LĀʻIE INN REDEVELOPMENT

Lāʻie, Koʻolau Loa District, Oʻahu, Hawaiʻi

TMKs: 5-5-006:39 & 40

Final ~~Draft~~ Environmental Assessment

Applicant:

Hawaiʻi Reserves, Inc.
Lāʻie, Hawaiʻi

Prepared by:

Group 70 International, Inc.
Architecture • Planning • Interior Design • Environmental Services
925 Bethel Street, Fifth Floor
Honolulu, HI 96813

July ~~January~~ 2008

LĀʻIE INN REDEVELOPMENT

Lāʻie, Koʻolau Loa District, Oʻahu, Hawaiʻi

TMKs: 5-5-006:39 & 40

Final ~~Draft~~ Environmental Assessment

This environmental document is prepared pursuant to Chapter 200 of Title 11, Administrative Rules, Department of Health, "Environmental Impact Statement Rules"

Applicant:

Hawaiʻi Reserves, Inc.
Lāʻie, Hawaiʻi

Approving Agency:
City and County of Honolulu
Department of Planning and Permitting

Prepared by:
Group 70 International, Inc.
Architecture • Planning • Interior Design • Environmental Services
925 Bethel Street, Fifth Floor
Honolulu, HI 96813

July ~~January~~ 2008

TABLE OF CONTENTS

SECTION **PAGE**

List of Appendices iii
List of Figures iv
List of Tables v

1.0 GENERAL INFORMATION 1-1
1.1 Applicant and Action 1-1
1.2 Project Summary 1-1
1.3 Contents of the Environmental Assessment 1-2
1.4 Agencies and Organizations Consulted During the Process 1-10
1.5 Project Timetable 1-10
1.6 Anticipated Determination 1-10

2.0 DESCRIPTION OF THE PROPOSED ACTION 2-1
2.1 Purpose and Need 2-1
2.2 Market Demand 2-2
2.3 Description of Proposed Project 2-3
2.3.1 Buildings 2-6
2.3.2 Capacity 2-7
2.3.3~~2~~ Infrastructure 2-8
2.3.4~~3~~ Construction Characteristics, Including Demolition 2-10
2.3.5~~4~~ Access, Parking and Pathways 2-11
2.4 Construction Costs and Schedule 2-12
2.5 Land Use Approvals 2-12
2.5.1 Parcel Consolidation and Zoning District Boundary Amendment 2-12
2.5.2 Special Management Area Use Permit (SMP) 2-12
2.5.3 Amendment of Plan Development Resort (PD-R) Approval 2-12
2.5.4 Other Permits Required for Construction 2-12

3.0 AFFECTED ENVIRONMENT AND POTENTIAL IMPACTS 3-1
3.1 Land Ownership, Use and Regulation 3-1
3.1.1 Land Use 3-1
3.1.2 Ownership 3-1
3.1.3 Regulation 3-7
3.1.4 Potential Impacts 3-7
3.2 Physical Environment 3-8
3.2.1. Soils and Agricultural Potential 3-8
3.2.2 Topography 3-8
3.2.3 Natural Hazards 3-11
3.2.4 Potential Impacts 3-13
3.3 Water Resources 3-13
3.3.1 Surface Water and Storm Water Management 3-13
3.3.2 Groundwater 3-14

3.3.3 Potential Impacts to Water Resources 3-16
3.4 Biological Resources 3-16
3.4.1 Flora 3-16
3.4.2 Fauna 3-16
3.4.3 Potential Impacts on Biological Resources 3-16
3.5 Archeological and Cultural Resources 3-18
3.5.1 Archeological Resources 3-18
3.5.2 Cultural Resources 3-18
3.5.3 Potential Impact on Archeological and Cultural Resources 3-19
3.6 Waste Management 3-19
3.6.1 Wastewater 3-19
3.6.2 Solid Waste 3-20
3.6.3 Potential Impacts on Waste Management 3-21
3.7 Traffic and Parking 3-21
3.7.1 Traffic 3-21
3.7.2 Parking 3-22
3.7.3 Potential Impacts on Traffic and Parking 3-23
3.8 Public Use and Services 3-24
3.8.1 Beaches, Parks, and Recreational Areas 3-24
3.8.2 Bicycle and Pedestrian Pathways 3-25
3.8.3 Public Services 3-25
3.8.4 Public Utilities 3-25
3.8.5 Potential Impacts to Public Use and Services 3-25
3.9 Visual Resources 3-26
3.9.1 Discussion 3-26
3.9.2 Potential Impacts on Visual Resources 3-26
3.10 Socio-Economics 3-26
3.10.1 Population/Demographics 3-26
3.10.2 Economic Factors 3-28
3.10.3 Employment 3-29
3.10.4 Potential Impacts on Socio-Economic Resources 3-30
3.11 Ambient Noise and Air Quality 3-30
3.11.1 Ambient Noise 3-30
3.11.2 Air Quality 3-30
3.11.3 Potential Impacts to Ambient Noise and Air Quality 3-30
3.12 Potential Cumulative and Secondary Impacts 3-31

4.0 CONFORMANCE WITH PLANS, POLICIES AND PROGRAMS 4-1
4.1 Hawai'i State Plan 4-1
4.1.1 Economy-Visitor Industry 4-1
4.1.2 Physical Environment 4-1
4.1.3 Facility Systems 4-2
4.1.4 Socio-cultural 4-2
4.2 General Plan for the City and County of Honolulu 4-2
4.2.1 Population 4-2
4.2.2 Economic Activity 4-2
4.2.3 Natural Environment 4-3

4.2.4 Transportation and Utilities 4-4
4.2.5 Energy 4-4
4.2.6 Physical Development and Urban Design 4-5
4.2.7 Culture and Recreation 4-5
4.3 Koʻolau Loa Sustainable Communities Plan 4-6
4.4 Hawai'i Coastal Zone Management Program 4-13
4.4.1 Recreational Resources 4-13
4.4.2 Historic Resources 4-15
4.4.3 Scenic and Open Space Resources 4-15
4.4.4 Coastal Ecosystems 4-16
4.4.5 Economic Uses 4-16
4.4.6 Coastal Hazards 4-17
4.4.7 Managing Development 4-17
4.5 SMA Guidelines (Section 25-3.2, ROH) 4-18

5.0 ALTERNATIVES 5-1
5.1 No Action Alternative 5-1
5.2 Reconstruction or Renovation Alternative 5-1
5.3~~2~~ Higher Density Resort Development Alternative 5-1
5.4~~3~~ PCC Expansion Alternative 5-2
5.5~~4~~ Comparative Summary of Potential Impacts 5-2

6.0 FINDINGS AND REASONS SUPPORTING ANTICIPATED DETERMINATION 6-1
6.1 Support for Determination 6-1
6.2 Anticipated Determination 6-3

7.0 REFERENCES 7-1

LIST OF APPENDICES

A Market Analysis
B Lāʻie Inn Redevelopment Project Investigation of Sewer and Water Requirements
C Lāʻie Inn Storm Water Report – Drainage Calculations
D Archaeological Assessment 2004
E Cultural Impact Assessment 2004
F Traffic Impact Analysis Report
G Lāʻie Beach Count Report
H Draft Environmental Assessment Comment Letters and Responses

LIST OF FIGURES

Figure		Page
1.1	Project Location Map	1-3
1.2	Aerial Photo with Existing Conditions	1-4
1.3	Tax Map Key	1-5
1.4	State Land Use Designation Map	1-6
1.5	Zoning Map	1-7
1.6	Koʻolau Loa Sustainable Communities Plan	1-8
1.7	Special Management Area Map	1-9
2.1	Preliminary Site Plan	2-4
2.2	Conceptual Rendering of Guest Building B from Entry	2-5
2.3	Conceptual Rendering of Restaurant and Banquet/Meeting Room Buildings	2-6
2.4	Pedestrian/Bicycle Path fronting PCC	2-10
2.5	Parcel Consolidation and Zoning District Boundary Amendment Map	2-14
2.6	Existing and Proposed Planned Development Resort Area	2-15
3.1	Photo Key	3-2
3.2	View north from PCC to McDonald's and the Chevron access road	3-3
3.3	View south to McDonald's restaurant from Lāʻie Inn	3-3
3.4	View northwest to the Chevron Station form Kamehameha Highway	3-4
3.5	View northwest to southern end of Lāʻie Inn	3-4
3.6	View northwest along Kamehameha Highway and the northern vacant area	3-5
3.7	View southeast to vacant portion area	3-5
3.8	View east to ocean from existing Lāʻie Inn	3-6
3.9	View east to existing public beach access	3-6
3.10	Soils Map	3-9
3.11	Topography	3-10
3.12	Flood Hazard Zones	3-12
3.13	Wailele Watershed	3-15
3.14	Groundwater Protection	3-17
4.1	Koʻolau Loa Sustainable Communities Plan – Land Use Map (1999)	4-7

LIST OF TABLES

Table		Page
2-1	Hotel Unit Summary	2-6
2-2~~1~~	Project Floor Area (GSF)	2-7
2-3	Hotel Capacity	2-7
2-4	Restaurant Capacity	2-8
3-1	TMK Parcel Numbers and Areas	3-1
3-2	Estimated Solid Waste Generation	3-20
3-3	Parking Summary	3-23
3-4~~3~~	Trip Generation Characteristics	3-24
3-5~~4~~	Population of Lāʻie Inn Study Area* 1990-2000	3-27
3-6~~5~~	Population of City and County of Honolulu 1990-2000	3-27
3-7~~6~~	Population Data by Race 1990-2000	3-28
3-8~~7~~	Unemployment Data 1990-2000	3-29
3-9~~8~~	Median Household Income 1989/1999 in Lāʻie Inn Study Area	3-29
3-10~~9~~	Median Household Income 1989/1999 in County	3-29

1.0 General Information

1.0 GENERAL INFORMATION

1.1 APPLICANT AND ACTION

Hawai'i Reserves, Inc. (HRI) proposes to redevelop the Lāʻie Inn in Lāʻie, Koʻolau Loa, and on O'ahu *(Figure 1.1)* with a new 220-room hotel with amenities including a restaurant, banquet/meeting facility, and swimming pool. The existing 49 unit Lāʻie Inn was developed in 1963~~5~~, but the quality of accommodation and the structure has deteriorated.

An Environmental Assessment (EA) is being prepared for the project because: 1) The entire project is located within the City and County of Honolulu's (County) Special Management Area (SMA), requiring a Special Management Area Use Permit (SMP) from the County; and 2) traffic mitigation measures being considered will require lane modifications of Kamehameha Highway, State Highway 83. The EA was prepared in compliance with Hawaiʻi Revised Statutes (HRS) Chapter 343, as amended, and Hawaiʻi Administrative Rules (HAR) Chapter 200, Title 11.

1.2 PROJECT SUMMARY

SMA Permitting Agency/ EA Accepting Authority:	County Department of Planning and Permitting (DPP)
Applicant:	Hawai'i Reserves, Inc. (HRI) 55-510 Kamehameha Highway Lāʻie, HI 96762-1193 Contact: Eric Marler Executive Vice President and Chief Financial Officer Telephone: 808-293-6426
Recorded Fee Owner:	Property Reserve, Inc. (PRI) 55-510 Kamehameha Highway Lāʻie, HI 96762-1193 Telephone: 808-293-6426
Planning and Environmental Consultant:	Group 70 International, Inc. 925 Bethel Street, Fifth Floor Honolulu, HI 96813 Contact: Jeffrey Overton, AICP, LEED AP Telephone: 808-523-5866
Existing Uses:	Lāʻie Inn, Chevron Station, McDonald's
Planned Uses:	Lāie Inn, Chevron Station, McDonald's
Project Area: *(Figure 1.1)*	Approximately 9.5 total acres
Tax Map Key Parcels: *(Figure 1.3)*	5-5-006:39 and 40

State Land Use District: *(Figure 1.4)*	Urban (all parcels)
County Zoning - Resort: *(Figure 1.5)*	Existing: Lāʻie Inn; Chevron and McDonald's parcels; Community Business (B-2): vacant area at north end of site
Planned Development-Resort	71/PDR7
Koʻolau Loa Sustainable Communities Plan *(Figure 1.6)*	Resort
Special Management Area: *(Figure 1.7)*	Within the Special Management Area

1.3 CONTENTS OF THE ENVIRONMENTAL ASSESSMENT

This Environmental Assessment is presented in seven sections as follows: *Section 1* includes information on the project. *Section 2* describes the proposed project; *Section 3* describes the environment affected by the project, potential impacts and mitigation measures; *Section 4* summarizes project conformance and consistency with existing plans, policies and programs including SMA guidelines; *Section 5* describes alternatives considered; *Section 6* provides findings and reasons that support the anticipated determination; and a list of references is provided in *Section 7*. Appendices include supporting technical reports. SMA application exhibits are unavailable at this time.

Figure 1.1 Project Location Map

Figure 1.2 Aerial Photo with Existing Conditions

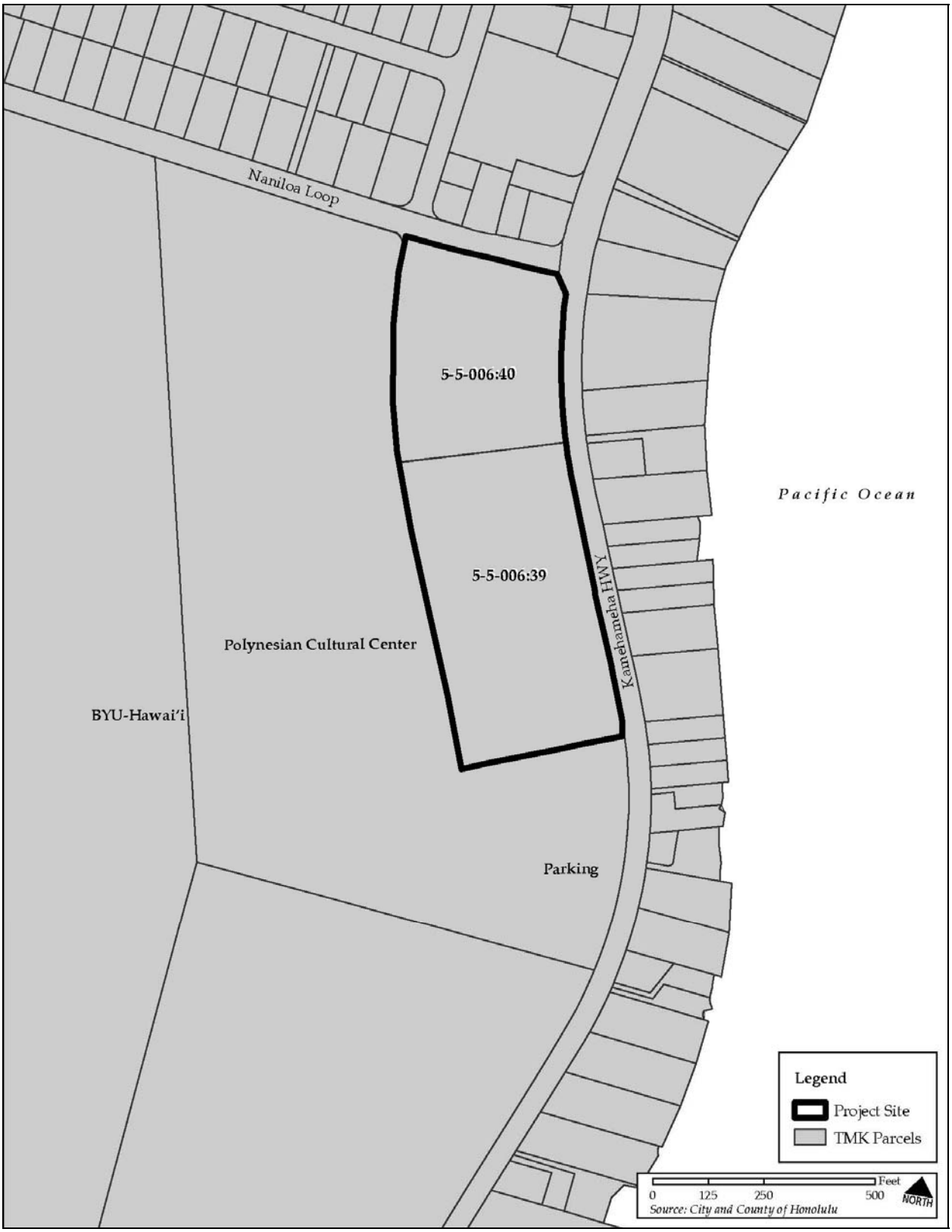


Figure 1.3 Tax Map Key

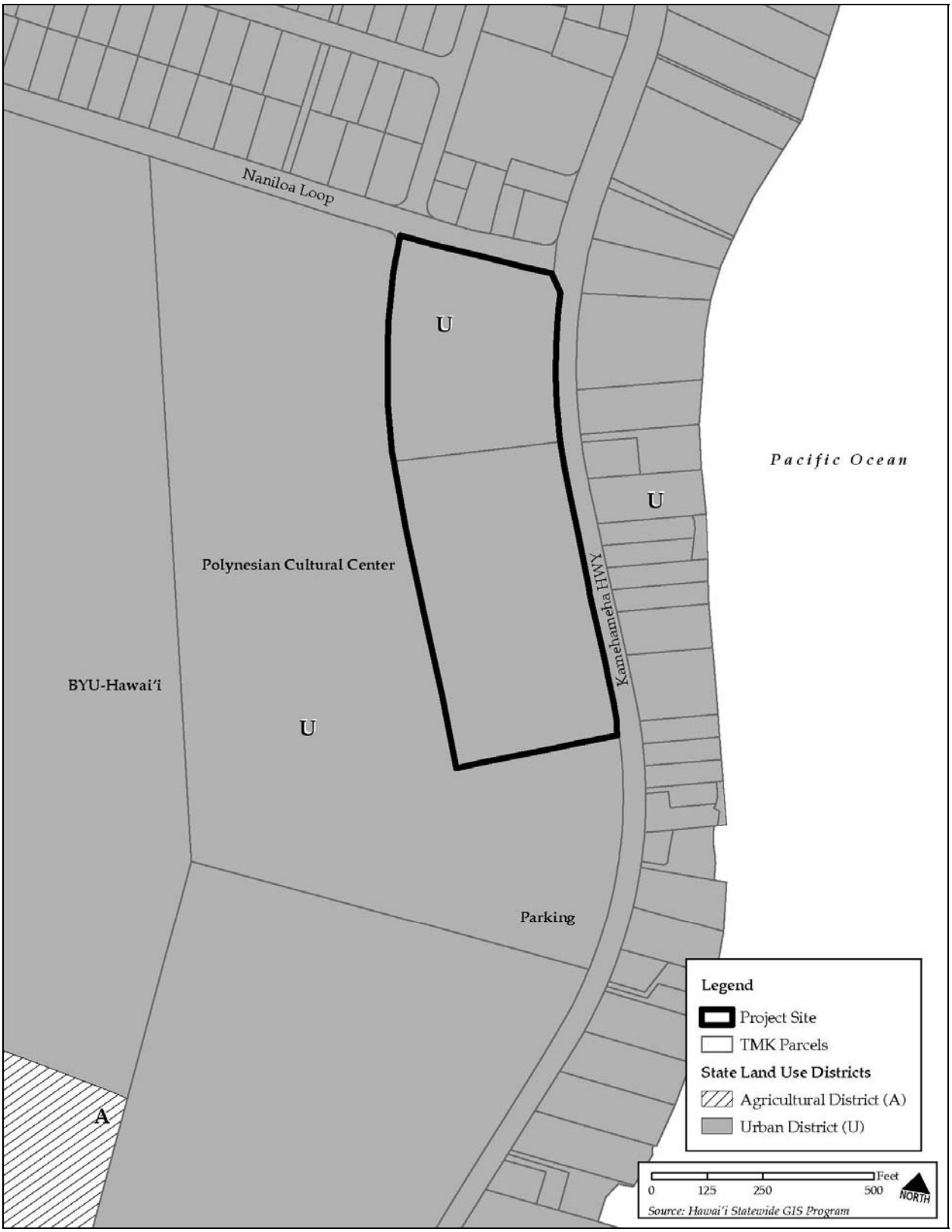


Figure 1.4 State Land Use Designation Map

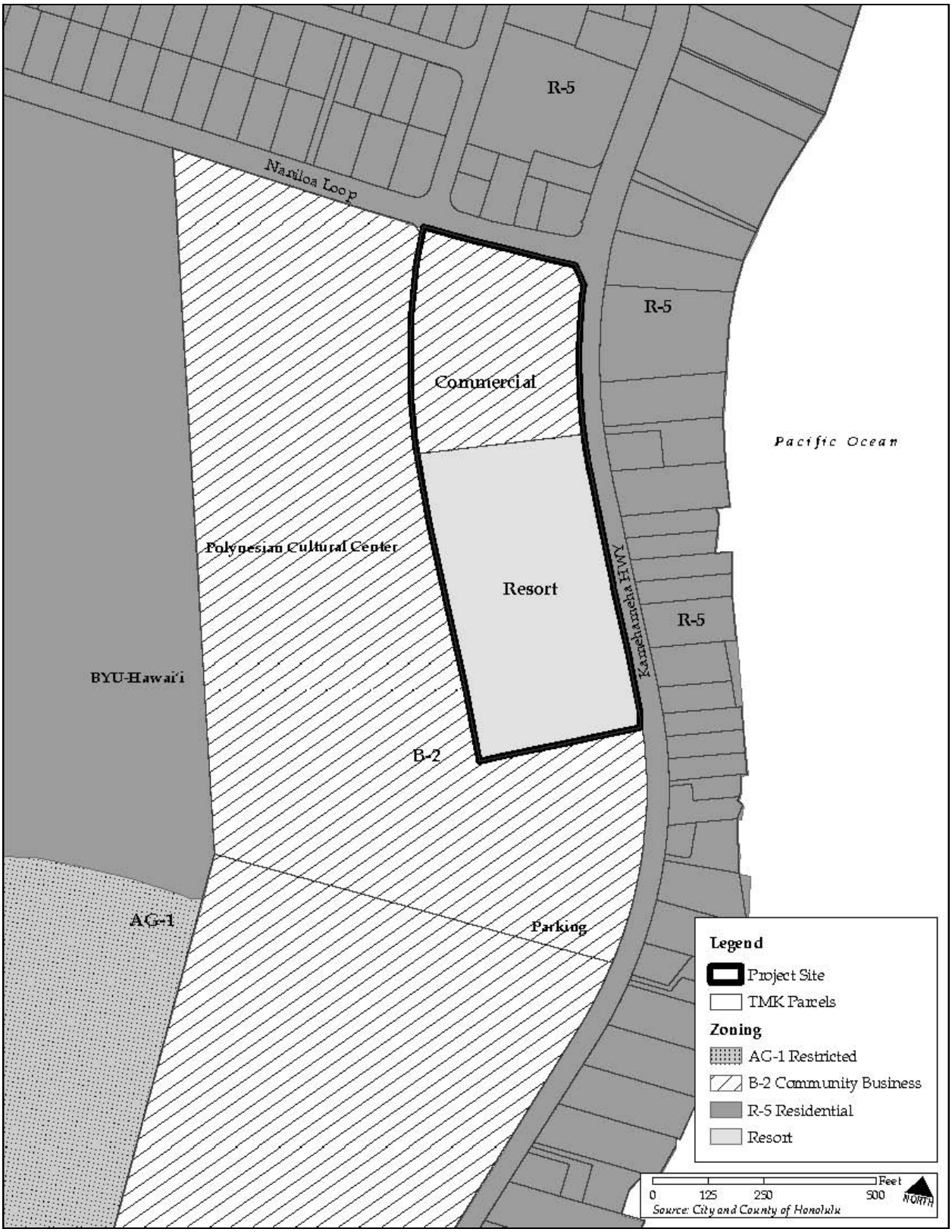


Figure 1.5 Zoning Map

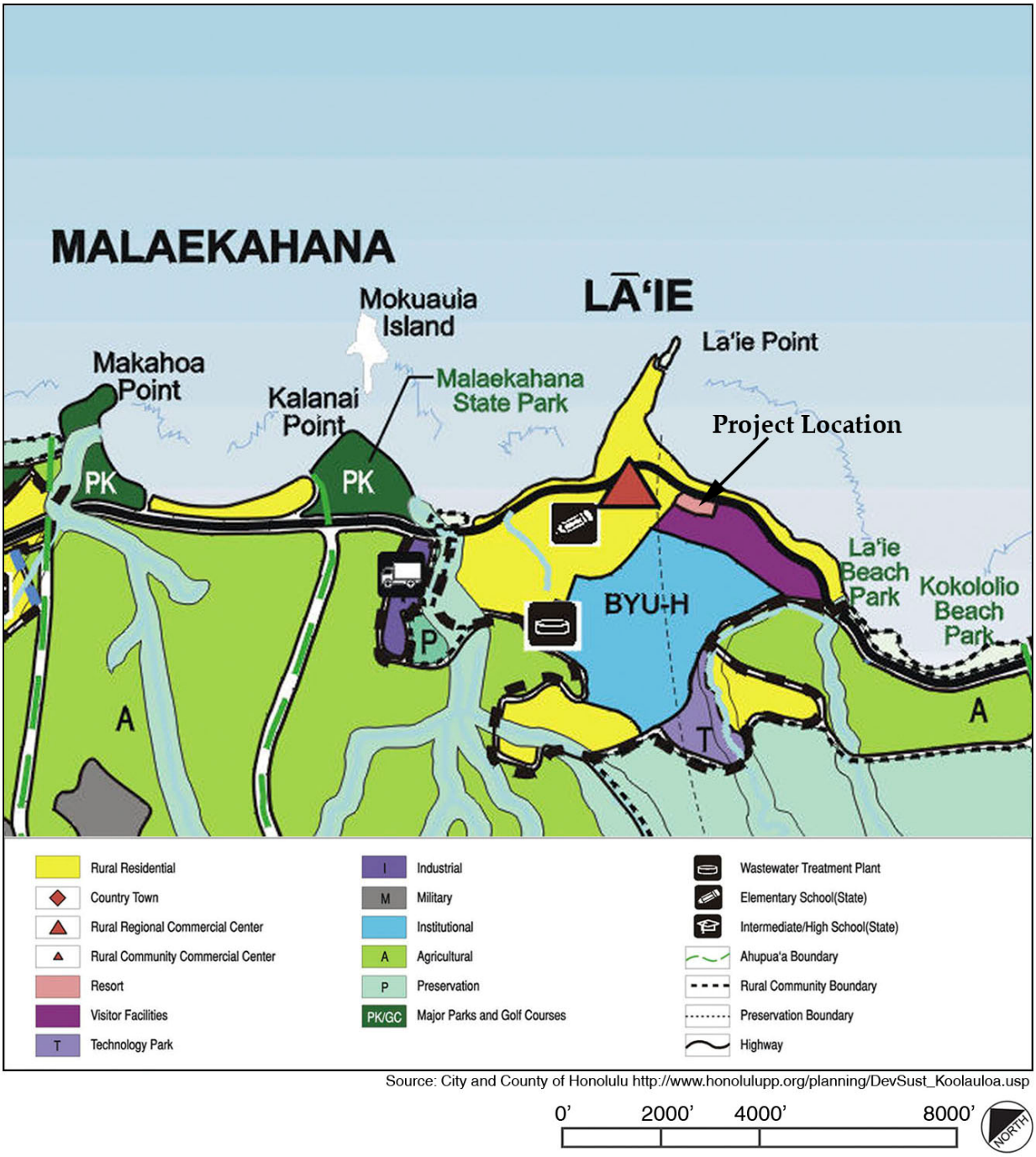


Figure 1.6 Koʻolau Loa Sustainable Communities Plan

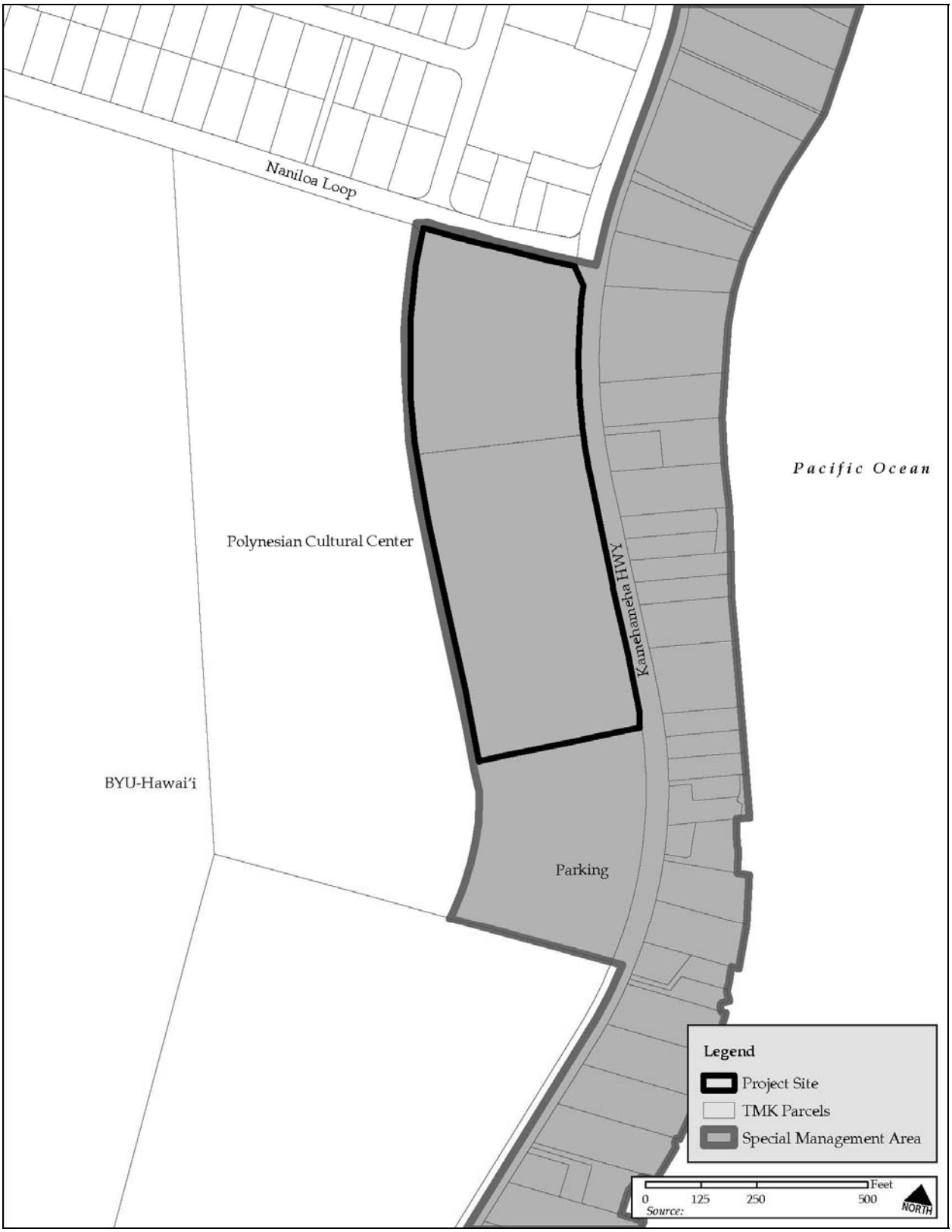


Figure 1.7 Special Management Area Map

1.4 AGENCIES AND ORGANIZATIONS CONSULTED DURING THE PROCESS

The following list includes governmental agencies and officials, private organizations, and community associations who will be contacted as part of the planning for this project.

State Agencies

- Department of Land and Natural Resources, Historic Preservation Division
- Department of Transportation, Highways Division
- Office of Hawaiian Affairs
- Department of Health, Environmental Planning Office
- Department of Business, Economic Development & Tourism, Office of Planning

County Agencies

- Department of Planning and Permitting
- Department of Transportation Services

Elected Officials

- House Representatives Michael Magaoay & Colleen Meyer
- State Senator Clayton Hee
- Council Member Barbara Marshall, District #3 (chair)
- Council Members Donovan Dela Cruz (District #2), Todd K. Apo, Charles K. Djou, Ann H. Kobayashi, Rod Tam, Romy M. Cachola, Gary H. Okino, Nestor R. Garcia

Other

- Lāʻie Community Association
- Koʻolau Loa Neighborhood Board #28
- North Shore Chamber of Commerce
- The Polynesian Cultural Center
- The Church of Jesus Christ of Latter-day Saints (LDS) Lāʻie-Hawaiʻi Temple
- Neighbors of the project site

1.5 PROJECT TIMETABLE

The current schedule for project development is for construction to commence in 2009 and be completed in an estimated 18-month construction period.

1.6 ANTICIPATED DETERMINATION

A Finding of No Significant Impact (FONSI) is anticipated. The anticipated direct, indirect or cumulative adverse effects are minor; therefore, an Environmental Impact Statement (EIS) is not required.

2.0 Project Description

2.0 PROJECT DESCRIPTION

This section describes the purpose and need for the project, market demand, technical description of the project, and economic and social characteristics.

2.1 PURPOSE AND NEED

The existing Lā'ie Inn, built in 1963~~5~~ as Laniloa Lodge, provides 49 hotel rooms. The two story hotel has a surrounding courtyard with a swimming pool. Room types consist of double-double bedrooms with a maximum capacity of five people and queen/king bedrooms with both having a maximum capacity of three people. Each room has a lanai on the courtyard and limited amenities. There are about 10 full-time employees who are currently employed by the Inn.

The Inn has deteriorated and occupancy has declined with the quality of accommodation. There is a demand for new quality accommodations in the area. Guests will include visitors to Polynesian Cultural Center (PCC), Brigham Young University-Hawai'i (BYU- Hawai'i) and the Church of Jesus Christ of Latter-Day Saints (LDS) Lā'ie-Hawai'i Temple as well as O'ahu tourists seeking an alternative to Waikīkī.

In addition to providing quality accommodations for area guests, the redeveloped hotel will provide significant employment opportunities for local residents and immense educational opportunities for students of the neighboring university campus. BYU-Hawai'i students will be able to work and intern at the new hotel, giving them real world on-the-job training and certification opportunities not available in a classroom setting. This value added feature will benefit both the college students and the new hotel.

PCC, BYU-Hawai'i, and the LDS Lā'ie-Hawai'i Temple attract visitors to the area who do not stay in Lā'ie due to a lack of accommodations. Since PCC opened in 1963, it has become one of the most visited tourist attractions on O'ahu. Show tickets sell out daily and, based on ticket counts, PCC has close to 2,500 ~~3,000~~ visitors daily (approximately 750,000 ~~1,095,000~~ visitors per year). Most of the tourists visiting PCC stay in Waikīkī, though many prefer an overnight stay near PCC to avoid the long travel distance. BYU-Hawai'i also attracts many visitors. It is a four-year college with an annual enrollment of approximately 2,400~~0~~ students from numerous countries around the world. The majority of BYU-Hawai'i's students (60 percent) are from the Pacific Rim (Samoa, New Zealand, Fiji, Tonga, Easter Island, and Marquesas). Many students' families travel great distances to visit their students and have few accommodations near campus. The Temple is also one of the most heavily visited landmarks in O'ahu. Approximately 115,000 ~~110,000~~ people visit the Temple's Visitor Center yearly. Likewise, a very small percentage of Temple visitors are accommodated in Lā'ie due to a poor supply of lodging.

With the proposed hotel redevelopment action, visitors will spend more time in the area and increase the economic vitality not only of Lā'ie, but the economically challenged Ko'olau Loa region. Besides direct benefits to the PCC, students in BYU-Hawaii's hospitality program, and potential employees in the area, residual benefits to various businesses up and down the coast will occur as overall visitor expenditures increase. Through the purchase of goods and services at Ko'olau Loa businesses, additional discretionary spending will provide revenue needed to capture the economic potential of the region, thereby supporting the broader community and benefiting the region's economy. Annual guest expenditures are estimated to be about $28

million annually, and the project is expected to provide an estimated $8 million in net public benefits.

2.2 MARKET DEMAND

The Hallstrom Group, Inc. conducted a detailed market analysis to assess the feasibility of constructing and operating a hotel in Lāʻie *(Appendix A)*. Their findings indicate that there is a market for higher quality accommodations in the vicinity of PCC.

Oʻahu's visitor industry is focused toward the Waikīkī urban resort district, which contains nearly 90 percent of the lodging units on the island (31,766 of 36,200 units) and receives upwards of 85 percent of more than $5 billion in visitor expenditures on Oʻahu each year. However, portions of Waikīkī are aging, have a lessening appeal among some return travelers, and have a strict cap on the number of allowable hotel rooms, with less than 1,000 more units permitted to be built. Many visitors are seeking alternative vacation experiences, developers are looking for sites in other Hawai'i locations, and operators are looking for ways to increase their visibility and coverage of the market.

The project site has unique characteristics that will allow a well-designed and marketed facility to capture an economic share of the competitive sector. It is adjacent to the most visited privately-owned visitor attraction in the state, PCC. The Lāʻie location is also within a scenic region offering a distinctly rural, non-Waikīkī, Hawaiian ambience.

The proposed development would capitalize on the emerging Hawaiian lodging industry trend of smaller, lower-amenity, competitively-priced accommodations located in suburban communities outside of established resort destinations. There are several projects on O'ahu and neighboring islands that model design and operation patterns of successful mainland limited service hotels with national "name/flag" affiliation.

The probable guest demographic for a redeveloped Lāʻie Inn, assuming competent management, marketing and affiliation, is likely to be predominately domestic visitors, divided primarily between:

- Younger, active, independently-traveling couples and families who are either return visitors to O'ahu or attracted by the operator's brand. These patrons would be seeking a competitively-priced, low-intensity, outdoor-oriented, non-Waikīkī/resort vacation experience. Few visitors of this segment currently stay at accommodations in the study area.
- Mixed-aged and seniors traveling to a defined destination in Lāʻie (PCC, the LDS Hawaiʻi Temple, BYU-Hawaiʻi, or family/friends), often in groups or within peak periods. Pricing, ease of access, supporting facilities, and quiet, quality and cleanliness are primary concerns of this group. Presently, this segment either stays at the existing Lāʻie Inn, Turtle Bay Resort, or in Waikīkī.

To address the expectations/needs of these guests, the redevelopment of Lāʻie Inn is designed with moderately spacious units in a low-key setting having lawn/playground areas, limited (cost-efficient) amenities, and a ~~quality~~ beachfront experience. Marketing tie-ins with the PCC and other windward/North Shore activities and destinations, and service and meeting space agreements with the restaurant will help to offer a more comprehensive vacation destination.

The existing operation fails to capture the economic potential of the site and the hotel accommodation demand of the area. The existing Lāʻie Inn with its 49 rooms was built in 1963~~5~~.

The hotel is in degraded condition and is viewed as a lower quality accommodation. A redeveloped Lā'ie Inn would increase the appeal, exposure, and flow of visitor dollars into the local community and the development itself. Based upon market research data, the 220 hotel rooms ~~transient vacation units~~ would be absorbed and well utilized.

A supplemental letter from the Hallstrom Group, included with *Appendix A*, concludes that the findings presented in the 2004 Market Study are valid and continue to support the redevelopment project. While some micro (near-term) market conditions may have changed, the fundamental macro (long-term) conditions and demand factors regarding the hotel redevelopment project are substantially unchanged.

2.3 DESCRIPTION OF PROPOSED PROJECT

A preliminary site plan for the redevelopment of the existing Resort-zoned Lā'ie Inn site, located ma uka (inland) of Kamehameha Highway, shown on *Figure 2.1*. Perspective renderings of the guestroom buildings and Banquet/Meeting room buildings are shown in *Figures 2.2* and *2.3*.

Figure 2.1 Preliminary Site Plan

Figure 2.2 Conceptual Rendering of Guest Building B from Entry

Figure 2.3 Conceptual Rendering of Restaurant and Banquet/Meeting Room Buildings

2.3.1 Buildings

The Lā'ie Inn redevelopment project will include demolition of existing structures and construction of a variety of new buildings. The site will be developed with a three-story guest unit building with an integrated one story reception area at the southern end of the building, one pool, and a one story banquet/kitchen/meeting facility. The restaurant and banquet/meeting facility will be open to the general public. There will be a new McDonald's and Chevron station at the northern end of the site. The future retail area will target new hotel guests and patrons of McDonald's and Chevron. Likely occupants include food/drink establishments and apparel, gift and other specialty type stores. All single-story buildings are in keeping with the Polynesian architectural theme of PCC. The Polynesian architectural design elements include dominant steep roof forms, articulated wooden beam structure, open air veranda with broad overhanging eaves, tapa patterns and botanical grille work. The hotel is monarchy/territorial, characterized by pitched roofs, roof overhangs, stucco walls and lanais. The materials of all buildings will be complimentary to the Polynesian architecture of PCC. The intent is to unify the hotel site and the PCC into essentially one campus through shared Pacific Island theming.

Hotel Rooms

The project will provide 220 hotel rooms in a three-story "U"-shaped building *(Figure 2.1)*. The vacation units will be a mixture of studios and~~,~~ one bedroom~~, and two bedroom~~ units ~~each~~, some with a lanai. Refer to *Table 2-1* for a summary of the hotel unit types. There will be 10 units that are Americans with Disabilities Act (ADA) accessible. Three elevators will serve both guests and hotel staff.

Table 2-1
Hotel Unit Summary

Hotel Unit Type	Total No. of Type	Studio/One Bedroom
King Guestroom	63	63 Studio
Queen-Queen Guestroom	149	149 Studio
Suite A King Guestroom	4	4 One Bedroom
Suite B King Guestroom	4	4 One Bedroom
Total	**220**	**212 Studio/8 One Bedroom**

Amenities

There will be an integrated one story reception area located at the southern end of the vacation unit building. This area will include an exercise room, gift/sundries shop, laundry facilities, and restrooms.

A swimming pool with water slide will be constructed in the central courtyard adjacent to the reception area.

A banquet/meeting building will be a stand alone building located south of the lobby area. A stand alone building will be located near the project entry. Non-guests will be welcome to dine at the restaurant. The banquet/meeting rooms and catering services will be available for a fee to the public for receptions, reunions, parties, meetings and other events.

The existing McDonald's restaurant and Chevron station at the southern portion will be demolished and a new McDonald's and Chevron ~~and~~ with a car wash will ~~be relocated from the southern portion of~~ be built in the project area to the north~~ern portion~~, adjacent to Naniloa Loop.

Redevelopment of the project site will provide approximately 167,050 ~~156,350~~ gross square feet (GSF) of floor area, including 135,000 GSF for the hotel rooms. Refer to *Table 2-2~~1~~* for a summary of the project site facility program areas.

Table 2-2~~1~~
Project Floor Area (GSF)

Building	Floor Area Gross Square Feet (GSF)
220 Hotel rooms	135,000
Restaurant/Kitchen/Banquet/Lanai	9,000
McDonald's	4,200 ~~3,500~~
Chevron	3,850
Retail (future)	15,000
Total Floor Area	**167,050** ~~**156,350**~~

2.3.2 Capacity

At full occupancy, the on-site guest population will be approximately 548. The assumed breakdown of guests is listed below.

Table 2-3
Hotel Capacity

Hotel Capacity = *548 persons*
212 rooms w/ 2 person occupancy = ***424 persons***
8 suites w/ 3 person occupancy = ***24 persons***
Meeting Room/Banquet = 3,000 SF, occupancy at 15 SF/person = **200 persons** (assume 50% from hotel; +***100 persons***)
Lobby areas are accessory to rooms, therefore no additional capacity

*Occupancy numbers may be higher per room

The anticipated occupancy rates for the hotel vary depending upon the season. Based on the Hawaii Data Book (2006 –Revised), peak tourist accommodation seasons will be the summer months (June, July, August) and during events such as BYU-Hawai'i graduation (June, December). The anticipated occupancy rates are 75% of the full capacity of the hotel, meeting room/banquet area and restaurant. The anticipated capacity of the restaurant is 205 people as shown below in *Table 2-4*.

Table 2-4
Restaurant Capacity

Restaurant = 4,000 SF (3,000 seating, 1,000 kitchen) = ***205 persons***
Seating area = 3,000 SF at occupancy 15SF/person = ***200 persons***
Kitchen = 1,000 SF at occupancy 200SF/person = ***5 persons***

The new and relocated McDonald's restaurant anticipates a comparable amount of customers and business activity to its current operation with a modest increase. The McDonald's restaurant will be approximately 2,400 SF, with a seating capacity of approximately 90 people. The carrying capacity of Chevron including the store and fueling stations is approximately 42 people.

The estimated number of people at the hotel after redevelopment is approximately 516, using an anticipated occupancy rate of 75%. This rate is a median percentage to address peak and off-peak seasons of the year, and includes the guests and employees of hotel and restaurant. The meeting room/banquet area will be typically used on special occasions, and is not factored into the estimated number above.

2.3.3~~2~~ Infrastructure

The existing Lā'ie Inn has water and electric service, sewer connections, and solid waste collection services. The following section describes the physical characteristics of these site utilities with the redevelopment of the site. R.M. Towill Corporation (May 2007) has completed infrastructure assessments for the project and their complete reports included in the appendices. *Appendix B* presents wastewater and water requirements and *Appendix C* presents drainage requirements.

Water

Existing potable water service is provided by Lā'ie Water Company. The project will tap directly into the existing Lā'ie Water Company main for their potable water demand. An 8-inch water main runs from Naniloa Loop along I'osepa Road between PCC and the project site. Branching off of the main line are 6-inch lines serving the existing Lā'ie Inn, Chevron Station and McDonald's. *Appendix B* presents an analysis of the water supply for the project.

At full build-out and occupancy, the proposed facilities demand will require approximately 88,700 gallons per day (gpd) of potable water. As development plans progress, fire protection requirements will be coordinated with the Honolulu Fire Department's Fire Prevention Bureau. Fire hydrants will be provided for emergency fire suppression. There is adequate capacity and pressure in the existing Lā'ie Water Company system to serve the project requirements. A new 8-inch connection will be made at Naniloa Loop for the project site. Specific storage and distribution requirements of the new facilities will be addressed with the Lā'ie Water Company.

There is a recycled water distribution system at PCC that will be extended to the redevelopment area for landscape irrigation.

Wastewater

The existing Lā'ie Inn, McDonald's and Chevron station are served by an 8-inch sewer line that connects to a 12-inch PCC sewer line. Wastewater from the project is collected and treated at the City and County of Honolulu operated Lā'ie Water Reclamation Facility (WRF). Existing peak flows are 650,000 gpd. *Appendix B* presents the wastewater management plan.

The redeveloped hotel ~~inn~~ will continue to be served by an extension and rerouting of the existing 8-inch sewer that connects to the 12-inch PCC sewer. At full build-out and occupancy, the project facilities are anticipated to produce approximately 181,100 gpd during peak wet weather flow at full development. Average dry weather flow is estimated at 52,400 gallons per day. Peak flows will be reduced with the use of low-flow fixtures. The Lā'ie WRF has adequate capacity to accommodate wastewater flows from the project.

Drainage System

The highpoint of the site is the center of the hotel ~~inn~~ development and storm water runoff sheet flows to the edges of the developed area. On the north side the flow toward Naniloa Loop and on southern side the storm water generally flows from the buildings to Kamehameha Highway. Storm water runoff from the project is estimated to be 21 cubic feet per second (CFS) in a 50-year recurrence interval greater than the existing 18.5 CFS. *Appendix C* presents the analysis of drainage conditions.

There is one municipal storm drain system on the north (Kahuku) side of Lā'ie, next to Kahawainui Stream and ~~There is no municipal storm sewer in Lā'ie, but there are~~ two private drainage systems managed by HRI that are closer to the project location. One system discharges at Laniloa Beach via two 42-inch drains near PCC and the other discharges at the Foodland Storm Water Outlet ~~Temple Beach~~ via a 20-foot wide open channel. The two storm water drainage systems in Lā'ie have ~~reached~~ capacity for a 3 to 5 year storm event and require improvements for additional capacity (R.M. Towill Corporation, 2007). Lā'ie Town Drainage Master Plan (R.M. Towill Corporation, 2004) recommends substantial infrastructure improvements in the future in order to achieve adequate drainage during heavier storm events.

The project is projected to cause an increase of 1.5 acres feet of water during a 50 year rain event. The project will include underground piping designed to exfiltrate all of this increased storm water, 1.5 acre feet, into the ground. There will also be piping to connect these exfiltration systems to the two existing private drainage systems at Naniloa Loop and PCC. ~~In the interim, the project will include an onsite underground drainage system that directs water to a new temporary pipeline beneath the PCC parking lot that connects to the BYU-Hawai'i 48-inch drain located along the southern boundary of PCC, which discharges at Laniloa Beach~~. There will be no new discharge points into coastal waters. The improvements will be designed in accordance with the County's Rules Relating to Storm Drainage Standards (2000). The project site will be graded to meet flood elevation requirements. Offsite runoff will not enter the project site.

Electricity and Communications

Hawaiian Electric Company's (HECO) overhead electrical distribution line will provide service to the property. Electrical lines would be provided to the site via an underground system from

the overhead lines along Kamehameha Highway. Hawaiian Telcom will provide telephone and communication services.

Solid Waste Disposal

Solid waste generated by the project operation will be collected by a private hauling company and will be disposed at HPOWER facility or the County's Waimānalo Gulch Landfill. Food waste will be collected separately for recycling per the Revised Ordinances of Honolulu Chapter 9 – 3.5.

2.3.4~~3~~ Construction Characteristics, Including Demolition

Construction will commence in 2009 and be completed within 18 months. The site contains the existing Lā'ie Inn, a Chevron Station and a McDonald's, all of which will be demolished for the new project. The project site will require mass grading, vegetation clearing, minor excavation (cut and fill), general construction, and planting and landscaping. A brief description of each element is provided below.

Vegetation Clearing, Grading and Grubbing

The redevelopment project will affect the entire approximately 10-acre site, with the planned relocation of trees, as practical. The entire site has a very slight elevation change, increasing in elevation at the southern portion of the site. The project site includes the existing Lā'ie Inn and rock wall, McDonald's and the Chevron Station. The undeveloped portion of the site has turf grass groundcover as landscaping with some ironwood and coconut trees. The entire site will be cleared, grubbed, and graded to develop new facilities and landscaped open areas. Much of the existing asphalt roadways will be removed.

Where possible, trees will be preserved in place for the landscaping of the redeveloped Lā'ie Hotel. Healthy coconut trees that cannot stay in their current location will be transplanted and continue to serve as on-site landscaping.

Excavations (Cut and Fill)

The site is generally level with a low elevation of 6 feet at the northern end of the project site and a high of more than 10 feet at the southern end. The topography will be modified and graded to Flood Insurance Rate Map (FIRM) elevation levels by using imported soil. After raising the site grade where needed, earthwork on-site will generally consist of fine adjustments to site grades to allow for buildings, roadways and pathways, drainage control features, landscaping and open spaces. Excavation will be required for removal of the gas station underground storage tanks and for construction of underground utilities and the swimming pool.

General Construction

The general construction of facilities will include the formation and placement of concrete foundations, the installation of mechanical equipment, the installation of electrical wiring and equipment, general carpentry work, painting and the many other trades and work associated with construction projects.

Figure 2.4 Pedestrian/Bicycle Path fronting

Planting and Landscaping

The hotel redevelopment will increase landscape design by offering a distinctly Polynesian ambience. Extensive tropical landscaping will be incorporated into the property as shown in *(Figure 2.4)*. Native plant species are planned to be included in the project landscape to further the rich cultural tradition in Lā'ie. A landscaped earthen berm along a bike/pedestrian path planned on Kamehameha Highway to provide privacy, highway noise reduction, and varied topographic landscape, such as canopy shade trees, will be used to shade the path and provide a buffer between the road and the hotel. Existing mature coconut palms (40 feet tall or greater) will be relocated and utilized on the project site, as practical. The open spaces between the buildings and pools will be landscaped with coconut palms and tropical shrubs. Landscaping that is salt tolerant will be used at this project.

2.3.5~~4~~ Access, Parking and Pathways

Access roadways, parking, facilities and pathways are required for the project. The site currently has two driveway connections ~~to Kamehameha Highway (Lā'ie Inn and~~ at the Chevron) and ~~a retail access~~ two roadway intersections with Kamehameha Highway (at Lā'ie Inn and -adjacent to PCC parking).

The two-lane Kamehameha Highway fronting the project consists of 11-foot lanes and 4-foot shoulders. Naniloa Loop, at the north end of the project site, services a residential area and the primary route for accessing BYU-H. Kamehameha Highway forms an unsignaled intersection with Naniloa Loop and the access driveways to the existing Lā'ie Inn and the Chevron Station and McDonald's restaurant. Bus stops are located in both directions fronting the project site.~~,~~ They are located ~~one~~ directly in front of the existing Lā'ie Inn, at the intersection of Naniloa Loop, and ~~one~~ across the highway at the intersection of Naniloa Loop.

The proposed action includes work within the State highway right-of-way. The number of ~~highways~~ access~~ing~~ points to Kamehameha Highway is reduced from four to two ~~driveways~~. The primary entrance to the redeveloped hotel ~~Lā'ie Inn~~ will continue to be from Kamehameha Highway at the southern end of the site via two-lane access road *(Figure 2.1)*. The secondary access to the hotel ~~Inn~~ will be off Naniloa Loop. This will be a gated entry for guests with access to the parking lots on the ma uka side of the guest unit building. Naniloa Loop will also provide access to the McDonald's and Chevron Station business area. There will be a driveway exit for the business area at the north end of the parcel directly to Kamehameha Highway that will be limited to right-turns in and out. Signalization of the Naniloa Loop/Kamehameha Highway intersection is anticipated to improve traffic flow and pedestrian safety. *Section 3.7* provides a detailed assessment of traffic conditions.

A parking summary is shown in *Chapter 3, Section 3.7.2 (Table 3-3)* ~~*Figure 2.1*~~. Approximately 245 ~~255~~ parking spaces will be provided on the project site for the overnight guests and employees. Parking spaces for the patrons of the restaurant, ~~and~~ banquet/meeting facility, and future retail will total 81 ~~105~~ spaces. ~~Overflow parking is available at PCC.~~ The business area at the northern end of the development site will have approximately 19 ~~66~~ parking spaces ~~places~~, plus space for an additional 34 spaces for future retail parking.

As part of the Lā'ie Master Plan implementation, a community pedestrian and bike path was constructed fronting PCC along Kamehameha Highway. The community pedestrian and bicycle path is a key element in the beautification efforts for the Lā'ie community. The purpose of the pathway is to provide for a safer bicycle/pedestrian route along the highway. This path

will be extended 1,100 feet along the Kamehameha Highway boundary of the development site. Improvements will be comparable to the existing path, including a paved curvilinear path, extensive landscaping and bollards to prevent unauthorized vehicular access.

This portion of the path will improve views from the highway and provide a buffer between the highway and the Lā'ie Inn redevelopment.

2.4 CONSTRUCTION COSTS AND SCHEDULE

The construction cost for the entire project is estimated at approximately $40 million. Construction will commence in 2009 and be complete in approximately 18 months.

2.5 LAND USE APPROVALS

Several land use and zoning approvals are required to support the project. They are listed below in the order they are required.

2.5.1 Parcel Consolidation and Zoning District Boundary Amendment

Consolidation and re-subdivision of the parcels within the project area was completed to establish correct underlying boundaries for proposed Community Business (B-2) and Resort zoning. Eight parcels were consolidated into the current two parcels (5-5-006:39 & 40) that coincide with the Community Business and Resort zoning boundaries.

The Community Business (B-2) and Resort zoning boundaries were amended in July 2007 with no net change of area in these zones via a Zoning District Boundary Amendment (ZDBA) *(Figure 2.5)*.

2.5.2 Special Management Area Use Permit (SMP)

The project site is located entirely within the SMA, as shown in *Figure 1.7,* and construction costs will exceed $125,000. Therefore, approval of a major SMP is required from DPP and City Council (by resolution), pursuant to Chapter 25 Revised Ordinances of Honolulu (ROH).

2.5.3 Amendment of Planned Development Resort (PD-R) Approval

The history of the Planned Development-Resort designation for the project site and the PCC site began in 1962 (Ordinance No. 2258) with the creation of Resort-Hotel District 2. The site was further modified for various elements of the resort and PCC uses in the early 1970's.

The PD-R boundary *(Figure 2.6)* will be adjusted to exclude the B-2 zoning areas (i.e., the McDonald's and Chevron Station) in the northern portion of the development. The planned changes to the Lā'ie Inn's floor area will be included in a PD-R modification. DPP is the approving authority for a modification of the PD-R.

2.5.4 Other Permits Required for Construction

Several other approvals will be required from the County and State to implement the proposed action, some of which will include:

- Building Permits (Buildings, Electrical, Plumbing), and Sidewalk/Driveway Work (DPP)
- Grading, Grubbing and Stockpiling Permit (DPP)
- National Pollutant Discharge Elimination System (NPDES) Permit – Construction Storm Water (State Department of Health)

- Sign Permits (DPP)
- Driveway Connection to Kamehameha Highway (County Department of Transportation Services, State Department of Transportation, Highway Division)

With concurrent processing of the required County land use requests, development approvals are anticipated to be in place for site work to begin in 2009.

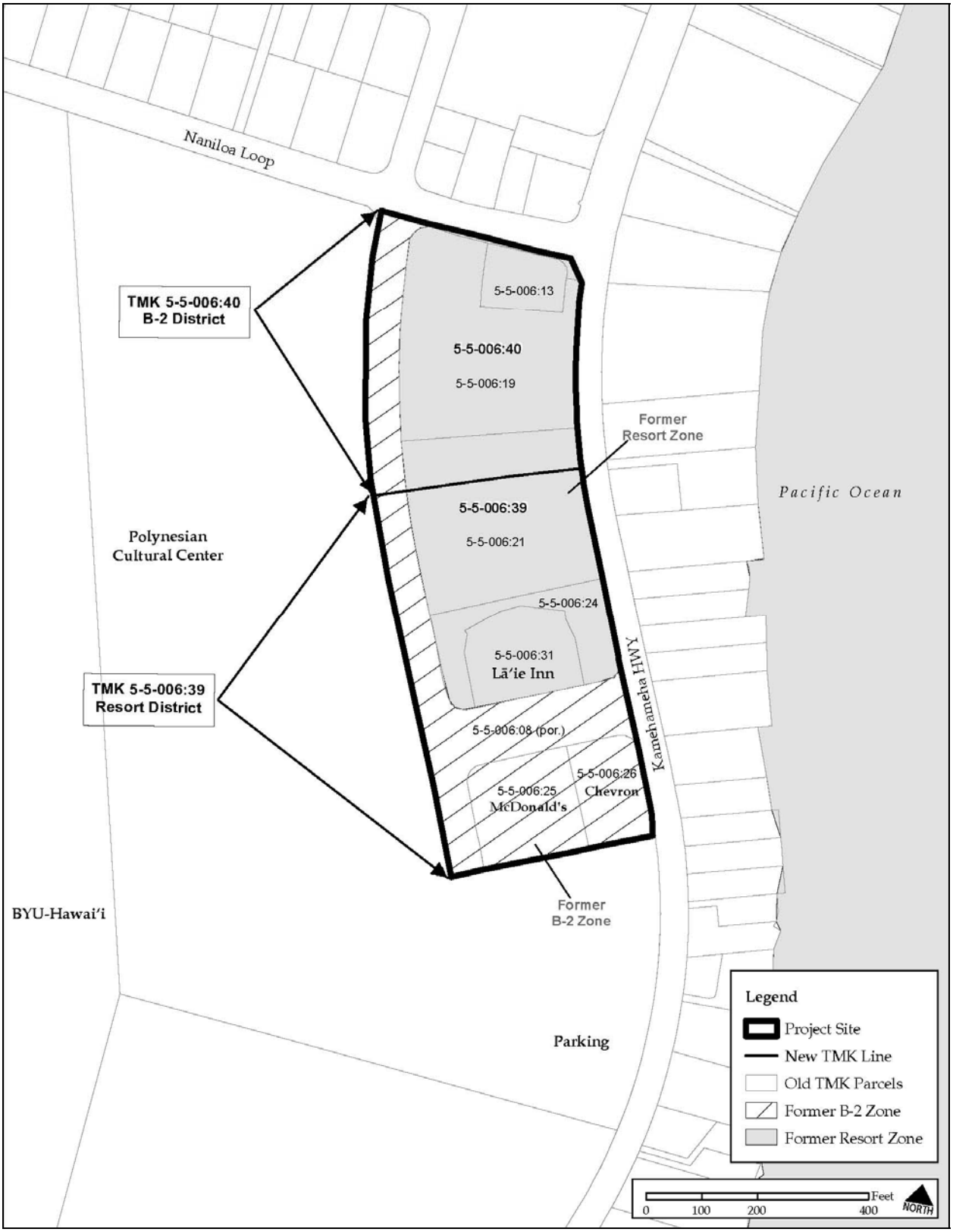


Figure 2.5 Parcel Consolidation and Zoning District Boundary Amendment Map

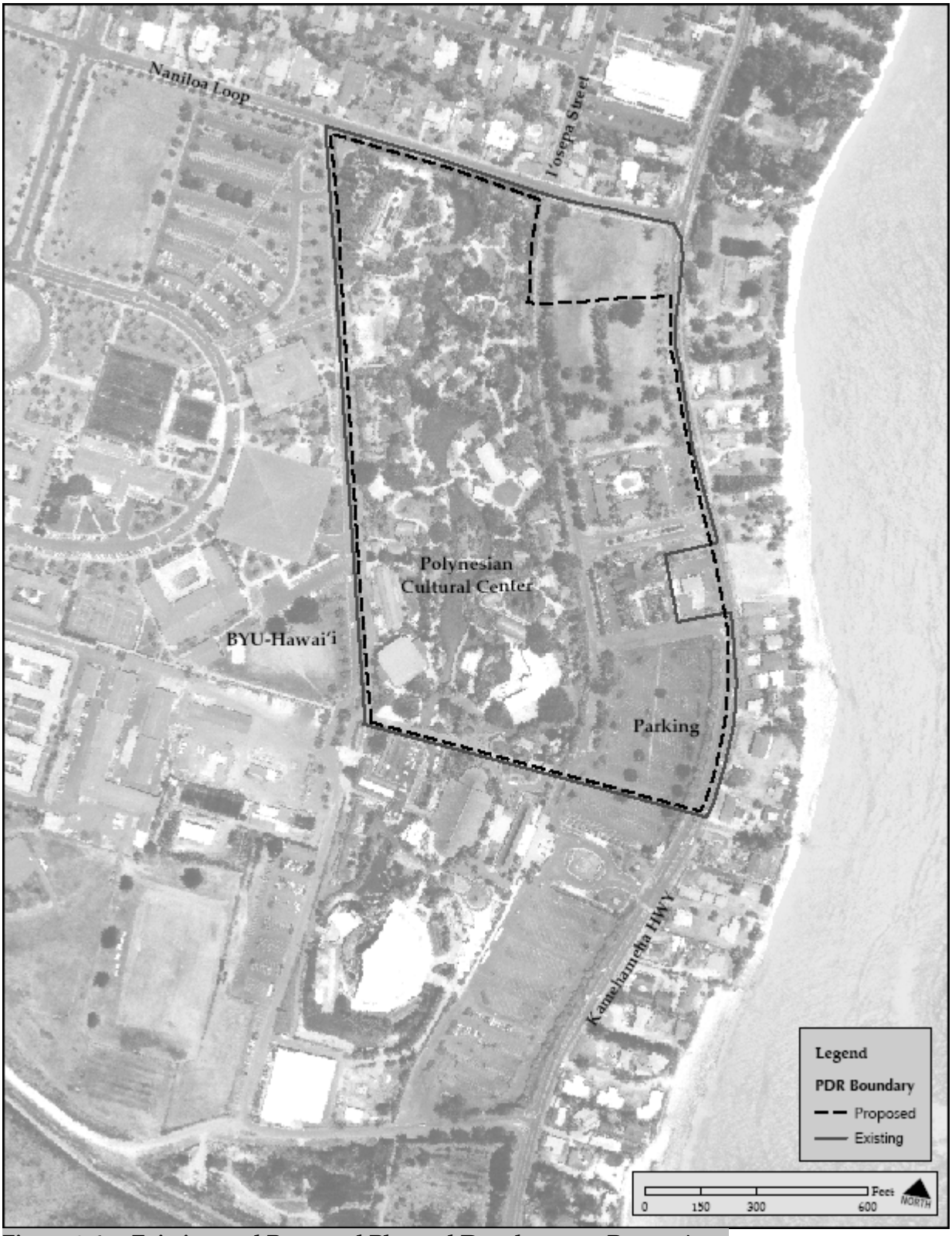


Figure 2.6 Existing and Proposed Planned Development Resort Area

3.0 Affected Environment and Potential Impacts

3.0 AFFECTED ENVIRONMENT AND POTENTIAL IMPACTS

This section describes the affected environment at the project area. Potential short- and long-term, direct, indirect and cumulative environmental impacts are described. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. Indirect effects are impacts that are associated with, but do not result directly from, an activity.

3.1 LAND OWNERSHIP, USE AND REGULATION

3.1.1 Land Use

Figure 3.1 is an aerial photo of existing land uses with a key to photos that show existing land uses. The site is developed with a McDonald's restaurant *(Figures 3.2 and 3.3)*, a Chevron station *(Figure 3.4)*, and Lāʻie Inn *(Figure 3.5)*. Most of the northern portion of the site is undeveloped and landscaped *(Figures 3.6 and 3.7)*.

3.1.2 Ownership

The entire project area is owned by Property Reserve, Inc. (PRI). The parcels are listed in *Table 3-1* and shown on *Figure 1.3*.

Table 3-1
TMK Parcel Numbers and Areas

Use	Approximate Area	
	Square Feet	Acres
TMK 5-5-006:39 and 40		
Vacant	198,111	4.6
Lāʻie Inn	23,885	0.6
McDonald's	35,772	0.8
Chevron	23,520	0.5
Lāʻie Inn	33,081	0.8
Roadways	94,500	2.2
Project Area Total	408,869	9.5

Figure 3.1 Photo Key

Figure 3.2 View north from PCC to McDonald's and the Chevron access road

Figure 3.3 View south to McDonald's restaurant from Lāʻie Inn

Figure 3.4 View northwest to the Chevron Station from Kamehameha Highway

Figure 3.5 View northwest to southern end of Lāʻie Inn

Figure 3.6 View northwest along Kamehameha Highway and the northern vacant area

Figure 3.7 View southwest to vacant portion area

Figure 3.8 View east to ocean from existing Lāʻie Inn

Figure 3.9 View east to existing public beach access

The surrounding Lāʻie community is a primarily low to medium density residential area with small-scale commercial uses, a university, tourist/visitor attraction and a religious center. The Church of Jesus Christ of Latter-Day Saints (LDS) developed and operates the town's largest institutions including BYU-Hawai'i, the LDS Lāʻie-Hawai'i Temple, and PCC, all located ma uka of Kamehameha Highway.

The nearby Lāʻie Village Shopping Center includes locally-owned and national chain retail and service businesses. The center includes Foodland supermarket, various restaurants (i.e., L&L Drive Inn, Subway, Pizza Hut/Taco Bell, Lāʻie Chop Suey), retail businesses (Ace Hardware Hawai'i, NAPA, Bank of Hawai'i, Wallace Theater), doctor offices and other services. Other uses within the project region are inland and beach front residences, Lāʻie Elementary School, agricultural land, and the beach parks of Mālaekahana State Recreation Area, Lāʻie Point State Wayside, Kokololio Beach and Pounder's Beach. The Kuilima Resort and Turtle Bay Hilton Hotel are located approximately 7 miles north of Lāʻie Inn past Kahuku. The project site is roughly equidistant (approximately 20 ~~15~~ miles) from the next closest commercial centers of Haleʻiwa and Kāneʻohe. Lāʻie is the employment center of Koʻolau Loa.

3.1.3 Regulation

The entire project area and adjacent properties are within the State Urban Land Use District and the State's Coastal Zone Management Area.

The entire site is within the SMA. The Chevron station, McDonald's restaurant and Lāʻie Inn are within the Resort district. The vacant areas north of the Inn are zoned Community Business (B-2), in preparation for relocation of the Chevron station and McDonald's to the corner of Naniloa Loop. There is a Planned Development-Resort (PD-R) zone that encompasses the site, except for the Chevron Station.

The project site is bordered by Kamehameha Highway to the east, PCC to the west, Naniloa Loop residential area to the north, and PCC access road and visitor parking lot area are south. The site is bounded by the following land uses and zoning districts as shown in *Figure 1.4*.

- North: Lāʻie residential community; zoned medium density (R-5) residential.
- West: PCC; zoned Community Business (B-2). Beyond PCC is BYU-Hawaiʻi.
- South: PCC parking lot. Zoned Community Business (B-2). Beyond parking lot to the south are State Agricultural District Lands and Wailele Stream; zoned General Agricultural (Ag-2).
- East: State-owned Kamehameha Highway. Beyond the highway are oceanfront residential lots; zoned medium density (R-5) residential.

3.1.4 Potential Impacts

The project will not result in new land ownership or State land use designation. There will be minor changes in land use with the expansion into vacant land. The types of land uses will not change, but the location of land uses will change. TMK parcel consolidation and subdivision were completed in 2007. And zoning boundary amendments were completed in 2007. The Community Business zoning in the southern portion was exchanged for an equal amount of Resort acreage in the northern project area. In addition, there will be an amendment to the PD-R boundary to exclude the new northern Chevron location, because service stations are not permitted uses in Resort zones.

No adverse short-term or long-term; or direct, indirect or cumulative impact on land ownership, use or regulation is anticipated and no mitigation is proposed.

3.2 PHYSICAL ENVIRONMENT

3.2.1 Soils and Agricultural Potential

There are three documents that classify soil type and designate agricultural viability. Soil types or classifications for the project area are based on soil surveys conducted by the USDA Soil Conservation Service (SCS) *(Figure 3.10)*. The Agricultural Lands of Importance to the State of Hawai'i (ALISH) designations and the University of Hawai'i Land Study Bureau (LSB) classifications attempt to illustrate the agricultural viability of the land based on soil ratings.

Based on the USDA Soil Conservation Service (1972) map for the area, the soil types found are the saline Jaucas sand (JcC) on the south-western portion at the site, Jaucas sand (JaC) on the north-eastern portion. Jaucas sands (JcC and JaC) consist of well drained soils developed from deposited sand made up of coral and seashells in coastal areas. Elevation can range from nearly level to steep. Water erosion hazard for these soils is minimal because permeability is rapid and runoff is very slow. Lands to the south and west of the site are associated with Mokulēʻia soil series, which are well drained (Ms) soils occurring in level areas that are suitable for irrigated agriculture.

The project site and the adjacent areas are 'unclassified' ALISH and LSB designations and therefore contain little agricultural value. The site is considered insignificant agricultural land by the above sources.

3.2.2 Topography

The site's topography can be described as coastal lowland and is shown in *Figure 3.11*. The majority of the site is below 20 ft elevation level, ranging from approximately 6 ft feet above mean sea level (msl) along the northern boundary, to 10 feet above msl along the southern boundary of the site. The site's developed portion, with McDonald's restaurant and Lāʻie Inn, reaches an elevation of 10 ft above msl. Slopes on the site are gradual ranging between 0 to 5 percent. The surrounding coastal lowland property is of similar elevation and percent slope with higher elevations for several constructed features within the PCC.

To meet FIRM elevation requirements, the proposed project redevelopment will require a maximum soil import of approximately 50,000 cubic yards. A grading plan will be developed during the design phase that will also include best management practices for erosion control. Approved grading plans and applicable permits will be obtained prior to the start of grading operations. The community pedestrian/bike path will be separated from the site by an earthen beam 4 to 6 feet in height. This feature will reduce noise at the project site.

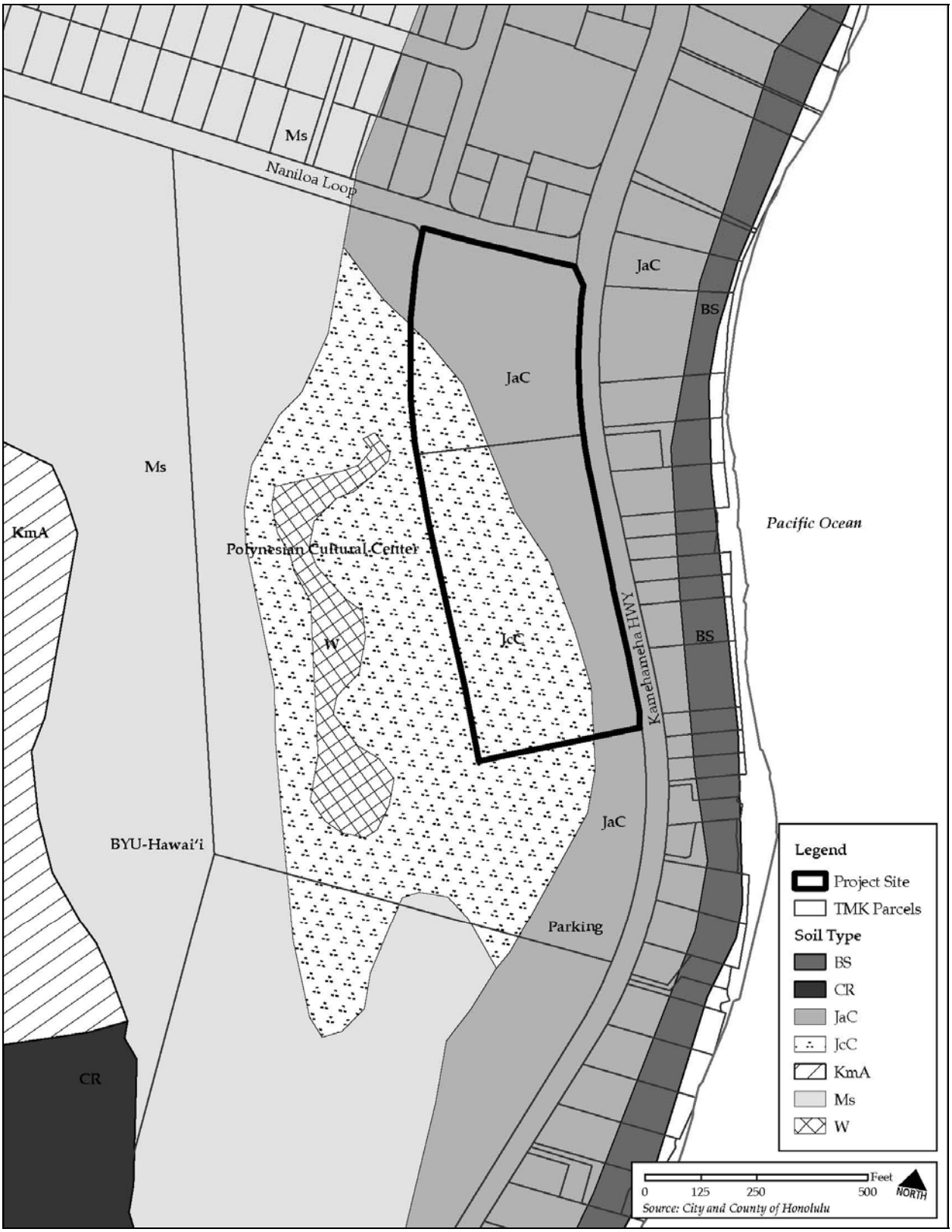


Figure 3.10 Soils Map

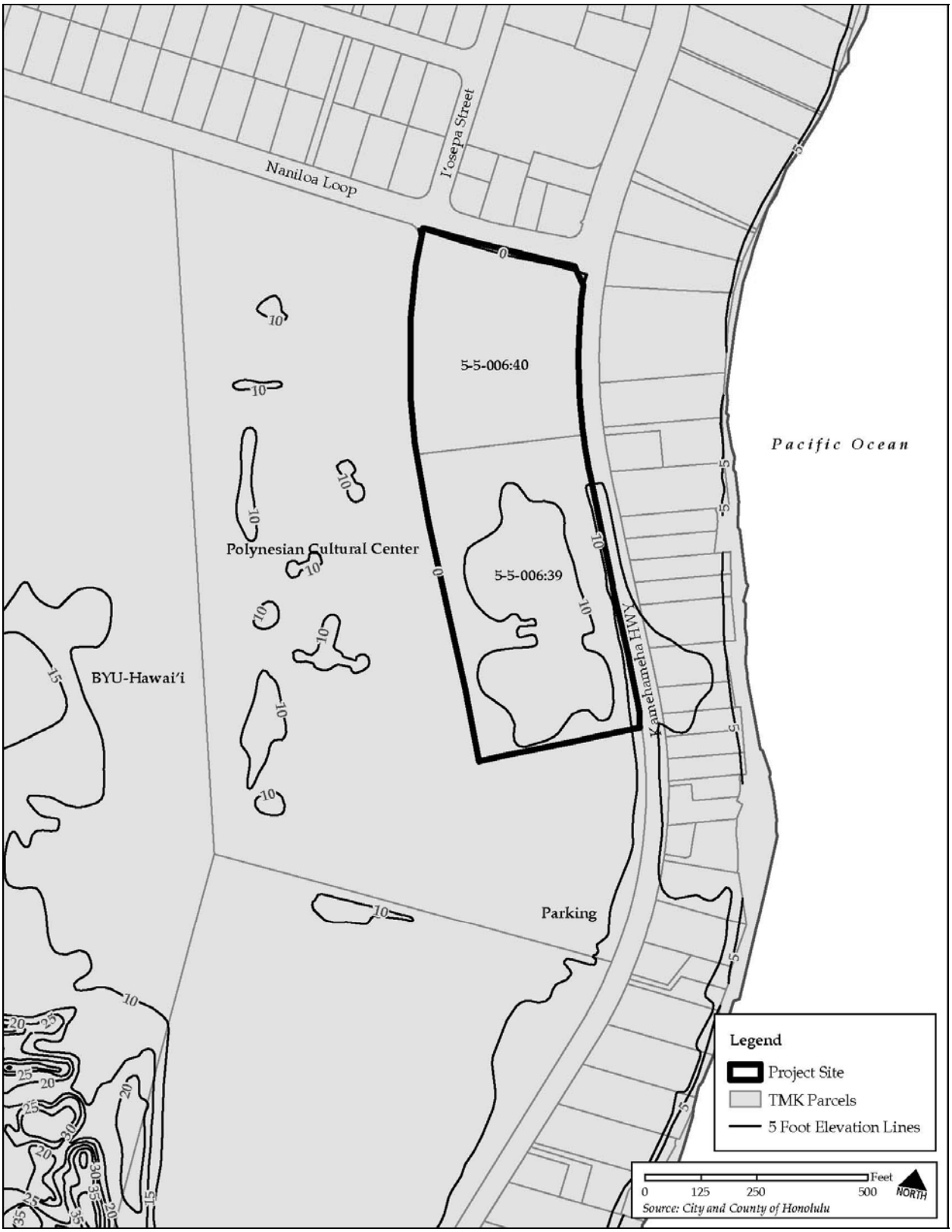


Figure 3.11 Topography

3.2.3 Natural Hazards

Flooding

The 100-year and 500-year flood hazard zones, established by Federal Emergency Management Agency (FEMA) are shown on *Figure 3.12*. Most of the site is within the 100-year flood hazard zone (AH). The base flood elevations range from 10 to 11 feet. The remainder of the property is classified as Zone AE, for which no base elevations have been determined. The gentle slopes and permeable, sandy soils prevalent in the project area facilitate percolation of rainfall into the soil. There is a broad low area at the northern end of the site that exhibits ponding during high rainfall periods.

The project will comply with rules and regulations of the National Flood Insurance Program, and construction will be in accordance with the LUO requirements. No habitable structures will be located within the coastal high hazard zone. Changes in land surface types will be made by grading the pervious surfaces to FIRM elevation and the construction of impervious surfaces, such as parking areas and buildings. The project site will be graded to direct storm water to improved drainage features. Storm drainage will be routed to the existing PCC storm drain system (*Section 3.3.1* ~~RM Towill 2007~~).

Tsunami

While tsunami inundation of low lying coastal areas is a natural phenomenon in Hawai'i, it is infrequent. The Islands are exposed to the major tsunami wave generating areas of the Pacific Ocean. Tsunami inundation could potentially affect Lāʻie's shoreline area to an elevation of approximately 12 feet above msl. This has been determined by historical limits of past tsunami inundation in Lāʻie, and more recent coastal engineering evaluations by the Army Corps of Engineers.

The project site falls within the tsunami inundation zone and site planning and building design will address this risk. An earthen beam will also be established as part of the landscaping along the Kamehameha Highway of the site, which could provide limited protection from ocean run-up.

Seismic Activity

Hawai'i occasionally experiences small earthquakes, however the project site is not considered to be a seismic hazard area. The Lāʻie area is outside of any special or volcanic hazard areas as defined for other areas of the State.

