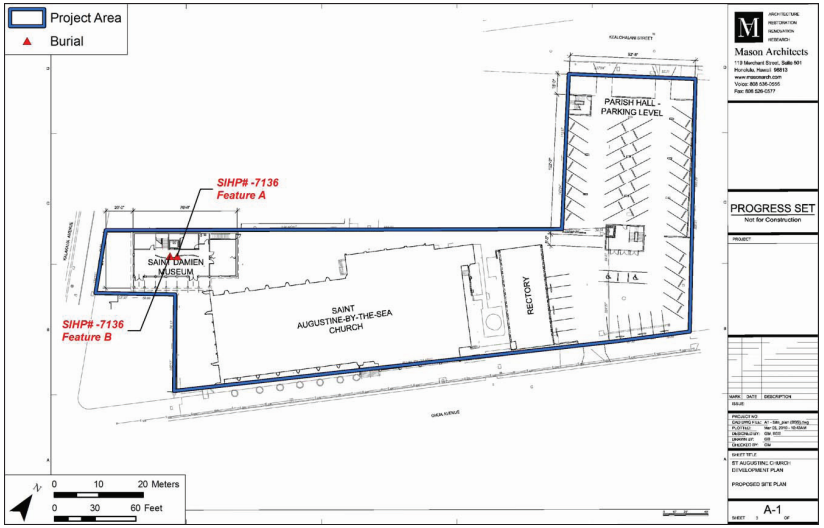

Figure 5. Site plan map showing the proposed development within the current project area (source: Mason Architects)

volcanic craters of Lē‘ahi (Diamond Head) and the Kaimukī dome (where the present day Kaimukī fire station is built) to the east. The *mauka* boundary of the marshland is where Kapahulu Park is located today, which then runs along the foot of Mānoa Valley into the districts of Kamō‘ili‘ili and Makiki, ending at the junction of Wilder and Pi‘ikoi Streets, then turning again to the sea. This marshy area was about 3 miles long and 1 mile wide, enclosing approximately 2,000 acres (Kanahele 1986:5-6).

The project area is located on the flat plain of Waikīkī, which generally is less than 4.5 m (15 ft) above sea level (Davis 1989:5). The U.S. Department of Agriculture (USDA) Soil Survey classifies the project area’s sediments as Jaucas Sand 0 to 15 percent slopes (JaC) (Figure 6), which are described as “excessively drained, calcareous soils…developed in wind- and water-deposited sand from coral and seashells” (Foote et al. 1972:48). Rainfall averages less than 30 inches of rain per year (Armstrong 1983:62). Currently, vegetation in the general area includes introduced exotics, such as MacArthur Palm, coconut, and a variety of ornamental shrubs. Until approximately 1920 Hamohamo Stream, (also called Kukaunahi Stream), was approximately 75 m to the southeast of the project area (see Figures 9, 19, 12 & 13).

1.2.2 Relationship of Project Area to Former Shorelines

It would not be surprising if the sandy coastline in the immediate vicinity of the project area was dynamic in such close proximity to the mouth of a significant stream (the mouth of former Hamohamo Stream, also called Kukaunahi Stream, was approximately 75 m to the southeast of the project area – see Figure 8). Our overlays of the project area on historic maps indicates that the shoreline in the vicinity of the project area has been relatively static since as far back as 1855 (see Figure 7). There are lines of evidence suggesting there had been an eroding shoreline previously. Land Commission Awards 1446 to Na‘a and 10677 to Pupuka indicate other land owners on the seaward (*makai*) side (see Appendix A). Early maps (see Figure 8) indicate the sea coming right up to the Waikīkī Beach Road (present Kalākaua Avenue alignment) whereas the beach road was typically set back at least a few meters from the coast. Both of these lines of evidence suggest that the shoreline may have extended slightly further out in pre-Contact times. This is assessed as not having a significant effect on the probability and nature of archaeological resources likely to be present.

1.2.3 Built Environment

St. Augustine-by-the-Sea Church is located within urban Honolulu at the eastern end of the Waikīkī resort area. It is surrounded by modern urban development including high-rise hotels, streets, sidewalks, and utility infrastructure (see Figure 3). Foster Tower is immediately to the west with the Pacific Beach Hotel further to the west across Kealohilani Avenue. The Marriott Hotel is to the east across ‘Ōhua Avenue. Kalākaua Avenue, the main thoroughfare for coastal Waikīkī, bounds St. Augustine-by-the-Sea to the south separating the church from Kūhiō Beach Park. An approximately 1 acre ground level parking lot lies inland (north of the project area) extending north to Kūhiō Avenue.

The current project area is relatively level and includes the seaward portion of an asphalt and concrete driveway extending along the northwest side of the main church sanctuary, an asphalt parking lot in the north corner of the church lands, the existing Parish Hall, and a lawn on the southwest side of the existing Parish Hall.

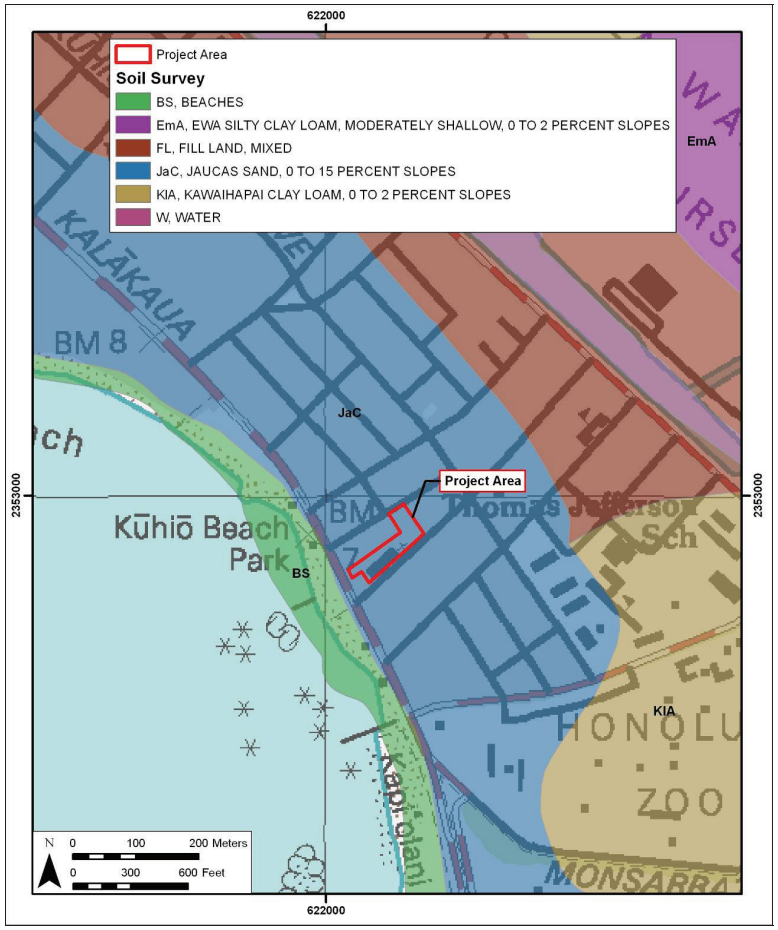

Figure 6. Overlay of Soil Survey of the State of Hawai‘i (Foote et al. 1972), indicating sediment types within and surrounding the current project area (source: Soils Survey Geographic Database [SSUGRO] 2001, U.S. Department of Agriculture)

Section 2 Background Research

2.1 Traditional and Historical Background

2.1.1 Pre-Contact to 1800s

Waikīkī, by the time of the arrival of Europeans in the Hawaiian Islands during the late eighteenth century, had long been a center of population and political power on O‘ahu. According to Martha Beckwith (1940), by the end of the fourteenth century, Waikīkī had become "the ruling seat of the chiefs of O‘ahu." The preeminence of Waikīkī continued into the eighteenth century and is betokened by Kamehameha's decision to reside there upon wresting control of O‘ahu by defeating the island's chief, Kalanikūpule. The nineteenth century Hawaiian historian John Papa ‘Ī‘ī (1959), himself a member of the *ali‘i*, described the king's Waikīkī residence:

> Kamehameha's houses were at Pua‘ali‘ili‘i, *makai* of the old road, and extended as far as the west side of the sands of ‘Āpuakehau. Within it was Helumoa where Ka‘ahumanu *mā* went to while away the time. The king built a stone house there, enclosed by a fence.

‘Ī‘ī further noted that the "place had long been a residence of chiefs. It is said that it had been Kekuapoi's home, through her husband Kahahana, since the time of Kahekili."

Chiefly residences, however, were only one element of a complex of features which were able to sustain a large population that characterized Waikīkī up to pre-contact times. Beginning in the fifteenth century, a vast system of irrigated taro fields was constructed, extending across the littoral plain from Waikīkī to lower Mānoa and Pālolo valleys. This field system - an impressive feat of engineering the design of which is traditionally attributed to the chief Kalamakua - took advantage of streams descending from Makiki, Mānoa and Pālolo valleys which also provided ample fresh water for the Hawaiians living in the *ahupua‘a*. Water was also available from springs in nearby Mō‘ili‘ili and Punahou. Closer to the Waikīkī shoreline, coconut groves and fishponds dotted the landscape. A sizeable population developed amidst this Hawaiian-engineered abundance. Captain George Vancouver, arriving at "Whyteete" in 1792, captured something of this profusion in his journals:

> On shores, the villages appeared numerous, large, and in good repair; and the surrounding country pleasingly interspersed with deep, though not extensive valleys; which, with the plains near the sea-side, presented a high degree of cultivation and fertility.
>
> [Our] guides led us to the northward through the village, to an exceedingly well-made causeway, about twelve feet broad, with a ditch on each side.
>
> This opened our view to a spacious plain, which, in the immediate vicinity of the village, had the appearance of the open common fields in England; but, on advancing, the major part appeared to be divided into fields of irregular shape and figure, which were separated from each other by low stone walls, and were in a very high state of cultivation. These several portions of land were planted with the

> eddo or *taro* root, in different stages of inundation; none being perfectly dry, and some from three to six or seven inches under water. The causeway led us near a mile from the beach, at the end of which was the water we were in quest of. It was a rivulet five or six feet wide, and about two or three feet deep, well banked up, and nearly motionless; some small rills only, finding a passage through the dams that checked the sluggish stream, by which a constant supply was afforded to the *taro* plantations.
>
> [We] found the plain in a high state of cultivation, mostly under immediate crops of *taro*; and abounding with a variety of wild fowl, chiefly of the duck kind...The sides of the hills, which were at some distance, seemed rocky and barren; the intermediate vallies, which were all inhabited, produced some large trees, and made a pleasing appearance. The plain, however, if we may judge from the labour bestowed on their cultivation, seemed to afford the principal proportion of the different vegetable productions on which the inhabitants depend for their subsistence (Vancouver, 1798: I, 161-164).

Umu, or artificial reefs built in areas lacking naturally occurring coral or rock shelters, may have been built *makai* of the current project area. These structures of rock and coral were loosely stacked to allow seaweed to grow to attract fish and have been found throughout the islands. Although *umu* have not been found in Waikīkī, Kanahele (1995:46) suggests that since the Ku‘ekaunahi Stream is sandy and lacks coral, it is likely *umu* were built to attract fish. Kanahele (1995:46) additionally suggests that a *ko‘a*, sacred shrine dedicated to the fish god Kū‘ula, may have been built “near the mouths of the Pi‘inaio, ‘Āpuakēhau and Ku‘ekaunahi streams, where fish were particularly abundant.”

Further details of the exuberant life that must have characterized the Hawaiians use of the lands that included the *ahupua‘a* of Waikīkī are given by Archibald Menzies, a naturalist accompanying Vancouver's expedition:

> The verge of the shore was planted with a large grove of cocoanut palms, affording a delightful shade to the scattered habitations of the natives. Some of those near the beach were raised a few feet from the ground upon a kind of stage, so as to admit the surf to wash underneath them. We pursued a pleasing path back to the plantation, which was nearly level and very extensive, and laid out with great neatness into little fields planted with taro, yams, sweet potatoes and the cloth plant. These, in many cases, were divided by little banks on which grew the sugar cane and a species of *Draecena* without the aid of much cultivation, and the whole was watered in a most ingenious manner by dividing the general stream into little aqueducts leading in various directions so as to be able to supply the most distant fields at pleasure, and the soil seemed to repay the labour and industry of these people by the luxuriancy of its productions. Here and there we met with ponds of considerable size, and besides being well stocked with fish, they swarmed with water fowl of various kinds such as ducks, coots, water hens, bitterns, plovers and curlews. (Menzies 1920:23-24)

However, the traditional Hawaiian focus on Waikīkī as a center of chiefly and agricultural activities on southeastern O‘ahu was soon to change - disrupted by the same Euro-American

contact which produced the first documentation (including the records cited above) of that traditional life. The *ahupua‘a* of Honolulu - with the only sheltered harbor on O‘ahu - became the center for trade with visiting foreign vessels, drawing increasing numbers of Hawaiians away from their traditional environments. The shift in pre-eminence is illustrated by the fact that Kamehameha moved his residence from Waikīkī to Honolulu. Indeed, by 1828, Levi Chamberlain describing a journey into Waikīkī would note:

> Our path led us along the borders of extensive plats of marshy ground, having raised banks on one or more sides, and which were once filled with water, and replenished abundantly with esculent fish; but now overgrown with tall rushes waving in the wind. The land all around for several miles has the appearance of having once been under cultivation. I entered into conversation with the natives respecting this present neglected state. They ascribed it to the decrease of population (Chamberlain 1957:26).

An 1855 map of Honolulu to Koko Head by La Passe indicates that the area within and in the vicinity of the current project area remained densely populated (Figure 7). The map also shows agricultural fields northeast (*mauka*) of the current project area.

2.1.2 Mid- to Late-1800s

As the 19th century progressed, Waikīkī was becoming a popular site among foreigners – mostly American – who had settled on O‘ahu. An 1865 article in the *Pacific Commercial Advertiser* mentioned a small community that had developed along the beach. The area continued to be popular with the *ali‘i* and several notables had residences there. A visitor to O‘ahu in 1873 described Waikīkī as “a hamlet of plain cottages, whither the people of Honolulu go to revel in bathing clothes, mosquitoes, and solitude, at odd times of the year” (Bliss 1873).

In the mid-1870s, the Waikīkī area below Diamond Head may be characterized as comprised of seasonal duck ponds and stands of algeroba (*kiawe*) on an open plain. That landscape was altered dramatically when Kapi‘olani Park was created by a consortium of prominent businessmen that included Archibald Cleghorn, John O. Dominis, and James Makee. The park stockholders acquired the property through a lease with two landholders of the area, King Kalākaua who leased approximately 150 acres in the land known as Kaneloa, and a Swedish-born immigrant to Hawai‘i named Allen Herbert, who leased the neighboring parcel of Kapua. The park was dedicated on June 11, 1877 (Kamehameha Day) and was named for King Kalākaua’s wife, Queen Kapi‘olani. Its original configuration included an open field and horse racing track, surrounded by private estates. As Robert Weyeneth notes, the original park was not intended for the general public:

> Kapi‘olani Park was established by a private corporation whose stockholders were chiefly interested in developing an exclusive residential retreat. The intention was not to create a site for public recreation. For its first two decades, the park was operated by the Kapiolani Park Association. . . . The Association was founded at a meeting on 8 November 1876, with a two-fold purpose: (1) building residences for its stockholders along the ocean at Waikīkī and on the slopes of Diamond Head and (2) laying out a first-class horse-racing track as the focal point of this new suburb [Weyeneth 1991:4].

Figure 7. Portion of the 1855 map of Honolulu to Koko Head by La Passe showing the current project area within the densely populated area of Waikīkī

At the northwest end of the park - i.e., the area of the present Honolulu Zoo - the park association transformed the two nondescript ponds:

To “reclaim” the marshy wetlands at the park entrance, Makee and Cleghorn proposed to create a picturesque water landscape. Through construction of a system of ditches and canals, they drained sufficient water from this portion of the park to create a collection of small islands and shallow ponds. Although the waterways were routinely criticized as stagnant breeding grounds for “limu moss,” the general effect was considered agreeable. Erecting rude wooden bridges enabled visitors to meander among the islands. The largest piece of dry land created from the former swamp was called Makee Island after the first Association president, and it became a favorite spot for picnics (Weyeneth 1991:12).

As the sugar industry throughout the Hawaiian kingdom expanded in the second half of the nineteenth century, the need for increased numbers of field laborers prompted passage of contract labor laws. In 1852, the first Chinese contract laborers arrived in the islands. Contracts were for five years, and pay was three dollars a month plus room and board. Upon completion of their contracts, a number of the immigrants remained in the islands, many becoming merchants or rice farmers. As was happening in other locales, in the 1880s, groups of Chinese began leasing and buying (from the Hawaiians of Waikīkī) former taro lands for conversion to rice farming. The taro lands’ availability throughout the islands in the late 1800s reflected the declining demand for taro as the native Hawaiian population diminished.

The Hawaiian Islands were well positioned for rice cultivation. A market for rice in California had developed as increasing numbers of Chinese laborers immigrated there since the mid-nineteenth century. Similarly, as Chinese immigration to the islands also accelerated, a domestic market opened.

> The primary market for both husked rice and paddy raised in all parts of the Hawaiian Islands was in Honolulu. The number of Chinese in the islands created a large home demand.
>
> In 1880 the home market was made more secure by an increase in the duty on rice imported into Hawai‘i to 1½ cents on paddy and 2½ cents on hulled rice. It resulted in further checking the importation of foreign rice and giving an immense impetus to the home product [Coulter and Chun 1937:13].

By 1892, Waikīkī had 542 acres planted in rice, representing almost 12% of the total 4,659 acres planted in rice on O‘ahu. Most of the former taro *lo‘i* converted to rice fields were located *mauka* (inland) of the present Ala Wai Boulevard. An 1897 map by Monsarrat depicts rice fields approximately 150 m east of the current project area (Figure 8). The 1897 map also shows small portion of ‘Ōhua Avenue extending *mauka* from the coastal Waikīkī Road, which was renamed Kalākaua Avenue in 1905 (Grant 1996:21).

2.1.2.1 The 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*

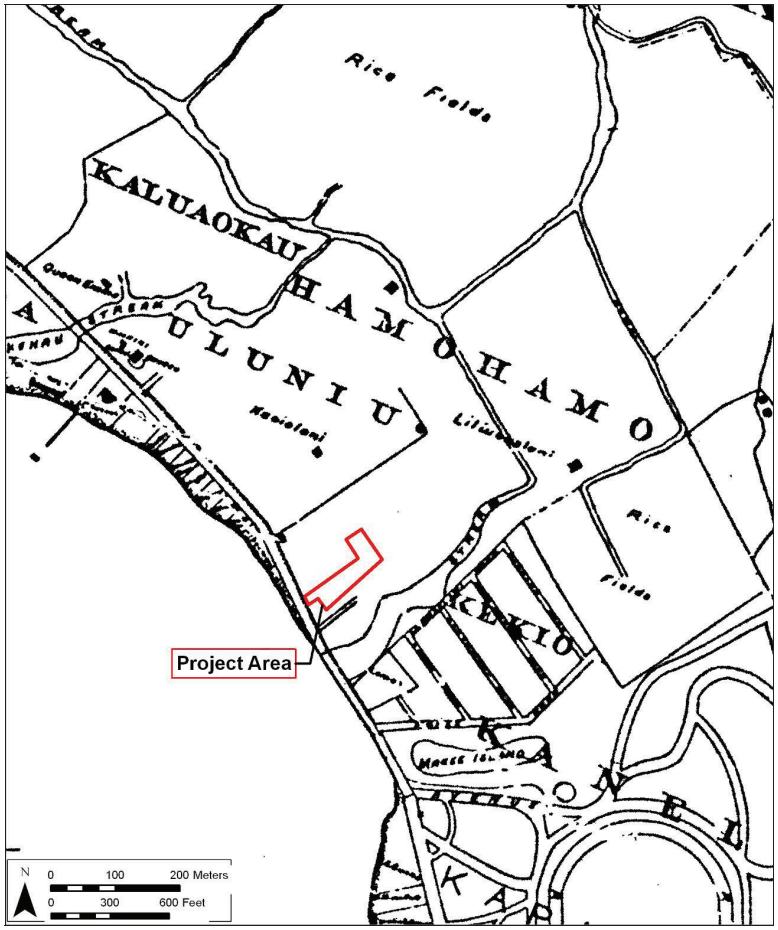

Figure 8. Portion of the 1897 map of Honolulu by Monsarrat showing rice fields and an early alignment of ‘Ōhua Avenue in the vicinity of the current project area

awards (individual land parcels) in 1850. It is through records for Land Commission Awards (LCA) generated during the Māhele that the first specific documentation of life in Hawai‘i, as it had evolved up to the mid-nineteenth century come to light. Although many Hawaiians did not submit or follow through on claims for their lands, the distribution of LCAs can provide insight into patterns of residence and agriculture. Many of these patterns of residence and agriculture probably had existed for centuries past. By examining the patterns of *kuleana* (commoner) LCA parcels in the vicinity of the project area, insight can be gained to the likely intensity and nature of Hawaiian activity in the area.

An 1881 Hawaiian Government survey map by S.E. Bishop, with locations of LCA parcels indicated, provides a record of the physical landscape of Waikīkī before the transformations of the twentieth century (Figure 9). LCA records for the awards shown on the map document house lots near the shore with associated taro *lo‘i* [irrigated plots] located inland and house lots adjacent to inland taro *lo‘i*. The current project area includes portions of three LCAs, 8452, 1446, and 2027, with several other LCAs located in the immediate vicinity.

LCA 8452 was granted to Ana Keohokālole and includes the majority of the current project area. Testimony given by Ana Keohokālole indicates that there were seven *lo‘i* present. These *lo‘i* were likely located within the vicinity of the *muliwai* or lagoonal back waters of Ku‘ekaunahi Stream (see Figure 9). The 1881 S.E. Bishop map also depicts two structures within LCA 8452 in the vicinity of the current project area.

LCA documentation indicates that the project area and its vicinity were under mixed land use consisting of taro cultivation, pasture lands, and house lots.

2.1.2.2 Early History of the Roman Catholic Church in Waikīkī

Robert Schoofs’ “*Pioneers of the Faith*,” a book on the history of the Catholic Mission in Hawai‘i, relates that, “When, in 1839, religious freedom was finally granted, the Catholics at Waikiki built a small chapel in the Hawaiian style” (Schoofs 1978:62). Schoofs relates that:

> …[Catholics] would gather there to pray or listen to the instructions of Father Walsh and Brother Melchior, their catechist… [but that] Holy Mass Seldom was celebrated there. Catholics from Waikiki were expected to go to the Fort Street Church to fulfill their Sunday obligation. Even so there were days, such as the anniversary of the confessor’s release from slave labor, when Holy Mass was celebrated in the makeshift chapel at Waikiki. Thus we read in different diaries that Mass was offered in the Waikiki cemetery, this being specifically mentioned probably because its little chapel had been erected on the very spot where the confessors had suffered and where some lay buried.
>
> Old records also state that in 1854 a small frame chapel was built on the beach, on what is now Kalākaua Avenue . This served its purpose for many years, until the site was exchanged for a piece of land on Ohua Avenue, which was then no more than a lane. There Father Modestus Favens, SS.CC. erected another chapel, mostly from the lumber of a vessel wrecked off Diamond Head (Schoofs 1978:62-63).

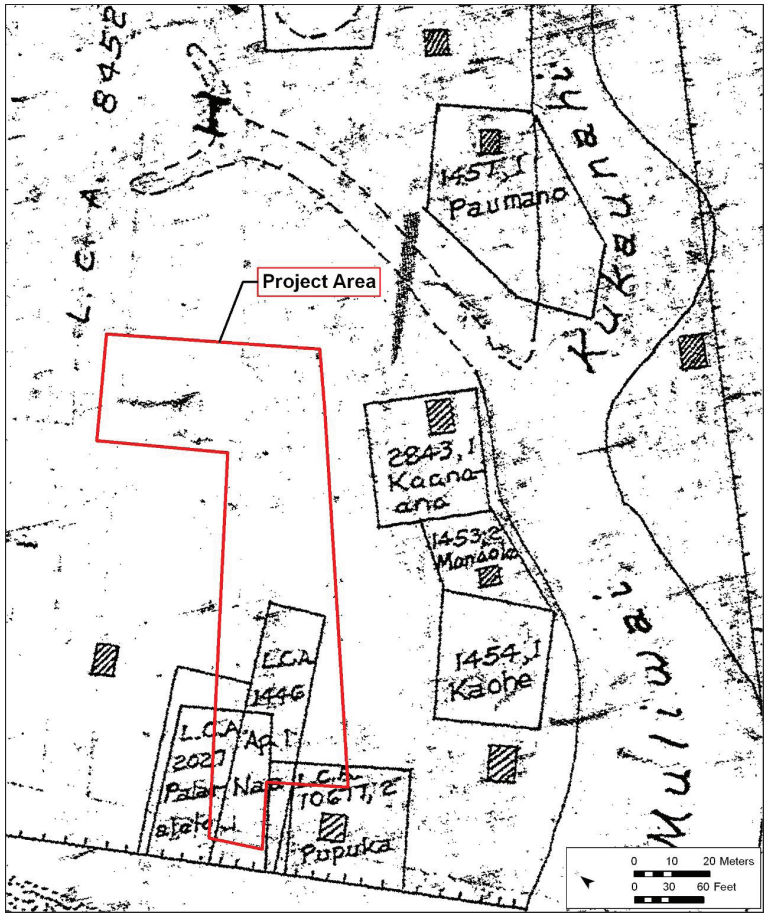

Figure 9. Portion of the 1881 Hawaiian Government survey map by S.E. Bishop map showing LCA’s within and in the vicinity of the current project area

Table 1. Land Commission Awards Within and in the Vicinity of the Current Project Area

LCA #	Claimant	Name of Land	Land Use
1446	Naa	Kamo‘okahi	2 taro *lo‘i* in taro, 1 bullrush *lo‘i* 2 bullrush ‘*auwai* Without house or fence; 0.28 acres
1452	Haau	Hamohamo	2 *lo‘i* A *kula,* A bank of an *‘auwai* and a house lot with a house but no fence; 0.96 acres
1453	Manaole	Kanukuaula (Kanakaaula); Hamohamo	2 *lo‘i,* a stream, a small *kula*, and a house lot; 0.07 & 0.8 acres
1454	Kaohe	Kamo‘okahi	2 *lo‘i,* three sections of a stream or *‘auwai*, a *kula*, and a house lot; 1.88 acres
1455	Pelekane	Hamohamo	1 *lo‘i,* and a house lot; 0.53 acres
1457	Paumano	Hamohamo	2 *lo‘i,* a section of *‘auwai*, a *kula*, and a house lot; 1.75 acres
1458	Kapea	Hamohamo	1 *lo‘i* 2 *kula,* A bank of an *‘auwai* and a house lot with 2 houses; 0.92 acres
2027	Palaua-lelo	Mokahi, Hamohamo	3 *lo‘i* in taro, 4 bullrush *lo‘i &* 2 *‘auwai* A house at Hamohamo and a *hau* tree ; 0.73 acres
2843	Kaanaana	Hamohamo	1 *lo‘i* A *kula*, a house
8452 O	Keohokā-lole	Hamohamo	No details; 99.68 acres
10677	Pupuka	Kukahi	1 *lo‘i* in taro a weed-grown *lo‘i,* a pond, A *kula,* a house lot

Thus it appears there was a church and cemetery near the present Kalākaua Avenue as early as 1854, which was later rebuilt under the direction of Father Modestus Favens at or in the vicinity of the present-day St. Augustine Church on ‘Ōhua Avenue (Schoofs 1978). The earliest depiction of a church in this vicinity appears on an 1881 island-wide Hawaiian Government survey map by W.D. Alexander (Figure 10). The map also depicts several structures in the vicinity of the current project area as well as a coconut grove to the northeast (*mauka*) of the project area.

Schoofs goes on to relate that regular celebrations of the Holy Mass at the Waikīkī Catholic Church did not begin until the Spanish American war (1898-1901) when:

> American troops were encamped near Diamond Head, among them a great number of Catholics. At their request Father Valentine H. Franck, SS.CC., celebrated Mass every Sunday in the small chapel in Waikiki, although but half of the men could be accommodated in it.
>
> It was decided to raise a temporary but much larger chapel. With plenty of eager hands at work, it took less than a week to erect the new building. There was nothing fancy about the new chapel, which was reduced to its simplest form – four joists resting upon twelve underpinnings. A number of uprights and rafters made up its skeleton. For wall and roof covering coconut fronds were used. Up front a fairly large cross was the only feature that suggested a place of worship.
>
> Bishop Gulstan Ropert blessed this primitive chapel and entrusted it to the care of Father Valentine. Regular services were held for a very fervent congregation of islanders and servicemen. Later a wooden floor was put in and the coconut fronds serving as wall covering were replaced by lattice work, while a galvanized roof afforded better protection against the rain….
>
> The Catholics of Waikiki … soon decided to finance the erection of a more permanent and dignified edifice, only one feature of the former structure being retained – its lattice work. Upon its completion, Bishop Gulstan Ropert blessed it and forthwith offered Holy Mass in it. This was on August 28, 1901, the feast of St. Augustine, to whom the new chapel was accordingly dedicated. (Schoofs 1978:63)

Thus it appears that between circa 1898 and the middle of 1901 the church architecture was undergoing almost continuous improvement.

2.1.3 1900s

During the early 20th century, St. Augustine Church continued to expand in order to meet the needs of a growing Catholic presence on O‘ahu including an increase in tourists into Waikīkī. Schoofs (1978:64) writes, “To accommodate the increasing number of the faithful, St. Augustine’s had to be twice enlarged, first in 1910 and then again in 1925”. It was during this time that the church also purchased a right-of-way to Kalākaua Avenue (Schoofs 1978:64). A 1910 U.S. Coast Guard Engineers map depicts rice fields, ponds, banana plantations, and other orchards within approximately 150 m of the current project area that extend *mauka* into Mō‘ili‘ili (Figure 11). The map shows that during the early 20th century, the project area and its vicinity

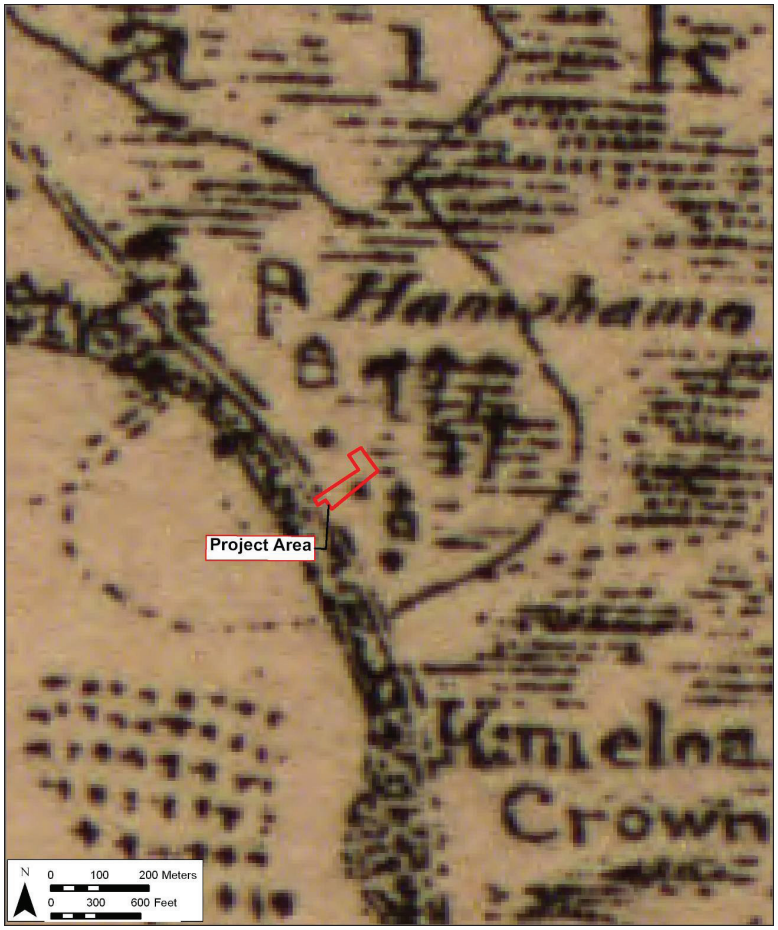

Figure 10. Portion of the 1881 Hawaiian Government survey map by W.D. Alexander showing a church in the vicinity of the current project area

Figure 11. 1910 U.S. Coast Guard Engineers map showing a church and several others structures within and in the vicinity of the current project area

were still primarily agricultural lands. Ōhua Avenue extends from Kalākaua Avenue along the northeastern project area boundary. The 1910 U.S. Coast Guard Engineers map also depicts a church (black rectangle with cross symbol) located midway along the northern project area boundary (see Figure 11). While the location of the church on the 1910 map may be accurate, it seems more likely that the church (St. Augustine's) was actually located within the current project area and depicted on the 1910 map as a large rectangular structure in the center of the project area (southeast of the map-designated church). This rectangular structure closely matches the location of St. Augustine Church depicted on a 1914 Sanborn Fire Insurance map (Figure 12). Regardless of which depiction is accurate, the inclusion of the church on the 1910 and 1914 maps likely reflects the "more permanent and dignified edifice" (Schoofs 1978:63) erected in 1901.

During the 1920's Waikīkī landscape would be transformed when the construction of the Ala Wai Drainage Canal – begun in 1921 and completed in 1928 – resulted in the draining and filling in of the remaining ponds and irrigated fields of Waikīkī. The canal was one element of a plan to urbanize Waikīkī and the surrounding districts:

> The [Honolulu city] planning commission began by submitting street layout plans for a Waikīkī reclamation district. In January 1922 a Waikīkī improvement commission resubmitted these plans to the board of supervisors, which, in turn, approved them a year later. From this grew a wider plan that eventually reached the Kapahulu, Mō‘ili‘ili, and McCully districts, as well as lower Makiki and Mānoa...
>
> The standard plan for new neighborhoods, with allowances for local terrain, was to be that of a grid, with 80-foot-wide streets crossing 70-foot-wide avenues at right angles so as to leave blocks of house lots about 260 by 620 feet. Allowing for a 10-foot-wide sidewalk and a 10-foot right-of-way [alley] down the center of each block, there would be twenty house lots, each about 60 by 120 feet, in each block [Johnson 1991:311].

In 1927 Father Emile Roger was transferred to St. Augustine becoming the first resident priest. Father Emile saw to the construction of a "medium-sized hall, patterned on the lattice work of the church, which was to serve as a kindergarten in the day time and as a meeting place for parochial organizations in the evening", which was opened in 1929 (Schoofs 1978:65). A 1927 Sanborn Fire Insurance map shows St. Augustine Church, mistakenly labeled as "St. Anthony's Church, within the current project area (Figure 13). The 1927 Sanborn map appears to show an enlarged (elongated) footprint of St. Augustine Church when compared to the 1914 Sanborn map (see Figure 12 and Figure 13). This enlarged footprint may account for the expansion of the church in 1925 described by Schoofs (1978:64). Expansion continued the following year when a six-grade school was opened on land purchased on the opposite (southeastern) side of Ōhua Avenue (Schoofs 1978:65). Newly created land tracts following the Ala Wai Canal's construction spurred a rush of development in the 1930's. An article in the Honolulu Star-Bulletin in 1938 extolled the area's progress:

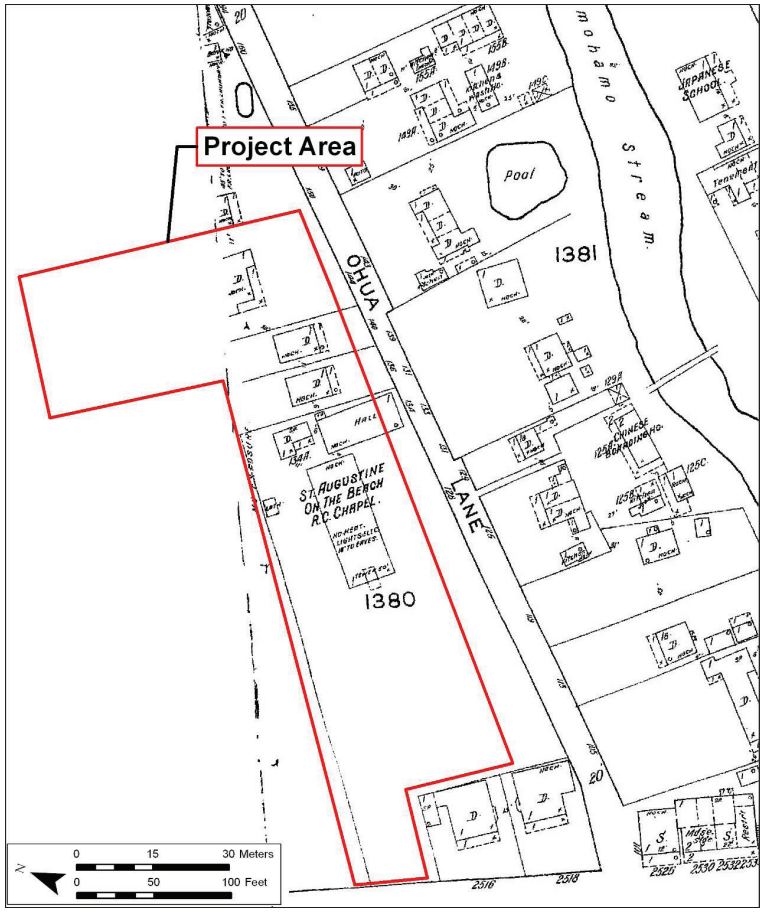

Figure 12. 1914 Sanborn Fire Insurance map showing St. Augustine's Church and other structures within the current project area

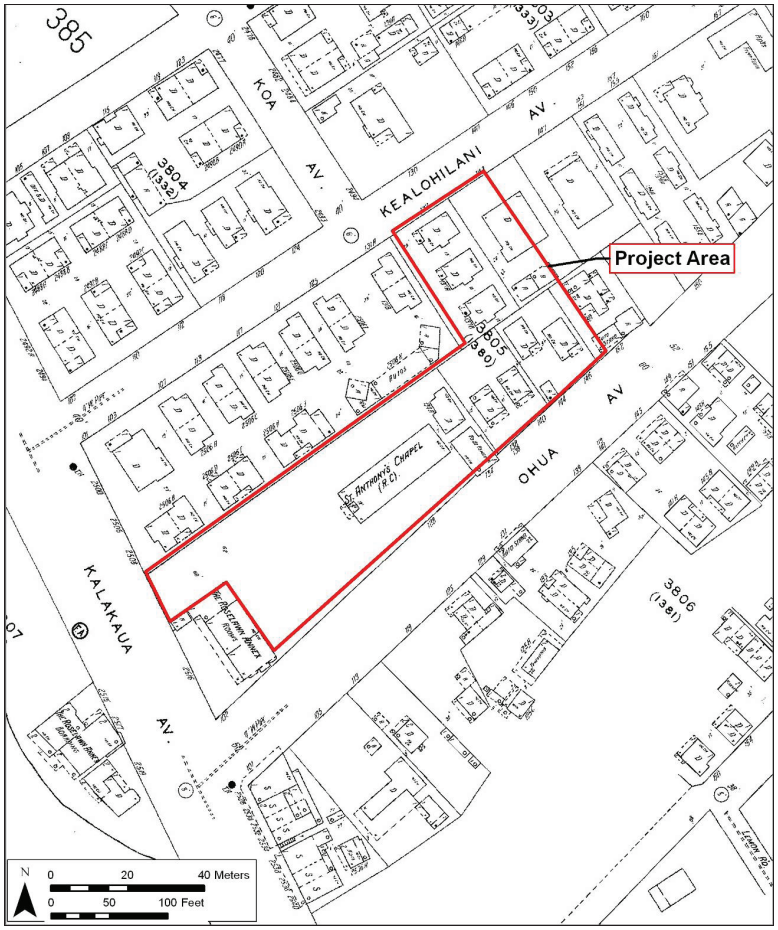

Figure 13. 1927 Sanborn Fire Insurance map showing St. Augustine's Church (mistakenly labeled "St. Anthony's Church") and other structures within the current project area

> The expansion of apartment and private residence construction is no secret. Examination of building permits will show that more projects have been completed during the past year, and more are now underway in this area, than in any other section of the territory.
>
> These developments are being made by island residents who have recognized the fact that Waikīkī presents the unparalleled possibility for safe investment with excellent return. (Newton 1938:10)

A circa 1930’s photograph of St. Augustine Church (Figure 14) shows the location of the church and another adjacent structure that is identified as a “Hall” on the 1914 Sanborn map and indicated “To Be Removed” on the 1927 Sanborn map (see Figure 12 and Figure 13).

The entrance of the United States into World War II following the Japanese bombing of Pearl Harbor on December 7, 1941 put on hold plans for the development of Waikīkī as a tourist destination. Until the war’s end in 1945, the tourist trade was non-existent “...since the Navy controlled travel to and from Hawai‘i and did not allow pleasure trips” (Brown 1989:141). For the duration of the war, Waikīkī was transformed into a recreation area for military personnel.

> It was not the same Waikīkī as before the war, though; barbed wire barricades now lined its sands, and there were other changes too. Fort DeRussy became a huge recreation center, with a dance hall called Maluhia that attracted thousands of men at a time. The Moana Hotel continued to function, but many other establishments and private homes in the area were taken over by the military [Brown 1989:141].

By the early 1950s, Waikīkī had become fully urbanized and Kalākaua Avenue extended along the coast to the base of Diamond Head (Figure 15). Foster Towers, located immediately adjacent to the northern boundary of the current project area, was the first high rise to be built in Waikīkī in the 1960s. Completed in 1962, it was also the first building to block the view of Diamond Head (Hibbard and Franzen 1986:139).

The existing Parish Hall of St. Augustine Church was constructed in 1959 on lands subleased from the Lili‘uokalani Trust by the Walter Coombs Estate and Pauline Spector. The two-story masonry apartment building (Building Permit #15989) replaced several wood cottages that were built in the 1920s, which are depicted on the 1927 Sanborn Fire Insurance map (see Figure 13).

In 1962, St. Augustine Church was replaced with a French-Gothic style building, the largest church built in Hawai‘i at the time.

Recently, extensive renovations have been undertaken to preserve the church. Since 2003, structural damage repair, interior upgrades, and general restoration have been ongoing.

The high rise hotels surrounding the project area, including the Waikiki Marriot, Waikiki Banyan, Prince Kuhio, and Pacific Beach Hotel, were all built within the past 40 years.

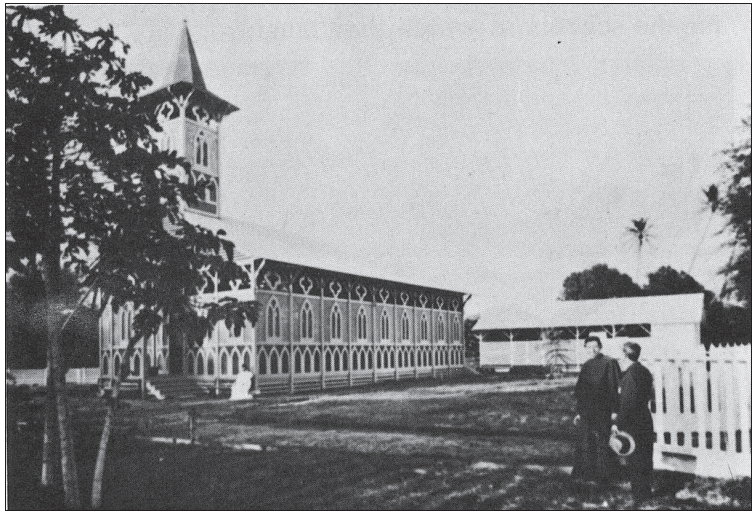

Figure 14. Photograph (circa 1930) showing St. Augustine Church and an adjacent structure (source: Bunson 1977:151)

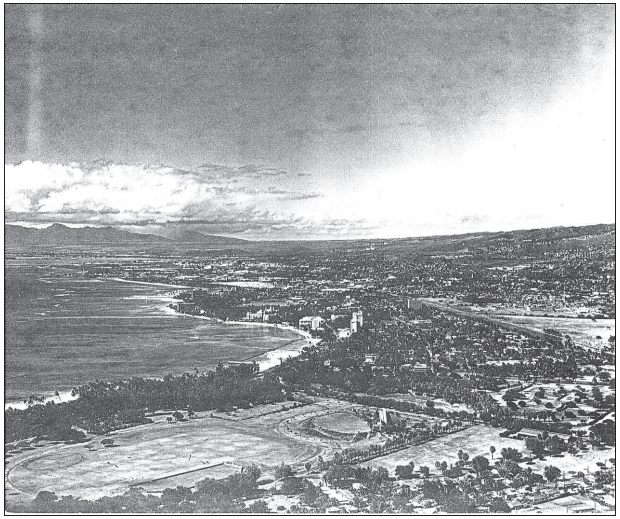

Figure 15. 1957 photograph of Waikīkī from Diamondhead (source: Bishop Museum)

2.2 Previous Archaeological Research

The locations of archaeological studies conducted in the vicinity of the current project area are illustrated in Figure 16 and summarized in Table 2. The following is a summary of these archaeological studies.

International Archaeological Research Institute, Inc. performed archaeological monitoring and data recovery at the Pacific Beach Hotel Office Annex (Beardsley and Kaschko 1997). Two traditional Hawaiian burials were discovered inadvertently and removed. Intact buried traditional Hawaiian cultural deposits were encountered, including a late pre-contact habitation layer, which contained pits, fire pits, post molds, artifacts, and food debris. The artifacts included basalt and volcanic glass flakes and cores, a basalt adze and adze fragments, worked pearl shells, a coral file and abraders, and a pearl shell fishhook fragment. The deposit was assigned SIHP# 50-80-14-4224. Additionally, a late nineteenth century trash pit was discovered, which contained a variety of ceramics, bottles, and other materials.

From November 1999 to October 2000, CSH encountered 44 human burials, with associated cultural deposits, during archaeological monitoring of excavations for a waterline project on Kalākaua Avenue between Ka‘iulani and Monsarrat Avenues (Perzinski et al. 2000; Winieski et al. 2002). Except for previously disturbed partial burials in fill, the bulk of the burials were encountered within a coralline sand matrix. The burials were designated SIHP# 50-80-14-5856 to -5862. A major cultural habitation layer was designated SIHP# 50-80-14-5940. Additionally, remnant light gauge rail from the Honolulu Transit trolley system was encountered (SIHP# 50-80-14-5942).

Two in situ and two previously disturbed human burials were encountered by Pacific Legacy during archaeological mitigation at the site of a new Burger King (Cleghorn 2001a) and an adjoining ABC Store (Cleghorn 2001b). The finds were located at the intersection of ‘Ōhua Avenue and Kalākaua Avenue (Cleghorn 2001a and 2001b). Because of their proximity to five burials encountered during the Kalākaua waterline project (see Winieski et al. 2002), they were included in the previously assigned SIHP # 50-80-14-5861. Three of these burials were recovered, and one was left in place. Volcanic glass fragments were found in association with one of the burials. A cultural layer was also observed that contained moderate to heavy concentrations of charcoal and fragments of volcanic glass. Historic-era artifacts, including a bottle fragment, plastic and glass buttons, a ceramic fragment, and metal fragments also were encountered within fill materials.

During archaeological monitoring by CSH for the Waikīkī Force Main Replacement project, scattered human remains were encountered in an excavation on ‘Ōhua Avenue (Winieski and Hammatt 2001). The remains included the proximal end and mid-shaft of a human tibia, the mid-shaft of a fibula, a patella, the distal end and mid-shaft of a femur, and small unidentified fragments. These remains occurred within a coralline sand matrix that had been heavily disturbed by previous construction and by the on-going construction project. No precise location for the original burial site was identified. The disturbed burial was assigned SIHP# 50-80-14-5797. In a test probe adjacent to the excavation on ‘Ōhua Avenue, a dog burial was encountered in a pit feature originating in an upper fill layer. An associated metal collar indicated that the deposition was historic.