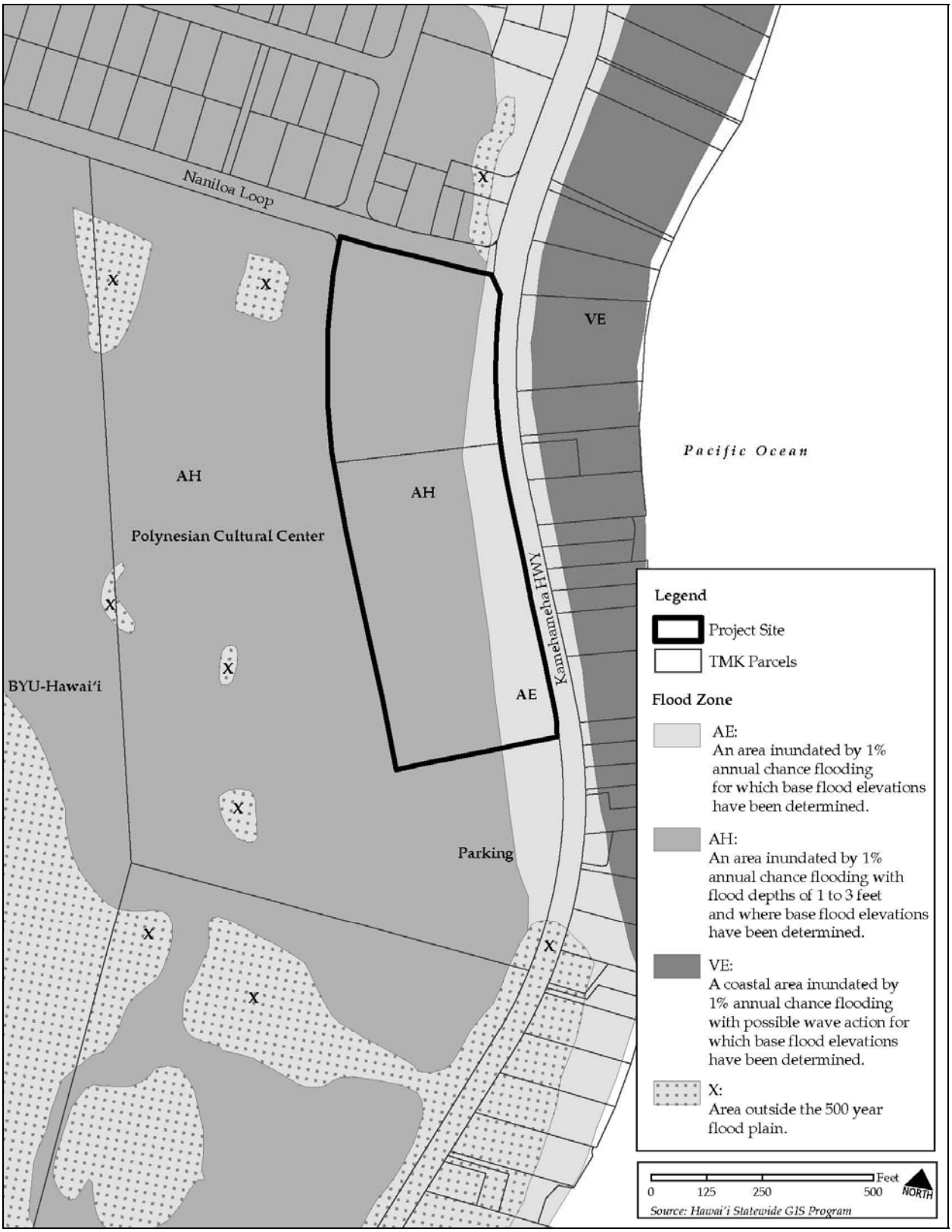


Figure 3.12 Flood Hazard Zones

3.2.4 Potential Impacts

The project will not impact the quantity of State Agricultural land.

Soil could potentially be released from the site in the air or in storm water runoff during construction. Storm water runoff will be managed onsite according to county drainage standards. Best management practices (e.g., construction site perimeter fencing, soil wetting) will be implemented to minimize soil loss via wind. After construction, landscaping and paving will prevent soil loss.

There will be minor changes to site topography to meet flood hazard protection requirements. The project will not increase the risk of natural hazards.

No adverse short-term or long-term; or direct, indirect or cumulative impact on soils, topography, or natural hazard risk is anticipated and therefore no mitigation is proposed.

3.3 WATER RESOURCES

3.3.1 Surface Water and Storm Water Management

The site is situated within the Wailele Watershed, which originates in the upper ridge area of the Koʻolau Range *(Figure 3.13)*. The majority of the Wailele Watershed area contains agricultural and conservation land. Wailele Stream is at the base of Wailele Gulch. It is the nearest stream at greater than 0.5 miles south of the project site. The various intermittent streams in the Lāʻie area, including the Wailele Stream, collect runoff from urban, agricultural, and ma uka watershed. Runoff constituents, such as silt, organic material, debris, trash, and terrigenous bacteria are carried downstream. These constituents are discharged into the ocean during peak precipitation periods, causing short-term degradation of ocean water quality. The ocean is well mixed in the project area and storm run off inputs are dissipated shortly following storm events.

There are no natural surface water bodies within the project site. Pacific Ocean is the nearest surface water and it is adjacent to the ma kai site. The Lāʻie Bay area is classified as Class A Marine waters by the State of Hawaiʻi Department of Health (DOH). Class A Marine waters must be protected for recreation use and aesthetic enjoyment. Other uses are allowed only if compatible with the protection and propagation of fish, shellfish, and wildlife, and with recreation in and on these waters. Land uses along Class A Marine waters, particularly construction activities, must take precautions to avoid adverse water quality effects.

The ocean at the Lāʻie shoreline is well-mixed due to trade wind exposure, ocean waves and currents. As a result, the water quality is consistently high with excellent dispersion of material introduced by area streams (AECOS, 1992). A few days after a storm period, the runoff constituents dissipate and the water quality typically returns to normal. The most evident effect of runoff is the temporary discoloration of near shore water due to suspended clay and silt particles.

Storm water drainage is an issue throughout Lāʻie. There is no municipal storm drainage system in Lāʻie, but there are two private drainage systems managed by HRI. One system discharges at Laniloa Beach via two 42-inch drains and the other discharges at Temple Beach via a 20-foot wide open channel. The two storm water drainage systems in Lāʻie have ~~reached~~ capacity for a 3 to 5 year storm and require improvements as described in the Lāʻie Town Drainage Master Plan (R.M. Towill 2007) for additional capacity. After very heavy rainfall periods, ponding is sometimes observed at the ma uka project site.

During construction, there is increased potential for soils to enter the storm water runoff with potential adverse impacts to the receiving water (Pacific Ocean). Best management practices will be implemented as prescribed by the Clean Water Act - NPDES Permit, Grading Permit and County-approved Sediment and Erosion Control Plan. To the extent practical, storm water will be retained on site.

During operation, ~~the~~ storm water will flow ~~be controlled~~ through an on-site underground storage collection system *(Appendix C)* that is designed to discharge the storm water into the ground, excess water would flow to one of two existing storm drain systems that ~~ultimately~~ discharges to the Pacific Ocean at Laniloa Beach and the Foodland Storm Water Outlet. The drainage system will be designed in accordance with County Rules related to Storm Drainage Standards and applicable discharge requirements will be followed. Small quantities of landscaping maintenance chemicals will be applied to the site in accordance to manufacturer's instructions. There is potential for minimal amounts of residual pesticide and fertilizer compounds to enter the drainage collection system. A water quality management program will be instituted to address landscape and hardscape maintenance, and measures to mitigate potential applications and practices that could affect surface water quality.

3.3.2 Groundwater

The Koʻolau Loa region experiences a large percentage of Oʻahu's total rainfall, much of which percolates into the underground aquifers. The main potable water source for the area is a deep basal aquifer. Koʻolau Loa's rich aquifers are tapped by the Honolulu Board of Water Supply (BWS) and the Lāʻie Water Company to provide domestic water for Koʻolau Loa and Koʻolau Poko. The upper North Shore region also receives a portion of their domestic water supply from the Koʻolau Loa BWS system.

Beneath the Lāʻie area there is also a shallow aquifer, or cap rock aquifer, which is separate from the deeper basal aquifer. There is no connection between the two aquifers. This brackish aquifer is not a potable source because it is affected by subsurface saline waters of the ocean. Uses of urban and agricultural lands in Lāʻie, including agricultural chemicals and wastewater disposal, can affect caprock water quality. Caprock water flows to the sea; however, there is no evidence of near shore ocean water quality effects by human uses at the project site.

The project site is located ma kai of both the DOH Underground Injection Control (UIC) Line and the BWS No Pass Line *(Figure 3.14)*. Development ma uka of these delineations is subject to stricter land use controls due to increased potential to impact potable water supplies. No impact is anticipated to groundwater quality or supply.

The project will be served by the Lāʻie Water Company, which provides water to the Lāʻie community. There is ample capacity to serve the project with no significant effects on the resource. The increase in water due to the expanded number of guests at this site will be approximately 88,700 gallons per day (gpd), with a maximum day flow of 133,050 gpd *(Appendix B)*. This accounts for a net increase of seven percent (7%) in the current daily system flow of 1.27 million gpd.

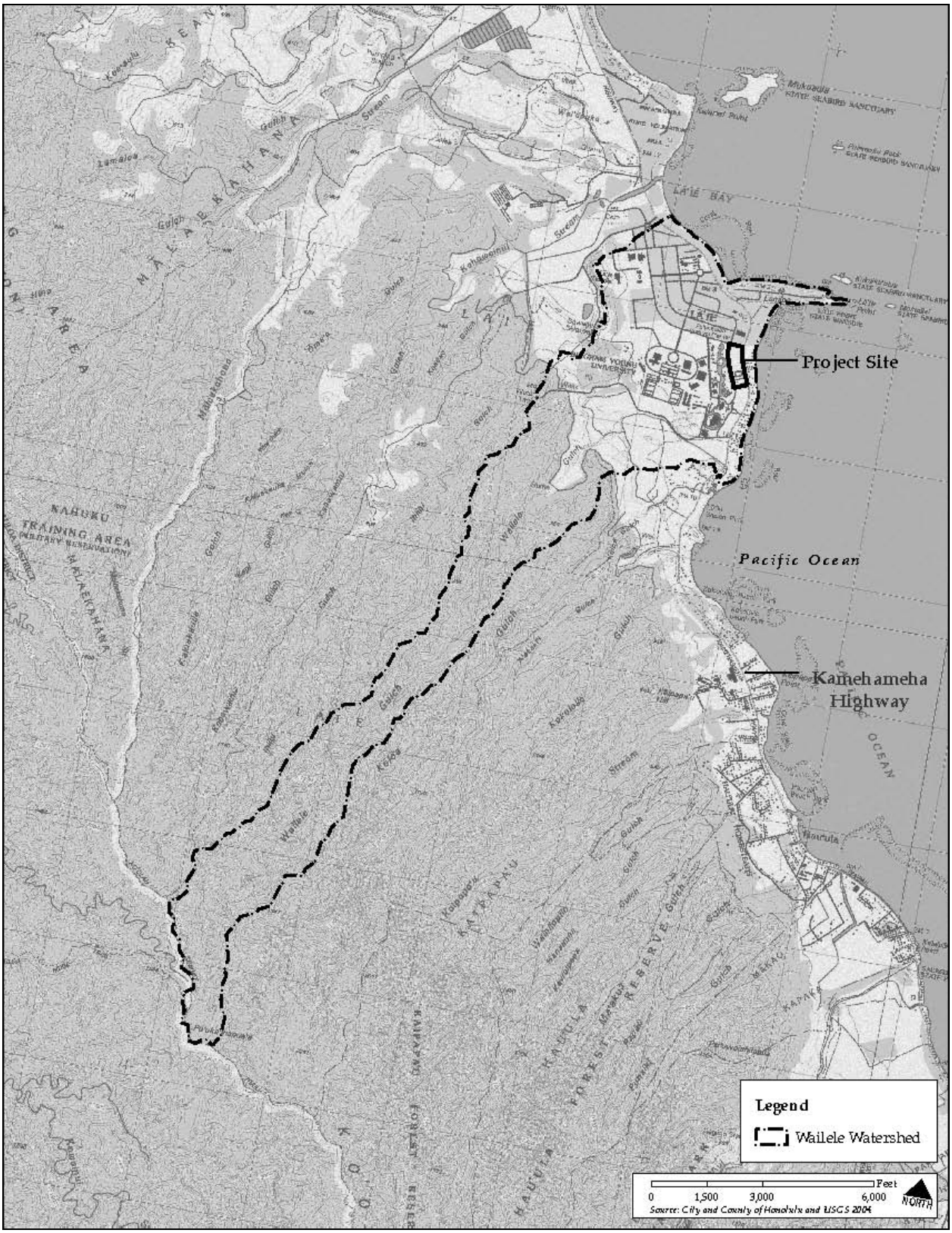


Figure 3.13 Wailele Watershed

3.3.3 Potential Impacts to Water Resources

No significant adverse short-term or long-term; or direct, indirect or cumulative impact on surface water is anticipated with the implementation of permit conditions and best management practices. Best management practices to control soil loss from the site include construction fencing, soil wetting, phased grading over the site to minimize the area of concurrent disturbance, and landscaping will be initiated as soon as is practical. No additional mitigation is proposed.

No adverse short-term or long-term; or direct, indirect or cumulative impact on groundwater supply or quality is anticipated. No mitigation is proposed.

3.4 BIOLOGICAL RESOURCES

There are no endangered, candidate endangered or threatened plant or animal species present at the site. The project site is not a "critical habitat" area defined by the U.S. Fish and Wildlife service. The closest habitat for endangered and endemic water birds is greater than a mile from the project site. Wetland birds do not inhabit the project site.

3.4.1 Flora

The natural vegetation associated with the soil types in this area consists of kiawe, koa haole, bristly foxtail, Bermuda grass, finger grass, and Australian salt brush. However, the project area has been altered by residential and commercial development, and therefore little natural vegetation exists. The vacant northern portion of the site is landscaped with turf grass and common tree species such as ironwood and coconut.

Vegetation at the site will be disturbed by grading and grubbing activities. Where possible, mature trees will be preserved in-place or relocated for landscaping.

3.4.2 Fauna

Cattle Egrets and pigeons are common in the project area. Other birds often found in the area may include the Spotted or Lace-necked Dove; the Barred or Zebra Dove, the Common Myna, and the Red-crested Cardinal. These birds are more prevalent in the open landscape area versus the developed areas. Also located in the project area are introduced mammal species, such as rats and mongoose. There are no endemic amphibians or land reptiles in the Hawaiian Islands. Introduced species include the common toad, frog, skinks and geckos. These amphibians and land reptiles are present in the project area, but none are rare, endangered or of any special significance.

3.4.3 Potential Impacts on Biological Resources

No adverse short-term or long-term; or direct, indirect or cumulative impact on protected biological resources or their habitats is anticipated. No mitigation is proposed.

Prior to beginning site grading or construction activities, a vector control program will be applied to eradicate rodents consistent with Hawai'i Administrative Rules, Chapter 11-26, and Vector Control. Rodent traps and/or rodenticides will be set out on the site for at least a week or until rodent activity ceases.

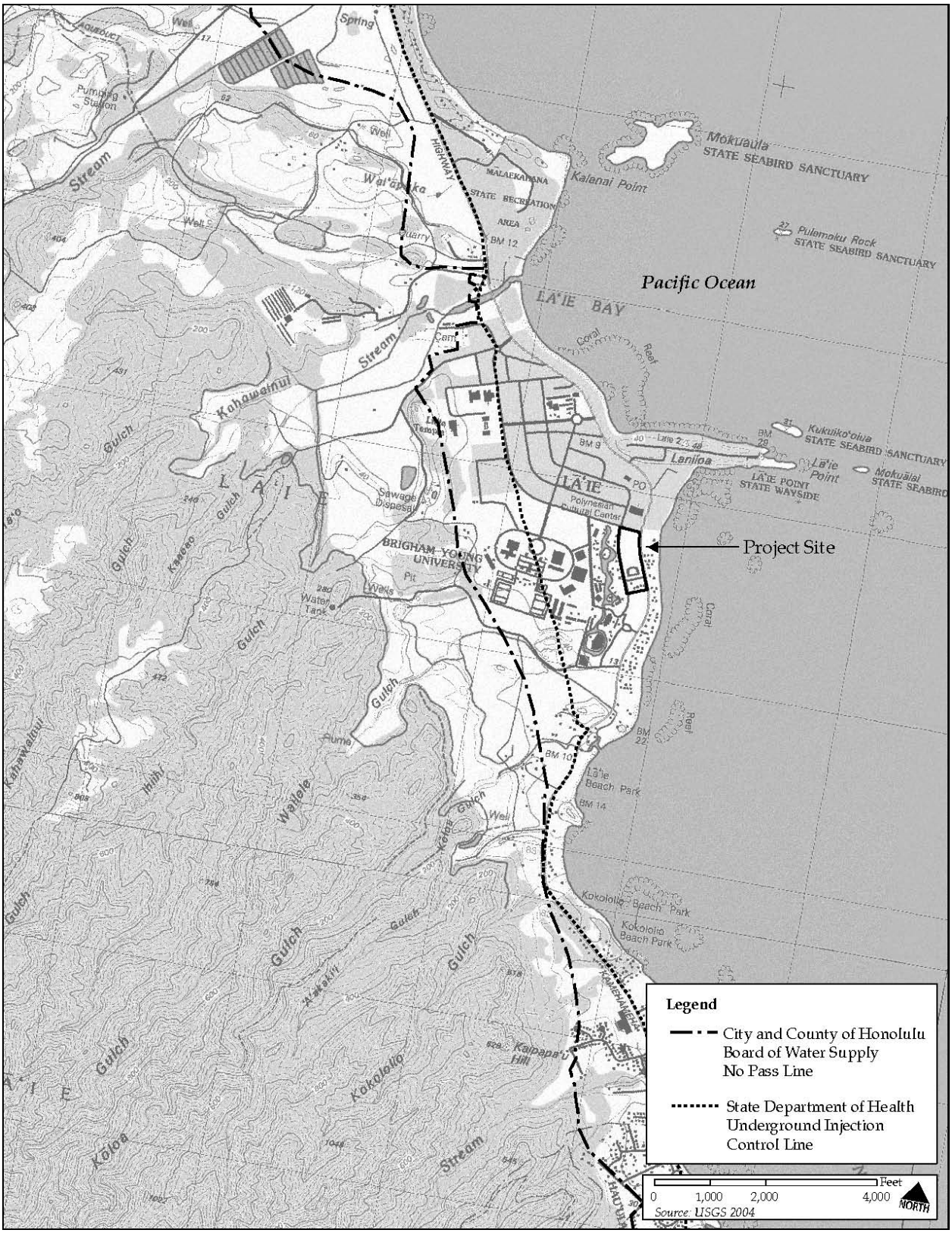


Figure 3.14 Groundwater Protection

3.5 ARCHAEOLOGICAL AND CULTURAL RESOURCES

Archaeological and cultural studies were completed for the project site by Scientific Consulting Services (October 2004~~ and August 2007~~) *(Appendices D and E)*.

3.5.1 Archaeological Resources

Archaeological studies conducted in the vicinity of the project area include investigation completed to obtain information for the Lāʻie Master Plan and Lāʻie Water Reclamation Facility by: Walter Graves (October 1995), Abad (October 1995), Halpern and Rosendahl (September 1995), Cultural Survey Hawaiʻi (1994 & 1991), and Dunn and Rosendahl (April 1992). Research completed at Hukilau Beach, was conducted by Hammatt (1987), Sinoto (1980), and Connolly (1980). Bath (1985), Ahlo and Hommon (1981), Sterling and Summer (1978), and J. Gilbert McAllister (1933) all investigated the Kahawainui Stream flood plain. Mālaekahana State Park, north of Lāʻie, was investigated by Yent and Griffin (1980).

In the areas ma uka of Lāʻie's shoreline, a number of archaeological sites have been identified. None of these sites are located in the project area; nor have they been included on the National or State Registers of Historic Places. Specifically, taro terraces are known to have existed in many locations throughout the Lāʻie region, but have since been destroyed through sugarcane cultivation and other modern land modifications.

Hukilau Beach, north of the project site, underwent subsurface testing in 1980 (Connolly) that revealed some evidence of a buried cultural layer. Sinoto's investigations (1980) of the Park's limestone outcrop indicated a rock shelter of the same formation, yet no cultural layer was identified. In 1987 (Hammatt) a human burial was discovered in a limestone cave in the vicinity of Hukilau Beach Park.

In April 1992, Dunn and Rosendahl identified additional cultural sites in the Lāʻie region to the north of the project site. The site located closest to the project location from their list of discoveries is described as a possible habitation site from the prehistoric to early historic periods. The site was identified by a subsurface deposit found in backhoe testing. It is located on the ma kai side of Kamehameha Highway close to the shoreline, several lots to the north of the project site.

A noted historical feature in the area is the former Koʻolau Railroad Line developed before 1900 as part of a trans-Koʻolau Railroad. One spur line extended from an area near the Lāʻie Temple southward and ma uka to a reservoir site near Wailele Gulch. The rail line has been mostly covered by residential development.

An on-site field inspection was undertaken by SCS on September 22 to 24, 2004 ~~and July 2007~~, including sub-surface testing. Results of the survey indicate that the project area has undergone extensive disturbances from previous activities (SCS, October 2004~~, and August 2007~~). No significant surface or subsurface remains were observed during the inspection.

3.5.2 Cultural Resources

A cultural assessment of the proposed project was completed by SCS in October 2004~~, with an update in August 2007~~. In 1993, Rosendahl and Maly completed the first cultural assessment for an EIS in Hawaiʻi, in association with the approval process for the Lāʻie Water Reclamation Facility (Group 70 International, Inc., 1993).

The Koʻolau Loa moku, one of six traditional segments of Oʻahu, contains the site of the proposed project. This moku also holds one of the last non-developed areas on Oʻahu, the ahupuaʻa of Kahana. The project site falls within the ahupuaʻa of Lāʻiemaloʻo, the area stretching from just below Lāʻie Point along the coast to Hauʻula and upwards toward the mountain ridges of Koʻolau Range.

The approximately 6,000 acre ahupuaʻa of Lāʻiewai and Lāʻiemaloʻo were purchased from Thomas T. Dougherty for $14,000 on January 26, 1865, by Francis A. Hammond, one of the co-presidents of the LDS Sandwich Isles Mission. Brigham Young requested that Kamehameha V allow an agricultural community to be located in Lāʻie and so began the Church of Jesus Christ Latter-day Saints activity in the region. When the first LDS families arrived in 1865 to raise sugar, construct a mill, schools, and a chapel, Lāʻie was a settlement of approximately 200 native Hawaiians. The history and culture of present day Lāʻie is intricately entwined with the LDS Church.

The project area is not the site of any traditional Hawaiian resources or any on-going Hawaiian cultural practices. It can be inferred from the taro terraces in the Lāʻie region that historically there may have been agricultural activities pursued by native Hawaiians in the area of the project site. There is a low potential for cultural remnants to be found on the site consistent with the archeological investigation by SCS ~~*(refer to Section 3.4.1)*~~. The site does not possess culturally significant plants. In addition, the site is not an access route to ma uka or ma kai trails or culturally significant resources.

3.5.3 Potential Impacts on Archaeological and Cultural Resources

Based on the above discussion, n~~N~~o adverse short-term or long-term impact; or direct, indirect or cumulative impact on archaeological and cultural resources is anticipated.~~,~~ ~~h~~However, the project will take special care to observe excavation activities for the potential of encountering subsurface remains. In the event that any previously unidentified archaeological resources are encountered during the development of the property, construction activities will stop and the contractor will immediately contact the State Historic Preservation Division in accordance with applicable regulations. In addition, archaeological monitoring will be conducted during earthmoving (i.e., grading and excavating) phases of construction. ~~No mitigation is proposed.~~

3.6 WASTE MANAGEMENT

3.6.1 Wastewater

The project site is currently serviced by the City and County of Honolulu operated Lāʻie Water Reclamation Facility (LWRF), located ma uka of the project site. The Lāʻie WRF can accommodate the proposed development having been upgraded (June 1997) to provide 0.9 million gallons per day (mgd) of treatment capacity. The 1997 upgrade also transformed the Lāʻie WRF into a state-of-the-art, environmentally sustainable, low impact facility. The Lāʻie WRF uses an activated sludge aeration/clarifier treatment process. Treated effluent is disposed through a combination of water reused for irrigation (agriculture and landscaping) and subsurface disposal. The Lāʻie WRF uses tertiary-level treatment, unlike most facilities in the state which use only secondary treatment. Tertiary treatment removes 99.5 percent of particulates from the treated wastewater. It is the first Oʻahu facility to disinfect reclaimed effluent by using environmentally friendly ultraviolet light. Additionally, sanitized solids are reused by combining them with green waste to create compost for gardening and agriculture.

The RM Towill 2007 Preliminary Engineering report *(Appendix B)* addresses the project requirements for wastewater management. The hotel rooms and related support facilities are anticipated to generate average daily wastewater flow of approximately 154,100 ~~135,000~~ gpd during peak wet weather and 45,800 ~~37,000~~ gpd during average dry weather. The project will be connected to the existing sewer collection line located in Naniloa Street and along Kamehameha Highway. Current capacity at the LWRF is more than adequate to accommodate the new facilities.

3.6.2 Solid Waste

No hazardous waste will be generated at the site. Solid waste generated by the new development will be collected by a private hauling company. It is anticipated that some of the construction waste can be recycled and will be hauled to the appropriate recycling company. Non-recyclable construction waste will be disposed of at PVT Landfill, a private construction and demolition landfill in Nanakuli. Efforts will be made to recycle typical municipal solid waste generated once the project is operational. Non-recyclable waste will be disposed of at either the City and County's HPOWER in Honolulu or the Waimānalo Gulch Landfill. Food waste will be collected separately for recycling per the Revised Ordinances of Honolulu Chapter 9 - 3.5.

Site preparation will involve removal of the gasoline Underground Storage Tanks (UST) at the Chevron Station following State UST and Federal EPA requirements. Soil surrounding the tanks will be tested for petroleum product. If the soil is contaminated, the State DOH will require removal to the PVT Landfill, which treats and disposes of petroleum contaminated soil.

Once operational, the quantity of municipal solid waste generated at the project site will fluctuate with the rate of occupancy, the banquet and wedding schedule. *Table 3-2* summarizes estimated waste generation rates for the guest facilities, restaurant, and banquet facility based on the California Integrated Waste Management Board (CIWMB). It assumes 100% occupancy, with the banquet facility being used every day of the year.

Table 3-2
Estimated Solid Waste Generation

Facility	Estimation Factor*	Pounds	
		Per Day	Per Year
220 Hotel Rooms	4.0 lb/room/day	892	321,200
4,200 sf Restaurant	0.005/lb/sf/day	21	7,665
6,000 sf Banquet Hall	0.005/lb/sf/day	30	10,950
	TOTAL	931	339,815

* Source: CIWMB, 1991

The applicant intends to reduce the impact the project's effect on the County landfill and solid waste management system by implementing recycling. The following waste management measures will be implemented:

- First, the owners will seek to prevent waste before it occurs, via source reduction. During construction, the applicant will plan efficiently for material use. During operation they will implement procedures that minimize waste generation, such as limiting the number of non-reusable or disposable products.

- Second, practicable efforts to re-use materials will be a component to the project's solid waste program. In the construction phase, efforts will be taken to reuse materials as much as possible, such as scrap generated on the site or used materials/scrap from other jobs. The primary re-use taking place in the operational phase will be composting/re-use of green waste. Chipping and composting will be utilized to the extent practicable; by yard and landscape maintenance crews for mulching and soil conditioning.
- Lastly, recycling will be an important part of both the construction and operational phase of the development. Recyclable materials will be separated from non-recyclable materials, hauled from the site to the appropriate company, and eventually processed to make new products. The project will also look into buying recycled products as building materials and for use in the commercial operations of the guest facilities.

3.6.3 Potential Impacts on Waste Management

No significant adverse short-term or long-term; or direct, indirect or cumulative impact on waste management is anticipated. There will be increased quantities of waste generated, but there is sufficient waste disposal capacity and efforts will be made to reduce waste generated. No additional mitigation is proposed.

3.7 TRAFFIC AND PARKING

3.7.1 Traffic

A Traffic Impact Assessment Report for the proposed Lāʻie Inn Redevelopment was prepared by The Traffic Management Consultant (March 2007) and included as *Appendix ~~E~~F*. The study analyzed existing conditions and estimated project-generated traffic at the intersections of Kamehameha Highway and Naniloa Loop and the project driveways proposed. The results of this report are discussed below.

The project will reduce the number of active access points onto Kamehameha Highway to two locations. There are currently four access points: two road way intersections and two driveway connections to Kamehameha Highway. Vehicle access for the redeveloped Lāʻie Inn will utilize an existing driveway located adjacent to Chevron and McDonald's on the south side adjacent to the PCC parking area. This driveway will provide access to the main entrance of the hotel ~~Inn~~. The current Lāʻie Inn entrance road with the redeveloped site will no longer be an access road. A portion of Iʻosepa Street, intersecting with Naniloa Loop, will serve as a secondary site entrance.

The two-lane Kamehameha Highway fronting the project consists of 11-foot wide travel lanes and 4-foot wide shoulders. Naniloa Loop, at the north end of the project site, services a residential area and is the primary route for accessing BYU-Hawaiʻi. Kamehameha Highway forms an unsignalized intersection with Naniloa Loop. Bus stops are located in both directions fronting the project site.

Two access roads, one off of Kamehameha Highway and one off of Naniloa Loop will provide entry to the project site. The primary entrance will be from Kamehameha Highway bordering on the north end of the PCC parking lot *(Figure 2.1)*. The other entrance will be off Naniloa Loop. This will be a secondary entry for hotel guests via gated access to using the parking lot on the back side of the guest building.

The number of driveways along Kamehameha Highway will be reduced with the elimination of the entrances to the Chevron Station. The ~~ma-uka~~ site will have one ~~two~~ driveway~~s~~ and one

roadway intersection at the project entrance, next to the PCC parking lot. The project will reduce the ~~– a reduction from the current~~ ~~four~~ number of ~~driveways~~ connections to Kamehameha Highway from four to two. ~~Expected use is only for service vehicles; therefore, use of this site was not analyzed in the traffic study.~~ There will be a driveway exit from the business area at the north end of the parcel directly to Kamehameha Highway that will be limited to right-turns in and out. ~~Vehicular access to the beachfront facility will be limited to service traffic.~~ Signalization of the Naniloa Loop/Kamehameha Highway is anticipated to improve traffic flow and pedestrian safety~~, particularly for beach club patrons~~. This improvement may increase delays to through-traffic on Kamehameha Highway. Widening Kamehameha Highway to provide left-turn lanes at Naniloa Loop and the hotel main entrance will help offset the delay by reducing the existing delays experienced through traffic waiting behind vehicles turning left to the side streets.

Traffic flow on Kamehameha Highway during morning and afternoon commute averages between 400 and 500 vehicles per hour, and peak Saturday traffic flow averages closer to 600 vehicles per hour. Currently long delays are experienced when making a left turn onto Kamehameha Highway in the north-bound direction.

The key project identified for the North Shore that is relevant to a discussion of cumulative impacts of plans to construct five new hotels and four public parks adjacent to the existing Turtle Bay Resort. There is no firm timeline for these improvements. The resort area is located approximately 7 miles north of Lāʻie.

The State Department of Transportation (DOT) has commented positively on the hotel redevelopment and site design including traffic management and the addition of a traffic signal. Several meetings have been held with DOT regarding traffic issues such as updated alignments and access points to the McDonalds and Chevron site. We will continue discussions with DOT as the project moves forward.

3.7.2 Parking

Adequate public and guest parking will be provided by the project to accommodate project development and use. Approximately 345 ~~436~~ parking spaces are provided on-site. No existing parking stalls will be removed from PCC as the current design for the Lāʻie Inn Redevelopment meets the necessary parking as stated in the Land Use Ordinance (LUO) (288 spaces). Future retail space will increase the proposed parking range to 379 and the LUO parking requirements to 339 spaces. Refer to *Table 3-3* for a parking summary of the project area. ~~Parking will be available from PCC under a future joint parking agreement (Conditional Use Permit – Joint Development).~~

Table 3-3
Parking Summary

Component	Parking Required (LUO)
220 Hotel rooms	220
Banquet Meeting Facility	40
Restaurant	10
McDonald's	11
Chevron	7
Total LUO Minimum	**288**
Parking Provided on Site	**345**
Retail (future)	51
Total LUO Minimum	**339**
Parking Provided on Site plus Retail (future)	**379**

3.7.3 Potential Impacts on Traffic and Parking

~~The proposed number of hotel rooms will more than~~ The expected number of guests visiting the hotel will roughly double the number of vehicle trips associated with the hotel. ~~existing capacity with a corresponding increase in vehicular traffic.~~ However, hotel guests~~ vacationing individuals and other visitors~~ are unlikely to travel during peak commute times. Additionally, local residents who are employed nearby at the hotel will avoid travel to the island's urban center, reducing traffic on the highway. Nonetheless, there will be an increased number of employees working on shifts that commute to the hotel ~~Inn~~. (NOTE: Many employees will be residents of Lā'ie that will bike or walk to the site.) The shift changes may coincide with peak commuter~~s'~~ traffic, particularly the early to middle shift changes. *Table 3-4*~~3~~ provides the proposed project's net vehicle trip generation. With the construction of the proposed project, approximately 50 to 60 vehicles will be added to traffic flow during peak commute and Saturday travel times.

The Kamehameha Highway existing traffic flow is poor during peak travel and the project may have direct and cumulative impact on traffic in the vicinity. The impacts from construction and operation of the project are not significant; construction days typically begin before peak traffic hours. Guests at the site are unlikely to travel during peak times. ~~The 75 employees `will work in three shifts that do not coincide directly with peak traffic hours. (NOTE: Many employees will be residents of Lā'ie that will bike or walk to the site.) Guests would not adhere to any schedule and would tend to avoid high traffic times.~~ Some of the guests attending the PCC who would have usually returned to Waikiki in the evening, may now stay overnight at the hotel and return the following day, when traffic is typically minimal. This will reduce the number of vehicles heading to town on Kamehameha Highway in the late evening hours.

Conferences held in the meeting room/banquet will be only on occasions and will rarely add to peak hour traffic, as most attendees would be staying at the hotel. Private buses/vans can be rented to shuttle local attendees from the urban areas. People may also use The Bus, and bus stops are located in both directions fronting the project site. Potential impacts include guests and visitors traveling to and from Waikiki and the airport areas, in addition to employees living within the Lā'ie region.

Improvements are recommended to alleviate existing and future traffic issues. For the two Kamehameha Highway intersections at Naniloa Loop and the Inn access road, the roadway infrastructure recommendations are to:

- Provide exclusive left-turn lane from Kamehameha Highway to the two roadways; ~~and~~
- Widen the north leg of the highway to provide a median left-turn shelter lane to facilitate traffic from the roadways merging with northbound highway traffic;
- Eventual signal installation and lane widening at the Naniloa Loop intersection with Kamehameha Highway;
- Crosswalk improvements at the Naniloa Loop intersection tied to signal installation and lane widening;
- The project will have one ~~two~~ driveway~~s~~ and one intersection with ~~on~~ Kamehameha Highway – a reduction from the current ~~four driveways~~ access points.

The project, with these improvements, will improve the safety of traffic conditions for vehicular travel and pedestrian use, especially during peak travel times.

Table 3-4~~3~~
Trip Generation Characteristics

	AM Peak Hour			PM Peak Hour			Saturday Peak Hour		
Land Use	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
Lāʻie Inn (220 rooms)	75	48	123	69	61	130	89	70	159
Restaurant	4	1	5	28	14	42	36	25	61
Gas Station	36	42	78	27	23	50	33	46	79
McDonald's	35	29	64	42	44	86	48	56	104
Retail	11	7	18	32	35	67	47	43	90
Subtotals	161	127	288	198	177	375	253	240	493
Existing Site Trips	72	72	144	74	69	143	91	109	200
Net Increase in Trips	**89**	**55**	**144**	**124**	**108**	**232**	**162**	**131**	**293**

3.8 PUBLIC USE AND SERVICES

3.8.1 Beaches, Parks, and Recreation Areas

The project site is located near several beach parks and surf breaks. The nearby beach parks include the Mālaekahana State Recreation Area, Lāʻie Point State Wayside, Lāʻie Beach Park and Kokololio Beach Park owned by the City and County of Honolulu, and Hukilau Beach. There are numerous surf breaks off shore including Pounders, Bill's Bowl, Gutters, and PCCs. The Koʻolau Loa Sustainable Communities Plan Open Space Map (1999) indicates Kokololio Beach Park and Mālaekahana State Park as the main shoreline access points in the area. None of these parks or surf sites is located at or adjacent to the project. ~~Access to these areas will not be impacted by the project.~~ The current beach access across from Lāʻie Inn will continue to allow for public beach access.

John M. Knox & Associates, Inc. (April, 2008) conducted a survey of users at the beach located across the highway from the Lāʻie Inn. This study was made to assess the hotel expansion's potential impact on beach use due to hotel guests, local residents, and visitors *(Appendix G)*. The findings indicate that the expansion of the hotel will not result in a large increase in beach use. The beach is currently not extensively used by either residents or visitors. Residents

appeared to use the beach area more on the weekends than the weekdays while non-Laie Inn guests used the beach more on weekdays, than weekends. Guests of the existing Lāʻie Inn accounted for very few of the observed beach users - eight percent (8%) of the total number. While hotel guests may use the beach areas across the redeveloped hotel, other beaches along Kamehameha Highway in Haleʻiwa and the North Shore are better suited for recreational enjoyment. The beach across from the hotel site is subject to seasonal changes and currents that regularly wash up marine debris and litter, and at high tide the usable beach area is sparse.

3.8.2 Bicycle and Pedestrian Pathways

There is an existing bicycle/pedestrian path fronting Kamehameha Highway and the project will provide the beneficial impact of extending that path along the project site. Many of the employees will be residents of Lāʻie that will bike or walk to the site.

3.8.3 Public Services

The nearest Police station is located at 56-470 Kamehameha Hwy in Kahuku. Currently, 10 to 20 staff and officers are assigned to the area from Ka'a'awa to Wailele Stream. The nearest medical clinic is the Kahuku Medical Center (KMC) ~~Hospital~~ located at 56-117 Pualalea Street, in Kahuku. The KMC ~~Kahuku Hospital~~ is a non-profit, civic and public safety facility which provides emergency services and a physician base for primary medical services to the Ko'olau Loa community. The state~~community~~ owned hospital receives state subsidies and has broad community support. The project will increase the transient population in Lāʻie, which will have minor impacts on Honolulu Police Department protection and public medical services. The nearest fire station is Station 15 located at 54-064 Kamehameha Hwy in Hau'ula. It is equipped with a five-person engine company and a one-person tanker truck. The increase in development will have minor impacts on Honolulu Fire Department Services.

Public schools in Koʻolau Loa are part of the State Department of Education's (DOE) Windward District. The only public school in Lāʻie is the Lāʻie Elementary School. The school was founded in 1895 by the Church of Jesus Christ of Latter-day Saints and staffed by church missionaries. In 1919, the school was moved to the current location near Kamehameha Highway. The Territory of Hawaiʻi took over the school in 1927 and re-named the school Lāʻie Elementary School.

The project will have no impact on schools~~,~~ or libraries, ~~or~~ and minimal impact on community gathering places (such as beaches or parks). The project will provide the benefit of an additional meeting venue for the community.

3.8.4 Public Utilities

The project will impact the demand for electrical and communication services. HECO and Hawaiian Telecom have adequate capacity to support the project with localized service improvements.

3.8.5 Potential Impacts to Public Use and Services

No significant adverse short-term or long-term; or direct, indirect or cumulative impact on public use and services in the vicinity is anticipated. The guests of the hotel ~~Inn~~ would increase use of public recreational facilities in the vicinity ~~and have greater demand on services~~; however, the existing facilities can accommodate the minor increases in demand. ~~No mitigation is proposed.~~ Guests of the hotel will be encouraged to use restrooms, changing areas, and showers that are provided at the hotel. The swimming pool will have restrooms and facilities nearby which are convenient for both swimming pool and beach patrons. New trash

receptacles will be provided at the beach access areas to help reduce litter and promote individual responsibility to care for the land. Beach access will be adequate to accommodate hotel guests without the need to cross private property. Educational material will be made available to guests, encouraging environmental stewardship and respect for private property and other surrounding areas.

3.9 VISUAL RESOURCES

3.9.1 Discussion

The Koʻolau Loa Sustainable Communities Plan (SCP) (1999) identifies panoramic view areas. The nearest panoramic viewpoints indicated in the SCP are Lāʻie Point and Hauʻula Beach Park. The project will not affect the vista at either of these locations. The project buildings may be slightly visible from Lāʻie Point, however, the buildings will not block views of the mountains.

The City's Coastal View Study (1987) identified important view sheds around Oʻahu. The project site is not included in the study's inventory of significant coastal views, but, it indicates this portion of Kamehameha Highway as a coastal roadway with "intermittent coastal views."

Roadway views ma uka toward the guest buildings and support facilities will focus on the roadside landscaping, which will serve as a buffer to the development. The design will be consistent with guidelines set forth in the Koʻolau Loa Sustainable Communities Plan. The new buildings will be designed with a Polynesian theme, and colors and materials that complement and enhance this rural community setting. The proposed scale and size of the project buildings are appropriate to the vicinity. The development will be three stories and will comply with the 40 foot height limit as specified in the zoning ordinance for this parcel, as consistent with provisions of the Land Use Ordinance (LUO).

PCC does not provide scenic views of the surroundings; therefore, the project would have no impact on the PCC visitor experience.

3.9.2 Potential Impacts on Visual Resources

No significant adverse short-term or long-term; or direct, indirect or cumulative impact on visual resources in the vicinity is anticipated. The vacant area north of the current Lāʻie Inn will be developed, which decreases the open space fronting Kamehameha Highway. Views to this vacant area were not identified as significant view sheds and views beyond are interrupted by PCC and residential development. Structures at the new hotel ~~Inn~~ will be carefully designed and sited to minimize visual effects to the surrounding areas. The hotel ~~Inn~~ will be within the 40-feet height limit as specified by LUO zoning ordinance provisions. The Polynesian-style sloped roofs will blend with the existing aesthetic of the PCC. New landscaping will be established around the finished project to enhance the visual appearance of the site.

The open space area north of the existing Inn will be lost, but the views were not identified as valuable and the proposed design and landscaping will mitigate the loss of open space. No other mitigation is proposed.

3.10 SOCIO- ECONOMICS

3.10.1 Population/Demographics

Data from U.S. Census Tract 102.02 is used to describe the existing socio-economic environment in the vicinity of the project area. Census Tract 102.02 includes the area generally bounded by Ma kai, Kaipapau Stream, Koʻolau Ridge, and Mālaekahana Stream and Adams Road.

Tables 3-54, 3-65, and 3-76 present basic demographic data for the project area and surrounding neighborhoods.

Table 3-54
Population of Lāʻie Inn Study Area* 1990-2000

Age	1990		2000		Percent Change (%)
	Number	Percent (%)	Number	Percent (%)	1990-2000
Under 18	2,335	35.7	2,055	33.7	-13.6
18-44	3,135	47.9	2,777	45.5	-12.9
45-64	764	11.7	963	15.8	+20.7
Over 65	312	4.8	305	5	-2.3
Total	**6,546**	**100****	**6,100**	**100****	**-7.3**

*Lāʻie Inn study area consists of Census Tract 102.02
*May not total to 100% due to rounding
Source: US Bureau of Census, Census, 1990, 2000

Table 3-65
Population of City and County of Honolulu 1990-2000

Age	1990		2000		Percent Change (%)
	Number	Percent (%)	Number	Percent (%)	1990-2000
Under 18	194,613	23.6	208,758	23.8	+6.8
18-44	386,669	46.8	356,544	40.7	-8.4
45-64	153,117	18.5	193,117	22	+20.7
Over 65	91,832	11.1	117,737	13.4	+22.0
Total	**826,231**	**100****	**876,156**	**100****	**+5.7**

*May not total 100% due to rounding
Source: U.S. Bureau of Census, Census, 1990, 2000

The overall population of the Lāʻie Inn study area decreased by approximately 7% between 1990 and 2000. The population of the Lāʻie Inn study area shows the greatest growth in persons between 45-64 years of age (20.7%). It is also the only age cohort population to increase between 1990 and 2000. In the County, the same cohort increased by 20.7%. The proportion of Lāʻie Inn's elderly (those over age 65) decreased slightly (-2.3%) between 1990 and 2000. In contrast, the County data shows the largest overall increase in persons over age 65 (22%), indicating the aging of the overall County population.

In 1990, persons reporting their race as Asian, Native Hawaiian or Pacific Islander made up the majority of the population in the Lāʻie Inn study area (65.9%). The only other race with a significant percentage was White (31.6%). For the County in 1990, the Asian, Native Hawaiian or Pacific Islander category was the largest at 63% of the total population, followed by White with 31.6%. Changes in the categories between 1990 and 2000 separated the Asian and Native Hawaiian/Pacific Islander categories and added a Bi-racial or Multi-racial category. In 2000, Asians made up 8.1% of the Lāʻie Inn study area and only 46% of the County. The Bi-racial or Multi-racial category comprised 26.6% in the Lāʻie Inn study area, but is only 19.9% in the County (19.9%). The percentage make up of the White category was 21.3% for the County and a comparable 25% in the Lāʻie Inn study area.

Table 3-7~~6~~
Population Data by Race 1990-2000

Race	Lāʻie Inn Study Area* 1990		Lāʻie Inn Study Area* 2000		City and County 1990		City and County 2000	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
White	2,186	31.6	1,522	25.0	264,372	31.6	186,484	21.3
Black or African American	55	0.8	32	0.5	25,875	3.1	20,619	2.4
American Indian & Alaska Native	51	0.7	17	0.3	3,523	0.4	2,178	0.2
Asian	4,564	65.9	493	8.1	526,459	63.0	403,371	46.0
Native Hawaiian Pacific Islander	Included in Asian		2,362	38.7	Included in Asian		77,680	8.9
Other	70	1.0	51	0.8	15,993	1.9	11,200	1.3
Bi or Multi racial	Not included		1,623	26.6	Not included		174,624	19.9
TOTAL	**6,926**	**100**	**6,100**	**100**	**836,231**	**100**	**876,156**	**100**

*Census Tract 102.02
Source: U.S. Bureau of Census, Census, 1990, 2000

3.10.2 Economic Factors

The project area is located within a growing rural commercial center in Lāʻie. Rural commercial centers are a mix of retail shopping, restaurant, personal service, entertainment and professional office uses that serve a regional consumer base which includes local residents, residents from neighboring communities and, to a limited extent, tourists. The majority of Lāʻie establishments are located along Kamehameha Highway and cross-streets throughout the Kamehameha Highway corridor. Data from the City and County of Honolulu's Economic Development Geographic Information System (GIS) Property Locator and Reports website (City and County of Honolulu, 20005) indicate that there are 38 establishments with 355 employees within ½ mile (2,640-foot) radius of the project area. The majority of these are small businesses, with one to four employees. Within a 0.75 mile (3,960-foot) radius of the project area, there are a total of 57 establishments with 1,758 employees. Again, the majority are small businesses with one to four employees. Examples of the type of establishments in Lāʻie include, in descending order of frequency, Entertainment and Recreation Services, Colleges and Universities, Primary and Secondary Education, Food Markets, Restaurants, Health and Medical Services, Other Food Service, and Non Durables Wholesale.

The project area currently generates annual gross real estate tax revenues of approximately $94,877.33, or about $0.27 per gross square foot. The City and County of Honolulu currently collects property taxes for the project area at a rate in accordance with its Resort District, B-2 Commercial Business District, or R-5 Residential District zoning.

Similar to the County, the project area has a low percentage of civilians unemployed in 1990 and 2000 (4.1%). Though the percentage of civilians unemployed has increased by 0.3% from 1990 to 2000 in the County, the project area has remained the same *(Table 3-8~~7~~).*

Table 3-8~~7~~
Unemployment Data 1990-2000

	Lāʻie Inn Study Area*		City and County		
	1990	2000	1990	2000	2006 (est.)
Percentage civilians unemployed	4.1%	4.1%	4.3%	4.6%	2.3%

*Census Tract 102.02
Source: U.S. Bureau of Census, Census, 1990, 2000

In 1989 and 1999, the median household income in the project area was ~~significantly~~ less than the median household income for the County *(Table 3-9~~8~~ and Table 3-10)*. In 1989, the median income in the project area was $3,515 less than the County. In 1999, the median income in the project area is $2,851 less than the County. Though the median income is lower in the project area, the median income grew faster than the County, 24.5% and 21.8%, respectively. The project area's median income grew 2.7% more than the County between 1989 and 1999.

Table 3-9~~8~~
Median Household Income 1989/1999 in Lāʻie Study Area*

	1989	1999	Percentage Changed
Median Household Income	$37,066	$49,063	+24.5%

*Census Tract 102.02
Source: U.S. Bureau of Census, Census, 1990, 2000

Table 3-10~~9~~
Median Household Income 1989/1999 in County

	1989	1999	Percentage Changed
Median Household Income	$40,58	$51,914	+21.8%

*Census Tract 102.02
Source: U.S. Bureau of Census, Census, 1990, 2000

The project does not include long-term residential housing units; rather it involves hotel rooms. Guests typically visit for periods of less than 30 days. At full occupancy of the project, the on-site guest population will be approximately 548 ~~500~~ people.

3.10.3 Employment

The employment associated with the Lāʻie Inn Redevelopment will consist of approximately 153 full-time equivalent employment positions. Of the total employment positions, there will ~~also~~ be approximately 75 employees working on the hotel site in three shifts (25 employees per shift). Most of the employees will commute to the site from current residences. Many employees will be residents of Lāʻie that will bike or walk to the site. The project is not anticipated to cause a direct or indirect shift in residential population to Lāʻie from other communities.

3.10.4 Potential Impacts on Socio-economic Resources

No significant adverse short-term or long-term; or direct, indirect or cumulative impact on socio-economics of the vicinity is anticipated. There will be beneficial impacts associated with increased employment, increased visitor spending in the community, an additional meeting/banquet venue, quality accommodation for visiting family and friends, and extension of the bike path. No mitigation is proposed.

The redeveloped hotel will provide significant employment opportunities for local residents and immense educational opportunities for students of the neighboring university campus. The project will create approximately 153 new jobs with $2.8 million in worker wages. Additionally, BYU-Hawaii students will be able to work and intern at the new hotel, giving them real world on-the-job training and certification opportunities not available in a classroom setting. This value added feature will benefit both the college students and the new hotel.

With the proposed hotel redevelopment action, visitors will spend more time in the area and increase the economic vitality not only of Lāʻie, but the economically challenged Koʻolau Loa region. Besides direct benefits to the PCC, students in BYU-Hawaii's hospitality program, and potential employees in the area, residual benefits to various businesses up and down the coast will occur as overall visitor expenditures increase. Through the purchase of goods and services at Koʻolau Loa businesses, additional discretionary spending will provide revenue needed to capture the economic potential of the region, thereby supporting the broader community and benefiting the region's economy. Annual guest expenditures are estimated to be about $28 million annually, and the project is expected to provide an estimated $8 million in net public benefits.

3.11 AMBIENT NOISE AND AIR QUALITY

3.11.1 Ambient Noise

The primary source of noise in the project area is traffic on Kamehameha Highway. Lāʻie is a suburban community characterized by residential, business, educational, religious and resort uses. The primary receptors of noise are the residents.

3.11.2 Air Quality

Ambient air quality in the vicinity and the State meets Federal and State air quality standards.

3.11.3 Potential Impacts to Ambient Noise and Air Quality

Construction equipment and activities for the project will result in short-term impacts on ambient air quality and noise levels. These impacts are anticipated to be a slight nuisance to the residential neighbors and possibly PCC visitors, but they would not represent a health risk. Construction operations will comply with State DOH regulations and the City and County of Honolulu Noise Ordinance, which limit construction operations and resultant noise to daytime hours and specific maximum levels. Air quality may be affected by the fugitive dust during construction, which will be mitigated by construction perimeter fencing and soil wetting. Landscaping will be initiated as soon as practical.

Once construction is completed, ambient noise levels may be impacted by the car wash facility planned for the Chevron station. These impacts are anticipated to be slight in nature, and will not represent a health risk. Operation of the facility will comply with State DOH regulations

and the City and County of Honolulu Noise Ordinance, which limits noise to certain hours and specific maximum levels.

No significant adverse short-term or long-term; or direct, indirect or cumulative impact on ambient noise or air quality is anticipated to result from operation of the project.

3.12 POTENTIAL CUMULATIVE AND SECONDARY IMPACTS

The Lāʻie Inn Redevelopment is anticipated to contribute to cumulative impacts associated with existing and proposed projects planned in the Koʻolau Loa region. The key project identified for the North Shore that is relevant to a discussion of cumulative impacts are plans to expand the Turtle Bay Resort. Given ongoing lawsuits and the State's interest in the resort, there is no firm timeline for these improvements, which may never be developed. The timetable for projects in Kahuku is unclear and the Lāʻie affordable housing project is on hold. Given the known and possible projects in the region, the redevelopment of the existing Lāʻie Inn to a larger hotel facility will add to the area's visitor population, employment, traffic, water use, waste water and drainage. New jobs and spending associated with the hotel redevelopment construction and operation will be a positive impact on the region's employment base and economy. Traffic will be managed through intersection improvements and the addition of a new traffic signal, which will help manage traffic on Kamehameha Highway. Water use for the project will slightly increase the amount of water drawn for human use from the regional aquifer. Wastewater from the project will be appropriately managed through the Lāʻie Water Reclamation Facility.

4.0 Conformance with Plans, Policies and Programs

4.0 CONFORMANCE WITH PLANS POLICIES AND PROGRAMS

This section details how the project conforms to the Hawaiʻi State Plan, County General Plan and Koʻolau Loa Sustainable Communities Plan (SCP), the Hawai'i Coastal Zone Management Program and the County Special Management Area guidelines.

4.1 HAWAI'I STATE PLAN

The Hawaiʻi State Plan (HRS Chapter 226), enacted in 1978, is a statement of long-range, statewide policy for an array of economic, physical, and social development issues. The Plan requires the conformance of state programs, land use decision-making, and budgetary processes with the goals, objectives, policies, and priority guidelines of the Plan. The Plan is old and some objectives are no longer relevant. The 2005 Hawaiʻi State Legislature passed legislation creating a Hawaiʻi 2050 task force to review the Hawaiʻi State Plan and make recommendations for a Sustainability Plan to the year 2050. During this period of Sustainability Plan development, the 1978 plan prevails.

The three State goals are as follows:

- A strong viable economy characterized by stability, diversity and growth that enables the fulfillment of needs and expectations of Hawaiʻi's present and future generations;
- A desired physical environment, characterized by beauty, cleanliness, quiet, stable natural systems, and uniqueness, that enhances the mental and physical well-being of the people;
- Physical, social and economic well-being for individuals and families in Hawaiʻi, that nourishes a sense of community responsibility, of caring and of participation in community life.

The proposed project is consistent with the Hawaiʻi State Plan objectives as summarized in this section by topic.

4.1.1 Economy-Visitor Industry

The project will:

- support and assist in the promotion of visitor attractions and improve the quality of existing visitor destination areas;
- provide new job opportunities and steady employment with job training that will allow for upward mobility within the visitor industry;
- foster an understanding by visitors of "The Aloha Spirit."

4.1.2 Physical Environment

The project will:

- not degrade Hawaiʻi's unique and fragile environment;
- take into account the physical attributes of the area during planning and designing phases;
- have no impact on rare or endangered plant or animal species and habitats;
- encourage multiple use without generating costly or irreparable environmental damage;
- have no impact on scenic and historic resources;
- not increase risk to life and property from erosion, flooding, tsunamis, hurricanes, earthquakes and other natural hazards;

- incorporate design and construction practices that enhance the physical characteristics of Hawaiʻi's communities;
- represent development in close proximity to existing services and facilities.

4.1.3 Facility Systems

The project will:

- be supported within resource capacities;
- support water conservation;
- encourage multimodal transportation systems through extension of the bicycle/pedestrian pathway along Kamehameha Highway;
- incorporate energy saving systems.

4.1.4 Socio-cultural

The project will:

- contribute to the wide range of facilities to fulfill the recreational needs of all diverse and special groups effectively;
- assure adequate access to natural resources in public ownership;
- support activities and conditions that promote cultural values, customs and arts that enrich lifestyles of Hawaiʻi's people, which are sensitive and responsive to family and community needs.

4.2 GENERAL PLAN FOR THE CITY AND COUNTY OF HONOLULU

The City and County of Honolulu General Plan guides and directs land use and growth through brief statements of objectives, policies, and planning principles. It was first adopted by resolution in 1977. The following discussion summarizes proposed project conformance with the objectives and policies of the City and County of Honolulu General Plan. Relevant objectives and policies of the General Plan pertaining to the proposed action are outlined below.

4.2.1 Population

Objective B. To plan for future population growth.

Policy 2 *Provide adequate support facilities to accommodate future growth in the number of visitors to Oʻahu.*

The proposed project provides improved and expanded visitor accommodations in Lāʻie. The project's location in Lāʻie will support the existing PCC activities in providing an accommodation alternative to Waikiki or the Turtle Bay Resort. At full occupancy, hotel ~~on~~ site population including guests and workers will be approximately 775 ~~580~~ people.

4.2.2 Economic Activity

Objective A. To promote employment opportunities that will enable all the people of Oʻahu to attain a decent standard of living

Policy 1 *Encourage growth and diversification of Oʻahu's economic base.*
Policy 2 *Encourage the development of small businesses and larger industries which will contribute to the economic and social well-being of Oʻahu residents.*

Objective B. To maintain the viability of Oʻahu's visitor industry.

Policy 6 — *Permit the development of secondary resort areas in West Beach, Kahuku, Makaha, and Lāʻie.*

Policy 7 — *Manage the development of secondary resort areas in a manner which respects existing lifestyles and the natural environment, and avoids substantial increases in the cost of providing public services in the area.*

Policy 8 — *Preserve the well-known and widely publicized beauty of Oʻahu for visitors as well as residents.*

Policy 9 — *Encourage the visitor industry to provide a high level of service to visitors.*

The project will create approximately 153 ~~105~~ new jobs with $3.7 ~~$2.8~~ million in worker wages. Lāʻie residents and nearby North Shore will likely be the project's employment base. There will be training and employment opportunities for students at the nearby BYU-Hawaiʻi. Annual guest expenditures are estimated to be about $28 million annually (Hallstrom, 2004).

Lāʻie is identified in the General Plan as a "secondary resort area" and the project directly supports Objective B in providing quality visitor accommodation; thereby maintaining the viability of Oʻahu's visitor industry. The design will be consistent with the neighboring PCC. The cost of public services will not be impacted by the project. The majority of utilities are provided by the Lāʻie Water Company a subsidiary of HRI, and the City and County of Honolulu's Lāʻie Wastewater Reclamation Facility. The project is expected to provide, after accounting for public costs of the project, an estimated $8 million in net public benefits.

4.2.3 Natural Environment

Objective A. To protect and preserve the natural environment.

Policy 1 — *Protect Oʻahu's natural environment, especially the shoreline, valleys, and ridges, from incompatible development.*

Policy 2 — *Seek the restoration of environmentally damaged areas and natural resources.*

Policy 3 — *Retain the Island's streams as scenic, aquatic, and recreation resources.*

Policy 4 — *Require development projects to give due consideration to natural features such as slope, flood and erosion hazards, water-recharge areas, distinctive land forms, and existing vegetation*

Policy 5 — *Require sufficient setbacks of improvements in unstable shoreline areas to avoid the future need for protective structures.*

Policy 6 — *Design surface drainage and flood-control systems in a manner which will help preserve their natural settings.*

Policy 7 — *Protect the natural environment from damaging levels of air, water, and noise pollution.*

Policy 8 — *Protect plants, birds, and other animals that are unique to the State of Hawaiʻi and the Island of Oʻahu.*

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

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

Policy 1 — *Protect the Island's well-known resources: its mountains and craters; forests and watershed areas; marshes, rivers and streams; shoreline, fishponds and bays; reefs and offshore islands.*

Policy 2 *Protect Oʻahu's scenic views, especially those seen from highly developed and heavily traveled areas.*

No unique or federally and State-listed bird, animal, or plant will be affected by the project. No critical habitats or sensitive environments (e.g., forests, watersheds, reefs, marshes, fishponds) will be affected. Mature trees (coconut) will be retained where practical. The project will be compatible with adjacent development. It will have no impact on environmentally damaged areas, or aquatic and recreational resources. The project will be designed to meet County design standards for minimizing risks from natural hazards and development near shorelines. Construction and operation of the project will not result in damaging levels of air, water and noise pollution. The facility will not impede ma kai views nor will it impact any of the panoramic vistas identified in the area (Coastal View Study, 1987).

4.2.4 Transportation and Utilities

Objective A. To create a transportation system which will enable people and goods to move safely, efficiently, and at a reasonable cost; serve all people, including the poor, the elderly, and the physically handicapped; and offer a variety of attractive and convenient modes of travel.

Policy 11 *Make public, and encourage private, improvements to major walkway systems.*

Objective B. To meet the needs of the people of Oʻahu for an adequate supply of water and for environmentally sound systems of waste disposal.

Policy 4 *Encourage a lowering of the per-capita consumption of water and the per-capita production of waste.*

Policy 6 *Support programs to recover resources from solid-waste and recycle wastewater.*

Many employees of the project will presumably live nearby. The project includes an extension of the existing pedestrian and bicycle pathway segment along Kamehameha Highway. This creates a recreational pathway among community amenities, as well as a safe alternative to driving for project employees living in the community.

Operation of the new facilities will preserve Hawaiʻi's natural resources through practices that conserve and save water, energy, and lower the amount of solid waste generated. For example, guests will be provided with towel and sheet changing cards which ask that guests consider using their linens more than once in an effort to reduce laundry requirements, and water consumption and energy use. Landscaping at the project will use plants with minimal water needs and efficient use of water in landscape irrigation will be practiced. PCC has a recycled water system for irrigation, and future plans call for this system to be extended to the project area. Recycling of solid waste will also be a component of operations.

4.2.5 Energy

Objective B. To conserve energy through the more efficient management of its use.

Policy 3 *Carry out public, and promote private, programs to more efficiently use energy in existing buildings and outdoor facilities.*

The project will work towards implementing practices that conserve energy.

4.2.6 Physical Development and Urban Design

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

Policy 2	*Coordinate the location and timing of new development with the availability of adequate water supply, sewage treatment, drainage, transportation, and public safety facilities.*
Policy 7	*Locate new industries and new commercial areas so that they will be well related to their markets and suppliers, and to residential areas and transportation facilities.*

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

Policy 4	*Require the consideration of urban design principles in all development projects.*
Policy 5	*Require new developments in stable, established communities and rural areas to be compatible with the existing communities and areas.*
Policy 7	*Promote public and private programs to beautify the urban and rural environments.*

The construction and operation of the project will be served by established private (water and sewer) and public (roads) infrastructure systems that have the capacity to accommodate the planned use. The facility will be compatible with and support the surrounding land uses. Additionally, its proximity to the residential community of Lāʻie, as an employee base, is essential.

Urban design principals are considered in the planning and architecture of the project's structure and landscape to ensure its compatibility with the surrounding area. The landscaping program will beautify the grounds and fronting roadway corridor and maintain the feel of the surrounding Koʻolau Loa environment. Demolition of the existing degraded Lāʻie Inn with a new structure will improve the aesthetics of the area.

4.2.7 Culture and Recreation

Objective B. To protect Oʻahu's cultural, historic, architectural, and archaeological resources.

Policy 2	*Identify, and to the extend possible, presser and restore buildings, sites, and areas of social, cultural, historic, architectural, and archaeological significance.*
Policy 3	*Cooperate with the State and Federal governments in developing and implementing a comprehensive preservation program for social, cultural, historic, architectural, and archaeological resources.*

Objective D. To provide a wide range of recreational facilities and services that are readily available to all residents of Oʻahu.

Policy 6	*Provide convenient access to all beaches and inland recreation areas.*
Policy 9	*Require all new developments provide their residents with adequate recreation space.*
Policy 10	*Encourage the private provision of recreation and leisure-time facilities and services.*
Policy 13	*Encourage the safe use of Oʻahu's ocean environments.*

Site reconnaissance and subsurface site testing for this project did not identify archeological, historic, or cultural resources. Should inadvertent discoveries be made during construction, work in the immediate area will be halted and the State Historic Preservation Division will be contacted. A qualified archaeologist will be consulted to recommend further measures required for preservation or data recovery.

Public recreational facilities at the project include a restaurant and banquet/meeting facilities, and bicycle/pedestrian path, which will contribute to adequate, accessible and diverse recreational activities open to all residents of Oʻahu. By providing adequate accommodation, the project indirectly contributes to the accessibility of recreation activities in the Lāʻie area.

The existing pedestrian access to the public beach area will still be accessible for recreational use. No existing public recreational facilities will be affected by the development of the guest facilities at this site. Additionally, coastal resources, such as surf sites or sandy beaches will also not be impacted by this project.

With population growth and the changing needs of visitors and residents, the project meets basic themes outlined in the General Plan, while providing redevelopment of an existing hotel to better sustain this community. The redeveloped hotel will be a beautiful addition to the area offering employment opportunities, economic activity, and support for Lāʻie and Koʻolau Loa residents.

4.3 KOʻOLAU LOA SUSTAINABLE COMMUNITIES PLAN

The Koʻolau Loa Sustainable Communities Plan (SCP) (City and County of Honolulu, 1999) is one of eight geographically-oriented plans intended to guide public policy, investment and decision-making through 2020. In support of the General Plan, the Development and Sustainability plans provide a policy context for land use, City budgetary actions and decisions made by the private sector. An update of the Koʻolau Loa SCP is currently in progress.

The project area is located within the Rural Community Boundary designated in the SCP with the following guidelines:

- Preserve Agricultural Lands, Significant Open Space, and Natural Resources;
- Promote an Efficient Development Pattern;
- Provide Sufficient Capacity for Projected Growth;
- Protect Natural and Scenic Resources.

The project is consistent with these principals as an "infill" development. It will not contribute to sprawl and concentrates development in a compact area of the existing community, thereby reducing infrastructure demand and reliance on the automobile. The project provides additional capacity for guest visits to the area, but no permanent population growth is anticipated. There are no anticipated impacts to natural resources, scenic resources, or agricultural lands.

The project further supports the SCP by enhancing existing recreational areas and resources. The project site will provide a new restaurant and meeting/banquet facility for recreational gatherings. The community's bicycle/pedestrian path is considered a recreational facility and it will be extended by the project.

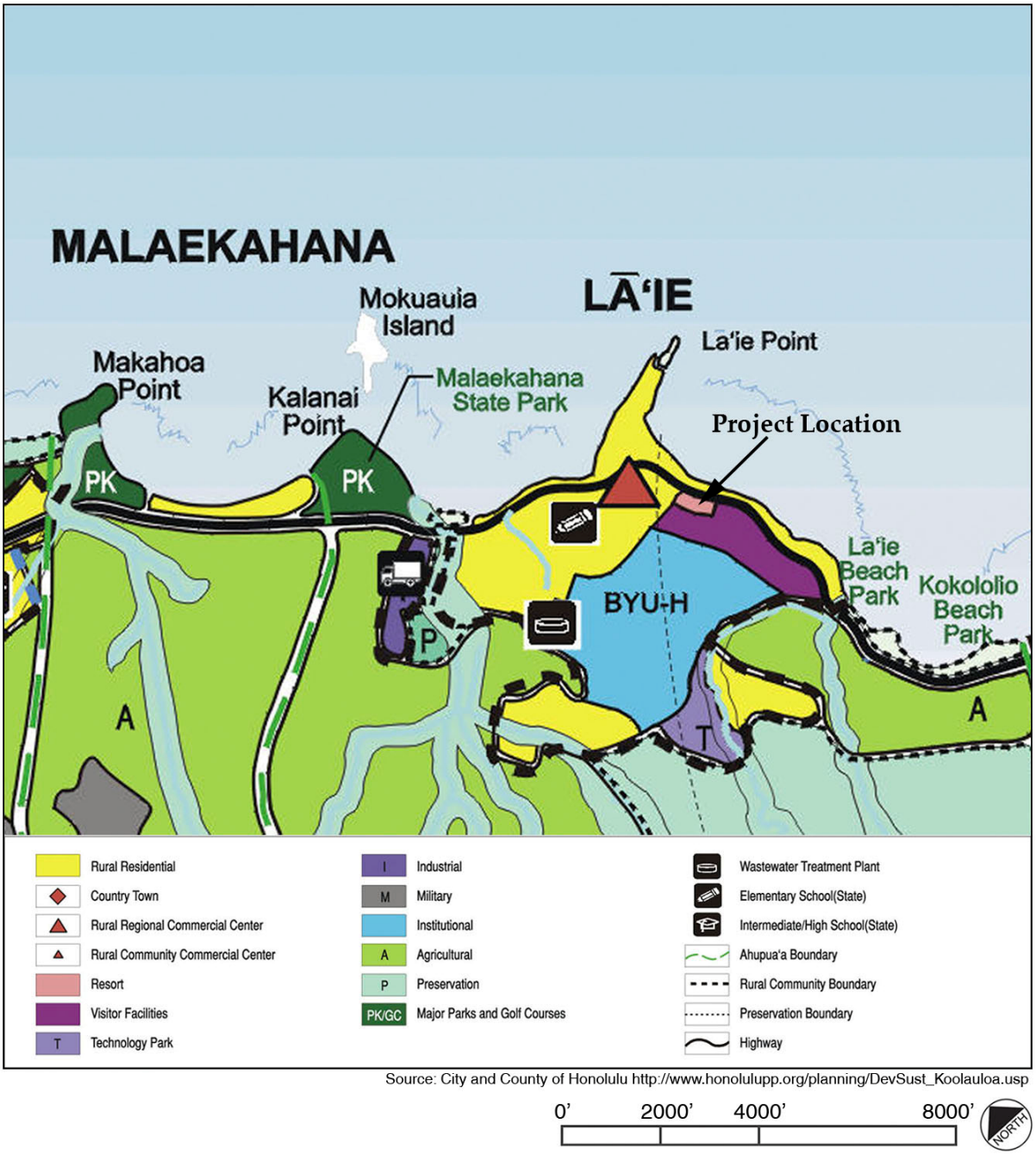


Figure 4.1 Koʻolau Loa Sustainable Communities Plan – Land Use Map (1999)

Like other parts of the island, Koʻolau Loa is a rural area with various commercial and residential designations. The hotel site is recognized in the Koʻolau Loa Sustainable Communities Plan (SCP) as part of the commercial corridor in the Lāʻie community. This sector is where most of the districtʻs business and institutional enterprises are located, by design. The hotel site currently not only has the appropriate City plan designation, but also the requisite zoning.

The SCP Land Use map *(Figure 4.1)* designates the project area as Resort which is consistent with the proposed action. Consolidation and re-subdivision of the parcels within the project area was completed to establish correct underlying boundaries for proposed Community Business (B-2) and Resort zoning. Eight parcels were consolidated into the current two parcels (5-5-006:39 & 40) that coincide with the Community Business and Resort zoning boundaries.

The project's conformance to the relevant components of the SCP is examined below. SCP elements included are those supported by the project. Non-supported or non-applicable elements of the SCP are not listed.

- *Section 3.6 – Commercial Areas Policies for Rural Regional Commercial Centers.*

The hotel site is recognized in the Koʻolau Loa Sustainable Communities Plan as part of the rural commercial corridor in the Lāʻie community. The site adjoins the Polynesian Cultural Center, for many years now Hawaii's number one paid attraction. The Lāʻie Inn Redevelopment, however, will essentially be a redevelopment and expansion of the existing Lāʻie Hotel. The proposed project is not a new commercial establishment. The rural character of the area will be enhanced by removing the current Inn, which is generic in appearance and has outlived its useful life. The hotel will be replaced with a new hotel, having rural architectural character and Polynesian themed facilities surrounded by rich landscaping. The existing McDonald's restaurant and Chevron station will be redeveloped at a more functional location with new and improved facilities. The redevelopment project will improve existing uses and help to revitalize the Lāʻie Community, while still serving and attracting visitors and residents from outside the community.

- *Section 3.6.2 – General Policies for Rural Regional Commercial Center:* Lāʻie *Rural Regional Commercial Center.*

- *Introduce a rural architectural character which incorporates appropriate themes and building forms reflective of the diverse heritage of Lāʻie's residents.*
    - The project will have a rural architectural character incorporating the Polynesian theme of the PCC. The design of the hotel is intended to unify the hotel site and the adjoining PCC into essentially one campus through shared Pacific Island theming. Detailed architectural character descriptions are discussed further in Sections 3.6.3 and 3.6.5.

- *Provide for a modest expansion of the district in order to meet future resident and visitor needs associated with Lāʻie's anticipated long-term housing and employment growth, and the expansion of visitor attractions. Given its size, and potential mix of uses, Lāʻie's center has potential as a focal point for the region's shopping and services and limited expansion is appropriate in order to better serve adjoining communities as well as local residents.*
    - The hotel redevelopment will provide modest expansion of the district to meet future needs of residents and visitors of the area. While the project is not a new commercial center, it will provide expanded opportunities for long-term employment growth and additional accommodations to support visitor attractions, particularly for the PCC, BYU-Hawaiʻi, and the LDS Hawaiʻi Lāʻie Temple. The nearby Lāʻie Shopping Center provides more of a focal point for

the region's shopping and services, however, the redevelopment will supply the extra support needed for the Lāʻie Community.

- *Limit uses primarily to commercial retail, business service establishments, professional offices and public uses such as a satellite city hall, library, post office, or other similar facilities, that provide services to Lāʻie and surrounding communities.*
    - The redevelopment project will offer public uses and services and to Lāʻie and surrounding communities. The hotel will provide lodging, meeting facilities, and eating establishments to visitors and residents. Students from BYU-Hawaiʻi will be provided with educational opportunities to receive joint training and certification for those who choose to major in Hotel Management. In addition, the McDonald's restaurant and Chevron service station will still be available to serve the needs of the area.

- *Section 3.6.3 – Planning Principles and Guidelines for All Commercial Areas*

Architectural Style:
- *Utilize building forms and details which reflect the region's rural character and incorporate the style and any desirable distinctive features of buildings in the community in which they are located.*
    - To ensure its compatibility with the surrounding area, urban design principals are integrated in the planning and architecture of the hotel facilities support buildings. The design of the hotel is intended to unify the hotel site and the adjoining PCC into essentially one campus through shared Pacific Island theming.

- *Encourage the use of false fronts, sloped roofs, and breaks in the roof line to reduce the apparent scale of large roof plates in commercial buildings with multiple storefronts.*
    - The hotel design character is monarchy/territorial with Polynesian themes exemplified by its pitched roofs, articulated wooden beam structure, and roof overhangs.

- *Avoid blank facades on portions of buildings visible from a street by using texture, articulation, color, windows, or other openings to create visual interest.*
    - The Polynesian architectural design elements include dominant steep roof forms, open air veranda, stucco walls, tapa patterns and botanical themed grille work.

- *Reflect a more residential scale and character in the portions of commercial buildings that are adjacent to or readily visible from residential areas, or screen them from view with landscaping.*
    - The new buildings will be one to three stories in height, designed with a Polynesian theme, with colors and materials, including screening landscaping, that will complement and enhance this rural community setting.

Building Scale and Massing:
- *Limit commercial buildings to a maximum 40 feet in height, including roof form. In general, buildings should maintain a low-rise, rural scale.*

- The development will be consistent with the Polynesian architectural theme of PCC. Buildings will be one to three stories in height and will comply with the 40 foot height limit as specified in the zoning ordinance for this parcel, as consistent with Land Use Ordinance (LUO) provisions.

- *Avoid the use of large, continuous buildings in new commercial developments. Commercial buildings adjacent to residential areas should be designed to recognize the balance between commercial needs and residential concerns. In general, the physical composition of height, size, and massing of commercial buildings in these locations should be compatible with adjacent residential development.*
    - Large continuous buildings are not planned in the redevelopment area as shown in *Figure 2.1*. Proposed architectural designs for the project balance commercial needs and fit with the area's residential community. The height of commercial buildings in this project will be typically one to three stories and will comply with the 40 foot height limit as specified by LUO zoning ordinance provisions.

Site Design and Access:

- *Provide for the general visibility from Kamehameha Highway of buildings within commercial centers, and employ adequate and appropriately designed signage at entries.*
    - Roadway views mauka toward the guest buildings and support facilities will be generally visible, but softened by generous roadside landscaping, which will serve as a buffer to the development. The design will be consistent with guidelines set forth in the Koʻolau Loa Sustainable Communities Plan. Appropriate signage will also be provided at the entry points.

- *Provide access to parking and loading areas primarily from Kamehameha Highway for the shopping areas in Kahuku and Lāʻie, and exclusively for the Rural Community Commercial Center (Hauʻula) and country store establishments that front the highway.*
    - Access roadways to parking and loading facilities are required for the project. The site currently has two driveway connections to Kamehameha Highway (Lāʻie Inn and Chevron) and a retail access road intersection (adjacent to PCC parking).

- *Employ site design practices and provide facilities which promote pedestrian, bicycle and public transit access.*
    - The community pedestrian and bicycle path is a key element in the beautification efforts for the Lāʻie community. The purpose of the pathway is to provide for a safer bicycle/pedestrian route along the highway. The path way improvements will be extended 1,100 feet along the Kamehameha Highway boundary of the hotel site. Improvements will be comparable to the existing path, including a paved curvilinear path, extensive landscaping and bollards to prevent unauthorized vehicular access.

- *Improve bus stops in front of commercial centers, including pull-out bus stop lanes and shelters for waiting passengers.*

- Bus stops are located in both directions fronting the project site, one directly in front of the existing Lāʻie Inn and one across the highway at the intersection of Naniloa Loop.

- *Provide racks for bicycle parking at all commercial centers and locate them where they are secure and visible from entry points or other heavy circulation areas.*
  - Bicycle parking will be provided at the relocated McDonalds and new hotel within the redevelopment area.

Visual Screening, Lighting, and Signage:
- *Plant a landscape screen consisting of trees and hedges along streets fronting parking lots.*
  - A landscaped earthen berm will be installed as part of the planned bicycle/pedestrian path along Kamehameha Highway to provide privacy, highway noise reduction, and varied topographic landscape serving as a buffer to the development.

- *Provide shade trees throughout parking lots.*
  - Canopy shade trees will be used to shade the parking lots and portions of the bicycle/pedestrian path.

- *Visually screen service areas from public and residential areas.*
  - Service areas will be visually screened from public and residential areas using landscape elements that will beautify the grounds, and through project site design. Service areas and parking will be located in the mauka portion of the project site. The view from the highway will be of the landscaping elements.

- *Require indirect illumination for signage visible from residential areas.*
  - Signage will be illuminated indirectly and will be visible from residential areas as needed.

- *Section 3.6.5 – Planning Principles and Guidelines for Lāʻie Rural Regional Commercial Center – Architectural Style, Building Scale and Massing.*

Architectural Style:
- *Employ architectural design strategies, forms, and details in new building design which reduce the sense of building mass of the center. Incorporate architectural forms and details in future renovations of existing buildings which visually reduce their apparent size.*
  - The project will reduce the sense of building mass of the center through architectural design, use of open space and landscaping. The hotel redevelopment elements are scaled and sited to achieve a proper fit with the existing environment.

- *Establish a more distinctive rural architectural character for the center through the use of Polynesian themes and built forms.*
  - The redevelopment will unify this section of the commercial corridor using Pacific Island theming. The design elements will promote the rural character

of the Lāʻie community with the use of materials that will be complimentary to the Polynesian architecture of PCC.

Building Scale and Massing:

- *Maintain the existing center's low-rise building scale consistent with the character of surrounding residential development.*
    - Buildings scale and size are suitable to the vicinity. The development will be one to three stories and within the height limit set by the LUO.

- *To the extent possible, site new buildings in a manner which emphasizes a pedestrian orientation and encourages travel on foot between new and existing establishments. Future renovation, redevelopment or expansion of the Rural Regional Commercial Center should take or create opportunities to implement a primarily pedestrian-oriented, village-like setting, in contrast to its current linear form.*
    - As part of the Lāʻie Master Plan implementation, a community pedestrian and bicycle path was constructed fronting PCC along Kamehameha Highway. The hotel redevelopment project will have a beneficial effect by extending the bicycle/pedestrian path further and facilitating a more walkable community. The community pedestrian and bicycle path is a key element in beautification efforts and provides for a safer bicycle/pedestrian route along the highway.

- *Section 3.8.2 – Visitor Attractions – General Policies, Planning Principles, and Guidelines.*

- We note that most of this Section does not directly apply to the Lāʻie Inn Redevelopment project. Subsections such as Planning Principles and Guidelines apply only to the PCC as stated in the Koʻolau Loa Sustainable Communities Plan.

General Policies:

- *Plans to renew and expand facilities as necessary to maintain the viability of the Polynesian Cultural Center (PCC) should be supported. Expansion of PCC may include expanding toward Hauʻula and into the vacant resort-zoned land adjacent to the Rodeway Inn.*

  The Center, one of Oʻahu's leading visitor attractions, is unique in its primary orientation toward Pacific Island themes. To maintain its continued viability, visitor attractions like the PCC must remain constantly aware of market trends and be able to adjust on a timely basis to changing visitor interests.
    - The area will be enhanced by removing the current Inn, which is generic in appearance and has outlived its useful life, and replacing it with Polynesian themed facilities surrounded by lush, beautiful landscaping. The site adjoins the PCC, for many years now Hawaii's number one paid attraction. The intent is to unify the hotel site and the PCC into essentially one campus through shared Pacific Island theming. The redeveloped hotel will offer a quality, mid-tiered product that is lacking and will be in demand. Marketing tie-ins with the PCC and other windward/North Shore activities and destinations, and service and meeting space agreements with the restaurant will help to offer a more comprehensive vacation destination. The applicant has and will

continue to work with the PCC on plans for the Lāʻie Inn Redevelopment project.

The existing Lāʻie Inn and PCC are identified in the SCP as a visitor facility to be retained in the community. Future resort development will be limited to the existing zoned lands in secondary resort areas at Kahuku-Kawela Bay area and Lāʻie. ~~Further the SCP states, "*Plans to renew and expand facilities as necessary to maintain the viability and vitality of the Polynesian Cultural Center (PCC) should be supported.*"~~ The proposed redevelopment of the Lāʻie Inn will help to sustain the vitality and viability of the PCC. Currently, most visitors are shuttled by bus from Waikīkī to the PCC. With the hotel ~~vacation unit~~ development, guests will be able to comfortably stay longer in Lāʻie, spending more money in the area and positively affecting the rural commercial businesses.

The Public Facilities Map of the SCP includes the bicycle/pedestrian path aligned along Kamehameha Highway, a portion of which is included in the proposed project. Other Public Facilities principles support water conservation measures, such as low flush toilets, drought-tolerant plant material, and reuse of treated wastewater effluent. These measures are being considered during the design phase of the proposed project.