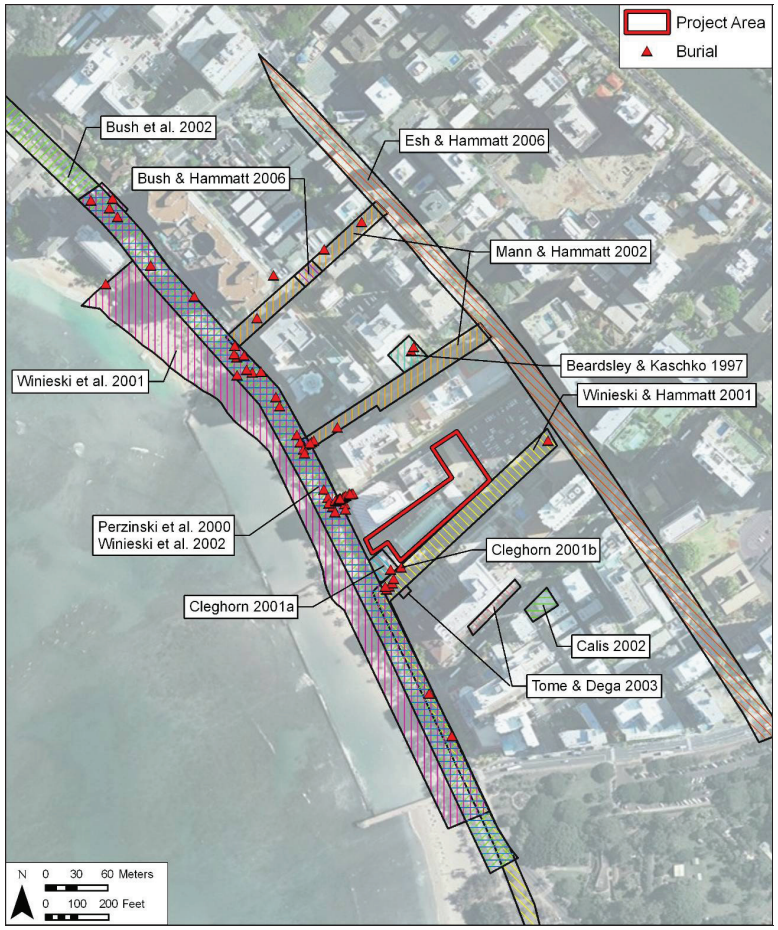

Figure 16. Aerial photograph (source: World Imagery 2009), showing previous archaeological studies conducted in the vicinity of the current project area

Table 2. Previous Archaeological Studies located in the Vicinity of the Current Project Area

Reference	Type of Investigation	Location	Results
Beardsley and Kaschko 1997	Archaeological Monitoring and Data Recovery	Pacific Beach Hotel Office Annex	Traditional Hawaiian cultural deposit and 2 human burials (SIHP# 50-80-14-4224); 3 ^{14}C dates
Perzinski et al. 2000	Burial Findings	Kalākaua Ave between Ka‘iulani and Monsarrat Ave	Documented 44 sets of human remains (SIHP# 50-80-14-5856 to -5862); 37 disinterred, 7 left in place; believed to be Native Hawaiian, interred prior to 1820
Cleghorn 2001a and b	Mitigation	Burger King & ABC Store Construction Site	Encountered 4 human burials while locating a buried sewer-line; assimilated with SIHP# 50-80-14-5861; recovered 3 of the 4 burials
Winieski and Hammatt 2001	Monitoring Report	‘Ōhua Ave and Kūhiō Ave	Disturbed, disarticulated human remains encountered; possibility that Hawaiian or Historic materials and other human burials may be present within the project area
Winieski et al. 2001	Monitoring Report	Kūhiō Beach	Skeletal remains of 10 individuals (SIHP# 50-80-5858, -5862, and -5863), 6 disinterred, only 2 located in situ; 4 indigenous artifacts, none in situ; discontinuous cultural layer; historic seawall
Bush et al. 2002	Monitoring Report	Kalākaua Ave between Ala Moana Blvd and Kapahulu Ave	Encountered 4 human burials likely pre-contact native Hawaiians (SIHP# 50-80-5856 Feature C, -5860 Feature U and V, and -5864); several historic trash pits; entire pig within an *imu* pit (estimated date, A.D. 1641-1671); gleyed much associated with former ponds
Mann and Hammatt 2002	Monitoring Report	Lili‘uokalani Ave and Uluniu Ave	Five burial finds of 6 individuals (in situ burial assigned SIHP# 50-80-14-6369, burial 5 assimilated with -5859); 2 historic trash pits
Winieski et al. 2002	Monitoring Report	Kalākaua Ave between Ka‘iulani and Monsarrat Ave	Report of 44 human burials (SIHP# 50-80-14-5856 to -5862), 37 disinterred (see Perzinski et al. 2000); habitation layer; remnant fragment of Honolulu Transit trolley system

Reference	Type of Investigation	Location	Results
Calis 2002	Monitoring Report	Lemon Road	No significant finds
Tome and Dega 2003	Monitoring Report	Waikīkī Marriot	One disturbed, isolated possible human bone fragment found
Esh and Hammatt 2006	Monitoring Report	Kūhiō Ave, from Kalākaua Ave to Ka‘iulani St	No significant finds
Bush and Hammatt 2006	Monitoring Report	Uluniu Avenue	No significant finds

CSH performed archaeological monitoring of the Kūhiō Beach Extension/Kalākaua Promenade project and ten human burials were encountered (Winieski et al. 2001). Only two of the burials were located in situ within naturally deposited calcareous beach sand while, the other eight previously were disturbed. These two burials along with two others were left in place, and they were assigned SIHP# 50-80-14-5858. The other six burials were disinterred and the burial sites were designated SIHP# 50-80-14-5862 and -5863. Additionally, a major cultural layer was found and documented (SIHP# 50-80-14-5940), apparently part of the same major cultural layer associated with the waterline project between Ka‘iulani and Monsarrat Avenues (see Winieski et al. 2002). Also, a portion of an historic seawall (SIHP# 50-80-14-5948) was encountered near the intersection of Kapahulu and Kalākaua Avenues.

CSH inadvertently encountered four sets of human remains during excavation activities relating to the Waikīkī Anti-Crime Street Lighting Improvement project along portions of Kalākaua Avenue (Bush et al. 2002). The first burial was encountered on Kalākaua Avenue, just before Dukes Lane, and assigned SIHP# 50-80-14-5864. The burial was left in place, and the light post was repositioned. The second burial was encountered at the intersection of Kalākaua Avenue and Ka‘iulani Avenue. Earlier, during archaeological monitoring for the water mains project, two burials were encountered in the immediate area of the second burial find and assigned SIHP# 50-80-14-5856 features A and B. Due to the close proximity to the previously encountered burials, the second burial was assigned the same SIHP# 50-80-14-5856, and designated feature C. Burials 3 and 4 were recovered at the intersection of Kalākaua Avenue and Kealohilani, near an area of concentrated burials assigned SIHP# 50-80-14-5860 during monitoring for the water mains project. Consequently, burials 3 and 4 were also assigned SIHP# 50-80-5860, features U and V. In addition to human remains, pre-contact deposits, historic and modern rubbish concentrations, and pond sediments also were encountered. An entire pig was found within an *imu* pit, and it was dated to between A.D. 1641 and 1671. The find appeared to be isolated, and it was not related to any habitation layer or cultural material.

In 2001 and 2002, CSH performed archaeological monitoring for the installation of 8- and 12-inch water mains on Lili‘uokalani Avenue and Uluniu Avenue (Mann and Hammatt 2002). During the course of monitoring, five burial finds, consisting of six individuals, were recorded within the project area. Four burial finds were recorded on Uluniu Avenue; three of these

inadvertent finds were in fill sediment. Due to the nature of the three burial finds in fill, it was concluded that no SIHP number would be assigned to these three previously disturbed burials. The single in situ burial encountered on Uluniu Avenue was assigned SIHP# 50-80-14-6369. The fifth burial, consisting of two individuals in fill material, was located on Lili‘uokalani Avenue. Since three burials had been found in the immediate vicinity during a previous project that had been assigned to SIHP# 50-80-14-5859 (see Winieski et al. 2002), the two new individuals were recorded as Feature H of this previously recorded historic property. Two historic trash pits also were located in the project area. One historic trash pit (SIHP# 50-80-14-6372) *mauka* of the intersection of Uluniu Ave and Prince Edward Street yielded early 1900s habitation information. The second historic trash pit (SIHP#50-80-14-6398) was encountered on Lili‘uokalani Ave, and it contained 1800s to mid 1950s habitation information.

In 2002, Scientific Consultant Services, Inc. completed an archaeological monitoring report for the ABC Store No. 35 Lemon Road fence wall construction project (Calis 2002). Three glass bottles or diagnostic bottle fragments were encountered that dated to the mid-nineteenth century. No historic properties were identified.

In May 2003, Scientific Consultant Services, Inc. monitored construction along the east (Paokalani Avenue) and west (‘Ōhua Avenue) flanks of the Waikiki Marriott Hotel in Waikīkī (Tome and Dega 2003). One fragment of possible human osseous material was recovered from the project area near the intersection of Ōhua Avenue and Kalākaua Avenue. It was found in association with modern trash debris and imported fill matrices, suggesting a secondary context.

CSH conducted archaeological monitoring for landscaping improvements along Kuhio Avenue, from Kalākaua Avenue to Ka‘iulani Street in Waikīkī (Esh and Hammatt 2006). No archaeological remains were encountered with the exception of in situ dog (*Canis familiaris)* remains. The dog remains were not associated with any cultural material. No SIHP number was assigned.

In 2006, CSH completed archaeological monitoring for the installation of service gas lines and meter at 125 Uluniu Avenue (Bush and Hammatt 2006). No historic properties were identified.

2.3 Background Summary and Predictive Model

Historical background research included study of archival sources, LCAs and historic maps, as well as a review of past archaeological research in the vicinity to construct a history of land use. From these sources, a predictive model was developed to give a general idea of pre-contact and historic coastal land use patterns in the coastal area of Waikīkī.

The *ahupua‘a* of Waikīkī in the centuries before the arrival of Europeans was an intensely used locale with abundant natural and cultivated resources - including an expansive system of irrigated taro fields - supporting a large population that included the highest-ranking *ali‘i*. In the nineteenth century, after a period of depopulation, Waikīkī was reanimated by the Hawaiian *ali‘i*, the foreigners residing there, and by the farmers continuing to work the irrigated field system, which had been converted from taro to rice. This farming continued up to the first decades of the 20th century until the Waikīkī reclamation project drained the remaining ponds and irrigated fields.

Previous and on-going archaeological reports have documented numerous pre- and post contact human burials throughout the Waikīkī area and within close proximity to the current project area (see Figure 16). Especially relevant to the present project area are 22 burials that were encountered at the intersection of Kealohilani and Kalākaua Avenues (Winieski et al. 2002) and an additional seven burials that were encountered at the intersection of ‘Ōhua and Kalākaua Avenues (Cleghorn 2001a, 2001b; Winieski et al. 2002). Isolated pre-contact burials and burial clusters in Waikīkī have been found primarily in sandy deposits, just above the water table and below historic-era fill materials. It was believed likely that pre- and/or post-contact burials would be found if intact Jaucas sand deposits were encountered below the twentieth century fills believed likely to be in the project area.

Archaeological studies within Waikīkī and in the vicinity of the project area have recorded the presence of subsurface cultural deposits of both pre- and post-contact provenance. These deposits have generally remained intact despite the years of construction activity that have altered the entire Waikīkī area. During archaeological monitoring of Kalākaua, Kealohilani, Ōhua Avenues mentioned above, intact cultural deposits were encountered (Cleghorn 2001a, 2001b; Winieski et al. 2002). It was believed likely that pre- and post-contact subsurface cultural deposits would be encountered within the current project area beneath twentieth century fill layers.

2.4 Results of Archaeological Inventory Survey

Subsurface testing within the project area was carried out following an Archaeological Inventory Survey Plan for the St. Augustine-by-the-Sea Master Plan Project, Waikīkī Ahupua‘a, Honolulu (Kona) District, Island of O‘ahu, TMK [1]-2-6-26:012 & 015 (Hammatt, Thurman and Shideler 2010) reviewed and accepted by the State Historic Preservation Division in a review dated July 19, 2010 (Log No. 2010.2412, Doc No. 1007MD05).

Archaeological Inventory Survey field work was performed in four phases, occurring between August 3, 2010 and March 17, 2011. A total of eleven test trenches (trenches 1-11) were excavated in areas of proposed project-related development including the proposed Saint Damien Museum and Parish Hall parking structure (Figure 17 and Figure 18). Fieldwork and documentation was performed by a crew of three to five alternating CSH archaeologists, Douglas Borthwick, B.A., Trevor Yucha, B.S., Douglas Thurman, B.A., Josephine Paolello, M.S., Jon Tulchin, B.A., Jeffrey Fong, M.A., Kelly Burke, M.Sc., Kendy Altizer, B.A., and David Shideler, M.A. under the overall direction of the project’s principal investigator Hallett H. Hammatt, Ph.D. The field work required approximately 21 person-days to complete.

The initial phase of subsurface testing included the excavation of six test trenches (trenches 1-6) within the project area. Four of the six initial test trenches (Trench 1, 2, 5, and 6) were located within the proposed footprint of the Parish Hall parking structure with the remaining two test trenches (Trench 3 and Trench 4) being located within the proposed footprint of the Saint Damien Museum (Figure 17 and Figure 18).

A buried, culturally-enriched sand A-horizon (cultural layer) was identified within each of the six initial test trenches and designated SIHP # 50-80-14-7135. Disarticulated human skeletal remains, consisting of a radius, three tarsal bones, and several rib fragments were identified during the hand excavation of Trench 3 within SIHP# 50-80-14-7135. Numerous pre-contact and

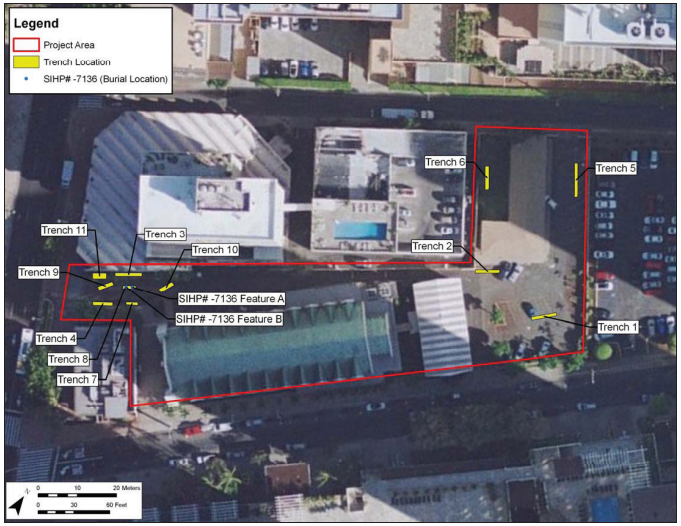

Figure 17. Aerial photograph (source: World Imagery 2009), showing Test Trench 1-11 and SIHP# -7136 Feature A-C

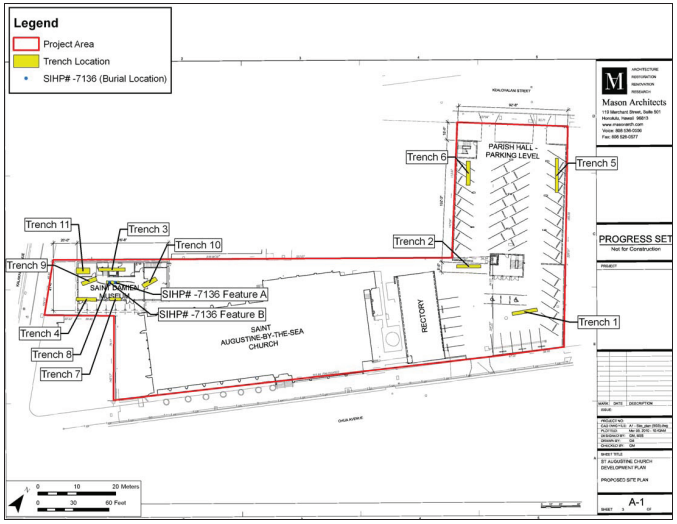

Figure 18. Proposed site plan, showing Test Trench 1-11 and SIHP# -7136 Feature A-C

historic-era artifacts were also encountered throughout the cultural layer and collected for laboratory analysis along with bulk sediment samples containing charcoal and/or carbonized plant remains. The results of laboratory analysis of artifacts and bulk sediment samples are presented in Section 5, Laboratory Analysis. The discovery of disarticulated human skeletal remains within SIHP# 50-80-14-7135 prompted a subsequent phase of testing within the proposed Saint Damien Museum footprint.

Following consultation with the SHPD, a second phase of subsurface testing included the excavation of two test trenches (Trench 7 and Trench 8), which were positioned immediately south of Trench 3 within the proposed Saint Damien Museum footprint (see Figure 17 and Figure 18). SIHP# 50-80-14-7135, a buried, culturally-enriched sand A-horizon, was encountered within Trench 7 and Trench 8. Two human interments (SIHP# 50-80-14-7136 Feature A and B) were identified within well-defined burial pits located within Trench 8. The discovery of SIHP# 50-80-14-7136 Feature A and B prompted further consultation with the SHPD and a subsequent phase of subsurface testing within the proposed Saint Damien Museum footprint.

The third phase of subsurface testing included the excavation of two trenches (Trench 9 and 10), which were positioned to the west and east of Trench 3, respectively, within the proposed Saint Damien Museum footprint (see Figure 17 and Figure 18). SIHP# 50-80-14-7135, a buried, culturally-enriched sand A-horizon, was encountered within Trench 9 and Trench 10. No human skeletal remains were encountered in these two test trenches.

The fourth phase of subsurface testing followed consultation with concerned previously recognized cultural descendants of Waikīkī and involved the excavation of one trench (Trench 11), which was positioned within the elevator shaft of the proposed Saint Damien Museum (see Figure 17 and Figure 18). A highly disturbed portion of SIHP# 50-80-14-7135 was encountered. No human skeletal remains were encountered in this test trench.

2.5 Stratigraphic Summary

Test trenches within the project area were located within the open, accessible portions of areas of proposed project-related development. These accessible portions included the church parking lot, portions of the lane that connects to Kalākaua Avenue, the stairway and wheelchair access ramp, and the Parish Hall lawn. Accordingly, the upper-most strata observed within the project area include a relatively uniform layer of asphalt and crushed basalt base course within the parking lot and lane, a thick concrete slab within the stairway and wheelchair access ramp, and sod within the Parish Hall lawn.

In general, the upper-most strata throughout the project area overlies imported fill, a buried and partially disturbed, culturally-enriched sand A horizon (SIHP# 50-80-14-7135, cultural layer), and naturally-occurring Jaucas sand. The base of excavation (BOE) for each trench was determined by the depth of the water table and/or naturally sterile soil. The maximum depth of the ten test trenches ranged from 1.3 m (130 cm) to 2.1 m (210 cm) below ground surface (cmbs). Following proper documentation, all trenches were backfilled and resurfaced.

Observed stratigraphic anomalies included filled areas related to the construction of nearby building foundations and subsurface utility installation, which extend from the modern ground

surface or underlying imported fill layers and have partially removed, truncated, and/or re-deposited portions of the cultural layer.

Additionally, pit features of varying depths and dimensions were observed, extending from the base of the cultural layer (SIHP# 50-80-14-7135) to within naturally-occurring Jaucas sand. These pit features could reflect natural depressions of the former land surface and/or be associated with man-made excavations. Two of these pit features, located within Trench 8, were observed to contain human burials (SIHP# 50-80-14-7136 Feature A and B). The remainder of the pit features contained sediment that was consistent with the sediment observed within the cultural layer, which is comprised of dark-stained sand or mottled sand containing sparse charcoal flecking. These features did not contain diagnostic information warranting them to be assigned as formal features of a historic property. Instead, each pit feature was assigned a consecutive number designation (Pit Feature 1-51) and depicted on trench plan and profile maps that include the depth of origin and base depth of each pit.

2.6 Test Trench Documentation

The two burials designated as SIHP# 50-80-14-7136 were found in Trench 8 and documentation for Trench 8 is supplied below. There was also an identification of human skeletal remains in a disturbed context in Trench 3 and thus documentation of that trench is supplied below as well.

2.6.1 Trench 3

Trench 3, located near the southwestern corner of the project area within the right-of-way lane onto Kalākaua Ave, was oriented in an approximate NE-SW direction, and it measured 6.9 m long by 0.75 m wide with a BOE of 1.9 m (Figure 19 to Figure 21 and Table 3). Groundwater was observed at approximately 1.85 m below the surface. The stratigraphy of Trench 3 consisted of a uniform layer of asphalt (Stratum Ia) and crushed basalt base course (Stratum Ib) overlying sandy silt (Stratum II), a highly disturbed cultural layer (Stratum III/SIHP# 50-80-14-7135), and Jaucas Sand (Stratum IV).

Disarticulated human skeletal remains, consisting of a largely intact radius fragment, three tarsal (foot) bones, and two rib fragments were collected from Stratum III (SIHP# 50-80-14-7135), at a depth of 145 cmbs, near the central area of the Trench (Figure 22). No distinguishing burial pit feature was observed. The incomplete, disarticulated remains indicate a secondary deposit, likely due to previous disturbance of a burial. In addition, Trench 3 contained faunal remains and pre-contact artifacts consisting of two possible net sinkers (Acc. #10 and #11), a coral file (Acc. #12), and a basalt flake (Acc. #13). Numerous pieces of historic-era artifacts were collected from Trench 3, including mostly glass bottle portions or non-diagnostic glass fragments (Acc. #14 - #28), a painted ceramic figurine portion (Acc. #29), many white ceramic fragments with decorative designs (Acc. #30), various brown ceramic fragments (Acc. #31), and non-diagnostic pieces of corroded metal (Acc. #32).

Figure 19. Trench 3 overview, view to north

Figure 20. Trench 3, profile of northwest wall, view to northwest

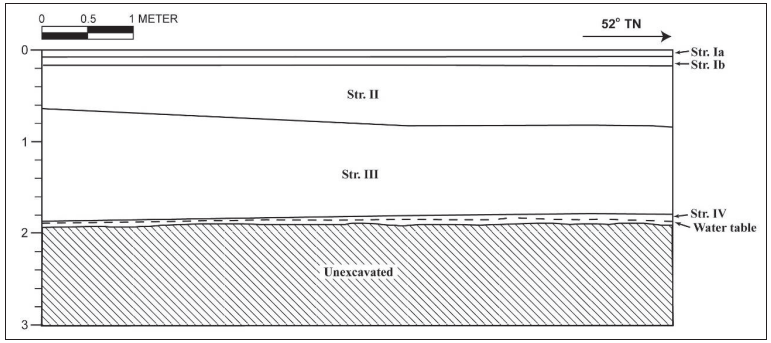

Figure 21. Trench 3, stratigraphic profile of northwest wall

Table 3. Strata Observed within Trench 3.

Stratum	Depth (cmbs)	Description of Sediment
Ia	0-10	Asphalt
Ib	10-18	Crushed basalt gravel base course
II	18-80	Fill; 2.5YR 2.5/4, dark reddish brown; sandy silt; weak grade, medium crumb structure; dry, weakly coherent consistency, no cementation; non-plastic; mixed origin; very abrupt, smooth lower boundary, common fine roots
III	64-183	Buried culturally-enriched A-Horizon (former land surface); 10YR 4/2, dark grayish brown, mottled (40%) with 10YR 8/3, very pale brown; fine-grain sand; structureless (single-grain); moist, loose consistency; no cementation; non-plastic; marine origin; clear, smooth lower boundary, common fine roots
IV	180-190 (BOE)	Jaucas Sand; 10YR 8/3, very pale brown; very fine-grain sand; structureless (single-grain); wet, slightly sticky consistency; no cementation; non-plastic; marine origin; no roots observed

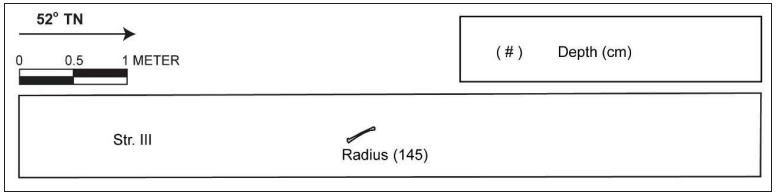

Figure 22. Trench 3, plan view of Stratum III

2.6.2 Trench 8

Trench 8, located directly east of Trench 3 near the southwestern corner of the project area within the Kalākaua Ave entranceway, was oriented in an approximate NE-SW direction, and it measured 3.0 m long by 1.0 m wide with a BOE of 0.98 m (Figure 23, Figure 24, and Table 4). Excavation was terminated prior to observing groundwater because of the presence of human burials. The stratigraphy of Trench 8 consisted of a uniform layer of asphalt (Stratum Ia) and crushed basalt base course (Stratum Ib) overlying sandy silt (Stratum II), a buried cultural layer (Stratum III/SIHP# 50-80-14-7135), and Jaucas Sand (Stratum IV).

Two distinct features were visible in the lower boundary of Stratum III (cultural layer). Partial excavation into these features exposed one extended human burial (Burial 1/SIHP# 50-80-14-7136 Feature A) at a depth of 87 cmbs in the northern portion (*mauka*) of the trench and one human burial (Burial 2/SIHP# 50-80-14-7136 Feature B) in a possibly semi-flexed, prone (stomach-down) position at a depth of 96 cmbs extending into the southwestern (*makai*) wall (Figure 25). In addition, Trench 8 contained a manuport (Acc. #48), determined to be a traditional Hawaiian artifact and a historic-era battery core (Acc. #49).

Figure 23. Trench 8, profile of southeast wall, view to west

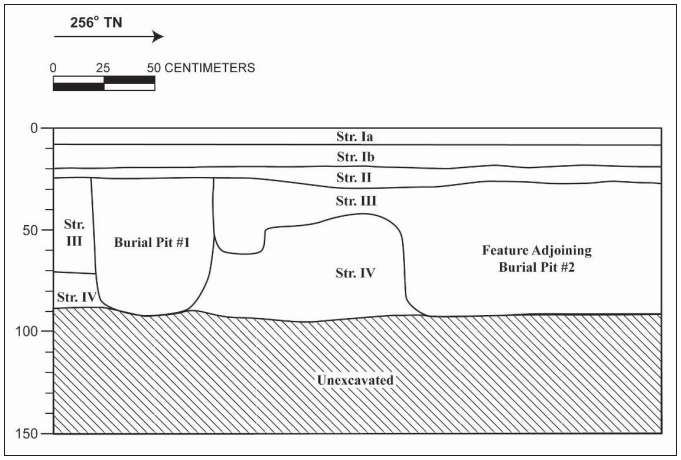

Figure 24. Trench 8, stratigraphic profile of southeast wall

Table 4. Strata Observed within Trench 8.

Stratum	Depth (cmbs)	Description of Sediment
Ia	0-8	Asphalt
Ib	8-20	Crushed basalt base course
II	20-30	Fill; 2.5YR 2.5/4, dark reddish brown; sandy silt; strong grade, medium crumb structure; dry, hard consistency, no cementation; non-plastic; mixed origin; very abrupt, smooth lower boundary, few fine roots
III	25-95	Buried culturally-enriched A-Horizon (former land surface); 7.5YR 5/1, gray; silty sand, structureless (single-grain); dry, weakly coherent consistency; no cementation; non-plastic; mixed origin; clear, irregular lower boundary, common fine roots
IV	50-98 (BOE)	Jaucas Sand; 10YR 8/3, very pale brown; very fine-grain sand; structureless (single-grain); dry, weakly coherent consistency; no cementation; non-plastic; marine origin; no roots observed

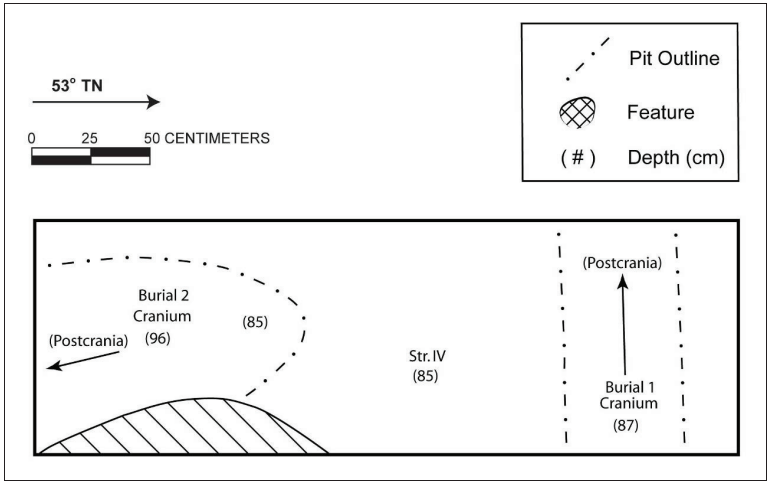

Figure 25. Trench 8, plan view of Stratum IV

2.7 Historic Property Descriptions

2.7.1 SIHP# 50-80-14-7135

Formal Type: Subsurface Cultural Layer
Functional Interpretation: Activity Area
# of Features: 1
Age: Pre- and Post-Contact
Current Dimensions: Identified within all subsurface test excavations within the 1.15-acre project area (lateral limits not established)
Location: Trenches 1-11
Tax Map Key: TMK [1]-2-6-26:012 & 015
Land Jurisdiction: Roman Catholic Church
Description:

SIHP# 50-80-14-7135 is a buried culturally-enriched sand A-Horizon (cultural layer) that was identified within all subsurface test excavations of the project area. The lateral limits of the subsurface cultural layer, which extend beyond the boundaries of the project area, have not been established.

Disarticulated human skeletal remains including most of a radius, three tarsal (foot) bones, and two rib fragments encountered within the SIHP# 50-80-14-7135 cultural layer that was present within Trench 3. The disarticulated human remains were encountered within Stratum III (cultural layer) at a depth of approximately 145 cmbs, near the central area of the Trench (see Figure 22). The incomplete, disarticulated remains indicate a secondary deposit, likely due to previous disturbance of a burial. There were no grave goods or artifacts in direct association with the disarticulated remains. Per consultation with SHPD/DLNR, the disarticulated human skeletal remains were recovered for interim curation on the Church premises.

A total of 63 accessioned artifacts were collected from within the SIHP# 50-80-14-7135 cultural layer. Ten of the artifacts consisting of ground stone tools, basalt flakes, and a coral file were considered to be of traditional Hawaiian origin, likely dating to the pre-contact period. These traditional Hawaiian artifacts were only observed in the southwestern (*makai*) portion of the project area, within Trenches 3, 4, 8 and 9. The remaining 53 accessioned artifacts collected during subsurface excavation were considered to be post-contact or historic period artifacts and consisted of various diagnostic or representative glass, ceramic, and metal items. A detailed summary and analysis of artifacts collected from SIHP# 50-80-14-7135 is presented in Section 5.1 Artifact Analysis below. The artifacts collected from SIHP# -7135 provide additional temporally diagnostic information indicating that SIHP# -7135 was utilized as an activity area from the pre-contact period through the mid 20th century.

Faunal osseous material was identified within SIHP# 50-80-14-7135 in Trenches 2-5, 7, and 9-11. Faunal species represented amongst identifiable bone fragments included cow (*Bos taurus*), pig (*Sus scrofa*), dog (*Canis familiaris*), and unknown species of bird and fish. A detailed summary and analysis of faunal skeletal material collected from SIHP# -7135 is presented in Section 5.2 Faunal Analysis below. The faunal assemblage collected from SIHP# -7135 consists largely of historically-introduced species dominated by butchered cow or

pig bones suggesting that the majority of the faunal osseous material was likely discarded or buried during the post-contact period.

Additionally, pit features of varying depths and dimensions were observed, extending from the base of the cultural layer (SIHP# 50-80-14-7135) to within naturally-occurring Jaucas sand. These pit features could reflect natural depressions of the former land surface and/or be associated with man-made excavations. Two of these pit features, located within Trench 8, were observed to contain human burials (SIHP# 50-80-14-7136 Feature A and B). The remainder of the pit features contained sediment that was consistent with the sediment observed within the cultural layer, which is comprised of dark-stained sand or mottled sand containing sparse charcoal flecking. These features did not contain diagnostic information warranting them to be assigned as formal features of a historic property. Instead, each pit feature was assigned chronological number designations (Pit Feature 1-51) and depicted on trench plan and profile maps that include the depth of origin and base depth of each pit.

In summary, evidence for pre-contact use of SIHP# 50-80-14-7135 is derived from the presence of eight traditional Hawaiian artifacts related to the manufacture of stone tools. Evidence for post-contact use of SIHP# 50-80-14-7135 is derived from the presence of two likely post-contact burials (SIHP# 50-80-14-7136 Feature A and B), butchered faunal osseous material, and 44 historic artifacts that were produced within the late 19th and mid 20th centuries.

2.7.2 SIHP# 50-80-14-7136

Formal Type: Complex (Human Interment)
Functional Interpretation: Burial
# of Features: 2
Age: Post-Contact
Current Dimensions: Minimally 4.2 m N/S by 3.1 m E/W
Location: Trench 8
Tax Map Key: [1] 2-6-26:012
Land Jurisdiction: Roman Catholic Church
Description:

SIHP# 50-80-14-7136 is a complex of human interments consisting of two in situ human burials encountered within Trench 8, designated Burial 1-2/SIHP# -7136 Features A and B (see Figure 17 and Figure 18).

SIHP# 50-80-14-7136 Feature A (Burial 1) is a human burial that was encountered in the northern portion (*mauka*) of Trench 8 on September 24, 2010, during the second phase of subsurface excavation in the project area (see Figure 17 and Figure 18). Trench 8 is located approximately 2.5 m southeast of the disarticulated remains encountered in Trench 3. Feature A was evidenced at a depth of 87 cmbs within a burial pit approximately 60 cm wide that extended from the top of Stratum III (cultural layer) to within Stratum IV (Jaucas sand). The burial pit sediment was composed similar to that of SIHP# -7136 Feature B with mottled brown and very pale brown sand derived from the disturbance to, and mixture of, Stratum III and IV. Once encountered, only a portion of the skeletal remains were exposed in order to determine the position of the burial. Based on the findings of the partial exposure, Feature A appears to represent a complete, previously undisturbed inhumation. The position of the skeletal remains

was determined to be supine (fully-extended) with the cranium oriented toward the SE and the postcrania to the NW with the femora extending into the northwest sidewall of Trench 8. Therefore, the foot elements could not be accounted-for during the partial excavation to exclude them as the disarticulated remains encountered in Trench 3; however, the arm elements appeared to be intact and undisturbed. No evidence of coffin wood was observed during the partial exposure of the skeletal remains. A necklace similar to that observed within SIHP# -7136 Feature B, consisting of small purple, green, red, and black glass beads was observed in situ over the neck area. No other associated grave goods or artifacts were observed within the burial pit feature.

A preliminary osteological analysis of the in situ burial suggests that the individual was possibly an older adult female, and an assessment of ethnicity of SIHP# -7136 Feature A suggests likely Polynesian. All of the postcranial elements appeared to be completely fused, generally indicating an age over 16 years, or an adult individual. None of the incisors or canines were present and there was marked resorption of the alveolar sockets, as well as in areas of several other missing teeth, which indicates previous (antemortem) loss of the teeth. Based on the condition of the dentition, it is suggested that the individual was likely an older adult. The overall size of the cranium appeared slightly robust, although the morphological features of the facial structures (e.g., glabellar region, and supraorbital ridges and margins) appeared to be consistent with female. The observed morphology of the nasal aperture is characteristic of Asiatic and Polynesian ancestries, and includes a moderately wide nasal aperture, low and partially flat nasals, and a small inferior nasal sill with a lack of guttering (Hefner 2009). The slight robusticity of the cranium, in consideration of the female traits, suggests that the individual was likely Polynesian rather than of Asiatic ethnicity. The burial position and necklace indicates that SIHP# -7136 Feature A is likely a post-contact human burial.

SIHP# 50-80-14-7136 Feature B (Burial 2) is a human burial that was encountered in the southwestern portion (*makai*) of Trench 8 on September 24, 2010, during the second phase of subsurface excavation in the project area (see Figure 17 and Figure 18). The burial is located approximately 2.5 m southeast of the disarticulated remains encountered in Trench 3. Feature B was evidenced at a depth of 96 cmbs within a burial pit that extended from the base of Stratum III (cultural layer) to within Stratum IV (Jaucas sand). The burial pit sediment was composed of mottled brown and very pale brown sand derived from the disturbance to, and mixture of, Stratum III and IV. The burial pit feature is ovoid and extends from the southwest wall toward the center area of the trench. The southern edge of the feature appears to be partially bisected by a small portion of a third outline that extends into the southern wall. The burial was encountered while bisecting the larger, central feature. Once encountered, only minimal excavation proceeded in the area in order to partially expose elements and determine the position of the burial without disturbing the remains. Only the upper portion of the burial, from the upper arm (proximal humeral shafts) and the upper back (scapulae, ribs, cervical vertebrae and thoracic vertebrae) to the cranium, extends into Trench 8. The cranium is oriented to the northeast (*mauka*) with the postcrania to the southwest (*makai*). The exposed skeletal remains of Feature B appear to represent a previously undisturbed inhumation. However, as the lower arms and hands, and below the chest extend into the southwest sidewall, it is not possible to exclude disturbance to the lower half of the skeletal remains. As such, the disarticulated remains from Trench 3 cannot be excluded as originating from this individual. The remains were in a prone position with the

anterior side (stomach) down and partially on the left side, and the cranium was on the left anterior side, facing to the right of the body, with the posterior right portion exposed. The burial position is estimated to be semi-flexed as the lower arms and hands were not encountered in a flexed position near the upper body. An elaborate beaded necklace consisting of numerous purple, green, black, and red small glass beads was observed around the neck area. All of the beads were loose due to complete degradation of the material used to string them. No other grave goods or associated artifacts were observed within the burial pit feature.

Although the position of the cranium and mandible partially obscured the facial structures, a preliminary osteological analysis of the visible in situ remains of SIHP# -7136 Feature B suggests an adult female individual, likely of Polynesian ethnicity. The proximal ends of the humeri appeared to be completely fused, generally indicating an age over 16 years. The teeth are heavily worn, which is likely attributed to gritty foods in the diet, and it indicates that the teeth have been in occlusion (fully erupted) for a length of time, further supporting the assessment of an adult individual. The overall shape of the cranium appeared mostly round, with a short anterior-posterior length, and the nasal bone contour appeared to be low and have a flat ‘plateau’ on the superior surface, with a morphology more consistent with Asiatic or Polynesian ancestries (Hefner 2009). The lateral edge of the right supraorbital margin appeared gracile, consistent with a female, yet the overall condition of the cranium was slightly robust to suggest Polynesian rather than an Asiatic ancestry. The burial position and necklace indicates that SIHP# -7136 Feature B is likely a post-contact human burial.

Following the procedures of Hawai‘i Revised Statutes (HRS) Chapter 6E-43, and Hawai‘i Administrative Rules (HAR) Chapter 13-300, the human burials associated with SIHP# 50-80-14-7136 were determined by SHPD/DLNR to be over 50 years old and likely Native Hawaiian. As previously identified Native Hawaiian burials on O‘ahu, their treatment falls under the jurisdiction of the O‘ahu Island Burial Council (OIBC).

2.8 Overview of Consultation

Preliminary consultation with the Roman Catholic Church Diocese of Honolulu was formally initiated February 4, 2010 and has included Patrick Downes, Marlene De Costa, Nettie Peiler, Walter Yoshimitsu and Father Lane Akiona of the Parish. The request was for information on the early history of the church – particularly any information relating to an indicated former cemetery and/or other burials (Schoof 1978:62) as may be documented in church records.

In a request of March 17, 2010 we inquired regarding possible access to any microfilm or photocopies of documents from certain early leaders of the Waikīkī Roman Catholic Church (including Father Walsh, Brother Melchior, or Father Modestus Favens) from the 1839-1865 timeframe (see present Section 2.1.2.2).

Ms. Marlene De Costa responded (3/17/2010):

> In answer to your inquiries, our records do not show that there was a cemetery on this parcel. We have previewed the files in the archives, Parish construction files and cemetery files. The only hope is if we have correspondence from either Fr. Walsh, Brother Melchior or Father Modestus Favens from the 1839-1865 timeframe.

Ms. Nettie Peiler responded (3/25/2010):

> The only correspondence on file referring to: Fr. Walsh, Fr. Favens and Fr., Melchior, are sacramental registers from the parishes they were assigned.

Ms. Marlene De Costa responded (3/25/2010):

> It appears that we have hit a dead end on research that would be valuable to your survey. We wish your firm and St. Augustine the best.

No substantive information above and beyond that available in standard church histories (Yzendoorn 1927, Schoof 1978) has been available.

The Saint Augustine-by-the-Sea Master Plan project was presented to the O‘ahu Island Burial Council meetings of April 14, 2010, September 8, 2010, October 13, 2010, and November 10, 2010.

The Saint Augustine-by-the-Sea Master Plan project was presented to the Waikīkī Neighborhood Board Tuesday, May 11 2010.

E-mail and telephone consultations were held with the SHPD archaeology and/or culture and history branches on 7/12/10, 8/10/10, 8/27/10, 8/30/10, 8/31/10, 9/22/10, 9/24/10, 9/27/10, 10/2/10, 10/7/10, 11/11/10, 12/3/10, 12/16/10, and 1/5/11.

In consultation with the SHPD and OIBC outreach to previously identified cultural descendants of Waikīkī included newspaper advertising in the *Star Advertiser* 11/10/2010 to 11/14/2010 and the January 2011 edition of *Ka Wai Ola o OHA* (Figure 27 and Figure 28) and was initiated by mail in mail-outs of November 18, 2010, January 27, 2011 and April 7, 2011 (see, Figure 26, Table 5, Figure 29 and Figure 29).

To date (4/2011) no one has offered any specific information pertaining to archaeological resources or human skeletal remains within the project area. Comments regarding preferred burial treatment have been elicited.

2.9 Summary and Interpretation from the Archaeological Inventory Survey

Historical background research included study of archival sources, LCAs and historic maps, as well as a review of past archaeological research in the vicinity to construct a history of land use. From these sources, a predictive model was developed to give a general idea of pre-contact and historic coastal land use patterns in the coastal area of Waikīkī.

The *ahupua‘a* of Waikīkī in the centuries before the arrival of Europeans was an intensely used locale with abundant natural and cultivated resources - including an expansive system of irrigated taro fields - supporting a large population that included the highest-ranking *ali‘i*. In the nineteenth century, after a period of depopulation, Waikīkī was reanimated by the Hawaiian *ali‘i*, the foreigners residing there, and by the farmers continuing to work the irrigated field system, which had been converted from taro to rice. This farming continued up to the first decades of the 20th century until the Waikīkī reclamation project drained the remaining ponds and irrigated fields.

Archaeological studies within Waikīkī and in the vicinity of the project area have recorded the presence of subsurface cultural deposits of both pre- and post-contact provenance. These deposits have generally remained intact despite the years of construction activity that have altered the entire Waikīkī area. During archaeological monitoring of Kalākaua, Kealohilani, ‘Ōhua Avenues mentioned above, intact cultural deposits were encountered (Cleghorn 2001a, 2001b; Winieski et al. 2002). The current archaeological inventory survey has identified SIHP# 50-80-14-7135, a buried, culturally-enriched sand A-horizon, which includes numerous pre- and post-contact artifacts, disarticulated human skeletal remains, and a total of 51 documented pit features.

Previous and on-going archaeological reports have documented numerous pre-Contact and post-Contact human burials throughout the Waikīkī area and within close proximity to the current project area (see Figure 16). Especially relevant to the present project area are 22 burials that were encountered at the intersection of Kealohilani and Kalākaua Avenues (Winieski et al. 2002) and an additional seven burials that were encountered at the intersection of ‘Ōhua and Kalākaua Avenues (Cleghorn 2001a, 2001b; Winieski, Perzinski, Shideler, et al. 2002). Isolated pre-contact burials and burial clusters in Waikīkī have been found primarily in sandy deposits, just above the water table and below historic-era fill materials. The Saint Augustine-by-the-Sea archaeological inventory survey has identified two post-contact human burials (SIHP# 50-80-14-7136 Feature A and B), both of which were identified within pits that extend from the overlying buried, culturally-enriched sand A-horizon (SIHP# 50-80-14-7135). Robert Schoofs’ “*Pioneers of the Faith*,” a book on the history of the Catholic Mission in Hawai‘i, suggests that there was a Catholic cemetery at a presently unknown location but seemingly near the present Kalākaua Avenue in the 1840s and 1850s (Schoofs 1978:62-63) (see present Section 2.1.2.2). It is unclear whether the burials and human skeletal remains of SIHP# 50-80-14-7136 relate to that former Catholic burial area or not.

In summary, the results of the Saint Augustine-by-the-Sea archaeological inventory survey, which has identified one subsurface cultural layer (SIHP# 50-80-14-7135) and one burial complex (SIHP# 50-80-14-7136), are congruent with previous archaeological studies conducted in the vicinity of the current project area. Archaeological studies, including the Saint Augustine-by-the-Sea archaeological inventory survey, continue to document the pre- and post-contact land use within Waikīkī.

2.10 Significance Assessments from the Archaeological Inventory Survey

The inventory survey investigation and documentation of the project area’s historic properties has provided sufficient information for significance evaluations. Significance is determined after evaluation of the historic property in light of the five broad criteria used by the Hawai‘i State Register of Historic Places (HAR 13-284-6). The criteria are the following:

A	Historic property reflects major trends or events in the history of the state or nation.
B	Historic property is associated with the lives of persons significant in our past.

C Historic property is an excellent example of a site type.

D Historic property has yielded or may be likely to yield information important in prehistory or history.

E Historic property has cultural significance to an ethnic group, including, but not limited to, religious structures, burials, and traditional cultural properties.

SIHP# 50-80-14-7135 is a buried, culturally-enriched sand A-horizon (cultural layer). SIHP# 50-80-14-7135 is evaluated significant under Criterion D (have yielded, or may likely yield information important in prehistory of history) of the Hawai‘i Register of Historic Places evaluation criteria.

SIHP# 50-80-14-7136 is a complex consisting of two in situ human burials (Feature A and B). SIHP# 50-80-14-7136 is evaluated significant under Criterion D (have yielded, or may likely yield information important in prehistory of history) and Criterion E (value to native Hawaiian people or to another ethnic group due to associations with cultural practices) of the Hawai‘i Register of Historic Places evaluation criteria.

2.11 Project Effect

CSH’s project specific effect recommendation is “effect, with proposed mitigation commitments.” The recommended mitigation measures will reduce the project’s effect on significant historic properties that were identified within the project area and be pro-active in addressing possible community concerns.

2.12 Mitigation Recommendations

To reduce the proposed project’s effect on significant historic properties, the following mitigation measures have been recommended. The two indicated plans should be completed prior to any land disturbing activities within the project area.

2.12.1 Burial Treatment Plan

SIHP# 50-80-14-7136, consisting of two in situ human burials (Feature A and B), will be treated in accordance with HAR 13-300. In order to alleviate the project’s effect on what are now termed “previously identified” human burials, a project specific burial treatment plan (a requirement of HAR 13-300; present study) is to be prepared for consideration of the O‘ahu Island Burial Council (OIBC). The burial treatment plan is to incorporate the appropriate input from the OIBC, SHPD/DLNR, and recognized lineal and cultural descendants.

2.12.2 Archaeological Monitoring

The Saint Augustine-by-the-Sea archaeological inventory survey represents a good-faith effort to identify and document the historic properties within the project area. Due to inherent limitations of any sampling strategy, it is possible that additional historic properties, potentially including human burials and non-burial archaeological deposits, may be encountered during project-related development. In order to mitigate any potential damage to known documented or

yet unidentified historic properties, it is recommended that project construction proceed under an archaeological monitoring program. This monitoring program will facilitate the identification and proper treatment of any additional burials that might be discovered during project construction, and will gather additional information regarding the project’s non-burial archaeological deposits, should any be discovered. The archaeological monitoring program will begin with an archaeological monitoring plan to be prepared for the review and approval of the SHPD prior to the beginning of construction. We anticipate on-site monitoring of all initial ground disturbance and that any deviation from this would only follow consultation with and written concurrence from the SHPD.

Section 3 Proposed Burial Treatment

The project proponents have been conscientious in their good faith effort to identify potential lineal and cultural descendants for the project area's two known burials (collectively SIHP # 50-80-14-7136) addressed in this plan. They also have been proactive in consulting with potential lineal and cultural descendants and the OIBC (with presentations at the meetings of April, September, October, and November 2010 and January and March 2011) regarding the project's development, archaeological inventory survey results, and proposed burial treatment options. This burial treatment plan was prepared to reflect the input from these various concerned parties.

With all previously identified Native Hawaiian burial sites on O‘ahu, the decision to preserve in place or relocate burial remains falls under the jurisdiction of the OIBC, which makes its decision in consultation with any recognized lineal and/or cultural descendants, per the requirements of HAR Chapter 13-300-33. Once the determination regarding burial treatment is made, the remains' proper treatment is carried out in accordance with HAR Chapter 13-300-38. This burial treatment plan is intended to provide the OIBC, any recognized lineal and/or cultural descendants, and the SHPD with detailed information to support this burial treatment decision-making process.

3.1 Statement of Proposed Treatment

Preservation in Place is proposed with the proposed Saint Damien Museum to be constructed over the two known burials of SIHP # 50-80-14-7136. The burials would remain in place under the floor of the central portion of the proposed two-story museum.

It is understood that this treatment is in accord with the wishes of all SHPD/OIBC previously recognized cultural descendants of the Saint Augustine-by-the-Sea burials (Ms. Ka‘anohi Paulette Kaleikini and family; see Figure 31). To the best of our knowledge, at this time, none are opposed.

The proposed approach is to set a concrete (or concrete masonry unit) rectangular, low (approximately 16" high) perimeter wall crypt around the two, to-be-left-in-place, burials. This rectangular wall would be approximately 13'4" long *mauka/makai* by 6'8" Diamond Head/‘Ewa. This low wall would allow for a modicum of protection from accidental horizontal intrusion and other construction related activities that would be occurring in the immediate vicinity for museum construction. The base of the proposed protective wall would be well above the depth of the burials. The burials lie at a depth of approximately 85 cm below the present asphalt surface (see Figure 25). Present plans call for the removal of this asphalt surface and then the importation of approximately 12-18 inches (30 to 45 cm) of fill with the floor slab to be poured above this fill. The proposed crypt would thus intrude only a very short distance, if at all, into the existing soil around the burials (with the top of the crypt being flush with the top of the imported fill).

A steel plate or two might rest on top of this perimeter crypt construction during much of the construction to provide additional protection.

The ground floor of the proposed two-story Saint Damien Museum would rest on the imported fill and crypt construction (there would be no air space or void).

In consultation with the SHPD/OIBC previously recognized cultural descendants of the Saint Augustine-by-the-Sea burials (Ms. Ka‘anohi Paulette Kaleikini and family; see Figure 31) the re-interment of the human skeletal remains recovered from a disturbed context in the immediate vicinity of the two burials to a location between the two burials is proposed and will be presented to the SHPD for their accord.

As the remains would be under a public museum access by known lineal or cultural descendants should be easy to accomodate on an ad hoc basis.

3.2 Immediate Short-Term Burial Protection Measures

While the project's burial treatment has been under discussion, short-term preservation measures were carried out to protect the project's previously identified burials from harm. Following trench backfilling, the trench was patched and planters and barriers were placed over the burial area to exclude access or traffic over the site. This protective measure is currently in place. The temporary protective buffer will ensure no pedestrian or vehicular traffic passes over the burial location until the proposed treatment of the remains is conducted,

3.3 Long-Term Management of the Burial Preserve Area

As presently proposed the *kūpuna* would be entombed under the central portion of the ground floor of the Saint Damien Museum. This is commensurate with the expressed wishes of the spokesperson for all SHPD/OIBC previously recognized cultural descendants of the Saint Augustine-by-the-Sea burials (Ms. Ka‘anohi Paulette Kaleikini). This is commensurate with the wishes of Father Lane Akiona of Saint Augustine-by-the-Sea Church and also with the pattern of the Church in regarding entombment beneath a Church as honorific. Saint Augustine-by-the-Sea Church would be responsible for respectful and appropriate treatment of the *kūpuna* during construction of the Saint Damien Museum and for the duration of the existence of the Museum. Contractors and construction workers would be informed of the burials and asked to respect their presence as far as commensurate with the construction project. Specifics of use of the space immediately over the *kūpuna* within the ground floor of the Museum would be at the discretion of the Church in consideration of the wishes of recognized cultural descendants.

3.4 Burial Preserve Recordation

In order to provide perpetual protection for the Burial Preserve area, the project proponents, acting on behalf of SHPD pursuant to HAR 13-300-38(g), will record the Burial Preserve area location with the State of Hawai‘i Bureau of Conveyances. This recordation would create an encumbrance on the specific property (TMK: [1] 2-6-026:012) to run with the land in perpetuity. The burial preserve area recordation (including detailed geographic locations) will be recorded with the Bureau of Conveyances upon the completion of project construction Copies of the recorded document shall be submitted to SHPD, and to the OIBC, and interested parties that participated in the burial treatment consultation process upon request.

3.5 Treatment of Inadvertent Burial Discoveries

The project's archaeological inventory survey report represented a good faith effort to identify and document the historic properties within the project area. Due to the inherent limitations of any sampling strategy it is likely that additional features of these historic properties, potentially including human burials, may be uncovered during the proposed project's construction.