4.4 HAWAIʻI COASTAL ZONE MANAGEMENT PROGRAM

The Coastal Zone Management Act of 1972 (16 USC Section 1451), as amended through Public Law 104-150, created the coastal management program and the National Estuarine Research Reserve system. The coastal states are authorized to develop and implement a state coastal zone management program. Hawaiʻi Coastal Zone Management (CZM) Program received federal approval in the late 1970's. The objectives of the State's Hawaiʻi Coastal Zone Management (CZM) Program, Section 205A-2, HRS, are to protect valuable and vulnerable coastal resources such as coastal ecosystems, special scenic and cultural values and recreational opportunities. The objectives of the program are also to reduce coastal hazards and to improve the review process for activities proposed within the coastal zone. Each county is responsible for designating a Special Management Area (SMA) that extends inland from the shoreline. Development within this SMA is subject to County approval to ensure the proposal is consistent with the policies and objectives of the Hawaiʻi CZM Program

The entire Lāʻie Inn Redevelopment project area is within the SMA as delineated by the City and County of Honolulu. Described below are the seven objectives of the Hawaiʻi CZM Program and an assessment of the project impacts relative to the State's CZM objectives and policies. The specific City and County SMA policies are also discussed.

4.4.1 Recreational Resources

Objective: Provide Coastal Recreational Opportunities Accessible to the Public

(A) Improve coordination and funding of coastal recreation planning and management.

(B) Provide adequate, accessible, and diverse recreational opportunities in the coastal zone management area by:

- *Protecting coastal resources uniquely suited for recreational activities that cannot be provided in other areas;*
- *Requiring replacement of coastal resources having significant recreational value, including but not limited to surfing sites and sandy 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;

- *Providing and managing adequate public access, consistent with conservation of natural resources, to and along shorelines with recreational value;*
- *Providing an adequate supply of shoreline parks and other recreational facilities suitable for public recreation;*
- *Encouraging expanded public recreational use of county, state, and federally owned or controlled shoreline lands and waters having recreational value;*
- *Adopting water quality standards and regulating point and non-point sources of pollution to protect and where feasible, restore the recreational value of coastal waters;*
- *Developing new shoreline recreational opportunities, where appropriate, such as artificial lagoons, artificial beaches, artificial reefs for surfing and fishing; and*
- *Encouraging reasonable dedication of shoreline areas with recreational value for public use as part of discretionary approvals or permits by the land use Commissions, board of land and natural resources, county planning commissions; and crediting such dedication against the requirements of section 46-6.*

The project would have no impact on coordination and funding of coastal recreation planning and management.

Public recreational facilities at the project include a restaurant and banquet/meeting facilities, which will contribute to adequate, accessible and diverse recreational activities in the coastal zone. By providing adequate accommodation, the project indirectly contributes to accessibility to recreation activities in the Lāʻie area.

No existing or planned public recreational facilities will be affected by the development of the guest facilities at this site. No coastal resources of significant value, such as surf sites or sandy beaches will be impacted by this project. No shoreline improvements are proposed, such as artificial reefs or beaches. The existing public beach pedestrian access from Kamehameha Highway to the ocean on the south~~ern~~ end ~~boundary of the proposed park~~ will not be affected by the project.

The project will be constructed and operate in accordance with State and federal water quality regulations. Storm water and sanitary sewer management systems will be integrated with existing PCC and Lāʻie infrastructure. The sanitary sewer systems have adequate capacity to address the anticipated load from the project.~~;~~ The existing storm water drainage system was installed over 30 years ago and was designed to earlier standards. To meet current design standards the ~~but the two existing storm water drainage systems in Lāʻie require improvements~~ Lāʻie Town Drainage Master Plan recommends substantial infrastructure improvements to increase ~~address the poor~~ drainage capacity. ~~,but these may not be implemented prior to the project construction. In the interim~~ However, the project will include an underground exfiltration drainage system that will retain and exfiltrate the increased storm water runoff at the project site. Unexfiltrated run-off will flow ~~that directs water~~ to a new pipeline beneath the PCC parking lot to the BYU-Hawaiʻi 48-inch drain located along the southern boundary of PCC, which discharges at Laniloa Beach and to the drainage system that discharges at the Foodland Storm Water Outlet. There are no septic tanks, leach fields proposed, or injection wells proposed. There will be no new discharge points into coastal waters.

4.4.2 Historic Resources

Objective: 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

(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.

An on-site archaeological inspection (SCS, October 2004~~, and August 2007~~) did not identify evidence of archaeological remains at the project site. The investigations determined that significant surface remains do not exist and subsurface remains are not likely to be present. The project area has undergone extensive disturbances from previous activities.

Consistent with the archeological investigation, the cultural assessment (SCS, October 2004) determined that there is no history of cultural practices on the site. The site does not possess culturally significant plants. In addition, the site is not an access route to ma uka or ma kai trails or culturally significant resources. At the ma uka site, the public beach access from Kamehameha Highway and lateral access along the shoreline will be maintained and will not be affected by the project.

Due to the presence of sandy deposits throughout the project area and recent discoveries of native Hawaiian burials in other parts of Lāʻie, archaeological monitoring will be conducted during earthmoving (i.e., grading and excavating) phases of construction.

4.4.3 Scenic and Open Space Resources

Objective: Protect, Preserve and, Where Desirable, Restore or Improve the Quality of Coastal Scenic and Open Space Resources

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

Scenic view sheds in the project area are identified in both the SCP and the City's Coastal View Study (1987). The project will not affect vistas and scenic resources identified in either document.

The Lāʻie Inn Redevelopment project is consistent with County General Plan, SCP, Zoning and PD-R. The Polynesian-styled architecture will blend into and complement the surroundings, specifically PCC. The scale and size of the project buildings are appropriate to the site and represent less than 50 percent of maximum allowable site build-out. Perimeter landscaping will serve as a visual buffer between the guest facilities and surrounding roads. Views from roads and other public areas towards the mountains will not be affected by development of the new facilities.

PCC design does not incorporate ocean views; therefore, the redevelopment will not impact views from within PCC.

4.4.4 Coastal Ecosystems

Objective: Protect Valuable Coastal Ecosystems from Disruption and Minimize Adverse Impacts on all Coastal Ecosystems

(A) Improve the technical basis for natural resource management;
(B) Preserve valuable coastal ecosystems of significant biological or economic importance;
(C) Minimize disruption or degradation of coastal water ecosystems by effective regulation of stream diversions, channelization, and similar land and water uses, recognizing competing water needs; and
(D) Promote water quantity and quality planning and management practices which reflect the tolerance of fresh water and marine ecosystems and prohibit land and water uses which violate state water quality standards.

The project will not affect coastal ecosystems or natural resource management. The project will use reclaimed water for irrigation and the low-water consumption fixtures will be used in the hotel rooms to minimize potable water use. During construction, all storm water will be retained onsite. During operation, underground storm water and wastewater infrastructure will eliminate non-point source pollutant discharge into coastal water. There will be no septic tanks or leach fields associated with the project. Operations will comply with State and federal water quality standards.

Landscaping may require the use of insecticides or other chemicals, which will be applied in accordance with manufacturer's instructions. No adverse environmental impacts are anticipated from application of these chemicals.

4.4.5 Economic Uses

Objective: Provide Public or Private Facilities and Improvements Important to the State's Economy in Suitable Locations

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

The project is consistent with State and County plans and land regulation (i.e., State districts and County zoning). The location is ideal for serving visitors to the community. The development is within the SMA, but is inland of and would not impact coastal resources. The project improvements are appropriate and suitable to the Resort and Community Business-zoned site. There will be construction and operation-phase economic benefits of increased

employment opportunities and the purchase of goods and services. Construction cost is estimated at $40 ~~$39~~ million. During operation, the new quality accommodation will encourage visitors to stay longer and presumably spend more in the community. The redeveloped hotel ~~inn~~ will generate state tax revenues. The project will enhance the viability and vitality of the region's economy. Socially, the project provides accommodation for visiting families and friends of the community, and provides another venue for family gatherings.

4.4.6 Coastal Hazards

Objective: Reduce Hazard to Life and Property From Tsunami, Storm Waves, Stream Flooding, Erosion and Subsidence.

(A) Develop and communicate adequate information on storm wave, tsunami, flood, erosion, and subsidence hazard;
(B) Control development in areas subject to storm wave, tsunami, flood, erosion, and subsidence hazard;
(C) Ensure that developments comply with requirements of the Federal Flood Insurance Program; and
(D) Prevent coastal flooding from inland projects.

The project site is within both the 100-year flood hazard zone *(Figure 3.17)* and the tsunami inundation zone. Site planning and building design will address these risks, with site grading plans addressing flood considerations. An earthen berm will be established as part of the landscaping along Kamehameha Highway to mitigate flood water flow onto and off of the site. Fill will be brought to the site to raise the elevation of low-lying areas and comply with requirements of the Federal Flood Insurance Program. Site grading will direct runoff and storm water to improved drainage features thus minimizing the impact of flooding. Drainage patterns in the community will not be affected by the project. No coastal flooding is anticipated. No habitable structures will be built on the ma kai side of Kamehameha Highway.

4.4.7 Managing Development

Objective: Improve the Development Review Process, Communication, and Public Participation in the Management of Coastal Resources and Hazards

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

This EA communicates the potential short and long-term impacts of the project on the environment. Procedurally, this EA conforms to HRS Chapter 343. The Office of Environmental Quality Control (OEQC) publishes notice of the EA availability for public review. The public is allowed 30-days to submit comments on the EA. During pre-scoping, agencies, organizations and persons (Section 1) were consulted and will continue to be informed throughout the planning process. In addition, the project development and planning process will involve community participation including presentations to the Lāʻie Community Association and the Koʻolau Loa Neighborhood Board No. 28.

There are numerous County approvals and permits required and processing will be conducted concurrently to the extent possible to facilitate timely processing.

4.5 SMA GUIDELINES (SECTION 25-3.2, ROH)

The review guidelines of Section 25-3.2 of the Revised Ordinances of Honolulu (ROH) are used by the Department of Planning and the City Council for the review of developments proposed in the Special Management Area (SMA). These guidelines are derived from Section 205A-26 HRS. The consistency of the proposed project with the guidelines is discussed below.

(1) All Development in the Special Management Area shall be subject to reasonable terms and conditions set by the council in order to ensure that:

- *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;*
- *Adequate and properly located public recreation areas and wildlife preserves are reserved;*
- *Provisions are made for solid and liquid waste treatment, disposition, and management which will minimize adverse effects upon special management area resources; and*
- *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.*

The proposed action will not adversely affect any public shoreline, right-of-way, ~~or~~ recreation area, or the existing beach right-of-way across from the project. The existing beach right-of-way across from the project will be maintained and will not be affected by the project. Minimal improvements such as pedestrian walkways, lighting, and landscaping will enhance ocean recreation for guest enjoyment of the shoreline area.

No ~~public areas or~~ wildlife preserves are affected by the project, and public areas will only be minimally impacted. Minimal impacts will be alleviated through project mitigation measures.

Wastewater will flow to the City and County of Honolulu operated Lāʻie Water Reclamation Facility which can accommodate the proposed development. The LWRF was upgraded (June 1997) to provide 0.9 mgd of treatment capacity. The 1997 upgrade transformed the Lāʻie WRF into a state of the art, environmentally sustainable, low impact facility.

Solid waste will be handled and disposed of by private waste and recycling companies. The applicant intends to reduce the impact the development may have on the County landfill by encouraging recycling.

Alterations to the land and vegetation will not adversely affect water or recreational resources in the area with the implementation of permit conditions and best management practices. The conversion from open space to development will impact foreground views from the highway, but landscaping and design features will minimize the impact. The development will not increase the potential hazard risk associated with flooding, landslides, erosion, siltation or earthquake. The design and construction will meet or exceed County building standards.

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

- *The development will not have any substantial, adverse environmental or ecological effect except such adverse effect is minimized to the extent practicable and clearly outweighed by public health*

and safety, or compelling public interests. 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;

- *The development is consistent with the objectives and policies set forth in Section 25-3.2 and area guidelines contained in Section 205A-26, Hawaiʻi Revised Statutes; and*
- *The development is consistent with the County General Plan, Development Plans, Zoning and subdivision codes and other applicable ordinances.*

No substantial adverse environmental or ecological direct, indirect or cumulative impacts are anticipated from the project.

(3) The project is consistent with the following:

- *Resort and Community Business-zoned designations for the ma uka site,*
- *Objectives and policies set forth in Section 25-3.2 and area guidelines contained in Section 205A-26, HRS, and*
- *Objectives and policies of the Hawaiʻi State Plan, County General Plan and the Koʻolau Loa Sustainable Development Plan.*

(4) The Council Shall Seek to Minimize, Where Reasonable:

- *Dredging, filling or otherwise altering any bay, estuary, salt marsh, river mouth, slough or lagoon;*
- *Any development which would reduce the size of any beach or other area usable for public recreation;*
- *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;*
- *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*
- *Any development which would adversely affect water quality, existing areas of open water free of visible structure, existing and potential fisheries and fishing grounds, wildlife habitats, or potential or existing agricultural uses of land.*

There will be no alteration of surface water or wetland area. There will be no impact on public access or views to the beach. No public beach or recreation area will be affected. The project will have no adverse impacts on areas of open water, potential fisheries, fisheries, wildlife habitat, or agricultural land.

5.0 Alternatives

5.0 ALTERNATIVES

Alternative actions, including the No Action Alternative that were considered and dismissed early in the planning process are described. The alternatives include:

- No Action
- Reconstruction or Renovation Alternative
- Higher Density Resort Development
- PCC Expansion

5.1 NO ACTION ALTERNATIVE

The No Action alternative would maintain the site in its present condition as the Lāʻie Inn, McDonald's restaurant, Chevron station, undeveloped Resort-zoned area (lawn), and beach residences. The environmental impact of these existing uses would remain unchanged.

In this alternative, Lāʻie Inn Redevelopment would not occur and the associated expanded employment and university student training opportunities, pedestrian/bike path beautification, ~~and~~ improved visitor accommodations, and significant overall economic benefits would not be realized. In comparison to the proposed action, there would be no construction-related impacts. There would be no operational impacts on traffic, water resources, and waste water or storm water management. The existing open space on the site would be retained, but the unsightly and deteriorating Lāʻie Inn would continue to degrade the aesthetics of the area.

5.2 RECONSTRUCTION OR RENOVATION ALTERNATIVE

The existing facility was built in 1963 and some renovation occurred in the 1990s. However, a 49-unit facility is inadequate for the needs of the area. Reconstruction or renovation with no change in the current density would not be economically viable, and would provide no economic benefit to the community and surrounding businesses. The inability to accommodate visitors and community needs are current concerns with the existing hotel. Additionally, there would be no increased employment opportunities for residents of the area, and university training opportunities would be minimal or nonexistent.

5.3~~2~~ HIGHER DENSITY RESORT DEVELOPMENT ALTERNATIVE

Under this alternative, the project site would be developed to a much higher density than the proposed project as allowed under current zoning. This development option would also require an application for a SMA Use Permit, and be reviewed for its consistency with the provisions of the Special Management Area under HRS Chapter 205A.

A hotel with nearly twice as many units as the proposed action (approximately 450) would be allowed on this Resort-zoned site per LUO. The maximum allowable height is 40 feet. The size of the resort zoned area is 5.9 ~~6.3~~ acres or 257,503 ~~274,428~~ sf. LUO allows a floor area ratio (FAR) of 1.4 for development on a lot area greater than 30,000 sf. Therefore, the allowable square footage of the development is 360,504 ~~384,199~~ sf. The adjacent Community Business zoned property allows for a higher density than the resort zone. The proposed action at the Resort-zoned site will be 149,000 ~~164,535~~ sf, or only 41 ~~43~~ percent of the allowable development.

If the high density alternative is realized, the environmental impacts would be significantly greater than the proposed project. Traffic, water consumption, and waste disposal from this alternative would be roughly double the proposed project. The duration of construction-related disturbances would increase. The site plan would be denser than the proposed action and design would be more constrained to allow for maximum build-out. For example, pitched Polynesian-style roofs would not be possible and the four-story buildings would have flat roofs. At full occupancy of a 400 room hotel, the on-site population would be approximately 950 ~~580~~ people, roughly 60 ~~40~~ percent greater than the proposed project. The maximum development would not be aesthetically compatible with surrounding land uses.

Compared to the proposed action, benefits would include greater number of hotel rooms, an increase in the tourist dollars spent in the community by guests of the Inn, and the increase to employment opportunities for the community. The proposed action is preferred as it provides a balance between economic gain and an aesthetically-pleasing and compatible neighborhood. This alternative would be less consistent with community plans and likely to be contrary to SCP guidelines for the area.

5.4~~3~~ PCC EXPANSION ALTERNATIVE

Another alternative to the proposed project would be the expansion of the PCC to include the entire project site. The existing Lāʻie Inn would be demolished. Again, an application for a SMA Use Permit would be required and the development would be reviewed for its consistency with the provisions of the Special Management Area under HRS Chapter 205A.

This alternative would create a significantly larger tourist attraction. Presumably the larger attraction would attract more visitors. PCC expansion would likely increase tour bus traffic on Kamehameha Highway as more visitors are likely patronize the establishment. If the design of the expansion is similar to existing exhibits at PCC, there would be extensive site disturbance to create new water features. This alternative would demolish the only accommodation facility in Lāʻie resulting in a negative social impact.

This alternative would have the beneficial effect of generating employment opportunities. A market study would be required to determine if the expanded PCC would be economically viable. It has not been determined if visitors would pay more, return more frequently, or stay longer.

5.54 COMPARATIVE SUMMARY OF POTENTIAL IMPACTS

The proposed action would provide an appropriately sized and scaled guest accommodation facility. The project is consistent with community desires and plans for the area and would meet the deficit of quality accommodation for the area. These are significant benefits not provided by the other alternatives, including no action. Other differences are described below.

The No Action alternative would not include the following proposed actions: socio-economic benefits of increased and significant employment opportunities for local residents, immense educational opportunities for students of the neighboring university campus, new venue for family gatherings and celebrations, and a convenient comfortable accommodation for community visitors. Development pressure on this under-utilized Resort-zoned parcel would continue without the proposed project.

The alternative of reconstruction or renovation with no change in the current density would be similar to the No Action alternative. Although the appearance of the existing hotel may improve, it will not provide additional support to the community. Lodging accommodations will not be sufficient for visitors and family, and increased employment opportunities will not be provided for area residents and local businesses. The status quo will remain, providing no change or support for economic stimulus to occur in the Lāʻie community.

Under the PCC expansion alternative, visitors would most likely arrive and depart via bus to access the newly expanded PCC. With fewer overnight guests in Lāʻie, there would be comparatively less potable water use, waste water and traffic than under the proposed action. However, the lack of overnight visitors would result in less visitor expenditures in the community. With the proposed action, visitors would spend more time in Lāʻie and increase the economic vitality of the region. The proposed action would also appeal to a greater variety of users, including the Koʻolau Loa community, through the wedding/banquet halls, meeting rooms, and restaurant.

With the proposed hotel redevelopment action, visitors will spend more time in the area and increase the economic vitality not only of Lāʻie, but the economically challenged Koʻolau Loa region. Besides direct benefits to the PCC, students in BYU-Hawaiʻi's hospitality program, and potential employees in the area, residual benefits to various businesses up and down the coast will occur as overall visitor expenditures increase. Through the purchase of goods and services at Koʻolau Loa business, additional discretionary spending will provide revenue needed to capture the economic potential of the region, thereby supporting the broader community and benefiting the region's economy.

6.0 Findings and Reasons Supporting Anticipated Determination

6.0 FINDINGS AND REASONS SUPPORTING ANTICIPATED DETERMINATION

The project does not "trigger" the preparation of an Environmental Assessment under Chapter 343 HRS. This EA was prepared pursuant to Chapter 25 ROH Special Management Area rules. Findings and Reasons Supporting the Anticipated Determination are presented for informational value as part of this assessment.

6.1 SUPPORT FOR DETERMINATION

In accordance with the Department of Health Rules Section 11-200-12, an applicant or agency must determine whether an action may have a significant impact on the environment. The Rules establish "significant criteria" to be used as a basis in making the determination and whether significant environmental impact will occur. According to the Rules, an action shall be determined to have a significant impact on the environment if it meets any one of the following criteria:

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

No significant adverse impacts to natural or cultural resources are anticipated from the proposed project. If during the course of construction cultural or archaeological remnants are unearthed, their treatment will be conducted in strict compliance with the requirements of the Department of Land and Natural Resources.

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

The project will increase the range of beneficial uses of the environment by replacing an inadequate and unsightly Inn with a quality accommodation for Lāʻie visitors and extending the existing bicycle/pedestrian path.

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

The project is consistent with State environmental policies in Chapter 344, Hawaiʻi Revised Statutes, the purpose of which is, "to establish a State policy which will encourage productive and enjoyable harmony between people and their environment, promote efforts which will prevent or eliminate damage to the environment and biosphere, and stimulate the health and welfare of humanity, and enrich the understanding of the ecological systems and natural resources important to the people of Hawaiʻi."

(4) Substantially affects the economic or social welfare of the community or State;

The proposed project will have beneficial impacts on the social and economic welfare of the community and the State. Short-term benefits will result form the increased construction employment and purchase of construction-related goods and services. During operation, there would be increased employment opportunities at the hotel ~~inn~~ and tax revenues generated from the business activities. The project will create approximately 153 ~~105~~ new jobs with $3.7 ~~$2.8~~ million in worker wages. Annual guest expenditures are estimated to be about $28 million annually. The new hotel ~~inn~~ will meet the market demand for quality accommodation for visitors to Lāʻie. Indirectly, the construction workers and hotel guests ~~lodgers~~ would likely

spend money in the community. The improvements will not adversely impact the economic or social welfare of the community. The project is expected to provide, after accounting for public costs of the project, an estimated $8 million in net public benefits. In addition to providing significant employment opportunities for local residents, the project will also provide immense educational opportunities for students of the neighboring university campus. BYU-Hawaiʻi students will be able to work and intern at the new hotel, giving them real world on-the-job training and certification opportunities not available in a classroom setting.

(5) Substantially affects public health;

No adverse impacts to public health are anticipated. The character of the area will be enhanced by removing the current Inn, which is generic in appearance and has outlived its useful life. The project will be beneficial to the Lāʻie residents and broader Koʻolau Loa community. Local businesses will be positively affected, and there will be increased employment opportunities for local residents, thereby improving social welfare and public health of the area.

There will be minimal short-term construction-related impacts on air quality and ambient noise during construction, but best management practices will be implemented to mitigate the impacts. The project will have a beneficial effect on public health by extending the bicycle/pedestrian path and facilitating a more walkable community.

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

The project would not result in permanent residential population changes, but there would be a greater transient population. Existing public facilities will not be affected; infrastructure facilities such as water and wastewater are provided.

(7) Involves a substantial degradation of environmental quality;

Redevelopment of the Lāʻie Inn will not facilitate degrad~~ation~~e of environmental quality. Construction activities will follow erosion control best management practices to mitigate offsite impacts.

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

Development of the new hotel ~~inn~~ does not require a commitment for larger actions or development. The community has the capacity to absorb the new development into their existing services and infrastructure. There are pre-existing traffic and drainage issues in the vicinity. Traffic improvements on Kamehameha Highway and a reduction in the number of intersections will mitigate the project's impact on traffic. Drainage solutions for the area have been developed that include the project's storm water flow.

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

No rare, threatened, or endangered species or habitats are present on-site or will be substantially affected by this project.

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

~~No~~ Impacts to water quality are not anticipated during construction or operation of the project. Proper landscaping techniques will minimize the impacts of land alterations, reducing effects on runoff water quality.

There will be short-term localized impacts to ambient noise levels and air quality during project construction, but no detrimental health effects will result. During operation, the project would have no significant impact on ambient noise and minimal impacts on air quality associated with the increased number of vehicles.

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

The project will have minimal to no effect on these environmentally sensitive areas. The project is located in the 100-year flood hazard zone and tsunami zone. The improvements are designed with consideration of these natural factors and their presence will not have an impact on the zones. The project would not increase to risk to public health and property from natural hazards.

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

The planned improvements will not impact recognized scenic vistas or view-planes.

(13) Requires substantial energy consumption.

The project will require a greater consumption of energy than the existing Inn. Energy conservation measures will be implemented where practicable. The extension of the bicycle/pedestrian path could result in a reduction in vehicular traffic and energy consumption.

6.2 ANTICIPATED DETERMINATION

A Finding of No Significant Impact (FONSI) is anticipated. The Lāʻie Inn Redevelopment will provide benefits while resulting in minimal impacts on the surrounding environment.

7.0 References

7.0 REFERENCES

AECOS. 1992. Water quality and biology of aquatic environments in Kahawainui Stream and its tributaries, Lāʻie, Oʻahu.

City and County of Honolulu, Department of Land Utilization. 1987. Coastal View Study.

City and County of Honolulu, Department of Planning and Permitting. October 1999. Koʻolau Loa Sustainable Communities Plan.

Gray Hong Nojima & Associates. October 2004. Lāʻie Inn Redevelopment Civil Report.

Group 70 International. April 1992. Final Environmental Impact Statement Lāʻie Development Plan Amendments.

Group 70 International. October 1995. Final Amended Supplemental Environmental Impact Statement Lāʻie Water Reclamation Facility.

Hawaiʻi Coastal Zone Management Program (Office of State Planning). 1996. Hawaiʻiʻs Coastal Non-point Pollution Control Program Management Plan.

John M. Knox & Associates, Inc. April 2008. Lāʻie Beach Count Report.

Kusao & Kurahashi, Inc. January 2003. Special Management Area Use Permit and Shoreline Setback Variance Application and Final Environmental Assessment Report for the Proposed Renovations and Expansion of the Turtle Bay Resort at Kuilima.

Scientific Consulting Services (SCS). October 2004. An Archeological Assessment Report of Approximately 10.5 Acres of Land (Lāʻie Inn Redevelopment) in Lāʻie Ahupuaʻa, Koʻolau Loa District, Island of Oʻahu, Hawaiʻi.

Scientific Consulting Services (SCS). August 2007. Archeological Assessment of 1.3 ac site in Lāʻie.

Scientific Consulting Services (SCS). October 2004. A Cultural Impact Assessment in Lāʻie, Koʻolauloa District, Koʻolau Loa District, Oʻahu Island, Hawaiʻi.

The Traffic Management Consultant. March 2007. Traffic Impact Analysis Report for Lāʻie Inn.

R.M. Towill Corp. December 2002. Final Environmental Assessment Lāʻie Wastewater Collection System Expansion.

R.M. Towill Corp. May 2007. Lāʻie Inn Redevelopment Project Investigation of Sewer and Water Requirements.

R.M. Towill Corp. July 2007. Lāʻie Storm Water Plan.

Sterling, Elspeth P. and Catherine C. Summers. 1978. Sites of Oʻahu. Bishop Museum Press.

The Hallstrom Group Inc. October 2004. A Market Evaluation for the Lāʻie Inn Redevelopment.

U.S. Department of Agriculture, Soil Conservation Service. August 1972. Soil Survey of Islands of Kauaʻi, Oʻahu, Maui, Molokaʻi and Lānaʻi, State of Hawaiʻi.

U.S. Geological Survey. 1983. Topographic Quadrangle Maps - Oʻahu – Kahuku.

Websites

1990 and 2000 U.S. Census http://www.census.gov/

The City and County of Honolulu Real Property Assessment & Treasury Divisions http://www.honoluluproperty tax.com/

The City and County of Honolulu's Economic Development Geographic Information System (GIS) Property Locator and Reports http://gis.hicentral.com/

Personal Communications

Enterprise Honolulu, 2006. Ms. Lettice MacPhaul, Executive Assistant. July 24, 2006.

Hawaiʻi Chamber of Commerce, 2006. Ms. Sherry Monor, Director. July 26, 2006.

North Shore Chamber of Commerce, 2006. Antya Miller, Executive Director. July 20, 2006.

Polynesian Cultural Center, 2006. Mr. Ray Magalei, Marketing Director.

The Church of Jesus Christ of Latter-day Saints, Lāʻie Hawaiʻi Temple, Visitor Center, 2006. Elder Geddes, Manager.

Appendices

Appendix A. Market Analysis

(This appendix makes references to a beach club facility and museum. During the planning process a redesign occurred removing these facilities.)

THE HALLSTROM GROUP INC.
REAL ESTATE
CONSULTANTS
& APPRAISERS

RECEIVED
4 2008

June 2, 2008

Mr. Eric Beaver, President
Mr. Eric Marler, CFO
Hawaii Reserves, Inc.
55-510 Kamehameha Highway
Laie, Hawaii 96762-1193

Market Study, Economic Impact Analysis, and Public Cost/Benefit Assessment of the Proposed Laie Inn Redevelopment Laie, Oahu, Hawaii

Dear Messrs. Beaver and Marler:

At your request, in November 2004 we completed a market study, economic impact analysis, and public costs/benefits assessment of the proposed Laie Inn Redevelopment, a mixed-use lodging project planned for 10.5 acres fronting Kamehameha Highway, adjacent to the Polynesian Cultural Center in Laie, Oahu, Hawaii. The envisioned standard/deluxe hotel would contain some 200-plus transient units and supporting amenities.

While we have not completed an update of our assignment, we note the following:

- State and Oahu tourism has remained generally positive during the past 44 months, apart from near-term air seat capacity and recessionary issues, with favorable trends forecast over the mid to long-term.
- There continues to be no competitive/comparable product in the general subject market region other than the existing Turtle Bay Resort, at which hotel development has been effectively stalled for decades and the State may purchase some or all of the remaining zoned building parcels.
- The supply of vacant hotel sites throughout Oahu is still limited.

ARBITRATION
VALUATION AND
MARKET STUDIES

PAUAHI TOWER
SUITE 1350
1003 BISHOP STREET
HONOLULU
HAWAII 96813-6442

(808) 526-0444
FAX (808) 533-0347
email@hallstromgroup.com
www.hallstromgroup.com

- The fundamental macro demand factors regarding a redeveloped Laie Inn, and the specific competitive traits of the subject property, are substantially unchanged since the completion of our original investigation and analysis.

Therefore, given the extended demand for additional hotel units on Oahu, a shortfall of available supply alternatives, and the desirable characteristics of the subject property, the findings of our November 11, 2004 report are fundamentally valid as of a current date under prevailing market conditions, and continue to support the resort hotel project planned for the identified subject acreage.

We would employ models similar to those previously presented for our economic impact analysis and public costs/benefits assessment were they to be updated, and would anticipate generally similar outcomes and relationships in most respects. However, the dollar figures could be meaningfully changed due to the impacts of inflation on wages/incomes, construction costs, spending and tax rates since late 2004.

We hope this letter addresses your current concerns. Please contact us if further detail or update analysis is required. We appreciate the opportunity to be of continued service in regards to this project.

Respectfully submitted,

THE HALLSTROM GROUP, INC.

Tom W. Holliday

Tom W. Holliday

/as/4349EL01

cc. ✓Jeffrey Overton

Market Study, Economic Impact Analysis, and Public Costs/Benefits Assessment of the Proposed

LAIE INN REDEVELOPMENT

Laie, Oahu, Hawaii

NOTE:

1) New TMK numbers were assigned to this property: TMK 5-5-06:039 and 040
2) Total proposed unit count is 220 hotel units.
3) Beach club has been dropped from the project (01/25/08).

THE HALLSTROM GROUP INC.
REAL ESTATE CONSULTANTS & APPRAISERS

ARBITRATION
VALUATION AND
MARKET STUDIES

DALIAHI TOWER
SUITE 1350
1001 BISHOP STREET
HONOLULU
HAWAII 96813

(808) 526-0444
FAX (808) 533-0347
email@hallstromgroup.com
www.hallstromgroup.com

November 11, 2004

Mr. Eric Beaver, President
Mr. Eric Marler, CFO
Hawaii Reserves, Inc.
55-510 Kamehameha Highway
Laie, Hawaii 96762-1193

Market Study, Economic Impact Analysis, and Public Cost/Benefit Assessment of the Proposed Laie Inn Redevelopment Laie, Oahu, Hawaii

Gentlemen:

At your request, we have completed a series of defined-scope analyses regarding the proposed Laie Inn Redevelopment master plan, a mixed-use, suburban resort complex to be located on 10.5 acres adjacent to the Polynesian Cultural Center, at the southerly gateway to Laie Town, Oahu, Hawaii. The project, replacing an aging facility, will be comprised of three primary components: a 228-unit Residence Inn, 17,700-square-foot thematic retail restaurant/museum center, and a three-quarter-acre Beach Club.

The subject property, identified on State of Hawaii tax maps as First Division Tax Map Key 5-5-06, Parcels 19, 20 and 31, and 5-5-20, Parcels 42, 43 and 87 fronts both sides of Kamehameha Highway, with the bulk of the holding on the mauka side. The site, zoned for resort/commercial uses, is generally level and at street grade, with access to full utility and support systems. It is currently improved with a gas station, McDonalds and 46-room motel; all in excess of three decades old.

The general focus of our assignment was embodied in seven tasks:

1. To quantify the demand for lodging and retail/restaurant inventory in the subject area and the competitive sector.

2. To identify the existing lodging and retail/restaurant inventory in the effective market areas.

3. To identify current and long-term proposed competitive lodging and retail additions, with concern given to timing, likelihood of actualization, anticipated characteristics and other relevant traits.

4. To assess the appropriateness of the subject holding for the proposed uses and ascertain whether it has sufficient attributes to obtain a competitive market share.

5. To identify the most probable guest demographics for the subject facility and estimate the time required to ramp-up to stabilized operations.

6. To estimate the direct and indirect, on and off-site benefits flowing to the local economy as a result of undertaking the subject development, including job and wage creation, business profits and discretionary expenditures.

7. To quantify the impact of the project on the public purse over time in regards to revenues generated (real property, income, excise and conveyance taxes) and costs of providing governmental services.

The function of our assignment is to provide timely market data, quality analysis of market supply/demand factors, and an informed opinion of the anticipated level of market success the subject project can expect to achieve, for use in land use approval petitioning processes and other associated submittals.

In completing our assignment we have inspected the subject property and its environs; researched current and projected tourism, hotel and retail operational, marketing and development trends; reviewed published and on-line data sources; correlated interviews, insights and surveys of the effective sectors; and, integrated file materials.

The primary results of our study are presented in the following document containing summary narrative and tables. The report opens with an overview of the assignment and conclusions, followed by a discussion of the Koolauloa/North Shore study area and sections covering each of the identified study issues.

All expressed conclusions are subject to the standard definition of terms, limiting conditions and assumptions, and certification of The Hallstrom Group, Inc., in addition to any others set forth in the narrative or on the tables herein. All work has been completed in conformance with the Code of Professional Ethics and Standards of Professional Appraisal Practice of the Appraisal Institute, and the Uniform Standards of Professional Appraisal Practice (USPAP).

Based on our inspection of the subject and environs, and analysis of the pertinent tourism/hotel industry and general Oahu economic data, we conclude the proposed Laie Inn redevelopment plan is well-supported by the market and characteristics of the property. Among the primary findings of our analysis:

- The market demand for resort-oriented development (lodging and commercial) is expanding on Oahu, and the available supply of development sites is highly limited.

- The North Shore/Koolauloa region is a well-visited tourist destination with numerous highly desirable attractions, attributes and assets, with many potential/available opportunities that are not yet exploited economically.

- The subject property has among the best locations on Oahu (outside of Waikiki) for limited scale "suburban" resort and commercial uses. It is adjacent to the state's largest private visitor attraction in the district's major community, along the Circle Island Drive route, and having in-place entitlements.

- We estimate it will take three years for the proposed Laie Inn to achieve a stabilized occupancy level of 76 percent, and approximately 18 to 24 months for the retail/restaurant/museum component to reach stabilized patronage.

- Upon completion, the redevelopment project will house some 153 full-time equivalent employment positions with annual wages of $3.7 million. The $37.9 million in capital investment will create 180 worker years during construction and have stabilized gross sales of $14.2 million per year.

- The redeveloped Laie Inn will increase tax receipts above current levels for both the county and state. We estimate total payments from primary tax sources to be at $627,350 and $2.9 million annually on a stabilized basis for county and state, respectively, and in no year will government costs exceed receipts.

We appreciate the opportunity to have been of service in regards to this unique holding. Please contact us if further detail or discussion is required.

Sincerely,

THE HALLSTROM GROUP, INC.

James E. Hallstrom, Jr., CRE

/as

Market Study, Economic Impact Analysis, and Public Costs/Benefits Assessment of the Proposed

LAIE INN REDEVELOPMENT

to be Located at

Laie, Oahu, Hawaii

Prepared for

Mr. Eric Beaver, President
Mr. Eric Marler, CFO
Hawaii Reserves, Inc.

November 2004

TABLE OF CONTENTS

	Page
ASSIGNMENT AND SUMMARY OF CONCLUSIONS	1
Assignment	1
Primary Study Conclusions	3
Tourism	3
The Study Region	4
The Subject Property and Proposed Development	5
The Lodging Component	5
Economic Impacts	7
THE KOOLAULOA/NORTH SHORE STUDY AREA	8
Natural Beauty and Public Parks	10
Destination Exhibits	11
The Turtle Bay Resort	16
Coast Villages	18
Market-Based Assets	20
Market Share Conclusions	21
Transportation/Access Problems	22
Climatic Concerns	22
Scarcity of Centrally-Located Alternative Sites	22
Community/ Governmental Opposition	23
Impetus and Promotion	23
MARKET STUDY OF THE LODGING COMPONENT	24
Introduction	24
The State of Hawaii and Oahu Tourism and Hotel Industries	25
Market Opportunities	33
Conclusions	36
MARKET STUDY OF THE PROPOSED RETAIL COMPONENT	37
Quantification of Demand	37

Table of Contents (continued)

	Page
Regional De facto Population Demand	39
Regional Tourist-Oriented Demand	42
Identification of Supply	45
Demand/Supply Correlation	46
APPROPRIATENESS OF THE SUBJECT SITE	47
Site Attributes	47
The Lodging Component	47
The Retail/Restaurant Component	49
Master Plan Reasonableness	50
ECONOMIC IMPACT OF THE PROPOSED DEVELOPMENT	52
Capital Investment and Construction Costs	53
Employment Opportunities Created	54
Wage Income Generated	56
Development Costs as Profit Income	57
Population, Income and Expenditures	58
Summary of Direct, Local Economic Impacts	58
PUBLIC COSTS/BENEFITS ASSESSMENT	60
Public Costs	62
Per Capita Costs	62
Public Fiscal Benefits	64
CERTIFICATION	67
Qualifications of The Hallstrom Group, Inc.	
Qualifications of the Analysts	

ASSIGNMENT AND SUMMARY OF CONCLUSIONS

Assignment

Our assignment has been to complete a series of market and economic analyses assessing the probable status and impacts of the proposed 10.5 acre Laie Inn Redevelopment master plan. The goal of the redevelopment effort is to modernize and efficiently utilize the resort/commercial potentials of a critically located and entitled site serving Oahu's largest visitor attraction and the primary community of the Koolauloa District, expanding and stabilizing the employment, economic and tax base of the region.

The new 228 unit Laie Inn will be a low-key, family-oriented facility, not a full-service hotel, without a restaurant, bar, or commercial component. The units would be in low-rise buildings, some offering ocean panoramas, with full kitchens and lanais, within an amenitied complex having pool(s), activity stations, water features and landscaping—all serving to tie the project into the adjacent Polynesian Culture Center (PCC).

An abutting 17,700 square foot destination retail center will be thematically integrated into the complex. The multi-building project will contain 2,475 square feet of retail space, a 4,200 square foot restaurant; 6,000 square foot banquet/wedding hall; and, a 4,200 square foot cultural museum. The center will provide needed services for Inn guests, additional opportunities for local patrons, and attract visitors to PCC and tourist passer-bys.

A 6,950 square foot "Gate House" containing the lobby, public areas and administration spaces of the Inn, will connect the center to the lodging facility.

The Beach Club will be a park-like shoreline amenity for Inn guests, with improvements limited to landscaping, recreation, and a picnic/restroom pavilion.

The purpose of our assignment has been to analyze the proposed subject redevelopment project in light of competitive, regional,

prevailing and forecast economic/market conditions in order to answer four primary study questions:

1. Is there sufficient market demand to absorb the various components of the Laie Inn complex during a reasonable exposure period given competing developments and statewide/regional economic trends?

2. From a market perspective, will the project be an appropriate use of the underlying site relative to governmental land planning objectives, accepted master plan design characteristics, and the area environs?

3. What will be the general/specific and direct/indirect economic impacts on Oahu resulting from the undertaking of the subject development through employment, wages, business operations, profits and construction/economic activity?

4. What will be the impact on the state and county "public purse" from the project in regards to costs of services required versus increased tax/fee receipts?

These issues were addressed through a comprehensive research and inquiry process utilizing data from market investigation, governmental agencies, various Hawaii-based media, industry spokespersons/ sources, on-line databases, and published public and private documents.

The pertinent results of our study are highlighted in the following report, containing supporting narrative, tabular data and other materials contributing to our conclusions. The synopsis presentation is divided into eight sections:

1. **Primary Study Conclusions**
2. **The Subject Property and Proposed Project**
3. **Overview of the Koolauloa/North Shore Region**
4. **Market Analysis of the Proposed Lodging Component**
5. **Market Analysis of the Proposed Retail/Restaurant Component**
6. **Appropriateness of the Subject for the Planned Use and Absorption Estimates**

7. **Economic Impact Analysis of the Proposed Development**
8. **Assessment of the Public Costs/Benefits Associated With the Project**

The primary source information regarding the subject used in our study were: maps, phasing schedules, cost estimates and project descriptions, details and planning objectives and timing guidelines provided by Group 70 International and Hawaii Reserves, Inc.

The Laie Inn site and environs were viewed on several occasions for this assignment in late 2004, and for several other studies regarding the site and nearby HRI holdings.

Primary Study Conclusions

Tourism

Tourism in Hawaii has recovered strongly since the September 11th, 2001 terrorist attacks, which interrupted a gradual and extended market upcycle that peaked during the prior year. Demonstrating the strength of the island visitor industry, the market quickly rebounded, and by the end of 2003, domestic travel (from the Mainland U.S.) was up nearly four percent, with total visitor days up three percent from 2002. While the international segment remained soft, it was primarily due to lingering economic weakness from late last decade coupled with Iraqi war concerns.

The post-attack recovery trends continued into 2004, with strong expansion again in the arrivals of the primary domestic/westbound sector (up 7.4 percent from the same period in 2003), and meaningful recovery in the international/Asian segment (up 15.3 percent through July). On a combined basis, total arrivals are up 9.6 percent for the first seven months of this year, with several record setting months during the summer. A total of 6.95 million arrivals, 65.2 million visitor nights and $11.9 billion in guest spending is projected for 2004--an all-time high for these three most vital indicators. If more people are spending more days and more money in Hawaii, the tourism industry is healthy.

Expectations are for general gains in tourism of six to ten percent for 2004, with another four to six percent in 2005, followed by a more modest 2.5 to 4.0 percent over the mid to long term. The recovery of the Asian segment has at last begun apace, although returns to early 1990s levels will probably not occur into 2005-2006, as further

strengthening of international economies and currencies (against the dollar) take place.

This escalating nightly visitor census will create demand for an additional 2,000 to 3,500 transient accommodation units on Oahu during the next decade, even after allowance for existing hotel operations to increase overall island average occupancies to the mid-80's percentile. The general Oahu tourism and hotel sectors provide macro-economic support for the proposed subject redevelopment.

The Study Region

The study area encompasses the Koolauloa District and the central and easterly region of the North Shore District. The non-urban regions of Oahu, specifically the study area and the Ko Olina Resort areas, will be the focal point of future tourism inventory expansion on the island in the coming decades. This is due to two reasons:

- The scarcity of desirable sites in Waikiki to meet the increasing long-term demand for visitor-oriented development on Oahu; and
- The ability to provide an outer-island ambience at competitive prices, while having the advantage of proximity to the highly developed supporting Oahu transportation, commercial and recreational infrastructure.

There are five primary tourism-oriented assets which together form the attraction base of the study area. In combination with the growth and urbanization of the Oahu economy, they should serve to support gradual expansion of visitor-based development. These favorable regional characteristics of the region are:

- Its natural beauty and public parks.
- The attraction of two major destination exhibits.
- The Turtle Bay Resort destination community, currently one of only two master planned vacation projects on Oahu.
- Numerous picturesque coastal villages.
- Other market-based assets.

Based on our investigation and analysis, we believe the North Shore/Koolauloa area has sufficient positive assets to become a secondary visitor area on Oahu, and will readily support the proposed lodging and commercial components of the subject redevelopment.

The Subject Property and Proposed Development

The subject property has unique characteristics which would allow a well-designed and marketed facility to capture an economic share of the competitive sector. It is adjacent to the most visited privately-owned visitor attraction in the state (PCC); is a rare commodity, a high quality, underdeveloped, resort/hotel classified site outside of Waikiki; it is within an evolving community having several guest destinations and expanding resident and specific-user populations; and is in a scenic region offering a distinctly rural, non-Waikiki, Hawaiian ambience. Critically, the property has virtually full entitlements, established mixed-resort (lodging and commercial) uses and general community support, factors which are scarce and valuable in pursuing new hotel development in the islands.

The existing operation fails to capture the potentials of the site or the opportunities associated with the available guest groups, most of whom now either stay at Turtle Bay or commute from Waikiki. A redeveloped Laie Inn would increase the exposure and flow of visitor dollars into the local community.

The project will have an extensive beachfront recreational component, low-rise low density improvements, direct highway exposure and access, and integration into a redeveloped/renewed mixed-use resort neighborhood being alongside a themed visitor-oriented retail center.

The Lodging Component

The proposed Laie Inn redevelopment would capitalize on the emerging lodging industry trend in Hawaii of smaller, lower-amenity, competitively-priced projects located in suburban communities outside of established major resorts. Several of these projects, with design and operation patterned after successful mainland limited service hotels having national "name/flag" affiliation, are being pursued on the neighbor islands The lower land prices and per unit construction costs allow for an economic return that is currently unavailable for costly new in-resort development.

The probable guest demographic for a redeveloped Laie Inn, assuming competent management, marketing and affiliation, would likely be predominately domestic visitors, divided primarily between:

- Younger, active, independently-traveling couples and families who are either return visitors to Oahu or attracted by the operator's brand. These patrons would be seeking a competitively-priced, low-intensity, outdoor-oriented, non-Waikiki/resort vacation experience. Few of this segment currently stay at accommodations in the study area.

- Mixed-aged and seniors traveling to a defined destination in Laie (PCC, the LDS Temple, BYU-Hawaii, or family/friends), often in groups or within peak periods. Pricing, ease of access, supporting facilities, and quiet, quality and cleanliness are primary concerns of this group. Presently, this segment either stays at the existing Laie Inn, at Turtle Bay Resort, or in Waikiki.

In order to address the expectations/needs of these groups, we recommend moderately spacious units with fully-equipped kitchenettes in a low-key setting having lawn/playground areas, limited (cost efficient) amenities, and an enticing beachfront experience. Marketing tie-ins with the PCC and other windward/North Shore activities and destinations, and service and meeting space agreements with restaurant operators in the adjoining retail center, would help to offer a more comprehensive vacation.

The specifics of the subject site and nearby uses, coupled with its historic operations, indicate significant macro-economic support for the subject lodging component. We estimate the redeveloped lodge will reach operational stabilization (75 percent occupancy) by year 3 after opening.

The Retail/Restaurant/ Museum Component

The retail/restaurant market of the Koolauloa/North Shore region of Oahu has historically been centered in Laie and Haleiwa, with the focus of the former being to serve the northerly-windward residential community and the latter attracting both visitor spending and local consumers. The sector is presently in an under-supplied mode, with increasing demand from an evolving population and a recovering tourism industry. This is coupled with a stagnant inventory of floor space, having no major new additions in recent years and virtually none outside Haleiwa in almost two decades.

At present, the de facto population of the Koolauloa District is about 15,500 persons (residents and lodged tourists) who create demand for some 320,000 square feet of floor space about half of which is directed

towards neighborhood or community-type businesses in the district. With available floor space of about 177,000 square feet, the market is undersupplied. We estimate the study region could support up to 204,000 additional square feet of space by 2020.

There are significant retailing/restaurant opportunities available in the Laie/Koolauloa region which is not being maximized by the existing supply, both in the resident population and tourism-oriented consumer sectors. The subject sites have unique and/or highly desirable characteristics, and their development within modern "Class A" space would provide competitive additions to the study area, and be well-received by the market.

The retail/restaurant/museum component of the Laie Inn redevelopment site is well-supported by the market and would achieve full absorption within a year of completion.

Economic Impacts

The construction of the Laie Inn redevelopment project and on-going operation of the integrated facility will bring some $37.9 million in direct real property capital investment and create some 1,879 "worker years" of employment on Oahu, generating $54.3 million in total wages, over the initial ten-year building and operation period of the project. The development will create meaningful profit opportunities for local contractors and suppliers, and some 180 worker years[1] of direct construction employment with wages of $10.5 million.

On a stabilized operating basis, the development will create 214 permanent jobs in the regional economy with annual wages of $5.5 million. Natural population expansion in Koolauloa will require up to 1,000 new jobs over the coming ten years, and the new Laie Inn master plan, though a relatively small holding, will create 20 percent of the long-term employment positions needed in the district over the next decade.

The average guest population of the Laie Inn at stabilized operation is forecast at 504 persons. The stabilized discretionary expenditures of the users are estimated at $27.6 million annually.

The total base economic impact on Koolauloa/Oahu from the subject project for the first ten years of construction and operation is projected

(1) A "worker year" is the equivalent of 2,000 hours of employment, or about the average number of hours worked annually by a full-time employee.

at $362.7 million, with a stabilized base impact of $47.3 million per year thereafter. The total overall economic impact during the first decade will be in excess of one-half billion dollars and $95 million annually over the long-term.

This is a substantial increase in capital formation, employment and wages, and economic impacts over the current on-site activities. Not only is a redevelopment necessary to maintain the competitiveness (and jobs/economic vitality) of the site, but will enable the creation of far greater long-term opportunities.

Public Costs/Benefits

The State of Hawaii will receive $22.4 million in primary tax revenues from the project during the 10-year development and operational model used in our analysis, with an additional $2.8 million annually in receipts thereafter. The City and County of Honolulu will gain some $5.0 million in taxes during the modeling decade, and $627,000 per year following.

In no year of the projection or stabilized periods does either the state or county suffer a revenue shortfall (costs exceeding receipts) due to the Laie Inn redevelopment. The stabilized net annual cash flow "benefit" to the City and County of Honolulu from the development will be about $50,000, and to the State of Hawaii $82,000 per year.

THE KOOLAULOA/NORTH SHORE STUDY AREA

The study area encompasses the Koolauloa District and the central and easterly region of the North Shore District. Together they comprise some 30 miles of coastal plains and interior uplands stretching from Kualoa Point on Oahu's windward (or easterly) side to the Haleiwa/Wailua communities at the heart of the northern coast of the island. The region is commonly referred to as the "country" by local residents, and is the most rural area of the county (approached only by the Waianae Coast).

Reached via either the H-1 Freeway/ Kamehameha Highway route through central Oahu, or going trans-Pali using one of three freeways and connecting with Kamehameha Highway along the windward side of the island, the study area can generally be divided into two parts:

the Wailua/Haleiwa to Kahuku Point/North Shore corridor; and the Kualoa Point to Kahuku Point stretch of the windward coast.

The latter region comprises the Koolauloa District, which contains Laie Town and the subject property. It has a current resident population of some 15,000 persons and hosts about 1,000 additional visitors each night. Current and forecast populations for the primary study area are summarized on Table 1.

Kamehameha Highway is the only thoroughfare transversing, the study area, and is commonly known as the greater Oahu "circle island drive", considered one of the "must" adventures for Oahu/Waikiki visitors. In addition to providing access for many of the island's leading attractions, the route passes by some of Oahu's finest beaches, most panoramic vistas, and through pineapple, sugarcane (now feral) and other agricultural and rural scenes displaying the traditional beauty of the island. An estimated 1.6 million tourists make the drive each year, passing directly by the subject property.[2]

The non-urban regions of Oahu, specifically the study area and the Ko Olina Resort areas, will be the focal point of future tourism inventory expansion on the island in the coming decades. This is due to two reasons:

- The scarcity of desirable sites in Waikiki to meet the increasing long-term demand for visitor-oriented development on Oahu; and
- The ability to provide an outer-island ambience at competitive prices, while having the advantage of proximity to the highly developed supporting Oahu transportation, commercial and recreational infrastructure.

The success (or market acceptance) of an area for tourist development is dependant upon the presence of numerous characteristics which constitute an attraction base. While there are a variety of asset-types

(2) During the 1970s and 1980s, estimates of circle-island travelers ranged as high as 2.4 million but lacked credible support. Certainly the figures were higher than at present, as evidenced by the 20-plus percent decline in attendance at PCC, the 60-plus percent decline at Waimea Falls Park, and a drop in group tour bus travel. Surveys beginning in the early 1990s estimated a 1.2 million annual visitation which has gradually grown to current levels.

which can serve to build this foundation, it is the synergistic combination of selected ones which generate the necessary drawing power. When there is a sufficient number of positive characteristics working in harmony in a given region, they are said to form a needed "critical mass" or "cumulative attraction". We believe the Koolauloa/North Shore region has significant in-place, diverse attributes supporting potentials for visitor plant development.

There are five primary tourism-oriented assets which together form the attraction base of the study area. In combination with the growth and urbanization of the Oahu economy, they should serve to support gradual expansion of visitor-based development. These favorable regional characteristics of the region are:

- Its natural beauty and public parks.
- The attraction of two major destination exhibits.
- The Turtle Bay Resort destination community, currently one of only two master planned vacation projects on Oahu.
- Numerous picturesque coastal villages.
- Market-based assets.

Natural Beauty and Public Parks

The Koolauloa and North Shore districts of Oahu have excellent, and well-established oceanfront recreational parks, including three state "regional" facilities on the windward coastline at Kualoa, Kahana Bay, and Malaekahana. Numerous other county beach parks are spread throughout the area, and every community has a developed shoreline enclave.

The quality of the parks, overall, are comparable with those found on any of the islands, and only those in South Maui are as easily accessible. While, due to urbanization pressures, the off-shore conditions of the study area are not as pristine as found in some neighbor island locals, the parks are generally much cleaner and less crowded than those servicing Waikiki and central Honolulu. Additionally, the internationally renowned surfing of the North Shore provides notoriety to the region and entertainment during the winter and spring months.

TABLE 1

QUANTIFICATION OF PROJECTED KOOLAULOA DISTRICT DE FACTO POPULATION 2000 THROUGH 2030
Market Study and Economic Impact Analysis of the Proposed Laie Inn Redevelopment
Laie, Oahu, Hawaii

Year	Resident Population Low	High	Mid-Point	Visitor Population (1) Low	High	Mid-Point	Mid-Point Total
2004 (2)			15,000	850	1,250	1,050	16,050
2005	15,100	15,400	15,250	884	1,300	1,092	16,342
2010	15,500	16,750	16,125	1,282 (3)	1,885	1,583	17,708
2015	16,000	18,275	17,138	1,410	2,074	1,742	18,879
2020	16,600	19,600	18,100	2,044 (4)	3,007	2,526	20,626

(1) Average daily visitor census in study region.
(2) Current estimate based on extrapolation based on DBEDT July 2003 population estimates.
(3) Redeveloped Laie Inn assumed to open during this period.
(4) Depicts second hotel at Turtle Bay opening during period. Assumed to be 350 rooms. Land is entitled, no project announced.

Source: C&C of Honolulu Planning Department, and The Hallstrom Group, Inc.

The focal point of most Hawaii vacations are beachfront activities, and the presence of such large famous shoreline tracts are a highly favorable long-term asset. Substantial enhancements have been made to the park system in recent years. The second phase of Kualoa Beach Park was completed last decade, and improved/new facilities have been built at many smaller community parks, including Laie Maloo Beach (Pounders) and Kekala Bay, which are less than one mile south of the subject. Turtle Bay Resort and the Campbell Estate have committed to increased public access to the Kahuku Point area, notably Kawela Bay, one of the state's finest beaches.

Beyond the oceanfront parks, inland (mauka) recreational opportunities are available at Kahana Valley State Park, the largest in the system, an 1,800-acre tract 15 minutes south of Laie. Sacred Falls Park also offers hiking, botanical features, and fresh-water falls and pools (though the majority of the lands are currently closed due to rockslides). And, there are 23 state-designated hiking trails along the windward and North shores of the island, more than are found in any other rural area of Hawaii. A variety of hiking, equestrian, ATV and other fee outdoor activities are also available at Kualoa Ranch, Waimea Valley, and at Turtle Bay.

The sculpted beauty of the Koolau Mountain range, with a lushness maintained by regular precipitation, creates a varied background which is not seen on the "younger" islands in the chain (Maui and the Big Island are still dominated by relatively unfeatured shield volcanoes). Only the east and northerly shores of Kauai offer as dramatic panoramas in Hawaii as found in the subject region.

However, the erosion creating the varied background, and the lush vegetation, is a result of more intense rainfall and stronger winds than are experienced in the dryer, leeward southerly and western areas of the islands. Many tourists (and their travel agents) seek to avoid these wetter and typically cooler climates, preferring the more-arid coastlines. The impact has been that windward-oriented resorts (Kapalua, Princeville and Turtle Bay) have generally had more difficulty and required more time in establishing their market share.

Destination Exhibits

Two of Oahu's most visited destination attractions, the Polynesian Cultural Center and Waimea Falls Park, are located in the study area. Together in 2002, they drew more than one million paying guests, and represent significant capital investments and visitor-oriented patronage.

1. The Polynesian Cultural Center

The Polynesian Cultural Center (PCC) is located in Laie along Oahu's northern windward coast. About one hour from Waikiki, PCC is the most elaborate destination exhibit in the state in regard to capital investment, number of visitors, market recognition and general quality of appearance.

Despite its relative distance from Waikiki, the source of more than 80 percent of the center's visitors, PCC is considered well located. Public relation officers feel the location is ideal: in a quiet town surrounded by ocean and mountains, and a far enough distance from Waikiki (via scenic drive) to allow guests to form the proper frame of mind. Logistically, the center is well-situated, adjacent to Brigham Young University-Hawaii, which provides the Pacific island employees vital to the re-creation of the various ethnic villages.

Improvements at the center represent considerable capital investment, at a substantially higher degree than any other single private attraction in the state (approached only by Sea Life Park and the Bishop Museum). Improvements include seven authentic reproductions of Pacific island villages, a 2,800-seat amphitheater, an extensive retail and administration complex, and elaborate landscaping, water features, and groundwork.

PCC has one of the largest unsecured parking lots on Oahu, covering approximately 12 acres and providing room for more than 800 automobiles. Tour buses are catered to with an expansive driveway, turning and unloading areas. The center fronts on and has direct access to Kamehameha Highway, the region's main thoroughfare.

Although guests may stroll through the villages and exhibit areas at their leisure, guided tram tours and canoe rides between sites are available. In order to establish realism, PCC has the seven villages staffed by trained employees from the island groups portrayed, displaying the crafts, lifestyle and cultural heritage of each. As a result, there is greater interaction between guest and employees than is typical for a destination attraction, and insures a visit to PCC is an educational experience.

The center features a nightly Polynesian stage show (in the Amphitheater) that is one of the state's premier performances and competitive with other presentations on Oahu and the mainland.

Based on admissions through August, a total of 797,500 guests are expected to visit the park in 2004, up 6.28 percent from the prior year and the second consecutive year of substantial recovery since 9/11. For the six years 1999-2004, PCC averaged 772,960 visitors annually. The recent attendance is below the 1.14 million record level of 1989 and the yearly average of 988,471 for the 1980s.

However, the decline, which is a function of fewer first time visitors to Oahu and changing demographic and motor coach touring trends, has not been as severe as seen at other Oahu attractions. Attendance appears to be within long-term stabilized ranges.

PCC has a well-established, positive reputation as the premier Oahu destination exhibit. It attracts large volumes of both tourists and residents, and has established itself as a "must see" item for all first-time Hawaii travelers. Estimates regarding local resident attendance range from 15 to 20 percent of gate totals.

As might be anticipated, the center's advertising campaign is also the most extensive of the island's destination exhibits. In addition to exposure through Waikiki-distributed Oahu travel magazines, PCC places brochures and displays throughout racks and information centers statewide. In an attempt to reach mainland travelers, PCC regularly purchases extensive spreads in Hawaii-oriented advertising supplements and in travel agent trade publications. The park offers meaningful commissions to travel agents, and is of significant enough importance, price and entertainment value to be regularly booked by mainland agents, the only exhibit so honored. Also, as PCC is administered by the Church of Jesus Christ of Latter-day Saints, its members traveling to Oahu are strongly inclined to visit. The center is a major contributor to the tourist channels offered to Oahu hotel rooms and has a competitive website.

Park attendance crosses all ages and cultural boundaries, an attribute ensuring PCC's continued success. The goal of management is to provide a continually diversified entertainment forum.

Retail merchandising is of higher standard than evident at competitive attractions, and features quality gifts and crafts in addition to standard souvenirs. A major recent addition was an omni-max theater; a state-of-the-art film-making and projection technology which offers viewers a sensation of experiencing on-screen action.

The drawing power of the Polynesian Cultural Center is strong, based on the desire of tourists to view Polynesian societies in a clean, comfortable and professionally presented setting. Its broad appeal, extensive marketing program, and tradition of quality entertainment has made it the forerunner of the state's destination exhibits. Its advantages are numerous: a strong desirable theme; extensive, well-kept facilities; highly trained and disciplined employees; and tasteful merchandising and meal service.

2. Waimea Falls Park[3]

Encompassing nearly 1,800 acres of the North Shore's most fertile valley, Waimea Falls Park is designed around a botanical garden and outdoor experience theme. While other destination exhibits feature intensive structural improvements to provide entertainment, Waimea Falls Park has historically relied on nurturing expansive tropical scenes that embody the typical tourist's conception of a Hawaiian paradise.

Circa one-hour's drive from Waikiki, Waimea Valley has direct access from Kamehameha Highway along the popular circle-island route, which draws some 1.6 million visitors annually. Yet, being in the rear of the Valley, the park has no direct exposure except a sign along the main thoroughfare, limiting the desirability of its frontage from a marketing perspective. Advantageously, the course of the road inhibits traffic speed near the park entrance.

Public Bus Route 52 services the area, the most popular scenic circuit for budget-oriented tourists. Waimea Falls Park, a two hour ride from Ala Moana Shopping Center, is often the first stop for visitors who later continue on the journey after experiencing this destination exhibit. The relatively long walk (three-fourths mile) from the public bus stop to the park entrance is a significant detriment to bus riders.

Few valleys are available on Oahu for large acreage unintensive yet commercial uses, fewer still which possess the physical beauty of Waimea Valley. For this reason, its isolated, non-urban location is well-suited to the park's theme. As the thrust of the operation is a wide-open, natural, ancient Hawaiian motif, it is doubtful if sites closer to Honolulu would be desirable. Many feel the extended drive to the

[3] The name of the attraction has been revised several times in recent years, generally in a form with either Waimea Valley or Waimea Falls. We are using the historically well-established name for the facility.

park from Waikiki/Honolulu "deprograms" the tourists and contributes to the aura of vastness. Additionally, Waimea Beach Park, a public enclave at the mouth of the valley, has one of Oahu's most beautiful white-sand swimming beaches, and provides an amenity and stopping-point incentive for potential Waimea Falls Park guests.

Structural improvements were historically minimized in an effort to protect the thematic purity of the park and limit capital investment. In recent years, several additions have been made, including a playground feature and butterfly exhibit, and the restaurant/retail structures renovated.

Waimea Falls Park has over four and one-half acres of parking area, although the overflow potential is nearly limitless. Guests at the park may walk or ride open trams through the botanical gardens, and are encouraged to participate in hula and Hawaiian games presentation.

Attendance at the park was 273,382 in 2002, up 16.2 percent from 2001, but off more than two-thirds from the record of 672,825 reached in 1987. Changing ownership, several floods and pricing issues have resulted in an unstable guest count over the last decade, with an annual average of 351,000 from 1991 through 2001.

The National Audubon Society assumed management of the park on June 28, 2003, and the impacts of new management, public access, and commitment to commercial uses on long-term attendance levels is not yet clear.

Waimea Falls Park is a successful exploitation of a specific location and tourist interest. Its scenic placement on a well-traveled bus (public and tour) route, and its ability to meet the visitor demand of an "authentic" Hawaiian-style paradise are its primary advantages.

As most local residents view the park as a commercialization of physical beauty which can be seen in many other Hawaii locations for free, Waimea Falls Park does not enjoy a large turnout from Oahu residents. Management estimates less than 10 percent of park guests are residents, a figure appearing optimistic upon observation; with most likely as the host of visiting friends and relatives.

The park has historically been marketed in conjunction with Sea Life Park, its "sister attraction". To stimulate interest among public bus

using tourist, placard advertisements promoting the park abound inside city buses.

Until the activities-oriented push of the last three years, the typical park guest was middle aged, elderly, or families with older children. Young adults are beginning to comprise a larger guest share, but cost, location and competition limit the penetration.

Retail and food services at the park are adequate. The gift shops offer little additional selection beyond what is available in Waikiki, with limited Waimea Falls Park logo merchandise.

The advantages of the park are its strong Hawaiian jungle garden theme, its scenic location, and its presentation of the theme in a manner acceptable to a cross-section of adult tourists.

These parks, particularly the PCC (Hawaii's most visited private entertainment/educational exhibit), serve as exceptional amenities to the tourism potential of the Koolauloa/North Shore area. They draw visitors to the region for extended periods of time, and provide identification and recognition, which has not been fully exploited through supporting development to date.

The Turtle Bay Resort

The Turtle Bay Resort, comprising 880 acres encompassing Kahuku Point, includes a 487-room hotel, 368 condominium units, golfing and other amenities.

Land use approvals for the resort have (for the most part) been granted, and other preliminary legal, financial and analytical efforts have been completed to support significant further expansion.

At its inception, it was anticipated the resort (then named "Kuilima") in conjunction with the regional assets, would serve as the focal point for a North Shore tourism boom. Due to poor management, marketing, and then-strong community opposition, the breadth of expectations were never actualized.

However, the status of the destination project has been in flux over the years due to changing ownership and cyclical economic conditions. While the resort has always been on the edge of the market (and island), the urbanizing North Shore/Koolauloa community has shown greater acceptance of the resort, recognizing its employment potentials;

and the county government acknowledges the need to expand the Oahu visitor plant in areas outside Waikiki.

Approvals for future development at the resort include:

Use	No. of Parcels	Area in Acres	No. of Units	Comments
Hotel	4	89	1,450	All oceanfront sites.
Condominium	8	137.2	2,063	Near makai and easterly areas of property.
Public Park	2	4.8		Oceanfront at Kawela Bay and Kahuku Point.
Park	1	2		Private, oceanfront between hotels.
Bird Sanctuary	1	6		Private, overlooking marsh.
Commercial	1	9		40,000 sq. ft. gross leaseable area, mauka/ westerly area of property.
Club House	1	5		Within second course, near access roadway.
Preserve	1	100		Punahooiapa Marsh Area
Stable	1	10		Extreme southerly corner of resort.

If built-out, the community would contain facilities and amenities competitive with any of the statewide major destination resorts, totaling 4,368 visitor units, up to 36 holes of championship golf, a central tennis facility, ecological preserves, underwater park, riding stables, and greatly enhanced beachfront areas.

However, given the history of the project, its market standing, and that Hawaii resorts invariably do not build to maximum densities, it is highly unlikely the number of units/rooms in the community will ever meaningfully approach the permitted levels. In light of the scarcity of available sites, and general tourism growth, there is a probability that a

hotel and/or condominium project will be built during the next two decades.

Currently, many overnight Laie visitors patronize the existing hotel, as it provides (by far) the best accommodations in the region. While it will be difficult to overcome the climatic issues, the resort needs additional facilities to create the cumulative attraction necessary for success. We believe the subject commercial component will appeal to these individuals, as a common guest complaint is the lack of such services in the resort, the closest non-hotel "Class A" retail/restaurant opportunities being in Laie or Haleiwa.

Coast Villages

The rural, picturesque small towns strung along the windward and North shores are considered an attraction by many visitors; depicting a type of "Hawaiiana" lifestyle now lost in urban Honolulu and the ultra-modern destination resorts. Interspersed with stretches of fields and jungle foliage, the villages exude character with fresh fruit stands, craft shops, and "mom and pop" stores, all providing glimpses into a way of life that generally is no longer found on the mainland.

The drawback to these communities are two-fold: many of the homes show signs of poor upkeep, reflecting the moderate to low income level of a significant number of residents; and, there is an overall lack of quality commercial opportunities.

Each of these problems is being addressed.

The urbanization of Oahu is bringing many median to upper-income residents into the region, resulting in commensurately "nicer" housing being developed or restored, particularly in the near-shoreline corridor which is the most visible to travelers. This trend can be seen in Laie, Sunset Beach, Pupukea, and Haleiwa.

Similarly, in response to historically ill-met and expanding demand more desirable commercial facilities are being proposed or considered in the area, at Laie (in the near-term) and in Haleiwa (over the mid- to long-term). Under the restrictions of the Scenic and Cultural District regulating construction design, it is anticipated that Haleiwa and Laie will remain the focal points of both tourism and resident-oriented commercial services in the study area.

The Laie Shopping Center is scheduled for expansion and a resort-oriented retail center will be part of the subject site redevelopment.

Relative to the size of the community, and its prominence in the northerly-windward area, Laie is under-developed from a retail and service standpoint, and there is strong support for commercial development over the next two decades.

Laie is the primary village in the Koolauloa district, having the highest resident population (about 5,300 permanent persons), the Brigham Young University – Hawaii campus (with some 2,400 students), and the Polynesian Cultural Center, the state's largest private visitor attraction which draws some 800,000 guests annually and is a major regional employer. The "church town" was initially developed by The Church of Jesus Christ of Latter-day Saints, which still controls much of the land in the Laie area through associated organizations.

Numerous destinations attract tourists and non-residents to Laie who would comprise a meaningful portion of demand for the redeveloped Laie Inn. The recent attendance figures at these facilities has been:

Destination	Annual Visitor Count 2002	2003	2004 (1)
Polynesian Cultural Center	730,443	750,371	797,488
Laie Temple Visitor Center (2)	97,119	105,197	100,118
BYU-Hawaii (3)	Circa 9,050 Annually		

(1) Projected based on data through August.
(2) Does not include LDS church members from neighbor islands attending temple services, estimated at a significant number of visitor days per year.
(3) Includes 7,050 for special events and 2,000 associated with athletic events, a significant portion of these are overnight visitors.

The town is the largest in the 40 mile stretch of Kamehameha Highway between Kaneohe and Haleiwa, providing much of the housing, retail, business and educational opportunities in the district. However, the town suffers from a lack of a diverse retail base, basic service/supply businesses, and no new employment potentials. As a result, residents typically travel long-distances for jobs and services/shopping, exacerbating the congestion of the single highway accessing the area.

Households in Koolauloa are among the most crowded on the island, having an average of 4.3 persons per dwelling unit, more than 20 percent above the island-wide figure. Average household sizes in the

district communities range from 2.66 persons in Punaluu, well below the islandwide figure of 2.95 persons, to 4.47 persons per household in Laie, one of the highest levels in the state. And the number of multi-generational families in single housing units is also well-above Hawaii norms. There has been little new residential development in the district over the past 15 years, and there is a need to upgrade, enhance, and revitalize infrastructure systems and public spaces for the town if it is successfully to continue in its role as the modern hub of a rural region.

Market-Based Assets

There are three market-based characteristics which also provide support for the tourism potential of the North Shore/Koolauloa study area: urbanization pressures, scarcity of prime developable resort sites, and its ability to compete with outer-island destinations.

The strongest active force in the study region's economy is the urbanization pressure being brought about by the steadily increasing population of Oahu. Although county planners have generally tried to stem the tide, it has not proven successful. Most analysts, and residents, consider it inevitable that population and construction levels will continue to escalate over the coming years and area population goals will be exceeded.

In the past, windward and North shore residents jealously protected the rural character of their communities, being adversarial to further development plans. The in-migrating populace of recent years, however, recognizes both the desirability of the region as a housing alternative, and the need to have adequate retail and employment opportunities.

The demand for jobs in an area with under-employment has greatly increased community support for development over the past decade, the most visible example being the positive reception for the Turtle Bay Resort expansion plan in the 1990s, replacing the near unanimous disapproval of the 1970s.

Despite the setbacks from the September 2001 terrorist attacks, the general economic recovery in Hawaii has been strong, outpacing the mainland, and many businesses, particularly in the construction trades, are again beginning to experience difficulty in finding sufficient numbers of qualified workers. The available labor pool in the Koolauloa and North Shore districts must be considered as a primary asset in its long-term development potential.

As more jobs are created in the study region, more persons are drawn to what is considered a highly desirable place to live. This generates demand for additional services and development, resulting in more employment opportunities. This cycle, which has yet to synchronize in the area, can be seen in other areas of the state, and we hold the opinion the basic structure exists in the region for such to occur, particularly as the demand for less intense suburban and rural housing alternatives increases on Oahu.

Scarcity of prime developable resort sites on Oahu is another market-generated factor in support of tourist-oriented development in Koolauloa and the North Shore. Waikiki is effectively fully-developed. Of the areas outside the urban resort district proposed for resort use, only Turtle Bay and Ko Olina remain viable alternatives at this time.

The third market-based asset supporting the regional tourism industry is that it presents an outer-island ambience at competitive prices while allowing guests to remain on Oahu. While benefiting from the superior transportation, supporting commercial, and entertainment facilities available on the island, the study area provides a less expensive, and less-troublesome alternative to neighbor island resort destinations. Plane fares are not incurred, luggage and rental car hassles are lessened, and time of travel is reduced.

Market Share Conclusions

Based on our investigation and analysis, we believe the North Shore/Koolauloa area has sufficient positive assets to become a secondary visitor area on Oahu. The issue is when will these assets combine in significant efficiency to create the cumulative attraction necessary to insure long-term success?

To date, this formation of "critical mass" has been hampered by five factors, the latter three of which are in the process of being mitigated or eliminated:

- Transportation and access problems.
- Less favorable climatic conditions.
- Ready availability of resort sites elsewhere on Oahu.
- Opposition from community and governmental groups.

- A lack of development impetus and quality promotional efforts.

Transportation/Access Problems

Kamehameha Highway is an older, two-laned roadway which has proven inadequate to support the urbanization of the region. Traffic complaints have been oft cited as the motive for restricting further development, and were a major hurdle for the proposed Turtle Bay Resort expansion to overcome during the approval process.

This is a long-term detrimental trait of the study area, and there have been few programs forwarded to widen the right-of-way for any extended distance (which may be impossible in some areas), or otherwise relieve the situation. The roadway currently is utilized by both a growing resident population and some 1.4 million visitors. Expansion of the tourism plant in the region will not independently increase the use of the highway.

It is the resident population, whose commute is becoming increasingly congested, which generate the majority of complaints, not the visitors. This creates more of a community relations dilemma, not an obstacle for the region to obtain an adequate tourist market share.

Climatic Concerns

The Koolauloa and North Shore are wetter and windier than other areas on the island. This poses a perception and marketing issue. As seen in comparably-located neighbor island resorts, the climatic effect slows market acceptance as it requires more time for tourists and their travel agents to become comfortable with the dependability of the weather at such destinations.

In recognition of this, it might be necessary to develop marketing campaigns which point out its lack of severity and positive aspects. At Princeville, Kauai, for example, the programs stress that most rain generally falls only in the predawn and late afternoon hours; winds are generally not severe and also occur mostly in the afternoon; and, that both these factors make for a cooler, lush climate, as opposed to the hot, arid atmosphere of the leeward resorts.

As the diversity of the tourism population grows, the number of arrivals favoring the cooler, lusher climes should also increase, particularly among Asian visitors.

Scarcity of Centrally-Located Alternative Sites

Only since the mid-1980s has the shortage of desirable, developable hotel sites in the Waikiki District created the need to look elsewhere on the island for alternative properties. Prior to this shortage, there was

little stimulus for developers to undertake construction outside the urban resort area; an effort which would entail greater risk, infrastructure costs, and community opposition.

With the near-capacity development of Waikiki, and the continued strength of the tourism industry, hoteliers are now recognizing the inevitability of seeking alternative locales.

Community/ Governmental Opposition

For many years, the local rallying cry had been to "Keep the Country"; with the result that governmental planning agencies responding to voter desires rejected many proposed development projects in Koolauloa and on the North Shore. This opposition has abated of late as an expanding population is now seeking increased commercial and employment opportunities closer to home.

Simultaneously, county officials realized that new, non-urban tourist destination areas on the island would have to be approved if Oahu wanted to maintain a stable visitor industry growth pattern and remain competitive with the neighbor islands.

With the expressed desire of several community boards being to expand employment opportunities in the region through development at Turtle Bay Resort and further urbanization in Haleiwa and Laie, there is community support as development occurs in appropriately classified areas.

The Koolauloa Sustainable Communities Plan was enacted several years ago after an extended research, planning and public review effort. The plan, which will guide land use in the district, specifically focuses urban uses in Koolauloa to the Laie area.

Impetus and Promotion

The basic physical assets supporting tourism in the area have existed for many years. What has been lacking is the stimulus to undertake the necessary efforts and capital expenditures to exploit them.

Resulting from the factors cited in this analysis, and the demands created by a recovering Hawaii tourism industry, there is a newly emerging impetus to further visitor-oriented development in the study region. This trend is crucial; for without entrepreneurs willing to take the risks in improving the region, the area will stagnate despite its positive characteristics.

The Turtle Bay Resort upgrades and new ownership, proposed Laie commercial constructions, several new North Shore subdivisions, and the proposed subject hotel redevelopment, are all indicative of a coalescence in understanding the area's potentials.

Koolauloa and the North Shore have historically been under-marketed, with few highly-visible media campaigns promoting the region as a whole instead of a single specific attraction. The result is that tourists do not recognize the study area as a lodging alternative, but merely a day's entertainment during a Waikiki vacation. This should be relatively easy to achieve as the existing major visitor destinations are owned or controlled by only three entities.

It is our opinion that as the upper-windward and North Shore further develops as a tourism destination, a regional promotional authority should be formed (as found in Waikiki, Kailua-Kona, and elsewhere), presenting a unified marketing front which would highlight the overall benefits of the area, and not just its individual assets.

MARKET STUDY OF THE LODGING COMPONENT

Introduction

The market demand for the 228 units comprising the redeveloped Laie Inn will be a function of "macro" indicators taken from islandwide data and "micro" indicators relating directly to the subject site and neighborhood.

To the extent the Oahu tourism and hotel sectors are demonstrating a high level of activity, positive long-term growth potentials, and a balance of supply, the "macro" perspective is favorable. If the subject property has access to attractions, amenities, and a consistent guest demographic, the "micro" perspective is also supportive of the proposed development.

In the following sections the Oahu/islandwide and subject/Laie indicators are analyzed in order to ascertain the extent of demand for the proposed subject lodging component, its potential competition, and operational opportunities. The objective is to forecast the probable market acceptance (absorption) of the redeveloped units.

We note due to the limited size of the Koolauloa/North Shore lodging sector, comprised of only some 909 widely varying units, or 2.5 percent out of a total of 35,664 islandwide, traditional market share/capture rate and residual analyses cannot be meaningfully supplied. However, the existing Laie Inn has a long-established, it muted, operating history which demonstrates the fundamental feasibility of a lodging operation on the site.

The State of Hawaii and Oahu Tourism and Hotel Industries

Tourism in Hawaii has recovered strongly since the September 11th, 2001 terrorist attacks, which interrupted a gradual and extended market upcycle that peaked during the prior year. Demonstrating the strength of the island visitor industry, the market quickly rebounded, and by the end of 2003, domestic travel (from the Mainland U.S.) was up nearly four percent, with total visitor days up three percent from 2002. While the international segment remained soft, it was primarily due to lingering economic weakness from late last decade coupled with Iraqi war concerns.

The post-attack recovery trends continued into 2004, with strong expansion again in the arrivals of the primary domestic/westbound sector (up 7.4 percent from the same period in 2003), and meaningful recovery in the international/Asian segment (up 15.3 percent through July). On a combined basis, total arrivals are up 9.6 percent for the first seven months of this year, with several record setting months during the summer. A total of 6.95 million arrivals, 65.2 million visitor nights and $11.9 billion in guest spending is projected for 2004--an all-time high for these three most vital indicators. If more people are spending more days and more money in Hawaii, the tourism industry is healthy.

From a hotel industry perspective, the slowest aspects of the recovery through 2003 were in regards to ADRs and operating profit margins. The former, suffering both from the slashing of rates in the immediate attack aftermath and the competitive effects of direct web-based reservations, and the latter due to having fewer rooms department dollars (due to low ADRs) over which to amortize fixed operating costs. However, early 2004 trends point to a major turn-around in these factors, with ADRs up statewide more than seven percent from last year (to $159.96 nightly), occupancies are up nearly six points (to 79.7 percent) and hotel operating profits up three to 12 points at most properties.

Until recent months, the neighbor islands had been the biggest recipients of the recovery; all showing growth during the past three years while Oahu/Waikiki lagged. However, in recent months the Oahu sector has surged to the forefront of the statewide industry, with total arrivals up 11.5 percent for the year (through July), three-plus times the growth rate in the neighbor islands, and featuring solid gains in the vital international/Asian market. The summer months of 2004 are expected to be the best ever for the season, and approach single month records for Waikiki.

A total of 4.5 million-plus visitors are projected for the island in 2004, representing a full recovery to pre-9/11 figures, with all-time records of 32 million visitor days and nearly $6 billion in expenditures. With more travelers spending more days and more money, the vitality of Oahu/Waikiki tourism is apparent.

After instability in 2002 and into early 2003, Oahu hotels have experienced significant average daily rate escalations, during the first half of 2004, with growth of more than five dollars from the prior year, on top of a five dollar nightly gain registered in 2003. Early occupancy averages for the year (through April--most current PKF data available) are at 80.37 percent; up four points from last year and the highest sustained level since prior to the attacks. Profit margins for hotels are also up across the board, several points above statewide average growth.

An increasing concern on Oahu is that the island tourism plant is reaching capacity. Development lands are scarce, Waikiki is virtually at the mandated hotel room count cap and other resort opportunities are limited, and approvals are time consuming, expensive and controversial. Resort construction is focusing on timeshare uses.