Before project construction begins, the project will complete an SHPD-approved archaeological monitoring plan. The archaeological monitoring program will facilitate the identification and treatment of any additional burials and/or isolated human skeletal remains in a disturbed context that might be discovered during project construction and to alleviate the project's effect on non-burial archaeological deposits.

If burial remains are discovered during archaeological monitoring of project construction, they will be treated in accordance with Hawai‘i State burial law regarding inadvertent burial discoveries (HAR Chapter 13-300-40). Following these regulations, burial treatment of inadvertent burial finds shall be determined by SHPD in accordance with Chapter 6E, HRS, in consultation with recognized cultural descendants. The project proponents will consider the potential to preserve any additional finds in place on a case-by-case basis.

Section 4 References Cited

Armstrong, R. Warwick (ed.)
1983 *Atlas of Hawai‘i*. University of Hawai‘i Press, Honolulu

Beardsley, Felicia, and Michael Kaschko
1997 Archaeological Monitoring and Data Recovery Pacific Beach Hotel Office Annex, Waikiki, O‘ahu. International Archaeological Research Institute, Inc., Honolulu.

Beckwith, Martha
1940 *Hawaiian Mythology*. Yale University Press, New Haven, CT.

Bliss, William R.
1873 A Sea-Side Retreat in the Pacific. *The Pacific and Commercial Advertiser*, February 1, 1873, p. 4.

Brown, DeSoto
1989 *Hawaii Goes to War: Life in Hawaii from Pearl Harbor to Peace*. Editions Limited, Honolulu.

Bunson, Maggie
1977 *Faith in Paradise: A Century and a Half of the Roman Catholic Church in Hawaii.* Daughters of St. Paul, Boston.

Bush, Anthony R. and Hallett H. Hammatt
2006 Archaeological Monitoring Report for Installation of Service Gas Lines and Meter at 125 Uluniu Avenue, Waikiki Ahupua‘a, Kona District, Island of O‘ahu (TMK (1) 2-6-023:019), Cultural Surveys Hawai‘i, Kailua, HI

Bush, Anthony, John P. Winieski, and Hallett H. Hammatt
2002 Archaeological Monitoring Report for the Waikīkī Anticrime Lighting Improvement Project Phase II (TMK 2-6-1, 2-6-2, 2-6-3, 2-6-5, 2-6-6, 2-6-25, 2-6-16, 2-6-18, 2-6-19, 2-6-22, 2-6-23, 2-6-26, 2-6-27). Cultural Surveys Hawai‘i, Inc., Kailua, Hawai‘i.

Calis, Irene
2002 An Archaeological Monitoring Report for ABC Store No. 35 Lemon Road Fence Wall Construction Project Waikiki Ahupua‘a, Honolulu District, O‘ahu Island, Hawai‘i. Scientific Consultant Services, Honolulu, Hawai‘i.

Chamberlain, Levi
1957 Tour Around O‘ahu: 1828. In *Sixty-fifth Annual Report of the Hawaiian Historical Society for the Year 1956*, pp. 2541. Hawaiian Historical Society, Honolulu.

Cleghorn, Paul
2001a Archaeological Mitigation of Waikiki Burger King Construction, TMK: 2-6-026:013 Kona District, Waikiki Ahupua‘a, Island of O‘ahu. Letter to Mr. Roy Yamani (Hawai‘i CIMMS). Pacific Legacy, Honolulu.

2001b Archaeological Mitigation near Waikiki Burger King Construction Site TMK: 2-6-026:012 & 013, Kona District, Waikiki Ahupua‘a, Island of O‘ahu. Letter to Mr. Paul Kosasa (ABC Stores). Pacific Legacy, Honolulu.

Coulter, John Wesley, and Chee Kwon Chun
1937 *Chinese Rice Farmers in Hawaii*. UH Research Publications No. 16. University of Hawai‘i, Honolulu.

Davis, Bertell
1989 Subsurface Archaeological Reconnaissance Survey and Historical Research at Fort DeRussy, Waikīkī, O‘ahu, Hawai‘i. International Archaeological Research Institute, Inc., Honolulu.

Esh, Kelly and Hallett H. Hammatt
2006 Archaeological Monitoring Report for Kūhiō Avenue (Kalākaua to Ka‘iulani), Waikīkī Ahupua‘a, Honolulu District, O‘ahu Island, Hawai‘i TMK [1] 2-6-015, to 022: various parcels) Cultural Surveys Hawai‘i, Kailua Hawai‘i

Foote, Donald E., E.L. Hill, S. Nakamura, and F. Stephens
1972 *Soil Survey of the Islands of Kaua‘i, O‘ahu, Maui, Molokai and Lāna‘i, State of Hawai‘i. U.S. Dept. of Agriculture*. U.S. Government Printing Office, Washington, D.C.

Grant, Glen
1996 *Waikiki Yesteryear*. Mutual Publishing, Honolulu.

Hammatt, Hallett H., Doug Thurman and David W. Shideler
2010 *Archaeological Inventory Survey Plan for the St. Augustine-by-the-Sea Master Plan Project, Waikīkī Ahupua‘a, Honolulu (Kona) District, Island of O‘ahu, TMK [1]-2-6-26:012 & 015* Cultural Surveys Hawai‘i, Kailua, HI.

Hefner, Joseph T.
2009 Cranial nonmetric variation and estimating ancestry. *Journal of Forensic Sciences* 54:985-995.

Hibbard, Don and David Franzen
1986 *The View from Diamond Head Royal Residence to Urban Resort*. An Editions Limited Book, Honolulu.

‘Ī‘ī, John Papa
1959 *Fragments of Hawaiian History as Recorded by John Papa ‘I‘ī*. Bishop Museum Press, Honolulu.

Johnson, Donald D.
1991 *The City and County of Honolulu: A Governmental Chronicle*. University of Hawai‘i Press, Honolulu.

Kanahele, George S.
1986 *Ku Kanaka Stand Tall. Search for Hawaiian Values* , University of Hawaii Press, Honoulu, HI.
1995 *Waikīkī 100 B.C. to 1900 A.D. An Untold Story*. The Queen Emma Foundation, Honolulu.

Mann, Melanie, and Hallett H. Hammatt
2002 Archaeological Monitoring Report for the Installation of 12- and 8-inch Water Mains on Lili‘uokalani Avenue and Uluniu Avenue, Waikīkī Ahupua‘a, Kona District, Island of O‘ahu (TMK 2-6-023, 24, and 26). Cultural Surveys Hawai‘i, Inc., Kailua, Hawai‘i.

Menzies, Archibald
1920 *Hawai‘i Nei 128 Years Ago*. The New Freedom, Honolulu.

Newton, Ronald V.
1938 Waikiki Seen as Area of Active New Development. *Honolulu Star-Bulletin*, 26 March: .10.

Perzinski, Mary, David W. Shideler, John Winieski, and Hallett H. Hammatt
2000 Burial Findings During the Excavation of a 16" Watermain on an Approximately 915 Meter (3,000 Ft.) Long portion of Kalakaua Avenue Between Kai’ulani and Monsarrat Avenues Associated with the Kuhio Beach Extension/Kalakaua Promenade Project, Waikiki Ahupua’a, Kona District, Island of O‘ahu, (TMK 2-6-1, 2-6-22, 2-6-23, 2-6-26, 2-6-27, and 3-1-43). Cultural Surveys Hawai‘i, Kailua, Hawai‘i.

Schoofs, Robert
1978 *Pioneers of the Faith: History of the Catholic Mission in Hawaii (1827-1940).* Revised by Fay Wren Midkiff. Sturgis Printing Co. Inc., Honolulu.

Tome, Guerin and Michael Dega
2003 Archaeological Monitoring Report for Construction Work at the Waikiki Marriot, Waikiki, Manoa Ahupua‘a, Honolulu District, O‘ahu Island, Hawai‘i. Scientific Consultant Services, Honolulu.

Vancouver, George
1798 *A Voyage of Discovery to the North Pacific Ocean, and Round the World Performed in the years 1790-1795*. Robinsons and Edwards, London.

Weyeneth, Robert R.
1991 *Kapi‘olani Park: A Victorian Landscape of Leisure*. Dept. of Parks and Recreation, City and County of Honolulu.

Winieski, John P., and Hallett H. Hammatt
2001 Archaeological Monitoring Report for the Public Baths Waste Water Pumping Station Force Main Replacement, Waikīkī, Honolulu, O‘ahu, Hawai‘i (TMK 2-6-25, 26, & 27, and 3-1-31, 43). Cultural Surveys Hawai‘i, Kailua, Hawai‘i.

Winieski, John, Mary Perzinski, David Shideler, and Hallett H. Hammatt
2002 Archaeological Monitoring Report for the Installation of a 16-Inch Water Main on an Approximately 915 Meter (3,000 Ft) Long Portion of Kalākaua Avenue Between Ka‘iulani and Monsarrat Avenues Associated with the Kūhiō Beach Extension/Kalākaua Promenade Project, Waikīkī Ahupua‘a, Kona District, Island of O‘ahu (TMK 2-6-1-, 2-6-22, 2-6-23, 2-6-26, 2-6-27, 3-1-43). Cultural Surveys Hawai‘i, Kailua, Hawai‘i.

Winieski, John, Mary Perzinski, Kehaulani Souza, and Hallett H. Hammatt
2001 Archaeological Monitoring Report, The Kuhio Beach Extension/Kalākaua Promenade Project, Waikīkī Ahupua‘a, Kona District, Island of O‘ahu (TMK 2-6-1-, 2-6-22, 2-6-23, 2-6-26, 2-6-27, 3-1-43), Cultural Surveys Hawai‘i, Kailua, Hawai‘i.

Yucha, Trevor M., Josephine M. Paolello, M.S., and Hallett H. Hammatt
2011 Archaeological Inventory Survey for the St. Augustine-by-the-Sea Master Plan Project, Waikīkī Ahupua‘a, Honolulu (Kona) District, Island of O‘ahu, TMK [1] 2-6-26:012 & 015, Cultural Surveys Hawai‘i, Kailua, Hawai‘i.

Yzendoorn, Father Reginald
1927 *History of the Catholic Mission in the Hawaiian Islands*, Honolulu Star-Bulletin Press, Honolulu, HI.

Appendix A Land Commission Awards

Land Commission Award 1446

No. 1335, Naa, Waikiki, Oahu, December 9, 1847

N.R. 114-115v3

Greetings to the Land Commissioners: I hereby tell of my land claim at Kamookahi for my two lo`i which are planted in taro, one bulrush lo`i, and two bulrush irrigation ditches.

I was given this place in 1835 by Daniel Kekahuna and have held it peacefully with no objections. I also have a house claim at Waikiki which I have lived at since the time Kinau was living and have lived peacefully with no objections. I have one house there.

NAA X

F.T. 43-44v3

Cl. 1446, Naa, December 11, 1848

Kekoa, sworn, This land I know. It is in Mookai [Mookahi], Waititi, consisting of kalo and upland, having 3 patches and a stream, without house or fence.

Mauka is Paki’s land
Waialae is Kahanaumaikai
Makai, Kauhao’s
Honolulu, Kalaimoku’s

Claimant had this place from Paki is time of Kaahumanu 1st and has held it undisputed tot eh present time, and improved it.

Kahue, sworn, confirmed all the above testimony.

N.T. 366-367v3

No. 1446, Naa, NAA, December 11, 1848

Kekoa, Sworn, I have seen his place at Mookahi in Waikiki consisting of three taro patches and one ditch in one section.

Mauka, Paki

Waialae and Makai, Kahanaumaikai and Kauhao

Honolulu, Kalaimoku.

Naa had received his interest from Paki at the time of Kaahumanu I and to the present time, no one has objected.

Kahue, sworn, Our testimonies are similar.

[Award 1446; R.R. 2557 & R.P. 6239; Kamookahi Waikiki Kona; 1 ap.; 1.02 Acs; R.P. 6239; Hamohamo Waikiki Kona; 1 ap.; .28 Ac.]

Land Commission Award 01452

No. 1452, Haau, Waikiki, Oahu, December 9, 1847

N.R. 117v3

Greetings to the Land Commissioners: I hereby tell of my land claim at Hamohamo in Waikiki. I have two lo`i, a kula, and also a bank of the irrigation ditch. This place is from my wahine, it was her former kane's, and on his death I married her, and that is the reason I acquired this place. I have held it peacefully with no objections.

I also have a house lot claim at Hamohamo from my wahine which I hold peacefully with no objections. I have one house there.

HAAU X

F.T. 48-49v3

Cl. 1452, Haai, December 15, 1848

Kanakaole, sworn, I know this place. It is in Hamohamo, Waititi, consisting of kalo & kula land in two lots.

1. House lot, having one house belonging to claimant and no fence:
Mauka is Keohokalole's land
Waialae is Kaneloa's
Makai is Kaia's
Honolulu, Kaluahinenui.

2. Second lot, one kalo patch:
Mauka is Kaumaka
Waialae is Kapea's
Makai is Ehu's
Honolulu is Hokaea's.

Claimant had both these lots from Keohokalole in 1845 and has ever since held them undisputed. Keohokalole is konohiki of Hamohamo and claimant received the land from him as a man under his rule.

Beretane, sworn, confirmed the testimony as above given. The witnesses after stated that claimant had these lots direct from Hookaea, is under konohiki.

Hookaea wanted.

N.T. 371-372v3

No. 1452, Haau, October 15, 1848

Kanakaole, sworn, I have seen his place at Hamohamo in Waikiki of 1 taro patch and 1 house in two sections.

1. 1 house lot where:
Mauka is Keohokalole's lot
Waialae, Pehu's land
Makai, Hookaea
Honolulu, Kaluahinenui.

One house is here with no fence.

2. 1 taro patch:
Mauka is Kaumaka
Waialae, Kapea's place
Makai, Ehu's place
Honolulu, Hookaea's place.

Hauu's interest is from Keohokalole at the time Kekauluohi died in the year 1845 and he has always lived there. No one objecting. Keohokalole is the konohiki.

Pelekane, sworn, Our testimonies are similar except that Keohokalole had not given these lands directly to Haau but it had been through his servant Hookaea, who had been the custodian

Postponed and will be resumed when Hookaea shall come.

[Award 1452; R.P. 5060; Hamohamo Waikiki Kona; 2 ap.; .96 Ac.]

Land Commission Award 1453

No. 1453, Manaole, Waikiki, Oahu, December 9, 1847
N.R. 117v3

Greetings to the Land Commissioners: I hereby tell of my land claim at Kanukuaula in Waikiki There are two lo`i, a stream, and a small kula, also, which were given me by Paehewa in the time of Kaahumanu I.

I also have a house lot at Hamohamo in Waikiki, which I got at the time when the body of Liholiho was returned /from England/ and I have lived there until this very time with no objections.
MANAOLE X

F.T. 49v3
Cl. 1453, Hanaole (Manaole), December 15, 1848

Kaohe, sworn, I know this place. It is in Kanakaaula in Waititi, and the house lot in Hamohamo.

1. Kalo land of 2 patches, 3 stream & some kula in Kanukaaula.
Mauka is land of Paku
Waialae is Mahuka
Makai is Hookaia's
Honolulu, Kaluahinenui

2. House lot:
Mauka is Kaanaana's
Waialae, Kealiieleele's
Makai, my land
Honolulu, Naa's.

Claimant has one house on this lot but no fence. He had the last lot No. 2 from Aikanaka about the time of the Kauai War (1923) and has held it undisputed ever since. Claimant had the 1st lot from Nalaweha at the same time, and has never been disputed in his possession of either. He cultivates the land to this time.

Kuhewa, sworn, confirms the testimony of Kaohe as above.

This claimant says his name is Manaole, his claim is signed as above H. He did not write it and says it is an error

N.T. 372v3
No. 1453, Manaole, December 15, 1848

Kaohe, sworn, I have seen his place at Kanukuaula in Waikiki of 2 patches, 3 ditches, a pasture and a house lot at Hamohamo.

1. 2 patches, 3 ditches and a pasture at Kanukuaula where:
Mauka is Paku
Waialae, Mahuka
Makai. Hookaea
Honolulu, Kaluahinenui.

2. 1 house lot at Hamohamo.
Mauka is Kaanaana
Waialae, Kealiieleele
Makai, my place
Honolulu, Naa.
One house is for himself and it has no fence.

Nalaweha had given the interest at Kanukuaula during the battle of Kauai in the year 1822, probably. No one had objected. The place at Hamohamo is from Keohokalole given during the battle of Kauai in the year 1822 when Aikanaka was still alive.

Kuewa, sworn, Our testimonies are similar; no one has objected.

[Award 1453; R.P. 2559; Hamohamo Waikiki Kona; 2 ap.; .07 Ac.; Kanukuaula Waikiki Kona; 1 ap.; .8 Ac.]

Land Commission Award 01454

No. 1454, Kaohe, Waikiki, Oahu, December 9, 1847
N.R. 117-118v3

Greetings to the Land Commissioners: I hereby tell of my land claim at Kamookahi in Waikiki. I have two lo`i, three sections of stream and one kula, which were given me by Palaualelo in the time of Kaahumanu I.

I lived there in peace with no objections. There is also a house lot at Hamohamo in Waikiki which I occupied in the time of Kaahumanu I. I have lived since then, with no objections, in peace.
KAOHE X

F.T. 50v3
Cl. 1454, Kaohe, December 15, 1848

Kuhewa, sworn, I know this place. It is in Mookai [Kamookahi] Waititi, consisting of kalo land kula and a house lot in Hamohamo, both in Waititi.

1. house lot, Hamohamo:
Mauka is Manaole's
Waialae is Kinikini's
Makai is Mokulehua's
Honolulu, Naa's.

2. Kalo patches, 2 in one lot in Mookai:
Mauka is Kaluahinenui
Waialae is Umi's
Makai is Kuluwailehua's
Honolulu is Wm Sumner's.

[2a] Two auwais or streams:
Mauka is Pupuka's
Waialae, Palaualelo's
Makai, Pelewale's
Honolulu, Kimo's.

[2b] Kula land.
Mauka is Waiauhia's
Waialae, Kahalehau's
Makai, Umi's
Honolulu is Kaluahinenui's.

Claimant took up the first lot in Hamohamo in time of Kaahumanu 1st and has lived on it and held it ever since undisputed. He has two houses on it, but no fence. Hookaia is konohiki.

Claimant has all the pieces under No. 2 in Mookai from Palaualelo in time of Kaahumanu. He is an old man still living as konohiki of the land and has ever since held these lands undisputed.

Manaole, sworn, confirmed the previous testimony.

N.T. 372v3
No. 1454, Kaohe, December 15, 1848

Kuewa, sworn, I have seen his property at Kamookahi in Waikiki consisting of 2 taro patches, 2 sections of ditches, 1 pasture and 1 house lot with two houses on it. There are four separate sections at Hamohamo.

1. A house lot at Hamohamo:
Mauka is Manaole
Waialae, Kinikini /Jenkins/
Makai, Mokulehua
Honolulu, Naa.

2. 2 taro patches at Kamokahi where:
Mauka is Kaluahinenui
Waialae, Uma
Makai, Kuluwailehua
Honolulu. Keolaloa.

3. 2 ditch sections:
Mauka is Pupuka
Waialae, Palanalelo
Makai, Pelawale;
Honolulu, Kimo.

4. 1 pasture:
Mauka is Waiania
Waialae, Kahalehau
Makai, Uma
Honolulu, Kaluahinenui.

The place at Hamohamo had been vacant, so I built my house there without any objections at the time Kaahumanu was alive. It has not been enclosed. The remaining three sections at Kamookahi are from Palanalelo received at the time of Kaahumanu. Palanalelo is the konohiki for Kamookahi while Hookaea is for Hamohamo; however, no one has objected to his /Kaohe/ lands.

Manaole, sworn, Our testimonies are similar.

[Award 1454; R.P. 2558; Kamookahi Waikiki Kona; 3 ap.; 1.88 Acs]

Land Commission Award 01455

No. 1455, Pelekane, Waikiki, Oahu, December 9, 1847

N.R. 118v3

To the Land Commissioners, Greetings: I hereby tell of my land claim at Hamohamo in Waikiki. I have one lo`i and also a house lot which adjoins my lo`i, which I got in the time of Kaahumanu I. I have held it peacefully with no objections.

PELEKANE X

F.T. 50-51v3

Cl. 1455, Pelekane, December 15, 1848

Iwinui, sworn, I know this land. It is in Hamohamo, Waititi; Kula add kalo land separately, consisting of two patches (one house fenced - no. 3; and kula land - no. 2).

Mauka is Kapea's
Waialae is Hookaia's, Makai also, and Honolulu.

2 koele lot
Mauka is Kahanamaikai [Kahanaumaikai]
Waialae is Kaluahinenui's
Makai, Napahi's
Honolulu is Kaluawailehua's.

Cultivated, but not built upon or fenced.

3. House lot, one house fenced.
Mauka is Hookaia's
Waialae, Kahuka's
Makai, Pelawale's
Honolulu, Kapea's.

Claimant had all these lots form Hookaia in time of Kaahumanu, and has lived there ever since cultivating them to this time without any opposition and in peace.

Kapea, sworn, confirms the testimony as now given.

N.T. 373-374v3

No. 1455, Pelekane, December 15, 1848

Iwinui, sworn, I have seen his place at Hamohamo of 2 patches, 1 pasture and 1 house which has a fence.

1. 2 patches:
Mauka is Kapea
Waialae, Makai and Honolulu, Hookaea.

2. 1 pasture:
Mauka is Kahanauonaikai
Waialae, Kaluahinenui
Makai, Napahi
Honolulu, Kuluwailehua.

3. 1 house lot with 1 house: It has been completely enclosed on all sides.
Mauka is Hookaea
Waialae, Kahula
Makai, Pelawale
Honolulu, Kapea.

The lot has been shared equally with Kapea.

[Award 1455; R.P. 6435; Hamohamo Waikiki Kona; 2 ap.; .53 Ac.]

Land Commission Award 01457

No. 1457, Paumano, Waikiki, Oahu, December 9, 1847

N.R. 119v3

To the Land Commissioners, Greetings: I hereby tell of my land claim at Hamohamo in Waikiki. I have two lo`i, a section of irrigation ditch, and also a kula. Mamala gave me this place in the time of Kaahumanu I. I have occupied it from that time with no objections.

I also have a house lot at Hamohamo. I began to live there in the time of Kaahumanu I. I have not been objected to until this time

PAUMANO

F.T. 51-52v3

Cl. 1457, Paumano, December 15, 1848

Pelekane, sworn, Paumano died lately, and left all his rights to his wife, Kaumaka, who has been his wife since Kaahumanu's time. They have no children and the land was hers at first. The claimant's land is in Hamohamo, Waititi, consisting of kalo and kula & a house lot.

1. House lot:
Mauka is Hohopa's Waialae is Iwinui's
Makai is Kawaaulu's
Honolulu, Ma's.

One house is on this lot in which claimant lives. It is fenced.

2. kalo land, two patches and 1 auwai or stream:
Mauka is Manaole's
Waialae, Kahue's
Makai is Haau's
Honolulu, Koa's.

3. Kula land, cultivated formerly.
Mauka is Kahanaumaikai's
Waialae is Kaluahinenui's
Makai is Napahi's
Honolulu, Kuluwailehua's.

Claimant had these lands from Aikanaka, a high chief, in time of Kuakini before 1821 and has ever since held them undisputed. They have been long in the descent of family rights.

Kapea, sworn, confirmed the testimony given.

N.T. 375v3

No. 1457, Paumano, December 15, 1848

Pelekane, sworn, Paumano had died before the dark moon and his wife had come in to inquire about this interest because this land at Hamohamo had been for Kaumaka's parents and they had no children so at the death of his parents, the land was for him. There are three sections with 2 taro patches, 1 ditch and a pasture.

1. 1 house-lot at Hamohamo:
Mauka is Hohopa
Waialae, Iwinui
Makai, Kawaaulu
Honolulu ma.
One has been enclosed and he /Pahemano/ now lives there.

2. 2 taro patches, 1 ditch section:
Mauka is Manaole
Waialae, Kahue
Makai, Haau
Honolulu, Koa.

3. 1 pasture without a fence where:
Mauka is Kahanaumaikai
Waialae, Kaluahinenui
Makai, Napahi
Honolulu, Kuluwailehua.

He had received this interest from Aikanaka through his parents before the missionaries arrived and he has been comfortable to this time; no one has objected.

Kapea, sworn, Our testimonies are similar, there have been no objections.

[Award 1457; R.P. 1273; Waikiki Kona; 2 ap.; 1.75 Acs; Paumano for Kaumaka]

Land Commission Award 01458

No. 1458, Kapea, Waikiki, Oahu, December 9, 1847

N.R. 119v3

Greetings to the Land Commissioners: I hereby tell of my land claim at Hamohamo in Waikiki. I have one lo`i, two kula, one bank of an irrigation ditch, which I got in the time of Kaahumanu I. I also have a house lot at Hamohamo which I began to occupy in the time of Kaahumanu I, and have lived there since in peace with no objections.

KAPEA X

F.T. 52-53v3

Cl. 1458, Kapea, December 18, 1848

Kaanana, sworn, I know this place. It is in Hamohamo, Waititi, in several lots.

1. House lot, having 2 houses. 1 claimant's 1 Paikane's (this last is a separate claim and accordingly detached in this statement of boundaries). Claimant has one house and it is fenced.

Mauka is Kekuanaoa
Waialae is Kekauonohi (Paikane)
Makai, Keohokalole
Honolulu, Kekuanaoa.

2. One kalo patch:
Mauka is Kaumaka
Waialae, Kahula
Makai, Keohokalole
Honolulu, Kekuanaoa.

3. Kula:
Mauka, W. Sumner
Waialae, Kekuanaoa's, Makai also, & Honolulu.

Claimant had all these lands from Naihe, high Chief in time of Kaahumanu I, and has held them to the present time and cultivated them without dispute. Keohokalole is the konohiki of the land.