Expectations are for general gains in tourism of six to ten percent for 2004, with another four to six percent in 2005, followed by a more modest 2.5 to 4.0 percent over the mid to long term. The recovery of the Asian segment has at last begun apace, although returns to early 1990s levels will probably not occur into 2005-2006, as further strengthening of international economies and currencies (against the dollar) take place.

The past 30 months have demonstrated the exceptional resilience of Hawaii as a visitor destination. The foundational industry factors, such as being part of the United States, its physical isolation, competitive

infrastructure, wide recognition, and exceptional climate and beauty, continue to place the islands in a superior position, and generally at the very top of visitor satisfaction surveys. Tourism and related real estate uses will remain viable in the state for the foreseeable future.

The *State of Hawaii Tourism Industry Trends* for primary market indicators from 1965 through 2004 (year-end forecasts) are summarized on Table 2. During this three-plus decade period, visitor arrivals have grown nearly ten-fold, the number of lodging units has increased by 60,000, and expenditures have grown more than 40 fold. With the exception of some factors during brief recessionary periods, most of the data shows consistent upward movement over time.

The *State of Hawaii Hotel Industry Trends* are displayed on Table 3 for the period 1972 through 2004 (year to date). The average daily rate being achieved at the surveyed hotels has increased from $20 to $160 during the study time frame. The average occupancy rate has, with the exception of five years, been in excess of 70 percent statewide annually; placing Hawaii among the consistently successful vacation destinations.

The *Island of Oahu/Waikiki Tourism Industry Trends*, shown on Table 4, and selected *Waikiki Hotel Trends* (although not including the subject, the best sector to show market movement) on Table 5, echo the extensive market growth seen throughout the islands, and the evident strength of the market recovery during the past three years.

The Hawaii visitor industry can be considered healthy over the mid to long-term if stable to increasing numbers of visitors are arriving, the total number of visitor days gradually escalates, spending outpaces inflation, and hotels show long-term ADR growth and consistent occupancies. Such conditions have prevailed in Hawaii for many years despite the short-lived post-attack setbacks.

Early data for 2004-2005 points to a continuing statewide recovery with record-setting domestic travel and expenditures, and movement towards stabilization by the International/Asian sector. A further expanding Oahu/Waikiki market continuing in an upcycle mode is also expected with increasing gains in arrivals and visitor days, visitor expenditures, ADRs, and occupancy rates in the near to mid-term. We consider the general data to be highly indicative of a continuing, macro growth cycle which began in mid-1994 and was interrupted by 9/11.

TABLE 2

STATE OF HAWAII TOURISM INDUSTRY TRENDS
Market Study and Economic Impact Analysis of the Proposed Laie Inn Redevelopment
Laie, Oahu, Hawaii

YEAR	TOTAL VISITORS	Annual Pct. Change	AVERAGE LENGTH OF STAY (days)	Annual Pct. Change	TOTAL VISITOR DAYS	Annual Pct. Change	VISITOR EXPENDITURES TOTAL (1) (000's)	Annual Pct. Change	DAILY PER CAPITA	Annual Pct. Change	TOTAL LODGING UNITS	Annual Pct. Change
1965	686,298	---	9.21	---	6,320,805	---	$225,000	---	$35.60	---	12,903	---
1970	1,789,591	32.15%	7.64	-3.41%	13,672,475	23.26%	$595,000	32.89%	$43.52	4.45%	30,323	27.00%
1975	2,829,105	11.62%	8.78	2.98%	24,839,542	16.34%	$1,360,000	25.71%	$54.75	5.16%	40,691	6.84%
1976	3,220,151	13.82%	8.94	1.82%	28,788,150	15.90%	$1,640,000	20.59%	$56.97	4.05%	44,093	8.36%
1977	3,433,667	6.63%	9.02	0.89%	30,971,676	7.58%	$1,845,000	12.50%	$59.57	4.57%	46,048	4.43%
1978	3,670,309	6.89%	9.33	3.44%	34,243,983	10.57%	$2,146,000	16.31%	$62.67	5.20%	48,790	5.95%
1979	3,960,531	7.91%	9.37	0.43%	37,110,175	8.37%	$2,537,000	18.22%	$68.36	9.09%	51,782	6.13%
1980	3,934,504	-0.66%	9.20	-1.81%	36,197,437	-2.46%	$2,875,000	13.32%	$79.43	16.18%	55,700	7.57%
1981	3,934,623	0.003%	9.14	-0.65%	35,962,454	-0.65%	$3,200,000	11.30%	$88.98	12.03%	57,239	2.76%
1982	4,242,916	7.84%	9.25	1.20%	39,246,973	9.13%	$3,700,000	15.63%	$94.27	5.95%	58,927	2.95%
1983	4,367,880	2.95%	9.77	5.62%	42,674,188	8.73%	$4,150,000	12.16%	$97.25	3.15%	60,198	2.16%
1984	4,855,580	11.17%	9.55	-2.25%	46,370,789	8.66%	$4,855,000	16.99%	$104.70	7.66%	64,588	7.29%
1985	4,884,110	0.59%	9.38	-1.78%	45,812,952	-1.20%	$4,900,000	0.93%	$106.96	2.16%	65,919	2.06%
1986	5,606,980	14.80%	9.03	-3.73%	50,631,029	10.52%	$5,753,000	17.41%	$113.63	6.24%	66,308	0.59%
1987	5,779,830	3.08%	9.00	-0.33%	52,018,470	2.74%	$6,473,000	12.52%	$124.44	9.51%	65,318	-1.49%
1988	6,142,420	6.27%	8.64	-4.00%	53,070,509	2.02%	$8,038,000	24.18%	$151.46	21.72%	69,012	5.66%
1989	6,641,820	8.13%	8.58	-0.69%	56,986,816	7.38%	$8,748,000	8.83%	$153.51	1.35%	67,734	-1.85%
1990	6,971,180	4.96%	8.20	-4.43%	57,163,676	0.31%	$9,363,000	7.03%	$163.79	6.70%	71,266	5.21%
1991	6,873,890	-1.40%	8.37	2.07%	57,534,459	0.65%	$10,634,094	13.58%	$184.83	12.84%	72,575	1.84%
1992	6,513,880	-5.24%	8.26	-1.31%	53,804,649	-6.48%	$9,159,703	-13.86%	$170.24	-7.89%	73,089	0.71%
1993	6,124,230	-5.98%	8.25	-0.12%	50,524,898	-6.10%	$8,148,655	-11.04%	$161.28	-5.26%	69,502	-4.91%
1994	6,430,000	4.99%	8.10	-1.82%	52,083,000	3.08%	$10,602,536	30.11%	$203.57	26.22%	70,463	1.38%
1995	6,625,049	3.03%	7.90	-2.47%	52,337,887	0.49%	$10,676,929	0.70%	$204.00	0.21%	70,490	0.04%
1996	6,824,300	3.01%	8.27	4.68%	56,436,961	7.83%	$11,174,518	4.66%	$198.00	-2.94%	70,288	-0.29%
1997	6,876,140	0.76%	8.38	1.32%	57,615,010	2.09%	$11,580,617	3.63%	$201.00	1.52%	71,025	1.05%
1998	6,743,140	-1.93%	8.63	2.94%	58,160,530	0.95%	$10,439,815	-9.85%	$179.50	-10.70%	71,480	0.64%
1999	6,741,307	-0.03%	8.90	3.23%	60,020,237	3.20%	$10,263,461	-1.69%	$171.00	-4.74%	71,157	-0.45%
2000	6,948,000	3.07%	8.93	0.26%	62,024,040	3.34%	$10,916,231	6.36%	$176.00	2.92%	71,506	0.49%
2001	6,303,791	-9.27%	9.16	2.61%	57,760,251	-6.87%	$10,064,724	-7.80%	$174.25	-0.99%	72,204	0.98%
2002	6,389,058	1.35%	9.34	1.97%	59,403,302	2.84%	$10,395,578	3.29%	$175.00	0.43%	70,783	-1.97%
2003	6,345,209	-0.69%	9.75	4.39%	61,888,312	4.18%	$11,139,896	7.16%	$180.00	2.86%	70,977	0.27%
2004 (2)	6,950,000	9.53%	9.38	-3.79%	65,191,000	5.34%	$11,929,953	7.09%	$183.00	1.67%	71,200	0.31%

(1) The State DBEDT changed its method of estimating expenditures from a tax receipts/economic activity formula to a survey of departing visitors in 2001-02. Analysis has confirmed this results in a significant understatement of actual expenditures and fails to account for in-state (Kamaaina) travel. In example, the formula-based 2001 figure is shown in the table, as taken from original DBEDT publication, the revised survey-based figure was 10% lower. We have continued to use the formula-based method until the inadequacies of the survey-method are addressed by the State over the next several years.

(2) Year-end projections based on available data through June/July.

Source: State of Hawaii, The Hawaii Visitors & Convention Bureau, First Hawaiian Bank, and The Hallstrom Group, Inc.

TABLE 3

STATE OF HAWAII HOTEL INDUSTRY TRENDS
Market Study and Economic Impact Analysis of the Proposed Laie Inn Redevelopment
Laie, Oahu, Hawaii

YEAR	ROOM RENTAL RATE	Annual Pct. Change	AVERAGE OCCUPANCY RATE	Annual Pct. Change	FOOD REVENUE/ ROOM (1)	Annual Pct. Change	BEVERAGE REVENUE/ ROOM (1)	Annual Pct. Change	TOTAL FOOD AND BEVERAGE REVENUE/ ROOM (1)	TOTAL FOOD AND BEVERAGE RATIO TO ROOM RATES	TOTAL FOOD AND BEVERAGE Annual Pct. Change
1972	$19.80	---	70.24%	---	$11.80	---	$4.77	---	$16.57	83.69%	---
1973	$21.52	8.69%	78.14%	11.25%	$12.93	9.58%	$5.00	4.82%	$17.93	83.32%	-0.44%
1974	$24.12	12.08%	78.35%	0.27%	$13.98	8.12%	$5.42	8.40%	$19.40	80.43%	-3.46%
1975	$27.43	13.72%	75.25%	-3.70%	$15.01	16.09%	$5.80	16.00%	$20.81	75.87%	-5.68%
1976	$29.54	7.69%	76.68%	1.90%	$15.82	5.40%	$6.22	7.24%	$22.04	74.61%	-1.65%
1977	$34.16	15.64%	76.70%	0.03%	$18.47	16.75%	$6.91	11.09%	$25.38	74.30%	-0.42%
1978	$38.46	12.59%	78.53%	2.39%	$16.62	-10.02%	$6.15	-11.00%	$22.77	59.20%	-20.31%
1979	$44.41	15.47%	73.73%	-6.11%	$18.49	11.25%	$6.74	9.59%	$25.23	56.81%	-4.04%
1980	$47.37	6.67%	69.27%	-6.05%	$19.83	7.25%	$7.53	11.72%	$27.36	57.76%	1.67%
1981	$49.73	4.98%	68.23%	-1.50%	$20.86	5.19%	$7.81	3.72%	$28.67	57.65%	-0.18%
1982	$51.85	4.26%	70.96%	4.00%	$20.46	-1.92%	$7.56	-3.20%	$28.02	54.04%	-6.26%
1983	$54.78	5.65%	69.73%	-1.73%	$20.69	1.12%	$7.35	-2.78%	$28.04	51.19%	-5.28%
1984	$59.25	8.16%	76.03%	9.03%	$20.64	-0.24%	$7.42	0.95%	$28.06	47.36%	-7.48%
1985	$68.84	16.19%	76.13%	0.13%	$22.11	7.12%	$7.89	6.33%	$30.00	43.58%	-7.98%
1986	$73.20	6.33%	81.66%	7.26%	$20.45	-7.51%	$6.85	-13.18%	$27.30	37.30%	-14.42%
1987	$79.75	8.95%	81.09%	-0.70%	$20.19	-1.27%	$6.51	-4.96%	$26.70	33.48%	-10.23%
1988	$87.94	10.27%	78.48%	-3.22%	$21.73	7.63%	$6.60	1.38%	$28.33	32.22%	-3.78%
1989	$97.37	10.72%	80.63%	2.74%	$19.40	-10.72%	$6.88	4.24%	$26.28	26.99%	-16.22%
1990	$102.34	5.10%	79.03%	-1.98%	$21.72	11.96%	$6.40	-6.98%	$28.12	27.48%	1.81%
1991	$101.89	-0.44%	72.41%	-8.38%	$21.52	-0.92%	$6.12	-4.38%	$27.64	27.13%	-1.27%
1992	$104.53	2.59%	73.67%	1.74%	$21.80	1.30%	$5.42	-11.44%	$27.22	26.04%	-4.01%
1993	$103.26	-1.21%	71.99%	-2.28%	$21.65	-0.69%	$4.99	-7.93%	$26.64	25.80%	-0.93%
1994	$104.80	1.49%	76.62%	6.43%	$21.11	-2.49%	$5.12	2.61%	$26.23	25.03%	-2.99%
1995	$114.39	9.15%	74.21%	-3.15%	$21.14	0.14%	$4.97	-2.93%	$26.11	22.83%	-8.80%
1996	$109.58	-4.20%	69.29%	-6.63%	$22.08	4.45%	$5.48	10.26%	$27.56	25.15%	10.19%
1997	$113.77	3.82%	68.93%	-0.52%	$23.35	5.75%	$5.94	8.39%	$29.29	25.74%	2.36%
1998	$140.63	23.61%	73.93%	7.25%	$24.10	3.21%	$6.48	9.09%	$30.58	21.75%	-15.54%
1999	$142.39	1.25%	73.13%	-1.08%	$25.05	3.94%	$6.91	6.64%	$31.96	22.45%	3.22%
2000	$151.79	6.60%	77.91%	6.54%	$26.16	4.43%	$7.59	9.84%	$33.75	22.23%	-0.94%
2001	$151.91	0.08%	71.45%	-8.29%	$26.02	-0.54%	$7.34	-3.29%	$33.36	21.96%	-1.23%
2002	$145.71	-4.08%	72.23%	1.09%	$25.50	-2.00%	$7.32	-0.27%	$32.82	22.52%	2.57%
2003	$149.22	2.41%	73.94%	2.37%	$25.81	1.22%	$7.74	5.74%	$33.55	22.48%	-0.18%
2004 (2)	$159.96	7.20%	79.70%	7.79%	$29.84	15.61%	$8.98	16.02%	$38.82	24.27%	7.94%

(1) Per occupied room per night.
(2) Through April.

Source: PKF Hawaii and The Hallstrom Group, Inc.

TABLE 4

ISLAND OF OAHU/WAIKIKI TOURISM INDUSTRY TRENDS
Market Study and Economic Impact Analysis of the Proposed Laie Inn Redevelopment
Laie, Oahu, Hawaii

YEAR	TOTAL VISITORS	Annual Pct. Change	PERCENT OF STATE TOTAL	AVERAGE LENGTH OF STAY (days)	Annual Pct. Change	TOTAL VISITOR DAYS	Annual Pct. Change	VISITOR EXPENDITURES ESTIMATED TOTAL (000's)	Annual Pct. Change	DAILY PER CAPITA	Annual Pct. Change	TOTAL LODGING UNITS	Annual Pct. Change
1965	662,278	---	96.50%	8.00	---	5,298,221	---	$185,000	---	$34.92	---	9,850	---
1970	1,680,426	30.75%	93.90%	7.25	-1.88%	12,183,088	25.99%	$515,000	35.68%	$42.27	4.21%	21,217	23.08%
1975	2,622,580	11.21%	92.70%	7.03	-0.61%	18,436,740	10.27%	$975,000	17.86%	$52.88	5.02%	25,699	4.22%
1976	2,956,099	12.72%	91.80%	6.95	-1.14%	20,544,885	11.43%	$1,125,000	15.38%	$54.76	3.54%	27,099	5.45%
1977	3,069,698	3.84%	89.40%	6.72	-3.31%	20,628,373	0.41%	$1,175,000	4.44%	$56.96	4.02%	28,083	3.63%
1978	3,218,861	4.86%	87.70%	6.68	-0.60%	21,501,991	4.24%	$1,300,000	10.64%	$60.46	6.14%	29,294	4.31%
1979	3,417,938	6.18%	86.30%	6.57	-1.65%	22,455,854	4.44%	$1,475,000	13.46%	$65.68	8.64%	32,088	9.54%
1980	3,324,656	-2.73%	84.50%	6.48	-1.37%	21,543,770	-4.06%	$1,650,000	11.86%	$76.59	16.60%	34,173	6.50%
1981	3,289,345	-1.062%	83.60%	6.33	-2.31%	20,821,553	-3.35%	$1,800,000	9.09%	$86.45	12.87%	33,480	-2.03%
1982	3,606,479	9.64%	85.00%	6.31	-0.32%	22,756,880	9.29%	$2,050,000	13.89%	$90.08	4.20%	34,610	3.38%
1983	3,669,019	1.73%	84.00%	6.15	-2.54%	22,564,468	-0.85%	$1,975,000	-3.66%	$87.53	-2.84%	35,761	3.33%
1984	3,942,731	7.46%	81.20%	6.25	1.63%	24,642,069	9.21%	$2,300,000	16.46%	$93.34	6.64%	36,848	3.04%
1985	3,912,172	-0.78%	80.10%	6.12	-2.08%	23,942,493	-2.84%	$2,350,000	2.17%	$98.15	5.16%	38,600	4.75%
1986	4,479,977	14.51%	79.90%	6.07	-0.82%	27,193,461	13.58%	$2,950,000	25.53%	$108.48	10.52%	39,010	1.06%
1987	4,381,111	-2.21%	75.80%	5.96	-1.81%	26,111,422	-3.98%	$3,211,705	8.87%	$123.00	13.38%	38,185	-2.11%
1988	4,594,530	4.87%	74.80%	5.92	-0.67%	27,199,619	4.17%	$3,949,929	22.99%	$145.22	18.07%	37,841	-0.90%
1989	4,895,021	6.54%	73.70%	5.85	-1.18%	28,635,875	5.28%	$4,524,468	14.55%	$158.00	8.80%	36,467	-3.63%
1990	5,005,307	2.25%	71.80%	5.81	-0.68%	29,080,835	1.55%	$5,026,332	11.09%	$172.84	9.39%	36,899	1.18%
1991	4,653,624	-7.03%	67.70%	5.60	-3.61%	26,060,292	-10.39%	$5,106,254	1.59%	$195.94	13.36%	36,623	-0.75%
1992	4,527,147	-2.72%	69.50%	5.75	2.68%	26,031,093	-0.11%	$4,840,221	-5.21%	$185.94	-5.10%	36,851	0.62%
1993	4,213,470	-6.93%	68.80%	5.77	0.35%	24,311,723	-6.61%	$4,442,967	-8.21%	$182.75	-1.72%	36,604	-0.67%
1994	4,695,167	11.43%	73.02%	5.85	1.39%	27,466,727	12.98%	$5,090,134	14.57%	$185.32	1.41%	36,194	-1.12%
1995	4,915,840	4.70%	74.20%	5.90	0.85%	29,003,456	5.59%	$5,890,602	15.73%	$203.10	9.59%	36,174	-0.06%
1996	5,092,680	3.60%	74.63%	5.88	-0.34%	29,944,958	3.25%	$6,313,595	7.18%	$210.84	3.81%	36,146	-0.08%
1997	5,017,069	-1.48%	72.96%	5.95	1.11%	29,828,984	-0.39%	$6,323,745	0.16%	$212.00	0.55%	35,971	-0.48%
1998	4,741,130	-5.50%	70.31%	5.41	-9.01%	25,649,513	-14.01%	$4,770,809	-24.56%	$186.00	-12.26%	36,206	0.65%
1999	4,558,168	-3.86%	67.62%	5.67	4.81%	25,844,813	0.76%	$4,600,377	-3.57%	$178.00	-4.30%	35,861	-0.95%
2000	4,776,960	4.80%	68.48%	6.61	16.58%	31,575,706	22.17%	$5,904,657	28.35%	$187.00	5.06%	36,303	0.81%
2001	4,268,937	-10.63%	67.61%	6.88	4.15%	29,388,797	-6.93%	$5,375,000	-8.97%	$182.89	-2.20%	36,500	0.54%
2002	4,239,887	-0.68%	66.36%	6.96	1.10%	29,494,656	0.36%	$5,400,000	0.47%	$183.08	0.10%	36,457	-0.12%
2003	4,066,258	-4.10%	64.08%	7.27	4.45%	29,579,916	0.29%	$5,500,000	1.85%	$185.94	1.56%	36,600	0.39%
2004 (1)	4,500,000	10.67%	70.92%	7.22	-0.69%	32,000,000	8.18%	$5,975,000	8.64%	$186.72	0.42%	36,730	0.36%

(1) Year-end projections based on available data through June/July.

Source: DBEDT, The Hawaii Visitors & Convention Bureau, First Hawaiian Bank, and The Hallstrom Group, Inc.

Currently, there are some 35,664 visitor units on Oahu. In Waikiki, there are some 31,800 registered units. Last year there were an estimated 9.5 million room nights recorded on Oahu. This figure is expected to increase at a rate two-plus percent annually over the long-term. Thus, by 2020 (the length of our projection period), the total number of room nights on the island will be more than 13 million.

This escalating nightly visitor census will create demand for an additional 4,000 to 6,000 transient accommodation units on Oahu during the next decade, even after allowance for existing hotel operations to increase overall island average occupancies to the mid-80's percentile.

It is doubtful the in-place inventory of land is sufficient to support this level of construction. Waikiki is effectively built-out given the scarcity of available land and the existing cap on the number of units in the district. There are sites at Ko Olina; however, Marriott is pursuing timeshare development; and Ritz Carlton, who has announced a presence, may be doing the same along with a new hotel. And, other lodging opportunities on the island are limited to secondary parcels in Laie and Makaha, and another site or two at Turtle Bay (which has proven uncompetitive over the years).

There is significant continuing, quantifiable "macro" market demand in support of the continuing subject hotel operation.

In order for this level of expansion to occur on Oahu, several proactive undertakings will be necessary, including continuing redevelopment/upgrading of Waikiki with some relief on the room cap; aggressive development at Ko Olina by Marriott, as preliminarily announced by Ritz Carlton and others; and expansion of study area opportunities. Otherwise, it may prove difficult to achieve public and private expenditures.

Some of the growth will be captured by existing operations, increasing the effective occupancy towards the low to mid-80s percent level. Yet, significant new development of several thousand units will be required to meet the demand. Due to land use restrictions, hotel/resort construction on Oahu will be limited to:

The Waikiki Resort District -- The historic and future foundation of the statewide tourism industry is effectively built-out in regards to hotel rooms, with virtually all of the

TABLE 5

WAIKIKI RESORT DISTRICT HOTEL INDUSTRY TRENDS
Market Study and Economic Impact Analysis of the Proposed Laie Inn Redevelopment
Laie, Oahu, Hawaii
Off-Beach Facilities with Restaurants Only

YEAR	ROOM RENTAL RATE	Annual Pct. Change	AVERAGE OCCUPANCY RATE	Annual Pct. Change	FOOD REVENUE/ ROOM (1)	Annual Pct. Change	BEVERAGE REVENUE/ ROOM (1)	Annual Pct. Change	TOTAL FOOD AND BEVERAGE REVENUE/ ROOM (1)	RATIO TO ROOM RATES	Annual Pct. Change
1974	$18.63	---	78.19%	---	$8.42	---	$3.66	---	$12.08	64.84%	---
1975	$21.70	16.48%	73.12%	-6.48%	$8.58	1.90%	$3.96	8.20%	$12.54	57.79%	-10.88%
1976	$22.94	5.71%	82.24%	12.47%	$9.38	9.32%	$4.30	8.59%	$13.68	59.63%	3.19%
1977	$25.68	11.94%	80.07%	-2.64%	$10.49	11.83%	$3.91	-9.07%	$14.40	56.07%	-5.97%
1978	$29.96	16.67%	74.59%	-6.84%	$11.94	13.82%	$3.82	-2.30%	$15.76	52.60%	-6.19%
1979	$34.19	14.12%	63.58%	-14.76%	$13.18	10.39%	$4.13	8.12%	$17.31	50.63%	-3.75%
1980	$34.78	1.73%	73.19%	15.11%	$13.26	0.61%	$4.62	11.86%	$17.88	51.41%	1.54%
1981	$33.90	-2.53%	73.82%	0.86%	$15.24	14.93%	$4.77	3.25%	$20.01	59.03%	14.82%
1982	$35.69	5.28%	81.25%	10.07%	$15.73	3.22%	$4.70	-1.47%	$20.43	57.24%	-3.02%
1983	$36.32	1.77%	79.13%	-2.61%	$15.15	-3.69%	$4.45	-5.32%	$19.60	53.96%	-5.73%
1984	$39.56	8.92%	85.73%	8.34%	$16.50	8.91%	$4.48	0.67%	$20.98	53.03%	-1.73%
1985	$44.31	12.01%	83.72%	-2.34%	$17.38	5.33%	$4.60	2.68%	$21.98	49.61%	-6.46%
1986	$50.23	13.36%	85.94%	2.65%	$15.30	-11.97%	$3.33	-27.61%	$18.63	37.09%	-25.23%
1987	$53.36	6.23%	87.08%	1.33%	$16.27	6.34%	$3.39	1.80%	$19.66	36.84%	-0.66%
1988	$63.19	18.42%	86.10%	-1.13%	$12.24	-24.77%	$3.06	-9.73%	$15.30	24.21%	-34.28%
1989	$69.29	9.65%	88.90%	3.25%	$13.22	8.01%	$2.27	-25.82%	$15.49	22.36%	-7.67%
1990	$76.43	10.30%	88.59%	-0.35%	$11.31	-14.45%	$2.48	9.25%	$13.79	18.04%	-19.29%
1991	$77.46	1.35%	82.17%	-7.25%	$11.59	2.48%	$2.30	-7.26%	$13.89	17.93%	-0.61%
1992	$79.38	2.48%	80.77%	-1.70%	$12.41	7.08%	$2.26	-1.74%	$14.67	18.48%	3.06%
1993	$75.46	-4.94%	75.52%	-6.50%	$12.36	-0.40%	$2.25	-0.44%	$14.61	19.36%	4.76%
1994	$72.16	-4.37%	82.32%	9.00%	$11.49	-7.04%	$1.97	-12.44%	$13.46	18.65%	-3.66%
1995	$77.32	7.15%	85.52%	3.89%	$12.29	6.96%	$2.05	4.06%	$14.34	18.55%	-0.57%
1996	$84.36	9.11%	83.09%	-2.84%	$13.37	8.79%	$2.11	2.93%	$15.48	18.35%	-1.06%
1997	$90.24	6.97%	81.78%	-1.58%	$13.93	4.19%	$2.34	10.90%	$16.27	18.03%	-1.75%
1998	$89.98	-0.29%	76.19%	-6.84%	$14.77	6.03%	$2.49	6.41%	$17.26	19.18%	6.39%
1999	$87.57	-2.68%	73.88%	-3.03%	$14.51	-1.76%	$2.73	9.64%	$17.24	19.69%	2.63%
2000	$89.42	2.11%	76.71%	3.83%	$13.97	-3.72%	$2.70	-1.10%	$16.67	18.64%	-5.31%
2001	$90.41	1.11%	72.59%	-5.37%	$13.94	-0.21%	$2.65	-1.85%	$16.59	18.35%	-1.57%
2002	$78.14	-13.57%	72.02%	-0.79%	$11.15	-20.01%	$2.53	-4.53%	$13.68	17.51%	-4.59%
2003	$79.81	2.14%	71.32%	-0.97%	$12.54	12.47%	$3.25	28.46%	$15.79	19.78%	13.01%
2004 (2)	$82.37	3.21%	76.19%	6.83%	$10.86	-13.40%	$3.53	8.62%	$14.39	17.47%	-11.70%

(1) Per occupied room per night through 1985, per registered hotel guest thereafter.
(2) Through April.

Source: PKF Hawaii, The Hawaii Visitors & Convention Bureau, and The Hallstrom Group, Inc.

resort-classified parcels developed to greater densities than would be permitted for new construction. Last decade, Honolulu adopted a limit of 32,800 total hotel rooms for the district, and with the recent opening of the Kalia Tower at Hilton Hawaiian Village there are about 31,766 registered in-place rooms. There are an additional estimated 1,000 to 2,000 uncertified units in condominium projects.

While there are significant redevelopment (Outrigger's Lewers Street plan) and hotel refurbishment projects being pursued which will re-establish the urban resort area for the long-term, they will not increase the number of available rooms. Further, many of the new units will be either timeshare product (not contributing to the transient room count) or suite units (decreasing the overall room count in favor of larger units). The ability of condominium units to meet escalating demand is limited by increasingly strict application of tax and zoning laws regarding short-term rentals.

The on-going recovery and return to stabilization of the Oahu visitor industry will benefit Waikiki hotels by increasing occupancies, retail sales and operating margins, particularly as the higher spending Asian sector recuperates. However, the district will not be able to accommodate a meaningful portion of the anticipated long-term growth over the next two decades, nor provide for the diversity of experience many travelers (particularly the domestic return segment) desire when visiting the island.

Destination Resorts -- Oahu has two generally competitive master planned destination resort communities: Ko Olina, on the leeward coast of the Ewa plain, and Turtle Bay, at Kuilima Point on the northerly/windward corner of the island. The intent of the developments were to provide a neighbor island-quality resort ambience with the benefits of easy access for greater numbers of tourists and a supporting urban Oahu infrastructure.

The concept has met with mixed success to date, and has not been aided by the increasing number of direct flights to the neighbor islands.

Turtle Bay has been limited by weather issues, poor marketing and management, change in ownership and land use direction, and the failure to provide sufficient support facilities. New ownership has renovated the hotel, and Palmer and Fazio golf courses, and is looking to expand its guest base beyond local residents and tour groups, but the project remains isolated from any off-resort retail or activities, and the typically windy and often wet climate dissuades patrons seeking a standard Hawaii vacation.

The resort, with a single 487-room hotel and 368 condominium units (approximately 110 are in the transient rental pool), has preliminary approvals for up to 1,450 additional hotel and 2,063 resort condominium units. It is highly doubtful if anywhere near that number are actualized, particularly given historically slow market demand and community environmental concerns, but the Kawela Bay hotel site (500 potential rooms) is among the most picturesque in the state and is prime for development during the next upcycle when resort hotel economics improve.

It is noted that Turtle Bay accommodations are first choice for many Laie visitors, who opt away from an aging, unaffiliated Laie Inn facility.

After more than a decade of land use review, the Ko Olina community began development in the mid-1980s with comprehensive infrastructure/amenity and several resort projects including the 387-room Ihilani Hotel and two condominium projects. Interest was high during the "bubble" period, but development activity subsequently slowed until new ownership emerged late last decade.

The project has beautiful protected beaches, an excellent amenity package (including championship golf, a marina, walking paths), a dry sunny climate, and direct freeway access. Beyond the economic issues, the resort had experienced problems due to the perceived sense of isolation with a lack of sufficient hotel and retail cumulative mass, an unfocused resort/residential development plan, and limited energy and capital spent to establish the community properly.

The new ownerships have begun implementation of extensive development plans, including a 750-unit timeshare village by Marriott, additional resort/residential product, and a repositioning in the market. The emergence of nearby Kapolei as a retail, restaurant and entertainment destination is also a benefit. The community has basic approvals for up to 3,000 hotel/timeshare units, and 4,000 resort/residential units (multifamily and single family).

Although it may take several more years for Ko Olina to recover momentum, its long-term prospects are positive, a combination of providing an easily accessed competitive destination experience and the need for additional hotel room inventory on Oahu.

Atypical/Secondary Locations -- Outside of Waikiki and the destination resorts, the number of hotel development opportunities on Oahu are limited by zoning, desirability and other market constraints. The luxury Kahala Mandarin has enjoyed long-term success on the beachfront of an exclusive residential golf course community. Conversely the off-water Makaha Valley developments have not. Other market lodging operations are limited to the airport, near Pearl Harbor (military-oriented), and downtown Honolulu.

Zoned, available development sites are exceptionally rare. Beyond the subject holding, there is only a property at Makaha Valley, which is a generally failed, non-competitive resort project. Past discussions were forwarded for cabins at Waimea Valley, but no entitlements were reached beyond preliminary DLNR approvals. Even if these two facilities were constructed, they would comprise fewer than 600 total potential guest units, and they are unlikely to be built, given the poor success of Makaha Valley to date and the significant environmental, community and land use hurdles the Waimea Valley cabins must overcome.

While some developers are reviewing opportunities for suburban limited service hotel construction using commercial designated parcels, this alternative will be unlikely to yield meaningful numbers of rooms on Oahu. Entitlements are a highly valuable commodity in Hawaii, particularly for near-water and resort-oriented uses which can take years of

contentious approvals. The established hotel use, underlying resort zoning and community support are superior characteristics of the Laie Inn holding.

On a gross basis, the demand/supply balance is favorable towards additional hotel development on Oahu over the mid to long-term. A moderately expanding visitor industry will create the need for upwards of 4,000 to 6,000 new hotel rooms on the island over the next two decades if tourism is to achieve optimum growth.

With Waikiki limited to about 1,000 more lodging units, significant development elsewhere on the island will be required. Even with the anticipated success of the Ko Olina Resort providing several thousand competitive units during the 2003-2020 projection period, there will be a shortage of development opportunities. The available sites at Turtle Bay and Makaha Valley have not proven competitive and are unlikely to be built to allowable densities regardless. Our macro economic analysis demonstrates there is evident excess demand in the Oahu market to support the proposed subject units.

As summarized on Table 6, there are an estimated 909 hotel/resort guest units in the North Shore/Koolauloa study area, comprised of 487 hotel rooms and 50 rental condominium units at Turtle Bay, 130 condominium rental units at Pat's at Punaluu, 49 at the Laie Inn, 192 rooms at the Inn at Schofield Barracks, and numerous private homes available for transient use. Additionally, there are an increasing number of small Bed & Breakfast operations along the North Shore.

Cumulatively, these units constitute less than 2.5 percent of the total Oahu inventory and represent diverse product types. They presently capture about 1.5 percent of the total room nights on the island. While the Turtle Bay hotel has demonstrated a quality facility can capture some of the market, there has otherwise been a failure to establish the study region as a vacation destination beyond a day trip route. This is primarily due to a lack of both regional and project-specific promotional efforts, which are limited by scarce advertising dollars and easily overwhelmed by Waikiki.

Koolauloa/North Shore has superior natural and scenic beauty, quaint seaside villages, expansive beaches, attraction and retail opportunities, and a rural ambience that should prove conducive to a larger scale of lodging development. The regional share of the island visitor population must only increase by minimal amounts in order to support

several hundred more rooms. There are a lack of other desirable locations on Oahu and there are other potential demand groups created by the increasing suburbanization of the North Shore and Koolauloa districts.

Over the past 15 years there have been several exploratory attempts regarding low-intensity lodging development at other locations on the North Shore, either as a motel or "rustic lodge", but lack of zoning approvals, community issues and investor instability have quashed the concepts.

The positive long-term market conditions on Oahu, increasing demand with limited supply and scarce development sites, coupled with the unmet opportunities available on the North Shore, provide general support for a modern, quality, well-marketed and operated hotel in the study area.

Market Opportunities

The "bubble"-fueled construction and renovation projects of the late 1980's resulted in a statewide hotel industry that was effectively over-capitalized and in some locations over-built relative to economic potentials. The market shake-out during the subsequent recession, followed by the negative effects of the terror attacks, has forced operators and developers to find new efficiencies and atypical opportunities. This section addresses the emerging trends of the past several years which are most pertinent to our study of the proposed subject redevelopment and its probable market acceptance.

Virtually all hotel development in Hawaii to date has been heavily-weighted towards the resort experience, typically within intense vacation/destination communities. While these projects serve the acknowledged foundations of industry demand, this historic development focus has failed to exploit opportunities associated with out-lying, suburban, non-vacation and/or specific-need locations; which are common criteria in selecting mainland lodging sites.

Successful non-resort projects have facility/amenity, marketing and operational requirements differing from the standard Hawaii hotel:

- The scope of development is kept to a minimum: simple low-rise structures, no food and beverage component, limited amenities (pool and grounds only), limited common space

TABLE 6

SUMMARY OF EXISTING KOOLAULOA/NORTH SHORE LODGING INVENTORY
Market Study and Economic Analysis of the Proposed Laie Inn Redevelopment
Laie, Oahu, Hawaii

Name	Type (1)	No. of Units/Rooms	Opened	Percentage of Units (2) Budget	Standard	Deluxe	Luxury	Tenure
Turtle Bay Condominiums	Apt/Hotel	50	1973	10	90			L
Inn at Schofield Barracks	Hotel	192	1994	50	50			L
Laie Inn (Subject Property)	Hotel	49	1964	90	10			F
Turtle Bay Resort	Hotel	443	1972		85	10	50	F
Pat's at Punaluu	Condo/Hotel	130	1968	80	20			
Aloha Polo Beach, North Shore	IVU	1	1997		100			F
Beach Home Hawaii	IVU	1	N/A			100		N/A
North Shore Beachfront Cottages	IVU	4	1963	100				F
Kawela Bay Home	IVU	1	1978		100			F
Hale Lani	IVU	9	1984			100		F
Ke Iki Beach Bungalows	IVU	1	1957	40	60			F
Koloeaea at Malaekahana	IVU	1	1992		100			F
Malaekahana Bay Beachfront Home	IVU	1	N/A					N/A
Laniea Beach Home	IVU	1	1979			100		F
North Shore Vacation Homes	IVU	4	1985/86		100			F
Owens Retreat	IVU	4	1963		100			F
Backpackers Vacation Inn	Other	14	1979	94	6			F
Hale Kimo at Sunset Beach	Other	2	1983			100		F
The Sunset Beach House	Other	1	N/A			100		F
Regional Total Units		**909**						
Oahu Total Units		**35,664**						
Region as Percent of Island Total		2.5%						

(1) IVU = Individual Vacation Unit. OTHER = Units not included in other categories.
(2) Rooms classified in Price/Quality as:
Budget = Up to $100 per night
Standard = $101 to $250 per night
Deluxe = $251 to $500 per night
Luxury = Over $500 per night

Source: State of Hawaii Department of Business, Economic Development & Tourism and The Hallstrom Group, Inc.

improvements, and an orientation towards durability over luxury. The buildings are designed to be efficient and less expensive, which in association with the lower land costs of secondary properties, results in a lower capital requirement and inherent risk. This modern limited service hotel-type design represents a new field in the expanding urban economy of Hawaii.

- There must be a strong opportunity for a locally-directed component, whether from the lodging needs associated with a growing suburban community, in support of a nearby attraction, or meeting highway traveler/businessmen demands. While the general overseas domestic market must always be the primary guest demographic, success in a secondary location is not found through direct competition with resort-type operations, but in maximizing opportunities presented by travelers drawn to, or with a lodging need, in a particular community. Laie is awash in such attractions, with PCC, BYUH and the Laie Temple.

- Association with a recognized name/flag operator or chain/system is needed to establish an immediate presence and to provide reassurance to guests at a secondary location. The small ("mom and pop") independent motel operation has rapidly faded on the mainland and cannot expect to achieve success within the general market in Hawaii, even with a new facility. There are too many advertising dollars and too much competition in the statewide marketplace for a small, atypically located, unamenitied project to be successful without an effective affiliation to provide a marketing base, facility branding, and operational expertise. The move towards greater association with a diversity of national/international flags, which is being seen at all levels of the industry in Hawaii, represents a major trend over the past half-decade; away from the independent or local-affiliation that has historically defined much of the market. Owners view association with a name-brand system as creating additional marketing opportunities, while operators consider it a chance to expand the reach and depth of the system.

The proposed management by Marriott will ensure the subject meets this market requirement.

The best non-resort or secondary sites also have proximity to the oceanfront, always a desirable feature in Hawaii; direct highway frontage for ease of locating, exposure to potential guests and capturing the occasional highway traveler; supporting retail/restaurant uses adjacent to or in the near-vicinity to provide needed guest services; and, have in-place zoning, such as resort or some commercial designations (neighbor islands), that permit lodging development, thus avoiding reclassification time and costs. Under optimum conditions, a subject non-resort hotel site should have the attributes of the best commercial location in the community.

By avoiding complex structural improvements, common areas and upgraded finishes, the effective size of a facility can be decreased by thousands of square feet and direct costs by more than one-third per square foot. Additional development expenses are saved by limiting or omitting commercial spaces, food & beverage outlets, and recreational amenities. The timing and costs of planning, approvals, architectural and engineering, and site holding are also reduced via a simple design and application. Land costs are reflective of general commercial values in the community and do not necessarily command the premiums associated with typical resort locations.

Operational efficiencies are often created by avoiding the low-profit (often money losing) food and beverage components and a complete line of hotel services. These "minimal" facilities can achieve overall profit margins approaching 50 percent of gross revenues, double that of a successful Hawaii full-service resort property, with some proposed projects projecting up to 60 percent margins.

The combination of development cost savings and operating enhancements allows this sub-sector to have moderately feasible project economics (unlike currently for destination hotels), resulting in a rush embracing the concept. Also, most critically, the limited scope approach allows a project to be successful with a smaller room base. A destination resort hotel requires a minimum of 300 rooms over which to amortize costs and achieve profitability, and even the most stripped-down hotel in Waikiki needs 100-plus rooms, due to site cost amortization. The new limited service hotel models show profitability for as few as 60 rooms.

Several projects embodying some or all of these characteristics are currently being pursued, mostly by mainland-based developers/investors, at Keaau and Kona on the Big Island, West

Maui, Hawaii Kai and preliminarily on Kauai. All are highway-fronting, non-resort locations, with proposals calling for low-rise simple, unamenitied construction with operation by well-recognized mainland affiliations using the upper-end branding of the system. The "Residence Inn" nameplate is one of Marriott's upper-end suburban hotel/motel brands.

Although the investments are modest, in many respects this is the most vibrant sector of the Hawaii hotel development industry, outpacing the costly, intensive and stagnant destination resort sector. Interestingly, these trends in some ways demonstrate a retro-movement back to pre-master planned resort days. In the 1950s and 60s there were numerous primarily interior, limited amenity, moderate quality, efficiency-oriented operations which achieved success before being up-staged and out-marketed by the luxury resort development of the 1970s and 80s (including the Maui Lu, Coco Palms, and Seaside properties).

Conclusions

Indications provided through market analysis demonstrate a fundamental support for hotel development of the subject site:

- Macroeconomic indicators are favorable, with increasing demand, limited inventory and scarce quality development opportunities. Oahu tourism is deep, well-established, nearing full recovery, and open to appropriately built and promoted diverse or atypical projects.

- The North Shore/Koolauloa region has the natural and thematic characteristics necessary to be an appealing vacation destination, and an operation has only to capture a small portion of the tourism traffic to be successful. Laie, in addition to being a growing and modernizing community, has established several significant attractions which draw specific groups of patrons (BYUH, Laie Temple and PCC).

- A low-intensity suburban limited service hotel concept is keeping with an emerging market trend in the statewide lodging sector. With a current lack of economic support for high cost resort hotel development and a saturation in many locales, the lower cost, higher efficiency, non-resort/secondary location and limited amenity facility is finding support, particularly when

coupled with the marketing and operational expertise of mainland chains/systems.

- The subject site has an established use for transient lodging and has excellent locational characteristics. It is adjacent to Hawaii's premier private attraction, in a major regional community, with strong secondary demographic contributors (BYUH, Laie Temple). Were the subject site on the Mainland, there would be no questions as to its high desirability for a moderate-sized suburban hotel/motel facility.

MARKET STUDY OF THE PROPOSED RETAIL COMPONENT

Quantification of Demand

The foundational demand for the retail/restaurant component of the proposed Laie Inn redevelopment is a function of its desirability as a high volume commercial location. The holding has favorable basic traits in regards to:

- *General location*, in Laie town, the largest community and most heavily populated trade area in the district;

- Quality *frontage*, with extensive exposure on the mauka side of Kamehameha Highway at the entrance to the PCC;

- Ready *access* via an improved intersection leading from the Highway to the site; and

- Solid *potential consumer demographics*, including residents and visitors of the town/region, PCC guests, passer-by, tourists, and highway traffic

The proposed subject thematic complex within the Laie Inn redevelopment site, will exploit the significant retail and restaurant opportunities associated with the implementation of the suburban resort master plan on the lands adjacent to and makai of the Polynesian Cultural Center (PCC). In addition to the high volume of passer-by (tourist and residents) traffic fronting the site, the commercial facility

will also benefit from the 800,000-plus annual visitors to PCC and the development of 228 lodging units within the Laie Inn complex.

In order to assess the demand for the subject holding, there are two distinct segments which must be analyzed:

- The Koolauloa/Laie Population Market -- This segment focuses on the needs created by the de facto population (residents and visitors staying in the area) for retail/restaurant space in the northerly windward community, stretching from Kaaawa to Sunset Beach.

- The North Shore Tourist Retail Market -- This segment considers the impact on commercial space demands created by visitors to the North Shore (Haleiwa to Kualoa).

We have estimated the demand for additional development in the study area which will be created by residents using per capita spatial demand trends. For tourist-oriented demand we have analyzed visitor data (arrivals, spending, and other factors) and surveyed North Shore retail/restaurant operations. Traffic counts were used to estimate other passer-by potentials.

The existing inventory of competitive space in the study area, stretching from Haleiwa to Kaaawa, was identified through tax assessor and state record materials and via inspection of the region. Future development potentials were estimated based on public and private land use plans for Koolauloa and the North Shore, announced projects, and other sources.

By correlating the amount latent and projected demand (if any) with the level of existing and proposed competitive inventory, the gross demand for the proposed subject facilities can be forecast. Further, the analysis provides insight into prevailing market trends, the type and tenor of the constituent businesses, and potential unmet opportunities in the effective sectors.

Given the favorable fundamental attributes of the subject site for commercial uses (as well established by historical operations), if there is demonstrable demand for additional floor space in the trade area, the support for the subject project is evident.

Regional De facto Population Demand

We believe the most appropriate method for determining the level of retail, restaurant and service commercial spatial needs for the persons residing (full-time and visitors) in the effective market region during the study period is through the use of per capita spatial demand trends.

Fundamentally, demand for all commercial development is a direct function of consumer demand for the finished products or service sold or served. As population levels (residents and tourists staying in the area) increase in a given market, the need for additional services is proportionately created.

By ascertaining an appropriate *"per square foot of retail development per person"* allowance, and applying this ratio against forecast population levels, the regional demand for additional space over time can be quantified.

In quantifying de facto resident demand for retail, restaurant and service commercial space, it is necessary to define the competition trade area. For this analysis, the effective market runs from Kaaawa to Sunset Beach, coterminus with the district boundaries. Residents at the edge of this coastal corridor would likely travel to nearby commercial centers in Kaneohe and Haleiwa, respective, rather than into the heart of the district.

Owing to its isolated status, a relatively precise measurement of consumer requirements in Koolauloa can be made. This is a reasonably accurate and desirable method unavailable to "linked" mainland urban centers wherein market demand overlaps between sectors and identification of an exact "impact radius" is virtually impossible.

There are three steps in completing this forecasting model:

1. Project consumer population levels

2. Estimate per capita spatial demand ratios

3. Test model scenarios

The results from the various model scenarios identify the probable market demand ranges for Koolauloa/Laie retail, restaurant and service commercial development meeting the needs of the regional population.

Consumer Population Levels -- "Resident" demand within the study area for retail space is a function of two ultimate constituent consumer groups, local residents and tourists who are staying in the district.

Table 1 displayed our projections for these demographic categories during our 16-year projection time frame from 2004 to 2020.

Resident population estimates are based on mid-point City and County of Honolulu Planning Department estimates for Koolauloa.

The *tourism population* levels, which are relatively minor in the study area, were estimated based on the number of available hotel rooms and transient rental units (at Turtle Bay Resort, the Laie Inn, Pat's at Punaluu, and in vacation homes throughout the district), and their relative occupancy. As noted foregoing, presently there are 909 lodging units in the greater study area. However, 192 of the units are at the Inn at Schofield Barracks, and are not truly in the North Shore region. Assuming the 710-plus area units are occupied 60 to 70 percent of the time with average party sizes of 2.0 to 2.5 persons, the total daily tourist population in Koolauloa is some 850 to 1,250 persons. The tourism totals are the average daily visitor census during the projection year. Our forecasts also include the additional "resident" tourism population which will result from the redevelopment of the Laie Inn into a 228-unit lodging facility.

Together, the resident and tourist totals combine to form the effective "de facto resident population" of potential consumers for retail, restaurant and service commercial uses in the study area.

Per Capita Spatial Demand Trends -- The best indicators of appropriate retail demand requirements for a modern economy can best be drawn from the experience of Oahu as a whole. These data provide useful insights into the probable growth trends for outlying areas like Koolauloa over the coming decades.

Table 7 displays the retail, restaurant and service commercial space per capita demand trends for the City and County of Honolulu for the period 1977 through 2003. For comparative purposes, demand is expressed on a de facto (resident and tourist) population basis. The

TABLE 7

SUMMARY OF RETAIL, SHOPPING CENTER AND SERVICE SPACE ON OAHU 1977 TO 2003
Market Study and Economic Impact Analysis of the Proposed Laie Inn Redevelopment
Laie, Oahu, Hawaii

Year	Gross Leaseable Floor Space in Sq. Ft.: Retail, Restaurant and Center (1)	Service (2)	Total	Resident Population of Island	Ratio of Gross Retail/Service Space Per Person (Sq. Ft.)
1977	7,422,000	2,911,000	10,333,000	737,000	14.02
1978	7,492,000	2,944,000	10,436,000	742,600	14.05
1979	7,806,000	3,002,000	10,808,000	756,000	14.30
1980	7,953,000	3,021,000	10,974,000	764,600	14.35
1981	8,537,000	3,052,000	11,589,000	767,573	15.10
1982	---	---	---	776,075	---
1983	---	---	---	789,097	---
1984	---	---	---	797,791	---
1985	9,014,000	3,242,000	12,256,000	804,294	15.24
1986	9,180,000	3,308,000	12,488,000	810,444	15.41
1987	9,280,000	3,384,000	12,664,000	818,447	15.47
1988	9,460,000	3,488,000	12,948,000	824,072	15.71
1989	9,612,000	3,621,000	13,233,000	831,337	15.92
1990	9,850,500	3,720,000	13,570,500	838,107	16.19
1991	10,000,000	3,800,000	13,800,000	846,568	16.30
1992	10,206,000	3,830,000	14,036,000	858,543	16.35
1993	11,636,000	3,950,000	15,586,000	864,366	18.03
1994	11,975,000	4,080,000	16,055,000	871,362	18.43
1995	12,198,600	4,120,000	16,318,600	873,027	18.69
1996	12,267,600	4,167,500	16,435,100	873,131	18.82
1997	12,470,000	4,200,000	16,670,000	874,449	19.06
1998	12,769,000	4,243,000	17,012,000	872,478	19.50
1999	13,140,000	4,295,000	17,435,000	874,321	19.94
2000	13,280,000	4,325,000	17,605,000	876,156	20.09
2001	13,372,000	4,348,000	17,720,000	881,295	20.11
2002	13,445,000	4,375,000	17,820,000	885,700	20.12
2003	**13,600,000**	**4,500,000**	**18,100,000**	**902,704**	**20.05**
Compounded Annual Growth Rate for 1977 through 2003			**2.27%**	**0.81%**	**1.44%**
Average Annual Addition for 1977 through 2003			**298,731**	**6,373**	**0.23**

Note: Complete data not available for all study years.
(1) Includes all significant neighborhood, strip, specialty, community, regional and super-regional malls and centers. Excludes hotels.
(2) Includes all significant business and health services. Excludes hotels.

Source: DBEDT, CB Commercial, Hawaii Real Estate, and The Hallstrom Group, Inc.

total estimated developed retail space of 18,100,000 square feet, equates to a de facto per person ratio of 20.05 square feet as of the present time.

This figure is somewhat understated, as portions of Waikiki in-hotel commercial space inventory are excluded from the survey. If these spaces were incorporated into the projection, the effective per capita space ratio would increase by one to two feet.

The Oahu total compares with nationwide estimates by the **Urban Land Institute** and others which indicate a range of 20 to 30 square feet per person is appropriate for an "urban" (non-agrarian) economy. In the islands, unlike the mainland, many quasi-service and full commercial users locate in industrial projects instead of retail development, pushing the effective per capita "retail" figure lower.

Applying the general Oahu figures to Koolauloa requires some analysis. In many respects, being the center of the state economy and home to the majority of residents, urban Oahu (encompassing all portions of the island except Waianae, the North Shore and Koolauloa) would be expected to have an atypically high amount of retail development in order to support statewide consumers. Conversely, a similar-sized plant as found in a larger metropolitan area may be required even though the population is far less; pushing upwards the per capita space ratios.

Suburban Maui communities, which are a market several steps advanced beyond the study area in its transformation from agriculture to urban uses, currently have 30 to 33 square feet of identified retail, restaurant and service commercial floor space per person in the de facto population. West Hawaii has 28 square feet; Kauai has 23 square feet; and Hilo, 21 square feet. These areas are compared on Table 8.

Demand for an individual use or business may be spread over a large area, and a single specialty business or two may service the entire island. It is unlikely such concerns would relocate to Koolauloa.

However, many businesses in the retail sector are neighborhood or small market oriented. These include groceries, drug stores, independent and franchise food services, banks, gas stations, specialty stores, family-owed operations, and service providers. Additionally, there are specific uses which would be attracted to the Koolauloa region, such as farm, ranch, agricultural and aquaculture supply and

TABLE 8

ESTIMATED FINISHED LIGHT INDUSTRIAL AND RETAIL/SERVICE COMMERCIAL FLOOR SPACE IN SELECTED NEIGHBOR ISLAND LOCATIONS
Market Study and Economic Impact Analysis of the Proposed Laie Inn Redevelopment
Laie, Oahu, Hawaii
As of Year-End 2003

Region	Big Island		Maui		Kauai
	Kona	Hilo	Lahaina	Kihei	
Estimated Resident Population	60,100	48,800	18,750	26,500	61,000
Light Industrial Development					
Gross Leaseable Sq. Ft. of Industrial Space (1)	2,400,000	2,007,000	328,500	585,000	1,600,000
Sq. Ft. Per Capita Ratio	**39.93**	**41.13**	**17.52**	**22.08**	**26.23**
Market Status	Stable	Oversupplied	Strongly Undersupplied	Undersupplied	Stable to Undersupplied
Retail/Service Commercial Development					
Gross Leaseable Sq. Ft. of Commercial Space (1)	1,702,500	1,004,500	625,000	775,000	1,400,000
Sq. Ft. Per Capita Ratio	**28.33**	**20.58**	**33.33**	**29.25**	**22.95**
Market Status	Mildly Oversupplied	Stable	Stable	Mildly Oversupplied	Stable
Combined Development					
Gross Leaseable Sq. Ft. of Industrial/Commercial Space (1)	4,102,500	3,011,500	953,500	1,360,000	3,000,000
Sq. Ft. Per Capita Ratio	**68.26**	**61.71**	**50.85**	**51.32**	**49.18**

Source: CB Hawaii, Hawaii Business and The Hallstrom Group, Inc.

retail product sales, crafts and artisan supply and outlets, and businesses serving needs of college students. Service and health care providers, LDS-based outreach concerns, and neighborhood office space present secondary demand opportunities.

Typically, neighborhood and community uses capture between 60 and 67 percent of total consumer retail/restaurant space demand. Yet, due to the history, economic and logistics of Koolauloa, the study region currently captures only about half the total space demand.

We have concluded an appropriate level of per capita finished space allowance for Koolauloa/Laie would be circa 20.5 per square feet per person in the de facto population (tourist and resident), at present, with a capture rate of 50 percent; increasing to 22.6 to 28.3 square feet per person and a capture rate of 54 to 62 percent by 2020. This is still below the per capita demand level for total and neighborhood uses island wide.

Based on the market data, we anticipate spatial demand to increase from the current level to the stabilized supply level at rates ranging from 2.26 percent ("conservative" growth) to 5.72 percent ("optimistic" growth) compounded annually during the study period.

Application of the Model -- By multiplying the de facto population forecasts by the per capita spatial trends, we can estimate the probable demand for finished retail, restaurant and service space by this primary market segment in Koolauloa. This figure can be translated into underlying acreage requirements through use of an appropriate Floor Area Ratio (FAR).

Application of these figures to the projected de facto population levels is shown on Table 9. The figures are correlated following quantification of tourist-oriented demand.

Based on our study, we estimate the total increase in demand for finished retail space in Koolauloa arising solely from de facto resident demand, between the report date and the year 2020, will be some 141,910 square feet (mid-point). This equates to a demand for retail-zoned lands of approximately 13.7 gross acres during the two-plus decade study period.

Regional Tourist-Oriented Demand

In addition to the demand created by the de facto resident population of the Koolauloa District, the subject projects will also have the

TABLE 9

ESTIMATED TOTAL RETAIL AND SERVICE SPACE DEMAND
FOR THE PRIMARY STUDY AREA 2002 TO 2020
Market Study and Economic Impact Analysis of the Proposed Laie Inn Redevelopment
Laie, Oahu, Hawaii

Scenario One: Conservative

	Gross Leasable Square Feet		
Year	**Primary Resident Demand**	**Regional Tourist Demand**	**Total Demand**
2004	158,896	25,981	184,877
2005	168,348	31,432	199,780
2010	185,625	42,350	227,975
2015	202,163	53,276	255,439
2020	227,194	64,597	291,791

Scenario Two: Moderate/Mid-Point

	Gross Leasable Square Feet		
Year	**Primary Resident Demand**	**Regional Tourist Demand**	**Total Demand**
2004	160,901	25,981	186,882
2005	180,605	32,276	212,880
2010	215,422	44,894	260,315
2015	252,477	57,950	310,427
2020	302,817	72,173	374,990

Scenario Three: Optimistic

	Gross Leasable Square Feet		
Year	**Primary Resident Demand**	**Regional Tourist Demand**	**Total Demand**
2004	162,906	25,981	188,887
2005	193,434	33,119	226,553
2010	248,591	47,437	296,028
2015	311,737	62,623	374,360
2020	396,693	79,748	476,441

Total Existing Study Area Demand			186,882
Estimated Existing Retail and Service Space (Sq. Ft.):			177,000
Current Undersupply or (Oversupply)			**9,882**
Periodic Additions Required (Sq. Ft.):			
Latent/Existing Demand	9,882	9,882	9,882
2004 to 2005	14,902	25,998	37,666
2006 to 2010	28,195	47,435	69,474
2011 to 2015	27,464	50,111	78,333
2016 to 2020	36,352	64,563	102,081
Cumulative Additional Space Required	**116,796**	**197,990**	**297,436**
Increase as a Percent of Existing Floor Space	**65.99%**	**111.86%**	**168.04%**
Estimated Mid-Point Additional Space Required (1) :			**204,074**

(1) Includes existing latent demand in total.

Source: The Hallstrom Group, Inc.

potential to attract significant numbers of consumers from tourists visiting the North Shore and windward areas of Oahu.

The Waikiki/Oahu tourism market, now in a strong recovery mode, though set back by the Asian economic crises of the late 1990s and the September 11 terrorist attacks, remains the central segment of the statewide industry and among the strongest destinations in the country. Visitor arrivals have averaged about 4.6 million annually over the past 10 years, and are expected to approach full post-9/11 recovery and 4.5 million visitors by 2004. Long-term forecasts call for continuing modest growth at two to three percent compounded annually.

The demand for retail/restaurant floor space created by the spending of Circle Island tourists and application to the Laie area are calculated on Table 10.

Total spending by tourists on Oahu has averaged $5.6 billion per year during the last decade, and is projected to be at $5.9 in 2004. Daily expenditures per capita are presently at $187, and are estimated to increase three to five percent annually compounded over the mid to long-term.

A significant number of Oahu tourists, both first time and repeat visitors, travel to the North Shore for at least one day of their stay. Extrapolation of estimates made by various groups (including the Haleiwa Downtown Merchants Association, Hawaii Visitors Bureau, Waimea Falls Park and others) indicate that about 1.615 million tourists to Oahu annually take the "circle island" drive along Kamehameha Highway through the North Shore and upper-windward areas. This represents about five percent of the total number of visitor days on the island (32.49 million for 2004), a figure basically unchanged during the past decade.

During the course of each day on Oahu, the typical visitor spends $130 on "Food and Beverage" and retail-oriented items according to DBEDT data. At present, it is estimated that about one-third of this amount would be spent by the average tourist during a day on the "circle-island" drive route. We believe this figure would be higher if more competitive, appealing retail/restaurant opportunities were made available.

This level of spending equates to a total of $69.3 million in visitor spending for central Oahu, North Shore and Koolauloa. With typical

Table 10

QUANTIFICATION OF TOURIST-ORIENTED RETAIL/RESTAURANT SPACE DEMAND
FOR THE KOOLAULOA/NORTH SHORE REGION 2002-2020
Market Study and Economic Impact Analysis of the Proposed Laie Inn Redevelopment
Laie, Oahu, Hawaii
All Values Are Constant Year-End 2004 Dollars

	2004	2005	2010	2015	2020
Conservative Scenario: Assuming Modest Growth Rates					
Total Oahu Visitors	4,500,000	4,635,000	5,098,500	5,480,888	5,754,932
Average Length of Stay	7.22	7.22	7.23	7.24	7.25
Total Visitor Days	32,490,000	33,464,700	36,862,155	39,681,626	41,723,256
Estimated North Shore/Koolauloa Visits	1,615,000	1,673,235	1,861,539	2,023,763	2,148,748
Percent of Total Visitor Days	4.97%	5.00%	5.05%	5.10%	5.15%
Average Daily Per Capita F&B and Retail Spending (1)	$130	$130	$130	$130	$130
Estimated Regional Spending Capture Rate (2)	33.0%	34.0%	35.0%	36.0%	37.0%
Total Annual Regional Retail/Restaurant Spending	$69,283,500	$73,956,987	$84,700,017	$94,712,104	$103,354,764
Average Annual Sales Per Square Foot (3)	$400	$400	$400	$400	$400
Indicated Demand for Retail/Restaurant Space (Sq. Ft.)	173,209	184,892	211,750	236,780	258,387
Estimated Actual/Potential Koolauloa Capture Rate	15.0%	17.0%	20.0%	22.5%	25.0%
Indicated Study Area Floor Space Demand (Sq. Ft.)	**25,981**	**31,432**	**42,350**	**53,276**	**64,597**
Optimistic Scenario: Assuming Aggressive Growth Rates					
Total Oahu Visitors	4,500,000	4,702,500	5,407,875	6,083,859	6,692,245
Average Length of Stay	7.22	7.23	7.27	7.32	7.38
Total Visitor Days	32,490,000	33,999,075	39,315,251	44,533,851	49,388,770
Estimated North Shore/Koolauloa Visits	1,615,000	1,699,954	1,985,420	2,271,226	2,543,522
Percent of Total Visitor Days	4.97%	5.00%	5.05%	5.10%	5.15%
Average Daily Per Capita F&B and Retail Spending (1)	$130	$130	$130	$130 $130	$130
Estimated Regional Spending Capture Rate (2)	33.0%	35.0%	37.0%	39.0%	41.0%
Total Annual Regional Retail/Restaurant Spending	$69,283,500	$77,347,896	$95,498,711	$115,151,178	$135,569,705
Average Annual Sales Per Square Foot (3)	$400	$400	$400	$400	$400
Indicated Demand for Retail/Restaurant Space (Sq. Ft.)	173,209	193,370	238,747	287,878	338,924
Estimated Actual/Potential Koolauloa Capture Rate	15.0%	18.0%	22.0%	25.0%	28.0%
Indicated Study Area Floor Space Demand (Sq. Ft.)	**25,981**	**34,807**	**52,524**	**71,969**	**94,899**
Mid-Point Demand Estimate (Sq. Ft.)	**25,981**	**33,119**	**47,437**	**62,623**	**79,748**

(1) From DBEDT Data Book Table 7.15 "Expenditures Per Visitor Day By Visitors From the U.S. West, U.S. East, And Japan, By Expenditure Type: 2000 and 2001".
(2) Percentage of total daily expenditures for F&B and Retail likely to be spent during course of day which includes a North Shore "Circle Island" trip.

Source: State DBEDT and The Hallstrom Group, Inc.

tourist-oriented and tourist/resident mixed-use stores averaging sales of $400 per square foot annually (overall range of $275 to $600 per square foot), the demand is created for some 173,209 square feet of retail space by visitors on the circle-island tour. We forecast the demand will increase by 85,200 to 165,700 square feet over the next 16 years.

This amount is captured via four basic retail/restaurant business forms:

1. Within local resident-oriented outlets such as fast food and other restaurants, gas station/mini-marts, grocery/drug stores, and other businesses selling primarily to consumers in the community.

2. In the retail areas of dedicated tourist destination facilities including PCC, Waimea Falls Park, the Dole Pineapple Plantation, and the Coral Kingdom.

3. At tourist-oriented outlets such as galleries, craft stores, souvenir/t-shirt shops, activities agencies, and other businesses selling primarily to day visitors to the region.

4. Within outlets having more equitable mixes of resident and tourist patrons, including surf shops, clothing boutiques, health food/produce and country/mom & pop stores.

At present, Laie/Koolauloa captures only about 15 percent of the visitor expenditures in the "circle drive" region, resulting in a demand for about 25,981 square feet of tourist-oriented floor space. Given adequate space development, the demand for additional leasable area in Koolauloa should range from 38,600 to 68,900 square feet during the next two decades.

Categories 3 & 4 are the major focus of the study sector and would be the most likely type of additional space developed to meet tourist-based demand. However, the extent and sales levels of the category 2 facilities indicates there is a meaningful market segment for destination retailing.

Visitor-oriented businesses do best in high exposure, modern and quaint/thematic projects. Surveys show there are few vacancies in such locations, and center managers report a strong interest for them. Visitor (and mixed resident/visitor) uses have driven the majority of

increased retail/restaurant sales and business creation activity in the Koolauloa/North Shore region during the past two decades, and the trend is expected to continue.

The total existing demand for retail/restaurant space in the primary study area is 186,882 square feet (mid-point estimate) and will increase by about 204,000 square feet over the next 16 years (to 2020).

Table 11 summarizes our demand calculations.

Identification of Supply

There is an estimated 177,000 square feet of reasonably competitive retail/restaurant space in Koolauloa within the communities stretching from Kaaawa to Sunset Beach, a figure significantly below existing demand (by about 9,882 square feet) and the market potentials for the region. The inventory includes 119,818 square feet in two major centers, summarized on Table 12, retail space at PCC, in minor strip developments, and poorer-quality space in about a dozen older (often "grandfathered") storefronts. Our survey identified 217 retail businesses in the Koolauloa/North Shore area; they are summarized by type and location on Table 13.

Apart from the remaining vacant square feet at the problematic Hauula Kai Shopping Center (much of which will be filled by the new Tamura Market), the space in the district is virtually full. The lack of new, meaningful additions to the study area inventory has been due to a scarcity of zoned lands, a limited-sized consumer income base, developer and business focus on Central Oahu and Ewa locations, and capital issues.

The relative stagnation in development during the past two decades was a primary concern in assessing the subject market sector. Was it the result of poor community economics, a lack of consumer confidence/appeal, or the failure by landowners to exploit potential market opportunities? We believe a combination of these factors limited expansion, and that meaningful changes are emerging to overcome these drags on new development. Our analysis indicates there is an existing unmet or latent demand for up to 9,882 square feet of retail/restaurant floor space in Koolauloa (186,882 square feet estimated mid-point demand less 177,000 square feet of existing inventory). Many Oahu retail operators and outlets view the region as being the next best expansion prospect on the island.

TABLE 11

QUANTIFICATION OF REGIONAL RESIDENT RETAIL AND SERVICE FLOOR SPACE DEMAND IN THE PRIMARY STUDY AREA 2002 TO 2020
Market Study and Economic Impact Analysis of the Proposed Laie Inn Redevelopment
Laie, Oahu, Hawaii

Scenario One: Conservative Population Growth & Capture Rate

Year	Annual Population Growth Rate	Forecast De Facto Population	X	Per Capita Demand in Square Feet	=	Total Resident Demand in Square Feet	X	Regional Capture Rate	=	Net Regional Demand in Square Feet
2004		15,850		20.05		317,793		50%		158,896
2005	0.84%	15,984		20.65		330,094		51%		168,348
2010	0.95%	16,782		21.27		356,971		52%		185,625
2015	0.72%	17,410		21.91		381,439		53%		202,163
2020	1.32%	18,644		22.57		420,729		54%		227,194

Scenario Two: Moderate Population Growth & Capture Rate

Year	Annual Population Growth Rate	Forecast De Facto Population	X	Per Capita Demand in Square Feet	=	Total Resident Demand in Square Feet	X	Regional Capture Rate	=	Net Regional Demand in Square Feet
2004		16,050		20.05		321,803		50%		160,901
2005	1.79%	16,342		21.25		347,317		52%		180,605
2010	1.54%	17,708		22.53		398,929		54%		215,422
2015	1.24%	18,880		23.88		450,852		56%		252,477
2020	1.69%	20,626		25.31		522,099		58%		302,817

Scenario Three: Optimistic Population Growth & Capture Rate

Year	Annual Population Growth Rate	Forecast De Facto Population	X	Per Capita Demand in Square Feet	=	Total Resident Demand in Square Feet	X	Regional Capture Rate	=	Net Regional Demand in Square Feet
2004		16,250		20.05		325,813		50%		162,906
2005	2.69%	16,700		21.85		364,970		53%		193,434
2010	2.08%	18,635		23.82		443,912		56%		248,591
2015	1.68%	20,349		25.97		528,369		59%		311,737
2020	2.00%	22,607		28.30		639,828		62%		396,693

Source: The Hallstrom Group, Inc.

TABLE 12

SUMMARY OF MAJOR COMPETITIVE SHOPPING CENTERS IN THE STUDY AREA
Market Study of the Proposed HRI Laie Retail/Restaurant Projects
Laie, Oahu, Hawaii

Project Name	Type/Orientation	Tenant Mix	Anchor Tenants	GLA in Sq.Ft.	Site Size in Acres	Layout	Year Built	Parking Spaces	Parking to GLA Ratio	Stores	Estimated Occupancy
Laie Village Shopping Center	Neighborhood Project/ Resident Consumers	Standard	Foodland Ace Hardware Wallace Theaters	72,818	8	Single-loaded strip building at rear of parking lot.	1969	245	3.36	23	100%
Hauula Kai Shopping Center	Neighborhood Project/Resident Consumers	Food & Service	Tamura Market (In Refurbishment)	47,000	6.5	Single-loaded block building at rear of parking lot.	1966	350	7.45	12	35%
Primary Study Area Totals (Koolauloa)				**119,818**							
Haleiwa Shopping Plaza	Neighborhood Project/Resident and Tourist Mix	Standard	Haleiwa Supermarket First Hawaiian Bank Bank of Hawaii Pizza Bob's	57,700	6.59	Multi-building project, some with direct frontage, with central parking lot.	1975 (1st phase of 23,000 SF). 1992 (2nd phase of 34,700 SF).	206	3.57	22	91%
Haleiwa Town Center	Neighborhood Project/Resident and Tourist Mix	Standard	Patagonia Barnfield Surf & Cycle NAPA	52,000	6	Single-loaded strip building at rear of parking lot.	1990's	200	3.85	25	95%
Secondary Study Area Totals (North Shore)				**109,700**							

Sources: National Research Bureau, Shopping Center Directory
and The Hallstrom Group, Inc.

Table 13

SUMMARY OF RETAIL/RESTAURANT BUSINESS TYPES IN THE KOOLAULOA/NORTH SHORE STUDY AREA
Market Study of the Proposed HRI Laie Retail/Restaurant Projects
Laie, Oahu, Hawaii

Location	Auto Related	Bakery	Bank	Bar	Bike Rental	Book Store	Cleaners	Clothes/Accessories	Coffee Shop	Construction/ Design	Dance/Exercise	Dental/Medical	Electronics	Fast Food Chain	Feed/ pet Store	Financial Services	Fishing Supply	Florist	Gallery	Gas Station/Mini-Mart	General/Grocery Store	Glass Shop
Punaluu																			1		2	
Hauula							1			2	1	1		1						1	4	
Laie	1		2				1					3		4				1		2	1	
Kahuku	1		1									3			1						2	
Pupukea/Sunset	1	1						2			1									1	1	
Waialua Shopping Center	1		1	1							1	2			2					1	2	
Rural Haleiwa/Waialua		1																			1	
Kam Hwy. (Haleiwa)		1			1			5				2		2			1		3	5	6	
North Shore Village						1								1								
Haleiwa Shopping Plaza			4	1							1	1	1	1					1			
North Shore Market Place	1							5	1	2				1		1			2			2
Total	**5**	**3**	**8**	**2**	**1**	**1**	**2**	**12**	**1**	**4**	**4**	**12**	**1**	**10**	**3**	**1**	**1**	**1**	**7**	**10**	**19**	**2**

Location	Hair/Nail Salon	Hardware	Hawaiian Crafts	Jewelry	Law	Museum	Other	Pharmacy	Photo Developing	Post Office	Realty	Restaurants	Shell Stand	Supermarket	Surf Shops	Tattoo Parlor	Theater	Thrift Store	Travel	Vacant	Video/Movie/Games	Washerette
Punaluu			1									1										
Hauula			1							1		4						1		4		
Laie	2	1						1		1		2		1	1		1		1			1
Kahuku	1		1							1	1	2										
Pupukea/Sunset											1	3		1	2							
Waialua Shopping Center	1									1										1	2	1
Rural Haleiwa/Waialua	1						1					1									2	
Kam Hwy. (Haleiwa)	2	1		2					1		2	8	1	1	7	1				1		
North Shore Village					1		2			1								1			1	
Haleiwa Shopping Plaza	1							1				4		1	1							
North Shore Market Place			3	2		1					3	2			5				1			
Total	**8**	**2**	**6**	**4**	**1**	**1**	**3**	**2**	**1**	**5**	**7**	**27**	**1**	**4**	**16**	**1**	**1**	**2**	**2**	**6**	**5**	**2**

TOTAL RETAIL/RESTAURANTS **217**

Source: The Hallstrom Group, Inc.

Apart from HRI, there are no major retail/restaurant supply additions presently being pursued in Koolauloa, and there are few available competitive sites. The aging, mostly vacant Hauula Kai Shopping Center, is undergoing refurbishment and repositioning. Overall, there is insufficient existing and proposed supply to meet the forecast demand for floor spaces created by the de facto population of the district during the projection period.

Despite the large and lucrative opportunities represented to the region by tourist spending, there have been no substantial additions to the Laie/Koolauloa area inventory to serve this consumer demographic either in recent years. This is a function of many factors, some of which are shared with the local resident sector, including a scarcity of quality, zoned, serviced commercial sites; a refocusing of tourist retailing to Waikiki during the 1990s; and lack of capital, developer interest and entrepreneurs.

While thousands of tourists may pass by daily, the major objective for successful development is the ability to "capture" a profitable share of the flow, a difficult task given the number of alternative commercial, public, park/beach, scenic, entertainment and resort venues. A competitive project must have solid exposure and access, be of sufficient size to create a diverse appealing destination with ample parking, be within an area of cumulative attraction or where large numbers of tourists stop, and have a thematic "hook".

Sites having these characteristics are rare in the study area and even fewer are coupled with owners having the desire and/or capital to proceed. Further, the exposure of Haleiwa, the focus of non-destination tourist retailing along the circle-island drive route, has been critically (and permanently) impaired by the completion of the Haleiwa Bypass road which leads most visitors past the town.

Demand/Supply Correlation

In light of the strengthening economics in the study sector and interest in new business formation in the area over the past two years, we conclude there is strong support for additional resident and visitor-oriented retail/restaurant space in Laie/Koolauloa. Well-designed and located competitive developments could readily increase the capture of resident (de facto population) and tourist demand by 20 to 40 percent in the study area.

The mid-point demand for additional space during the next two decades is 204,000 square feet, which includes 9,882 square feet of existing unmet demand and 194,000 square feet of new demand. This just more than doubles the existing inventory. Apart from limited space in an older center, there are no major projects planned other than the subjects. It is our conclusion there is sufficient market support for the projects, and they will achieve competitive rent and absorption velocity levels.

APPROPRIATENESS OF THE SUBJECT SITE

Site Attributes

The Lodging Component

The physical characteristics of the subject property are favorable for suburban hotel development:

- The building site is of sufficient size, at about 10 acres, regularly shaped, nearly level at street grade, and has supported moderate intensity construction and urban uses for decades.
- Excellent access and exposure are provided via Kamehameha Highway, the region's primary thoroughfare, and complete utility systems are available to the property.
- The facing beachfront site is a highly desirable (and marketable) amenity for the mauka lodging units, providing a strong connection with fundamental Hawaii visitor expectations and making the project superior to similarly priced and designed limited service hotel-type facilities.
- By virtue of its long-term development and underlying land use designations, the property has virtually full entitlements supporting the subject proposal. Further, no meaningful community objections to redevelopment would be expected. This combination of factors is rare in Hawaii, particularly for a hotel-potential holding outside of Waikiki or a destination resort.

- The property is the best high-traffic, high-volume commercial location in Koolauloa, characteristics typically supportive of suburban hotel uses.

The community/support aspects of the subject property are also favorable:

- The site is adjacent to the Polynesian Cultural Center (PCC), Hawaii's most visited, highly marketed and capital intensive private destination attraction in the state, which has received 750,000 to 800,000 guests annually in recent years. This presents a major and desirable opportunity for a competitive hotel operation. While the dynamic of the Oahu sector is skewed by Waikiki, it would be difficult to find such a major attraction lacking nearby lodging units elsewhere in the U.S. We believe there are significant untapped cross-marketing and group opportunities for a redeveloped subject, and only a fraction of the center attendance must be tapped to achieve a successful operation.
- Laie contains several facilities that also serve as destinations which typically require lodging support. Brigham Young University–Hawaii, with an enrollment of about 2,400, a significant number of which are dormitory residents, attracts parents/family members and upwards of 9,000 non-student participants annually to school events such as athletic events, special functions, graduations, and conferences. The Laie Hawaii Temple visitor center hosts more than 100,000 guests annually, and there are thousands more non-resident Temple patrons.
- Unlike most North Shore/Koolauloa areas, Laie has a variety of retail and restaurant businesses available to service hotel guests. This is a necessary component for any vacation area to avoid the feeling of isolation that often plagues non-urban hotel and resort development. In addition to existing community services, the Laie Shopping Center is proposing a 16,000-square-foot expansion, and a 17,700-square-foot thematic project, is proposed abutting the hotel redevelopment site. This tourist-oriented destination retail center will contain a full-service three-meal restaurant, general store, shops and museum.

- The BYUH student and PCC worker pool will provide an ethnically and linguistically diverse, educated, motivated and presentable workforce; a particularly desirable commodity as the Oahu economy recovers and unemployment rates move back to national lows. Employee transportation issues, which could otherwise become a concern for such an outlying operation, can be mitigated by hiring from within the community.

- Laie residents have traditionally shown support for quality development that increases job opportunities and capital investment in the area, and enhances the quality of existing assets. Given the contention that often surrounds resort/hotel and near-ocean development in the islands, this support can save significant time and planning/legal costs, and diminish investment risks.

Based on our analysis, it can be affirmatively answered the subject holding has sufficient attributes to be a competitive hotel site.

The Retail/Restaurant Component

The shopping center component of the Laie Inn redevelopment site represents a unique and unmatched opportunity in the study region for tourist-oriented retail/restaurant uses. It is the best potential off-water retail/commercial holding in Koolauloa, and has all of the necessary characteristics to achieve success in the competitive sector:

- Abutting a destination attraction which attracts more than three-quarters of a million guests annually;

- Extensive highway frontage, unobstructed exposure and extended roadway visibility;

- Direct access onto the property from Kamehameha Highway, with a larger on-site parking lot (shared with hotel), overflow parking at PCC, and good neighborhood pedestrian and vehicular traffic flow;

- Incorporated into a resort lodge with 228 guest rooms (proposed); and

- Located within an emerging suburban resort neighborhood.

The thematic potentials are dynamic, and we endorse a "Village" concept (in concert with the PCC "villages" design), with the multi-building project being in the style of a vintage plantation community.

The center will be an essential feature of the "suburban resort" master plans for the area and a necessary amenity for the proposed lodging operation.

The museum and banquet uses are more specific business types which should prove highly successful at the subject location through interaction with the hotel component and PCC and due to special community needs.

The museum will serve as an attraction to the facility, a "gateway" promotion for PCC, and an amenity to Laie Inn guests. The banquet room will provide meeting areas for inn guests (helping attract groups to the hotel) and service the reception needs associated with the Laie Temple and BYUH.

Master Plan Reasonableness

The envisioned Laie Inn redevelopment master plan embodies the primary qualities considered necessary for the project to achieve success:

- The intensity of overall scope is low-key and suburban, with modest two to three story buildings and a density of some 22 rooms per acre on the overall site (assuming 228 total units at build-out on the 10-acre holding), well below resort densities that range up to 40-plus rooms per acre. The improvements will be thematically integrated into the larger PCC-centered resort pod, providing a seamless sense of experience, frontage and exposure at the southerly gateway to Laie.

- The proposed level of facilities and amenities package is appropriate to the location and market setting. The site could not support (on many levels) an intensive full-service resort hotel, but remains highly suited for a limited service hotel operation. The omission of a restaurant will lower construction costs, lessen administration expenses, and increase overall operating profit margins. Restricting amenities to a pool, beachfront club, and landscaped grounds will also lower costs of development and operation yet still achieve the expectations

of the guest demographic. Overall, the proposed improvements are reflective of emerging suburban hotel development trends in Hawaii and will achieve the construction cost and operational efficiencies necessary for its success.

- With the completion of the proposed retail/restaurant component, the hotel will have significant "on-site" retail, restaurant, services and (in conjunction with PCC) entertainment/activity support, at no direct cost to the lodging operation. The restaurant operator in the center will meet guest dining needs, perhaps even room service, and provide meeting/banquet space to guest groups. Visitors will have ready access to sundry supplies, gifts/souvenirs, art/crafts, and tourist-related services via a seamless, themed development which would give the hotel the comprehensive retail and dining feel of a much larger facility.

- The beach club is an excellent addition to the facility, immediately creating a resort-ambience and providing a superior low-cost high-impact marketing tool. While having to cross the highway in accessing the shoreline is a negative, appropriate crossing markings, warning signs/lights, and landscaping will mitigate the hazard and discontinuity. Few, if any, other existing or proposed competitive quality, moderately-priced lodging operations in Hawaii offer an improved beach club facility.

- Sufficient parking may be an issue at build-out when maximum activity at the project is reached. However, many hotel guests would be out and about during the day as the shopping traffic peaked, while retail parking demands would lessen at night when guests returned. Overflow and bus parking may potentially be available at the PCC.

There are no obvious major shortcomings to, or omissions from, the master plan given the site and its market limitations. The Laie Inn redevelopment concept is appropriate in scale and form to exploit the excellent opportunity presented by the subject site.

In addition to creating additional and more stable employment positions, a redeveloped Laie Inn that is associated with a mainland chain/system will provide a level of experience, exposure and expertise

to the employees (particularly management and accounting) that may be currently lacking.

A quality local lodging alternative will provide enhanced direct support to BYUH and Laie Temple activities, ceremonies and conferences, attracting many of these guests away from Waikiki or Turtle Bay and into the community.

ECONOMIC IMPACT OF THE PROPOSED DEVELOPMENT

The development of the Laie Inn redevelopment master plan will generate significant efforts and expenditures that will favorably impact the Koolauloa/Oahu economy on both a direct and indirect basis, increasing the level of capital investment, capital growth and capital flow in the region. The project will pump millions of dollars into the district, expanding the economy, widening the tax base and creating stable long-term employment opportunities.

From a direct perspective, the proposed mixed used, suburban resort/commercial project will create numerous construction, equipment operator and specialty trade jobs on- and off-site during the planning and emplacement of the infrastructure, and building of the improvements. After completion of the guest rooms, retail/restaurant space, and beach club facilities over an estimated five-year development period, there will be significant additional employment positions created by the component businesses and the buildings themselves (landscape, service, maintenance, and renovation needs in the course of their use).

Numerous local businesses will enjoy significant profit opportunities arising for contracting companies constructing the improvements, and for local businesses which would supply a substantial portion of the materials needed in the building efforts.

The general island economy also will benefit from the subject development and its employees and businesses, which will spend large amounts of wage income in off-site shops, restaurants, and service establishments throughout Oahu, and in purchasing goods and services.

Indirectly, as these wages, profits, and expenditures move through the regional economy, they will have a ripple, or "multiplier," effect--increasing the amount of capital flowing to the entire community as a result of the subject.

Construction, operational and other workers earning wages from the redeveloped Laie Inn and associated off-site efforts will spend the majority of their income on living and entertainment expenses while supporting and patronizing other island businesses, as will the guests and customers of the project. Much of this spending would then be re-directed by these businesses to other island industries, with significant portions of these secondary profits in turn being put back through the region's economic and tax structure.

These substantial direct and indirect economic impacts associated with the proposed subject project, as quantified in the following sections, are all the result of the capital investment and entrepreneurship necessary to convert aging, underdeveloped, less efficiently performing lands, long designated for resort-oriented uses, into a modern, efficient working mixed-use resort/commercial development. The Koolauloa/ Oahu economy will be meaningfully stimulated by the capital investments and business requirements of the club and its members and guests.

Capital Investment and Construction Costs

The subject development will bring an estimated $37.8 million in direct construction capital into Koolauloa over the four-year model build-out period assumed for the project. A breakdown of the basic expense items, their respective costs and expenditure over time is summarized on Table 14.

Also shown are anticipated contractor and supplier profits flowing to local businesses as a result of the project. All costs were taken from estimates provided by the HRI (the landowner), as cited on the table.

Not included in the totals are several million in indirect costs such as design, legal/other fees, engineering, marketing expenses, other developer costs, loan interest and other non-real property items. The inclusion of these "soft cost" results in a total capital investment undertaking approaching $50 million.

TABLE 14

CONSTRUCTION COSTS AND CONTRACTOR AND SUPPLIER PROFIT ESTIMATES
Market Study and Economic Impact Analysis of the Proposed Laie Inn Redevelopment
Laie, Oahu, Hawaii
In Constant Year 2004 Dollars

Development Year	2005	2006	2007	2008	Totals
	1	2	3	4	
Phase	One		One & Two	Two	
Percent of Phase Construction Completed	20%	60%	20% & 50%	50%	
"All in" Construction Costs (1)					
Lodging Component (2)	$4,001,940	$12,005,820	$11,347,310	$7,345,370	**$34,700,439**
Retail Component	$92,245	$276,734	$92,245		**$461,224**
Museum	$112,744	$338,231	$112,744		**$563,718**
Restaurant	$215,525	$646,576	$215,525		**$1,077,627**
Banquet/Meeting Facility	$214,151	$642,454	$214,151		**$1,070,757**
TOTAL CONSTRUCTION COSTS	**$4,636,605**	**$13,909,816**	**$11,981,975**	**$7,345,370**	**$37,873,765**
CONTRACTOR'S PROFIT (3)	**$463,661**	**$1,390,982**	**$1,198,197**	**$734,537**	**$3,787,377**
SUPPLIER'S PROFIT (4)	**$185,464**	**$556,393**	**$479,279**	**$293,815**	**$1,514,951**

(1) From Hawaii Reserves Inc. "Residence Inn by Marriott - Financial Projections: Construction Cost Estimates".
(2) Includes Beach Club facilities.
(3) Estimated at 10% of construction costs.
(4) Estimated at 4% of construction costs.

Source: Dowling Company, Inc., and The Hallstrom Group, Inc.

The subject direct costs will infuse an average of $9.4 million annually into the Oahu building industry on average over the build-out period. This is the equivalent of a more than one percent boost over recent yearly construction levels. Indirect expenditures could reach an additional $4 million per year.

Employment Opportunities Created

Based on indicators provided by the construction of comparable sized projects and Hawaii industry averages, we have estimated the demand for on- and off-site, full-time equivalent employment positions associated with building of the lodging and commercial structures, the on-going businesses contained in the mixed-use resort project, and in providing continuing services to the occupied buildings.

The employment opportunities created by the construction of the subject will not all be "new" jobs but will be enhanced opportunities for resident construction trade workers, youths reaching employment age, and existing local businesses. The stabilized (long-term), permanent jobs in the redeveloped Laie Inn operations will for the most part be new positions on the island.[4]

Our employment estimates on are based on full-time equivalent "worker/years," although one worker/year (or circa 2,000 working hours) may be comprised of many employees involved in specialized tasks of a much shorter duration.

Estimates are based on a 10-year modeling period of project construction (five years) followed by lodging and retail/restaurant operations (five years). The associated number of employment opportunities created are displayed on the top of Table 15.

Included in our projections on the table are the full-time equivalent (FTE) off-site and support employment opportunities which will be provided to Koolauloa/Oahu businesses as a result of the project. Also shown are the total number of employees within the operating departments of the on-going businesses, including maintenance/landscaping workers which will be required to service the project improvements and grounds over time.

(4) It is considered highly likely the McDonalds and gas station currently on the site, and their constituent jobs, will be relocated to the Laie Shopping Center.

TABLE 15

EMPLOYEE JOB COUNT AND WAGE ESTIMATES
Market Study and Economic Impact Analysis of the Proposed Laie Inn Redevelopment
Laie, Oahu, Hawaii
in Constant Year 2004 Dollars

Development Year	2005 1	2	Phase I of Inn Opens 3	4	Phase II Opens 5	6	7	8	9	10	Total 1 Through 10	Stabilized
Worker Requirements (1)												
Construction/Development (2)	27	65	54	35							180	
Operational Departments (3)			122	122	153	153	153	153	153	153	1,162	153
Off-Site Employees (4)	11	26	70	63	61	61	61	61	61	61	537	61
TOTAL EMPLOYMENT CREATED	37	91	246	220	214	214	214	214	214	214	1,879	214
Worker Wages												
Construction/Development (5)	$1,543,519	$3,754,114	$3,134,019	$2,028,721							$10,460,373	
Operational Departments (6)			$2,780,880	$2,780,880	$3,695,380	$3,695,380	$3,695,380	$3,695,380	$3,695,380	$3,695,380	$34,563,516	$3,695,380
Off-Site Employees (7)	$319,349	$776,713	$2,112,418	$1,853,735	$1,836,000	$1,836,000	$1,836,000	$1,836,062	$1,836,000	$1,836,000	$16,109,215	$1,836,000
TOTAL ANNUAL WAGES PAID	$1,862,868	$4,530,828	$8,027,317	$6,663,337	$5,531,380	$5,531,380	$5,531,380	$5,531,380	$5,531,380	$5,531,380	$54,707,629	$5,531,380

(1) All job counts expressed as "full-time" equivalent positions.
(2) Estimated at one worker/year per $210,000 in contract spending.
(3) See Table 16.
(4) Includes all off-site jobs created by work efforts at the project, direct and indirect. Estimated at 0.4 off-site positions per on-site position.
(5) Average annual wage of $58,000/worker year.
(6) Average annual wage of $25,000/worker year.
(7) Average annual wage of $50,000/worker year.

Source: Various, and The Hallstrom Group, Inc.

The projections are founded on examples provided by various lodging and commercial developments undertaken on Maui and the Big Island over the past decade, and via formulae expressing relationships between total worker wages/benefits and construction/operating tasks and costs.

Building construction employment forecasts are taken from discussions with developers, review of project records and ratios of direct costs to job creation (assuming an average wage of $58,000/year plus benefits equal to 25 percent of wages). Our analysis assumes one worker/year per $210,000 in contract spending.

On-going lodging, retail and restaurant operations are forecast to require 153 total permanent employee positions upon reaching stabilized levels. The estimated job counts and associated prevailing wages for the operating components of the subject project are summarized on Table 16.

Off-site employees were estimated at 40 percent of on-site workers, and are comprised of three groups:

- Numerous off-site building industry positions will also be enhanced by the Laie Inn redevelopment, including such jobs as administration, office help, material providers, equipment maintenance and specialty tasks. Analysis of Oahu labor trends from 1980 through 2003 demonstrate a linkage equal to about 20 to 30 percent between the creation of on-site construction positions and direct off-site employment.

- Off-site support businesses, including contractor/retail/counter sales, fuel providers, shipping, storage and professional services will also benefit. A conservative job creation relationship of five to ten percent relative to on-site positions was used (or, one off-site support worker/year for each ten to 20 on-site worker/years).

- Extrapolation of state Department of Business Economic Development and Tourism (DBEDT) data, along with indicators provided by other state agencies and First Hawaiian Bank studies, demonstrate that each Hawaii worker creates demand for services (and related employment) during and directly attributable to the work day at up to a ten percent ratio. These positions include food businesses, providers of tools and

TABLE 16

ESTIMATED JOB COUNT AND WAGES FOR THE OPERATING COMPONENTS
Market Study and Economic Impact Analysis of the Proposed Laie Inn Redevelopment
Laie, Oahu, Hawaii

Component	Basis	Unit Count	Stabilized Total Jobs (1)	Current Wages Hourly (2)	Current Wages Total Annual
Lodging	.33 workers per room Includes operations, housekeeping, maint.	228 guest rooms	75	$14.75	$2,219,580
Retail	1 worker per 250 square feet of floor space	2,475 square feet	10	$12.40	$248,000
Restaurant	16 hrs operation daily (6 AM to 10PM), 2 shifts, each with 17 persons (4 cook, 2 clean, 6 wait, 3 bus, 1 host & 1 mgmt). 14 shifts/week, plus 10% vacation allowance.	52	52	$8.50	$884,000
Banquet	7 events per week (out of possible 14), each 4 hrs, with staff of 11 (4 kitchen, 7 floor)	8	8	$8.50 (3)	$136,000
Museum (Includes Gift Shop)	1 worker per 500 square feet of floor space	3,025 square feet	6	$12.40	$148,800
Beach Club	11 hrs operation daily (7 AM to 6PM) with staff of 2, with a total of 77 hrs per week.		2	$14.75	$59,000
TOTAL ALL OPERATING COMPONENTS			**153**		**$3,695,380**

(1) Rounded full-time equivalent positions, equal to 2,000 working hours per year.
(2) From State Dept. of Labor and Industrial Relations ("Lohi" website) 2004 data through September.
(3) Excludes unreported wait staff tips.

Source: The Hallstrom Group, Inc.

trade goods, payroll/financial and insurance businesses, medical requirements and other secondary indirect/off-site employment.

During the 10-year building and operations modeling period of the project, the number of worker/years created on- and off-site by the development varies from 37 to 246 positions annually, totaling 1,879 worker/years over the entire projection timeframe. Of this total, 180 worker/years (an annual average of 45 positions during the four-year construction period) are direct construction-oriented, 1,162 total (or 145 per operating year) are on-going business operating positions; and 537 are off-site worker requirements.

On a stabilized basis after the modeling timeframe, the project will generate some 214 permanent full-time equivalent and/or enhanced employment opportunities--153 directly related to on-site activities, and 61 indirect positions throughout the island.

The average annual on-site job count during the 10-year subject study period of 188 positions represents about a 0.04 percent increase from the total jobs presently available on Oahu (188 additional jobs per year to the average mid-year 2004 job count of 428,000). This number can be readily absorbed by the currently available employment pool.

Additional secondary and/or supplementary employment will be created as a result of the lodging and commercial operations. Much of the cash flow of the component businesses will be re-spent in the Koolauloa/Oahu economy, and are forecast to reach $14.2 million per year on a stabilized basis (quantified in a subsequent section). Based on DBEDT data stating each $75,000 to $100,000 spent creates one employee position, an additional 142 to 189 secondary jobs will be supported in the region as a result of the subject.

Wage Income Generated

In accordance with data compiled by the state Department of Labor and Industry Relations and as derived from the marketplace, we have estimated the personal income (in the form of wages) which will flow to Laie/Koolauloa workers as a result of the Laie Inn redevelopment project.

The average wage of a full-time construction worker is estimated at $58,000 per year based on DLNR data for mid-2004. Lodge and

retail/restaurant operating and maintenance personnel are forecast to be paid an average of about $25,000 per year on average ($12.50 per hour). Off-site building and support industry jobs were estimated to receive an average pay of $30,000 annually.

Overall project average wages are equal to $28,900 per worker/year created during the model period, and $25,850 on a stabilized basis.

Application of these wage estimates to the employment forecasts generates personal income (wage) projections directly resulting from subject development, which were shown at the bottom of Table 15. The wage figures are all presented in constant 2004 dollars, and will undoubtedly escalate over time in accordance with inflationary pressures.

In the first year of development, the "Total Annual Wages Generated" by the subject development effort would be $1.86 million, increasing to a high of $8.0 million, as the number of construction workers peak in year 3. After completion of all construction, the on-going operational, maintenance, off-site/indirect and other employment would result in average annual wages of $5.53 million thereafter.

Over the first 10 years of the development and operation period, on- and off-site, direct and indirect worker wages would total $54.3 million.

Development Costs as Profit Income

While the significant majority of the materials needed to build the subject industrial and commercial structures must be imported to Oahu, a portion of the construction costs spent in the development will flow to local businesses in the form of contractor profits and supplier profits.

Typically, within the industry net contractor profit margins are expected to be at 8 to 20 percent of total construction costs. We have used a conservative ten percent figure. Supplier profits were extrapolated at four percent of total costs; generally supplies/materials equate to 50 to 60 percent of total cost, with a profit margin for the supplier of six to eight percent.

Application of these estimates to the forecast development parameters of the subject project was shown on Table 14.

The total Contractor's Profit ranges from $463,661 to $1,391,000 per year, with a cumulative profit of $3.8 million over the five-year construction period. The total annual Supplier's Profit ranges from a low of $185,464 to a high of $557,000, and equates to $1.5 million over the development time-frame.

Population, Income and Expenditures

The 228 Laie Inn guest units will house a consistent population of transient visitors to the Laie community. While at the Inn, they will contribute to the Koolauloa regional economy in the form of substantial daily discretionary expenditures on rooms, food, shopping and activities.

Table 17 displays our population and discretionary expenditures estimates for the subject project.

We have estimated the average daily guest population at the 228-unit inn will be 504 persons. This is based on an estimated occupancy rate of 76 percent, with an average party size of 2.95 persons. While this party size is larger than for standard hotel rooms, it is consistent with the multi-room, larger size of the proposed Residence Inn units and in keeping with the expected family demographic.

We estimate the daily per capita spending by Laie Inn guests in the Oahu economy will be on average $150, which is what the typical Oahu visitor spends daily on non-lodging purchases. This pays for all food, entertainment, household goods, locally purchased fixtures and furnishings, utilities, clothing and other daily items.

By build-out, the total discretionary expenditures made by subject project guests in the local market will be at $27.6 million annually on a stabilized basis, in 2004 dollars. During the 10-year development and operation model period, the total sum of these expenditures will be $197.7 million.

Summary of Direct, Local Economic Impacts

The various direct, local economic impacts which will flow to the Koolauloa region and across Oahu as a result of the subject development are summarized on Table 18.

TABLE 17

GUEST POPULATION AND DISCRETIONARY EXPENDITURES
Market Study and Economic Impact Analysis of the Proposed Laie Inn Redevelopment
Laie, Oahu, Hawaii
In Constant Year 2004 Dollars

Development Year	3	4	5	6	7	8	9	Stabilized 10
Cumulative Development								
Guest Rooms Opening	132	0	96	0	0	0	0	0
Total Guest Rooms	132	132	228	228	228	228	228	228
Average Daily Guest Population								
Total De Facto Population	292	292	504	504	504	504	504	504
ANNUAL GUEST DISCRETIONARY (TAXABLE) EXPENDITURES (3)	$15,989,738	$15,989,738	$27,618,638	$27,618,638	$27,618,638	$27,618,638	$27,618,638	$27,618,638
Total Years 1 - 10	$197,691,300							

(1) Assumes first phase guest rooms open in early 2007, and second phase rooms open in 2009.
(2) Based on estimated occupancy of 76% with average party size of 2.95 persons.
(3) Estimated at $150 per capita daily for guest population, about 75% of average for Oahu.

Source: Various, and The Hallstrom Group, Inc.

The wages, profits and expenditures figures are taken from previously presented tables. The lodging, retail, restaurant, museum gift store operational revenues were calculated based on gross sales experienced at facilities of similar scale and quality in the state.

The gross annual revenues of the lodging component were projected to reach $9.8 million annually by stabilization, assuming an average daily rate of $150, occupancy at 76 percent, and minor departmental revenues equal to another three percent.

The commercial components were forecast to have sales at $600 per square foot annually for the retail, restaurant and museum gift shops, and at $5,000 per event using the banquet facility. Total gross revenues for these businesses at stabilization is estimated at $4.4 million in 2004 dollars.

The annual Total Base Economic Impact increases from $2.5 million in year 1 of the development effort to a high of $47.3 million in year 5 and beyond. Over the decade long development and operation modeling period, the total is $362.6 million. Fueled by operations and guest expenditures, the estimated stabilized annual base impact thereafter is $47.3 million.

These dollars will be spent, then re-spent, on goods and services on the island, diminishing in impact on the local economy with each turnover as a portion flows off Oahu for goods, services and financing commitments. First Hawaiian Bank studies have concluded the appropriate economic multiplier rates in Hawaii are from 1.2 to 3.5 times (or 20 to 250 percent) of the base impact amount. Mainland studies (by the Urban Institute and others) tend toward the upper end of this range, and reach multipliers as high as 4.0.

Due to the need to import more than 85-plus percent of supplies/goods used on Oahu, the multiplier impact for the island is not as great as for mainland locales, particularly for construction-based expenditures. We have therefore tested multiplier rates at the mid-point of the market spectrum, ranging from 1.5 to 3.5 times.

On a conservative basis, using a relatively low-end multiplier effect ratio of 2.0, the total overall direct impact on the Oahu economy resulting from the Laie Inn redevelopment project would be $725.3 million over the 10-year projection period (in constant 2004 dollars).

TABLE 18

SUMMARY OF ECONOMIC IMPACTS ASSOCIATED WITH DEVELOPMENT
Market Study and Economic Impact Analysis of the Proposed Laie Inn Redevelopment
Laie, Oahu, Hawaii
In Constant Year 2004 Dollars

Development Year	2005		Phase I Opens		Phase II Opens						Total Years 1 Through 10	Stabilized
	1	2	3	4	5	6	7	8	9	10		
ANNUAL WAGES GENERATED	$1,862,868	$4,530,828	$8,072,317	$6,693,337	$5,531,380	$5,531,380	$5,531,380	$5,531,380	$5,531,380	$5,531,380	$54,303,629	$5,531,380
CONTRACTOR'S PROFIT	$463,661	$1,390,982	$1,198,197	$734,537							$3,787,377	
SUPPLIER'S PROFIT	$185,464	$556,393	$479,279	$293,815							$1,514,951	
LODGING OPERATIONAL GROSS REVENUES (1)			$5,657,296	$5,657,296	$9,771,692	$9,771,692	$9,771,692	$9,771,692	$9,771,692	$9,771,692	$69,944,746	$9,771,692
RETAIL/RESTAURANT REVENUES (2)			$4,427,000	$4,427,000	$4,427,000	$4,427,000	$4,427,000	$4,427,000	$4,427,000	$4,427,000	$35,416,000	$4,427,000
DISCRETIONARY EXPENDITURES			$15,989,738	$15,989,738	$27,618,638	$27,618,638	$27,618,638	$27,618,638	$27,618,638	$27,618,638	$197,691,300	$27,618,638
TOTAL BASE ECONOMIC IMPACT	$2,511,992	$6,478,202	$35,778,826	$33,795,721	$47,348,710	$47,348,710	$47,348,710	$47,348,710	$47,348,710	$47,348,710	$362,657,001	$47,348,710
Multiplier Effect Ratio	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
TOTAL OVERALL IMPACT	$5,023,985	$12,956,404	$71,557,652	$67,591,443	$94,697,420	$94,697,420	$94,697,420	$94,697,420	$94,697,420	$94,697,420	$725,314,003	$94,697,420

(1) Based upon average daily rate of $150 with 76% occupancy for rooms department, and 35% additional ancillary revenues (telephone/other).
(2) Estimated at average of $600 per square foot per year for retail, restaurant and museum gift shop (400 sq. ft.) spaces. Banquet revenues estimated at average of $5,000 per event.

Source: Various, and The Hallstrom Group, Inc.

On a stabilized annual basis thereafter, the overall impact would be at $94.7 million.

PUBLIC COSTS/BENEFITS ASSESSMENT

The purpose of this analysis is to delineate the direct areas in which the proposed subject mixed-use resort development will potentially impact the sphere of public agency resources, and quantify (where possible) the costs of providing expanded services to the project, versus the economic benefits that accrue to the community through an increase in local and state tax payments.

For most developments, potential direct costs to governmental services and programs include:

-- Police Protection
-- Fire Protection
-- Public Oversight Agencies
-- Infrastructure Services
-- Recreational Demands
-- Educational Needs
-- Infrastructure Costs
-- Various Other Services and Financial Commitments

However, as a privately built resort-oriented project many of these costs will not be increased on the state or county levels as a direct result of the proposed Laie Inn redevelopment. There will be negligibly increased educational or recreational needs directly attributable to the "new" subject development; the major off-site public infrastructure items (highway and primary water/sewer mains) are already in place; and the development will require no specific public subsidies, welfare services, bonding or capital improvements.

Further, and most importantly, as the site has a long-established lodging and commercial use, the impacts associated with activities at the developed site have long since been absorbed by the affected services and departments. It is unlikely the redeveloped property will appreciably increase governmental service needs in the region.

Direct tax benefits to the state and county coffers will primarily flow from the project and its operation over time from three major sources:

-- Real Property Taxes
-- Gross Excise Tax Receipts
-- State Income Taxes
-- Transient Accommodation Taxes

Some cost/benefit issues are considered as off-setting, or "a wash," as the cost of the services to the government is theoretically directly reimbursed in the form of user fees. Building permits and utility hook-up fees are two prime examples. Other such items include workers compensation premiums and benefits, utility operations and associated use billing rates, and business oversight/registration verses licensing fees. These items are excluded from this study.

From an actual public service cost perspective to Oahu and state agencies, the redeveloped Laie Inn project will represent only a fraction of the county and state resort plant and overall urban lands in use. Given the vast number of housing units, resorts, businesses, and agricultural lands on the island, it is difficult to assert that of themselves the subject club and users will create the need for meaningful expansion of existing public services.

No new schools, parks, highways, recreational facilities, service agencies, hospitals, or other public enterprises will be required specifically because of this project. The impact on the total regional land base will be minimal. Public safety facilities are proximate in Laie, generally have the personnel and equipment to service the businesses and buildings in the subject complex, and will expand with overall community growth over the next decade as the project is built. Further, public infrastructure systems in the region were designed with the capacity to service development in the immediate vicinity of the subject.

And as pointed out, any such costs have long since been absorbed by the affected systems and agencies owing to the more than three decades of historical subject use.

However, the need for additional services is a cumulative effect, each project, each tourist and, to a lesser degree, business adds a little bit to the community base until increased "need thresholds" are reached.

In regard to some services, the effective actual impact may not be apparent from a cost perspective, merely creating nominally greater demands which can be readily met through existing agencies and facilities without the need for additional workers or funds.

Our analysis of City and County of Honolulu and state budgets indicate the actual effect of governmental services relating to the Laie Inn redevelopment would not create the need to expand county and state services in and of itself.

As an alternative to actual cost estimates, which are often disparate as they inherently cannot provide for unexpected and/or atypical items, it is most common to project public costs on a per capita allocation.

This approach is generally appropriate for resort and residential developments, as public costs and services generally accrue to where a person lives (or in the case of a tourist, where they are lodging).

Government services are holistic in nature, providing a foundation throughout a community, regardless of actual, specific impact on any given land holding. A resort development or business may not have a need for parks or schools, but they are essential to the patrons and workers and create the climate in which the resort or business operates. Similarly, government administration, capital projects and public welfare items may have no direct relation to a particular project, but provide the economic underpinnings that enhances overall economic success.

In order to meaningfully quantify public costs that may be associated with the subject development, we have therefore looked at the issue on a per capita allocation basis.

Public Costs

Per Capita Costs

The preferred method for determining public costs is through per capita expenditures incurred by the State of Hawaii and City and County of Honolulu in accordance with the de facto population area of the jurisdiction. This is founded on the principal that each individual on the island equitably benefits from all governmental costs, regardless of type or focus throughout the day, with each new member of the community (whether resident or visitor) creating a proportionate new cost burden in their daily home and working life.

As previously noted, this is the standard method for resort and residential application as most costs are viewed as accruing to the housing or lodging aspects of a persons lifestyle and land use. We have included it as a means of demonstrating the overall public fiscal impact potential of the proposed subject project even when viewed from this maximum potential cost perspective. We consider this approach as setting the absolute upper limit on all public costs (actual, indirect and inferred).

According to the state Department of Budget and Finance database,[5] the state spent a total of $7.48 billion on services, salaries, infrastructure, and financing in fiscal 2003. The total de facto population in the state on an average daily basis was about 1,356,000 persons, including residents, tourists, and military personnel.

The per capita expenditure by the state will thus be about $5,516 for calendar year 2004, an increase of several percent from the prior year. From 1979 through 2003, state government expenditures increased at a rate of just over five percent annually compounded.

The stabilized average de facto population on-site at the subject at build-out will be 504 persons, a figure reached in year 5 of the development model. Using the allocated state cost per de facto "resident" of $5,516 per year, the total annual "costs" to the state purse at stabilization by the project using the per capita allowance method would be $2,782,546 in constant year 2004 dollars.

Analyzed on a similar basis, the City and County of Honolulu's budget for the local government in calendar year 2004[6] is $1.169 billion, which represents an escalation over time of more than four percent compounded annually since 1995.

The current de facto population on Oahu is some 1,020,000 persons. The resulting de facto per capita county expenditure for this year is therefore anticipated to be $1,146.

Application of this figure to the total on-site de facto population at the Laie Inn build out would be about $578,150 annually in costs to the county government on a stabilized basis (504 de facto residents x $1,146).

(5) "Executive Branch Operating Appropriations by Department (All Funds)."
(6) "Fiscal Year 2004 Operating Budget Ordinance."

Total Public Costs -- On a per capita allowance cost basis, the state and county expenses associated with the subject development would range from $1.95 million in year 3 of the project (the first year of lodging unit occupancy) to a stabilized maximum of $3.5 million at build-out in year 6 and beyond in year 2004 dollars.

Public Fiscal Benefits

Real Property Taxes -- Property taxes paid by landowners in the subject project were calculated using the 2004 tax rates for both land and buildings, improved or unimproved.

The assessed values for the improvements were based upon the direct costs provided by the HRI development team, plus an allowance of 25 percent for indirect, financing, profits and other costs which would inure to the structures. The total estimated assessed values of the finished lodging units and retail/restaurant facilities upon completion is $46.8 million.

The assessed values for the land components were estimated at $25 per square foot for the 9.75 acres lying mauka of the highway and $50 per square foot for the .75-acre oceanfront parcel. The total projected land component assessed value is $12.25 million.

It was assumed the land would be classified as resort and be taxed at the rate of $10.63 annually per $1,000 of assessed value; the prevailing rate in the county. The improvements, whether lodging or commercial facilities, are also assumed to have a "resort" tax rate of $10.63 per $1,000 of assessment.

All real property value of the subject holding is assumed to be vested in the completed "salable" and operating components, with no assessment placed against open spaces, roads, or other systems.

The total real property tax to be paid to the City and County of Honolulu in 2004 dollars ranges from $130,231 in year 1 of development, to a stabilized level of $627,351 at build-out in year 5 and beyond. The aggregate real property taxes paid over the 10-year study time-frame will be $5.04 million.

State Income Tax -- The state will receive income taxes from two sources:

- the wages of the workers associated with the construction, maintenance, and operation of the Laie Inn redevelopment components;
- the corporate profits from contractors and suppliers serving the construction phase of the development, and as generated by on-going lodging and commercial operations.

According to DBEDT data, individual State of Hawaii income tax liability as a ratio to gross income has ranged from 5.5 to 5.9 percent during the past decade, with the more current figures tending toward the mid to upper-end of the range. We have employed an effective tax rate of 5.80 percent of gross income for individual workers and full-time residents.

The effective tax rate for the corporate income is estimated at 2.00 percent of gross operating profits, based on available DBEDT statistics.

The total income tax revenues to be received by the state are projected at $121,029 in the first year of construction increasing to a maximum level at year 3 of $499,134 million annually in constant 2004 dollars.

On a stabilized basis, after build-out, the permanent on-site lodging and commercial employees, off-site workers, and operating businesses, would pay an annual state income tax of $398,775. Over the 10-year modeling period, the cumulative income taxes paid are estimated at $3.74 million.

We have not included any corporate income or other taxes which will be paid by the developers as a result of their profits from undertaking the subject development, or from the secondary jobs created by the discretionary spending of workers and businesses. Such items have the potential to be substantial contributions to the state coffers.

State Transient Accommodations Tax -- This tax is levied against the gross lodging revenues associated with a transient accommodations operation. At present, the effective rate is 7.25 percent.

We have estimated the gross room revenues of the proposed 228-unit Laie Inn and applied the prevailing rate.

The anticipated "TAT" receipts associated with the subject lodging component ranges from $398,208 in the first year of Phase I operations to a stabilized level of $687,813 annually in year 5 and beyond as the Inn is fully built out. Over the ten-year projection period, the state will receive an estimated $4.92 million from this levy.

State Gross Excise Tax -- This 4.166 percent of expenditures tax was applied against:

- the total estimated construction contract costs;
- the total gross sales of the lodging and commercial operations; and
- the discretionary expenditures of the de facto guest and worker populations of the subject.

The anticipated state excise tax receipts arising from the subject development grow from an estimated $193,161 in the first year of development to a peak of $1.15 million. Over the 10-year study period, the receipts total $8.66 million and stabilize at circa $1.15 million per year.

We have not included any excise tax revenues associated with the direct, local "multiplier effect" expenditures on Oahu, or those created in the secondary market by the suppliers to the operating businesses or secondary worker expenditures.

Total Public Benefits (Revenues) -- In constant 2004 dollars, the aggregate annual tax revenues flowing from the subject development at full project build-out range from:

- $130,231 to $627,351 per year for the City and County of Honolulu, stabilizing over time at the higher figure, totaling $5.04 million over the 10-year development projection model;
- $444,421 to $2,864,532 annually for the State of Hawaii, stabilizing at $2.8 million per year, and cumulatively at $22.4 million over the 10-year forecast period; and
- $574,651 to $3.5 million per year for total tax receipts (county and state), totaling $27.4 million for the initial 10 years of the Laie Inn redevelopment, and stabilizing at $3.5 million per year.

Correlation

Our public cost/benefit assessment model is displayed on Table 19, depicting the correlation of public service costs (per capita allocation basis) with the anticipated tax revenue benefits. As can be seen, in no single year do public coffers suffer a net loss.

CERTIFICATION

The undersigned do hereby certify that, to the best of our knowledge and belief, the statements of fact contained in this report are true and correct. It is further certified that the reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions, and are our personal, impartial, and unbiased professional analyses, opinions, and conclusions. We further certify that we have no present or prospective interest in the property that is the subject of this report, and have no personal interest with respect to the parties involved. We have no bias with respect to the property that is the subject of this report or the parties involved with this assignment. Our engagement in this assignment was not contingent upon developing or reporting predetermined results. Our compensation for completing this assignment is not contingent upon the development or reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this appraisal. The appraisal analyses, opinions, and conclusions were developed, and this report has been prepared, in conformity with the requirements of the Code of Professional Ethics and Standards of Professional Appraisal Practice of the Appraisal Institute, and the Uniform Standards of Professional Appraisal Practice. The use of this report is subject to the requirements of the Appraisal Institute relating to review by duly authorized representatives. The undersigned certify that they have made personal inspections of the property that is the subject of this report. No other persons provided significant real property appraisal assistance other than the undersigned.

TABLE 19

PUBLIC COST/BENEFIT SUMMARY TABLE
Market Study and Economic Impact Analysis of the Proposed Laie Inn Redevelopment
Laie, Oahu, Hawaii
In Constant Year 2004 Dollars

Development Year	1	2	3	4	5	6	7	8	9	10	Total Years 1 Through 10	Stabilized
PUBLIC BENEFITS (Revenues)												
1. REAL PROPERTY TAXES												
Cumulative Assessed Values (1) (2)												
Improvements		$14,201,170	$28,402,340	$28,402,340	$46,765,764	$46,765,764	$46,765,764 #	$46,765,764 #	$46,765,764 #	$46,765,764		$46,765,764
Land	$12,251,250	$12,251,250	$12,251,250	$12,251,250	$12,251,250	$12,251,250	$12,251,250	$12,251,250	$12,251,250	$12,251,250		$12,251,250
Total Assessed Value	$12,251,250	$26,452,420	$40,653,590	$40,653,590	$59,017,014	$59,017,014	$59,017,014	$59,017,014	$59,017,014	$59,017,014		$59,017,014
TOTAL REAL PROPERTY TAXES	**$130,231**	**$281,189**	**$432,148**	**$432,148**	**$627,351**	**$627,351**	**$627,351**	**$627,351**	**$627,351**	**$627,351**	**$5,039,820**	**$627,351**
2. STATE INCOME TAXES												
Taxable Personal Income	$1,862,868	$4,530,828	$8,027,317	$6,693,337	$5,531,380	$5,531,380	$5,531,380	$5,531,380	$5,531,380	$5,531,380	$54,302,629	$5,531,380
Taxable Corporate Profits	$649,125	$1,947,374	$1,677,476	$3,434,069	$2,405,717	$3,897,759	$3,897,759	$3,897,759	$3,897,759	$3,897,759	$29,602,558	$3,897,759
Personal Taxes Paid	$108,046	$262,788	$465,584	$388,214	$320,820	$320,820	$320,820	$320,820	$320,820	$320,820	$3,149,552	$320,820
Corporate Taxes Paid	$12,982	$38,947	$33,550	$68,681	$48,114	$77,955	$77,955	$77,955	$77,955	$77,955	$592,051	$77,955
TOTAL STATE INCOME TAXES	**$121,029**	**$301,735**	**$499,134**	**$456,895**	**$368,934**	**$398,775**	**$398,775**	**$398,775**	**$398,775**	**$398,775**	**$3,741,604**	**$398,775**
3. STATE TRANSIENT ACCOMMODATIONS TAX												
Taxable Rooms Revenues			$5,492,520	$5,492,520	$9,487,080	$9,487,080	$9,487,080	$9,487,080	$9,487,080	$9,487,080	$67,907,520	$9,487,080
TOTAL STATE TAT			**$398,208**	**$398,208**	**$687,813**	**$687,813**	**$687,813**	**$687,813**	**$687,813**	**$687,813**	**$4,923,295**	**$687,813**
4. STATE GROSS EXCISE TAX												
Taxable Transactions												
Construction Contracts	$4,636,605	$13,909,816	$11,981,975	$7,345,370							$37,873,765	
Guest Purchases (less hotel expenses)				$5,905,442	$5,905,442	$13,419,945	$13,419,945	$13,419,945	$13,419,945	$13,419,945	$78,910,609	$13,419,945
Hotel Operations				$10,084,296	$10,084,296	$14,198,692	$14,198,692	$14,198,692	$14,198,692	$14,198,692	$91,162,053	$14,198,692
Total Taxable Transactions	$4,636,605	$13,909,816	$11,981,975	$23,335,107	$15,989,738	$27,618,638	$27,618,638	$27,618,638	$27,618,638	$27,618,638	$207,946,428	$27,618,638
TOTAL STATE EXCISE TAX	**$193,161**	**$579,483**	**$499,169**	**$972,141**	**$666,132**	**$1,150,592**	**$1,150,592**	**$1,150,592**	**$1,150,592**	**$1,150,592**	**$8,663,048**	**$1,150,592**
TOTAL GROSS PUBLIC REVENUES												
To C&C Honolulu (Item #1)	$130,231	$281,189	$432,148	$432,148	$627,351	$627,351	$627,351	$627,351	$627,351	$627,351	$5,039,820	$627,351
To State (Items #2, 3 & 4)	$444,421	$1,162,408	$1,828,658	$2,259,391	$2,350,231	$2,864,532	$2,864,532	$2,864,532	$2,864,532	$2,864,532	$22,367,767	$2,864,532
AGGREGATE TAX REVENUES	**$574,651**	**$1,443,597**	**$2,260,806**	**$2,691,538**	**$2,977,582**	**$3,491,883**	**$3,491,883**	**$3,491,883**	**$3,491,883**	**$3,491,883**	**$27,407,588**	**$3,491,883**
PUBLIC COSTS (Expenses)												
By C&C Honolulu				$334,736	$334,736	$578,180	$578,180	$578,180	$578,180	$578,180	$3,560,373	$578,180
By State of Hawaii				$1,610,948	$1,610,948	$2,782,546	$2,782,546	$2,782,546	$2,782,546	$2,782,546	$17,134,627	$2,782,546
TOTAL PUBLIC COSTS				**$1,945,684**	**$1,945,684**	**$3,360,726**	**$3,360,726**	**$3,360,726**	**$3,360,726**	**$3,360,726**	**$20,694,999**	**$3,360,726**
TOTAL NET PUBLIC BENEFITS												
To C&C Honolulu	$130,231	$281,189	$432,148	$97,412	$292,615	$49,171	$49,171	$49,171	$49,171	$49,171	$1,479,448	$49,171
To State of Hawaii	$444,421	$1,162,408	$1,828,658	$648,443	$739,283	$81,986	$81,986	$81,986	$81,986	$81,986	$5,233,141	$81,986
AGGREGATE NET BENEFITS	**$574,651**	**$1,443,597**	**$2,260,806**	**$745,855**	**$1,031,898**	**$131,156**	**$131,156**	**$131,156**	**$131,156**	**$131,156**	**$6,712,589**	**$131,156**

(1) Assessed value for improvements are based on estimated total ("All In") construction cost plus 25% (profit/other). Improvements are assumed assessed at 50% of completed value in Year 2.

(2) Current land value estimates: mauka 9.75 acres at $25 per square foot and makai .75 acres at $50 per square foot.

Source: The Hallstrom Group, Inc.

The Appraisal Institute conducts programs of continuing education for their designated members. As of the date of this report, James E. Hallstrom, Jr. has completed the requirements of the continuing education program of the Appraisal Institute.

James E. Hallstrom, Jr., MAI, CRE
Hawaii State Certified
General Appraiser CGA-178
Exp. Date December 31, 2005

Tom W. Holliday

/as

4349CR01

Appendix B. Lāʻie Inn Redevelopment Project Investigation of Sewer and Water Requirements

(This appendix makes references to a beach club facility. During the planning process a redesign occurred removing this facility.)

FINAL

Laie Inn Redevelopment Project
Investigation of Sewer and Water Requirements
Laie, Oahu, Hawaii

MAY 2007

NOTE:
1) New TMK numbers were assigned to this property: TMK 5-5-06:039 and 040
2) Beach club has been dropped from the project (01/25/08).

Prepared For:

Hawaii Reserves, Inc.
55-510 Kamehameha Highway
Laie, Hawaii 96726

and

Group 70
925 Bethel Street, 5th Floor
Honolulu, Hawaii 96813

R. M. TOWILL CORPORATION
SINCE 1930

420 Waiakamilo Road, Suite 411
Honolulu, Hawaii 96817-4941
(808) 842-1133 ● Fax: (808) 842-1937
(RMTC Ref: 1-20363-1-E)

FINAL

Laie Inn Redevelopment Project

Investigation of Sewer and Water Requirements

May 2007

Prepared For:

Hawaii Reserves, Inc.
55-510 Kamehameha Highway
Laie, Hawaii 96726

and

Group 70 International, Inc.
925 Bethel Street, 5th Floor
Honolulu, Hawaii 96813

Prepared By:

R. M. Towill Corporation
420 Waiakamilo Road, Suite 411
Honolulu, Hawaii 96817

TABLE OF CONTENTS

		Page
1.0	INTRODUCTION	1
1.1	Project Description	1
1.2	Purpose of Report	1
1.3	References	1
2.0	SEWER SYSTEM	2
2.1	Existing Conditions	2
2.2	Projected Wastewater Flows	3
2.3	Proposed System	3
2.4	Probable Impacts and Mitigative Measures	3
3.0	WATER SYSTEM	5
3.1	Existing Conditions	5
3.2	Projected Water Demands	5
3.3	Proposed System	6
3.4	Probable Impacts and Mitigative Measures	6
4.0	ESTIMATED CONSTRUCTION COST	8

TABLES

Table 1	Existing Wastewater Flows	2
Table 2	Projected Wastewater Flows	3
Table 3	Projected Water Demands	6
Table 4	Projected Fire Flows	6
Table 5	Estimated Construction Cost – Sewer System	8
Table 6	Estimated Construction Cost – Water System	8

ATTACHMENTS

Attachment 1 – Existing Laie Wastewater System

Attachment 2 – Conceptual Sewer Plan

Attachment 3 – Existing Laie Potable Water System

Attachment 4 – Conceptual Water Plan

1.0 INTRODUCTION

1.1 Project Description

The proposed project will entail redevelopment of the existing Laie Inn property into a resort of 220 units, banquet facilities, and swimming pool at the main project site. The existing Laie Inn will be demolished. The existing McDonalds and service station will also be demolished and new structures constructed to house these users on another location on the site. The resort expansion will be on a total of 9.7 acres. In addition, a new beach site facility will be situated on three parcels across Kamehameha Highway (makai side) totaling 1.0 acres. Project lands are owned by Hawaii Reserves, Inc. (HRI).

1.2 Purpose of Report

The purpose of this report is to examine and address the sewer and water systems as follows:

- Description of the existing infrastructure
- Proposed system requirements
  - Flow and demand projections
  - Proposed infrastructure improvements
  - Estimated construction cost of proposed improvements
- Probable impacts and mitigative measures
  - Impacts to existing infrastructure
  - Need for additional investigation and analysis prior to design
  - Contractor responsibilities during construction

1.3 References

1. Engineering Report for the Laie Wastewater Collection System Expansion, August 2000, prepared by R. M. Towill Corporation.

2. Final Environmental Assessment for Laie Wastewater Collection System Expansion Phase II, December 2002, prepared by R. M. Towill Corporation.

2.0 SEWER SYSTEM

2.1 Existing Conditions

The existing Laie Inn (formerly known as the Laniloa Lodge) is currently serviced through a private wastewater collection gravity sewer which connects to the collection, treatment, and disposal system (refer to **Attachment 1**) owned and operated by the City and County of Honolulu (CCH).

Wastewater from the inn is conveyed via an 8-inch sewer towards sewer manhole (SMH) #4 on a 12-inch private gravity line. The private sewer is a polyvinyl chloride (PVC) pipe running along Iosepa Street towards Naniloa Loop. The 12-inch private sewer connects to the CCH wastewater collection system at an 18-inch sewer at a manhole located at the intersection of Iosepa Street and Naniloa Loop. The 18-inch CCH sewer then continues along Naniloa Loop and turns southwest just before the Temple View Apartments. The final leg of the gravity sewer increases to a 24-inch diameter line, which ends at the CCH Laie Wastewater Pump Station. Wastewater is pumped from the station through a 14-inch force main to the CCH Laie Water Reclamation Facility (WRF).

The Laie WRF was expanded in 1997 to a design average flow of 0.90 million gallons per day (mgd), and currently treats approximately 0.60 mgd of wastewater. The Laie WRF utilizes oxidation, filtration and disinfection to treat the wastewater to produce reclaimed water at an "R-1" level, which is the highest level of treatment for reclaimed water. The reclaimed water from the Laie WRF is used for irrigation at various locations in Laie.

Existing facilities at the proposed project site include the Laie Inn, McDonald's Restaurant, and Chevron Service Station. The peak flows generated by these facilities which have been estimated in the Engineering Report for the Laie Wastewater Collection System Expansion (**Reference 1**) are presented in **Table 1**. The proposed beach area is not currently sewered.

Table 1
Existing Wastewater Flows

Facility	Average Dry Weather Flow (mgd)	Peak Wet Weather Flow (mgd)
Laie Inn (94 units)	0.0081	0.0310
McDonald's Restaurant	0.0073	0.0271
Chevron Service Station	0.0014	0.0069
TOTAL	0.0168	0.0650

2.2 Projected Wastewater Flows

Wastewater flow projections for the proposed project are based on the assumptions listed below:

Total Resort Units	220	(Alternative 13, 2/28/07)
Persons/Resort Unit	2	(Reference 1)
Resort Average Flow, gpcd	60	(Reference 1)
Resort Site Area, acres	9.7	
Beach Area, acres	1.0	
Beach Area Average Flow, gpcd	10	(State Dept. of Health, Ch. 11-62)
Maximum Factor	3.15	(Reference 1)
Dry Infiltration/Inflow, gpcd	15	(Reference 1)
Wet Infiltration/Inflow, gad	4,122	(Reference 1)

The projected wastewater flows for the proposed development are presented in **Table 2**. The proposed beach area will consist primarily of a storage structure, so it is assumed a sewer will not be required for the proposed beach area.

Table 2
Projected Wastewater Flows

Facility	Average Dry Weather Flow (mgd)	Peak Wet Weather Flow (mgd)
Laie Inn	0.0330	0.1124
Restaurant / Banquet Facility	0.0128	0.0417
McDonalds	0.0036	0.0147
Service Station	0.0030	0.0123
TOTAL	0.0524	0.1811

2.3 Proposed System

The conceptual sewer plan is presented on **Attachment 2**. Highlights of the conceptual sewer plan are:

- The banquet facility, lobby area and adjacent rooms of the redeveloped Laie Inn will be served by a new 8-inch sewer, which will connect to the existing 12-inch private sewer at SMH #4; the existing 8-inch sewer, which currently is connected to SMH #4 and serves the existing facilities, will be abandoned
- The restaurant will be served by a new 8-inch sewer which will connect to the existing 12-inch private sewer at SMH #5
- The rooms in separate wings from the lobby will be serviced by an 8-inch sewer which will connect to the existing 12-inch private sewer at SMH #3
- The relocated McDonalds and service station will be served by a new 8-inch sewer which will connect to the existing 12-inch private sewer at SMH #2

2.4 Probable Impacts and Mitigative Measures

The proposed project is estimated to generate an average dry weather flow of 0.0524 mgd; this is approximately 0.036 mgd more wastewater than the estimated average dry weather flow of 0.0168 mgd from the current facilities. The existing Laie WRF can accommodate this increase in flow.

The proposed construction of the project's wastewater system is not expected to require the relocation or modification of any existing collection system infrastructure.

An agreement with the Polynesian Cultural Center must be obtained for connection to their 12-inch sewer.

The wastewater flow generation rates assume that low flow fixtures will be specified in the design of the resort and beach area's plumbing facilities. This is consistent with the assumptions stated in **Reference 1**.

Prior to the start of construction, the contractor will be required to verify the location of existing infrastructure, including underground utilities, boxes, and manholes. During construction, the contractor will be required to protect existing infrastructure and to ensure that services are not interrupted within the project area.

3.0 WATER SYSTEM

3.1 Existing Conditions

The Laie Water Company is the private potable water purveyor serving Laie's residential, commercial, and institutional users. The system is not connected to the City and County of Honolulu's Board of Water Supply (BWS) system.

Laie's potable water is derived from the underground artesian aquifer (**Reference 2**). The Laie Water Company owns and operates two wells numbered 3856-04 and -06, which serve as the primary source of drinking water. Back-up sources are provided by three additional wells numbered 3855-06, -07, and -08, known as the BYU Wells, and also owned and operated by the Laie Water Company.

Water pumped from the aquifer is stored in a 2.0 million gallon tank located mauka of the Brigham Young University (BYU) Hawaii campus. Constructed in 1987, the tank consists of a welded steel tank with a spillway elevation of 268 feet (**Reference 2**).

The potable water sources and storage for the Laie area are shown on **Attachment 3**.

The Laie Inn is currently serviced by a 6-inch water line (refer to **Attachment 4**), which branches off an 8-inch water main running along Iosepa Street. A second connection off the same 8-inch main services the Chevron Service Station and McDonald's Restaurant. An existing 12-inch high density polyethylene (HDPE) water main is also located in Kamehameha Highway and Naniloa Loop along the north and east boundaries of the main project site.

3.2 Projected Water Demands

Water demand projections for the proposed project are based on the criteria listed below:

Total Resort Units	220	(Alternative 11, 4/20/06)
Resort Site Area, acres	9.7	
Beach Area, acres	1.0	
Average Day Demand		
Hotel, gal/unit	350	(BWS Design Standards, 2002)
Commercial, gal/ac	3,000	(BWS Design Standards, 2002)
Beach Area, gal/ac	4,000	(BWS Design Standards, 2002)
Maximum Day Demand Factor	1.5	(BWS Design Standards, 2002)
Peak Hour Factor	3.0	(BWS Design Standards, 2002)
Critical Fire Hydrant Residual Pressure, psi	20	(BWS Design Standards, 2002)

Projected water demands for the proposed project are presented in **Table 3**. The water demand calculations can be refined during the design stage by using actual fixture unit counts for the facilities as designed.

The fire flow projections for the structures on the proposed site are listed in **Table 4**. The fire flows were determined by applying the Fire Code of the City and County of Honolulu, which is based on 1997 Uniform Fire Code. The fire flows listed in **Table 4** assume the building construction will meet Type I or Type II criteria per the Uniform Building Code and that the structures are not provided with automatic sprinkler systems. If automatic sprinkler systems are provided in the hotel structure, the fire flow can be reduced to 1,500 gpm.

Table 3 Projected Water Demands			
Facility	Average Day (gpd)	Maximum Day (gpd)	Peak Hour (gpd)
Laie Inn	77,000	115,500	231,000
Restaurant / Banquet Facility	5,100	7,650	15,300
McDonalds	3,600	5,400	10,800
Service Station	3,000	4,500	9,000
TOTAL	88,700	133,050	266,100

Table 4 Projected Fire Flows					
Structure	Fire Area (square feet)	Fire Flow (gpm)	Flow Duration (hours)	Minimum Number of Hydrants	Average Spacing Between Hydrants (feet)
Laie Inn	126,000	3,750	3	4	350
Restaurant	5,600	1,500	2	1	500
Banquet Facility	4,200	1,500	2	1	500
McDonalds/ Service Station	4,000	1,500	2	1	500

Notes:

1. The fire flows listed assume the building construction will meet Type I or Type II criteria per the Uniform Building Code
2. If the buildings are provided with automatic sprinkler systems, the fire flows can be reduced to a minimum of 1,500 gpm

3.3 Proposed System

The conceptual water system plan is presented on **Attachment 4**; highlights of the plan are:

- A 10-inch high density polyethylene (HDPE) line will branch off the existing 12-inch HDPE water main in Naniloa Loop to serve the main project site, with a standard FM meter located on-site
- The existing on-site 6-inch and 8-inch water lines will be abandoned
- Two-inch water laterals (not shown on the plan) will be connected to the 10-inch system to serve each of the resort's buildings

3.4 Probable Impacts and Mitigative Measures

Preliminary hydraulic analysis by Hawaii Reserves, Inc. indicates that the existing water storage and distribution system is capable of providing the required fire flow of 1,500 gpm to the project site. A review of the water demands and hydraulic analysis should be performed at such time that more definitive design information becomes available, such as water fixture units/counts, landscape irrigation requirements and type of building construction.

As discussed previously, low flow fixtures will be specified during the design phase of the project, which will reduce the impact of the proposed project on operating pressures in the existing water system.

Prior to the start of construction, the contractor will be required to verify water infrastructure locations, especially underground waterlines, valves, and valve boxes. Water service, including fire protection, should not be disrupted during construction activities. The relocation or modification of any existing offsite water infrastructure during construction is not anticipated, with the exception of connection of the proposed water system to the existing system.

4.0 ESTIMATED CONSTRUCTION COST

The estimated construction cost for the sewer and water systems for the proposed development are presented in **Table 5** and **Table 6**, respectively.

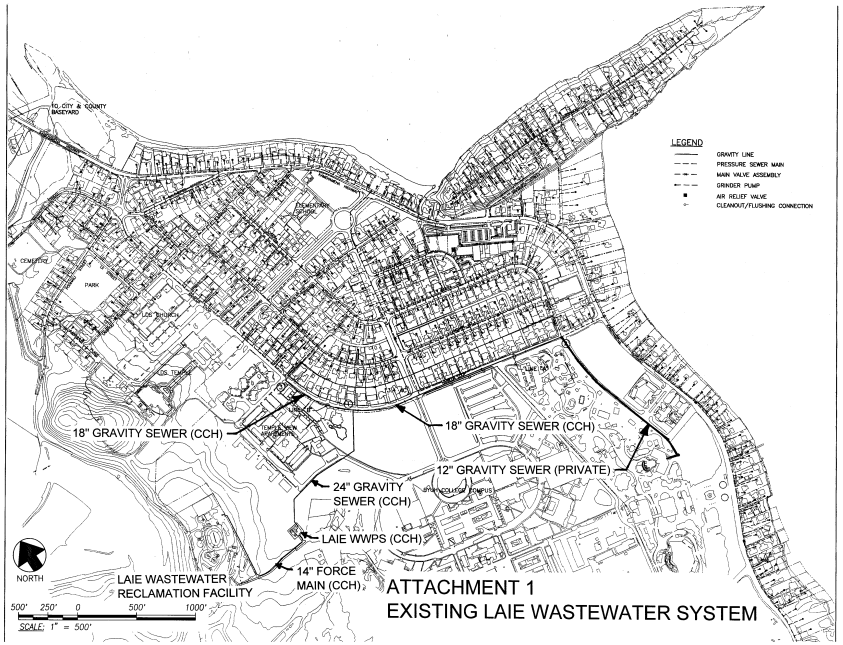
Table 5
Estimated Construction Cost – Sewer System

Item	Quantity	Unit	Unit Cost	Total Cost
8" PVC	700	LF	$100	$70,000
Sewer Manholes	6	EA	$7,000	$42,000
Connection to Existing MHs	3	EA	$2,000	$8,000
TOTAL				$120,000

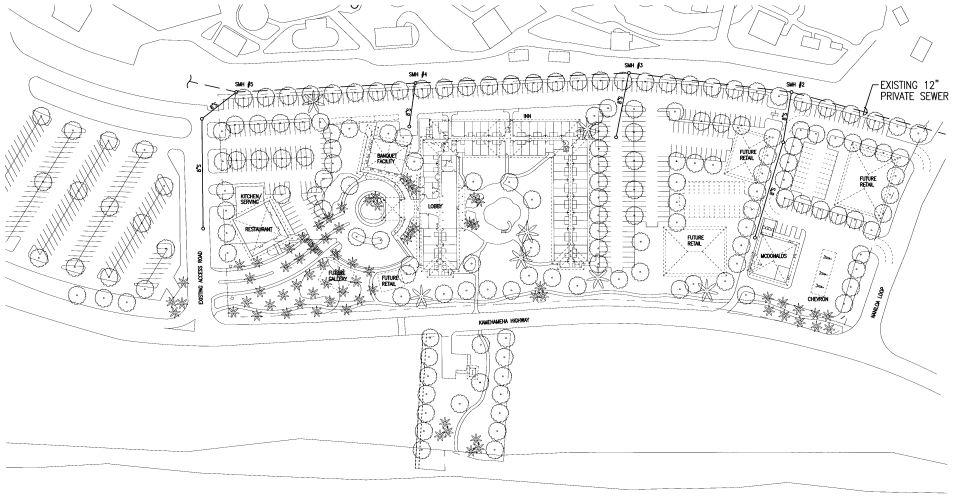
Table 6
Estimated Construction Cost – Water System

Item	Quantity	Unit	Unit Cost	Total Cost
10" HDPE	1,900	LF	$145	$276,000
Fire Hydrants	7	EA	$8,000	$56,000
FM Meter	1	EA	$40,000	$40,000
Connection to Existing Main	1	EA	$20,000	$20,000
TOTAL				$392,000

ATTACHMENTS



ATTACHMENT 1
EXISTING LAIE WASTEWATER SYSTEM

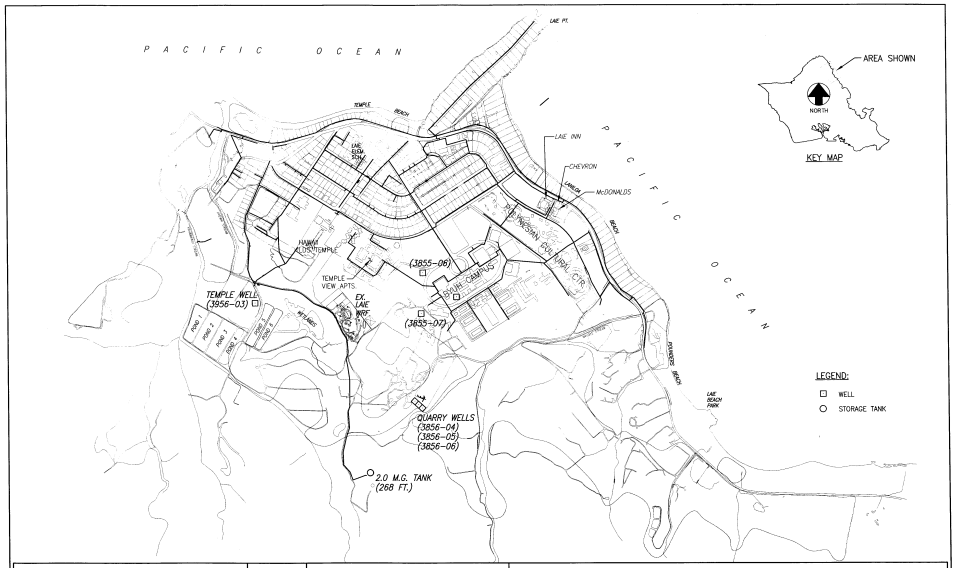


NORTH

ATTACHMENT 2 – CONCEPTUAL SEWER PLAN

0 25 50 100
SCALE IN FEET

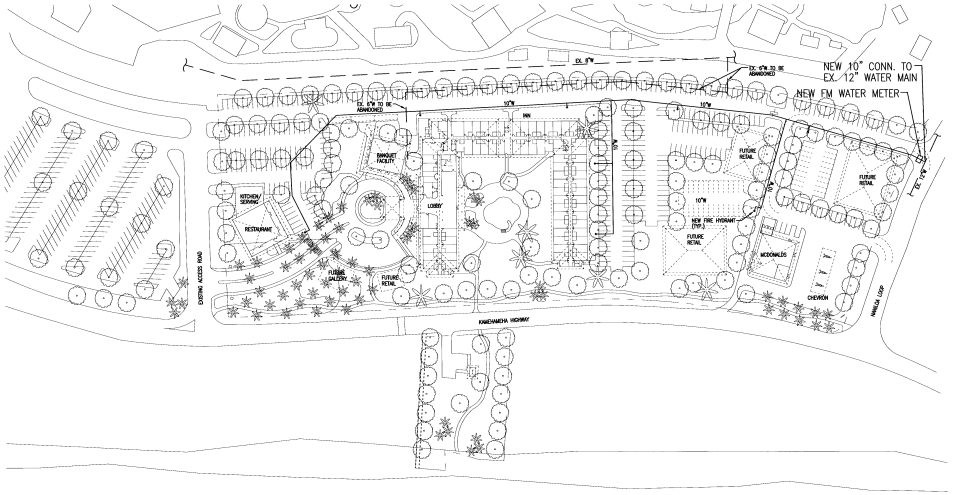
MAY 2007



Planning – Engineering – Environmental Services – Photogrammetry – Surveying – Construction Management
R. M. TOWILL CORPORATION
828 842 1133 420 Waiakamilo Road Suite 411 Honolulu Hawaii 96817-4941

ATTACHMENT 3 - Existing Potable Water System

Figure



NORTH

ATTACHMENT 4 – CONCEPTUAL WATER PLAN

0 25 50 100
SCALE IN FEET

MAY 2007

Appendix C. Lāʻie Inn Storm Water Report – Drainage Calculations

(This appendix makes references to a beach club facility. During the planning process a redesign occurred removing this facility.)

Drainage Calculations

LAIE INN
STORM WATER PLAN
Laie, Oahu, Hawaii
TMK: 5-5-6 : 13, 19, 21, 24, 31

Updated: July 2007

NOTE:
1) New TMK numbers were assigned to this property: TMK 5-5-06:039 and 040
2) Beach club has been dropped from the project (01/25/08).

Prepared For:

Hawaii Reserves, Inc.
55-510 Kamehameha Highway
Laie, Hawaii 96762-1193

R. M. TOWILL CORPORATION
SINCE 1930

420 Waiakamilo Rd., Suite 411
Honolulu, Hawaii 96817-4941
(808) 842-1133 • Fax: (808) 842-1937
(RMTC Ref: 1-20363-01-E)

Drainage Calculations

PROJECT NAME:	UPDATE TO LAIE INN – STORM WATER PLAN
LOCATION:	Laie, Oahu, Hawaii
TAX MAP KEY:	5-5-6: por. 13, 19, 21, 24, 31
PROJECT AREA:	9.7 Acres
OWNER:	Hawaii Reserves, Inc. 55-510 Kamehameha Highway Laie, Hawaii 96762-1193 Contact: Jeff Tyau Phone: (808) 293-6432
ENGINEERING CONSULTANT:	R. M. Towill Corporation 420 Waiakamilo Road, Suite 411 Honolulu, Hawaii 96817-4941 Phone: (808) 842-1133
DATE:	July 12, 2006

Laie Inn Summary

- TMK: 5-5-6: POR. 13, 19, 21, 24, 31
- Site is within FEMA Flood Zone AH, Flood Elevation 10-10.5 feet
- Total Project Area: 9.7 Acres
- Lot Across Kamehameha Highway Project Area: 0.7 Acres

Concept Grading:

Entire Site

- Max Elevation = 12'+/-
- Approximate fill within FEMA AE flood zone (up to 10'-10.5') = 17,700 CY

Grading Summary

	Cut (CY)	Fill (CY)	Net (CY)
Total Site	1,614	21,869	20,255 (Fill)

Peak Flow:

Existing Condition	Laie Inn Site	Lot Across Kamehameha Highway
10 Year Storm (CFS)	35.9	2.9
50 Year Storm (CFS)	49.6	4.2
100 Year Storm (CFS)	63.8	5.6
Proposed Condition		
10 Year Storm (CFS)	49.4	1.6
50 Year Storm (CFS)	63.9	2.5
100 Year Storm (CFS)	78.3	3.4
Increase		
10 Year Storm (CFS)	13.5	-1.3
50 Year Storm (CFS)	14.3	-1.7
100 Year Storm (CFS)	14.5	-2.2

List of Drainage System Assumptions:

- Existing double 42" BYUH outlet invert = -0.7'
- Existing 48" BYUH drain line slope = 0.3%
- Existing BYUH 48" drain line invert at proposed connection = 2.1'
- Existing Laie Town drain line invert at proposed connection = 2.1'

Runoff Volume:

Existing Condition	Laie Inn Site	Lot Across Kamehameha Highway
Land Area (acres)	9.7	1.0
Impervious Area	34%	19%
Curve Number (CN)	66	59
100-Year Runoff	8.4 in	7.2 in
100-Year Runoff Vol.	6.8 ac-ft	0.6 ac-ft
Proposed Condition		
Land Area (acres)	9.7	0.7
Impervious Area	68%	11%
Curve Number (CN)	79	54
100-Year Runoff	10.3 in	6.4 in
100-Year Runoff Vol.	8.3 ac-ft	0.4 ac-ft
Increase		
Impervious Area	34%	-8%
Curve Number (CN)	13	-5
100-Year Runoff Vol.	1.5 ac-ft	-0.2 ac-ft

Runoff Volume due to Fill in FEMA Flood Zone:

- Entire Site: 17,700 CY Fill = 11.0 Acre-feet

Retention Options:

Onsite

1. Underground Storage – 3-foot diameter perforated pipes (capacity = 1.5 acre feet)

Offsite

2. Retention Basin in Wailele area (capacity = 11.2 acre-feet)

List of Appendices:

Appendix A – Figures
Appendix B – Hydraulic Analysis
Appendix C – WinTR-55 Printouts and Peak Flow and Runoff Volume Calculations
Appendix D –TR-20 Printouts and Detention Basin Summaries
Appendix E – Future Backbone Drain System
Appendix F – Miscellaneous Supporting Information

List of Figures:

- Figure 1 – Existing Drain Area
- Figure 2 – Proposed Drain Area
- Figure 3 – FEMA Flood Insurance Rate Map
- Figure 4 – BYUH 48" Drain Areas
- Figure 5 – Laie Town Drain Areas
- Figure 6 – Proposed Site Grading
- Figure 7 – Proposed Site Onsite Drains
- Figure 8 – Underground Storage
- Figure 9 – Offsite Storage – Wailele Retention Basins

1. Existing Conditions

The proposed site for the Laie Inn is situated between the Polynesian Cultural Center and Kamehameha Highway. The Laie Inn project site is approximately 9.7 acres. Existing structures on the project site include a McDonald's restaurant and a Chevron Gas Station. The majority of the existing site is grassed open area (see Figure 1).

The proposed site for the Beach Club is located makai of Kamehameha Highway from the Laie Inn. The Beach Club project site is approximately 0.7 acres. There are currently a few small existing buildings on the site. Runoff from the site is either absorbed by the sandy soils of the site or drains into the ocean directly to the west.

The town of Laie has a history of poor drainage due to the low elevations mauka of Kamehameha Highway and the over-burdened drainage system. The proposed project site also lacks an existing underground drainage system. These circumstances will require significant new infrastructure to handle storm runoff or mitigation measures until the new drainage system can be built.

2. Proposed Conditions

Designing a new drainage system in accordance with the City and County of Honolulu's Rules Relating to Storm Drainage Standards, (2000), will require significant upgrades to the existing drainage system as proposed in the City's *Laie Town Drainage Master Plan* (R.M. Towill Corporation, 2004). However, there is no definitive schedule, nor has funding been secured for the recommended improvements. The Laie Inn is likely to be completed before any improvements are made. As an intermediate solution, the proposed drainage system will be designed to also work with any future improvements.

3. City Requirements

The proposed development will be constructed in accordance with the City & County of Honolulu's "Rules Relating to Storm Drainage Standards", dated January, 2000.

Increase in runoff volume
The City & County of Honolulu requires that the increase in the 100-year storm runoff volume due to any new development be retained. Increase in runoff volume is typically due to the construction of impervious surfaces on previously pervious surfaces.

The main project site will be graded at or above the FEMA FIRM flood elevations. The grading for the site is intended to keep the proposed buildings at a height of 10.5-11 ft. Filling within the FIRM flood zone requires an equal amount of storage capacity be provided to replace the lost storage capacity due to the filled area. The proposed project site is located within Flood Zone AH as shown on the FEMA Flood Insurance Rate Map

(FIRM) 15003C0045 for the City and County of Honolulu (November 20, 2000), (see Figure 3).

New storage facilities with the capacity to store the calculated increase in runoff volume must be constructed. Underground perforated pipes can act as storage facilities if open space is unavailable. A large storm water retention basin consisting of excavated basins and embanked berms can be constructed within the drainage basin of the project site.

Peak Flow
The City & County of Honolulu requires that drainage facilities are able to convey the calculated peak flow. Typically, the 10-year storm peak flow is the required design storm, but because the outlets for this project are submerged at the ocean, the design storm is the 50-year storm. The minimum size drain pipe regardless of the flow being conveyed is 18-inches in diameter. For larger projects there is also a requirement to control the increase in peak flow due to the proposed development. Detention basins can be used to decrease the peak flow to pre-development levels. Detention basins are usually constructed in combination with retention basins.

4. Proposed Drainage System

Proposed Outlet Analysis
Calculations were performed to determine the impacts of discharging the proposed Laie Inn peak runoff to the existing BYUH 48" drain system to the south of the project site (see Figure 4), as well as the existing Laie Town drainage system and ultimately the 25-foot wide channel near the Foodland to the north of the project site (see Figure 5).

Proposed Drain - Existing BYUH 48" Drain & Existing Laie Town Drain
The project site will be graded such that a portion of the project site will slope towards the Polynesian Cultural Center Parking Lot to the south of the project, and a portion of the project site to slope towards the Laie Town to the north of the project. The finished grade of the site will be raised from the existing ground elevations, but will be below the 100-year flood elevation of 10-feet to 10.5-feet. Finished floor elevations of the onsite buildings will be above the 100-year flood elevation, varying between 10.5-feet and 11-feet (see Figure 6).

The existing BYUH 48" drain will discharge the peak runoff from a portion of the project site, with the remainder of the site discharged to the existing Laie Town drain system and Foodland outlet channel. The runoff from the site will be conveyed to the existing drain system (at node 4C on Figure 5) by a proposed drain line installed within Iosepa Street. Grated drain inlets and 18" drain pipes will be located onsite to drain low lying areas and convey the flow to the drain in Iosepa Street (see Figure 7).

This system was proposed to alleviate some of the flow from the BYUH 48" drain. However, the Laie Town Drain system is also undersized and inadequate for conveying the existing peak runoff in the area. In addition, numerous low lying areas within Laie Town have no drainage facilities and are subject to flooding even during small storms. With the existing conditions in consideration, it was determined that peak runoff from Phase 2 of the project site could be conveyed through the existing Laie Town drainage system without a significant increase to the existing flood problem. The increase in peak flow due to construction of the project site is approximately 14.5 cfs (from WinTr-55 calculations, Appendix C). Offsite basins with spillways are proposed to decrease the peak flows to both the BYUH 48" Drain areas and the Laie Town areas (see Section 6. Proposed Offsite Retention Basins).

If the backbone drainage system improvements (Laie Town Drainage Master Plan, by R. M. Towill Corporation, dated September 2004) are built, then the proposed drainage system would be able to handle a 100-year storm.

5. Proposed Onsite Retention Basins

Increase in Runoff Volume
The proposed layout for Laie Inn will increase the impervious area due to new buildings and walkways. This will cause an increase of storm water runoff to be generated. For the site, there is a 34% increase of impervious area and an increase of 1.5 acre-feet of runoff volume.

Proposed Storage
Options for providing the required storage capacity include various offsite locations within the same watershed in combination with onsite perforated pipes. Although storage requirements could be completely fulfilled offsite, it is recommended to provide the required storage due to the development on the project site. This will help to alleviate local runoff during smaller storms. During larger storms where the FEMA 100-Year flood elevations are attained, the offsite storage will help to alleviate any additional flooding caused by raising the ground of the project site above the flood elevations.

Onsite Storage – Combination Above Ground and Underground Storage
The system of underground pipe retention basins has approximately 4090 LF of 3-foot diameter drain pipe (see Figure 8).

6. Proposed Offsite Retention Basin

Increase in Runoff Volume
The proposed drainage system does not require the main project site to be graded at or above the FEMA FIRM flood elevations. However, the proposed building finished floors need to be above the flood elevations, and large onsite depressions need to be filled in order to minimize flooding. Filling the total project site requires approximately 17,700 CY, equivalent to 11.0 acre-feet.

Proposed Storage Volume and Decrease in Peak Flow
To compensate for the loss of storage volume in the flood zone due to the required grading of the project site several offsite retention basins were considered. The basins considered were able to provide retention volumes greater than the volume lost due to the grading of the project

The retention basins were also able to detain storms and release the storm water safely over spillways, ultimately decreasing the peak flows from their drainage areas. The basins were able to decrease the peak flows by more than the increase in peak flow due to construction of the project.

Offsite Storage – Wailele Retention Basin
The offsite storage of the selected basin can be provided by in the open land south-west of the BYUH campus, bordering the north bank of Wailele Stream (see Figure 9). Construction requirements for the retention basin consist of grading a berm at the 35-foot elevation. A spillway at the 34-foot elevation will allow collected runoff to discharge at a controlled rate after the basin is filled. The basin will provide a storage volume of approximately 11.2 acre-feet. The basin will also provide a reduction in peak flow of approximately 116 cfs for the 10-year storm, 154 cfs for the 50-year storm, and 177-cfs for the 100-year storm. The reduction in peak flow provided by the basins is much greater than the 14.5 cfs increase in peak flow due to development of the project.

7. Cost Analysis

1 – Earthwork
A portion of the site will be filled to slope south towards the Polynesian Cultural Center Parking Lot, and a portion of the site will be filled to slope north towards Laie Town. The grading of the site will require approximately 1,614 CY of excavation and 21,879 CY of embankment. The cost is approximately $606,000.

2 – Site Drain System
Onsite drains consist of approximately 4,690 LF of 18-inch to 48-inch diameter RCP pipes. The cost is approximately $676,000.

3 – Onsite Storage – Underground Storage
The above ground storage can be incorporated into the mass grading of the site. Construction of the underground pipe retention basin will require approximately 4090 LF of perforated pipe and crushed rock trench. The cost is approximately $591,000.

4 – Offsite Storage - Wailele Retention Basin
Construction of the Wailele retention basin will require approximately 3,400 CY of embankment. The cost is approximately $123,000.

9. Summary of Costs for a complete System

Price includes:

Earthwork and Site Drain System
Onsite Storage – Underground Storage
Offsite Storage – Wailele Retention Basin

$1,996,000 w/o grading

8. List of References

Laie Town Drainage Master Plan, R. M. Towill Corporation, September 2004.

Rules Relating to Storm Drainage Standards, City and County of Honolulu, Department of Planning and Permitting, January 2000.

Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii, U.S. Department of Agriculture, Soil Conservation Service, August 1972.

TR-20 Project Formulation, U.S. Department of Agriculture, Soil Conservation Service

WinTR-55 Small Watershed Hydrology, Version 1.00.08, National Resources Conversation Service, December 2004.