Paikane, sworn, and confirmed the above.

(There are two houses and two persons in one fence. The present claimant and Pelekane, See Cl. 1455, the boundaries are separately stated in both claims in the testimony.)

N.T. 374v3

No. 1458 [Kapea & Pelekane]

He had received his interest from Hookaea at the time of Kaahumanu I and I have always lived there to this time; no one has objected.

Kapea, sworn, Our testimonies are similar.

N.T. 375-376v3

No. 1458, Kapea, December 18, 1848

Kaanaana, sworn, I have seen his place at Hamohamo in Waikiki - 1 patch, 1 pasture, 1 ditch section and 1 house lot.

1. 1 house lot where:
Mauka is Kekuanaoa
Waialae, Pelekane
Makai, Keohokalole
Honolulu, Kekuanaoa.
This lot has been divided with the other half for Pelekane, #1455.

2. 1 patch, 1 ditch section where:
Mauka is Kaumaka
Waialae, Kahula
Makai, Keohokalole
Honolulu, Haau.

3. 1 pasture:

Mauka is Keolaloa

Waialae and Makai, also Honolulu, Kekuanaoa.

This interest is from Naihe at the time of Kaahumanu I and to this time, no one has objected.

Pelekane, sworn, Our testimonies are similar.

[Award 1458; R.P. 5954; Hamohamo Waikiki Kona; 2 ap.; .92 Ac.]

Land Commission Award 2027

No. 2027, Palaualelo, Waikiki kai

N.R. 329v3

To the Land Commissioners, Greetings: Be it known to you all that I, the one whose name is below, hereby state my claim for three taro lo`i, four bulrush lo`i, and two irrigation ditches, at Mokahi. There is a house at Hamohamo and one hau tree. I have occupied it from the time of Kaahumanu I, with no objection.

Farewell and thanks

PALAUALELO X

December 21, 1847

F.T. 474v14

No. 2027, Palaualelo, claimant

Kaiho, sworn, say he knows the land of claimant. It is a mooaina called Mookalu in the ili Mookahi, Waikiki, Oahu. It consists of 1 piece of lois, land & Apana 2, 4 house lot in Ponahakeone in Hamohamo, Waikiki, Oahu.

Apana 1 is bounded:
Mauka by the land of Kuewa
Kekeha by the land of Kaukau
Makai by the land of Peleuli
Honolulu by the land of Kahakai.

Apana 2 is bounded:
Mauka by the coconuts in Hamohamo
Kekaha by house lot of Paku
Makai by sea shore
Honolulu by house lot of Kauaohilo

Claimant received his land from Peleuli in the time of Kaahumanu & has held it in quiet until this time.

[Award 2027; R.P. 2575; Hamohamo Waikiki Kona; 1 ap.; .25 Ac.; Pau Waikiki Kona; 1 ap.; .55 Acs]

Land Commission Award 02843

No. 2843, Kaanaana, Waikiki, Oahu, January 11, 1848

N.R. 660-661v3

To the Land Commissioners, Greetings: I hereby state my claim for land at Hamohamo in Waikiki. There is one lo`i and also a house lot. I got these places in the year 1839. In the year 1847 two lo`i were taken by Kapaakea and have not been returned until this time. There is also a kula of mine.

Farewell to you all,

KAANAANA X

[Award 2843; R.P. 6484; Hamohamo Waikiki Kona; 2 ap.; .73 Ac.]

Land Commission Award 08452*O

No. 8452*O, Keohokalole, Waikiki, Oahu, February 5, 1848
N.R. 567-568v5

I, the one whose name is below, hereby state my claims in my lands to enter in the lands of the Mo`i. These are things done by my own hands, with my people.

At Waiomao, one orange tree and my cultivated valley, an `Ili in Waikiki, with seven lo`i.
At Kapiwai are two mala of coffee and one mala of lauhala, one lo`i, and also a cultivated lot.
This in an `Ili in the Ahupua`a of Honolulu, Island of Oahu.
At Makua, on the Island of Oahu, one orange tree.

At Aamakao, an Ahupua`a on the Island of Hawaii, is one lo`i, and a house lot and an orange tree.
In the District of Kau, Ahupua`a of Wailau, is a house lot in the land.
In the Ahupua`a of Kaalaiki is a lot like that /in Wailau/. These are on the Island of Hawaii.

At Lahaina, in Kuhua Ahupua`a, is a mala of lauhala.

At Honouliwai, an Ahupua`a on the Island of Molokai are two orange trees.

At Kula, Island of Maui, Keokea Ahupua`a, there are three small mala of sweet potatoes and one mala of taro, made by our own hands, not by /those of/ the /people of the/ land.
At Kooka, an Ahupua`a in Lahaina, are four coconut trees and a single coconut tree at the shore in the lot of Kualaula, in Kiika, a /total of/ five coconut trees, and some kou trees at Pahoa, which have not been counted, also a hala clump is there, at the seashore.
I am with aloha, respectfully,
KEOHOKALOLE, who affirms this is my name, signed by Z. Kaauwai

F.T. 573v3
No. 8452, Keohokalole

Awahua, sworn, says he knows the House lots claimed by Keohokalole at Kaawaloa, Hawaii. The first one is fenced all round with a stone wall.

It is bounded:
Makai by the sea shore
On Kailua side by the Government land
Mauka by the land of Kahaku and Awahua
and on the other side by the road.

Claimant derived this lot from her ancestors, who held it from very ancient times. There is a stone house and several grass houses in it, belonging to claimant, besides a Tomb.

The second Lot is called "Aeoili" and is fenced all round.
It is bounded:
Makai by Government land
On Kailua side by the same
Mauka the same
On the side next the Pali by the Road.

Claimant derived this lot from her ancestor, who held it from olden times.

Witness knows the three House Lots in Kealakekua claimed by Keohokalole. The first Lot is called "Kulou" and is fenced in.

It is bounded:
Makai by the Sea beach
Kaawaloa side by Government land
Mauka by the Road
South Kona side by a lot belonging to T. Cummings.

The second Lot is called "Kaahaloa" it is enclosed all round, and [is] bounded on:
Kona Hema by a lot belonging to T. Cummings
Mauka by the lot of Nakoko
North Kona by an old Heiau
Makai by the Road.

The third Lot is called "Hailokoalii" and is bounded on:
The south Kona side by an old Heiau
Mauka by a Government Lot & the lot of Ialua
Makai by the Sea Beach
On the other side by a pali.

Claimant inherited these Lots from her ancestors by the mother's side, who possessed them from ancient times.

Kekaalua, sworn, says he knows there lots perfectly & confirms in full the testimony of Awahua.

N.T. 326-327v10
No. 8452, A. Keohokalole; K. Kapaakea

To His Highness, John Young, Minister of Interior
Greetings:
This is to inform you and the Privy Council of my desire to convey some of my lands for the Governments one third in the land which remain as mine. Grant me this, of course, with the approval of the Privy Council

Below is a list of the lands I wish to convey to the government.

Aapueo ahupuaa, Kula, Maui
5 Omaopio ahupuaa, Kula, Maui.
Makehu ahupuaa, Kula, Maui
Kuikuiaeo ahupuaa, Kula, Maui
2 Kailua ahupuaa, Kula, Maui
2 Pukalani ahupuaa, Kula, Maui.
Kukuiula ahupuaa, Kipahulu, Maui.
Alaakua ahupuaa, Kaupo, Maui.

Kanakau ahupuaa, Kona, Hawaii.
Kaipuhao ahupuaa, Kohala, Hawaii.
Halaula ahupuaa, Kohala, Hawaii,
Keahakea ahupuaa, Hamakua, Hawaii.
Kaioula ahupuaa, Kau, Hawaii.
2 Makahakupa ahupuaa, Kau, Hawaii.
Kouhuhuula ahupuaa, Kau, Hawaii.
Pohina ahupuaa, Kau, Hawaii.
Puhalanui ahupuaa, Kau, Hawaii.
Wiliwilinui ahupuaa, Kau, Hawaii.
2 Papohaku ahupuaa, Kau, Hawaii.

The boundaries of all of these lands above have been established.
With appreciation,
(sign) A. Keohokalole

Honolulu, Jan. 3, 1850
To Your Highness, John Young, Minister of Interior
Greetings:

Here is a list of the names of my lands which has been left for me pending for an approval of its distribution.

Kahana ahupuaa, Koolauloa, Oahu.
Hamohamo ili, Waikiki, Oahu.
Malaekahana ahupuaa, Koolauloa, Oahu.

Paeohi ahupuaa, Lahaina, Maui.
2 Koheo ahupuaa, Kula, Maui.
3 Alae ahupuaa, Kula, Maui.
2 Kealahou 3,4, ahupuaaa, Kula, Maui.
Aapueo ahupuaa, Kula, Maui.
Kamehame ahupuaa, Kula, Maui.
Kuikuiaeo ahupuaa, Kula, Maui.
Muolea, Hana, Maui.

Kealakekua, Kona, Hawaii.
Kaawaloa ahupuaa, Kona, Hawaii.
Onouli ahupuaa, Kona, Hawaii.
Keahuolu ahupuaa, Kona, Hawaii.
Pau ahupuaa, Kohala, Hawaii.
Paauhau ahupuaa, Hamakua, Hawaii.
Puna ahupuaa, Puna, Hawaii.
Keaiwa ahupuaa, Kau, Hawaii.
Kawela ahupuaa, Kau, Hawaii.

With appreciation,
A. Keohokalole,
Honolulu, Jan. 3, 1850

Resolved, that the Minister of the Interior be and is hereby authorized to transfer to the list of lands belonging to Keohokalole, Kaapuna, Kona, Hawaii, and Aapueo 2, Kula, Maui, and transfer to the Government and list one of the Alae's in Kula, Maui, in lieu of Aapueo 2, sold by Kapaakea through mistake.

By order of Privy Council
December 22, 1850
Resolved, that the Government shall accept the division of lands of the chiefs as made by them, and those laid off for the Government shall be the government third of their lands.
By order of the King and Council
August 27th, 1850

I hereby certify the foregoing to be true copies of the original documents now on file in this Department.
(sign) A.G. Thruston, Chief Clerk, Interior Department
November 9th, 1853

[Award 8452; (Oahu) R.P. 5616; Malaekahana Koolauloa; 1 ap.; 3280 Acs; R.P. 5616; Kapiwai Pauoa; 1 ap.; 10.5 Acs; R.P. 5588; Hamohamo Waikiki; 3 ap.; 99.68 Acs; Land Patent 8330; Hamohamo Waikiki; 3 ap.; 2.24 Acs; R.P. 4387; Kahana Koolauloa; 1 ap.; 5050 Acs (ahupuaa); (Maui); R.P. 4388; 1 ap. Aapueo Kula Ahupuaa; Alae 3 Kula 1 ap. (ahupuaa), Kamehame Kula, R.P. 4388 & 7453; Kealahou 3-4 Kula; R.P. 4388 & 7453; Koheo 2 Kula Ahupuaa Ap. 19; R.P. 4388; Kukuiaeo Kula; Muolea Hana; 1 ap.; ahupua`a; Paeohi Lahaina; Kukuiokaea Kula Ahupuaa Ap. 7; (Hawaii): Kealakekua S. Kona R.P. 7533 & 3607; Honohina Hilo R.P. 4386 & 7693; Kaawaloa S Kona R.P. 7532 & 4386, & 4385; Onouli S Kona R.P. 4386 & 7146; Keahuolo N. Kona; R.P. 6886; Paauhau Hamakua; Land Patent 8123; Pau N. Kohala; Land Patent 8083; Puua Puna R.P. 7788; Kawela Kau R.P. 6886; Keaiwa Kau; See Award MA 3 for Hamoa Hana award]

Land Commission Award 10677

No. 10677, Pupuka

N.R. 576v4

Greetings to you, kaulakaauwai: Here is my little letter of explanation to you concerning my lo`is here at Kukahi. There is one taro lo`i, one weed-grown lo`I, also a pond, and a kula. The name of it all is Kalihi.

PUPUKA

F.T. 476-477v14

No. 10677, Pupuka, Claimant, Deceased, Paku, heir

Palaualelo, sworn, say[s] he is the konohiki of claimant’s land. It contains 3 lois, 3 auwai in Mookahi, in Waikiki, Oahu. Apana 2. A house lot in Hamohamo, Waikiki.

Apana 1 is bounded:
Mauka by the land of Kalia
Kekaha by the land of Kauko
Makai by the land of Uluoni
Honolulu by the land of Kauai

Apana 2 is bounded:
Mauka by the Uluniu
Kekaha by the house of Nuewa
Makai by the sea shore of Hamohamo kai
Honolulu by the House of Nae.

Claimant received the land from me in the time of Kaahumanu & has held it in quiet ever since.

Naohe, sworn, says the above testimony is true & his own is like it.

[Award 10677; R.P. 4631; Kamookahi Waikiki; 1 ap.; .43 Ac]

Appendix B Consultation with Cultural Descendants of Waikīkī

November 18, 2010

Mr. XX

Subject: Notification to Previously Recognized Lineal and/or Cultural Descendants of Waikīkī of the Discovery of *Iwi Kupūna* During Archaeological Inventory Survey Fieldwork At St. Augustine-by-the-Sea Church, Hamohamo, Waikīkī

Aloha Mr. XX:

St. Augustine-by-the-Sea Church [Hamohamo, Waikīkī Ahupua‘a, Honolulu (Kona) District, Island of O‘ahu, TMK [1]-2-6-26:012 & 15] is moving forward with a Master Plan project including planning for the construction of a new small museum honoring Saint Damien in the *makai/‘ewa* portion of the Church property fronting Kalākaua Avenue and construction of a new Parish Hall in the *mauka* portion of the Church lands.

During the course of an archaeological inventory survey, two intact human burials (and another find of a few human bones in a disturbed context) were identified within the St. Augustine-by-the-Sea Church property under the central portion of the footprint of the proposed Saint Damien Museum under what of long-standing has been a drive-way to Kalākaua Avenue (see attached Figures 1 & 2). The burials remain in place and traffic over the burials has been stopped.

In consultation with the State Historic Preservation Division and the O‘ahu Island Burial Council, St. Augustine-by-the-Sea Church seeks to reach out to all previously recognized lineal and or cultural descendants of Waikīkī for the purposes of:

- Making you aware of this discovery,
- If you feel this matter is your *kuleana*, urging you to consider contacting Phyllis “Coochie” Cayan at the State Historic Preservation Division (SHPD), located at the Kākuhihewa Building, 601 Kamōkila Blvd., Suite 555, Kapolei, Hawai‘i, 96707 [tel. 808-692-8015; fax 808-692-8020] to present information regarding appropriate treatment of the unmarked human remains and file descendancy claim forms and/or provide information to SHPD adequately demonstrating lineal or cultural descent from these specific burials or cultural descent from ancestors buried in the vicinity of this area.

A legal burial notice summarizing the find and the request for concerned parties to come forward within thirty days has been published in the *Star Advertiser* (Figure 3) on November 10, 12, and 14, 2010 and will also be published an upcoming edition of *Ka Wai Ola o OHA*.

We take this issue very seriously and have made no final decisions. If you wish to file a claim as a lineal or cultural descendant, please contact Ms. Cayan at the SHPD directly in this regard. Any written comments received by the Church will be shared verbatim with the O‘ahu Island Burial Council and the State Historic Preservation Division.

Mahalo for your consideration of this matter.

Aloha.

Father Lane Akiona

Figure 26. Text for consultation letter with Cultural Descendants of Waikīkī (11/18/2010)

Table 5. List of Previously Recognized Waikīkī Descendants Initially Consulted

CLAIMANT'S NAME
Ahlo, Charles
Arcalas, Cara
Ayau, Eddie
Bates, Cline
Bates, Ke`ala
Battle, Cherie Kahealani Keohokalole
Del Toro, Benjamin
Del Toro, Daniel
Del Toro, Rachel
Del Toro, Samuel
Diamond, A. Van Horn
Gomes, Phoebe
Gomes, Robin
Gora, Amelia K.
Grace, Nadine
Harris, Cy K.
Hatchie, Andrew
Hukiku, Clarence Moses
Kaleikini, Ali`ikaua
Kaleikini. Kala
Kaleikini, No`eau
Kaleikini, Kaanohi Paulette
Kaleikini, Tuahine
Keana'aina, Betty
Keana'aina, Kihei
Keana'aina, Luther
Keana'aina, Michelle
Keana'aina, Noelani
Keana'aina, Regina
Keana'aina, Vicky
Keana'aina, Wilsam
Kekaula, Mary K.
Keli`inoi, Kalahikiola
Keli`inoi, Moani
Keli`ipa`akaua, Chase
Keli`ipa`akaua, Justin
Keohokalole, Adrian Kealoha
Keohokalole, Dennis Ka`imina`auao
Keohokalole, E. Emalia
Keohokalole, James Hoapili
Keohokalole, Jeanine Leikeonaona
Keohokalole, Joseph Moses Keaweaheulu
Keohokalole, Lori Lani
Kini, Debbie Norman

CLAIMANT'S NAME
Kini, Nalani
Koko, Kanaloa
Kuhea, Kealoha
Kuloloio, Manuel
Kuloloio, Manuel
Lew, Haumea
Lopes, Puahone Kini
Lopes, Kamaha`o
Lopes, Leina`ala (Moses-Hukiku)
Lopes, Wilfred
Luka, Alika
Mamac, Violet L. Medeiros
McDonald, Ruby Keana`aina
Medeiros, David
Medeiros, Jim
Medeiros, Jacob L.
Medeiros, Jaimison K.
Medeiros, Jayla A.
Medeiros, Kareen K.
Medeiros, Lincoln K.
Medeiros, Roland
Medeiros Jr., Clarence
Medeiros Sr., Clarence
Norman, Carolyn
Norman, Eileen
Norman, Kaleo
Norman, Keli`inui
Norman, Theodore
Olds, Nalani
Papa, Jr., Richard Likeke
Pascua, Bruce H.
Rash, Regina
Roy, Corbett
Shirai, Jacqueline
Shirai, Jr., Thomas T.
Suzuki, Ashley
Suzuki, Kimberly
Takaki, Miles
Takaki, Moses
Takaki, Tracy
Takizawa, Lorna Medeiros
Theone, Nicole Gulia
Yokooji, Dayleen

Public Notice | Public Notice

PUBLIC NOTIICE

NOTICE TO INTERESTED PARTIES IS HEREBY GIVEN that, during the course of an archaeological inventory survey, Cultural Surveys Hawai'i, Inc. identified two human burials within the St. Augustine-by-the-Sea Church property, Hamohamo, Waikiki Ahupua'a, Honolulu (Kona) District, Island of O'ahu, TMK [1]-2-6-26:012

The landowner is Roman Catholic Church [contact: Father Lane Akiona, 923-7024, 130 'Ohua Avenue Honolulu, Hawaii 96815. email - staugustinebythesea@gmail.com].

The Tax Map Key plat map indicates the burials were within Land Commission Award (LCA) 1446 granted to Na'a. Background research indicates that during the *Mahele* these lands were awarded to Ana Keohokalole and that LCA 8452 granted to Ana Keohokalole, LCA 2027 to Palaua-lelo, and LCA 10677 to Pupuka are in the immediate vicinity.

Following the procedures of Hawai'i Revised Statutes (HRS) Chapter 6E-43, and Hawai'i Administrative Rules (HAR) Chapter 13-300, the burial features are believed to be over 50 years old and most likely Native Hawaiian. The burial features have been assigned State Inventory of Historic Properties (SIHP) # 50-80-14- 7136.

The landowner would prefer to keep all burials associated with 50-80-14-7136 within the Church property but seeks to explore re-location to an on-site preserve. The decision to preserve in place or relocate these previously identified human remains shall be made by the O'ahu Island Burial Council and the SHPD in consultation with any recognized lineal and/or cultural descendants, per the requirements of HAR Chapter 13-300-33. The remains' proper treatment shall occur in accordance with HAR Chapter 13-300-38. A burial treatment plan is currently being prepared by Cultural Surveys Hawai'i, Inc. [P.O. Box 1114, Kailua, HI 96724; tel. 808-262-9972; fax 808-262-4950].

SHPD is requesting persons having any knowledge of the identity or history of these human burials to immediately contact Phyllis Coochie Cayan at SHPD, located at the Kakuhihewa Building, 601 Kamokila Blvd., Suite 555, Kapolei, Hawai'i, 96707 [tel. 808-692-8015; fax 808-692-8020] to present information regarding appropriate treatment of the unmarked human remains. All interested parties should respond within thirty days of this notice and file descendancy claim forms and/or provide information to SHPD adequately demonstrating lineal or cultural descent from these specific burials or cultural descent from ancestors buried in the vicinity of this area.

(SA255495 11/10, 11/12, 11/14/10)

Figure 27. Burial Notice published in the *Star-Advertiser* 11/10/2010, 11/12/2010 & 11/14/2010

32 'ianuali2011

NO KA ILINA
BURIAL NOTICES

WAIKĪKĪ AHUPUA'A

NOTICE TO INTERESTED PARTIES IS HEREBY GIVEN that, during the course of an archaeological inventory survey, Cultural Surveys Hawai'i Inc. identified human burials within the St. Augustine-by-the-Sea Church property, Hamohamo, Waikīkī Ahupua'a, Honolulu (Kona) District, Island of O'ahu, TMK [1]-2-6-26:012.

The landowner is Roman Catholic Church [contact: Father Lane Akiona, 923-7024, 130 'Ōhua Ave., Honolulu, HI 96815; email, staugustinebythesea@gmail.com].

The Tax Map Key plat map indicates the burials were within Land Commission Award (LCA) 1446 granted to Na'a. Background research indicates that during the *Māhele* these lands were awarded to Ana Keohokālole and that LCA 8452 granted to Ana Keohokālole, LCA 2027 to Palaua-lelo, and LCA 10677 to Pupuka are in the immediate vicinity.

Following the procedures of Hawai'i Revised Statutes (HRS) Chapter 6E-43, and Hawai'i Administrative Rules (HAR) Chapter 13-300, the burial features are believed to be over 50 years old and most likely Native Hawaiian. The burial features have been assigned State Inventory of Historic Properties (SIHP) # 50-80-14-7136.

The landowner would prefer to keep all burials associated with 50-80-14-7136 within the Church property but is considering relocation. However, the decision to preserve in place or relocate these previously identified human remains shall be made by the O'ahu Island Burial Council and the SHPD in consultation with any recognized lineal and/or cultural descendants, per the requirements of HAR Chapter 13-300-33. The remains' proper treatment shall occur in accordance with HAR Chapter 13-300-38. A burial treatment plan is currently being prepared by Cultural Surveys Hawai'i Inc. [P.O. Box 1114, Kailua, HI 96724; tel. 808-262-9972; fax 808-262-4950].

SHPD is requesting persons having any knowledge of the identity or history of these human burials to immediately contact Phyllis Coochie Cayan at SHPD, located at the Kākuhihewa Building, 601 Kamōkila Blvd., Suite 555, Kapolei, HI 96707 [tel. 808-692-8015; fax 808-692-8020] to present information regarding appropriate treatment of the unmarked human remains. All interested parties should respond within 30 days of this notice and file descendancy claim forms and/or provide information to SHPD adequately demonstrating lineal or cultural descent from these specific burials or cultural descent from ancestors buried in the vicinity of this area.

KŌLOA AHUPUA'A

All persons having information concerning potential unmarked burials on a roughly 66-acre property (TMK:4-2-8-14:001) in Kōloa Ahupua'a, Kōloa District, Island of Kaua'i are hereby requested to contact Dr. Bob Rechtman, Rechtman Consulting LLC (808) 969-6066, 507A E. Lanikaula St., Hilo, HI 96720, and/or Ms. Phyllis Coochie Cayan, DLNR-SHPD Burial Sites Program (808) 692-8015, 601 Kamokila Blvd. Room 555, Kapolei, HI 96707.

Figure 28. Burial Notice published in January 2011 edition of *Ka Wai Ola o OHA*

St. Augustine Catholic Church

With the servant leadership of the Congregation of the Sacred Hearts of Jesus and Mary since 1854

January 21, 2011

Subject: St. Augustine-by-the-Sea Church Master Plan Project
Notification of Consultation Meeting with Previously Recognized Lineal and/or Cultural Descendants of Waikīkī for the Discovery of *Iwi Kupūna* at St. Augustine-by-the-Sea Church, Hamohamo, Waikīkī

Aloha Mr. XX:

St. Augustine-by-the-Sea Church [Hamohamo, Waikīkī Ahupua‘a, Honolulu (Kona) District, Island of O‘ahu, TMK [1]-2-6-26:012 & 15] has long been associated with a responsibility to *mālama* the legacy and relics of our beloved St. Damien. This responsibility has caused us to consider how we manage the physical structure of our church, and we have been working on a new Master Plan for St. Augustine that will guide our future and allow us to realize a number of our goals. Foremost among the improvements we hope to construct are a new small museum honoring Saint Damien in the *makai/'ewa* portion of the Church property fronting Kalākaua Avenue and a new Parish Hall in the *mauka* portion of the Church's property.

During the course of an archaeological inventory survey that we needed to prepare in order to support land use approvals for the Master Plan, two intact human burials (and another find of a few human bones in a disturbed context) were identified within the St. Augustine-by-the-Sea Church property under the central portion of the footprint of the proposed Saint Damien Museum under what has been a drive-way access to Kalākaua Avenue for many years. The burials now remain in-place and traffic over the burials has been stopped.