Laie Inn Storm Water Plan Summary and Cost Matrix July 12, 2007	A EARTHWORK	Increase in Runoff Volume	Fill below FEMA Flood Elevation	Total Required Storage Volume	B SITE DRAINAGE SYSTEM	3 Underground Storage	4 RUNOFF STORAGE OPTIONS - OFFSITE Wailele (D.A. 9) Retention Basin	Recommended Drainage Improvements
Proposed Site - Slope portion of site towards PCC parking lot - Slope portion of site towards Laie Town - Raise ground elevations (below 100-yr flood levels) - Set building floor elevations at 10.5' to 11' MSL - Convey por. of site runoff to exist. BYUH 48" Drain - Convey por. of site runoff to Laie Town Drain System					50-yr storm design (ultimate conditions). Connect to existing Laie Town Drain System in Naniloa Loop near PCC weir 50-yr storm design (ultimate conditions). Connect to existing 48" BYUH drain in PCC parking lot		Top of berm=35' Spillway=34' Bottom of basin=30' Fill=3,400 CY Area = 2.4 ac Storage = 11.2 ac ft Reduction in Peak Flow	
Entire Site (9.7 acres)	Emb.= 21,869 **$604,925**	1.5 ac-ft	17,700 CY (11.0 ac-ft)	12.5 ac-ft	4,690 LF of 18" to 48" RCP drains DMH's and grate inlets **$675,225**	4090 LF 36" Diam. Perf. Pipe (1.5 ac-ft) **$589,657**	10-Yr Storm : 116 cfs 50-Yr Storm : 154 cfs 100-Yr Storm : 177 cfs **$123,000**	**A+B+3+4** **$1,992,807**

Laie Inn-Matrix jn607.xls

Laie Inn
Cost Estimate - Grading, Drainage, Water, Sewer
7/12/2007

Item	Quantity		Unit Cost	Total Cost	Assumptions
Site Grading					
Clearing and Grubbing	9.7	ac	$6,000	$ 59,000	
Mass Excavation	0	cy	$ 12	$ 0	
Mass Embankment	21,869	cy	$ 25	$ 547,000	
Erosion Control	0	ac	$3,000	$ 0	
				$ 606,000	
On-Site Storage - Underground Storage Pipes (On-Site Basins included with Site Grading)					
Excavation	4999	CY	$ 25	$ 125,000	Assume 1' on each side of pipe and 1' below pipe to be gravel.
#3B Fine Gravel	3928	CY	$ 35	$ 138,000	Using 2' cover, total depth = 2+3+1 = 6 ft.
36" Perforated HDPE Drain	4090	lf	$ 80	$ 328,000	total width of trench = 1+3+1 = 5 ft.
				$ 591,000	
Off-Site Storage - Wailele Retention Basin					
Clearing and Grubbing	0.57	ac	$3,000	$ 2,000	
Mass Excavation	0	cy	$ 12	$ 0	
Mass Embankment	3,400	cy	$ 35	$ 119,000	
Erosion Control	0.57	ac	$3,000	$ 2,000	
				$ 123,000	
Drain Pipes					
18" RCP Drain	1800	lf	$ 80	$ 144,000	Includes bedding material and geotextiles
24" RCP Drain	1385	lf	$ 85	$ 118,000	
30" RCP Drain	335	lf	$ 100	$ 34,000	
36" RCP Drain	550	lf	$ 120	$ 66,000	
42" RCP Drain	0	lf	$ 165	$ 0	
48" RCP Drain	620	lf	$ 200	$ 124,000	
Manholes/Drain Inlets	38	ea	$5,000	$ 190,000	
				$ 676,000	
Water Pipes					
10" HDPE	1980	lf	$ 145	$ 288,000	Includes valves & fittings
Fire Hydrants	8	lf	$5,000	$ 40,000	250 ft spacing
Connection to existing main	2	ea	$5,000	$ 10,000	
				$ 338,000	
Sewer System					
6" PVC	700	lf	$ 85	$ 60,000	
Sewer Manholes	5	ea	$7,000	$ 35,000	
Connection to existing manholes	4	ea	$2,000	$ 8,000	
				$ 103,000	
TOTAL GRADING, DRAINAGE, SEWER, WATER				**$2,437,000**	

APPENDIX A

FIGURES

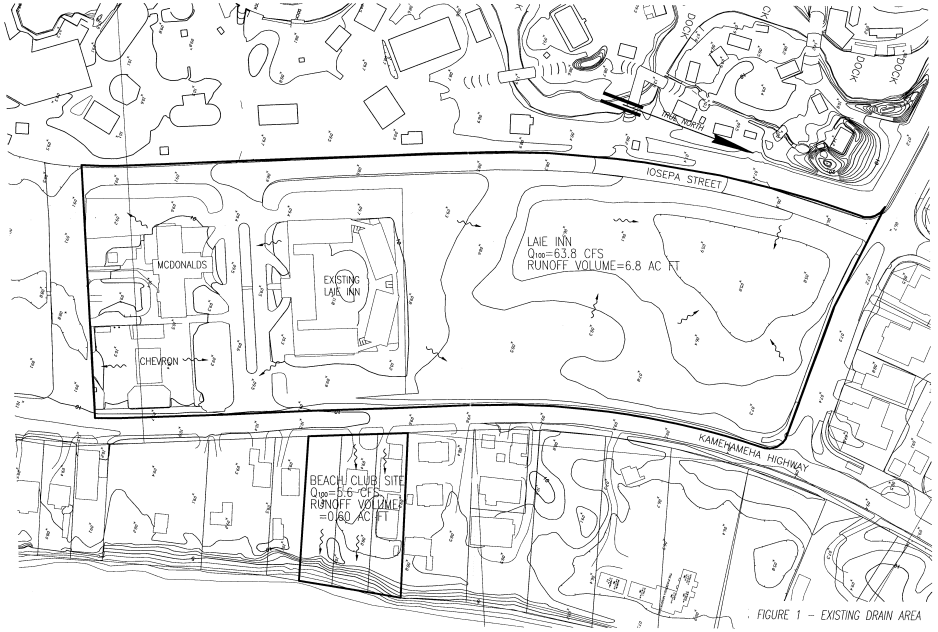


FIGURE 1 – EXISTING DRAIN AREA

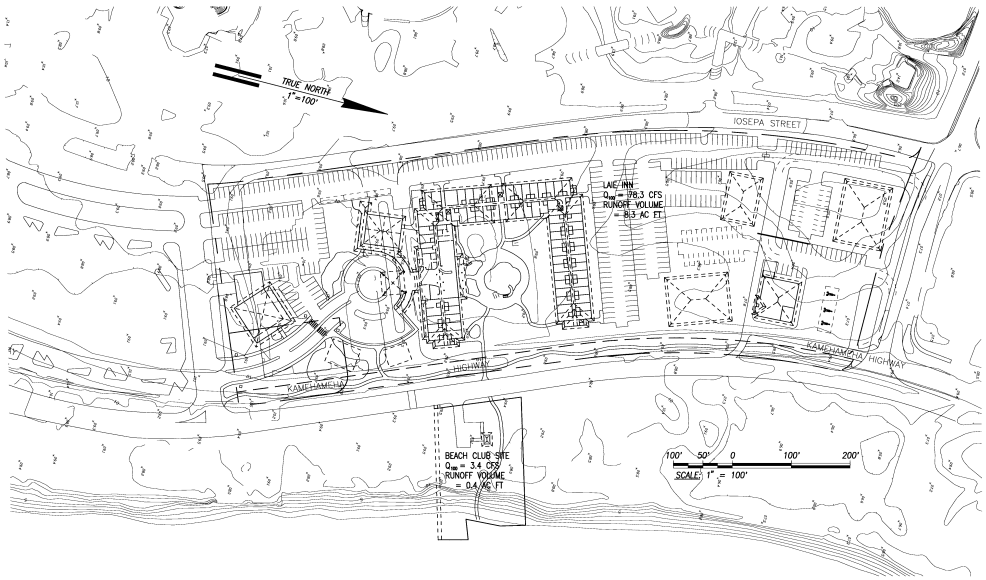


FIGURE 2 – PROPOSED DRAIN AREA

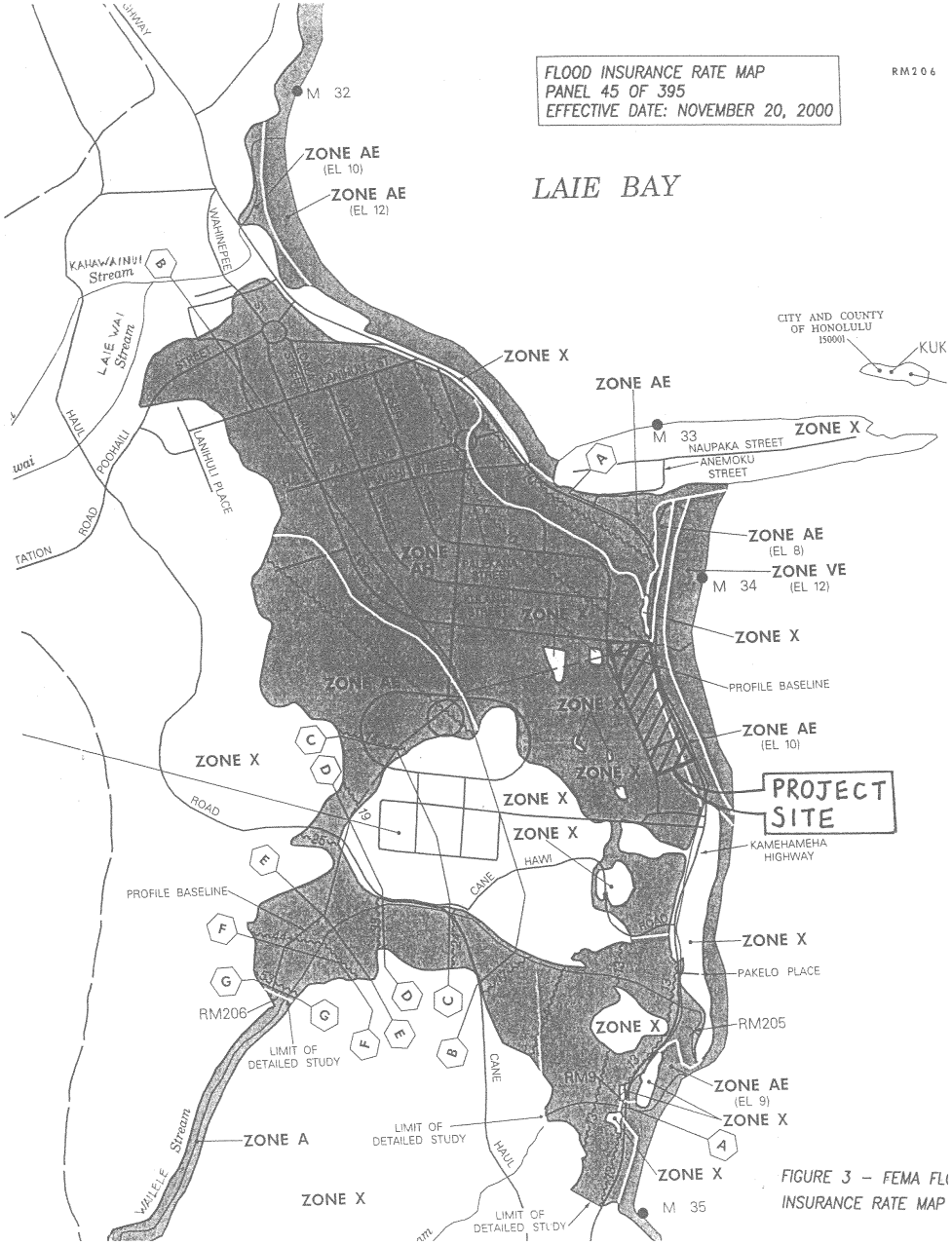


FIGURE 3 – FEMA FL
INSURANCE RATE MAP

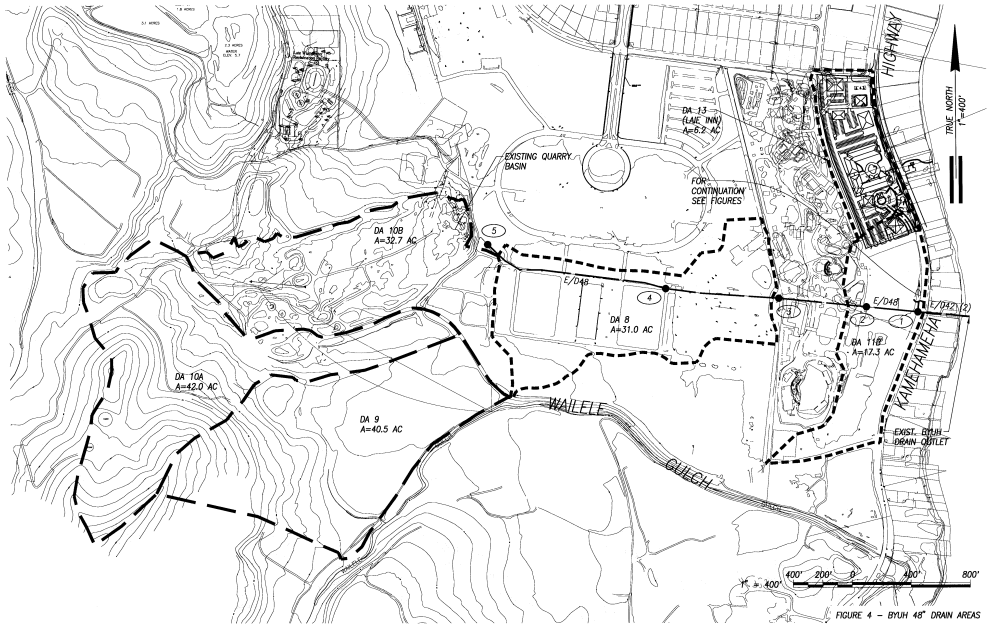


FIGURE 4 – BYUH 48" DRAIN AREAS

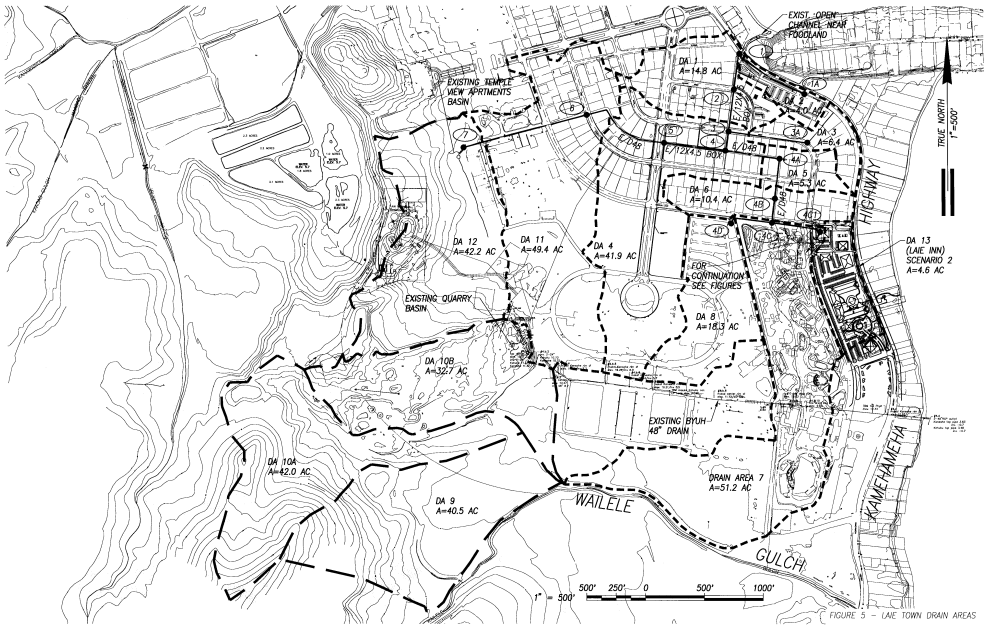
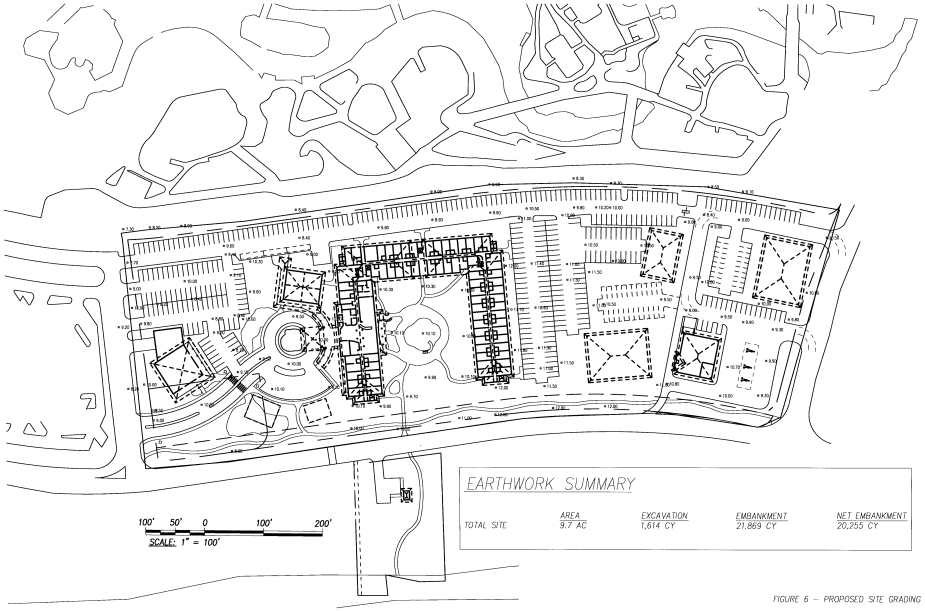


FIGURE 5 – LAIE TOWN DRAIN AREAS



EARTHWORK SUMMARY

	AREA	EXCAVATION	EMBANKMENT	NET EMBANKMENT
TOTAL SITE	9.7 AC	1,614 CY	21,869 CY	20,255 CY

FIGURE 6 – PROPOSED SITE GRADING

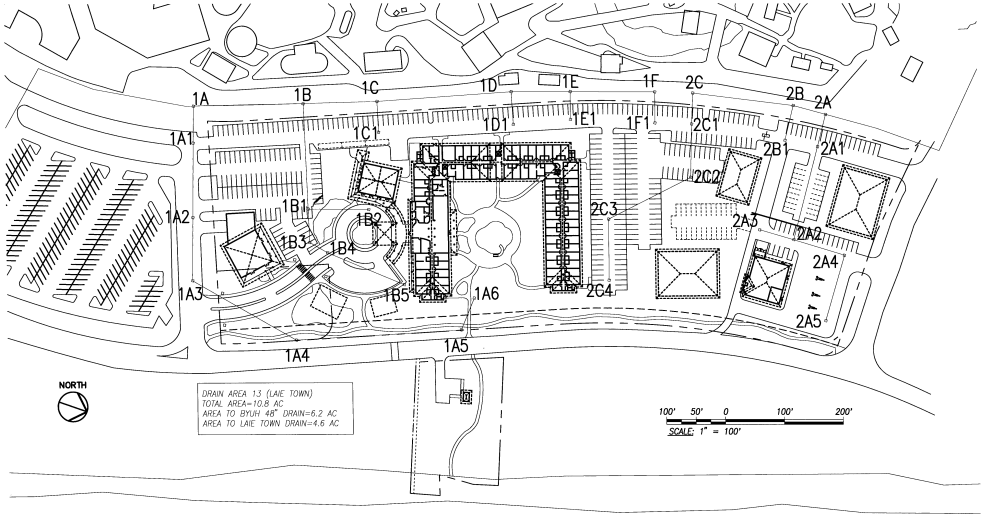


FIGURE 7 – PROPOSED ONSITE DRAINS

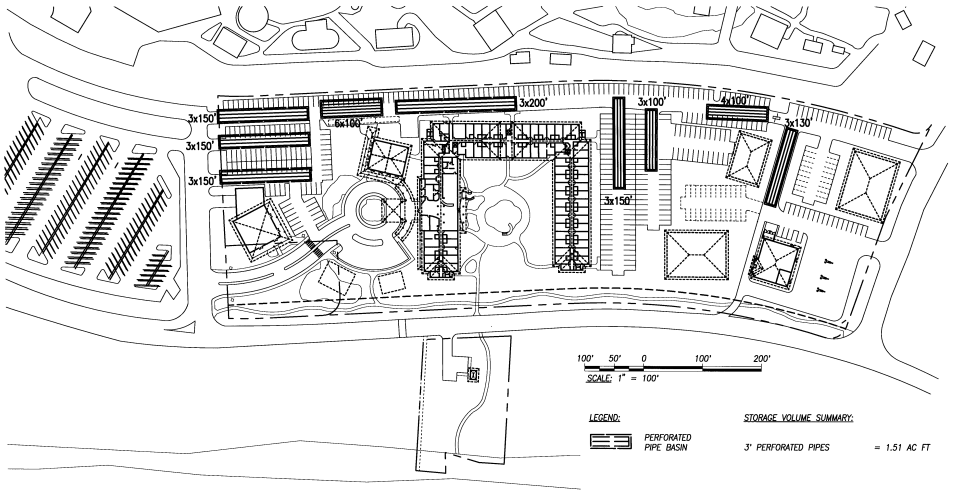


FIGURE 8 – UNDERGROUND STORAGE

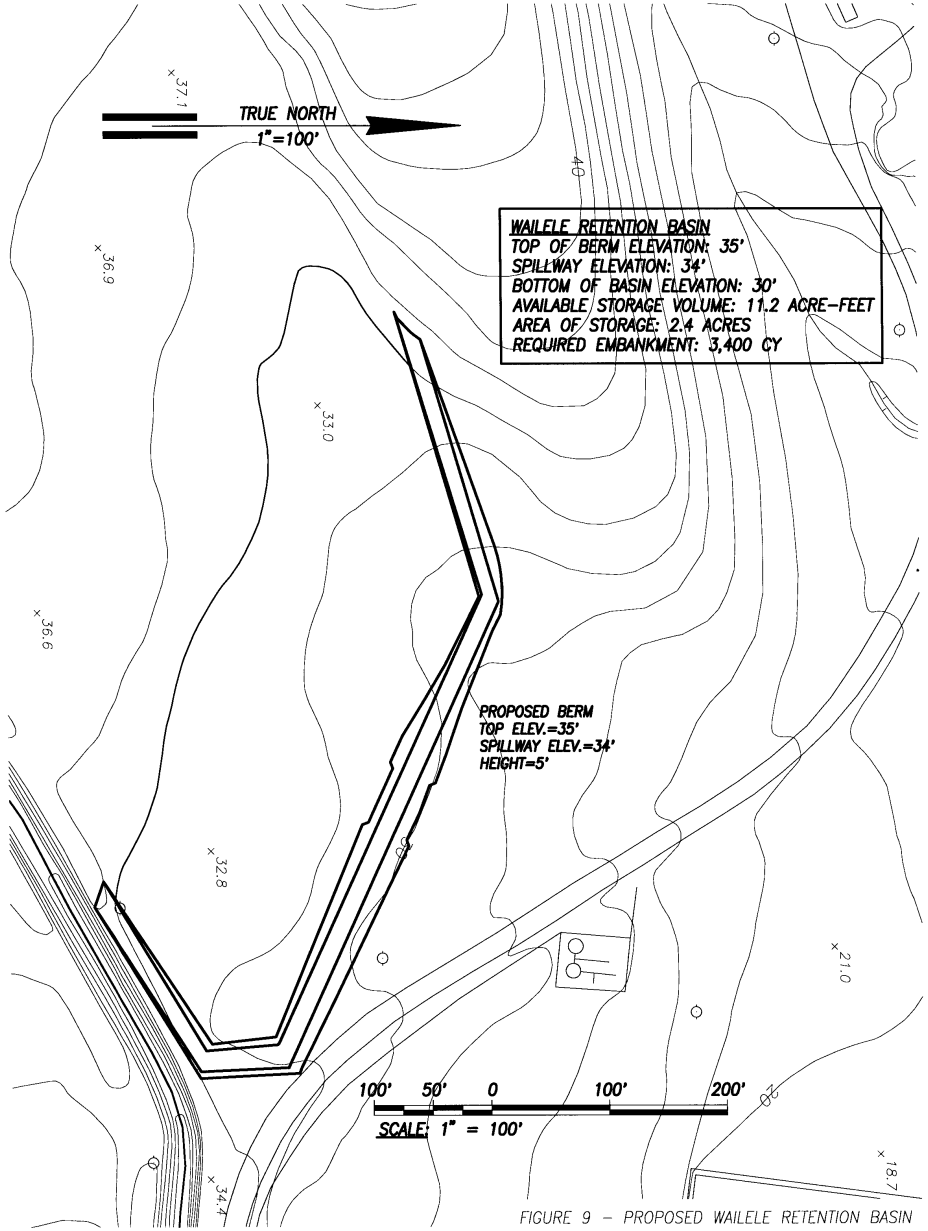


FIGURE 9 – PROPOSED WAILELE RETENTION BASIN

APPENDIX B

HYDRAULIC ANALYSIS

Drainage Calculations
Lake Inn Storm Water Plan
South Portion of Site
50-Year Storm

7/3/2007

Drain Line Node	Area Name	Total Area (ac)	Tc	Tc	C	100 YR I (in/hr)	F	A	Runoff Q=CIA (cfs)	Other Inflows Q (cfs)	Total Inflow Q (cfs)	Curbs Q=CFA (cfs)	Flows E Group E (cfs)	Pipe Qr (cfs)	Qr (ft)	VI (fps)	Pipe/Culvert Diameter/Size Qty	(in)	(ft)	(ft)	L (ft)	n	M	S	Inv. Elev. Up	Inv. Elev. Down	Inside Top of Inlet Elev	Cover (ft)	Cut Ref Elev	MANHOLE LOSSES A	B	C	D	Bend Coef.	HGL Down	HGL Up	Fix Gr.	FB (ft)	Reef (Deg)	Mar VL/VQ	Crt. Crit Ref 2.3	hf Ref 2.3 Table 8	hVD Ref 2.3 Table 8	DOFHSD Ref 2.3 Table 8	k Ref 2.3 Table 8	m Ref 2.3 Table 8	nadj Ref 2.3 Table 8	hadj Ref 2.3 Table 8
Rebuilt portion of cutoff from area behind BYLAH Basin into BYLAH 48". Remainder flows into PCC																																															
ADMINISTRATIVE PROPOSED BOX DRAIN BYLAH 48" DRAIN UPGRADE																																															
Outlet																									-6.90	-6.90	6.90	9.60							1.00												
1	add Area 1-10	169.1	37.0	27.3	0.46	3.02	1.30	17.2	264.0	38.9	6.2	381.7	0.0	0.0	301.7	6.0	6.6	1	-	8	8	450	0.013	0.0011	0.0021	-5.96	-5.96	0.34	8.96	3.46						2.39	2.39	10.00	Full 8.10	0	0.88							
2		146.2	31.0	31.8	0.36	3.08	1.43	3.0	221.1			221.1	0.0	0.0	221.1	6.8	4.8	1	-	8	8	450	0.013	0.0008	0.0022	-5.91	-5.91	0.89	8.91	3.36						2.79	2.79	10.00	Full 7.25	0	0.88							
3		146.2	31.0	31.8	0.36	3.08	1.43	3.0	221.1			221.1	0.0	0.0	221.1	6.8	4.8	1	-	8	8	600	0.013	0.0008	0.0022	-5.65	-5.65	0.15	8.65	2.47						3.22	3.22	10.00	Full 6.78	0	0.88							
4	add Area 5	146.2	31.0	31.8	0.36	3.08	1.43	3.0	221.1			221.1	0.0	0.0	221.1	5.8	7.4	1	-	8	8	600	0.013	0.0007	0.0021	-5.78	-5.78	-0.78	15.78	1.66						4.87	4.87	10.00	Full 11.13	0	0.85							
5	Area 5,10A,10B	119.2	18.0	18.0	0.52	3.80	1.08	115.0	191.8			191.8	0.0	0.0	191.8	5.0	6.4	1	-	6	6	1550	0.013	0.0021	0.0051	-6.64	-6.64	-0.64	13.04	3.21						6.08	6.08	14.00	Full 5.92	0	0.85							
NEW EBRPA ST. DRAIN FOR PCC																																															
7																									-6.96	-6.96		11.16		0.0						2.39	2.39	9.20	Full 6.81	90	0.00							
10H		6.2	5.0	5.0	0.72	3.00	2.80	0.0	0.0			0.0	36.9	0.0	36.9	0.8	2.0	1	48			70	0.013	0.0007	0.0064	1.20	1.20		3.30	5.2	0.00	0.000	0.000	0.000	0.00	3.19	5.20	8.50	Ent. Cent. 3.38	90	0.02	0.00	0.0419	0.74	1.15	0.00865	2.87	0.018	0.09
10G		6.2	5.0	5.0	0.72	3.00	2.80	0.0	0.0			0.0	36.9	0.0	36.9	4.0	2.0	1	48			260	0.013	0.0007	0.0064	1.20	1.20		4.80	6.0	0.00	0.000	0.000	0.000	0.00	3.19	5.37	10.18	Full 4.73	90	0.02	0.00	0.0419	0.74	1.15	0.00865	2.87	0.018	4.13
10A		5.2	5.0	5.0	0.72	3.00	2.80	0.1	0.9	14.1	2.5	14.0	30.8	0.0	30.8	2.4	2.0	1	48			280	0.013	0.0007	0.0014	1.70	1.70		1.80	6.0	0.00	0.040	0.000	0.027	0.01	3.19	5.44	7.00	Open 1.56	0	0.00	0.00	0.0419	0.74	1.15	0.00865	2.87	0.018	2.53
10B		3.7	5.0	5.0	0.72	3.00	2.80	0.1	0.7	11.4	1.9	11.2	22.0	0.0	22.0	1.4	4.0	1	30			190	0.013	0.0030	0.0050	3.37	3.37		3.63	6.0	0.00	0.040	0.110	0.027	0.00	2.39	5.44	8.98	Full 2.46	0	0.00	0.00	0.0419	0.74	2.28	0.00865	2.87	0.018	1.87
7C		1.7	5.0	5.0	0.72	3.00	2.80	0.1	0.8	3.1	0.5	3.3	10.4	0.0	10.4	1.2	3.4	1	24			120	0.013	0.0062	0.0042	3.90	3.90		2.50	6.0	0.00	0.050	0.000	0.012	0.00	1.79	5.44	7.13	Full 1.81	0	0.00	0.00	0.0419	0.74	1.00	0.00865	2.87	0.018	1.42
7D		1.1	5.0	5.0	0.72	3.00	2.80	0.1	0.7	2.2	0.4	2.6	6.7	0.0	6.7	1.0	3.0	1	18			230	0.013	0.0041	0.0035	4.00	4.00		2.00	6.0	0.00	0.050	0.000	0.012	0.00	1.48	7.91	8.90	Full 1.09	0	0.00	0.00	0.0419	0.74	2.44	0.00865	2.87	0.018	1.72
7E		0.6	5.0	5.0	0.72	3.00	2.80	0.0	0.2	1.4	0.2	1.6	3.8	0.0	3.8	0.8	2.2	1	18			100	0.013	0.0013	0.0016	5.00	5.00		3.40	6.0	0.00	0.029	0.000	0.008	0.01	1.33	8.13	9.36	Full 1.30	0	0.00	0.00	0.0419	0.74	1.40	0.00865	2.87	0.018	0.84
7F		0.4	5.0	5.0	0.72	4.80	2.80	0.1	0.5	1.0	0.3	2.3	2.3	0.0	2.3	0.6	1.2	1	18			140	0.013	0.0005	0.0008	5.75	5.75		2.95	6.0	0.00	0.029	0.000	0.008	0.00	1.15	8.17	8.95	Full 1.61	0	0.00	0.77	0.0419	0.74	0.81	0.00865	2.87	0.018	0.60

Drainage Calculations
Laie Inn Storm Water Plan
South Portion of Site
50-Year Storm

Drain Line Node	Area Name	Total Area (ac)	Tc	Plate 5 Tc	C	100 YR i (in/hr)	F	A (ac)	Runoff q=CiFA (cfs)	Other Inflows q' (cfs)	Other Inflows Area (ac)	Total Inflow (cfs)	Cumul. Q=CiFA (cfs)	Plate 6 Group A (cfs)	Pipe Qr (cfs)	Dn (ft)	Vf (fps)	Pipe/Culvert Qty	Diameter/Size (in)	(ft)	(ft)	L (ft)	n	Sf	S	Inv. Elev. Up	Inv. Elev. Down	Inside Top of Box	Cover (ft)	Hf (ft)	Col Ref. Q_3/Q_1	MANHOLE LOSSES A	B	C	D	Ent. Cont.	H.G.L. Down	H.G.L. Up	Fin. Gr.	FB (ft)	Bend (Deg.)	Max V1,V2	Ent. Ctrl H/D Ref. 2.3	k1 Ref. 2.3 Table 8	h1/D Ref. 2.3 Table 8	Q/D^(5/2) Ref. 2.3 Table 8	k Ref. 2.3 Table 8	m Ref. 2.3 Table 8	He/D Ref. 2.3 Table 8	Hc/D Ref. 2.3
NEW DRAIN INLET 1A1 - 1A6																																					5.56													
1A																										1.70	1.70		1.60									5.64	7.30	Open 1.66	90	0.00								
		2.5	5.0	5.0	0.72	3.00	2.80	0.2	1.0			1.0	15.1	0.0	15.1	1.5	4.8	1	24			60	0.013	0.0044	0.0050					0.27							5.90													
1A1																										2.00	2.00		3.70		0.00	0.090	0.000	0.027	0.00	2.07		6.02	7.70	Full 1.68	0	0.00	1.04	0.0419	0.74	2.66	0.00065	2.67	0.016	1.90
		2.3	5.0	5.0	0.72	3.00	2.80	0.1	0.7			0.7	14.1	0.0	14.1	1.4	4.5	1	24			125	0.013	0.0039	0.0050					0.49							6.50													
1A2																										2.63	2.63		4.58		0.00	0.090	0.000	0.027	0.00	2.00		6.62	9.20	Full 2.58	0	0.00	1.00	0.0419	0.74	2.49	0.00065	2.67	0.016	1.75
		2.2	5.0	5.0	0.72	3.00	2.80	0.3	1.9			1.9	13.4	0.0	13.4	1.4	4.3	1	24			110	0.013	0.0035	0.0050					0.38							7.00													
1A3																										3.18	3.18		3.03		0.00	0.090	0.110	0.040	0.00	1.95		7.24	8.20	Full 0.96	45	0.00	0.97	0.0419	0.74	2.36	0.00065	2.67	0.016	1.66
		1.9	5.0	5.0	0.72	3.00	2.80	0.5	2.8			2.8	11.5	0.0	11.5	1.2	3.7	1	24			200	0.013	0.0026	0.0050					0.52							7.14													
1A4																										4.18	4.18		2.13		0.00	0.050	0.065	0.013	0.00	1.83		7.27	8.30	Full 1.03	22.5	0.00	0.91	0.0419	0.74	2.03	0.00065	2.67	0.016	1.45
		1.4	5.0	5.0	0.72	3.00	2.80	0.1	0.5			0.5	8.7	0.0	8.7	1.0	2.8	1	24			280	0.013	0.0015	0.0050					0.42							7.04													
1A5																										5.58	5.58		2.73		0.00	0.090	0.000	0.080	0.00	1.68		7.33	10.30	Open 2.97	90	0.00	0.84	0.0419	0.74	1.54	0.00065	2.67	0.016	1.16
		1.4	5.0	5.0	0.72	3.00	2.80	1.4	8.2			8.2	8.2	0.0	8.2	1.5	4.7	1	18			60	0.013	0.0061	0.0050					0.37							7.70													
1A6																										5.88	5.88		2.33		0.00	0.090	0.250	0.027	0.00	1.67		8.07	9.70	Full 1.63	0	0.00	1.11	0.0419	0.74	2.98	0.00065	2.67	0.016	1.84
NEW DRAIN INLET 1B1 - 1B2																																					6.19													
1B																										3.37	3.37		3.03									6.44	8.90	Full 2.46	90	0.00								
		1.9	5.0	5.0	0.72	3.00	2.80	0.1	0.8	8.1	1.3	9.0	11.4	0.0	11.4	1.2	3.6	1	24			180	0.013	0.0025	0.0050					0.45							6.89													
1B1																										4.27	4.27		2.13		0.00	0.050	0.120	0.040	0.00	1.82		7.10	8.40	Full 1.30	90	0.00	0.91	0.0419	0.74	2.01	0.00065	2.67	0.016	1.44
		0.4	5.0	5.0	0.72	3.00	2.80	0.4	2.4			2.4	2.4	0.0	2.4	0.6	1.4	1	18			105	0.013	0.0005	0.0050					0.1							7.16													
1B2																										4.80	4.80		3.21		0.00	0.050	0.000	0.013	0.00	1.16		7.22	9.50	Full 2.28	0	0.00	0.77	0.0419	0.74	0.88	0.00065	2.67	0.016	0.61
NEW DRAIN INLET 1B3 - 1B5																																					6.89													
1B1																										4.27	4.27		2.63									7.10	8.40	Full 1.30	0	0.00								
		1.3	5.0	5.0	0.72	3.00	2.80	0.3	1.6			1.6	8.1	0.0	8.1	1.5	4.6	1	18			60	0.013	0.0060	0.0050					0.36							7.46													
1B3																										4.57	4.57		2.63		0.00	0.090	0.110	0.040	0.00	1.65		7.70	8.70	Full 1.00	45	0.00	1.10	0.0419	0.74	2.94	0.00065	2.67	0.016	1.83
		1.1	5.0	5.0	0.72	3.00	2.80	0.1	0.7	2.9	0.5	3.6	6.5	0.0	6.5	1.1	3.7	1	18			35	0.013	0.0039	0.0050					0.14							7.84													
1B4																										4.75	4.75		3.26		0.00	0.050	0.120	0.013	0.00	1.46		8.02	9.50	Full 1.48	0	0.00	0.98	0.0419	0.74	2.37	0.00065	2.67	0.016	1.29
		0.5	5.0	5.0	0.72	3.00	2.80	0.5	2.9			2.9	2.9	0.0	2.9	0.6	1.6	1	18			140	0.013	0.0008	0.0050					0.11							8.13													
1B5																										5.45	5.45		2.26		5.00	0.000	0.020	0.000	0.00	1.18		8.15	9.20	Full 1.05	0	0.00	0.79	0.0419	0.74	1.05	0.00065	2.67	0.016	0.69
NEW DRAIN INLET 1C1																																					6.72													
1C																										3.90	3.90		2.50									6.79	8.40	Full 1.61	90	0.00								
		0.5	5.0	5.0	0.72	3.00	2.80	0.5	3.1			3.1	3.1	0.0	3.1	0.7	1.7	1	18			55	0.013	0.0009	0.0050					0.05							6.84													
1C1																										4.18	4.18		2.73		0.00	0.000	0.020	0.000	0.00	1.19		6.86	8.40	Full 1.54	0	0.00	0.79	0.0419	0.74	1.12	0.00065	2.67	0.016	0.71
NEW DRAIN INLET 1D1																																					7.73													
1D																										4.50	4.50		2.90									7.87	8.90	Full 1.03	90									
		0.4	5.0	5.0	0.72	3.00	2.80	0.4	2.2			2.2	2.2	0.0	2.2	0.6	1.2	1	18			55	0.013	0.0004	0.0050					0.02							7.90													
1D1																										4.78	4.78		2.63		5.00	0.000	0.020	0.000	0.00	1.15		7.92	8.90	Full 0.98	0	0.00	0.77	0.0419	0.74	0.79	0.00065	2.67	0.016	0.58
NEW DRAIN INLET 1E1																																					8.01													
1E																										5.00	5.00		3.40									8.10	9.90	Full 1.80	90									
		0.2	5.0	5.0	0.72	3.00	2.80	0.2	1.4			1.4	1.4	0.0	1.4	0.4	0.8	1	18			45	0.013	0.0002	0.0050					0.0							8.11													
1E 1																										5.73	5.73		2.68		5.00	0.000	0.000	0.000	0.00	1.13		8.11	9.90	Full 1.79	0	0.00	0.75	0.0419	0.74	0.50	0.00065	2.67	0.016	0.44
NEW DRAIN INLET 1F1																																					8.17													
1F																										5.73	5.73		2.58									8.19	9.80	Full 1.61	90	0.00								
		0.3	5.0	5.0	0.72	3.00	2.80	0.3	1.8			1.8	1.8	0.0	1.8	0.5	1.0	1	18			50	0.013	0.0003	0.0050					0.0							8.20													
1F1																										5.98	5.98		2.33		0.00	0.000	0.020	0.000	0.00	1.14		8.22	9.80	Full 1.58	0	0.00	0.76	0.0419	0.74	0.66	0.00065	2.67	0.016	0.51

Drainage Calculations
Laie Inn Storm Water Plan
North Portion of Site
50-Year Storm

Drain Line Node	Area Name	Total Area (ac)	Other Flow Name	Tc	Plate 5 Tc	C	50 YR i (in/hr)	F	A (ac)	Runoff q=CiFA (cfs)	Other Inflows q' (cfs)	Other Inflows Area (ac)	Total Inflow (cfs)	Cumul. Q=CiFA (cfs)	Plate 6 Group A (cfs)	Pipe Qr (cfs)	Dn (ft)	Vf (fps)	Pipe/Culvert Qty	Diameter/Size (in)	(ft)	(ft)	L (ft)	n	Sf	S	Inv. Elev. Up	Inv. Elev. Down	Inside Top of Box	Cover (ft)	Hf (ft)	Col Ref. Q_3/Q_1	MANHOLE LOSSES A	B	C	D	Ent. Cont.	H.G.L. Down	H.G.L. Up	Fin. Gr.	FB (ft)	Bend (Deg.)	Max V1,V2	Ent. Ctrl H/D Ref. 2.3	k1 Ref. 2.3 Table 8	h1/D Ref. 2.3 Table 8	Q/D^(5/2) Ref. 2.3 Table 8	k Ref. 2.3 Table 8	m Ref. 2.3 Table 8	He/D Ref. 2.3 Table 8	Hc/D Ref. 2.3
Assume runoff from area 12 is forced into Laie Town Drain																																																			
Assume runoff from areas 9, 10A, 10B that does not drain into BYUH 48" is forced into Laie Town Drain																																																			
Onsite pipe size check																																																			
LAIE TOWN BOX DRAIN (ENDING AT FOODLAND OUTLET)																																																			
Outlet																																																			
	(Flow at Outlet)	322.1	Food Land	82.0	82.0	0.70	3.00	0.85	0.0	575.0		4.0	575.0	0.0	0.0	575.0																						1.90	Kam Hwy												
1																											-1.30	-1.30	3.20	1.80									1.90	6.00	Open 4.10		0.03								
	Drain Area 1	318.1		82.0	82.0	0.70	3.00	0.85	14.8	567.8			567.8	0.0	0.0	567.8	4.5	10.5	1	-	12	4.5	300	0.013	0.0044	0.0001					1.32							3.23													
2																											-1.27	-1.27	3.23	1.47									3.23	5.70	Full 2.47	0	0.03								
		303.3	Laie Town	20.0	20.0	0.70	3.00	1.80	0.0	1,146.5		6.4	1,146.5	0.0	0.0	1,146.5	4.5	21.2	1	-	12	4.5	360	0.013	0.0179	0.0001					6.44							9.67													
3																											-1.23	-1.23	3.27	2.13									9.67	6.40	Full -3.27	0	0.03								
	Drain Area 4	296.9	Laie Town, PCC, BYUH	20.0	20.0	0.70	3.00	1.80	41.9	1,122.4		90.2	1,122.4	0.0	0.0	1,122.4	4.5	20.8	1	-	12	4.5	170	0.013	0.0171	0.0001					2.91							12.59													
4																											-1.22	-1.22	3.28	0.22									12.59	4.50	Full -8.09	0	0.03								
		164.8	Laie Town, BYUH	30.0	30.0	0.70	3.00	1.45	0.0	501.8		164.8	501.8	0.0	0.0	501.8	4.5	9.3	1	-	12	4.5	530	0.013	0.0034	0.0001					1.82							14.40													
5																											-1.16	-1.16	3.34	0.86									14.40	5.20	Full -9.20	0	0.03								
LAIE TOWN AND TEMPLE VIEW APARTMENTS DRAIN PIPE																																						14.40													
5																											-1.16	-1.16		0.86									14.40	5.20	Full -9.20	90	0.03								
	DA 11 & Overflow	164.8		48.0	48.0	0.70	3.00	1.20	122.6	415.3			415.3	0.0	0.0	415.3	4.0	33.0	1	48			690	0.013	0.0836	0.0001					57.7							72.08													
6	From DA 9,10A,10B																										-1.10	-1.10		3.90		0.00	1.500	-0.770	1.005	0.00	0.00		73.82	6.80	Full -67.02	0	0.02	7.80	0.0419	0.74	12.98	0.00065	2.67	0.016	20.97
	Drain Area 12	42.2		18.0	18.0	0.40	3.00	1.85	42.2	93.7			93.7	0.0	0.0	93.7	4.0	7.5	1	48			1080	0.013	0.0043	0.0001					4.6							78.41													
7																											-0.99	-0.99		2.99		0.00	0.140	0.770	0.094	0.00	4.40		79.42	6.00	Full -73.42	0	0.02	1.10	0.0419	0.74	2.93	0.00065	2.67	0.016	4.86
FOODLAND PARKING LOT DRAIN PIPE																																						1.90													
1																											-1.30	-1.30		1.80									1.90	6.00	Open 4.10	90	0.00								
	Drain Area 2	4.0		5.0	5.0	0.70	3.00	2.80	4.0	23.5			23.5	0.0	0.0	23.5	2.0	7.5	1	24			660	0.013	0.0108	0.0001					7.1							9.03													
1A																											-1.23	-1.23		5.93		0.00	0.280	0.770	0.094	0.00	2.93		10.18	6.70	Full -3.48	0	0.00	1.46	0.0419	0.74	4.16	0.00065	2.67	0.016	2.87
LAIE TOWN DRAIN PIPE																																						9.67													
3																											-1.23	-1.23		2.13									9.67	6.40	Full -3.27	90	0.03								
	Drain Area 3	6.4		5.0	5.0	0.70	3.00	2.80	6.4	37.6			37.6	0.0	0.0	37.6	2.0	12.0	1	24			680	0.013	0.0277	0.0001					18.8							28.49													
3A																											-1.17	-1.17		6.17		0.00	0.610	1.870	0.245	0.00	5.19		31.21	7.00	Full -24.21	0	0.00	2.59	0.0419	0.74	6.65	0.00065	2.67	0.016	4.23
LAIE TOWN, POLYNESIAN CULTURAL CENTER, AND BYUH DRAIN PIPE																																						12.59													
4																											-1.22	-1.22		0.22									12.59	4.50	Full -8.09	90	0.03								
	Drain Area 5	90.2		28.0	28.0	0.70	3.00	1.50	5.3	284.2			284.2	0.0	0.0	284.2	4.0	22.6	1	48			470	0.013	0.0391	0.0001					18.4							30.99													
4A																											-1.17	-1.17		1.87		0.00	1.500	0.000	3.000	0.00	16.18		35.49	4.70	Full -30.79	90	0.02	4.04	0.0419	0.74	8.88	0.00065	2.67	0.016	11.95
	Drain Area 6	84.9		24.0	24.0	0.70	3.00	1.60	10.8	285.3			285.3	0.0	0.0	285.3	4.0	22.7	1	48			340	0.013	0.0395	0.0001					13.4							48.90													
4B																											-1.14	-1.14		1.34		0.00	1.500	0.000	3.000	0.00	16.29		53.40	4.20	Full -49.20	90	0.02	4.07	0.0419	0.74	8.92	0.00065	2.67	0.016	12.01
	Drain Area 7	74.1	Laie Inn	15.0	15.0	0.70	3.00	2.00	51.2	311.3		4.6	311.3	0.0	0.0	311.3	4.0	24.8	1	48			210	0.013	0.0470	0.0154					9.9							63.27													
4C																											2.10	2.10		0.20		0.00	1.500	-1.550	3.000	0.00	18.82		66.22	6.30	Full -59.92	90	0.02	4.71	0.0419	0.74	9.73	0.00065	2.67	0.016	13.54
	Drain Area 8	18.3		17.0	17.0	0.70	3.00	1.90	18.3	73.0			73.0	0.0	0.0	73.0	3.0	10.3	1	36			380	0.013	0.0120	0.0001					4.6							70.77													
4D																											2.14	2.14		-0.14		0.00	0.295	1.550	0.590	0.00	4.98		73.21	5.00	Full -68.21	90	0.01	1.66	0.0419	0.74	4.68	0.00065	2.67	0.016	4.66

Drainage Calculations
Lale Inn Storm Water Plan
North Portion of Site
50-Year Storm

7/3/2007

Basin Line Item	Area Name	Total Area (ac)	Other Flow Name	Tc	Tc	C	25 YR I (in/hr)	I	A	Runoff (cfs/ac)	Other Inflows C	Area (ac)	Total Inflow	Control Q (cfs)	Plate 9 Group A	Flow Qp (cfs)	Qa (cfs)	Qf (cfs)	Pipe/Culvert Diameter/Size (in)	(ft)	(in)	L	n	Sf	S	Inv Elev Up	Inv Elev Down	Inside Top of Curb	Curb (ft)	Hf (ft)	Qu/Qd	MINHOLE LOSSES A	B	C	D	Exit Cont.	H.G.L. Upst	Hgrade Down	Fb (ft)	Bend (Deg.)	Bend Loss K	Sin. C(K) HED Ref 2.3	K1 Ref 2.3 Table 5	L/D Table 5	Sf(FSG) Ref 2.3 Table 5	n Ref 2.3 Table 5	HeD Ref 2.3 Table 5	HeQ Ref 2.3
LALE INN DRAIN PIPE																																															
AC																																															
		4.6																								2.18	2.18		1.25		0.3																	6.98
AC30				5.0	5.0	0.72	3.00	2.60	0.0	0.0			0.0	27.8	0.0	27.8	1.7	4.0	1	36		305	0.013	0.0066		5.60	3.60		1.50		0.30	0.000	0.000	0.040	0.00	2.62	9.60	6.98	0.0	0.00	0.67	0.8418	0.74	1.70	0.00065	2.67	0.018	1.86
		4.6		5.0	5.0	0.72	3.00	2.60	0.1	0.7	14.5	2.4	15.1	27.8	0.0	27.8	1.7	4.0	1	36		250	0.013	0.0050		4.60	4.60		1.40		0.4		0.000	0.000	0.013	0.03	2.62	7.26	9.10	Open 1.50	0	0.00	0.67	0.8418	0.74	1.70	0.00065	2.67	0.018	1.86
2A				5.0	5.0	0.72	3.00	2.60	0.2	1.1	2.9	0.6	4.0	12.8	0.0	12.8	1.2	2.0	1	30		80	0.013	0.0010	0.0050	4.60	4.60		1.00		0.1		0.000	0.000	0.000	0.01	2.03	7.26	7.26	Open 1.14	0	0.00	0.67	0.8418	0.74	1.50	0.00065	2.67	0.018	1.26
2B				5.0	5.0	0.72	3.00	2.60	0.0	0.1	0.7	1.4	0.8	6.0	0.0	6.0	1.1	2.0	1	24		170	0.013	0.0010	0.0050	3.70	3.70		1.00		0.0		0.000	0.000	0.000	0.01	1.06	7.63	7.26	Open 1.07	0	0.00	0.84	0.8418	0.74	1.50	0.00065	2.67	0.018	1.10
2C																										3.70	3.70		1.00																			
LALE INN DRAIN PIPE																																															
2A																																																
		2.4		5.0	5.0	0.72	3.00	2.58	0.8	3.8			3.8	14.8	0.0	14.8	1.2	2.0	1	30		55	0.013	0.0036		4.60	4.60		1.45		0.1															7.36
2A1				5.0	5.0	0.72	3.00	2.58	0.2	1.2	8.5	1.1	7.7	19.8	0.0	19.8	1.1	2.0	1	30		165	0.013	0.0037	0.0036	4.50	4.00		1.00		0.0		0.000	0.000	0.015	0.00	2.57	7.44	8.00	Ext. Cont. 1.56	0	0.00	0.85	0.8418	0.74	1.40	0.00065	2.67	0.018	1.26
2A2				5.0	5.0	0.72	3.00	2.58	0.2	1.2			1.2	10.8	0.0	10.8	1.1	2.0	1	30		165	0.013	0.0037	0.0036	3.70	3.70		1.30		0.1		0.000	0.000	0.015	0.01	1.88	7.63	7.44	Open 1.81	90	0.00	0.78	0.8418	0.74	1.70	0.00065	2.67	0.018	1.13
2A3				5.0	5.0	0.72	3.00	2.58	0.2	1.1			1.1	9.9	0.0	9.9	0.9	1.8	1	18		90	0.013	0.0036	0.0040	3.00	2.50		1.30		0.1		0.000	0.020	0.000	0.00	1.16	7.76	9.00	Full 1.24	0	0.00	0.78	0.8418	0.74	1.14	0.00065	2.67	0.018	0.72
LALE INN DRAIN PIPE																																															
2A4																										3.70	3.70		1.20																		7.55
		1.1		5.0	5.0	0.72	3.00	2.60	0.0	1.5			1.5	8.5	0.0	8.5	0.8	2.0	1	24		80	0.013	0.0050	0.0050	5.10	5.10		1.10		0.1		0.000	0.000	0.000	0.00	1.09	7.76	7.80	Open 1.61	90	0.00	0.78	0.8418	0.74	1.14	0.00065	2.67	0.018	0.95
2A5				5.0	5.0	0.72	3.00	2.60	0.0	4.5			4.5	4.5	0.0	4.5	0.6	2.0	1	18		110	0.013	0.0010	0.0010	6.70	6.70		1.00		0.0		0.000	0.000	0.000	0.00	1.28	8.00	8.00	Open 1.22	0	0.00	0.85	0.8418	0.74	1.00	0.00065	2.67	0.018	0.90
LALE INN DRAIN PIPE																																															
2B																										4.60	4.60		1.00																		7.26
		3.5		5.0	5.0	0.72	3.00	2.58	0.3	2.8			2.8	2.8	0.0	2.8	0.5	1.0	1	18		60	0.013	0.0050	0.0050	5.20	5.20		1.00		0.0		0.000	0.000	0.000	0.00	1.16	7.41	8.40	Full 0.97	0	0.00	0.78	0.8418	0.74	1.00	0.00065	2.67	0.018	0.80
LALE INN DRAIN PIPE																																															
2C																										3.70	3.70		1.00																		7.63
		1.4		5.0	5.0	0.72	3.00	2.60	0.1	0.4			0.4	8.1	0.0	8.1	1.0	2.0	1	24		90	0.013	0.0013	0.0036	4.00	4.00		1.00		0.1		0.000	0.000	0.000	0.00	1.06	7.70	10.00	Open 2.27	90	0.00	0.84	0.8418	0.74	1.50	0.00065	2.67	0.018	1.10
2C1				5.0	5.0	0.72	3.00	2.60	0.3	2.1			2.1	8.5	0.0	8.5	1.0	4.0	1	18		60	0.013	0.0060	0.0050	5.40	5.40		2.00		0.8		0.000	0.000	0.021	0.00	1.06	7.50	10.00	Open 2.08	0	0.00	0.84	0.8418	0.74	2.00	0.00065	2.67	0.018	1.10
2C2				5.0	5.0	0.72	3.00	2.60	0.3	3.1			3.1	8.5	0.0	8.5	1.1	3.0	1	18		110	0.013	0.0036	0.0050	6.70	6.70		2.00		0.0		0.000	0.150	0.040	0.00	1.06	8.70	10.00	Full 1.31	87.5	0.00	1.12	0.8418	0.74	3.00	0.00065	2.67	0.018	1.55
2C3				5.0	5.0	0.72	3.00	2.60	0.3	3.1			3.1	3.1	0.0	3.1	0.7	1.0	1	18		110	0.013	0.0006	0.0050	7.20	7.20		1.00		0.0		0.000	0.000	0.150	0.00	1.46	9.47	10.00	Full 1.13	87.5	0.00	0.46	0.8418	0.74	2.00	0.00065	2.67	0.018	1.20
2C4				5.0	5.0	0.72	3.00	2.60	0.3	3.1			3.1	3.1	0.0	3.1	0.7	1.0	1	18		110	0.013	0.0006	0.0050	7.70	7.70		1.70		0.1		0.000	0.000	0.000	0.00	1.16	8.86	11.00	Full 1.42	0	0.00	0.78	0.8418	0.74	1.14	0.00065	2.67	0.018	0.72

APPENDIX C

WINTR-55 PRINTOUTS AND PEAK FLOW AND RUNOFF VOLUME CALCULATIONS

Laie Inn Runoff Calculations
6/4/2007

TR-55 Method

* Values based on 100-Year, 24-Hour Storm

Laie Inn Site

	Area (ac)	*Q (cfs)	*Runoff (in)	Runoff Volume (ac-ft)
Existing	9.7	63.8	8.4	6.8
Proposed	9.7	78.3	10.3	8.3
Increase		14.5		1.5

Lot Across Kamehameha Highway

	Area (ac)	*Q (cfs)	*Runoff (in)	Runoff Volume (ac-ft)
Existing	1.0	5.6	7.2	0.6
Proposed	0.7	3.4	6.4	0.4
Increase		-2.2		-0.2

Rational Method Check

Q=CIA Q = Flow Rate (cfs)
C = Runoff Coefficient
I = i(Rainfall Intensity) x F(Correction Factor)
A = Area (ac)

Laie Inn Site

	C	i	F	I	A (ac)	Q (cfs)
Existing	0.60	4	2.3	9.2	9.7	53.5
Proposed	0.72	4	2.3	9.2	9.7	64.3
Increase						10.7

53.5<63.8
64.3<78.3
10.7<14.5

Final Values (Use Larger Value)
Existing Q=63.8cfs
Proposed Q=78.3cfs
Increase in Q=14.5cfs

Lot Across Kamehameha Highway

	C	i	F	I	A (ac)	Q (cfs)
Existing	0.37	4	2.3	9.2	1.0	3.4
Proposed	0.31	4	2.3	9.2	0.7	2.0
Increase						-1.4

3.4<5.6
2.0<3.4
-1.4>-2.2

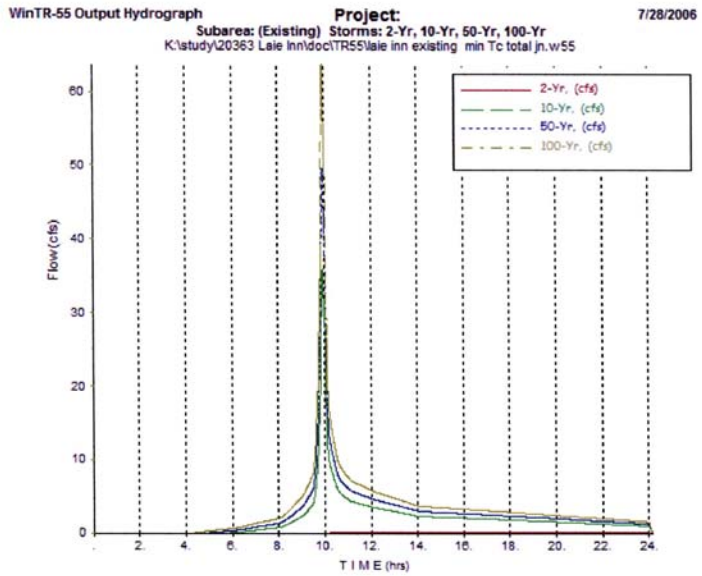
Final Values (Use Larger Value)
Existing Q=5.6cfs
Proposed Q=3.4cfs
Increase in Q=-1.4cfs
Note: The final value for the increase in Q does not reflect the final existing and proposed Q, because the Q values for the rational method differed greater although neither number was used as the final Q value.

RMTC

Honolulu County, Hawaii

Hydrograph Peak/Peak Time Table

Sub-Area or Reach Identifier	Peak Flow and Peak Time (hr) by Rainfall Return Period 2-Yr (cfs) (hr)	10-Yr (cfs) (hr)	50-Yr (cfs) (hr)	100-Yr (cfs) (hr)
SUBAREAS				
Existing	0.13 12.63	35.91 9.93	49.63 9.93	63.80 9.93
REACHES				
OUTLET	0.13	35.91	49.63	63.80



no project title provided
no project subtitle provided

Name of printed page file:
TR20.out

STORM 100-Yr

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
Existing	0.015		8.368		9.93	63.80	4208.29

Line Start Time (hr)	Flow Values @ time increment of 0.006 hr (cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
4.360	0.05	0.05	0.06	0.06	0.06	0.06	0.06
4.404	0.07	0.07	0.07	0.07	0.08	0.08	0.08
4.448	0.08	0.08	0.09	0.09	0.09	0.09	0.10
4.492	0.10	0.10	0.10	0.10	0.11	0.11	0.11
4.536	0.11	0.12	0.12	0.12	0.12	0.12	0.13
4.581	0.13	0.13	0.13	0.14	0.14	0.14	0.14
4.625	0.14	0.15	0.15	0.15	0.15	0.16	0.16
4.669	0.16	0.16	0.16	0.17	0.17	0.17	0.17
4.713	0.17	0.18	0.18	0.18	0.18	0.19	0.19
4.757	0.19	0.19	0.19	0.20	0.20	0.20	0.20
4.802	0.21	0.21	0.21	0.21	0.21	0.22	0.22
4.846	0.22	0.22	0.23	0.23	0.23	0.23	0.23
4.890	0.24	0.24	0.24	0.24	0.25	0.25	0.25
4.934	0.25	0.25	0.26	0.26	0.26	0.26	0.27
4.978	0.27	0.27	0.27	0.27	0.28	0.28	0.28
5.023	0.28	0.28	0.29	0.29	0.29	0.29	0.30
5.067	0.30	0.30	0.30	0.30	0.31	0.31	0.31
5.111	0.31	0.32	0.32	0.32	0.32	0.32	0.33
5.155	0.33	0.33	0.33	0.33	0.34	0.34	0.34
5.200	0.34	0.34	0.35	0.35	0.35	0.35	0.36
5.244	0.36	0.36	0.36	0.36	0.37	0.37	0.37
5.288	0.37	0.38	0.38	0.38	0.38	0.38	0.39
5.332	0.39	0.39	0.39	0.40	0.40	0.40	0.40
5.376	0.40	0.41	0.41	0.41	0.41	0.41	0.42
5.421	0.42	0.42	0.42	0.43	0.43	0.43	0.43
5.465	0.43	0.44	0.44	0.44	0.44	0.44	0.45
5.509	0.45	0.45	0.45	0.46	0.46	0.46	0.46
5.553	0.46	0.47	0.47	0.47	0.47	0.47	0.48
5.597	0.48	0.48	0.48	0.48	0.49	0.49	0.49
5.642	0.49	0.50	0.50	0.50	0.50	0.50	0.51
5.686	0.51	0.51	0.51	0.51	0.52	0.52	0.52
5.730	0.52	0.52	0.53	0.53	0.53	0.53	0.54
5.774	0.54	0.54	0.54	0.54	0.55	0.55	0.55
5.818	0.55	0.55	0.56	0.56	0.56	0.56	0.57
5.863	0.57	0.57	0.57	0.57	0.58	0.58	0.58
5.907	0.58	0.59	0.59	0.59	0.59	0.59	0.60
5.951	0.60	0.60	0.60	0.60	0.61	0.61	0.61
5.995	0.61	0.61	0.62	0.62	0.62	0.62	0.62
6.040	0.63	0.63	0.63	0.64	0.64	0.64	0.65
6.084	0.65	0.65	0.65	0.66	0.66	0.66	0.66

no project title provided
no project subtitle provided

Line Start Time (hr)	Flow Values @ time increment of 0.006 hr (cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)

WinTR-55 Current Data Description

--- Identification Data ---

User: RMTC
Project:
SubTitle:
State: Hawaii
County: Honolulu
Filename: K:\study\20363 Laie Inn\doc\TR55\laie inn existing min Tc total jn.w55

Date: 7/28/2006
Units: English
Areal Units: Acres

--- Sub-Area Data ---

Name	Description	Reach	Area(ac)	RCN	Tc
Existing	Minimum Tc	Outlet	9.7	66	0.100

Total area: 9.70 (ac)

--- Storm Data --

Rainfall Depth by Rainfall Return Period

2-Yr (in)	5-Yr (in)	10-Yr (in)	25-Yr (in)	50-Yr (in)	100-Yr (in)	1-Yr (in)
2.0	.0	9.0	.0	11.0	13.0	.0

Storm Data Source: User-provided custom storm data
Rainfall Distribution Type: Type I
Dimensionless Unit Hydrograph: <standard>

RMTC

Honolulu County, Hawaii

Storm Data

Rainfall Depth by Rainfall Return Period

2-Yr (in)	5-Yr (in)	10-Yr (in)	25-Yr (in)	50-Yr (in)	100-Yr (in)	1-Yr (in)
2.0	.0	9.0	.0	11.0	13.0	.0

Storm Data Source: User-provided custom storm data
Rainfall Distribution Type: Type I
Dimensionless Unit Hydrograph: <standard>

RMTC

Honolulu County, Hawaii

Watershed Peak Table

Sub-Area or Reach Identifier	Peak Flow by Rainfall Return Period 2-Yr (cfs)	10-Yr (cfs)	50-Yr (cfs)	100-Yr (cfs)
SUBAREAS				
Existing	0.13	35.91	49.63	63.80
REACHES				
OUTLET	0.13	35.91	49.63	63.80

RMTC

Honolulu County, Hawaii

Hydrograph Peak/Peak Time Table

Sub-Area or Reach Identifier	Peak Flow and Peak Time (hr) by Rainfall Return Period 2-Yr (cfs) (hr)	10-Yr (cfs) (hr)	50-Yr (cfs) (hr)	100-Yr (cfs) (hr)
SUBAREAS				
Existing	0.13 12.63	35.91 9.93	49.63 9.93	63.80 9.93
REACHES				
OUTLET	0.13	35.91	49.63	63.80

RMTC

Honolulu County, Hawaii

Sub-Area Summary Table

Sub-Area Identifier	Drainage Area (ac)	Time of Concentration (hr)	Curve Number	Receiving Reach	Sub-Area Description
Existing	9.70	0.100	66	Outlet	Minimum Tc

Total Area: 9.70 (ac)

RMTC

Honolulu County, Hawaii

Sub-Area Time of Concentration Details

Sub-Area Identifier/	Flow Length (ft)	Slope (ft/ft)	Mannings's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
Existing User-provided							0.100
						Time of Concentration	0.100

WinTR-55, Version 1.00.08 Page 1 7/28/2006 2:13:39 PM

RMTC

Honolulu County, Hawaii

Sub-Area Land Use and Curve Number Details

Sub-Area Identifier	Land Use	Hydrologic Soil Group	Sub-Area Area (ac)	Curve Number
Existing	CN directly entered by user	-	9.7	66
	Total Area / Weighted Curve Number		9.7	66

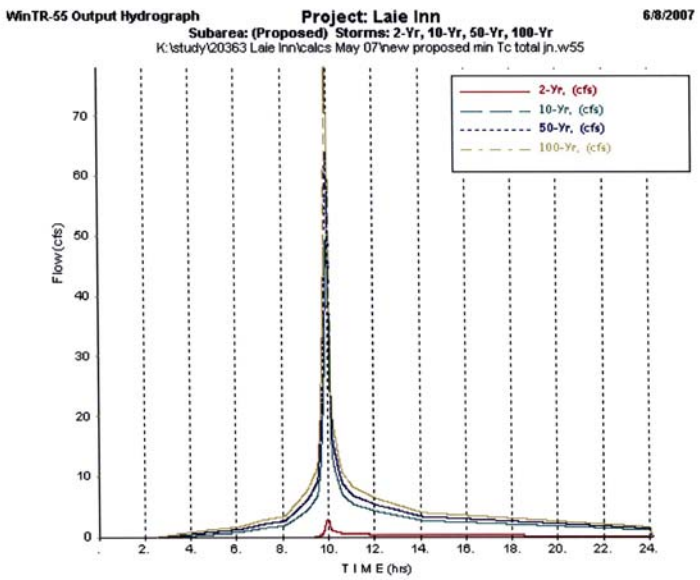
RMTC

Laie Inn

Honolulu County, Hawaii

Hydrograph Peak/Peak Time Table

Sub-Area or Reach Identifier	Peak Flow and Peak Time (hr) by Rainfall Return Period 2-Yr (cfs) (hr)	10-Yr (cfs) (hr)	50-Yr (cfs) (hr)	100-Yr (cfs) (hr)
SUBAREAS				
Proposed	2.88 9.95	49.40 9.93	63.88 9.93	78.29 9.93
REACHES				
OUTLET	2.88	49.40	63.88	78.29



Laie Inn

TR-55 Calculations - Proposed Site

Name of printed page file:
TR20.out

STORM 100-Yr

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
Proposed	0.015		10.277		9.93	78.29	5164.29

Line Start Time (hr)	Flow Values @ time increment of 0.006 hr (cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
2.522	0.05	0.05	0.06	0.06	0.06	0.06	0.07
2.566	0.07	0.07	0.08	0.08	0.08	0.08	0.09
2.610	0.09	0.09	0.10	0.10	0.10	0.10	0.11
2.655	0.11	0.11	0.12	0.12	0.12	0.12	0.13
2.699	0.13	0.13	0.14	0.14	0.14	0.14	0.15
2.743	0.15	0.15	0.16	0.16	0.16	0.16	0.17
2.787	0.17	0.17	0.18	0.18	0.18	0.18	0.19
2.831	0.19	0.19	0.20	0.20	0.20	0.20	0.21
2.876	0.21	0.21	0.22	0.22	0.22	0.22	0.23
2.920	0.23	0.23	0.24	0.24	0.24	0.25	0.25
2.964	0.25	0.25	0.26	0.26	0.26	0.27	0.27
3.008	0.27	0.28	0.28	0.28	0.28	0.29	0.29
3.052	0.29	0.30	0.30	0.30	0.31	0.31	0.31
3.097	0.31	0.32	0.32	0.32	0.33	0.33	0.33
3.141	0.34	0.34	0.34	0.34	0.35	0.35	0.35
3.185	0.36	0.36	0.36	0.37	0.37	0.37	0.38
3.229	0.38	0.38	0.39	0.39	0.39	0.39	0.40
3.273	0.40	0.40	0.41	0.41	0.41	0.42	0.42
3.318	0.42	0.42	0.43	0.43	0.43	0.44	0.44
3.362	0.44	0.45	0.45	0.45	0.46	0.46	0.46
3.406	0.46	0.47	0.47	0.47	0.48	0.48	0.48
3.450	0.49	0.49	0.49	0.50	0.50	0.50	0.51
3.495	0.51	0.51	0.52	0.52	0.52	0.52	0.53
3.539	0.53	0.53	0.54	0.54	0.54	0.55	0.55
3.583	0.55	0.56	0.56	0.56	0.57	0.57	0.57
3.627	0.58	0.58	0.58	0.59	0.59	0.59	0.60
3.671	0.60	0.60	0.61	0.61	0.61	0.61	0.62
3.716	0.62	0.62	0.63	0.63	0.63	0.64	0.64
3.760	0.64	0.65	0.65	0.65	0.66	0.66	0.66
3.804	0.67	0.67	0.67	0.68	0.68	0.68	0.69
3.848	0.69	0.69	0.70	0.70	0.70	0.70	0.71
3.892	0.71	0.71	0.72	0.72	0.72	0.73	0.73
3.937	0.73	0.74	0.74	0.74	0.75	0.75	0.75
3.981	0.76	0.76	0.76	0.77	0.77	0.77	0.78
4.025	0.78	0.78	0.79	0.79	0.79	0.80	0.80
4.069	0.80	0.81	0.81	0.81	0.82	0.82	0.82
4.113	0.83	0.83	0.83	0.83	0.84	0.84	0.84
4.158	0.84	0.85	0.85	0.85	0.86	0.86	0.86
4.202	0.86	0.87	0.87	0.87	0.87	0.88	0.88
4.246	0.88	0.89	0.89	0.89	0.90	0.90	0.90

WinTR-55 Current Data Description

--- Identification Data ---

User: RMTC
Project: Laie Inn
SubTitle:
State: Hawaii
County: Honolulu
Filename: K:\study\20363 Laie Inn\calcs May 07\new proposed min Tc total jn.w55

Date: 6/8/2007
Units: English
Areal Units: Acres

--- Sub-Area Data ---

Name	Description	Reach	Area(ac)	RCN	Tc
Proposed	Minimum Tc	Outlet	9.7	79	0.100

Total area: 9.70 (ac)

--- Storm Data --

Rainfall Depth by Rainfall Return Period

2-Yr (in)	5-Yr (in)	10-Yr (in)	25-Yr (in)	50-Yr (in)	100-Yr (in)	1-Yr (in)
2.0	.0	9.0	.0	11.0	13.0	.0

Storm Data Source: User-provided custom storm data
Rainfall Distribution Type: Type I
Dimensionless Unit Hydrograph: <standard>

RMTC

Laie Inn

Honolulu County, Hawaii

Storm Data

Rainfall Depth by Rainfall Return Period

2-Yr (in)	5-Yr (in)	10-Yr (in)	25-Yr (in)	50-Yr (in)	100-Yr (in)	1-Yr (in)
2.0	.0	9.0	.0	11.0	13.0	.0

Storm Data Source: User-provided custom storm data
Rainfall Distribution Type: Type I
Dimensionless Unit Hydrograph: <standard>

RMTC

Laie Inn

Honolulu County, Hawaii

Watershed Peak Table

Sub-Area or Reach Identifier	Peak Flow by Rainfall Return Period 2-Yr (cfs)	10-Yr (cfs)	50-Yr (cfs)	100-Yr (cfs)
SUBAREAS				
Proposed	2.88	49.40	63.88	78.29
REACHES				
OUTLET	2.88	49.40	63.88	78.29

RMTC

Laie Inn

Honolulu County, Hawaii

Hydrograph Peak/Peak Time Table

Sub-Area or Reach Identifier	Peak Flow and Peak Time (hr) by Rainfall Return Period 2-Yr (cfs) (hr)	10-Yr (cfs) (hr)	50-Yr (cfs) (hr)	100-Yr (cfs) (hr)
SUBAREAS				
Proposed	2.88 9.95	49.40 9.93	63.88 9.93	78.29 9.93
REACHES				
OUTLET	2.88	49.40	63.88	78.29

RMTC

Laie Inn

Honolulu County, Hawaii

Sub-Area Summary Table

Sub-Area Identifier	Drainage Area (ac)	Time of Concentration (hr)	Curve Number	Receiving Reach	Sub-Area Description
Proposed	9.70	0.100	79	Outlet	Minimum Tc

Total Area: 9.70 (ac)

RMTC

Laie Inn

Honolulu County, Hawaii

Sub-Area Time of Concentration Details

Sub-Area Identifier/	Flow Length (ft)	Slope (ft/ft)	Mannings's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
Proposed User-provided							0.100
						Time of Concentration	0.100

RMTC

Laie Inn

Honolulu County, Hawaii

Sub-Area Land Use and Curve Number Details

Sub-Area Identifier	Land Use	Hydrologic Soil Group	Sub-Area Area (ac)	Curve Number
Proposed	CN directly entered by user	-	9.7	79
	Total Area / Weighted Curve Number		9.7	79

RMTC

Laie Inn
Lot Across Kam Hwy
Honolulu County, Hawaii

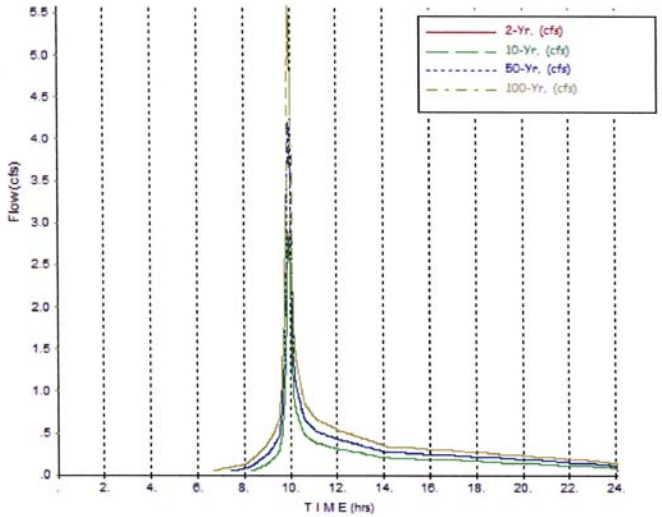
Hydrograph Peak/Peak Time Table

Sub-Area or Reach Identifier	Peak Flow and Peak Time (hr) by Rainfall Return Period 2-Yr (cfs) (hr)	10-Yr (cfs) (hr)	50-Yr (cfs) (hr)	100-Yr (cfs) (hr)
SUBAREAS				
Existing	.00 n/a	2.89 9.94	4.20 9.93	5.59 9.93
REACHES				
OUTLET	.00	2.89	4.20	5.59

WinTR-55 Output Hydrograph **Project: Laie Inn** 7/28/2006

Subarea: (Existing) Storms: 2-Yr, 10-Yr, 50-Yr, 100-Yr

K:\study\20363 Laie Inn\doc\TR55\lot across kam hwy existing min Tc jn.w55



Laie Inn
Lot Across Kam Hwy

Name of printed page file:
TR20.out

STORM 100-Yr

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
Existing	0.002		7.233		9.93	5.59	3580.94

Line Start Time (hr)	Flow Values @ time increment of 0.006 hr (cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
6.672	0.05	0.05	0.05	0.05	0.05	0.05	0.05
6.716	0.05	0.05	0.05	0.05	0.05	0.05	0.06
6.760	0.06	0.06	0.06	0.06	0.06	0.06	0.06
6.804	0.06	0.06	0.06	0.06	0.06	0.06	0.06
6.849	0.06	0.06	0.06	0.06	0.06	0.06	0.06
6.893	0.06	0.06	0.06	0.07	0.07	0.07	0.07
6.937	0.07	0.07	0.07	0.07	0.07	0.07	0.07
6.981	0.07	0.07	0.07	0.07	0.07	0.07	0.07
7.025	0.07	0.07	0.07	0.07	0.07	0.08	0.08
7.070	0.08	0.08	0.08	0.08	0.08	0.08	0.08
7.114	0.08	0.08	0.08	0.08	0.08	0.08	0.08
7.158	0.08	0.08	0.08	0.08	0.08	0.08	0.08
7.202	0.08	0.08	0.08	0.08	0.09	0.09	0.09
7.246	0.09	0.09	0.09	0.09	0.09	0.09	0.09
7.291	0.09	0.09	0.09	0.09	0.09	0.09	0.09
7.335	0.09	0.09	0.09	0.09	0.09	0.09	0.09
7.379	0.09	0.09	0.09	0.10	0.10	0.10	0.10
7.423	0.10	0.10	0.10	0.10	0.10	0.10	0.10
7.468	0.10	0.10	0.10	0.10	0.10	0.10	0.10
7.512	0.10	0.10	0.10	0.10	0.10	0.10	0.10
7.556	0.10	0.10	0.10	0.11	0.11	0.11	0.11
7.600	0.11	0.11	0.11	0.11	0.11	0.11	0.11
7.644	0.11	0.11	0.11	0.11	0.11	0.11	0.11
7.689	0.11	0.11	0.11	0.11	0.11	0.11	0.11
7.733	0.11	0.11	0.12	0.12	0.12	0.12	0.12
7.777	0.12	0.12	0.12	0.12	0.12	0.12	0.12
7.821	0.12	0.12	0.12	0.12	0.12	0.12	0.12
7.865	0.12	0.12	0.12	0.12	0.12	0.12	0.12
7.910	0.13	0.13	0.13	0.13	0.13	0.13	0.13
7.954	0.13	0.13	0.13	0.13	0.13	0.13	0.13
7.998	0.13	0.13	0.13	0.13	0.13	0.13	0.13
8.042	0.13	0.13	0.14	0.14	0.14	0.14	0.14
8.086	0.14	0.14	0.14	0.14	0.14	0.14	0.14
8.131	0.15	0.15	0.15	0.15	0.15	0.15	0.15
8.175	0.16	0.16	0.16	0.16	0.16	0.16	0.16
8.219	0.16	0.16	0.17	0.17	0.17	0.17	0.17
8.263	0.17	0.17	0.18	0.18	0.18	0.18	0.18
8.308	0.18	0.18	0.19	0.19	0.19	0.19	0.19
8.352	0.19	0.19	0.20	0.20	0.20	0.20	0.20
8.396	0.20	0.21	0.21	0.21	0.21	0.21	0.21

Laie Inn
Lot Across Kam Hwy

Line Start Time (hr)	Flow Values @ time increment of 0.006 hr (cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)

WinTR-55 Current Data Description

--- Identification Data ---

User: RMTC
Project: Laie Inn
SubTitle: Lot Across Kam Hwy
State: Hawaii
County: Honolulu
Filename: K:\study\20363 Laie Inn\doc\TR55\lot across kam hwy existing min Tc jn.w55

Date: 7/28/2006
Units: English
Areal Units: Acres

--- Sub-Area Data ---

Name	Description	Reach	Area(ac)	RCN	Tc
Existing	Minimum Tc	Outlet	1	59	0.100

Total area: 1 (ac)

--- Storm Data --

Rainfall Depth by Rainfall Return Period

2-Yr (in)	5-Yr (in)	10-Yr (in)	25-Yr (in)	50-Yr (in)	100-Yr (in)	1-Yr (in)
2.0	.0	9.0	.0	11.0	13.0	.0

Storm Data Source: User-provided custom storm data
Rainfall Distribution Type: Type I
Dimensionless Unit Hydrograph: <standard>

RMTC

Laie Inn
Lot Across Kam Hwy
Honolulu County, Hawaii

Storm Data

Rainfall Depth by Rainfall Return Period

2-Yr (in)	5-Yr (in)	10-Yr (in)	25-Yr (in)	50-Yr (in)	100-Yr (in)	1-Yr (in)
2.0	.0	9.0	.0	11.0	13.0	.0

Storm Data Source: User-provided custom storm data
Rainfall Distribution Type: Type I
Dimensionless Unit Hydrograph: <standard>

RMTC

Laie Inn
Lot Across Kam Hwy
Honolulu County, Hawaii

Watershed Peak Table

Sub-Area or Reach Identifier	Peak Flow by Rainfall Return Period 2-Yr (cfs)	10-Yr (cfs)	50-Yr (cfs)	100-Yr (cfs)
SUBAREAS				
Existing	.00	2.89	4.20	5.59
REACHES				
OUTLET	.00	2.89	4.20	5.59

RMTC

Laie Inn
Lot Across Kam Hwy
Honolulu County, Hawaii

Hydrograph Peak/Peak Time Table

Sub-Area or Reach Identifier	Peak Flow and Peak Time (hr) by Rainfall Return Period 2-Yr (cfs) (hr)	10-Yr (cfs) (hr)	50-Yr (cfs) (hr)	100-Yr (cfs) (hr)
SUBAREAS				
Existing	.00 n/a	2.89 9.94	4.20 9.93	5.59 9.93
REACHES				
OUTLET	.00	2.89	4.20	5.59

WinTR-55, Version 1.00.08 Page 1 7/28/2006 2:16:18 PM

RMTC

Laie Inn
Lot Across Kam Hwy
Honolulu County, Hawaii

Sub-Area Summary Table

Sub-Area Identifier	Drainage Area (ac)	Time of Concentration (hr)	Curve Number	Receiving Reach	Sub-Area Description
Existing	1.00	0.100	59	Outlet	Minimum Tc

Total Area: 1 (ac)

RMTC

Laie Inn
Lot Across Kam Hwy
Honolulu County, Hawaii

Sub-Area Time of Concentration Details

Sub-Area Identifier/	Flow Length (ft)	Slope (ft/ft)	Mannings's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
Existing							
User-provided							0.100
					Time of Concentration		0.100

WinTR-55, Version 1.00.08 Page 1 7/28/2006 2:16:18 PM

RMTC

Laie Inn
Lot Across Kam Hwy
Honolulu County, Hawaii

Sub-Area Land Use and Curve Number Details

Sub-Area Identifier	Land Use	Hydrologic Soil Group	Sub-Area Area (ac)	Curve Number
Existing	CN directly entered by user	-	1	59
	Total Area / Weighted Curve Number		1	59
			=	==

RMTC

Laie Inn
Lot Across Kam Hwy
Honolulu County, Hawaii

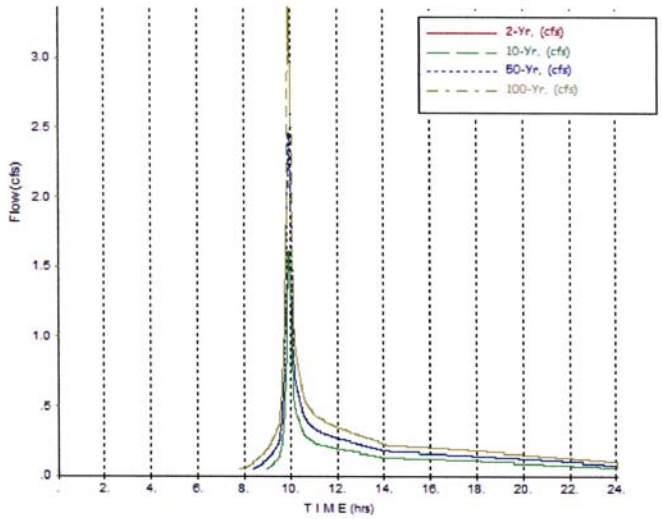
Hydrograph Peak/Peak Time Table

Sub-Area or Reach Identifier	Peak Flow and Peak Time (hr) by Rainfall Return Period 2-Yr (cfs) (hr)	10-Yr (cfs) (hr)	50-Yr (cfs) (hr)	100-Yr (cfs) (hr)
SUBAREAS				
Proposed	.00	1.61	2.46	3.37
	n/a	9.94	9.93	9.93
REACHES				
OUTLET	.00	1.61	2.46	3.37

WinTR-55 Output Hydrograph **Project: Laie Inn** 7/28/2006

Subarea: (Proposed) Storms: 2-Yr, 10-Yr, 50-Yr, 100-Yr

K:\study\20363 Laie Inn\doc\TR55\lot across kam hwy future min Tc jn.w55



Laie Inn
Lot Across Kam Hwy

Name of printed page file:
TR20.out

STORM 100-Yr

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
Proposed	0.001		6.388		9.93	3.37	3095.27

Line Start Time (hr)	Flow Values @ time increment of 0.006 hr (cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
7.798	0.05	0.05	0.05	0.05	0.05	0.05	0.05
7.842	0.05	0.05	0.05	0.05	0.05	0.05	0.05
7.886	0.05	0.05	0.05	0.05	0.05	0.05	0.05
7.930	0.06	0.06	0.06	0.06	0.06	0.06	0.06
7.975	0.06	0.06	0.06	0.06	0.06	0.06	0.06
8.019	0.06	0.06	0.06	0.06	0.06	0.06	0.06
8.063	0.06	0.06	0.06	0.06	0.06	0.06	0.06
8.107	0.06	0.06	0.07	0.07	0.07	0.07	0.07
8.152	0.07	0.07	0.07	0.07	0.07	0.07	0.07
8.196	0.07	0.07	0.07	0.07	0.08	0.08	0.08
8.240	0.08	0.08	0.08	0.08	0.08	0.08	0.08
8.284	0.08	0.08	0.08	0.09	0.09	0.09	0.09
8.328	0.09	0.09	0.09	0.09	0.09	0.09	0.09
8.373	0.09	0.10	0.10	0.10	0.10	0.10	0.10
8.417	0.10	0.10	0.10	0.10	0.10	0.10	0.10
8.461	0.11	0.11	0.11	0.11	0.11	0.11	0.11
8.505	0.11	0.11	0.11	0.11	0.12	0.12	0.12
8.549	0.12	0.12	0.12	0.12	0.12	0.12	0.12
8.594	0.13	0.13	0.13	0.13	0.13	0.13	0.13
8.638	0.13	0.13	0.13	0.14	0.14	0.14	0.14
8.682	0.14	0.14	0.14	0.14	0.14	0.14	0.14
8.726	0.15	0.15	0.15	0.15	0.15	0.15	0.15
8.770	0.15	0.16	0.16	0.16	0.16	0.16	0.16
8.815	0.16	0.16	0.16	0.16	0.17	0.17	0.17
8.859	0.17	0.17	0.17	0.17	0.17	0.18	0.18
8.903	0.18	0.18	0.18	0.18	0.18	0.18	0.18
8.947	0.19	0.19	0.19	0.19	0.19	0.19	0.19
8.992	0.19	0.20	0.20	0.20	0.20	0.20	0.20
9.036	0.20	0.20	0.21	0.21	0.21	0.21	0.21
9.080	0.22	0.22	0.22	0.22	0.22	0.22	0.22
9.124	0.23	0.23	0.23	0.23	0.23	0.24	0.24
9.168	0.24	0.24	0.25	0.25	0.25	0.25	0.25
9.213	0.25	0.26	0.26	0.26	0.26	0.26	0.27
9.257	0.27	0.27	0.28	0.28	0.28	0.28	0.28
9.301	0.29	0.29	0.29	0.29	0.29	0.30	0.30
9.345	0.30	0.30	0.31	0.31	0.31	0.32	0.32
9.389	0.32	0.32	0.32	0.33	0.33	0.33	0.33
9.434	0.33	0.34	0.34	0.34	0.35	0.35	0.35
9.478	0.36	0.36	0.36	0.36	0.37	0.37	0.37
9.522	0.38	0.38	0.39	0.40	0.42	0.43	0.45