In coordination with the State Historic Preservation Division of the Department of Land and Natural Resources, and the O‘ahu Island Burial Council, St. Augustine-by-the-Sea Church seeks to reach out to previously recognized lineal and/or cultural descendants of Waikīkī to consult with them regarding appropriate treatment of the human remains in relation to the proposed project. A meeting to discuss this has been scheduled as indicated below, and we are seeking your *mana'o*.

Tuesday, February 1, 2011
6:30 p.m. to 8:00 p.m.
St. Augustine-by-the-Sea Church (Parish Hall)
130 ‘Ōhua Avenue
Honolulu, Hawaii 96815
Phone: (808) 923-7024

We look forward to your participation in this consultation meeting. If you have any questions, please contact me at the number listed above.

Mahalo for your consideration of this matter.

Aloha.

Father Lane Akiona

130 ‘Ōhua Avenue, Honolulu, HI 96815
Tel: (808) 923-7024 Fax: (808) 922-4086
www.staugustinebythesea.org
staugustinebythesea@gmail.com

Figure 29. January 27, 2011 outreach letter

St. Augustine Catholic Church

With the servant leadership of the Congregation of the Sacred Hearts of Jesus and Mary since 1854

April 7, 2011

Ms. Phyllis Coochie Cayan
State Historic Preservation Division
Room 555, Kākuhihewa Building
601 Kamōkila Blvd.
Kapolei Hawaii 96707

Subject: St. Augustine-by-the-Sea Church Master Plan Project
Notification of Consultation Meeting with Previously Recognized Lineal and/or Cultural Descendants of Waikīkī for the Discovery of *Iwi Kupūna* at St. Augustine-by-the-Sea Church, Hamohamo, Waikīkī

Aloha Coochie Cayan:

St. Augustine-by-the-Sea Church [Hamohamo, Waikīkī Ahupua‘a, Honolulu (Kona) District, Island of O‘ahu, TMK [1]-2-6-26:012 & 15] has long been associated with a responsibility to *mālama* the legacy and relics of our beloved St. Damien. This responsibility has caused us to consider how we manage the physical structure of our church, and we have been working on a new Master Plan for St. Augustine that will guide our future and allow us to realize a number of our goals. Foremost among the improvements we hope to construct are a new small museum honoring Saint Damien in the *makai/'ewa* portion of the Church property fronting Kalākaua Avenue and a new Parish Hall in the *mauka* portion of the Church's property.

During the course of an archaeological inventory survey that we needed to prepare in order to support land use approvals for the Master Plan, two intact human burials (and another find of a few human bones in a disturbed context) were identified within the St. Augustine-by-the-Sea Church property under the central portion of the footprint of the proposed Saint Damien Museum under what has been a drive-way access to Kalākaua Avenue for many years. The burials now remain in-place and traffic over the burials has been stopped.

In coordination with the State Historic Preservation Division of the Department of Land and Natural Resources, and the O‘ahu Island Burial Council, St. Augustine-by-the-Sea Church seeks to reach out to previously recognized lineal and/or cultural descendants of Waikīkī to consult with them regarding appropriate treatment of the human remains in relation to the proposed project. A meeting to discuss this has been scheduled as indicated below, and we are seeking your *mana'o*.

Monday, April 18, 2011
6:30 p.m. to 8:00 p.m.
St. Augustine-by-the-Sea Church (Parish Hall)
130 ‘Ōhua Avenue
Honolulu, Hawaii 96815
Phone: (808) 923-7024

We look forward to your participation in this consultation meeting. If you have any questions, please contact me at the number listed above.

Mahalo for your consideration of this matter.

Aloha.

Father Lane Akiona

130 ‘Ōhua Avenue, Honolulu, HI 96815
Tel: (808) 923-7024 Fax: (808) 922-4086
www.staugustinebythesea.org
staugustinebythesea@gmail.com

Figure 30. April 7 2011 outreach letter

LINDA LINGLE
GOVERNOR OF HAWAII

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

RUSSELL Y. TSUJI
ACTING FIRST DEPUTY

LENORE N. OHYE
ACTING DEPUTY DIRECTOR - WATER

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

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

MEMORANDUM

November 23, 2010

LOG NO: 2010.3082
DOC NO: 1011AJ10

To: All Council Members, O‘ahu Island Burial Council

From: Phyllis Coochie Cayan, History and Culture Branch Chief

Subject: Chapter 6E-43 Historic Preservation Review –
Departments recommendation to recognize the applicants below as Cultural Descendants to Unidentified Native Hawaiian burials in the Ili of Hamohamo, Waikiki Ahupua‘a, Kona District, Island of O‘ahu
TMK (1) 2-6-26: 012; 015

For the purpose of establishing and substantiating cultural descent claim to unidentified Native Hawaiian burials located at Hamohamo, Waikiki and located in the above parcel; the following applicants have submitted genealogical information to the State Historic Preservation Division (SHPD) for assessment and verification pursuant to the Hawai‘i Administrative Rules (HAR) 13-300-35;

1. Paulette Kaanohi Kaleikini
2. Moani Kaleikini Soares
3. Tuahine Kaleikini
4. Kala Kaleikini
5. Kalahikiola Keliinoi
6. Kilinahe Keliinoi
7. Aliikaua Kaleikini
8. No‘eau Kaleikini
9. Haloa Kaleikini
10. Mahiaimoku Kaleikini
11. Moehonua Kaleikini

The applicant has established adequate lineage to the Keaweamahi family who once resided in the district of Kona, O‘ahu. The aforementioned applicants have been formally recognized by the OIBC as Cultural Descendants to iwikupuna located at the WALLMART property; therefore, the department recommends that the Hawai‘i Island Burial Council (HIBC) recognizes Ka‘anohi Kaleikini, Moani Kaleikini Soares, Tuahine Kaleikini, Kala Kaleikini, Kalahikiola Keliinoi, Kilinahe Keliinoi, Aliikaua Kaleikini, Noeau Kaleikini, Haloa Kaleikini, Mahiaimoku Kaleikini, and Moehonua Kaleikini as Cultural Descendants to the unidentified Native Hawaiian burials located on TMK (1) 2-6-026: 012; 015.

Figure 31. Cultural Descendants of the Saint Augustine-by-the-Sea burials recognized by the SHPD and the OIBC at the March 2011 OIBC meeting – all consulted by mail

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APPENDIX D

Engineering Reports

APPENDIX D-1

Utilities Report
September 2010

Prepared By:
Sam O. Hirota, Inc.

Utilities Report

St. Augustine by the Sea Church
September 1, 2010
Tax Map Key: 2-6-026:012 & 015

Water

The Saint Augustine by the Sea Church site is currently serviced by two water meters (WM): parcel 15 is serviced by a 1.5" meter on Kealohilani Avenue, and parcel 12 is serviced by a 1.5" meter on Ohua Avenue.

Kealohilani WM:

Under existing conditions, the parish hall building with a soup kitchen (parcel 15) produces a water demand of 38 gallons per minute (GPM). This demand is based on 81.5 total fixture units throughout the existing building.

Under proposed conditions, the renovated parish hall (to replace the existing building) will produce a water demand of 31 GPM, which is based on 57 total fixture units. There is a reduction in water demand, and the existing meter is well under its 100 GPM capacity, therefore the existing water meter is adequate under proposed conditions.

Ohua WM:

Under existing conditions, the church and rectory buildings (parcel 12) produce a water demand of 35 GPM. This demand is based on 70 total fixture units between the two buildings.

Under proposed conditions, the church, rectory, and the Father Damien museum will produce a demand of 44 GPM, which is based on 103 total fixture units. According to the Board of Water Supply table titled "How to Size a Water Line Based on Fixture Units", a 1.5" water meter can handle up to 100 GPM. Therefore, an increase in water meter size is not warranted.

Proposed Consumption:

The redeveloped parish hall (9,000 square feet(SF)) & museum (5,500 SF) are classified as commercial/residential mix, based on the Water System Standards, dated 2002, Table 100-18, with an average daily demand of 120 gallons/ 1,000 SF. The existing rectory building (4 units) is classified as Multi-Family Low Rise with and average daily demand of 400 GPD/unit. The calculated average daily demand for the proposed improvement is 3,340 GPD. Actual quantities shall be determined at the time of building permit submittal.

Sewer

The Saint Augustine by the Sea Church site is currently serviced by four sewer laterals: parcel 15 is serviced by a lateral on Kealohilani Ave, and parcel 12 is serviced by three laterals on Ohua Ave.

Kealohilani Ave Lateral:

The renovated parish hall will replace the existing parish hall building. Under proposed conditions, the parish hall will still consist of the soup kitchen and the same number of

employees but there will be no dormitories. The parish hall will see a decrease in wastewater flows, from 2,390 gallons per day (GPD) to 2,150 GPD. Therefore, the existing sewer lateral is adequate under proposed conditions.

Ohua Ave Laterals:

The wastewater flows from the church shall remain unchanged. Under the proposed condition the rectory building will have an increase of three residents. The rectory building will see and increase of 240 GPD. The proposed Father Damien museum will produce an additional 325 GPD, that will be serviced by the existing lateral that services the rectory. Therefore, the three existing laterals on Ohua Ave will increase by 565 GPD.

St Augustine by the Sea Church **9/1/2010**

Fixture Unit Computations

Existing Conditions

Church

Fixture	Quantity	Fixture Unit Demand	Total Units
Water Closet 1.6 GPF Valve	4	5.0	20.0
Lavatory	4	1.0	4.0
Util/Kit Sink	3	1.5	4.5
		Total	**28.5**

Rectory

Fixture	Quantity	Fixture Unit Demand	Total Units
Water Closet 1.6 GPF Valve	4	5.0	20.0
Lavatory	4	1.0	4.0
Util/Kit Sink	2	1.5	3.0
Shower/tub	3	3.5	10.5
Washer	1	4.0	4.0
		Total	**41.5**

Parish Hall

Fixture	Quantity	Fixture Unit Demand	Total Units
Water Closet 1.6 GPF Valve	8	5.0	40.0
Lavatory	8	1.0	8.0
Util/Kit Sink	3	1.5	4.5
Shower/tub	7	3.5	24.5
Hose Bibs	3	2.5, then 1.0 for ea addtn'l	4.5
		Total	**81.5**

Total Existing	**151.5**

Proposed Conditions

Church	**no change**	**28.5**
Rectory	**no change**	**41.5**

Parish Hall (to replace existing Parish Hall)

Fixture	Quantity	Fixture Unit Demand	Total Units
Water Closet 1.6 GPF Valve	7	5.0	35.0
Urinal	1	5.0	5.0
Lavatory	4	1.0	4.0
Util/Kit Sink	5	1.5	7.5
Drinking Fountain	2	0.5	1.0
Hose Bibs	3	2.5, then 1.0 for ea addtn'l	4.5
		Total	**57.0**

Damien Museum

Fixture	Quantity	Fixture Unit Demand	Total Units
Water Closet 1.6 GPF Valve	4	5.0	20.0
Urinal	1	5.0	5.0
Lavatory	2	1.0	2.0
Util/Kit Sink	1	1.5	1.5
Drinking Fountain	2	0.5	1.0
Hose Bibs	2	2.5, then 1.0 for ea addtn'l	3.5
		Total	**33.0**

Total Proposed	**160.0**

Ohua Ave WM (Church + Museum + Rectory)	Fixture Units	GPM	Required WM Size	Existing WM Size
Existing	70.0	35	1"	1.5"
Proposed	103.0	44	1"	

Kealohilani Ave WM (Parish Hall)	Fixture Units	GPM	Required WM Size	Existing WM Size
Existing	81.5	38	1"	1.5"
Proposed	57.0	31	1"	

SAM O. HIROTA, INC.

Wastewater Flows

Existing

Parish Hall

Employees	gpcd*	Wastewater Flow (GPD**)
6	25	150
Soup Kitchen visitors/day	gpcd	
80	25	2000
Residents		
3	80	240
		2390

Rectory

Residents		
1	80	80
		80

Proposed

Parish Hall (to replace existing Parrish Hall)

Employees	gpcd	Wastewater Flow
6	25	150
Soup Kitchen visitors/day	gpcd	
80	25	2000
		2150

Rectory

Residents		
4	80	320
		320

Museum

Employees	gpcd	Wastewater Flow
3	25	75
Visitors/day	gpcd	
50	5	250
		325

Church = no change

*gpcd = Gallons per capita per day
** GPD = Gallons per day

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APPENDIX D-2

Preliminary Drainage Report
St. Augustine-by-the-Sea Master Plan
August 2010
Revised November 02, 2011

Prepared By:
Sam O. Hirota, Inc.

PRELIMINARY DRAINAGE REPORT

SAINT AUGUSTINE BY THE SEA CHURCH
MASTER PLAN

HONOLULU, ISLAND OF OAHU, HAWAII

TMK: 2-6-026:012 & 015

AUGUST 30, 2010

Revised November 02, 2011

SAM O. HIROTA, INC.
ENGINEERS AND SURVEYORS
864 S. BERETANIA ST.
HONOLULU, HI 96813
(808)537-9971

TABLE OF CONTENTS

Project Location and Description 1

Environmental Characteristics

Topography 1
Climate 1
Geology/Soils 1

Existing Conditions

Existing Condition Hydrology 2

Proposed Conditions

Proposed Condition Hydrology 3

Potential Impacts and Mitigation
..... 5

References 5

Exhibit 1 - Location Map
Exhibit 2 - Vicinity Map
Exhibit 3 – Soils Map
Exhibit 4 - Existing Condition
Exhibit 5 - Proposed Condition

Project Location and Description

Saint Augustine by the Sea Church
Tax Map Key: 2-6-026:012 & 015
Grading Area = 1.15 Acres

This report will analyze the change in storm runoff conditions due to the proposed master plan improvements on the Saint Augustine by the Sea Church property located on the island of Oahu (see **Exhibit 1**). The existing Saint Augustine by the Sea Church site is within parcels TMK: 2-6-026:012 & 015. Currently there are three vehicle entrances to the existing site, an entrance from Kalakaua Avenue, Kealohilani Avenue and Ohua Avenue (see **Exhibit 2**). There are two pedestrian entrances located on Ohua Avenue.

Concrete masonry unit walls bound the site on the northeastern and southeastern borders of the site. The northwestern border in bound by the Foster Tower condominium building fronted by a CMU wall and concrete curb. The southern corner is bordered by a commercial building, fronted by a CMU wall. The Saint Augustine by the Sea Church, rectory building and parish hall building are located throughout the site. A parking area and roadway are located northwest of the church. An asphalt parking lot is located in the east, south-eastern corner of the property.

Environmental Characteristics

Topography

The existing grade on the parcel slopes downward in a north-eastern direction with elevations ranging from approximately 9 to 5 feet. The northern eastern end of the property slopes toward Kealohilani Avenue. The site is relatively flat with an average slope of approximately 2 percent within the existing improvements

Geology and Soils

The site is situated on the lower slopes of the Koolau Range. According to the "Soil Survey of the Island of Oahu", U.S. Department of Agriculture, Soil Conservation Service (see **Exhibit 3**), the site is primarily identified as Jaucas sand (JAc) with various percent slopes. The soil has slow to very slow runoff; water erosion hazard is slight but wind erosion is a severe hazard where vegetation has been removed.

Existing Conditions

Existing Drainage Hydrology

Concrete masonry unit walls bound the site on the northeastern and southeastern borders of the site. The northwestern border in bound by the Foster Tower condominium building fronted by a CMU wall and concrete curb. The southern corner is bordered by a commercial building, fronted by a CMU wall. (see **Exhibit 4**).

Runoff calculations are based on the City & County of Honolulu Standards using the Rational Method for a 10-year, 1-hour storm event. The existing runoff generated from the project site is 4.40 cfs. The runoff generated on the site enters the city storm drain system on Ohua Avenue. Storm runoff from the church building is captured through a series of downspouts. A portion is collected through a piped system and released into the City's storm drain system. The remaining church roof runoff is captured through downspouts and exits the site through weep holes in the curb on Ohua Avenue. Runoff from the rectory building sheet flows in an easterly direction to toward Ohua Avenue. Runoff generated by the parish hall building sheet flows in a northerly direction towards Kealohilani Avenue.

See attached calculations (**Appendix A**).

The majority of the runoff (1.67 cfs, Drain Area 1) is generated from the church's roof which is captured through a series of down spout and collected in a piped system. Additional sheet flow from the paved roadway flows in a northeasterly direction before entering a series of drain inlets in the eastern parking lot (drain area 3). A portion of churches roof runoff sheet flows towards Kalakaua Avenue.

The remainder of the runoff from the church roof (1.10 cfs, Drain Area 2) is captured through a series of downspouts and exits through weep holes in the curb on Ohua Avenue. Runoff generated by concrete walkway flows in a south-easterly direction, exiting the site on Ohua Avenue. Runoff from rectory building roof sheet flows in the southeastern direction existing the site through a pedestrian entrance.

Runoff generated within the eastern corner (Drain Area 3,0.96 cfs) sheet flows towards two drain inlets located within the parking lot. A portion of the sheet flow exits the site

through an entrance on Ohua Avenue. A CMU wall along the northeastern and a portion of the southwestern border prevent runoff from exiting the site.

Storm runoff generated by the both parish hall building roof and a portion of the paved parking area (0.43 cfs, Drain Area 4) flows in a northwesterly direction, exiting the site through the driveway on Kealohilani Avenue

Runoff generated by the remainder of the parish hall building roof (0.24 cfs, Drain Areas 5) percolates within the grassed area. Walls along the northern and western edge prevent runoff from exiting the site.

Proposed Conditions

Proposed Drainage Hydrology

Concrete masonry unit walls along the northeastern and southeastern borders of the site will remain. The Foster Tower condominium building, CMU wall and concrete curb along the northwestern border will remain. The commercial building at the southern corner will remain. The existing parish hall building will be demolished and a new parking structure/parish hall will be built. A new museum building will be will be constructed at the entrance on Kalakaua Avenue (see **Exhibit 5**). The existing Saint Augustine by the Sea Church and rectory building will remain. Landscaped areas will be added to the parking structure/parish hall entrances along Ohua Avenue and Kealohilani Avenue. The asphalt parking area between the Saint Augustine by the Sea Church and Foster Tower will be replaced with stone cut pavers and landscaping.

Runoff calculations are based on the City & County of Honolulu Standards using the Rational Method for a 10-year, 1-hour storm event. The proposed runoff generated from the project site is 4.20 cfs. Storm runoff from the church roofs will be captured through a series of downspouts and exit through weep holes in the curb on Ohua Avenue. A portion will be collected through a piped system and released into the City storm drain system. Runoff from the new museum will be captured through a roof drain system and will percolate into landscaped areas. Runoff from the new parking structure will be captured through a piped system and filtered before being released into the City storm drain system

See attached calculations (**Appendix A**).

A small amount of runoff (0.10 cfs, Drain Area 1) generally sheet flows toward Kalakaua Avenue.

The new museum runoff (0.32 cfs, Drain Area 2) will be captured through roof drains and will percolate into landscaped areas (Drain Area 4) before exiting the site on Ohua Avenue

The church roof runoff (2.05 cfs, Drain Area 3) will be captured through a series of downspouts. The eastern portion will be collected through a piped system before entering the City storm drain system. The western portion will exit the site though weep holes in the curb on Ohua Avenue. Runoff from concrete walkways will exit the site through a pedestrian entrance on Ohua Avenue. A portion of the rectory roof runoff will sheet flow and exit through another pedestrian entrance on Ohua Avenue. The remaining rectory roof runoff will percolate into a landscaped area (Drain Area 4) before exiting the site.

The runoff (0.25 cfs, Drain Area 4) generated in this area will be minimal due to landscaping. Portions of storm runoff from the new museum building and existing rectory building (Drain Areas 2 & 3) will percolate within the site before entering the city storm drain system. Additional drain inlets will be constructed and utilized as an overflow line.

Runoff (0.04 cfs, Drain area 5) will flow towards Ohua Avenue and percolate before exiting the site. The existing drain inlet will be utilized as an overflow line.

The new parking structure/parish hall runoff (1.41 cfs, Drain Area 6) will be captured through a piped system and filtered before entering the City storm drain system.

Drain areas 7 and 8 (0.03 cfs, 0.01 cfs) will flow towards Kealohilani Avenue and percolate before exiting the site. Runoff will be minimal due to increased landscaping.

Potential Impacts and Mitigation

The proposed development will potentially decrease the 10-year, 1-hour storm by about 5.00%. This is based on County Standards for Estimating Runoff. All storm runoff generated by the proposed improvements will be contained within the site. Due to the increased landscaped area, the proposed improvements will not impact the adjacent site condition, or the county storm drainage system.

References

1. "Rules Relating to Storm Drainage Standards", Department of Planning and Permitting, City and County of Honolulu, January 2000.

2. "Erosion and Sediment Control Guide for Hawaii", U.S. Department of Agriculture, Soil Conservation Service, Honolulu, Hawaii, March 1981.

3. "Soil Survey of the Island of Oahu, State of Hawaii", U.S. Department of Agriculture, Soil Conservation Service, December 1973.

4. "Rainfall-Frequency Atlas of the Hawaiian Islands", U.S. Department of Commerce, Washington, D.C., 1962

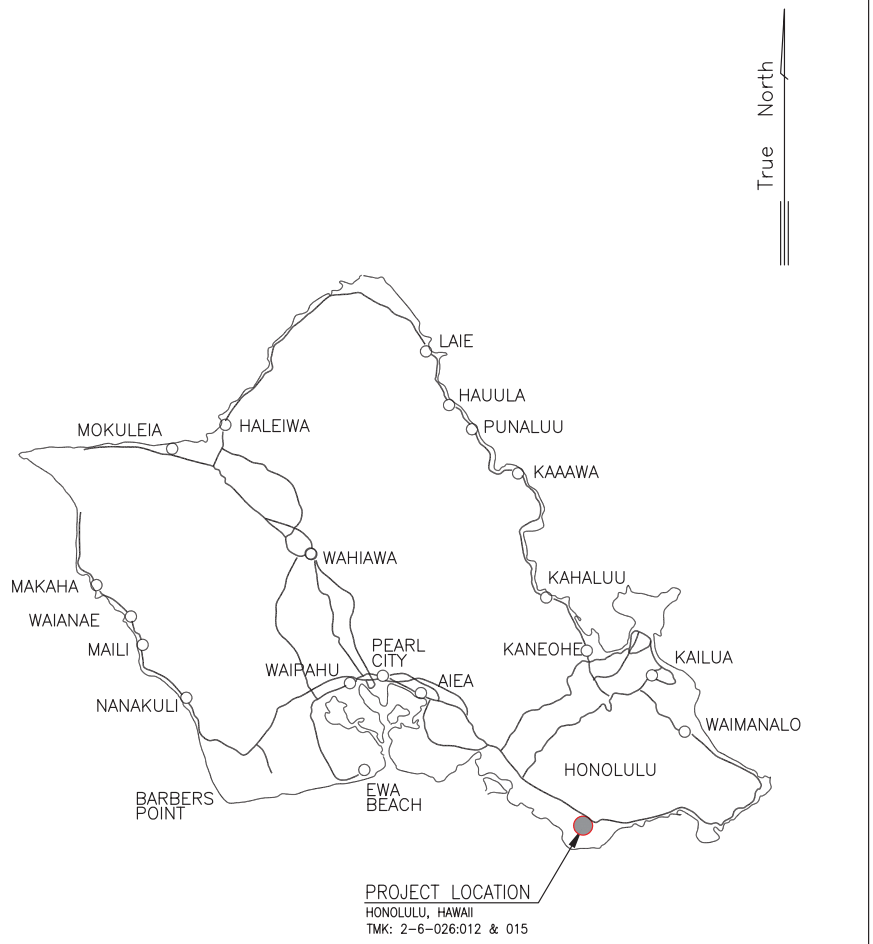

EXHIBIT 1: LOCATION MAP

NOT TO SCALE

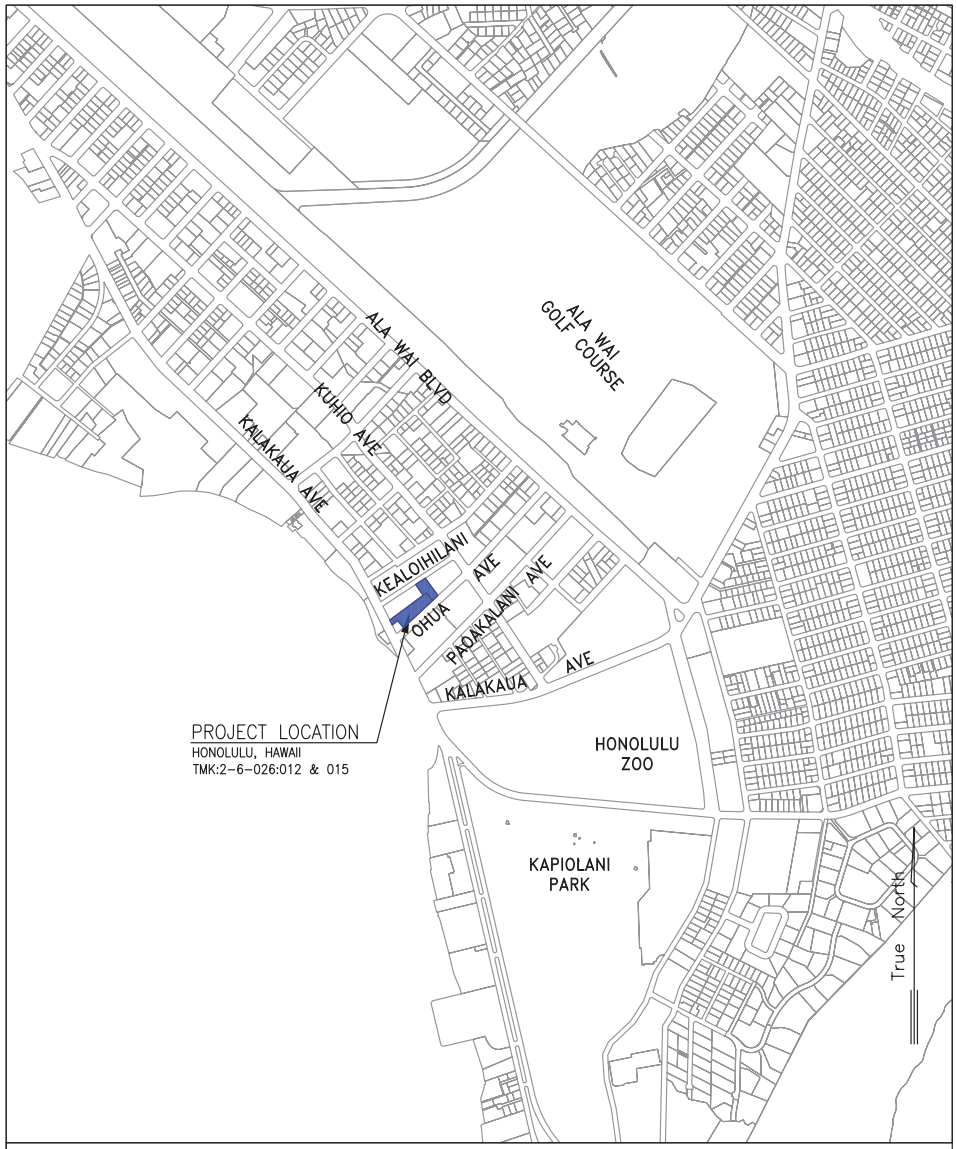

EXHIBIT 2: VICINITY MAP

NOT TO SCALE

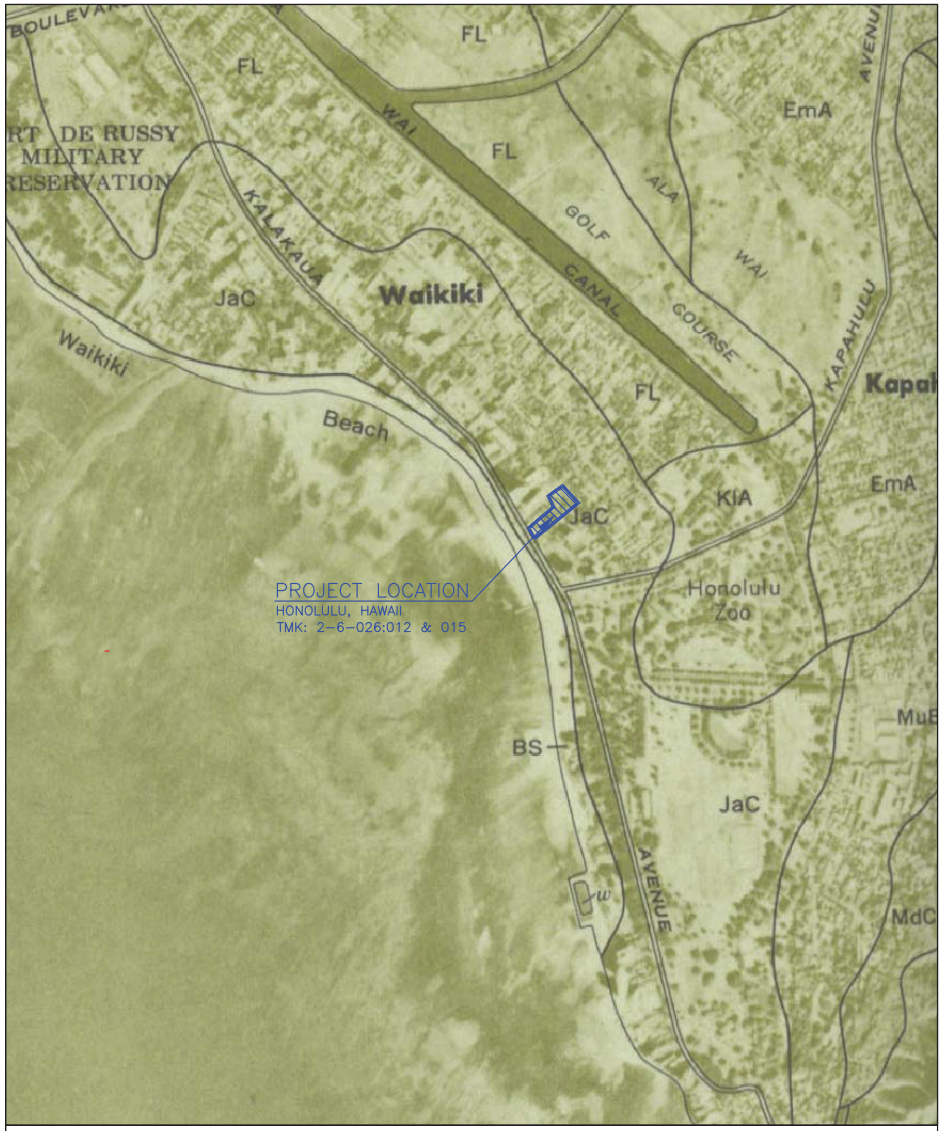

EXHIBIT 3: SOILS MAP

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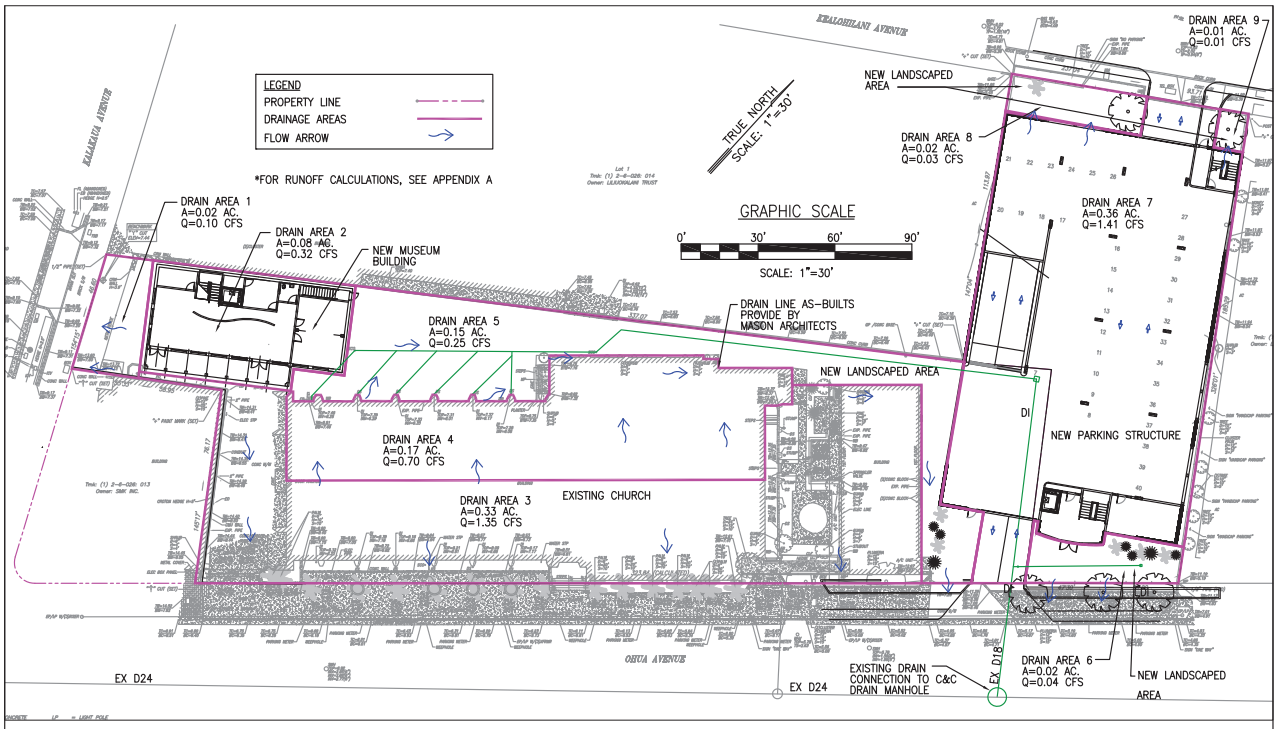


EXHIBIT 5:
PROPOSED CONDITION
SCALE: 1"=30'

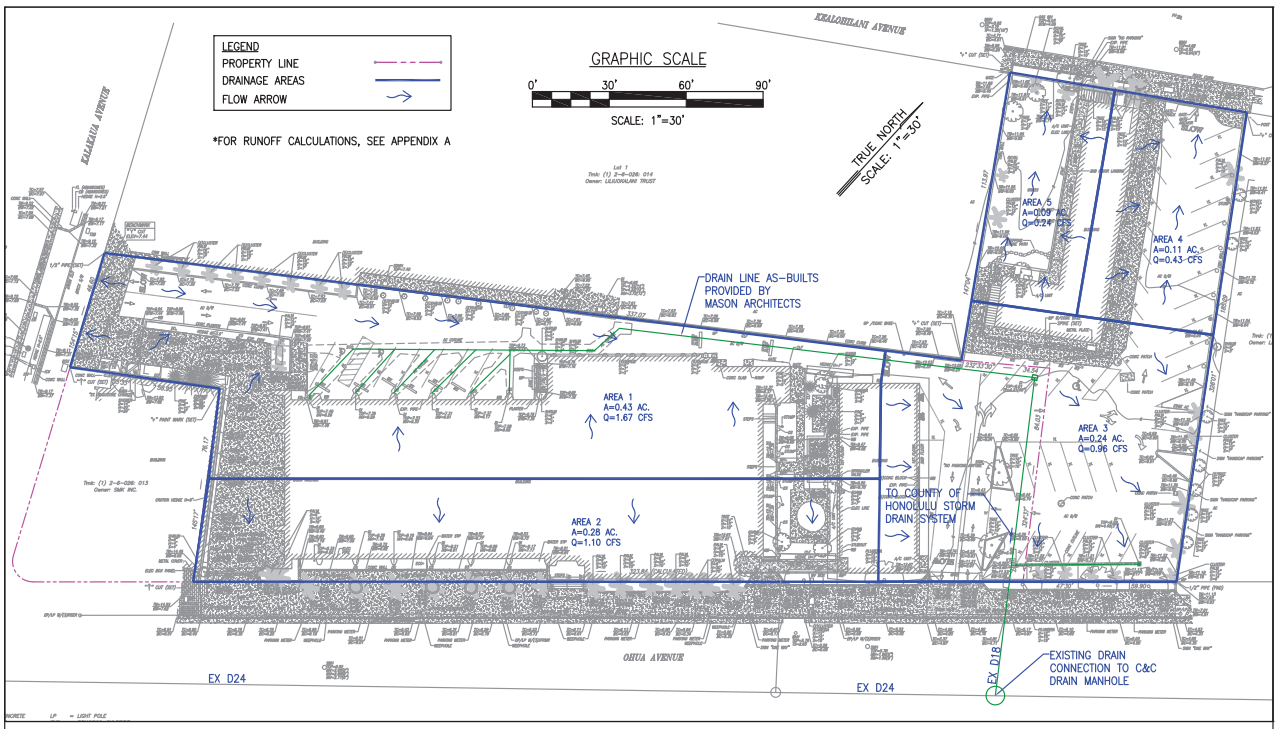


EXHIBIT 4:
EXISTING CONDITION
SCALE: 1"=30'

APPENDIX A

RUNOFF CALCULATIONS

APPENDIX A
RUNOFF CALCULATIONS

SAINT AUGUSTINE BY THE SEA CHURCH
Drainage Study
Prepared by: Sam O. Hirota Inc.

Date: November 2, 2011
SOH#100170

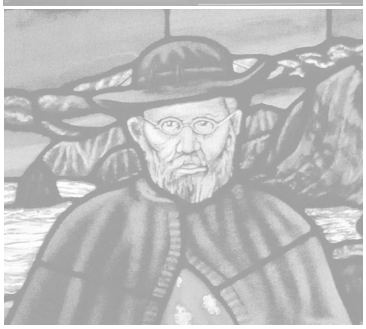
10 Year, 1 Hour

EXISTING CONDITION HYDROLOGY

AREAS	AREA (sf)	AREA (ac)	C	LENGTH (ft)	SLOPE (%)	Tc (min)	I(in)	CF	Q(cfs)
1	18595	0.43	0.85	67	2.3	10.0	2	2.30	1.67
2	12072	0.28	0.90	45	0.1	11.0	2	2.20	1.10
3	10609	0.24	0.90	81	0.0	11.0	2	2.20	0.96
4	4692	0.11	0.90	88	0.0	11.0	2	2.20	0.43
5	3925	0.09	0.60	76	0.0	11.0	2	2.20	0.24
	TOTAL	1.15						**TOTAL**	4.40

PROPOSED CONDITION HYDROLOGY

AREAS	AREA (sf)	AREA (ac)	C	LENGTH (ft)	SLOPE (%)	Tc (min)	I(in)	CF	Q(cfs)
1	1030	0.02	0.90	21	2.0	10.0	2	2.30	0.10
2	3320	0.08	0.90	30	2.5	10.0	2	2.30	0.32
3	14375	0.33	0.90	74	1.5	10.0	2	2.30	1.37
4	7405	0.17	0.90	234	0.0	10.0	2	2.30	0.70
5	6534	0.15	0.40	20	0.0	14.0	2	2.00	0.24
6	814	0.02	0.90	100	2.0	11.0	2	2.20	0.07
7	15489	0.36	0.90	16	1.0	12.0	2	2.14	1.37
8	814	0.02	0.40	16	1.0	15.0	2	2.00	0.03
9	172	0.00	0.40	16	1.0	15.0	2	2.00	0.01
	TOTAL	1.15						**TOTAL**	4.20



APPENDIX E

Traffic Report

APPENDIX E-1

Traffic Planning Support for Environmental Assessment;
St. Augustine by-the-Sea Church Master Plan
January 2012

Prepared By:
Phillip Rowell and Associates

Phillip Rowell and Associates
47-273 'D' Hui Iwa Street Kaneohe, Hawaii 96744 Phone: (808) 239-8206 FAX: (808) 239-4175 Email:prowell@hawiiantel.net

January 23, 2012

Mr. Ronald Sato
Helber Hastert & Fee Planners, Inc.
733 Bishop Street, Suite 2590
Honolulu, Hawaii 96813

Re: **Traffic Planning Support for Environmental Assessment**
St. Augustine By-the-Sea Church Master Plan
Honolulu, Hawaii

Dear Ronald:

Phillip Rowell and Associates has completed the following report relative to traffic issues associated with proposed new facilities at St. Augustine By-the-Sea Church. The report is presented in the following format:

A. Project Location and Description
B. Purpose and Objective of Study
C. Study Approach
D. Description of Existing Streets
E. Project Trip Generation
F. Existing On-Site Parking
G. Observations

A. Project Location and Description

St. Augustine By-the-Sea Church is located along the north side of Ohua Avenue east of Kalakaua Avenue in Waikiki. The northeast corner of the intersection of Ohua Avenue at Kalakaua Avenue is occupied with a commercial building containing a fast food restaurant (Burger King) and an ABC Store. The Church has frontage along Kalakaua Avenue north of this commercial building and along Ohua Avenue west of the commercial building. Pedestrians can access the Church along Ohua.

The parking lot for the Church is located east of the Church between Ohua Avenue and Kealohilani Avenue. There is a two-way driveway along Ohua Avenue and a one-way outbound driveway along Kealohilani Avenue. The parking lot has 46 stalls.

The proposed project is the construction of a new 5,500 square foot St. Damien Museum and a new 17,740 square foot multi-purpose hall.

B. Purpose and Objective of Study

The purpose of this report is to provide traffic planning support in response to traffic related comments from the Traffic Review Branch (TRB) of the Department of Planning and Permitting (DPP) and Department of Transportation Services (DTS). The comment letter from DPP is dated October 12, 2011, and the comment letter from DTS is dated October 4, 2011.

C. Study Approach

Based on our discussion and review of the comment letters from DPP and DTS, the following work tasks were followed to prepare a traffic assessment limited to addressing traffic related comments from TRB and DTS.

1. We performed a site reconnaissance to verify existing roadway cross-sections, traffic control devices, and surrounding land uses. We also identified conditions that may be affected by construction activities such as bus stops, loading zones and pedestrian crosswalks.

2. We collected existing traffic data from other sources that included traffic studies for other projects in area and data from DTS. We also conducted field observations during a weekday, a Saturday and a Sunday to identify constraints to traffic operating conditions at the intersections adjacent to the Church and driveways to the Church.

3. We performed parking use counts of the Church's parking lot on two Sundays to determine the level of usage.

4. We estimated the amount of additional traffic that the proposed actions may generate using procedures and data provided by the Institute of Transportation Engineers.

5. We prepared this letter report documenting the analyses performed and conclusions of these analyses.

D. Description of Existing Streets

Access to and egress from St. Augustine-By-the-Sea Church is via Kalakaua Avenue, Ohua Avenue and Kealohilani Avenue.

Kalakaua Avenue is a three-laned southbound major arterial. Traffic volumes were estimated from information obtained from other traffic studies for projects in the area. These studies contained 2008 peak hour traffic volumes for weekday afternoon and Saturday afternoon only. The estimated peak hour traffic volumes were 1,265 vehicles during the weekday afternoon peak hour and 1,050 vehicles during the Saturday afternoon peak hour. The peak hours are generally between 4:00 pm and 5:00 pm. The curb along the east side of Kalakaua Avenue between Ohua Avenue and Kealohilani Avenue is designated a freight loading and unloading only zone.

Ohua Avenue is a one-lane, one-way westbound street south of St. Augustine-By-the- Sea Church. The approach at Kalakaua Avenue is striped for two westbound to southbound left turn lanes. Parking is allowed along both sides of the street. Parking is metered parallel parking except for a section along the north side of Ohua Avenue between the approximate frontage of the Church and Kalakaua Avenue. This section is designated a freight loading and unloading only zone. The traffic reports for other projects in the area did not contain any traffic data for Ohua Avenue. To estimate peak hour traffic along Ohua Avenue, one-hour traffic counts were performed between 4:00 pm and 5:00 pm on a weekday (Friday) afternoon and between 4:00 pm and 5:00 pm on a Saturday afternoon. The one hour period between 4:00 pm and 5:00 pm was counted to be consistent with the traffic counts along Kalakaua Avenue noted above. The Friday afternoon peak hour traffic

volume was 230 vehicles per hour and the Saturday afternoon peak hour volume was 210 vehicles per hour.

Kealohilani Avenue is a two-lane, two-way street north of the Church. No parking is allowed along either side. Based on observation, the lanes appear less than the standard 12-foot width.

E. Project Trip Generation

Future traffic volumes generated by the project were estimated using the methodology described in the *Trip Generation Handbook*[1] and data provided in *Trip Generation*[2]. This method uses trip generation equations or rates to estimate the number of trips that the project will generate during the peak hours of the project and along the adjacent street.

The proposed action is the construction of a museum and a parish hall. The Institute of Transportation Engineers references do not provide trip generation data for these types of uses. Therefore, the number of peak hour trips that the proposed buildings will generate were estimated using the following assumptions:

1. Per the EA, the museum will have a staff of five persons that will be employees and/or volunteers and a floor area of 5,500 square feet. The number of trips that will be generated by the museum was estimated using trip generation data developed by Kaku Associates for the Santa Monica Civic Center Specific Plan Development Program. The trip generation data is based on the square footage of the museum and includes employee generated trips.

2. The parish hall will contain offices, a meeting area and an assembly area. Based on the building floor plan provided in the EA, the parish hall will contain five offices, a clerical support office and a meeting room with a total floor area of approximately 12,150 square feet. These uses are consistent with office uses. The number of trips that will be generated by these uses was estimated using trip generation rates for offices and the estimated square footage of floor area.

3. The parish hall will also contain an assembly area with an estimated floor area of 5,590 square feet. It was assumed that this assembly area will be used comparable to typical church uses and that trip generation rates based on the square footage of church uses would be applicable. Church uses included “an assembly hall or sanctuary; it may also house meeting rooms, classrooms and occasionally dining.”[3]

4. The new parish hall will contain 17,740 square feet and will replace the existing 4,700 square foot parish hall. It was assumed that uses in the new parish hall will be comparable to the existing parish hall but will have more floor area. Therefore, 74% of the trips generated by the new 17,740 square foot parish hall will be new trips. The remaining 26% of the trips are already in the traffic stream.

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[1] Institute of Transportation Engineers, *Trip Generation Handbook*, Washington, D.C., 1998, p. 7-12

[2] Institute of Transportation Engineers, *Trip Generation, 7th Edition,* Washington, D.C., 2003

[3] Institute of Transportation Engineers, *Trip Generation, 7th Edition,* Washington, D.C., 2003, p. 1002

The results of the trip generation analysis of the proposed office building is summarized as Table 1. Shown are the trip generation rates and the estimated number of peak hour trips that the parish hall and the museum will generate during weekday afternoon and Saturday afternoon peak hours.

Table 1 Trip Generation Analysis - Proposed Parish Hall

Period & Direction		Parish Hall: Office Uses (2) (LU Code 710) 12.150 TGSF (1) Trips TGSF or Percent	Parish Hall: Office Uses Trips	Parish Hall: Assembly Area (2) (LU Code 560) 5.590 TGSF Trips TGSF or Percent	Parish Hall: Assembly Area Trips	Total Trips Generated by New Parish Hall	Percent New Trips	New Trips Generated by the Parish Hall	Museum (3) 5.500 TGSF Trips TGSF or Percent	Museum Trips	Total New Trips
Weekday PM Peak Hour	Total	1.49	18	1.41	8	26	74%	19	2.38	13	32
	In	17%	3	59%	5	8		6	27%	4	10
	Out	83%	15	41%	3	18		13	73%	9	22
Saturday PM Peak Hour	Total	0.41	5	3.54	20	25		19	2.38	13	32
	In	54%	3	71%	14	17		13	27%	4	17
	Out	46%	2	29%	6	8		6	73%	9	15

Notes:
(1) TGSF = Thousand Gross Square Feet
(2) Source: Institute of Transportation Engineers, *Trip Generation 7th Edition*, Washington, D.C., 2003
(3) Source: Kaku Associates, *Civic Center Specific Plan Development Program*, May 2005

Pedestrian Traffic

It is difficult to estimate the number of pedestrians, but given the nature of the surrounding area and limited parking, it is reasonable that a significant number of trips to and from St. Augustine By-the-Sea Church will be pedestrians. Any pedestrian trips into and out of the building would result in a comparable reduction in vehicular trips. A pedestrian choosing to walk rather than driving would result in at least one less inbound vehicle trip and one less outbound vehicle trip.

F. Existing On-Site Parking

Based on our discussion, it was decided that use of the existing on-site parking lot should be estimated based on a count of the number of vehicles using the lot during the 10:00 am Sunday service as the service would have the largest attendance. A count was performed on Sunday, December 11, 2011. The parking lot was full with four vehicles double parked for a total of 50 vehicles in the parking lot. It was decided that this count may not be valid as parking along Ohua Avenue was prohibited due to the Honolulu Marathon.

A second count was performed on Sunday, December 18, 2011. The results were consistent with the previous count. The parking lot was full and there were three vehicles double parked for a total of 49 vehicles.

Lastly, during the afternoon traffic counts along Ohua Avenue, no pedestrians were observed walking to the Church and the parking lot was not full. This implies that there was no Church related parking occurring along Ohua Avenue.

G. Observations and Conclusions

During the surveys and several reconnaissances of the area, the following was observed:

1. Pedestrian traffic along Kalakaua Avenue and Ohua Avenue is heavy. Any closure of the sidewalks during construction will have a significant impact of pedestrian flow, especially along Kalakaua Avenue.

2. Vehicles consistently violated the parking restrictions along Ohua Avenue by vehicles parking in the freight loading only zones during weekday afternoon and Saturday afternoon peak periods.

3. During the weekday and Saturday afternoon peak hours, the intersection of Kalakaua Avenue at Ohua Avenue appears to operate at an acceptable level-of-service. The queues cleared every cycle observed. The queues were also relatively short, less than 10 vehicles. No queues were observed to back up beyond the entrance to the Marriott parking garage. At least two large tour buses were observed in the longer queues. This means that the driveway to the Church's parking lot is not blocked by queues from the traffic signal at Kalakaua Avenue. Since the intersection of Kalakaua Avenue at Ohua Avenue operates at an acceptable level-of-service, it appears that the intersection will also operate at an acceptable level-of-service upon completion of the proposed project.

4. Based on our observations during the traffic counts, parking use counts and reconnaissance of the adjacent streets, Sunday morning traffic along the streets adjacent to the Church (Kalakaua Avenue and Ohua Avenue) is less than either Friday or Saturday afternoon traffic.

5. Using the results of the trip generation analysis, Friday afternoon peak hour traffic along Ohua Avenue will increase from 230 to 240 vehicles per hour and Saturday afternoon peak hour traffic will increase from 208 to 225 vehicles per hour. The increases are 4.3% and 8.2%, respectively. These are relatively minor increases in peak hour traffic and would appear not to adversely impact traffic flow noticeably. These increases are east of the Church's driveway where the increases are greatest. Traffic increases at other locations will be less.

6. There are no bus stops for public transportation along Kalakaua Avenue or Ohua Avenue in the vicinity of the project.

Respectfully submitted,
PHILLIP ROWELL AND ASSOCIATES

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Principal