Laie Inn
Lot Across Kam Hwy

Line Start Time (hr)	Flow Values @ time increment of 0.006 hr (cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)

WinTR-55 Current Data Description

--- Identification Data ---

User: RMTC
Project: Laie Inn
SubTitle: Lot Across Kam Hwy
State: Hawaii
County: Honolulu
Filename: K:\study\20363 Laie Inn\doc\TR55\lot across kam hwy future min Tc jn.w55

Date: 7/28/2006
Units: English
Areal Units: Acres

--- Sub-Area Data ---

Name	Description	Reach	Area(ac)	RCN	Tc
Proposed	Minimum Tc	Outlet	0.7	54	0.100

Total area: .70 (ac)

--- Storm Data --

Rainfall Depth by Rainfall Return Period

2-Yr (in)	5-Yr (in)	10-Yr (in)	25-Yr (in)	50-Yr (in)	100-Yr (in)	1-Yr (in)
2.0	.0	9.0	.0	11.0	13.0	.0

Storm Data Source: User-provided custom storm data
Rainfall Distribution Type: Type I
Dimensionless Unit Hydrograph: <standard>

RMTC

Laie Inn
Lot Across Kam Hwy
Honolulu County, Hawaii

Storm Data

Rainfall Depth by Rainfall Return Period

2-Yr (in)	5-Yr (in)	10-Yr (in)	25-Yr (in)	50-Yr (in)	100-Yr (in)	1-Yr (in)
2.0	.0	9.0	.0	11.0	13.0	.0

Storm Data Source: User-provided custom storm data
Rainfall Distribution Type: Type I
Dimensionless Unit Hydrograph: <standard>

RMTC

Laie Inn
Lot Across Kam Hwy
Honolulu County, Hawaii

Watershed Peak Table

Sub-Area or Reach Identifier	Peak Flow by Rainfall Return Period 2-Yr (cfs)	10-Yr (cfs)	50-Yr (cfs)	100-Yr (cfs)
SUBAREAS				
Proposed	.00	1.61	2.46	3.37
REACHES				
OUTLET	.00	1.61	2.46	3.37

RMTC

Laie Inn
Lot Across Kam Hwy
Honolulu County, Hawaii

Hydrograph Peak/Peak Time Table

Sub-Area or Reach Identifier	Peak Flow and Peak Time (hr) by Rainfall Return Period 2-Yr (cfs) (hr)	10-Yr (cfs) (hr)	50-Yr (cfs) (hr)	100-Yr (cfs) (hr)
SUBAREAS				
Proposed	.00 n/a	1.61 9.94	2.46 9.93	3.37 9.93
REACHES				
OUTLET	.00	1.61	2.46	3.37

RMTC

Laie Inn
Lot Across Kam Hwy
Honolulu County, Hawaii

Sub-Area Summary Table

Sub-Area Identifier	Drainage Area (ac)	Time of Concentration (hr)	Curve Number	Receiving Reach	Sub-Area Description
Proposed	.70	0.100	54	Outlet	Minimum Tc

Total Area: .70 (ac)

RMTC

Laie Inn
Lot Across Kam Hwy
Honolulu County, Hawaii

Sub-Area Time of Concentration Details

Sub-Area Identifier/	Flow Length (ft)	Slope (ft/ft)	Mannings's n	End Area (sq ft)	Wetted Perimeter (ft)	Velocity (ft/sec)	Travel Time (hr)
Proposed							
User-provided							0.100
						Time of Concentration	0.100

WinTR-55, Version 1.00.08 Page 1 7/28/2006 2:16:38 PM

RMTC

Laie Inn
Lot Across Kam Hwy
Honolulu County, Hawaii

Sub-Area Land Use and Curve Number Details

Sub-Area Identifier	Land Use	Hydrologic Soil Group	Sub-Area Area (ac)	Curve Number
Proposed	CN directly entered by user	-	.7	54
	Total Area / Weighted Curve Number		.7	54

APPENDIX D

TR-20 PRINTOUTS AND DETENTION BASIN SUMMARIES

Drainage Area 9

Wailele Basin

Drainage Area =	40.5	acres
	0.0633	sq.mile
Weighted CN =	63	
Tc =	7	min
	0.117	hr
Top of Berm Elev =	35	ft
Bottom of Berm Elev =	30	ft
Spillway Elev =	34	ft
Storage Volume @ 35' =	11.22	ac-ft

Weir Equation: $Q = C\,L\,H^{1.5}$

Assumptions

1. L = 50'
2. Storage volume is proportional to elevation
3. Basin is empty, starting routing @ basin bottom

Elev	C	L	H	$H^{1.5}$	Q
30	3	50	0	0.00	0
32	3	50	0	0.00	0
34	3	50	0	0.00	0.01
35	3	50	1	1.00	150

Elev	Volume
30	0.00
32	4.23
34	8.80
35	11.22

Duration	Rainfall
$P_{2\text{-}24}$	2"
$P_{10\text{-}24}$	9"
$P_{50\text{-}24}$	11"
$P_{100\text{-}24}$	13"

Summary

	Q (cfs), Weir L = 50'			
	2-year	10-year	50-year	100-year
Before Routing	0	126	176	228
After Routing	0	10	22	51


```
*****************80-80 LIST OF INPUT DATA FOR TR-20 HYDROLOGY*****************

JOB TR-20                        FULLPRINT          SUMMARY
TITLE 001 FN:jn83.txt
TITLE 002 SCS (2-, 10-, 50- and 100-YR, 24-HR STORM)
 3 STRUCT      01
 8                       30.0        0.0         0.0
 8                       34.0        0.01        8.80
 8                       35.0        150.0       11.22
 9 ENDTBL
 6 RUNOFF 1    01     1 0.0633      63.0        0.117       1     1   1 jn83
 6 RESVOR 2    01 1   2 30.0                                 1     1   1 STRUCT01
   ENDATA
 7 INCREM 6              0.100
 7 COMPUT 7    01    01 0.0         2.0         1.0         1 2  01  01 2-YR
   ENDCMP 1
 7 COMPUT 7    01    01 0.0         9.0         1.0         1 2  01  02 10-YR
   ENDCMP 1
 7 COMPUT 7    01    01 0.0         11.0        1.0         1 2  01  03 50-YR
   ENDCMP 1
 7 COMPUT 7    01    01 0.0         13.0        1.0         1 2  01  04 100-YR
   ENDCMP 1
   ENDJOB 2

*******************************END OF 80-80 LIST*******************************

TR20 ------------------------------------------------------------------- SCS -
                                FN:jn83.txt                              VERSION
07/03/**          SCS (2-, 10-, 50- and 100-YR, 24-HR STORM)            2.04TEST
10:42:43                   PASS   1   JOB NO.   1                       PAGE   1


EXECUTIVE CONTROL  INCREM    MAIN TIME INCREMENT =   .100 HOURS


EXECUTIVE CONTROL  COMPUT    FROM STRUCTURE  1  TO STRUCTURE  1          2-YR
    STARTING TIME =    .00       RAIN DEPTH =  2.00       RAIN DURATION =  1.00
    ANT. RUNOFF COND. = 2        MAIN TIME INCREMENT =   .100 HOURS
    ALTERNATE NO. = 1            STORM NO. = 1            RAIN TABLE NO. = 1


OPERATION RUNOFF    STRUCTURE  1
         OUTPUT HYDROGRAPH =  1      AREA =    .06 SQ MI
         INPUT RUNOFF CURVE = 63.    TIME OF CONCENTRATION =   .12 HOURS
         COMPUTED INTERNAL TIME INCREMENT =  .0156 HOURS

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                   .00 WATERSHED INCHES;     141 CFS-HRS;        .0 ACRE-FEET.


OPERATION RESVOR    STRUCTURE  1
         INPUT HYDROGRAPH 1       OUTPUT HYDROGRAPH 2
         SURFACE ELEVATION =    30.00

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                   .00 WATERSHED INCHES;     140 CFS-HRS;        .0 ACRE-FEET.
```

```
EXECUTIVE CONTROL  ENDCMP    COMPUTATIONS COMPLETED FOR PASS   1
□

TR20 ---------------------------------------------------------------------- SCS -
                                FN:jn83.txt                                VERSION
07/03/**            SCS (2-, 10-, 50- and 100-YR, 24-HR STORM)            2.04TEST
10:42:43                     PASS   2   JOB NO.   1                       PAGE   2


EXECUTIVE CONTROL  COMPUT    FROM STRUCTURE  1  TO STRUCTURE  1         10-YR
    STARTING TIME =   .00       RAIN DEPTH =  9.00       RAIN DURATION =  1.00
    ANT. RUNOFF COND. = 2       MAIN TIME INCREMENT =   .100 HOURS
    ALTERNATE NO. = 1           STORM NO. = 2            RAIN TABLE NO. = 1


OPERATION RUNOFF    STRUCTURE  1
         OUTPUT HYDROGRAPH =  1      AREA =    .06 SQ MI
         INPUT RUNOFF CURVE = 63.    TIME OF CONCENTRATION =   .12 HOURS
         COMPUTED INTERNAL TIME INCREMENT =  .0156 HOURS

    PEAK TIME(HRS)              PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
        9.96                          125.6                        (RUNOFF)

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  4.47 WATERSHED INCHES;     182 CFS-HRS;      15.1 ACRE-FEET.

    DURATION(HRS)   2      4      6      8     10     12     14     16
    FLOW(CFS)      15     11      9      8      7      6      5      2

    DURATION(HRS)  17
    FLOW(CFS)       0


OPERATION RESVOR    STRUCTURE  1
         INPUT HYDROGRAPH 1        OUTPUT HYDROGRAPH 2
         SURFACE ELEVATION =    30.00

    PEAK TIME(HRS)              PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       13.76                            9.9                          34.07

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  1.86 WATERSHED INCHES;      76 CFS-HRS;       6.3 ACRE-FEET.

    DURATION(HRS)   2      4      6      8     10     11
    FLOW(CFS)       9      8      7      6      4      0


EXECUTIVE CONTROL  ENDCMP    COMPUTATIONS COMPLETED FOR PASS   2
□

TR20 ---------------------------------------------------------------------- SCS -
                                FN:jn83.txt                                VERSION
07/03/**            SCS (2-, 10-, 50- and 100-YR, 24-HR STORM)            2.04TEST
10:42:43                     PASS   3   JOB NO.   1                       PAGE   3


EXECUTIVE CONTROL  COMPUT    FROM STRUCTURE  1  TO STRUCTURE  1         50-YR
    STARTING TIME =   .00       RAIN DEPTH = 11.00       RAIN DURATION =  1.00
    ANT. RUNOFF COND. = 2       MAIN TIME INCREMENT =   .100 HOURS
    ALTERNATE NO. = 1           STORM NO. = 3            RAIN TABLE NO. = 1
```



```
OPERATION RUNOFF    STRUCTURE  1
         OUTPUT HYDROGRAPH =  1      AREA =    .06 SQ MI
         INPUT RUNOFF CURVE = 63.    TIME OF CONCENTRATION =   .12 HOURS
         COMPUTED INTERNAL TIME INCREMENT =  .0201 HOURS

    PEAK TIME(HRS)              PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
        9.95                          175.6                        (RUNOFF)

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  6.14 WATERSHED INCHES;     251 CFS-HRS;      20.7 ACRE-FEET.

    DURATION(HRS)   2      4      6      8     10     12     14     16
    FLOW(CFS)      21     15     11     10      9      8      6      4

    DURATION(HRS)  18     18
    FLOW(CFS)       1      0


OPERATION RESVOR    STRUCTURE  1
         INPUT HYDROGRAPH 1        OUTPUT HYDROGRAPH 2
         SURFACE ELEVATION =    30.00

    PEAK TIME(HRS)              PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
       11.42                           21.6                         34.14

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  3.53 WATERSHED INCHES;     144 CFS-HRS;      11.9 ACRE-FEET.

    DURATION(HRS)   2      4      6      8     10     12     14
    FLOW(CFS)      16     11     10      9      8      6      0


EXECUTIVE CONTROL  ENDCMP    COMPUTATIONS COMPLETED FOR PASS   3
□

TR20 ---------------------------------------------------------------------- SCS -
                                FN:jn83.txt                                VERSION
07/03/**            SCS (2-, 10-, 50- and 100-YR, 24-HR STORM)            2.04TEST
10:42:43                     PASS   4   JOB NO.   1                       PAGE   4


EXECUTIVE CONTROL  COMPUT    FROM STRUCTURE  1  TO STRUCTURE  1         100-YR
    STARTING TIME =   .00       RAIN DEPTH = 13.00       RAIN DURATION =  1.00
    ANT. RUNOFF COND. = 2       MAIN TIME INCREMENT =   .100 HOURS
    ALTERNATE NO. = 1           STORM NO. = 4            RAIN TABLE NO. = 1


OPERATION RUNOFF    STRUCTURE  1
         OUTPUT HYDROGRAPH =  1      AREA =    .06 SQ MI
         INPUT RUNOFF CURVE = 63.    TIME OF CONCENTRATION =   .12 HOURS
         COMPUTED INTERNAL TIME INCREMENT =  .0201 HOURS

    PEAK TIME(HRS)              PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
        9.95                          228.3                        (RUNOFF)

    RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  7.88 WATERSHED INCHES;     322 CFS-HRS;      26.6 ACRE-FEET.

    DURATION(HRS)   2      4      6      8     10     12     14     16
    FLOW(CFS)      27     19     14     13     11     10      8      6
```

```
   DURATION(HRS)  18      19
   FLOW(CFS)       2       0


OPERATION RESVOR    STRUCTURE  1
         INPUT HYDROGRAPH 1        OUTPUT HYDROGRAPH 2
         SURFACE ELEVATION =    30.00

   PEAK TIME(HRS)              PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
      10.41                          50.8                          34.34

   RUNOFF ABOVE BASEFLOW  (BASEFLOW =    .00 CFS)
                  5.29 WATERSHED INCHES;     216 CFS-HRS;      17.9 ACRE-FEET.

   DURATION(HRS)   2      4      6      8     10     12     14     14
   FLOW(CFS)      23     15     13     12     10      8      4      0


EXECUTIVE CONTROL  ENDCMP    COMPUTATIONS COMPLETED FOR PASS   4
▯

TR20 ------------------------------------------------------------------- SCS -
                                FN:jn83.txt                              VERSION
07/03/**           SCS (2-, 10-, 50- and 100-YR, 24-HR STORM)           2.04TEST
10:42:43                     SUMMARY, JOB NO.   1                       PAGE   5


                             SUMMARY TABLE 1
                             ---------------
   SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
   A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
 F-FLAT TOP HYDROGRAPH   T-TRUNCATED HYDROGRAPH   R-RISING TRUNCATED HYDROGRAPH

 XSECTION/  STANDARD                                   PEAK DISCHARGE
 STRUCTURE   CONTROL     DRAINAGE   RUNOFF   ----------------------------------
    ID      OPERATION     AREA     AMOUNT   ELEVATION   TIME      RATE    RATE
                         (SQ MI)    (IN)      (FT)      (HR)     (CFS)   (CSM)

 RAINFALL OF   2.00 inches AND  24.00 hr DURATION, BEGINS AT    .0 hrs.
 RAINTABLE NUMBER  1,    ARC 2
 MAIN TIME INCREMENT   .100 HOURS

    ALTERNATE    1   STORM    1
    --------------------------
 STRUCTURE  1  RUNOFF      .06      .00        ---       .00        0       .0
 STRUCTURE  1  RESVOR      .06      .00        ---       .00        0       .0

 RAINFALL OF   9.00 inches AND  24.00 hr DURATION, BEGINS AT    .0 hrs.

    ALTERNATE    1   STORM    2
    --------------------------
 STRUCTURE  1  RUNOFF      .06     4.47        ---      9.96      126   2100.0
 STRUCTURE  1  RESVOR      .06     1.86      34.07     13.76       10    166.7

 RAINFALL OF  11.00 inches AND  24.00 hr DURATION, BEGINS AT    .0 hrs.

    ALTERNATE    1   STORM    3
    --------------------------
 STRUCTURE  1  RUNOFF      .06     6.14        ---      9.95      176   2933.3
 STRUCTURE  1  RESVOR      .06     3.53      34.14     11.42       22    366.7

 RAINFALL OF  13.00 inches AND  24.00 hr DURATION, BEGINS AT    .0 hrs.
```



```
    ALTERNATE    1   STORM    4
    --------------------------
 STRUCTURE  1  RUNOFF      .06     7.88        ---      9.95      228   3800.0
 STRUCTURE  1  RESVOR      .06     5.29      34.34     10.41       51    850.0
▯

TR20 ------------------------------------------------------------------- SCS -
                                FN:jn83.txt                              VERSION
07/03/**           SCS (2-, 10-, 50- and 100-YR, 24-HR STORM)           2.04TEST
10:42:43                     SUMMARY, JOB NO.   1                       PAGE   6


                             SUMMARY TABLE 3
                             ---------------
   STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES
   QUESTION MARK (?) AFTER: OUTFLOW PEAK - RISING TRUNCATED HYDROGRAPH.

 XSECTION/          DRAINAGE
 STRUCTURE            AREA       STORM NUMBERS..........
   ID               (SQ MI)          1         2         3         4


 STRUCTURE   1          .06
 ---------------------------
    ALTERNATE    1                   0        10        22        51
▯

TR20 ------------------------------------------------------------------- SCS -
                                FN:jn83.txt                              VERSION
07/03/**           SCS (2-, 10-, 50- and 100-YR, 24-HR STORM)           2.04TEST


END OF  1 JOBS IN THIS RUN


                    SCS  TR-20,  VERSION 2.04TEST
                                   FILES

     INPUT  = WAILELE2.TXT                          , GIVEN DATA FILE
     OUTPUT = WAILELE2.OUT                          , DATED 07/03/**,10:42:43

              FILES GENERATED - DATED 07/03/**,10:42:43

     FILE WAILELE2.TMG CONTAINS MESSAGE + WARNING INFORMATION


          TOTAL NUMBER OF WARNINGS =   6,  MESSAGES =   9

                      JOB ENDED AT 10:42:43
                  *** TR-20 RUN COMPLETED ***
```

Volume Calculations for Wailele Basins

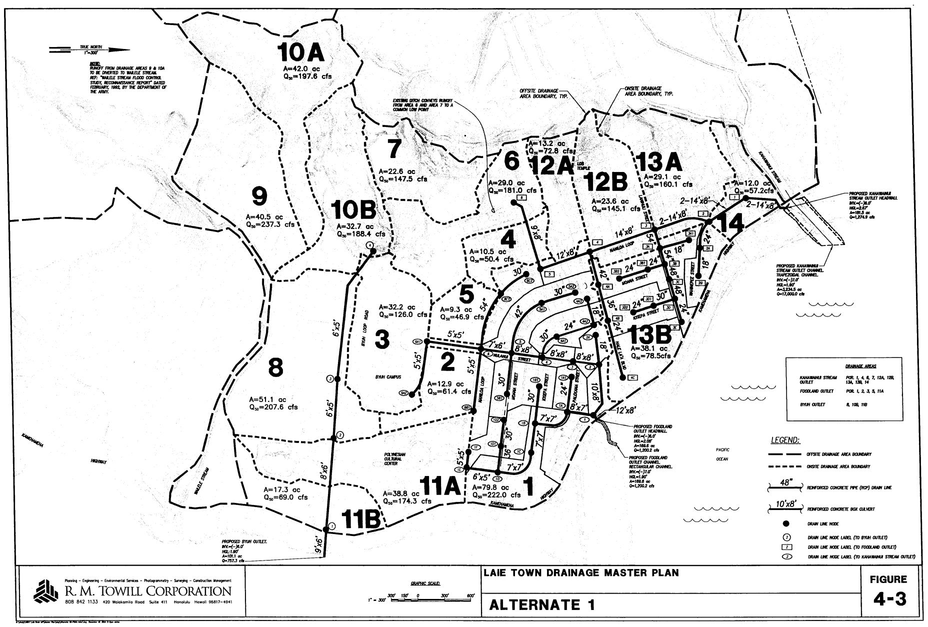
V1 = (1/3) * h * [B1 + B2 + sqrt(B1 * B2)]

Basin 2

Height	Area	Volume (cf)	Volume (ac
30	88435		
32	95804	184189.857	4.228417
34	103338	199094.478	4.57058
35	107165	105245.702	2.416109
		Total	11.21511

APPENDIX E

FUTURE BACKBONE DRAIN SYSTEM



Laie Town Drainage Master Plan
Drainage System
Alternate 1

Drain Line Node	Area Name	Total Area (ac)	Other Flow Name	Tc	Plate 5 Tc	C	50 YR i (in/hr)	F	A (ac)	Runoff q=CiFA (cfs)	Other Inflows q' (cfs)	Other Inflows Area (ac)	Total Inflow (cfs)	Cumul. Q=CiFA (cfs)	Plate 6 Group A (cfs)	Pipe Qr (cfs)	Dn (ft)	Vf (fps)	Pipe/Culvert Diameter/Size Qty	(in)	(ft)	(ft)	L (ft)	n	Sf	S	Inv. Elev. Up	Inv. Elev. Down	Inside Top of Box	Cover (ft)	Hf (ft)	Col Ref. Q_3/Q_1	Manhole Losses A	B	C	D	Ent. Cont.	H.G.L. Down	H.G.L. Up	Fin. Gr.	FB (ft)
DRAINAGE AREAS: POR. 1, 4, 6, 7, 12A, 12B, 13A, 13B, 14																																									
NANILOA LOOP DRAIN (KAHAWAINUI STREAM)																																						2.67	Kam Hwy		
Outlet																											-6.00	-6.00	2.00	7.70									2.67	10.70	Full 8.03
	Area 14 (1/2)	181.5		6.0	6.0	0.59	3.00	2.70	6.0	28.6			28.6	901.7	1,274.9	1,274.9	8.0	5.7	2	-	14	8	600	0.013	0.0007	0.0001					0.43							3.10			
1																											-5.94	-5.94	2.06	3.94									3.10	7.00	Full 3.90
	Area 14 (1/2)	175.5	#2 Drain	6.0	6.0	0.59	3.00	2.70	6.0	28.6	11.3	5.5	39.9	873.1	1,237.3	1,237.3	8.0	5.5	2	-	14	8	510	0.013	0.0007	0.0001					0.34							3.44			
2																											-5.89	-5.89	2.11	6.49									3.44	9.60	Full 6.16
	Area 13A	164.0	#3 Drain	6.0	6.0	0.68	3.00	2.70	29.1	160.1	49.2	23.9	209.2	833.2	1,164.9	1,164.9	8.0	5.2	2	-	14	8	650	0.013	0.0006	0.0001					0.39							3.83			
3																											-5.82	-5.82	2.18	3.42									3.83	6.60	Full 2.77
	Area 12B	111.0	#4 Drain	6.0	6.0	0.76	3.00	2.70	23.6	144.9	18.0	8.7	162.9	624.0	823.1	823.1	8.0	7.3	1	-	14	8	750	0.013	0.0012	0.0001					0.89							4.72			
4																											-5.75	-5.75	2.25	4.15									4.72	7.40	Full 2.68
	Area 1M	78.7	Area 4,12A	42.0	42.0	0.71	3.00	1.30	3.4	9.5	123.2	23.7	132.7	461.1	0.0	461.1	8.0	4.8	1	-	12	8	620	0.013	0.0005	0.0001					0.34							5.06			
5																											-5.69	-5.69	2.31	4.29									5.06	7.60	Full 2.54
	Area 6	51.6	Area 7	7.0	7.0	0.80	3.00	2.60	29.0	181.0	147.5	22.6	328.5	328.5	0.0	328.5	8.0	4.6	1	-	9	8	830	0.013	0.0006	0.0001					0.49							5.55			
6																											-5.60	-5.60	2.40	3.60									5.55	7.00	Full 1.45
WAIHINEPEE STREET DRAIN TO NANILOA LOOP (#2 Drain)																																						3.44			
2																											-5.89	-5.89		6.49									3.44	9.60	Full 6.16
	Area 13B5B (1/2)	5.5		61.0	61.0	0.69	3.00	1.00	2.8	5.7			5.7	11.3	0.0	11.3	0.9	3.6	1	24			330	0.013	0.0025	0.0150					0.8							4.27			
2A																											-0.94	-0.94		6.24		0.00	0.050	0.000	0.040	0.00	1.82		4.36	7.30	Full 2.94
	Area 13B5A (1/2)	2.8		61.0	61.0	0.69	3.00	1.00	2.8	5.7			5.7	5.7	0.0	5.7	0.8	3.2	1	18			320	0.013	0.0029	0.0100					0.9							5.29			
2B																											2.26	2.26		5.44		0.00	0.050	0.140	0.040	0.00	1.38		5.52	9.20	Full 3.68
LANIHULI STREET DRAIN TO NANILOA LOOP (#3 Drain)																																						3.83			
3																											-5.82	-5.82		3.42									3.83	6.60	Full 2.77
		23.9	#3A Drain						0.0	0.0	4.4	2.1	4.4	49.2	0.0	49.2	1.8	3.1	1	54			220	0.013	0.0006	0.0050					0.1							3.97			
3A																											-4.72	-4.72		6.22		0.00	0.020	0.065	0.040	0.00	3.58		4.09	6.00	Full 1.91
		21.7	#3B Drain						0.0	0.0	11.4	5.5	11.4	44.8	0.0	44.8	1.8	2.8	1	54			190	0.013	0.0005	0.0050					0.1							4.19			
3B																											-3.77	-3.77		5.67		2.00	0.000	0.000	0.000	0.01	3.53		4.20	6.40	Full 2.20
	Area 13B4B (1/3)	16.2		61.0	61.0	0.69	3.00	1.00	2.1	4.4			4.4	33.4	0.0	33.4	2.0	2.7	1	48			180	0.013	0.0005	0.0020					0.1							4.30			
3C																											-3.41	-3.41		5.21		0.00	0.000	0.000	0.000	0.00	3.14		4.30	5.80	Full 1.50
	Area 13B4A (1/3)	14.1	#3D Drain	61.0	61.0	0.69	3.00	1.00	2.1	4.4	12.7	6.2	17.1	29.0	0.0	29.0	1.3	2.3	1	48			230	0.013	0.0004	0.0070					0.1							4.39			
3D																											-1.80	-1.80		4.70		3.00	0.020	0.000	0.040	0.01	3.10		4.46	6.90	Full 2.44
	Area 13B1B (1/2)	5.8		61.0	61.0	0.69	3.00	1.00	5.8	11.9			11.9	11.9	0.0	11.9	1.1	3.8	1	24			270	0.013	0.0028	0.0070					0.8							5.21			
3E																											0.09	0.09		5.01		0.00	0.050	0.140	0.040	0.00	1.85		5.44	7.10	Full 1.66
LOALA STREET DRAIN TO LANIHULI STREET (#3A Drain)																																						3.97			
3A																											-4.72	-4.72		6.22									4.09	6.00	Full 1.91
	Area 13B4C (1/3)	2.1		61.0	61.0	0.69	3.00	1.00	2.1	4.4			4.4	4.4	0.0	4.4	0.7	2.5	1	18			340	0.013	0.0017	0.0100					0.6							4.69			
3A1																											-1.32	-1.32		6.32		0.00	0.025	0.075	0.000	0.00	1.27		4.79	6.50	Full 1.71
MOANA STREET DRAIN TO LANIHULI STREET (#3B Drain)																																						4.19			
3B																											-3.77	-3.77		5.67									4.20	6.40	Full 2.20
	Area 13B3C (2/5)	5.5		61.0	61.0	0.69	3.00	1.00	2.8	5.7			5.7	11.4	0.0	11.4	1.0	3.6	1	24			200	0.013	0.0025	0.0100					0.5							4.70			
3B1																											-1.77	-1.77		6.27		0.00	0.050	0.120	0.040	0.00	1.82		4.91	6.50	Full 1.59
	Area 13B3B (2/5)	2.8		61.0	61.0	0.69	3.00	1.00	2.8	5.7			5.7	5.7	0.0	5.7	1.1	1.8	1	24			340	0.013	0.0006	0.0020					0.2							5.13			
3B2																											-1.09	-1.09		6.39		0.00	0.000	0.020	0.000	0.00	1.56		5.15	7.30	Full 2.15
IOSEPA STREET DRAIN TO LANIHULI STREET (#3D Drain)																																						4.39			
3D																											-1.80	-1.80		4.70									4.46	6.90	Full 2.44
	Area 13B2C (2/5)	6.2		61.0	61.0	0.69	3.00	1.00	3.1	6.3			6.3	12.7	0.0	12.7	1.2	2.6	1	30			240	0.013	0.0010	0.0050					0.2							4.69			
3D1																											-0.60	-0.60		5.50		0.00	0.000	0.000	0.000	0.00	2.02		4.69	7.40	Full 2.71
	Area 13B2B (2/5)	3.1		61.0	61.0	0.69	3.00	1.00	3.1	6.3			6.3	6.3	0.0	6.3	1.0	2.0	1	24			240	0.013	0.0008	0.0030					0.2							4.88			
3D2																											0.12	0.12		5.08		0.00	0.025	0.075	0.000	0.00	1.59		4.98	7.20	Full 2.22
HALE LAA BOULEVARD DRAIN TO NANILOA LOOP (#4 Drain)																																						4.72			
4																											-5.75	-5.75		4.15									4.72	7.40	Full 2.68
	Area 13B3A (1/5)	8.7		61.0	61.0	0.69	3.00	1.00	1.4	2.8			2.8	18.0	0.0	18.0	1.0	1.9	1	42			380	0.013	0.0003	0.0100					0.1							4.84			
4A																											-1.95	-1.95		6.85		0.00	0.000	0.000	0.000	0.00	2.68		4.84	8.40	Full 3.56
	Area 13B2A (1/5)	7.3		61.0	61.0	0.69	3.00	1.00	1.5	3.2			3.2	15.1	0.0	15.1	1.5	2.1	1	36			420	0.013	0.0005	0.0020					0.2							5.06			
4B																											-1.11	-1.11		5.71		0.00	0.020	0.000	0.040	0.00	2.34		5.12	7.60	Full 2.48
	Area 13B1A (1/2)	5.8		61.0	61.0	0.69	3.00	1.00	5.8	11.9			11.9	11.9	0.0	11.9	2.0	3.8	1	24			660	0.013	0.0028	0.0020					1.8							6.96			
4C																											0.21	0.21		6.59		0.00	0.050	0.140	0.040	0.00	1.85		7.19	8.80	Full 1.61

Drain Line Node	Area Name	Total Area (ac)	Other Flow Name	Tc	Plate 5 Tc	C	50 YR i (in/hr)	F	A (ac)	Runoff q=CiFA (cfs)	Other Inflows q' (cfs)	Other Inflows Area (ac)	Total Inflow (cfs)	Cumul. Q=CiFA (cfs)	Plate 6 Group A (cfs)	Pipe Qr (cfs)	Dn (ft)	Vf (fps)	Pipe/Culvert Diameter/Size Qty	(in)	(ft)	(ft)	L (ft)	n	Sf	S	Inv. Elev. Up	Inv. Elev. Down	Inside Top of Box	Cover (ft)	Hf (ft)	Col Ref. Q_3/Q_1	MANHOLE LOSSES A	B	C	D	Ent. Cont.	H.G.L. Down	H.G.L. Up	Fin. Gr.	FB (ft)
DRAINAGE AREAS: POR. 1, 2, 3, 5, 11A																																									
KAMEHAMEHA HWY PROPOSED BOX DRAIN (NEAR FOODLAND)																																									
Outlet																																						**2.08**	Kam Hwy		
																											-6.00	-6.00	2.00	7.70									2.08	10.70	Full 8.62
		169.6	#1 Drain						0.0	0.0	272.9	74.3	272.9	629.0	1,200.2	1,200.2	8.0	12.5	1	-	12	8	80	0.013	0.0037	0.0001					0.30							2.38			
1																											-5.99	-5.99	2.01	4.19									2.38	7.20	Full 4.82
	Area 1H	95.4	#2 Drain	42.0	42.0	0.71	3.00	1.30	3.0	8.3	5.1	1.9	13.5	356.1	0.0	356.1	8.0	4.5	1	-	10	8	610	0.013	0.0005	0.0001					0.32							2.70			
2																											-5.93	-5.93	2.07	5.13									2.70	8.20	Full 5.50
	Area 1A2 (1/2)	90.5		42.0	42.0	0.71	3.00	1.30	1.9	5.1			5.1	342.6	0.0	342.6	8.0	5.4	1	-	8	8	290	0.013	0.0009	0.0001					0.25							2.95			
3																											-5.90	-5.90	2.10	4.40									2.95	7.50	Full 4.55
	Area 1B	88.7	#4 Drain	42.0	42.0	0.71	3.00	1.30	1.8	5.0	16.7	6.0	21.7	337.5	0.0	337.5	8.0	5.3	1	-	8	8	350	0.013	0.0008	0.0001					0.30							3.24			
4																											-5.87	-5.87	2.13	3.17									3.24	6.30	Full 3.06
		80.9	#5A,#5B Drain						0.0	0.0	46.9	16.9	46.9	315.8	0.0	315.8	8.0	4.9	1	-	8	8	350	0.013	0.0007	0.0001					0.26							3.50			
5																											-5.83	-5.83	2.17	3.23									3.50	6.40	Full 2.90
		64.0	#6A,#6B,#6C Drain						0.0	0.0	268.9	64.0	268.9	268.9	0.0	268.9	6.0	6.4	1	-	7	6	340	0.013	0.0017	0.0001					0.56							4.07			
6																											-5.80	-5.80	0.20	5.60									4.07	6.80	Full 2.73
PROPOSED DRAIN PIPES TO #1 DRAIN																																						**2.38**			
1																											-5.99	-5.99	1.01	4.19									**2.38**	7.20	Full 4.82
	Area 1I	74.3	#1A Drain	42.0	42.0	0.71	3.00	1.30	5.8	16.1	11.4	4.1	27.5	272.9	0.0	272.9	7.0	4.9	1	-	8	7	300	0.013	0.0008	0.0001					0.2							2.62			
1A																											-5.96	-5.96	1.04	3.46									2.62	5.50	Full 2.88
	Area 1J4 (1/4)	64.4	#1B Drain	42.0	42.0	0.71	3.00	1.30	3.7	10.2	11.8	4.3	22.0	245.4	0.0	245.4	7.0	5.0	1	-	7	7	450	0.013	0.0009	0.0001					0.4							3.02			
1B																											-5.92	-5.92	1.08	5.32									3.02	7.40	Full 4.38
	Area 1J3 (1/4)	56.4		42.0	42.0	0.71	3.00	1.30	3.7	10.2			10.2	223.4	0.0	223.4	7.0	4.6	1	-	7	7	330	0.013	0.0008	0.0001					0.2							3.27			
1C																											-5.88	-5.88	1.12	4.08									3.27	6.20	Full 2.93
	Area 1J2 (1/4)	52.8	#1D Drain	42.0	42.0	0.71	3.00	1.30	3.7	10.2	18.4	6.6	28.6	213.1	0.0	213.1	7.0	4.3	1	-	7	7	530	0.013	0.0007	0.0001					0.4							3.64			
1D																											-5.83	-5.83	1.17	5.93									3.64	8.10	Full 4.46
	Area 1J1 (1/4)	42.5		42.0	42.0	0.71	3.00	1.30	3.7	10.2			10.2	184.5	0.0	184.5	5.0	6.2	1	-	6	5	360	0.013	0.0019	0.0001					0.7							4.33			
IE																											-5.80	-5.80	-0.80	6.50									4.33	6.70	Full 2.37
	Area 11A	38.8		27.0	27.0	0.71	3.00	2.10	38.8	174.3			174.3	174.3	0.0	174.3	5.0	7.0	1	-	5	5	180	0.013	0.0028	0.0001					0.5							4.82			
1F																											-5.78	-5.78	-0.78	6.38									4.82	6.60	Full 1.78
PALEKANA STREET PROPOSED DRAIN PIPES (#1A Drain)																																						**2.62**			
1A																											-5.96	-5.96		3.46									**2.62**	5.50	Full 2.88
	Area 1G	4.1		42.0	42.0	0.71	3.00	1.30	4.1	11.4			11.4	11.4	0.0	11.4	1.0	3.6	1	24			400	0.013	0.0025	0.0100					1.0							3.63			
1A1																											-1.96	-1.96		6.96		0.00	0.050	0.140	0.013	0.00	1.82		3.84	7.00	Full 3.16
IOSEPA STREET PROPOSED DRAIN PIPES TO KULANUI STREET (#1B Drain)																																						**3.02**			
1B																											-5.92	-5.92		5.32									**3.02**	7.40	Full 4.38
	Area 1F2 (1/2)	4.3		42.0	42.0	0.71	3.00	1.30	4.3	11.8			11.8	11.8	0.0	11.8	1.1	2.4	1	30			420	0.013	0.0008	0.0050					0.3							3.37			
1B1																											-3.82	-3.82		6.62		0.00	0.000	0.075	0.000	0.00	2.00		3.45	5.30	Full 1.85
MOANA STREET PROPOSED DRAIN PIPES TO IOSEPA STREET (#1D Drain)																																						**3.64**			
1D																											-5.83	-5.83		5.93									**3.64**	8.10	Full 4.46
	Area 1K2 (1/2)	6.6		42.0	42.0	0.71	3.00	1.30	3.3	9.2			9.2	18.4	0.0	18.4	1.1	2.6	1	36			290	0.013	0.0008	0.0100					0.2							3.86			
1D1																											-2.93	-2.93		6.63		0.00	0.000	0.055	0.000	0.00	2.39		3.91	6.70	Full 2.79
	Area 1K1 (1/2)	3.3		42.0	42.0	0.71	3.00	1.30	3.3	9.2			9.2	9.2	0.0	9.2	1.2	1.9	1	30			300	0.013	0.0005	0.0020					0.2							4.06			
1D2																											-2.33	-2.33		5.43		0.00	0.000	0.020	0.000	0.00	1.94		4.08	5.60	Full 1.52
PUUAHI STREET PROPOSED DRAIN PIPES (#2 Drain)																																						**2.70**			
2																											-5.93	-5.93		5.13									**2.70**	8.20	Full 5.50
	Area 1A1 (1/2)	1.9		42.0	42.0	0.71	3.00	1.30	1.9	5.1			5.1	5.1	0.0	5.1	0.6	2.9	1	18			330	0.013	0.0024	0.0150					0.8							3.49			
2A																											-0.98	-0.98		7.78		0.00	0.025	0.075	0.000	0.00	1.33		3.59	8.30	Full 4.71
PUUAHI STREET AND IOSEPA STREET PROPOSED DRAIN PIPES TO KULANUI STREET (#4 Drain)																																						**3.24**			
4																											-5.87	-5.87		3.17									**3.24**	6.30	Full 3.06
	Area 1C3 (1/3)	6.0		42.0	42.0	0.71	3.00	1.30	2.0	5.6			5.6	16.7	0.0	16.7	1.0	3.4	1	30			310	0.013	0.0017	0.0150					0.5							3.76			
4A1																											-1.22	-1.22		7.42		0.00	0.020	0.000	0.040	0.00	2.15		3.82	8.70	Full 4.88
	Area 1C2 (1/3)	4.0		42.0	42.0	0.71	3.00	1.30	2.0	5.6			5.6	11.1	0.0	11.1	2.0	3.5	1	24			440	0.013	0.0024	0.0020					1.1							4.88			
4A2																											-0.34	-0.34		6.04		0.00	0.050	0.000	0.040	0.00	1.80		4.97	7.70	Full 2.73
	Area 1C1 (1/3)	2.0		42.0	42.0	0.71	3.00	1.30	2.0	5.6			5.6	5.6	0.0	5.6	1.5	3.1	1	18			300	0.013	0.0028	0.0020					0.8							5.81			
4A3																											0.26	0.26		6.44		0.00	0.050	0.140	0.040	0.00	1.37		6.04	8.20	Full 2.16

Drain Line Node	Area Name	Total Area (ac)	Other Flow Name	Tc	Plate 5 Tc	C	50 YR i (in/hr)	F	A (ac)	Runoff q=CiFA (cfs)	Other Inflows q' (cfs)	Other Inflows Area (ac)	Total Inflow (cfs)	Cumul. Q=CiFA (cfs)	Plate 6 Group A (cfs)	Pipe Qr (cfs)	Dn (ft)	Vf (fps)	Pipe/Culvert Diameter/Size Qty	(in)	(ft)	(ft)	L (ft)	n	Sf	S	Inv. Elev. Up	Inv. Elev. Down	Inside Top of Box	Cover (ft)	Hf (ft)	Col Ref. Q_3/Q_1	MANHOLE LOSSES A	B	C	D	Ent. Cont.	H.G.L. Down	H.G.L. Up	Fin. Gr.	FB (ft)
MOANA STREET PROPOSED DRAIN PIPES TO KULANUI STREET (#5A Drain)																																						**3.50**			
5																											-5.83	-5.83		3.23									**3.50**	6.40	Full 2.90
	Area 1D2 (1/2)	12.6		42.0	42.0	0.71	3.00	1.30	6.3	17.5			17.5	35.1	0.0	35.1	1.7	3.6	1	42			700	0.013	0.0012	0.0050					0.8							4.35			
5A1																											-2.33	-2.33		6.13		0.00	0.020	0.000	0.040	0.00	2.93		4.41	7.30	Full 2.89
	Area 1D1 (1/2)	6.3		42.0	42.0	0.71	3.00	1.30	6.3	17.5			17.5	17.5	0.0	17.5	1.4	3.6	1	30			400	0.013	0.0018	0.0050					0.7							5.14			
5A2																											-0.33	-0.33		6.23		0.00	0.020	0.140	0.040	0.00	2.18		5.34	8.40	Full 3.06
MOANA STREET PROPOSED DRAIN PIPES TO KULANUI STREET (#5B Drain)																																						**3.50**			
5																											-5.83	-5.83		3.23									**3.50**	6.40	Full 2.90
	Area 1F1 (1/2)	4.3		42.0	42.0	0.71	3.00	1.30	4.3	11.8			11.8	11.8	0.0	11.8	1.1	2.4	1	30			460	0.013	0.0008	0.0050					0.4							3.89			
5B1																											-3.53	-3.53		6.53		0.00	0.000	0.075	0.000	0.00	2.00		3.96	5.50	Full 1.54
PROPOSED DRAIN PIPES TO #6 DRAIN (#6A Drain)																																						**4.07**			
6																											-5.80	-5.80	-0.80	5.60									**4.07**	6.80	Full 2.73
		32.2							0.0	0.0			0.0	126.0	0.0	126.0	5.0	5.0	1	-	5	5	620	0.013	0.0014	0.0001					0.9							4.96			
6A1																											-5.74	-5.74	-0.74	9.04									4.96	9.30	Full 4.34
	Area 3	32.2		16.0	16.0	0.65	3.00	2.00	32.2	126.0			126.0	126.0	0.0	126.0	5.0	5.0	1	-	5	5	630	0.013	0.0014	0.0001					0.9							5.87			
6A2																											-5.67	-5.67	-0.67	7.67									5.87	8.00	Full 2.13
PROPOSED DRAIN PIPES TO #6 DRAIN (#6B Drain)																																						**4.07**			
6																											-5.80	-5.80	-0.80	5.60									**4.07**	6.80	Full 2.73
	Area 1E	16.5	Area 2	42.0	42.0	0.71	3.00	1.30	3.6	10.0	69.3	12.9	79.3	79.3	0.0	79.3	5.0	3.2	1	-	5	5	700	0.013	0.0006	0.0001					0.4							4.47			
6B1																											-5.73	-5.73	-0.73	5.73									4.47	6.00	Full 1.53
NANILOA LOOP PROPOSED DRAIN PIPES TO KULANUI STREET (#6C Drain)																																						**4.07**			
6																											-5.80	-5.80		5.60									**4.07**	6.80	Full 2.73
	Area 5	15.3		12.0	12.0	0.80	3.00	2.10	9.3	46.9			46.9	63.6	0.0	63.6	2.8	4.0	1	54			680	0.013	0.0010	0.0020					0.7							4.78			
6C1																											-4.44	-4.44		7.54		0.00	0.020	0.000	0.013	0.00	3.74		4.81	7.60	Full 2.79
	Area 1L	6.0		42.0	42.0	0.71	3.00	1.30	6.0	16.7			16.7	16.7	0.0	16.7	1.2	3.4	1	30			370	0.013	0.0017	0.0080					0.6							5.42			
6C2																											-1.48	-1.48		6.58		0.00	0.020	0.140	0.013	0.00	2.15		5.60	7.60	Full 2.00

Drain Line Node	Area Name	Total Area (ac)	Other Flow Name	Tc	Plate 5 Tc	C	50 YR I (in/hr)	F	A (ac)	Runoff Q=CIFA (cfs)	Q	Other Inflows I	Area (ac)	Total Inflow (cfs)	Cumul Q=CIFA (cfs)	Plate 6 Group A (cfs)	Pipe Qc (cfs)	Dn (ft)	Vf (fps)	Pipe/Culvert Qty	Diameter/Size (in)	(ft)	(ft)	L (ft)	n	Sf	S	Inv. Elev. Up	Inv. Elev. Down	Inside Top of Box	Cover (ft)	HF (ft)	Col Ref Qu/Qc	MANHOLE LOSSES A	B	C	D	Ent. Cont.	H.G.L. Down	H.G.L. Up	Fin. Gr.	FB (ft)
DRAINAGE AREAS: 8, 10B, 11B																																										
KAMEHAMEHA HWY PROPOSED BOX DRAIN (BYUH 48" DRAIN UPGRADE)																																							1.80	Kam Hwy		
Outlet																												-6.00	-6.00	0.00	8.00									1.90	9.00	Full 7.10
	Area 11B	101.1		17.0	17.0	0.70	3.00	1.90	17.3	69.0				69.0	465.0	757.3	757.3	6.0	14.0	1	-	9	6	450	0.013	0.0069	0.0001				3.00							4.66			
1		83.8							0.0	0.0				0.0	396.0	0.0	396.0	6.0	8.2	1	-	8	6	1050	0.013	0.0025	0.0001	-5.96	-5.96	0.04	10.96								4.95	12.00	Full 7.01
2																															2.87							7.66			
	Area 8	83.8		15.0	15.0	0.75	3.00	1.80	51.1	207.6				207.6	396.0	0.0	396.0	5.0	13.2	1	-	6	5	600	0.013	0.0088	0.0001	-5.85	-5.85	0.15	9.05								7.66	10.20	Full 2.54
3																															5.39							12.95			
	Area 10B	32.7		7.0	7.0	0.80	3.00	2.40	32.7	188.4				188.4	188.4	0.0	188.4	5.0	6.3	1	-	6	5	1550	0.013	0.0020	0.0001	-5.79	-6.79	-0.79	14.79								12.95	15.00	Full 2.05
4																															3.09							16.04			
																												-5.64	-5.64	-0.64	17.64								16.04	18.00	Full 1.96

APPENDIX F

MISCELLANEOUS SUPPORTING DOCUMENTS

Laie Inn - Project
Rational Method
C Value Calculation
7/12/07

Drainage Area	Total Drainage Area (sf)	Total Drainage Area (ac)	Time of Concentration (min)	Soil Area (sf)	Total Soil Area (sf)	Area Difference (sf)	Existing Land Usage	Existing Land Use Description	C Values	Weighted C Value
Existing	421,274	9.7	10		421,274	0				**0.60**
				224,744			Open Land	Open Space/Forest	0.50	
				22,884			Open Land	Open Space/Forest	0.50	
				55,908			Pervious Areas	Open Space/Forest	0.55	
				88,658			Existing Pavement	Business Areas	0.85	
				26,976			Existing Rooftops	Business Areas	0.85	
				2,104			Existing Walkways	Business Areas	0.85	
Proposed	421,274	9.7	10		417,018	4,256				**0.70**
				167,391			Pervious Areas	Open Space/Forest	0.55	
				154,447			New Pavement	Hotel-Apartment Areas	0.80	
				51,994			New Rooftops	Hotel-Apartment Areas	0.80	
				30,029			New Walkways	Hotel-Apartment Areas	0.80	
				13,158			New Impervious Areas	Hotel-Apartment Areas	0.80	
Proposed 2	421,274	9.7	10		417,018	4,256				**0.72**
(Includes Future Buildings)				134,791			Pervious Areas	Open Space/Forest	0.55	
				165,847			New Pavement	Hotel-Apartment Areas	0.80	
				73,194			New Rooftops	Hotel-Apartment Areas	0.80	
				30,029			New Walkways	Hotel-Apartment Areas	0.80	
				13,158			New Impervious Areas	Hotel-Apartment Areas	0.80	

Laie Inn - Lot Across Kam Hwy
Rational Method
C Value Calculation
7/28/06

Drainage Area	Total Drainage Area (sf)	Total Drainage Area (ac)	Time of Concentration (min)	Soil Area (sf)	Total Soil Area (sf)	Area Difference (sf)	Existing Land Usage	Existing Land Use Description	C Values	Weighted C Value
Existing	45,555	1.0	10		45,372	183				**0.37**
				36,500			Pervious Areas	Open Space/Forest	0.25	
				6,533			Existing Rooftops	Business Areas	0.85	
				2,339			Existing Walkways	Business Areas	0.85	
Proposed	31,774	0.7	10		31,774	0				**0.31**
				28,280			Pervious Areas	Open Space/Forest	0.25	
				1,970			New Pavement	Hotel-Apartment Areas	0.80	
				150			New Rooftops	Hotel-Apartment Areas	0.80	
				1,375			New Walkways	Hotel-Apartment Areas	0.80	

Laie Inn
SCS Method
CN Value Calculation
7/12/2007

Drainage Area	Total Drainage Area (sf)	Total Drainage Area (ac)	Time of Concentration (min)	Soil Type	Soil Area (sf)	Total Soil Area (sf)	Area Difference (sf)	Hydrologic Classification	Existing Land Usage	Existing Land Use Description	Curve Number	Weighted Curve Number
Existing	421,274	9.7				421,718	-444					66
			10.0	JcC	86,647			A	Pervious	Open Space Fair Condition	49	
				JcC	72,118			A	Pavement	Paved Parking	98	
				JcC	17,687			A	Roof	Roof Top	98	
				JcC	1,678			A	Walkway	Paved	98	
				JaC	192,044			A	Pervious	Open Space Fair Condition	49	
				JaC	41,829			A	Pavement	Paved Parking	98	
				JaC	9,289			A	Roof	Roof Top	98	
				JaC	426			A	Walkway	Paved	98	
Proposed New	421,274	9.7	10.0			417,018	4,256					75
				JcC	167,391			A	Pervious	Open Space Fair Condition	49	
				JcC	154,447			A	Pavement	Paved Parking	98	
				JcC	51,994			A	Roof	Roof Top	98	
				JcC	30,029			A	Walkway	Paved	98	
				JcC	13,158			A	Impervious	Paved	98	
Proposed Future	421,274	9.7	10.0			417,018	4,256					79
				JcC	134,791			A	Pervious	Open Space Fair Condition	49	
				JcC	165,847			A	Pavement	Paved Parking	98	
				JcC	73,194			A	Roof	Roof Top	98	
				JcC	30,029			A	Walkway	Paved	98	
				JcC	13,158			A	Impervious	Paved	98	

Laie Inn - Lot Across Kam Hwy
SCS Method
CN Value Calculation
7/28/2006

Drainage Area	Total Drainage Area (sf)	Total Drainage Area (ac)	Time of Concentration (min)	Soil Type	Soil Area (sf)	Total Soil Area (sf)	Area Difference (sf)	Hydrologic Classification	Existing Land Usage	Existing Land Use Description	Curve Number	Weighted Curve Number
Existing 2	45,555	1.0				45,372	183					59
				JcC	36,500			A	Pervious	Open Space Fair Condition	49	
				JcC	6,533			A	Roof	Roof Top	98	
				JcC	2,339			A	Walkway	Paved	98	
Future 2	31,774	0.7				31,774	0					54
				JcC	28,280			A	Pervious	Open Space Fair Condition	49	
				JcC	1,970			A	Pavement	Paved Parking	98	
				JcC	150			A	Roof	Roof Top	98	
				JcC	1,375			A	Walkway	Paved	98	

Appendix D. Archeological Assessment 2004

SCS Project 499-AA-2

AN ARCHAEOLOGICAL ASSESSMENT REPORT OF APPROXIMATELY 10.5 ACRES OF LAND (LA`IE INN REDEVELOPMENT) IN LA`IE AHUPUA`A, KO`OLAULOA DISTRICT, ISLAND OF O`AHU, HAWAI`I [TMK: 5-5-2: 42, 43, AND 87; TMK: 5-5-6: 8 (POR.), 13, 19, 21, 24, 25, 26, AND 31]

WITH AN ADDENDUM ADDED IN REVISION

Prepared by:
Christopher M. Monahan, Ph.D.

Submitted October 2004
Revised (Addendum Added) February 2005

Prepared for:
Mr. Eric Beaver, President
Hawaii Reserves Inc.
55-510 Kamehameha Highway
La`ie, HI 96762-1193

NOTE:

1) **New TMK numbers were assigned to this property: TMK 5-5-06:039 and 040**
2) **Beach club has been dropped from this project (01/25/08)**

TABLE OF CONTENTS

TABLE OF CONTENTS ii

LIST OF FIGURES iii

INTRODUCTION 1

ENVIRONMENTAL SETTING 1

BACKGROUND 6
- PREHISTORIC SETTING 6
- HISTORIC SETTING 9
- PREVIOUS ARCHAEOLOGY 10
- EXPECTED FINDINGS 11

METHODOLOGY 11

FINDINGS 12
- OVERVIEW 12
- SOIL STRATIGRAPHY 13
- SUBSURFACE FEATURE 1 (SSF-1) 22

REFERENCES 25

ADDENDUM 28

REASON FOR THE ADDENDUM 28

METHODS 29

FINDINGS 29

ADDENDUM REFERENCE 39

APPENDIX A: SHPD LETTER TO SCS. ..... A

LIST OF FIGURES

Figure 1: USGS (Kahana Quadrangle) Map Showing Project Area Location. 2
Figure 2: Tax Map Key [TMK] Showing Project Area Parcels. Lots West of the Highway are TMK: 5-5-6. Lots East of the Highway are TMK: 5-5-2. 3
Figure 3: Aerial Photograph Showing Existing Project Area Location, Boundaries, and Phase I and II Areas (based on map provided by Group 70 International, Inc.). 4
Figure 4: Development Plan for the Project Area (map from Group 70 International, Inc.)..... 5
Figure 5: Overview of the Larger (*Mauka*) Portion of the Project Area, Facing South. 7
Figure 6: Overview of the Smaller (*Makai*) Portion of the Project Area, Facing West. 7
Figure 7: Vegetation in the Larger Portion of the Project Area, Facing Southeast. 8
Figure 8: Vegetation in the Smaller Portion of the Project Area, Facing Southwest. 8
Figure 9: Cinder Block and Concrete Barbeque Pit Feature, Located in the Northern Portion of the Project Area, Facing South. 13
Figure 10: Representative Soil Profile at ST-1, Illustrating the Main Sedimentary Units Found in the Project Area. 14
Figure 11: Site Map Showing Location of Excavation Units. 16
Figure 12: Stratigraphic Profile, ST-1, Facing West. 17
Figure 13: Stratigraphic Profile, ST-5, Facing East. 18
Figure 14: Stratigraphic Profile, ST-3, Facing West. 19
Figure 15: Stratigraphic Profile, ST-14, Facing North. 20
Figure 16: Stratigraphic Profile, ST-15, Facing North. 21
Figure 17: Stratigraphic Profile of the Subsurface Hearth (SSF-1) Exposed in the Northern End of ST-2, and Further Investigated in TU-1. 23
Figure 18: Hearth Feature Exposed in the West Wall of ST-2, Facing West. 24
Figure 19: Hearth Feature Exposed in the West Wall of TU-1, Facing Northwest. 24
Figure 20: Additional Stratigraphic Trenches (ST-13 to ST-20) Excavated in Parcels 19 and 21. 30
Figure 21: ST-13, Facing Southwest. 31
Figure 22: ST-13, Facing Northwest. 31
Figure 23: ST-14, Facing West. 32
Figure 24: ST-14, Facing South. 32
Figure 25: ST-15, Facing West. 33
Figure 26: ST-15, Facing East-Northeast. 33
Figure 27: ST-16, Facing West. 34
Figure 28: ST-16, Facing East-Northeast. 34
Figure 29: ST-17, Facing West. 35
Figure 30: ST-17, Facing South. 35
Figure 31: ST-18, Facing West. 36
Figure 32: ST-18, Facing South. 36

Figure 33: ST-19, Facing East. 37
Figure 34: ST-19, Facing West. 37
Figure 35: ST-20, Facing North. 38
Figure 36: ST-20, Facing Northeast. 38

INTRODUCTION

Scientific Consultant Services (SCS), Inc. conducted an Archaeological Inventory Survey (AIS) in La`ie, La`ie Ahupua`a, Ko`olauloa District, O`ahu Island, Hawai`i [TMK: 5-5-2: 42, 43, and 87; TMK: 5-5-6: 8 (Por.), 13, 19, 21, 24, 25, 26, and 31]. The survey covered an area of approximately 10.5 acres on two separate portions, each consisting of several contiguous parcels owned by Hawaii Reserves, Inc. (Mormon Church) (Figures 1 and 2). Christopher Monahan, Ph.D., conducted the fieldwork from September 22–24, 2004. SCS Archaeologist Guerin Tome, B.A., assisted Monahan in the field on September 22–23, 2004.

The work described in this report precedes the La`ie Inn Redevelopment Project, which involves the development of a resort complex at the site of several existing commercial and residential buildings, as well as presently undeveloped land (Figures 3 and 4). This work represents Phase I of the Archaeological Inventory Survey required by the State Historic Preservation Division (SHPD). Phase II, to be conducted at a later date, will investigate the subsurface deposits within the existing footprints of structures to be razed (including a gas station, McDonalds restaurant, and the current La`ie Inn).

Findings of the AIS, presented in detail below, were negative. No significant prehistoric or historic sites or were located. Therefore, in accordance with SHPD guidelines, the survey can be summarized in an abbreviated report form called an Archaeological Assessment (SHPD 2002). Due to the presence of sandy deposits throughout the project area, and, due to recent discoveries of traditional Native Hawaiian burials in other parts of La`ie (SCS reports in progress), future planned construction activities should be subjected to Archaeological Monitoring. *Given the negative results of this Phase I AIS, we recommend that Archaeological Monitoring alone will be sufficient to document any subsurface deposits located within the Phase II area.*

ENVIRONMENTAL SETTING

The project area, comprising approximately 10.5 acres on two separate portions, each consisting of several contiguous parcels, is located in the town of La`ie, La`ie Ahupua`a, Ko`olauloa District, on the northeast windward coast of O`ahu Island (see Figure 1). The La`ie area is part of an extensive sand dune and beach system stretching from Kahana Bay in the south to Kahuku and beyond in the north.

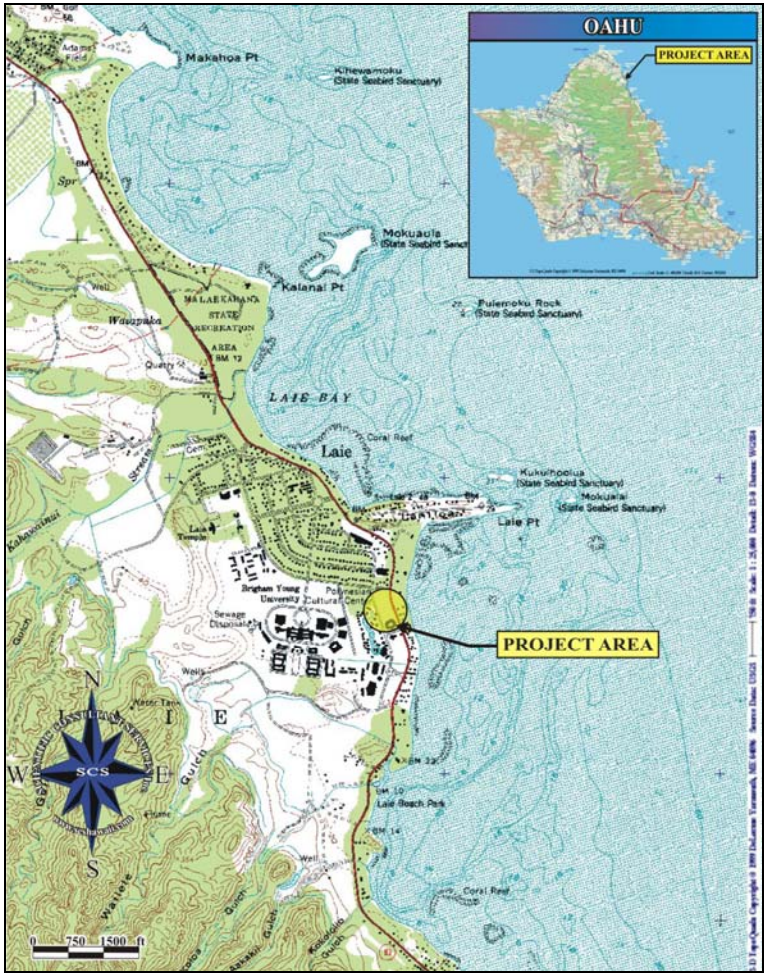


Figure 1: USGS (Kahana Quadrangle) Map Showing Project Area Location.

Figure 2: Tax Map Key [TMK] Showing Project Area Parcels. Lots West of the Highway are TMK: 5-5-6. Lots East of the Highway are TMK: 5-5-2.

Figure 3: Aerial Photograph Showing Existing Project Area Location, Boundaries, and Phase I and II Areas (based on map provided by Group 70 International, Inc.).

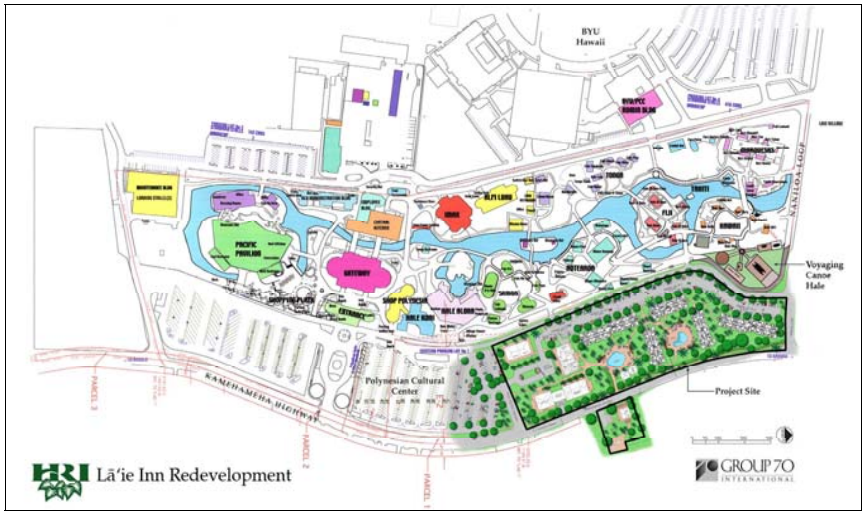


Figure 4: Development Plan for the Project Area (map from Group 70 International, Inc.).

The two separate portions comprising the project area are located on either side of the Kamehameha Highway. The larger portion [TMK: 5-5-6: 8 (Por.), 13, 17, 21, 24, 25, 26, and 31] abuts the *mauka* side of the highway, and is bounded by Naniloa Road (to the north), Iosepa Street (to the west), and the Polynesian Cultural Center parking lot (to the south). The smaller portion (TMK: 5-5-2: 42, 43, and 87) abuts the highway on the *makai* side, and is bounded by residential lots (to the north and south) and the seashore (to the east). Elevation in the project area is no more than 1–2 m above mean annual sea level. Both portions of the project area are predominately flat, but the larger portion, in particular, dips down somewhat in the northwest into a small ponded area that appears to flood periodically (Figures 5 and 6).

Soils in the project area consist of Jaucas sands (Foote *et al.* 1972), which are well-drained, calcareous soils that form in material derived from coral and shells and occur as narrow strips along coastal plains, adjacent to the seashore. These soils were traditionally used for a variety of purposes by Native Hawaiians, including habitation sites, temporary workstations, and burial grounds (Kirch 1985). Beach sand is located at the extreme eastern portion of the project area (Foote *et al.* 1972).

Annual rainfall in the project area is between the 1270 mm (50 inches) and 1900 mm (75 inches) isohyets, with actual values in La`ie closer to the low end of this range. Vegetation is dominated by a grassy lawn with several trees species and smaller shrubs and weeds (Figures 7 and 8). Identified taxa include: *Terminalia catappa* (Tropical Almond), *Casuarina* sp. (Ironwood), *Carica* sp. (Papaya), *Passiflora foetida* (Love-in-a-Mist, a vine), *Ficus* sp. (Banyan), *Plumeria* sp. (Plumeria), *Asystasia gangetica* (Chinese Violet), *Kyllinga nemoralis* (*Kili`o`opu*), *Morinda citrifolia* (Indian Mulberry), *Wedelia trilobata* (Wedelia), *Bidens alba* (Beggar's Tick), *Scaevola taccada* (Beach *Naupaka*), *Pandanus odoratissimus* (Pandanus), *Vigna marina* (Beach Pea), *Messerschimdia argentea* (Tree Heliotrope), and *Cocus nucifera* (Coconut Palm) (Merlin 1977; Sohmer and Gustafson 1993; Whistler 1994).

BACKGROUND

PREHISTORIC SETTING

With its favorable climate and environment, the La`ie Ahupua`a was traditionally divided into a number of smaller districts, each with a sizeable permanent population engaged in intensive cultivation of the relatively flat, low-lying lands between the hills and the coastline (Handy and Handy 1972). The area just *mauka* of the present day Mormon Temple was

Figure 5: Overview of the Larger (*Mauka*) Portion of the Project Area, Facing South.

Figure 6: Overview of the Smaller (*Makai*) Portion of the Project Area, Facing West.

Figure 7: Vegetation in the Larger Portion of the Project Area, Facing Southeast.

Figure 8: Vegetation in the Smaller Portion of the Project Area, Facing Southwest.

formerly the largest single wet taro location in the *ahupua`a.* The coastline here is well known as an excellent area for fishing and catching sea turtles.

Just south of La`ie, towards Hau`ula, extensive systems of stone terraces for wet taro cultivation (*lo`i*) were widely distributed, from prehistory into historical times (Handy and Handy 1972). Sterling and Summers (1978), citing McAllister (1933), note the presence of a well-known *lo`i* site (Sterling and Summers Site 282)—as well as many other sites that were destroyed soon after European contact—just south of the Mormon Temple, less than a mile *mauka* of the present project area.

Several *heiau* were located in the La`ie Ahupua`a including Moohekili Heiau (Sterling and Summers Site 283) which was destroyed by the time of McAllister's (1933) work; and, just *mauka* of the Mormon Temple, Nioi Heiau (Sterling and Summers Site 281), which was in ruins (a coral platform was all that remained) at the time of McAllister's observations.

Several *ko`a*, or fish shrines, were located in the La`ie Ahupua`a. The Kalanai Ko`a (Sterling and Summers Site 274), located less than a mile north of the present project area at the northern limits of La`ie Bay, was also the site of a traditional Hawaiian burial. The Kaihukuuna Ko`a (Sterling and Summers Site 285), located approximately 1.5 miles south of La`ie, was abandoned and mostly in ruins by the time of McAllister's (1933) survey.

HISTORIC SETTING

In earliest historical times, the La`ie Ahupua`a was conquered by Kamehameha I who gave the land to his half brother, Kalaimamahu, who eventually passed the land on to his daughter, Kekauluohi, who in turn passed it to her son, Lunalilo. The entire *ahupua`a* remained under Lunalilo's control until the Great Māhele of 1848 (Dunn and Rosendahl 1992). Land Commission Awards (LCAs), a result of the Great Māhele's restructuring of land ownership, provide documents detailing the parcel's resources in the mid-1800s. LCAs often reflect the earlier traditional use of the land, however, no LCAs for the parcels comprising the project area exist in the historic record.

The earliest foreign settlers in the area were Chinese families engaged in commercial sugar production in 1789. Although these early attempts were unsuccessful, sugar finally took hold in the area by the 1830s (Sterling and Summers 1978; Glick 1980). The present project area is outside of the sugar cultivation zone, which would have been well *mauka* of the present Kamehameha Highway.

Missionaries established their presence in La`ie in the mid-1800s. The Mormon Church was established in 1865 when it acquired 6,000 acres of plantation land. The existing Mormon Temple was dedicated in 1920 (Sterling and Summers 1978). The early 1900s saw the establishment of a railroad connecting the sugar industry facilities between Kahuku to the north, and Kahana to the south. The construction of the Kamehameha Highway in the 1930s and the continued presence of the Mormon Church have greatly influenced the character and direction of modern-day La`ie.

PREVIOUS ARCHAEOLOGY

The earliest occupation of La`ie Ahupua`a has been dated to approximately A.D. 1000 at inland caves and rock shelters (Jensen 1989) and somewhat later (A.D. 1415) along the coast (Bath 1985; Kennedy 1992; Masterson *et al.* 1997).

A wide range of traditional sites and features indicating both temporary and permanent habitation, as well as intensive agriculture and aquaculture, has been documented in the La`ie Ahupua`a (*e.g.*, McAllister 1933; Clark 1979; Walker and Rosendahl 1988; Hammatt 1989, 1991; Dunn and Rosendahl 1992). These sites and features include subsurface cultural deposits (including hearths, stone tool scatters, and midden), fishing shrines, *heiau*, taro lands, fishponds, stone terraces, mounds, enclosures, walls and platforms, and burials.

A number of human burials and other traditional deposits have been found in the coastal dunes and sandy shores immediately north and south of the project area. Twenty-three burials, two *ko`a*, two *heiau*, a mound, a faced terrace, and many subsurface cultural deposits reflecting both temporary and permanent habitation have been documented (Sterling and Summers 1978; Yent and Ota 1982; Kennedy 1992; Masterson *et al.* 1997). This evidence includes State Site 50-80-02-28, State Sites 50-80-06-4792 through -4798, and State Sites 50-80-06-5457 and -5458, which have yielded subsurface hearths and postholes as well as burials from the mid-A.D. 1400s into the historic era.

An Archaeological Inventory Survey by Monahan (2003) approximately 1000 m north of the project area, on a 0.5-acre parcel just *mauka* of the Kamehameha Highway, documented one site (50-80-02-6640), a buried historic trash layer dating to the early-to-middle 20th century. One basalt flake tool was also recovered. Traditional Native Hawaiian burials have recently been documented by SCS in Archaeological Monitoring projects in La`ie. These projects are in progress and reports on these finds are forthcoming.

EXPECTED FINDINGS

Based on all of the above background information, including the character of the two lots, expected findings in this Archaeological Inventory Survey were as follows:

(1) There was a high likelihood of finding traditional Native Hawaiian burials due to the presence of sandy beach deposits known to contain such evidence throughout the Hawaiian Islands;

(2) There was a moderate likelihood of finding subsurface evidence of traditional Native Hawaiian activities: hearths (*imu*), midden deposits, and other occupation debris (*e.g.*, stone tool waste, fishing camps);

(3) There was a moderate likelihood of finding subsurface historical evidence related to the commercial production of sugar—especially the railroad bed that ran roughly along the existing Kamehameha Highway. More generally, it was expected that historic debris of various kinds would be encountered in the form of fill or past garbage dumping;

(4) There was a low likelihood of finding significant surface features or sites, since the two lots consist mostly of open grassy areas, commercial structures, and residences.

METHODOLOGY

Christopher Monahan, Ph.D., conducted the fieldwork from September 22–24, 2004. SCS Archaeologist Guerin Tome, B.A., assisted Monahan in the field on September 22–23, 2004. All aspects of the work were photographed with a digital camera. Several digital video clips of the project area were also recorded. There were three main field activities as follows:

(1) *Conduct a pedestrian survey of the project area*—The project area was inspected for evidence of surface features. This consisted mostly of looking for subtle topographic variation (*e.g.,* depressions and built-up areas) that might indicate past human alterations of the landscape. There was one area of heavy vegetation, along the seashore in the smaller, *makai* portion (TMK: 5-5-2: 42, 43, and 87), that was carefully inspected for possible hidden features;

(2) *Mechanically test (excavate) for subsurface evidence of significant archaeological and/or historical sites or features*—Eighteen Stratigraphic Trenches (ST) measuring approximately 5.0 m by 0.7 m were excavated using a backhoe. All excavation was directed and monitored by an SCS archaeologist. The trenches were positioned in order to sample the entire Phase I area (see Figure 3). Soils from these trench excavations were not screened. All trenches were photographed upon completion. One representative excavation wall in each trench was sketched to illustrate soil stratigraphy. Soil and sediments were described in accordance with standard archaeological procedure (U.S. Dept. of Agriculture Soil Survey Staff 1951, 1962; Munsell 1990);

(3) *Hand test (excavate) for subsurface evidence of significant archaeological and/or historical sites or features, based on the results of the backhoe trenching*—One Test Unit (TU) measuring 1.0 m by 1.0 m was excavated at the northern end of ST-2, in which a buried hearth (*imu*) was exposed during trench excavation. TU-1 was primarily excavated in order to test for temporally-diagnostic artifacts within the feature. All soils from these test units were screened using standard 1/8-inch metal mesh. TU-1 was photographed before, during, and after excavation.

Laboratory work, conducted at SCS facilities in Honolulu, consisted of digitally drafting all maps and sketches, archiving digital images, and describing and documenting all recovered artifacts. Two charcoal samples were collected from the buried hearth, but these were not sent for radiocarbon testing since the hearth was not deemed to be sufficiently old, based on the artifact analysis. All documentation pertaining to this project and all recovered artifacts are currently being curated at SCS facilities in Honolulu.

FINDINGS

OVERVIEW

Findings can be summarized as follows:

(1) The only surface feature of potential historic significance was a small cinder block and concrete structure (Figure 9). This was described by locals as a relatively recent barbeque pit, and deemed insignificant for the purposes of this investigation;

(2) With one single exception (see below), excavation failed to yield any subsurface features or significant artifacts. Most units exposed bedded dune sand deposits to the water table, which was reached between 1.0 and 2.0 m. A weakly-developed buried surface (or 'A horizon'), probably dating from the 1960s or after was exposed in some units of the smaller, *makai* parcel;

(3) No traditional artifacts or buried cultural layers were recovered in any of the excavations;

(4) No human remains were recovered in any of the excavations;

(5) The buried hearth (*imu*) contained a small amount of potentially historic debris (including glass, ceramics, and non-human bone). Further analysis determined that none of this debris could be conclusively assigned to a historic period; there was no evidence that the feature was older than 50 years.

Figure 9: Cinder Block and Concrete Barbeque Pit Feature, Located in the Northern Portion of the Project Area, Facing South.

SOIL STRATIGRAPHY

With some variation from east (*makai*) to west (*mauka*), stratigraphic trenching revealed a fairly uniform sedimentary environment (Figure 10). Most units were found to contain three main sedimentary layers, with the uppermost sometimes divided into two subunits (IA and IB), as follows:

Layer I: Dry, moderately consolidated, very dark grayish brown (10YR 3/2) to grayish brown (10YR 5/2) fine sandy silt to silty fine sand; several northwestern and western units in the large parcel (*i.e.*, ST-2, ST-3, ST-4, and ST-11) were more consolidated with some clay content; bedding structures typically visible as thin alternating bands of slightly different sediment color and grain size. This uppermost unit ranged in thickness from 25–40 cm (30 cm average); the upper portion (IA) was typically more silty, while the lower portion (IB) was more sandy; inclusions of abundant roots and rootlets, recent garbage (in some units), and whole marine shells (in some units);

Layer II: Damp, loose (unconsolidated) yellow (10YR 7/6) to light yellowish brown (10YR 6/4) medium-grained sand; unit walls easily collapsed in Layer II sediments; weakly-expressed bedding structures. This unit comprised the main body of excavated sediment in the project area, and typically extended from between 25 to 40 cmbs to just above the water table (*i.e.*, 110 to 250 cmbs); inclusions of rare roots and rootlets, few pebbles, and fragmentary shell bits; no cultural materials recovered in Layer II;

Figure 10: Representative Soil Profile at ST-1, Illustrating the Main Sedimentary Units Found in the Project Area.

Layer III: Wet, loose (unconsolidated) light gray (2.5YR 7/1 to 2.5YR 7/2) coarse sand. The top of this unit, which extends to an unknown depth, was typically coincident with the water table; inclusions of some pebbles and abundant fragmentary shell bits; no roots; no cultural material.

Table 1 summarizes all excavation units. Figure 11 shows the location of all excavation units in the project area. For all units, excavation was terminated when the water table was encountered; thus, depth of excavation is more or less equivalent (within a few centimeters) with the depth of the water table. Figures 12–16 illustrate representative stratigraphic profiles for the different portions of the project area. These stratigraphic profiles can be cross-checked against the location data (see Figure 10) to appreciate sedimentary variation across the project area.

Table 1: Summary of Stratigraphic Trenches (ST) and Test Unit (TU) in Project Area.

Unit	Size (m)	Depth (cm)	Finds	Stratigraphic Comments
ST-1	5.0 x 0.7	165	None	Typical sand dune deposits
ST-2	5.0 x 0.7	150	Buried hearth (*imu*) between 20–40 cmbs, north end of the trench	Trench profiles showed the hearth to be at least 1.0 m by 1.0 m in areal dimension

ST-3	5.0 x 0.7	120	None	Sediments suggest periodic standing water
ST-4	5.0 x 0.7	110	None	Sediments suggest periodic standing water
ST-5	5.0 x 0.7	130	Modern trash (pop top tab) at 7 cmbs	--
ST-6	5.0 x 0.7	160	None	--
ST-7	5.0 x 0.7	190	None	--
ST-8	5.0 x 0.7	178	Non-human bone in upper (IA, IB) layers, including dog, bird, and large (cow size) mammal	--
ST-9	5.0 x 0.7	178	None	--
ST-10	5.0 x 0.7	175	None	--
ST-11	5.0 x 0.7	180	None	Sediments suggest periodic standing water
ST-12	5.0 x 0.7	132	None	--
ST-13	5.0 x 0.7	185	One pig bone	Weakly developed 'A horizon'
ST-14	5.0 x 0.7	220	Recent construction debris (including asphalt shingle fragments) in upper 25–40 cmbs	--
ST-15	5.0 x 0.7	255	Recent construction debris (including asphalt shingle fragments) in upper 25–40 cmbs	Shallowly buried 'A horizon' (*i.e.*, old surface), probably no older than 1960s, between 20–40 cmbs
ST-16	5.0 x 0.7	210	None	--
ST-17	5.0 x 0.7	200	None	This unit showed a relatively deep upper organic layer, suggesting a disturbance (digging into underlying sand)
ST-18	5.0 x 0.7	190	None	--
TU-1 (SSF-1)	1.0 x 1.0	40	Hearth fill contained recent glass, ceramics, non-human bone, charcoal, between 20-40 cmbs	Located at the northeast end of ST-2; Excavated in order to expose SSF-1 (the buried hearth)

Figure 11: Site Map Showing Location of Excavation Units.

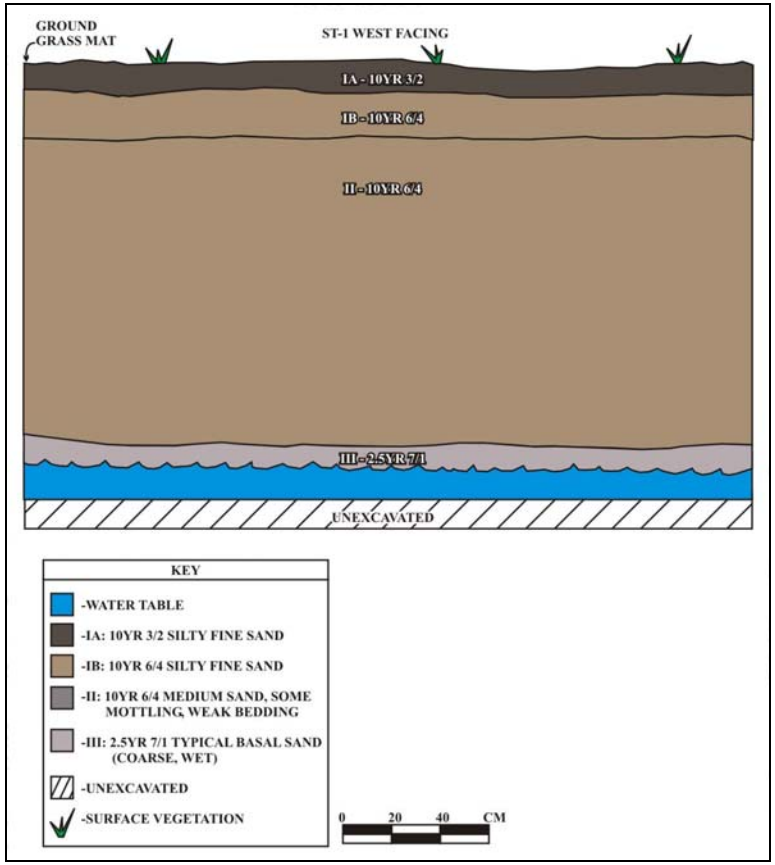


Figure 12: Stratigraphic Profile, ST-1, Facing West.

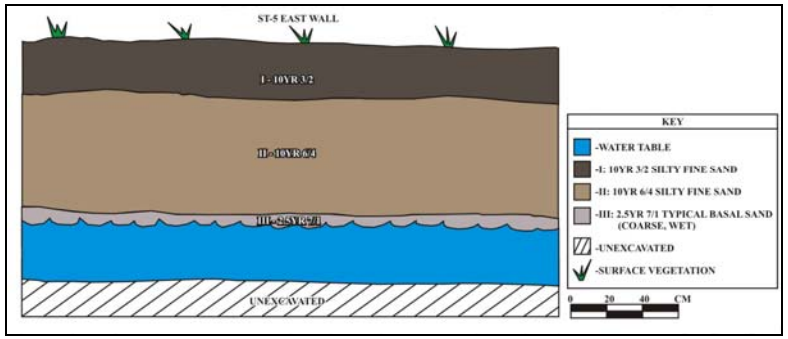


Figure 13: Stratigraphic Profile, ST-5, Facing East.

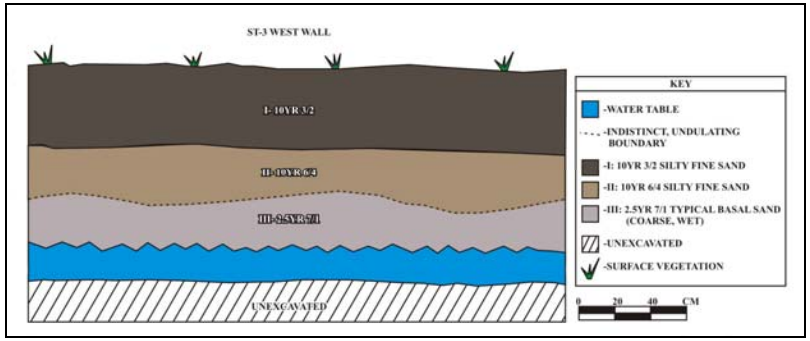


Figure 14: Stratigraphic Profile, ST-3, Facing West.

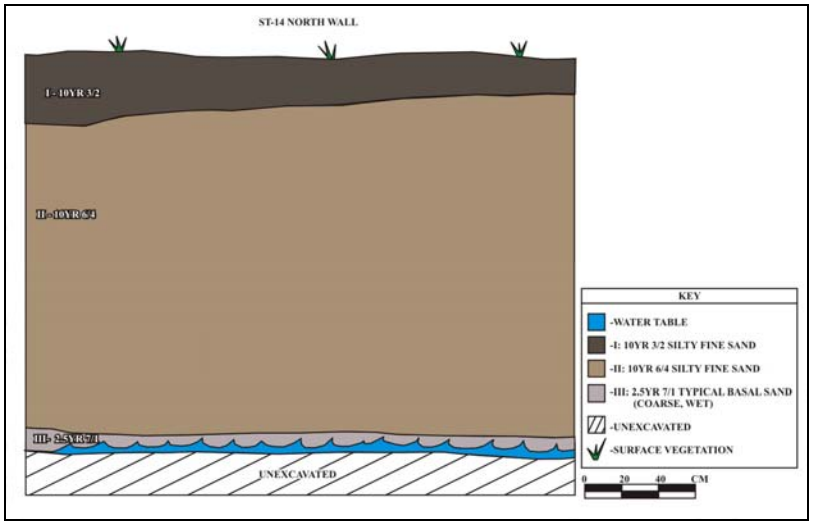


Figure 15: Stratigraphic Profile, ST-14, Facing North.

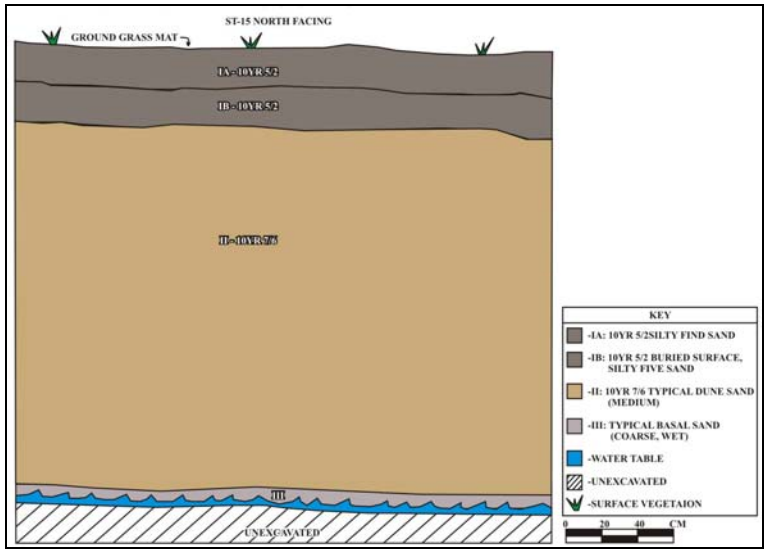


Figure 16: Stratigraphic Profile, ST-15, Facing North.

SUBSURFACE FEATURE 1 (SSF-1)

Subsurface Feature 1 (SSF-1), a buried hearth, was exposed in the northern end of ST-2, and further investigated by excavating TU-1. The feature consisted of a single linear alignment of cobbles, with a few large pebbles and small boulders, directly overlying a dense charcoal layer, approximately 5 to 10 cm thick. The entire feature, from the top of the rocks to the base of the charcoal layer, was located between approximately 20 and 40 cmbs (Figures 17–19). As exposed in the west and east walls of ST-2, the feature's area was at least 1.0 m by 1.0 m^2. Excavation of TU-1 (see Figure 19) showed that the hearth extended only about another 10 cm to the east. The stratigraphic position of the hearth shows it was located in a weakly-developed, buried 'A horizon' capped by a more recent, consolidated clay. The buried ground surface upon which the hearth was located probably dates from no earlier than the 1960s or 1970s. The overlying clay is an introduced fill post-dating the abandonment of the hearth. Table 2 summarizes finds recovered in excavation from TU-1:

Table 2: Historic Artifacts from the Hearth Exposed in ST-2 and TU-1.

Bag No.	Feature	Unit	Layer	Depth (cm)	Material	Count	Comments
3	SSF-1	TU-1	IB	10-20	Glass	3	2 clear bottle sherds (1 of which is a base); 1 opaque green bottle sherd
3	SSF-1	TU-1	IB	10-20	Ceramic	2	1 yellowware cup/bowl sherd w. brown overglaze interior & exterior; 1 tile fragment w. blue-green matte glaze on one surface
3	SSF-1	TU-1	IB	10-20	Bone	2	1 cow terminal phalange, 1 indeterminate large-sized mammal long bone fragment (burned)
4	SSF-1	TU-1	IB	20-30	Ceramic	1	1 creamware plate edge sherd, molded scalloped edge, w. transfer print design
4	SSF-1	TU-1	IB	20-30	Glass	1	Clear bottle/jar sherd
4	SSF-1	TU-1	IB	20-30	*Kukui* nut	1	--
4	SSF-1	TU-1	IB	20-30	Bone	1	Indeterminate medium-sized vertebrate

None of the historic artifacts were temporally diagnostic, and all of the material may be relatively recent in age.

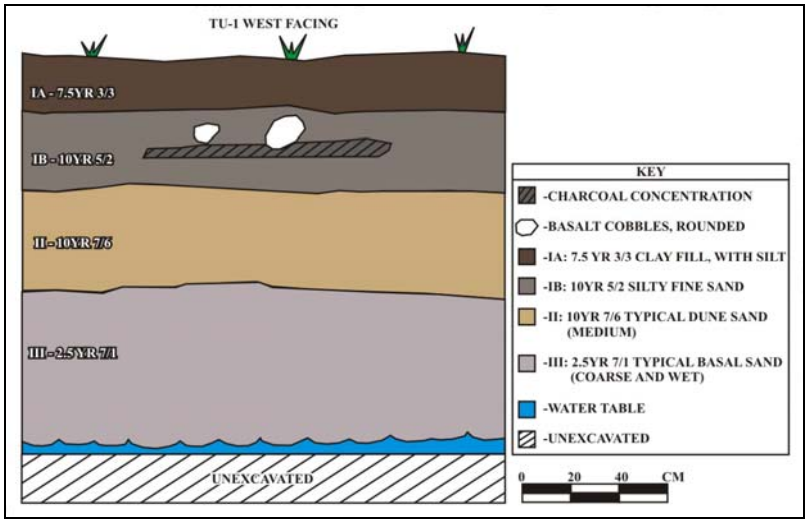


Figure 17: Stratigraphic Profile of the Subsurface Hearth (SSF-1) Exposed in the Northern End of ST-2, and Further Investigated in TU-1.

Figure 18: Hearth Feature Exposed in the West Wall of ST-2, Facing West.

Figure 19: Hearth Feature Exposed in the West Wall of TU-1, Facing Northwest.

REFERENCES

Bath, J.E.
1985 *Archaeological Testing and Mapping at Kahawainui Stream in Laie, Oahu, Hawaii*. Prepared for U.S. Army Engineer Division, Pacific Ocean, Corps of Engineers.

Clark, S.
1979 *Scope of Work for Archaeological Investigations at La`ie Beach Park*. Prepared for City and County of Honolulu, Dept. of Parks and Recreation.

Dunn, A. and P. Rosendahl
1992 *Archaeological Inventory Survey, Laie Master Plan Project: Lands of Malaekahana and Laie, Koolauloa District, Island of Oahu*. Prepared for Group 70 International, Inc. Honolulu, HI.

Foote, D.E., E.L. Hill, S. Nakamura, and F. Stephens
1972 *Soil Survey of the Islands of Kaua'i, O'ahu, Maui, Molokai, and Lanai, State of Hawai'i.* USDA Soil Conservation Service, GPO, Washington, DC.

Glick, C.E.
1980 *Sojourners and Settlers: Chinese Migrants in Hawaii*. Hawaii Chinese History Center and the University of Hawaii Press, Honolulu, HI.

Hammatt, H.H.
1989 *Archaeological Reconnaissance of a 2.8-Acre Parcel at Laie, Oahu, TMK:5-5-01:51, Site 80-02-4049*. Prepared for Stone & Stone.

1991 *Archaeological Survey of the La`ie Sewer Plant with Historical Background on La`ie Ahupua`a*. Prepared for Mr. James Pederson.

Handy, E.S., and E.G. Handy.
1972 *Native Planters of Old Hawai`i*. Bishop Museum Bulletin 233. Bishop Museum Press, Honolulu, HI.

Jensen, P.M.
1989 *Archaeological Inventory Survey, Punamano and Malaekahana Golf Courses, Lands of Ulupehupehu, Punalau, Kahuku, Malaekahana, and Laie, Koolauloa District, Island of Oahu*. Prepared for Kuilima Resort Company.

Kennedy, J.
1992 *Archaeological Inventory Survey for the Proposed Kokololio Beach Park Located at TMK:5-5-1:54 La`iemalo Ahupua`a, Ko`olauloa District, Island of O`ahu.* ARCH, Inc., Haleiwa, HI.

Kirch, P.V.
1985 *Feathered Gods and Fishhooks: An Introduction to Hawaiian Archaeology and Prehistory*. University of Hawai`i Press, Honolulu, HI.

Masterson, I.A., M. Heidel, L. Pyle, D. Shideler, and H. Hammatt
1997 *An Archaeological Monitoring Report for the Kapaka to Laie Waterline*. Prepared for the Board of Water Supply. Honolulu, HI.

McAllister, J.G.
1933 *Archaeology of O`ahu*. Bishop Museum Bulletin 104, Honolulu, HI.

McEldowney, P.H.
2003 *Chapter 6E-42 Historic Preservation Review – SMA Use Permit – Major and Draft Environmental Assessment for the Hale La`a Boulevard Landscape Project, La`ie, O`ahu [2003/SMA-42], La`ie, Ko`olauloa, O`ahu, TMK: (1) 5-5-003:050, 051; 5-5013:086, 5-5-015, 5-5-016.* Letter memo. SHPD Doc. No. 0306EJ11.

Merlin, M.D.
1977 *Hawaiian Coastal Plants and Scenic Shorelines*. The Oriental Publishing Co., Honolulu, HI.

Monahan, C.M.
2003 *An Archaeological Inventory Survey of 0.5 Acres of Land (Temple Gardens Project) in La`ie Ahupua`a, Ko`olauloa District, Island of O`ahu, Hawai`i [TMK: 5-5-03:50 and 51].* SCS, Inc., Report filed with SHPD, Kapolei, HI.

Munsell Color
1990 *Munsell Soil Color Charts.* Macbeth Division of Kollmorgen Instruments Corporation, Baltimore, MD.

SHPD
2002 *Guidelines for Archaeological Assessment Reports*. Letter memo dated 30 December 2002. On file at SCS, Inc., Honolulu, HI.

Sohmer, S.H., and R. Gustafson
1993 *Plants and Flowers of Hawai`i*. University of Hawaii Press, Honolulu, HI.

Sterling, E.P. and C.C. Summers
1978 *Sites of O`ahu*. Dept. of Anthropology, B.P. Bishop Museum. Honolulu, HI.

U.S. Dept. of Agriculture Soil Survey Staff
1951 *Soil Survey Manual.* U.S. Government Printing Office, Washington, DC.

1962 Supplement replacing *Soil Survey Manual* pp. 173-188. U.S. Government Printing Office, Washington, DC.

Walker, A.T., and P. Rosendahl
1988 *Archaeological Reconnaissance Survey of the Proposed Kaipapau Exploratory Well Site Access Road Project Area.* PHRI Report 418-111088(K). Prepared for Belt, Collins and Associates, Hilo, HI.

Whistler, W.A.
1994 *Wayside Plants of the Islands*. Everbest Printing Co., Hong Kong.

Yent, M. and J. Ota
1982 *Results of Auger Coring Conducted at Malaekahana State Recreation Area, Phase II, Koolauloa, Oahu, TMK:5-6-01:24,45-47,49,51,53,55-65.* On File at the State Historic Preservation Division, Kapolei, HI.

ADDENDUM

This document is an addendum to *An Archaeological Assessment Report of Approximately 10.5 Acres of Land (La`ie Inn Redevelopment) in La`ie Ahupua`a, Ko`olauloa District, Island of O`ahu, Hawai`i [TMK: 5-5-2: 42, 43, AND 87; TMK: 5-5-6: 8 (POR.), 13, 19, 21, 24, 25, 26, AND 31]* (SCS Project 499) (Monahan 2004). This addendum, along with the original report and an appendix consisting of the State Historic Preservation Division's (SHPD) review letter requesting additional work in a portion of the project area, will be submitted to the SHPD for final review. This addendum describes the results of additional testing (backhoe excavation) conducted at TMK: 5-5-6: 19 & 21. All pertinent background information on the project area can be found in the original report, to which this addendum is attached.

No significant sites or new findings were obtained as a result of the additional testing in parcels 19 and 21. The results and recommendations of the original study remain unchanged.

REASON FOR THE ADDENDUM

The Archaeological Assessment Report cited above (Monahan 2004) was received by the SHPD on October 13, 2004; a review letter dated December 7, 2004, was sent to SCS soon after (Log No: 2004.3502, Doc. No. 0412SC04) (Appendix A). In its review letter, the SHPD stated that, although no significant sites or features were documented in the project area, additional subsurface testing was recommended before the report could be accepted as final. The main reasons for this recommendation were the documented presence of Jaucas Sands throughout the project area, and the potential for having missed unmarked, traditional Native Hawaiian burials.

The letter states: "Since you have clearly demonstrated that virtually the entire project area is underlain by Jaucas Sands, we would like to be very sure that sufficient testing has occurred. We recommend that additional testing be carried out through trenching that is perpendicular to the orientation of STs 1 – 12, and in the areas not covered by the previous testing."

Upon receiving the letter from SHPD, Monahan consulted with Dr. Sara Collins (SHPD-Oahu) by phone, prior to the additional trenching. Upon completion of the additional work, Monahan again consulted with Collins, this time in person (at SHPD offices in Kapolei), on January 26, 2005, appraising her of the negative results of the additional testing described here. Collins agreed, in principle, that the results of this additional work could be written up and submitted as an addendum to the original report.

METHODS

In consultation with Sara Collins, SCS (Monahan) conducted one additional day of subsurface testing (excavation) in parcels 19 & 21. Eight additional trenches, designated ST-13 through and including ST-20, were excavated by backhoe on January 25, 2005 (Figure 20). Methods and documentation were the same as the original Inventory Survey (see Monahan 2004), with one exception: no stratigraphic profiles were drawn, since all trenches exhibited typical sediments and strata, already documented, analyzed, and interpreted elsewhere. As with the original study, all of the additional trenches were excavated to the water table.

FINDINGS

Trench locations (see Figure 20) were designed to sample areas not covered by the original testing, and to sample the sediments in a perpendicular fashion. None of the trenches yielded any human remains and/or burial features. No significant artifacts or features whatsoever were documented.

The water table was shown to be approximately 20–40 cm higher than recorded in October, 2004. This probably reflects seasonal variation (the 'winter ocean' effect), well known to North Shore surfers.

Table 1 and Figures 21–36 document the eight additional trenches. A recent historic trash feature was exposed in ST-20. This subsurface feature was approximately 50–60 cm thick and 120 cm long. It contained clear bottle glass fragments and a piece of non-ferrous metal pipe between 50–60 cmbs. The upper limits of the historic trash feature were located between 20–30 cmbs (see Figures 35 and 36).

Table 1: Summary of Additional Trenches Excavated at TMK: 5-5-6: 19 & 21.

Unit	Size (m)	Depth (cm)	Finds	Stratigraphic Comments
ST-13	8.5	150	None	--
ST-14	3.0	115	None	Mucky gray marine sand
ST-15	7.5	160	None	--
ST-16	7.5	160	None	--
ST-17	14.5	160	None	--
ST-18	8.0	180	Upper layer of coral fragments	Dense layer of coral fragments in orange-brown sandy matrix
ST-19	7.0	100	None	Water table as high as 80 cmbs
ST-20	8.0	135	Recent historic trash feature, including: clear bottle glass fragments, piece of non-ferrous metal pipe at 50-60 cmbs	Upper limit of historic trash feature at 20-30 cmbs; feature itself is 50-60 cm thick

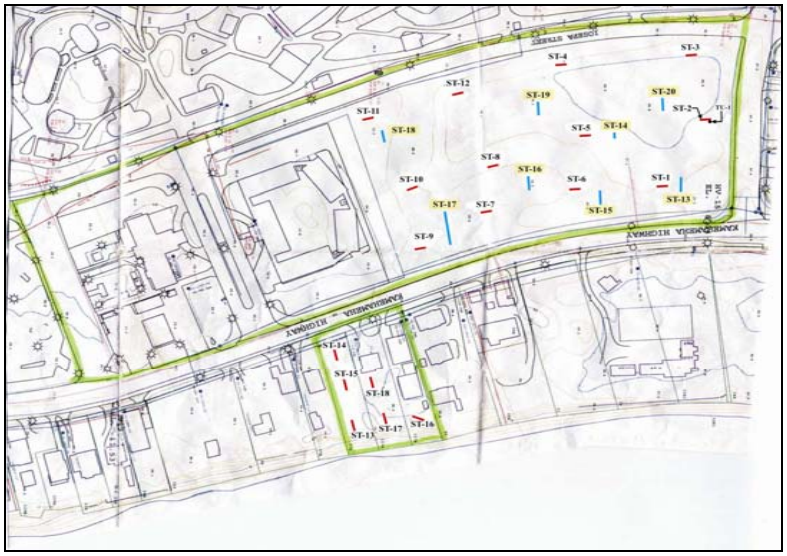


Figure 20: Additional Stratigraphic Trenches (ST-13 to ST-20) Excavated in Parcels 19 and 21.

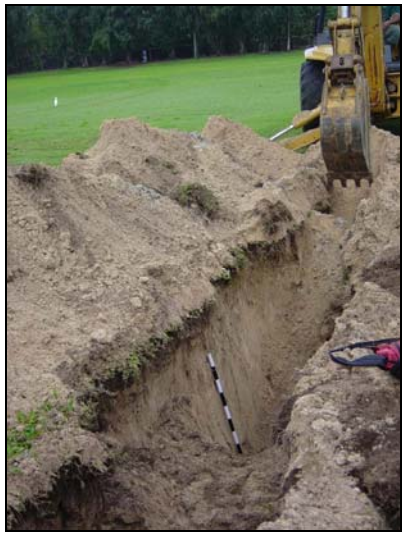


Figure 21: ST-13, Facing Southwest.

Figure 22: ST-13, Facing Northwest.

Figure 23: ST-14, Facing West.

Figure 24: ST-14, Facing South.

Figure 25: ST-15, Facing West.

Figure 26: ST-15, Facing East-Northeast.

Figure 27: ST-16, Facing West.

Figure 28: ST-16, Facing East-Northeast.

Figure 29: ST-17, Facing West.

Figure 30: ST-17, Facing South.

Figure 31: ST-18, Facing West.

Figure 32: ST-18, Facing South.

Figure 33: ST-19, Facing East.

Figure 34: ST-19, Facing West.

Figure 35: ST-20, Facing North.

Figure 36: ST-20, Facing Northeast.

ADDENDUM REFERENCE

Monahan, C.M.
2004 *An Archaeological Assessment Report of Approximately 10.5 Acres of Land (La`ie Inn Redevelopment) in La`ie Ahupua`a, Ko`olauloa District, Island of O`ahu, Hawai`i [TMK: 5-5-2: 42, 43, AND 87; TMK: 5-5-6: 8 (POR.), 13, 19, 21, 24, 25, 26, AND 31].* SCS, Inc., Report No. 499, filed with SHPD, Kapolei, HI.

APPENDIX A: SHPD LETTER TO SCS.

SCS 499

LINDA LINGLE
GOVERNOR OF HAWAII

PETER T. YOUNG
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

DAN DAVIDSON
DEPUTY DIRECTOR - LAND

YVONNE Y. IZU
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

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

December 7, 2004

Chris Monahan, Ph.D.
Scientific Consultant Services, Inc.
711 Kapi`olani Boulevard, Suite 975
Honolulu, Hawaii 96813

Log No: 2004.3502
Doc No: 0412SC04

Dear Dr. Monahan:

SUBJECT: Chapter 6E-42 Historic Preservation Review of an Archaeological Assessment Report on Property in La`ie
Lā`ie, Ko`olauloa, O`ahu
TMK: (1) 5-5-002: 042, 043 & 087; 5-5-006: 008 (por.), 013, 019, 021, 024, 024, 026 & 031

Thank you for the opportunity to review and comment on a report documenting the results of an archaeological assessment conducted on property in Lā`ie (Monahan. 2004. *An Archaeological Assessment Report of Approximately 10.5 Acres of Land [Lā`ie Inn Redevelopment] in Lā`ie Ahupua`a, Ko`olauloa District, Island of O`ahu, Hawai`i [TMK: 5-5-2: 42, 43, and 87; TMK: 5-5-6: 8 (por.), 13, 19, 21, 24, 25, 26, and 31]*). We received the subject report on October 13, 2004, and provide the following comments. Our review is late, and we apologize for any inconvenience this may have caused you or your client.

The 10.5-acre redevelopment property underwent a pedestrian survey with no evidence of surface finds made. Eighteen stratigraphic trenches (ST) were excavated by backhoe in accessible portions of the project area. One additional test unit was excavated by hand in order to investigate a subsurface feature that was identified in ST 2. No evidence of historic sites or deposits, including human burials, was encountered during the field work. Stratigraphic data indicate that much of the project area is underlain by Jaucas Sands, and associated deposits, with the water table present at one to two meters below surface. The subsurface feature turned out to be a modern hearth, with post-historic rubbish in it. You have recommended that future construction work undergo on-site archaeological monitoring in accordance with an approved monitoring plan.

A 1

Before we deem the report adequate, and accept it as final, we would like to ask about the possibility of conducting some additional subsurface testing, particularly in the area where STs 1 – 12 were excavated. Since you have clearly demonstrated that virtually the entire project area is underlain by Jaucas Sands, we would like to be very sure that sufficient testing has occurred. We recommend that additional testing be carried out through trenching that is perpendicular to the orientation of STs 1 – 12, and in the areas not covered by the previous testing.

Should you have any questions, please contact Sara Collins at 692-8026.

Aloha,

Melanie A. Chinen, Administrator
State Historic Preservation Division

SC: slc

c: A. Van Horn Diamond, Chair, O`ahu Island Burial Council
Nathan Napoka, Branch Chief, History and Culture Branch

A 2

Appendix E~~D~~. Cultural Impact Assessment 2004

A CULTURAL IMPACT ASSESSMENT IN LĀ`IE, KO`OLAULOA DISTRICT, O`AHU ISLAND, HAWAI`I [TMK: 5-05-002:42, 23, 87 AND TMK: 5-05-006:8, 9 (PORTION), 13, 19, 21, 24, 25, 26, AND 31]

Prepared by:
Leann McGerty, B.A.
and
Robert L. Spear, Ph.D.
October 2004

Prepared for:
Group 70 International, Inc.
925 Bethel Street, Fifth Floor
Honolulu, HI 96813

DRAFT COPY

NOTE:
1) New TMK numbers were assigned to this property: TMK 5-5-06:039 and 040
2) Beach club has been dropped from the project (01/25/08).

TABLE OF CONTENTS

TABLE OF CONTENTS ii
LIST OF FIGURES ii
INTRODUCTION 1
METHODOLOGY 4
ARCHIVAL RESEARCH 4
CONSULTATION 4
PROJECT AREA AND VICINITY 4
PAST POLITICAL BOUNDARIES 5
TRADITIONAL SETTLEMENT PATTERNS 5
WESTERN CONTACT 6
THE *MĀHELE* 7
CULTURAL ASSESSMENT 8
references 9

LIST OF FIGURES

Figure 1: Tax Map Key (TMK) of a Portion of Project Area Location 2
Figure 2: Tax Map Key (TMK) of a Portion of Project Area Location 3

INTRODUCTION

Scientific Consultant Services, Inc. (SCS) has been contracted by Hawaii Reserves, Inc. to conduct a Cultural Impact Assessment on some parcels in Lā`ie, Ko`olauloa, O`ahu [TMK: 5-05-002: 42, 23, 87; TMK: 5-05-006:8, 9 (por), 13, 19, 21, 24, 25, 26, 31] (Figure 1). Plans for these parcel include proposed development and expansion of the Lā`ie Inn to be called the Lā`ie Hotel.

A Cultural Impact Assessment involves evaluating the probability of negative impact on cultural values and rights within the project area and its vicinity. According to the Guidelines for Assessing Cultural Impacts established by the Hawaii State Office of Environmental Quality Control (OEQC 1997):

> The types of cultural practices and beliefs subject to assessment may include subsistence, commercial, residential, agricultural, access-related, recreational, and religions and spiritual customs. The types of cultural resources subject to assessment may include traditional cultural properties or other types of historic sites, both man made and natural which support such cultural beliefs.

Act 50, enacted by the Legislature of the State of Hawaii (2000) with House Bill 2895, relating to Environmental Impact Statements, proposes that:

> …there is a need to clarify that the preparation of environmental assessments or environmental impact statements should identify and address effects on Hawaii's culture, and traditional and customary rights…[H.B. NO. 2895].

The purpose of Act 50 is to require that Environmental Impact Statements include an assessment of any impact on the cultural practices of the community and state. It also amends the definition of 'significant effect' to include adverse effects on cultural practices. Thus, Act 50 requires an assessment of cultural practices to be included in the Environmental Impact Statement and to be taken into consideration during the planning process. The concept of geographical expansion is recognized by using, as an example, "the broad geographical area, e.g. district or ahupua`a" (OEQC 1997). It was decided that the process should identify 'anthropological' cultural practices, rather than 'social' cultural practices. For example, *limu* (edible seaweed) gathering would be considered an anthropological cultural practice, while a modern-day marathon would be considered a social cultural practice. The discussion resulted in the following workable definition for cultural practices:

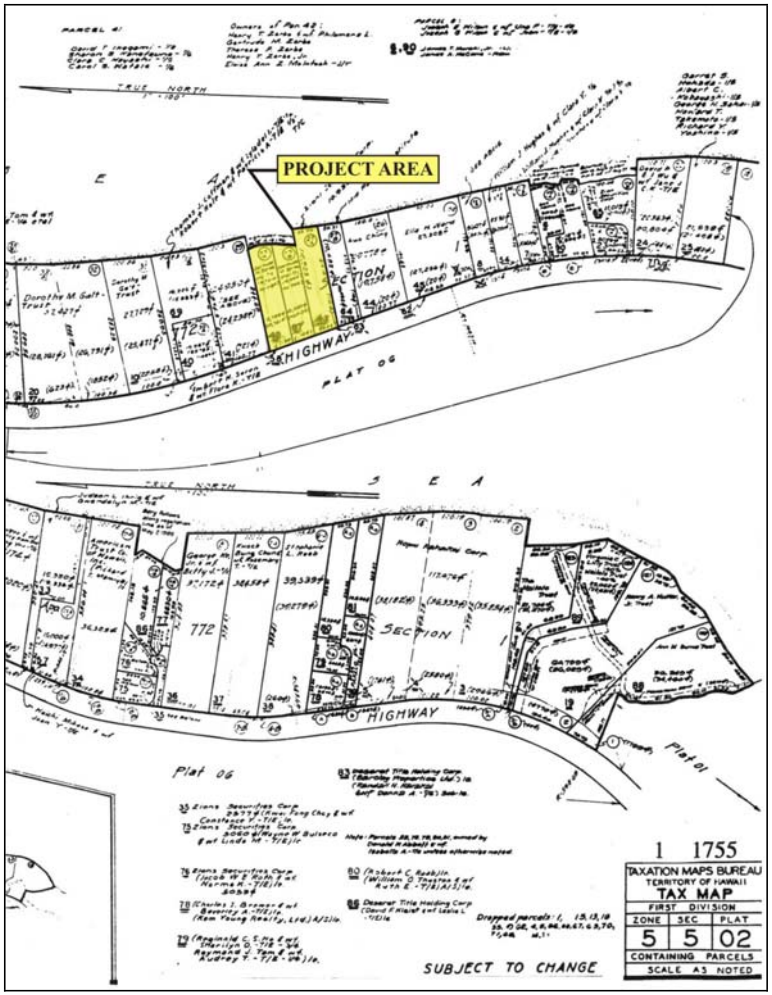


Figure 1: Tax Map Key (TMK) of a Portion of Project Area Location.

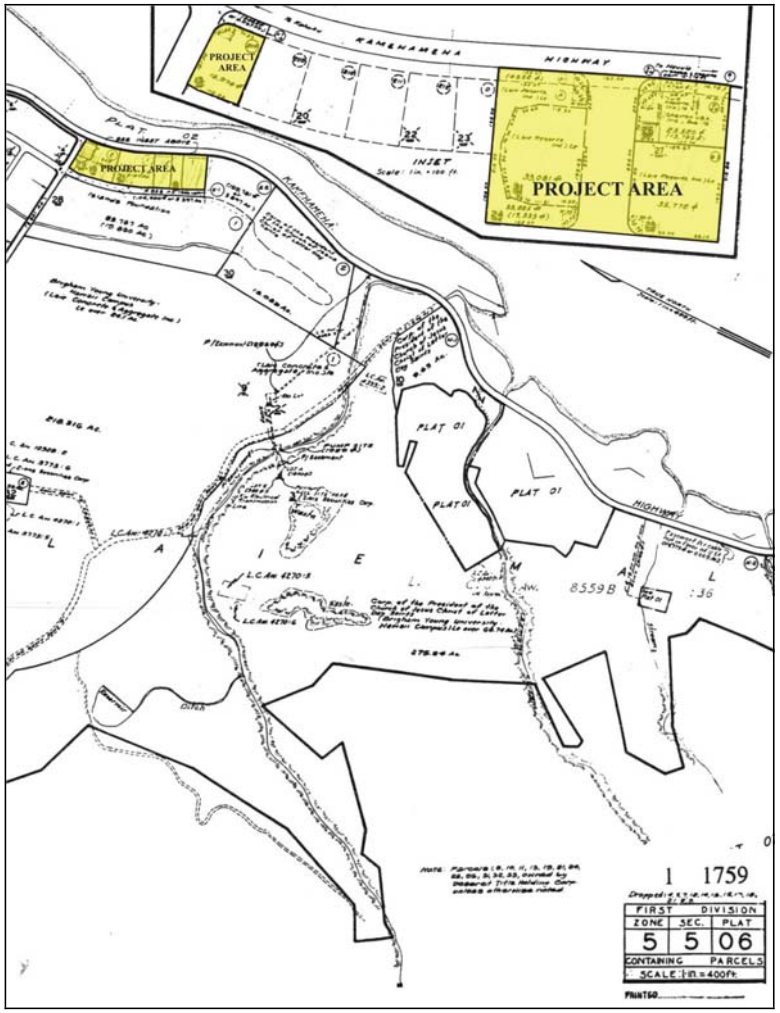


Figure 2: Tax Map Key (TMK) of a Portion of Project Area Location.

1.) A traditional cultural practice that is being conducted [at present].

2.) Traditional, beliefs, practices, life ways, societal, history of a community and its traditions, arts, crafts, music, and related social institutions [Act 50, Cultural Impact Assessment 2001].

METHODOLOGY

This Cultural Impact Assessment was prepared in accordance with the methodology and content protocol provided in the *Guidelines for Assessing Cultural Impacts* (OEQC 1997). This report contains archival and documentary research, as well as consultation with individuals or organizations with knowledge of the project area, its cultural resources, and its practices and beliefs. Based on this research, an assessment of the potential effects on cultural resources in the project area and recommendations for mitigation of these effects can be proposed.

ARCHIVAL RESEARCH

Archival research focused on a historical documentary study involving both published and unpublished sources. These included legendary accounts of native and early foreign writers; early historical journals and narratives; historic maps and land records such as Land Commission Awards, Royal Patent Grants, and Boundary Commission records; historic accounts, and previous archaeological project reports.

CONSULTATION

Individuals and/or groups who have knowledge of traditional practices and beliefs associated with a project area or who know of historical properties within a project area were sought for consultation. Individuals who had particular knowledge of traditions passed down from preceding generations and a personal familiarity with the project area were invited to share their relevant information. Initial contact was made with the Office of Hawaiian Affairs (OHA) on O`ahu and the Ko`olauloa Hawaiian Civic Club.

PROJECT AREA AND VICINITY

The project area is comprised of two separate portions located on either side of Kamehameha Highway in Lā`ie in the vicinity of the Polynesian Cultural Center. The larger portion abuts the *mauka* side of the highway, and is bounded by Naniloa Road to the north, Iosepa Street to the west, and the Polynesian Cultural Center parking lot to the south. The smaller portion abuts the highway on the *makai* side and is bounded by residential lots to the

north and south, and the seashore to the east. Elevation in the project area is no more that 1-2 meters above mean sea level.

PAST POLITICAL BOUNDARIES

Traditionally, the division of O`ahu's's lands into districts (*moku*) and sub-districts was performed by the *ali`i mō`ī* Māili-kūkahi,(Kamakau 1991) Cordy 2000, places his reign in the mid-500s . Land was considered the property of the king or *ali`i `ai moku* (the *ali`i* who eats the island/district), which he held in trust for the gods. The title of *ali`i `ai moku* ensured rights and responsibilities to the land, but did not confer absolute ownership. The king kept the parcels he wanted, his higher chiefs received large parcels from him and, in turn, distributed smaller parcels to lesser chiefs. The *maka`~inana* (commoners) worked the individual plots of land.

In general, several terms, such as *moku*, *ahupua`a*, *`ili* or *`ili`~ ina* were used to delineate various land sections. A district (*moku*) contained smaller land divisions (*ahupua`a*) that customarily continued inland from the ocean and upland into the mountains. Extended household groups living within the *ahupua`a* were therefore able to harvest from both the land and the sea. Ideally, this situation allowed each *ahupua`a* to be self-sufficient by supplying needed resources from different environmental zones (Lyons 1875:111). The *`ili `~ina* or *`ili* were smaller land divisions next in importance to the *ahupua`a* and were administered by the chief who controlled the *ahupua`a* in which it was located (*ibid*:33; Lucas 1995:40). The *mo`o`~ina* were narrow strips of land within an *`ili*. The land holding of a tenant or *hoa `~ina* residing in a *ahupua`a* was called a *kuleana* (Lucas 1995:61). The project area is located within the district of Ko`olauloa in the *ahupua`a* of Lā`ie, which literally translated means "*`ie* leaf" (Pukui *et al*. 1974:128).

TRADITIONAL SETTLEMENT PATTERNS

The Hawaiian economy was based on agricultural production and marine exploitation, as well as raising livestock and collecting wild plants and birds. Extended household groups settled in various *ahupua`a*. During pre-Contact times, there were primarily two types of agriculture, wetland and dry land, both of which were dependent upon geography and physiography. River valleys provided ideal conditions for wetland *kalo* (*Colocasia esculenta*) agriculture that incorporated pond fields and irrigation canals. Other cultigens, such as *kō* (sugar cane, *Saccharum officinaruma*) and *mai`a* (banana, *Musa* sp.), were also grown and, where

appropriate, such crops as *`uala* (sweet potato, *Ipomoea batatas*) were produced. This was the typical agricultural pattern seen during traditional times on all the Hawaiian Islands (Kirch and Sahlins 1992, Vol. 1:5, 119; Kirch 1985).

Agricultural development on the leeward side of O`ahu was likely to have begun early in what is known as the Expansion Period ([A.D. 1200–1400] Kirch 1985). According to Handy and Handy, there were numerous cultivated sections on the flat lands and many stoned terraces lined the stream, banks of the inland valleys. In addition, the bay was famous for its fishing and for catching sea turtles. Coastal pools fed by springs dotted coastal plains, contributing to its fecundity.

> In 1935 Kekuku, a 75-year-old *kama`āina* of the place, pointed out an area more than 60 acres in extent as having formerly been the largest single wet-taro area in La`ie *ahupuaa*, on land owned by his family for generations [Handy and Handy 1972:461].

WESTERN CONTACT

Early records, such as journals kept by explorers, travelers, and missionaries; Hawaiian traditions that survived long enough to be written down; and archaeological investigations have assisted in the understanding of past cultural activities Some of the first historical descriptions of O`ahu were of the northern coast, including the project area lands, recorded by members of Capt. Cook's third voyage in 1779 and leaving no doubt as to a viable population and associated activities located along their route. Leaving Hawai`i Island for the second time, Captain Clerke, who had succeeded to command of the *H.M.S. Resolution* following the death of Captain Cook, entered in his journal:

> Run round the Noern [northern] Extreme of the Isle [O`ahu] which terminates in a low Point rather projecting [Kahuku Point]; off it lay a ledge of rocks extending a full Mile into the Sea, many of them above the surface of the Water; the country in this neighborhood is exceeding fine and fertile; here is a large Village, in the midst of it run up a large-Pyramid doubtlessly part of a Morai [Beaglehole 1967:572, Part One, Vol III].

The north side of O`ahu was also praised by Lieutenant King, who recorded:

> We…sailed along its NE & NW sides but saw nothing of the Soern [Southern] part. What we did see of this Island was by far the most beautiful country of any in the Group; particularly the Neck that Stretches to the Noward: & its NW side. Nothing could exceed the verdure of the hills, nor the Variety which the face of the Country display'd. It [s north–eastern] parts were cliffy, and rugg'd to the Sea side, but the Valleys look'd exceedingly pleasant, near the N Point [Kahuku Point] we were charmd with the narrow border full of Villages, & the Moderate hills that rose behind them; but as we came more into the bay which the N & West extremity forms, the low land extended far back, & was highly cultivated. Where we Anchord was a charming Landscape [Waimea Bay; Beaglehole 1967:611, Part one, Vol. III].

Surgeon, David Samwell added more information concerning its physical appearance and the populations activities:

> This Island has a pleasant Appearance, having much wood upon it; the Land is in general high…the Island produces plenty of breadfruit, Cocoa nuts, Plantains, Yams, Taroo root & sweet Potaotes & Sugar Canes and …there are many hogs upon it. In the afternoon saw the appearance of a good anchoring place in an open road [roadstead] with a fine Sandy Beach, on which stood many Towns, with green Plants behind extending to the Hills which rose at no great distance off; as we were sailing along we saw three or four of their burying Places called E-heiaw [*heiau*] with the kind of high obelisks erected on them of wood, & on the Pales which inclosed them we could see with our Glasses many human Skulls. We saw many Indians sitting by their Houses looking at us & shouting now & then. Between two and three o'Clock both Ships came to an Anchor about ¾ of a mile distant off shore, before the mouth of a small River [Waimea Bay; Beaglehole 1967:1221, Part Two, Vol III].

THE *MĀHELE*

In the 1840s, a drastic change in the traditional land tenure resulted in a division of island lands and a system of private ownership based on Western law. While it is a complex issue, many scholars believe that in order to protect Hawaiian sovereignty from foreign powers, Kauikeaouli (Kamehameha III) was forced to establish laws changing the traditional Hawaiian society to that of a market economy (Daws 1968:111; Kuykendall Vol. I, 1938:145 *et passim*; Kame`eleihiwa 1992:169–70, 176).

Among other things, the foreigners demanded private ownership of land to insure their investments (Kuykendall Vol. I, 1938:138 *et passim*; Kame`eleihiwa 1992:178; Kelly 1998:4). Once lands were made available and private ownership was instituted, native Hawaiians including the *maka`~inana* (commoners) were able to claim the plots they were cultivating and living on, if they had been made aware of the foreign procedures (*kuleana* lands, LCAs). This land division, or *M~hele*, occurred in 1848. The awarded parcels were called Land Commission Awards (LCA). If occupation could be established through the testimony of witnesses, the petitioners were issued a Royal Patent number and could then take possession of the property (Chinen 1961:16).

After the conquest of O`ahu in 1795 by Kamehmeha I, Lā`ie was given as *`āina pana la`au* (conquered lands) to his half brother, Kalaimanhū who eventually passed it on to his daughter, Kekāuluohi, who in turn passed it to her son with Charles Kana`ina, Lunalilo. The entire *ahupua`*a remained under the control of Lunalilo until the Great Māhele. Although awarded LCAs can be helpful in reflecting earlier traditional land use, none were located on the present project area (Waihona `Aina 2000).

CULTURAL ASSESSMENT

Individuals and organizations, including the Office of Hawaiian Affairs on O`ahu and the Ko`olauloa Hawaiian Civic Club were contacted by SCS in order to obtain information concerning cultural activities occurring at or in the vicinity of Parcel 120. None of the individuals and/or groups who responded had any cultural information pertaining to the project area.

Based on community response, archival research, and continuous development in the vicinity, it is reasonable to conclude that, pursuant to Act 50, the exercise of native Hawaiian rights, or any ethnic group, related to gathering, access or other customary activities will not be affected by renovations on the previously enumerated parcels. Because there were no activities identified, there are thus no adverse effects.

REFERENCES

Beaglehole, J.C. (Ed.)
1967 *The Journals of Captain Cook on his Voyages of Discovery.* Vol. 3. *The Voyage of the* Resolution *and* Discovery. Cambridge University Press for Haklyut Society.

Chinen, Jon
1961 Original Land Titles in Hawaii. Copyright 1961 Jon Jitsuzo Chinen. Library of Congress Catalogue Card No. 61-17314.

Cordy, Ross
2002 *The Rise and Fall of the O`ahu Kingdom*. Mutual Publishing: Australia.

Daws, G.
1968 *Shoal of Time: History of the Hawaiian Islands.* University of Hawai`i Press. Honolulu.

Fornander, Abraham
1969 *An Account of the Polynesian Race, Its Origins and Migrations*. Vol. 1 to 3. Charles E. Tuttle Co. Inc.: Jutland.
1919 *Hawaiian Antiquities and Folklore*. Bishop Museum Press: Honolulu.

Handy, E.S. Craighill and Elizabeth G. Handy
1972 N*ative Planters in Old Hawaii.* Bishop Museum Bulletin 233. Bishop Museum Press. Honolulu.

Kamakau, Samuel
1964 Ka Po`e Kahiko. *Bishop Museum Special Publication* 51. Honolulu.

Kame`eleihiwa, Lilikal~
1992 *Native Land and Foreign Desires: Pehea La E Pono Ai?* Bishop Museum Press. Honolulu.

Kelly, Marion
1983 *N~M~la o Kona: Gardens of Kona*. Dept. of Anthropology Report Series 83-2. Bishop Museum. Honolulu.

1998 AGunboat Diplomacy, Sandalwood Lust and National Debt@ In *Ka Wai Ola o OHA,* Vol. 15, No. 4, April 1998.

Kirch, Patrick
1985 *Feathered Gods and Fishhooks: An Introduction to Hawaiian Archaeology and Prehistory*. University of Hawaii Press, Honolulu.

Kirch, Patrick V. and Marshall Sahlins
1992 *Anahulu*. Vol. 1 and 2. University of Chicago Press. Chicago.

Kuykendall, R.S.
1938 *The Hawaiian Kingdom*. Vol. 1. University of Hawai`i Press. Honolulu.

Lucas, Paul F. Nahoa
1995 *A Dictionary of Hawaiian Legal Land-terms*. Native Hawaiian Legal Corporation. University of Hawai`i Committee for the Preservation and Study of Hawaiian Language, Art and Culture.. University of Hawai`i Press.

Lyons, C.J.
1875 ALand Matters in Hawaii@. *The Islander*, Vol. I. Honolulu.

Menzies, Archibald
1920 *Hawaii New, 128 Years ago*. W.F. Wilson, ed. New Freedom Publishers: Honolulu.

OEQC (Hawaii State Office of Environmental Quality Control)
1997 "Guidelines for Assessing Cultural Impacts." Adopted by the Environmental Council, November 1997

Pukui, Mary Kawena, Samuel Elbert, Esther Mookini
1974 *Place Names of Hawaii.* University of Hawai`i Press: Honolulu.

Appendix F~~E~~. Traffic Impact Analysis Report

(This appendix makes references to a beach club facility. During the planning process a redesign occurred removing this facility.)

TRAFFIC IMPACT ANALYSIS REPORT

FOR THE PROPOSED

LA'IE INN REDEVELOPMENT

LA'IE, OAHU, HAWAII

TAX MAP KEYS 5-5-006: 19, 21, 31 & 5-5-20:42, 43, 87

I. Introduction

A. Project Description

Hawaii Reserves, Inc. proposes to redevelop the existing La'ie Inn in La'ie, Oahu, Hawaii. La'ie Inn is located to the north of the Polynesian Cultural Center. The project site is bounded by Kamehameha Highway, Laniloa Street, I'osepa Street, and Naniloa Loop. A McDonald's Restaurant and a Chevron gas station are also located on the project site. The 10.3-acre project site is identified as Tax Map Keys: 5-5-006: 19, 21, 31 and 5-5-20:42, 43, 87. Figure 1 depicts the vicinity map.

La`ie Inn is proposed to be redeveloped from a 48-room hotel into a 220-room hotel. The hotel will include a restaurant with 5,600 square feet of gross floor area (SFGFA) and a meeting/banquet room with 3,000 SFGFA. The existing McDonald's Restaurant and 8-fueling position gas station are proposed to be relocated to the southwest corner of Naniloa Loop and Kamehameha Highway. The McDonald's Restaurant would be reduced from a 6,260 SFGFA to a 3,500 SFGFA fast-food restaurant. The convenience store also would be reduced from 1,085 SFGFA to 500 SFGFA. Future retail spaces, which total 18,000 SFGFA, are also planned and are included in this traffic impact analysis. The proposed project also includes a private beach facility on the makai (east) side of Kamehameha Highway. The proposed redevelopment project is expected to reach full build out and occupancy by the Year 2010.

Site access is proposed on Kamehameha Highway at the existing Laniloa Street (renamed La`ie Inn Entrance Drive) and a driveway to the private beach facility. A right-turn-out only driveway also is proposed directly on Kamehameha Highway, about 200± feet south of its intersection with Naniloa Loop. Access to the McDonald's Restaurant and the gas station is proposed via a driveway on Naniloa Loop, which will be located about 150± feet mauka of Kamehameha Highway. Between Laniloa Street and Naniloa Loop, I`osepa Street would be converted into a parking lot/driveway, which would provide access to the hotel and the future retail pads. The project site is depicted on Figure 2.

NOTE:

1) New TMK numbers were assigned to this property: TMK 5-5-06:039 and 040
2) Beach club has been dropped from the project (01/25/08).

Figure 1. Location and Vicinity Map

Figure 2. La'ie Inn Conceptual Plan

B. Purpose and Scope of the Study

The purpose of this study is to analyze the traffic impacts resulting from the development of the proposed La'ie Inn Redevelopment. This report presents the findings and recommendations of the study. The scope of this study includes:

1. Description of the proposed project.
2. Evaluation of existing roadways and traffic conditions.
3. Development of trip generation characteristics of the proposed project.
4. Analysis of the future traffic conditions without the proposed project.
5. Identification and analysis of traffic impacts resulting from the development of the full build out of the proposed project.
6. Recommendations of improvements, as necessary, that would mitigate the traffic impacts identified in this study.

C. Methodologies

1. Capacity Analysis Methodology

The highway capacity analysis, performed for this study, is based upon procedures presented in the Highway Capacity Manual (HCM), published by the Transportation Research Board. HCM defines Level of Service (LOS) as "a quality measure describing operational conditions within a traffic stream". Several factors may be included in determining LOS, such as: speed, travel time, freedom to maneuver, traffic interruptions, driver comfort, and convenience. LOS's "A", "B", and "C" are considered satisfactory Levels of Service. LOS "D" is generally considered a "desirable minimum" operating level of service. LOS "E" is an undesirable condition, and LOS "F" is an unacceptable condition. Intersection LOS is primarily based upon delay. Table 1 summarizes the LOS criteria.

Table 1. Level of Service Criteria (HCM)

LOS	Unsignalized Intersections Control Delay (sec/veh)
A	≤ 10
B	> 10 – 15
C	> 15 – 25
D	> 25 – 35
E	> 35 – 50
F	> 50

Worksheets for the capacity analysis performed throughout this report are compiled in the Appendix.

2. Trip Generation Methodology

The trip generation methodology is based upon generally accepted techniques developed by the Institute of Transportation Engineers (ITE) and published in Trip Generation, 7th Edition. ITE hotel trip rates were developed by correlating the total vehicle trip generation data with various activity/land use characteristics, such as the vehicle trips per hour (vph) per hotel room.

The trip generation characteristics of the existing Chevron gas station and convenience store varied from the ITE rates for a gasoline/service station with a convenience market, i.e., the observed trip generation was higher during the AM peak hour of weekday traffic and lower during the PM and Saturday peak hours of traffic. For the purpose of this analysis, the trip generation rates, which were developed from the existing Chevron gas station, were applied to the proposed gas station.

The observed trip generation characteristics of the existing McDonald's Restaurant were lower than the ITE rates for a fast-food restaurant with a drive-through window. The observed traffic generated by the existing fast-food restaurant was reassigned to its new and smaller location.

II. Existing Conditions

A. Roadways

Kamehameha Highway is the primary arterial highway in the North Shore area and Windward Oahu. Kamehameha Highway is a two-way, two-lane highway with a posted speed of 25 miles per hour (mph), in the vicinity of the proposed project. Kamehameha Highway carried about 14,000 vehicles per day, total for both directions.

Naniloa Loop is a collector roadway in the Brigham Young University and Mormon Temple area. Naniloa Loop is a two-way, two-lane roadway, which intersects Kamehameha Highway at two locations: at the project site, and about one mile to the north of the project site. Naniloa Loop is stop-controlled at both of its intersections with Kamehameha Highway.

North of Naniloa Loop, I`osepa Street is a two-way, two-lane residential roadway. I`osepa Street extends to the south of Naniloa Loop, behind the project site and terminates at Laniloa Street. I`osepa Street is stop-controlled at its intersection with Naniloa Loop.

Laniloa Street is a two-way, two-lane roadway between Kamehameha Highway and I`osepa Street. Laniloa Street provides access to the existing McDonald's Restaurant and the Chevron gas station. Laniloa Street is stop-controlled at its intersection with Kamehameha Highway.

The existing project site has five points of access including: Naniloa Loop via I`osepa Street, a driveway into La`ie Inn and the McDonald's Restaurant, two Chevron gas station driveways, and Laniloa Street.

B. Existing Peak Hour Traffic Volumes and Operating Conditions

1. Field Investigation and Data Collection

Manual traffic count surveys were conducted in the vicinity of the proposed project in September, 2004, during the peak periods of weekday traffic – from 7:00 AM to 9:00 AM and from 3:30 PM to 5:30 PM, and during the Saturday peak period of traffic – from 1:00 PM to 3:00 PM. The following Kamehameha Highway intersections were included in the study area:

- Kamehameha Highway and Naniloa Loop (south leg)
- Kamehameha Highway and La`ie Inn Driveway
- Kamehameha Highway and Chevron gas station driveways
- Kamehameha Highway and Laniloa Street
- Kamehameha Highway and the Polynesian Cultural Center (PCC) Main Entrance
- Naniloa Loop and I`osepa Street

Hale Laa Boulevard was closed for construction during the field investigation. Therefore, existing traffic volumes on Naniloa Loop may be higher than under normal conditions. The peak period traffic data are presented in the Appendix.

2. Existing AM Peak Hour Traffic

The AM peak hour of traffic occurred from 7:00 AM to 8:00 AM. Kamehameha Highway carried about 1,000 vph, total for both directions. The existing project site generated 192 vph, entering and exiting the site driveways, during the existing AM peak hour of traffic.

The left-turn movement from Naniloa Loop to northbound Kamehameha Highway operated at LOS "E", during the existing AM peak hour of traffic. PCC was closed during the AM peak period of traffic. The other intersections in the study area operated at satisfactory Levels of Service, i.e., LOS "C" or better, during the existing AM peak hour. Figure 3 depicts the existing AM peak hour traffic volumes and the results of the capacity analysis.

3. Existing PM Peak Hour Traffic

The PM peak hour of traffic occurred between 1:00 PM and 2:00 PM. Kamehameha Highway carried over 1,000 vph, total for both directions, during the existing PM peak hour of traffic. The existing project site generated 204 vph, entering and exiting the site driveways, during the existing PM peak hour of traffic.

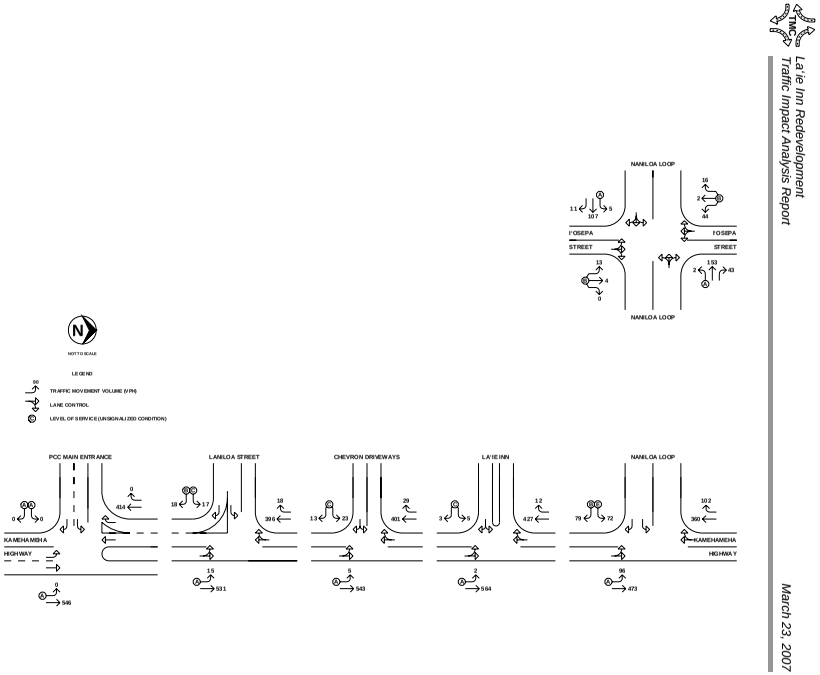


Figure 3. Existing AM Peak Hour Traffic

During the existing PM peak hour of traffic, the left-turn movement from Naniloa Loop to northbound Kamehameha Highway operated at LOS "F". The left-turn movement from the PCC Main Entrance operated at LOS "D" at Kamehameha Highway. The other intersections in the study area operated at satisfactory Levels of Service, during the existing PM peak hour. The existing PM peak hour traffic volumes and the results of the capacity analysis are depicted on Figure 4.

4. Existing Saturday Peak Hour Traffic

The Saturday peak hour of traffic generally occurred between 3:30 PM and 4:30 PM. Kamehameha Highway carried over 1,000 vph, total for both directions, during the existing Saturday peak hour of traffic. The existing project site generated 283 vph, entering and exiting the site driveways, during the existing Saturday peak hour of traffic.

The left-turn movement from Naniloa Loop to northbound Kamehameha Highway operated at LOS "F", during the existing Saturday peak hour of traffic. The Chevron gas station driveways operated at LOS "D". The left-turn movements from the Laniloa Street and from the PCC Main Entrance onto Kamehameha Highway also operated at LOS "D". Figure 5 depicts the existing Saturday peak hour traffic volumes and the results of the capacity analysis.

III. Future Traffic Conditions

A. Background Growth in Traffic

The State Department of Transportation (DOT) collected historical traffic count data on Kamehameha Highway at Hale Laa Boulevard, about a half mile north of the project site. Linear regression analysis of the DOT data indicated that the average annual growth in traffic on Kamehameha Highway averaged about 1.91 percent per year. A background growth factor of 11.5 percent was applied to the existing traffic demands to estimate the Year 2010 traffic demands.

B. Recommended Intersection Improvements Without Project

1. Northbound Kamehameha Highway should be widened at Naniloa Loop to provide an exclusive left-turn lane.

2. A median shelter lane should be constructed to facilitate the left-turn movement from Naniloa Loop onto Kamehameha Highway in the northbound direction to mitigate the LOS "F", during the existing PM and Saturday peak hours of traffic.

3. A median shelter lane should be constructed to facilitate the left-turn movement from the PCC Main Entrance onto Kamehameha Highway in the northbound direction to mitigate the LOS "E", during the Saturday peak hour of traffic without the proposed project.

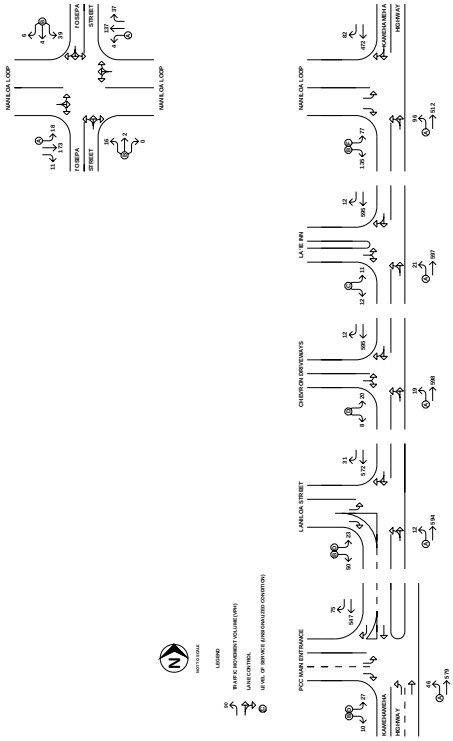


Figure 5. Existing Saturday Peak Hour Traffic

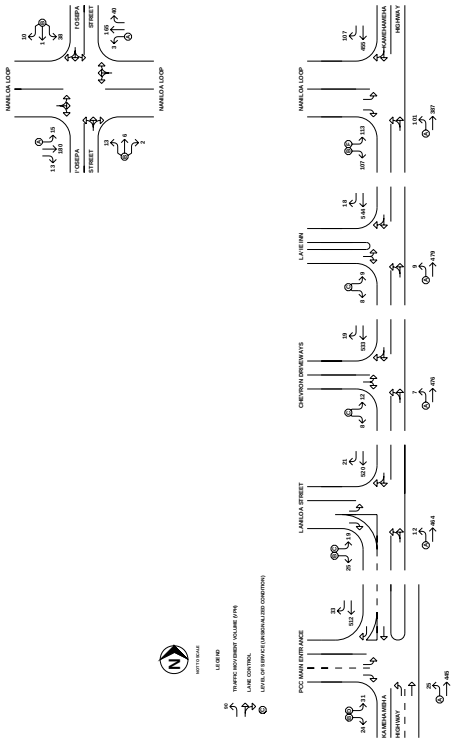


Figure 4. Existing PM Peak Hour Traffic

C. Year 2010 AM Peak Hour Traffic Analysis Without Project

During the Year 2010 AM peak hour of traffic without the proposed project, the recommended median shelter lane is expected to improve the traffic operations of the left-turn movement from Naniloa Loop to northbound Kamehameha Highway from LOS "F" to LOS "C". The left-turn movements onto Kamehameha Highway from the other intersections along the project site are expected to operate at LOS "D", during the AM peak hour without the proposed project. Figure 6 depicts the AM peak hour traffic volumes without the proposed project and the results of the capacity analysis.

D. Year 2010 PM Peak Hour Traffic Analysis Without Project

The left-turn movement from Naniloa Loop to northbound Kamehameha Highway is expected to operate at LOS "C", during the Year 2010 PM peak hour of traffic without the proposed project. The other intersections in the study area are expected to operate at satisfactory Levels of Service, during the PM peak hour without the proposed project. The PM peak hour traffic volumes without the proposed project and the results of the capacity analysis are depicted on Figure 7.

E. Year 2010 Saturday Peak Hour Traffic Analysis Without Project

During the Year 2010 Saturday peak hour of traffic without the proposed project, the recommended median shelter lane is expected to improve the traffic operations of the left-turn movement from Naniloa Loop to northbound Kamehameha Highway from LOS "E" to LOS "C". The La`ie Inn and Chevron gas station driveways on Kamehameha Highway are expected to operate at LOS "D", during the Saturday peak hour without the proposed project. The left-turn movement from Laniloa Street is expected to operate LOS "E". Figure 8 depicts the Saturday peak hour traffic volumes without the proposed project and the results of the capacity analysis.

IV. Traffic Impact Analysis

A. Project Generated Traffic

1. Trip Generation Characteristics

The trip generation from the proposed La`ie Inn Redevelopment Project was reduced by the existing site traffic to determine the net increase in site trips. During the AM peak hour of traffic, the proposed La`ie Inn Redevelopment Project is expected to generate a net increase in traffic of 144 vehicles per hour (vph) – 89 vph entering the site and 55 vph exiting the site. The proposed project is expected to generate a net increase in traffic of 232 vph, during the PM peak hour of traffic: 124 vph entering the site and 108 vph exiting the site. During the Saturday peak hour of traffic, the proposed project is expected to generate a net increase in traffic of 293 vph: 162 vph entering the site and 131 vph exiting the site. The trip generation characteristics for the proposed project are summarized in Table 2.

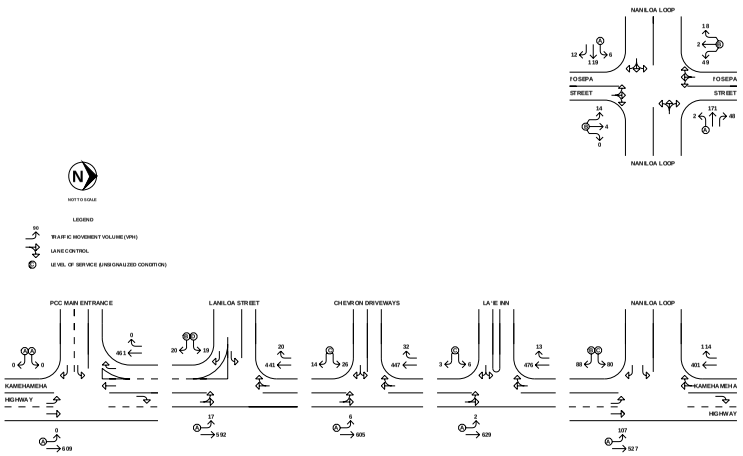


Figure 6. AM Peak Hour Traffic Without Project – Improved

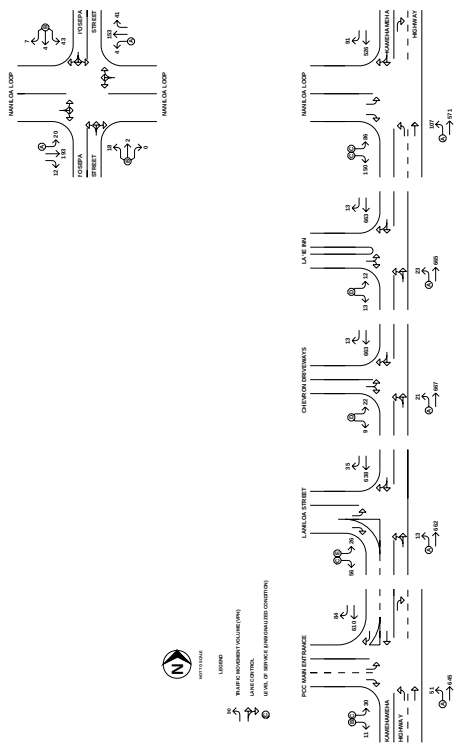


Figure 8. Saturday Peak Hour Traffic Without Project – Improved

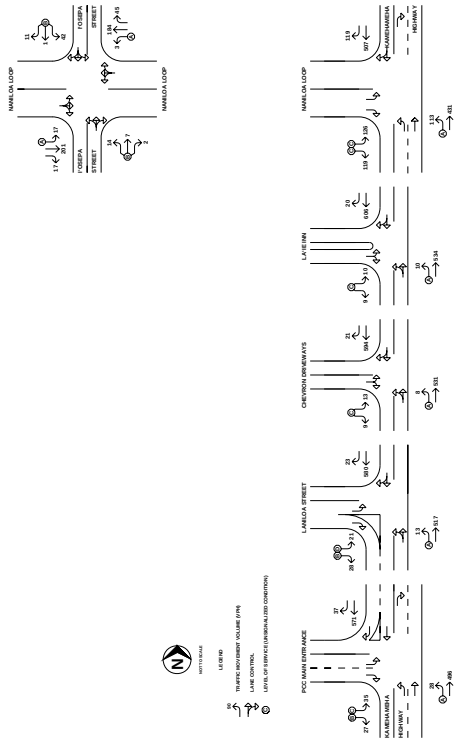


Figure 7. PM Peak Hour Traffic Without Project – Improved

Table 2. Trip Generation Characteristics

Land Use (ITE Code)	Units	AM Peak Hour (vph)			PM Peak Hour (vph)			Saturday Peak Hour (vph)		
		Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
Hotel (310)	220 Rooms	75	48	123	69	61	130	89	70	159
Restaurant (931)	5,600 SFGFA	4	1	5	28	14	42	36	25	61
Gas Station	8 Fueling Positions	36	42	78	27	23	50	33	46	79
Fast-Food Restaurant	3,500 SFGFA	35	29	64	42	44	86	48	56	104
Retail (820)	18,000 SFGFA	11	7	18	32	35	67	47	43	90
Subtotals		161	127	288	198	177	375	253	240	493
Existing Site Trips		72	72	144	74	69	143	91	109	200
Net Increase in Trips		**89**	**55**	**144**	**124**	**108**	**232**	**162**	**131**	**293**

2. **Trip Distribution**

The trip distribution is based upon existing site traffic patterns. Figures 9, 10, and 11 depict the AM, PM, and Saturday peak hour project-generated traffic assignments for the proposed project, respectively.

B. Proposed Traffic Improvements With Project

1. Northbound Kamehameha Highway should be widened at La'ie Inn Entrance Drive (Laniloa Street) to provide an exclusive left-turn lane.

2. A median shelter lane should be constructed to facilitate the left-turn movement from the La'ie Inn Entrance Drive onto Kamehameha Highway in the northbound direction.

C. AM Peak Hour Traffic Impact Analysis With Project

The intersections in the study area are expected to operate at satisfactory Levels of Service", during the AM peak hour of traffic with the proposed project. Figure 12 depicts the AM peak hour traffic with the proposed project, and the results of the capacity analysis.

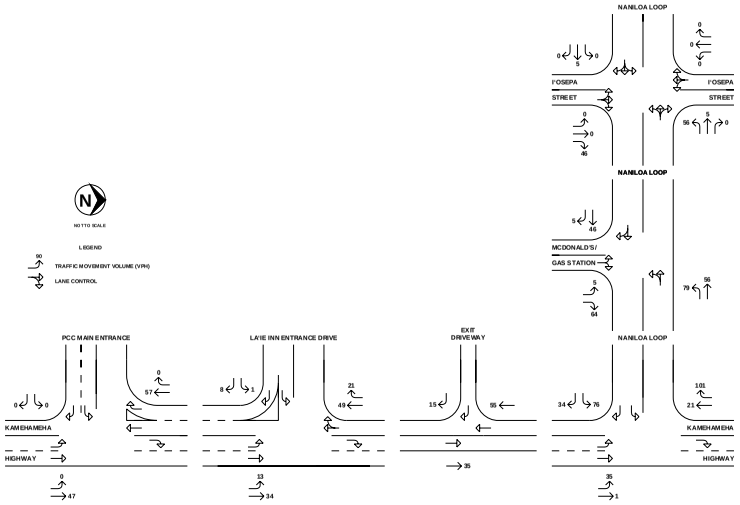


Figure 9. AM Peak Hour Traffic Assignment

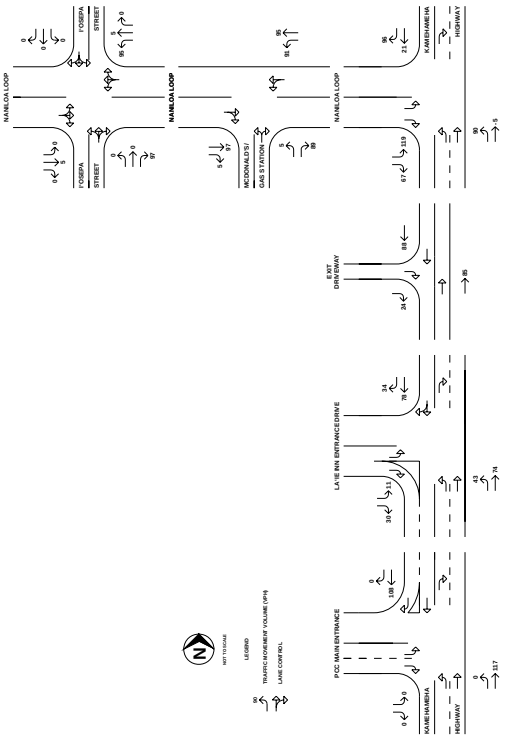


Figure 11. Saturday Peak Hour Traffic Assignment

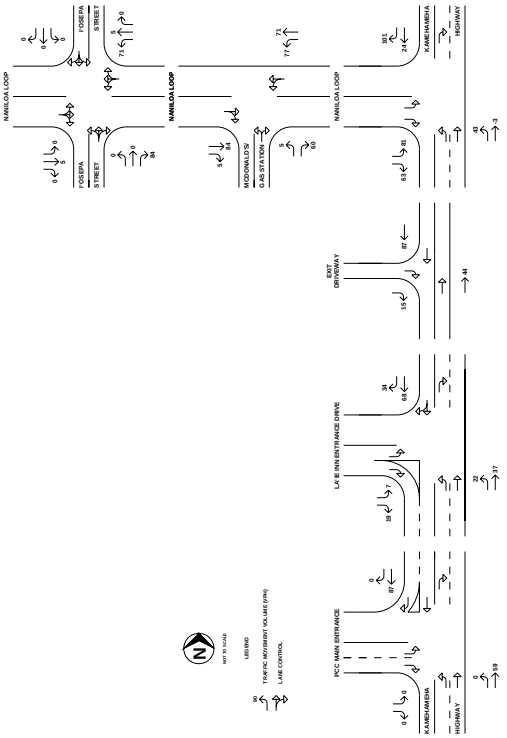


Figure 10. PM Peak Hour Traffic Assignment

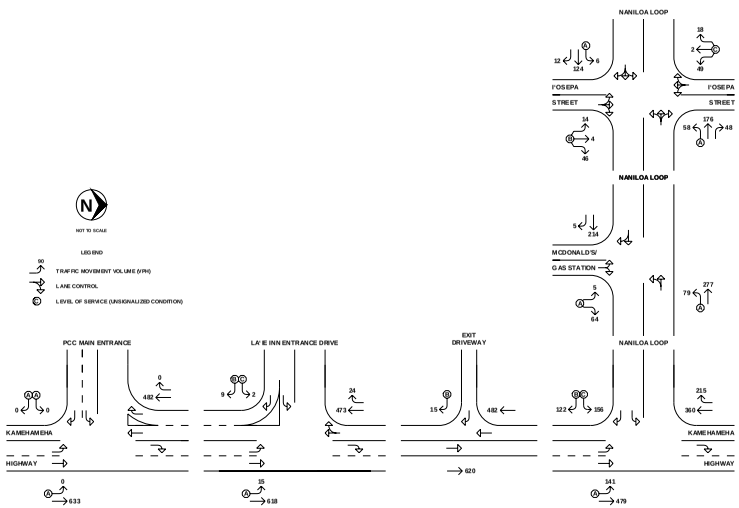


Figure 12. AM Peak Hour Traffic With Project

D. PM Peak Hour Traffic Impact Analysis With Project

During the PM peak hour of traffic with the proposed project, the left-turn movement from Naniloa Loop onto Kamehameha Highway is expected to operate at LOS "D". The 95-percentile left-turn queue on Naniloa Loop is expected to extend back to the McDonald's Restaurant/gas station driveway. Southbound I`osepa Street also is expected to operate at LOS "D" at Naniloa Loop. The other intersections in the study area are expected to operate at satisfactory Levels of Service. The PM peak hour traffic with the proposed project and the results of the capacity analysis are depicted on Figure 13.

E. Saturday Peak Hour Traffic Impact Analysis With Project

The left-turn movement from Naniloa Loop onto northbound Kamehameha Highway is expected to operate at LOS "F", during the Saturday peak hour of traffic with the proposed project. The 95-percentile left-turn queue on Naniloa Loop is expected to extend back to I`osepa Street. Southbound I`osepa Street is expected to operate at LOS "D" at Naniloa Loop. The other intersections in the study area are expected to operate at satisfactory Levels of Service. Figure 14 depicts the Saturday peak hour traffic volumes with the proposed project and the results of the capacity analysis.

V. Recommendations and Conclusions

A. Recommended Traffic Improvements Without Project

1. Kamehameha Highway and Naniloa Loop Improvements

   a. Widen the northbound approach of Kamehameha Highway to provide an exclusive left-turn lane to Naniloa Loop.

   b. Widen the north leg of Kamehameha Highway to provide a median left-turn shelter lane to facilitate the left-turn movement from Naniloa Loop.

2. Kamehameha Highway and PCC Main Entrance – Widen the north leg of Kamehameha Highway to provide a median left-turn shelter lane to facilitate the left-turn movement from the PCC Main Entrance.

B. Recommended Traffic Improvements With Project

1. Signalize the intersection of Kamehameha Highway and Naniloa Loop, when warranted.

2. Widen the northbound approach of Kamehameha Highway to provide an exclusive left-turn lane to La`ie Inn Entrance Drive.

3. Widen the north leg of Kamehameha Highway to provide a median left-turn shelter lane to facilitate the left-turn movement from La`ie Inn Entrance Drive.

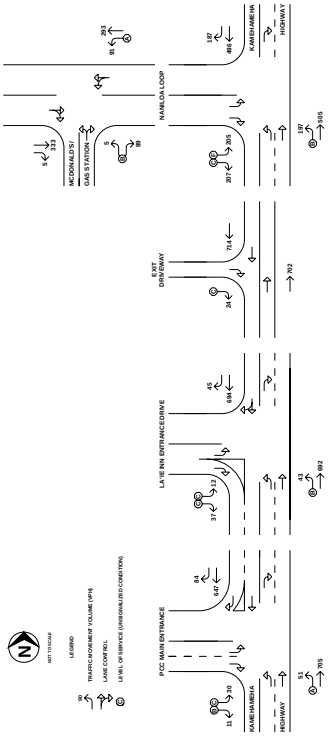


Figure 14. Saturday Peak Hour Traffic With Project

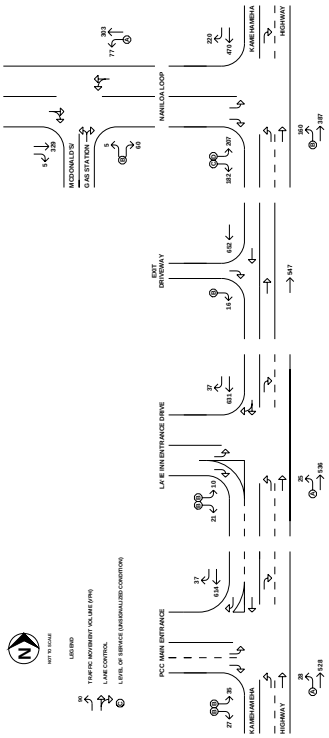


Figure 13. PM Peak Hour Traffic With Project

4. Advance warning signs should be installed on Kamehameha Highway on both approaches to the pedestrian crosswalk between the private beach facility and La‘ie Inn.

5. In-roadway/embedded (flashing) lights should be considered at the Kamehameha Highway crosswalk to the private beach facility.

C. Conclusions

The proposed redevelopment plan relocates the La‘ie Inn to La‘ie Inn Entrance Drive and Naniloa Loop. The McDonald’s Restaurant and gas station driveways also would be relocated to Naniloa Loop. The recommended traffic improvements on Kamehameha Highway are expected to mitigate the weekday traffic impacts resulting from the redevelopment of La`ie Inn. Because the field investigation occurred when Hale Laa Boulevard was closed for construction at Kamehameha Highway, traffic on Naniloa Loop may be overstated. Naniloa Loop should be monitored after the proposed redevelopment to determine the future warrant(s) for the installation of traffic signals. Table 3 summarizes the traffic impact analysis of the intersections in the vicinity of the proposed project.

Table 3. Traffic Impact Analysis Summary

Kamehameha Highway Intersection	Existing LOS			Without Project LOS With Mitigation			With Project LOS With Mitigation		
	AM	PM	Sat.	AM	PM	Sat.	AM	PM	Sat.
Naniloa Loop	E	F	F	C	C	C	D	D	F
Gas Station Dwy. (New)	N/A	N/A	N/A	N/A	N/A	N/A	B	B	C
La‘ie Inn Dwy. (Existing)	C	C	C	C	C	D	N/A	N/A	N/A
Chevron Dwys. (Existing)	C	C	D	C	C	D	N/A	N/A	N/A
La‘ie Inn Entrance Drive	C	C	D	D	C	E	C	B	C
PCC Main Entrance	A	D	D	A	C	C	A	B	C

Note: LOS = Side Street Level of Service (Unsignalized Condition)

Appendix G. Lāʻie Beach Count Report

JOHN M. KNOX & ASSOCIATES, INC.

LĀʻIE BEACH COUNT REPORT

April 7, 2008

Prepared for:
Group 70 International, Inc.
and
Hawaiʻi Reserves, Inc.

Prepared by:
John M. Knox & Associates, Inc.

With Assistance from:
FAQ Hawaiʻi, Inc.

1001 Bishop St., ASB Tower 1542 ▪ Honolulu, HI 96813 USA ▪ Phone (808) 523-1352 ▪ Fax (808) 523-1353 ▪ E-Mail jmk@johnmknox.com ▪ Web www.johnmknox.com

Purpose

Group 70 International, Inc. prepared a Draft Environmental Assessment for Hawaiʻi Reserves, Inc. (HRI) in regard to HRI's proposal to expand the Lāʻie Inn from its current 49 rooms to 220 rooms. In response to the Environmental Assessment, several letters raised questions about the hotel expansion's potential impacts on beach counts, and the likely changes in ratio of use by guests vs. residents.

Group 70 requested John M. Knox & Associates (JMK Associates) to respond with a two-day (weekday and weekend) beach count to determine current ratios of hotel guests vs. others. Our understanding is that Group 70 will use this information to estimate future impacts for the Final Environmental Assessment.

Methods

JMK Associates designed a simple survey and tabulation form (Exhibit 1), and worked with its frequent subcontractor FAQ Hawaiʻi, Inc., a survey fielding company, to gather the information from beach-goers. A two-interviewer team made counts at five time periods, starting at:

- Sunrise (6 a.m. and shortly after)
- 9 a.m.
- 11 a.m.
- 1 p.m.
- 3 p.m.

Most of the counts were made on Friday April 4 and Saturday April 5, 2008. The original plan was to do counts at four times, but the sunrise period was added after speaking with the Lāʻie Inn general manager of April 4 (see next section). Because a weekday sunrise count was not done that Friday, one was added the following Monday April 7.

One interviewer began at the Hauʻula-side (southern) access across from the current hotel, included any beach-goers observed to the south for 30 yards or so, then moved north. The other began at the available Kahuku-side (northern) access across from the church, included any beach-goers observed to the north, then moved south, meeting the other interviewer in the middle. The survey gathered just the following information:

(1) How many people were present (at both the northern and southern parts of the beach);
(2) Of these, how many were Lāʻie Inn guests or employees, visitors staying elsewhere, Lāʻie residents, or other Hawaiʻi residents.
(3) Whether the people counted at one time period had been present earlier, in order to provide both duplicated and unduplicated counts.

Interviewers also noted weather conditions. They were instructed not to proceed if the weather was unduly rainy in the day or cloudy at sunrise. This was not a problem. The weather these days was slightly cool but mostly clear and inviting for beach-goers.

Exhibit 1: Beach Count/Survey Form

Day/Date: _____ **Interviewer Name:** _____

Aloha, we're doing a beach count for the Lā'ie Inn across the street. All I would like to know is which of these categories best describes (each of) you

[READ 5 CATEGORIES]:

IF BEFORE 3 pm SAY: We'll do this again in a couple of hours. If you're still here then, hope you won't reminding us of the same information then!

IF AFTER 6 am, SAY: We've been doing this every few hours. Can you remind me if we asked you before, and if this is the 2nd or 3rd time, or what?

[MARK NUMBER WHO SAY SECOND, THIRD, OR EVEN FOURTH TIME, BY CATEGORY]

	Lā'ie Inn Guests	Lā'ie Inn Employees	Visitors Staying Elsewhere	Lā'ie Residents	Other Hawai'i Residents	*Weather Conditions*
6:00 AM						
9:00 AM (1st time counted)						
# 2nd Time (6 am)						
11:00 AM (1st time counted)						
# 2nd Time (9 am)						
# 3rd Time (6 am)						
1:00 PM (1st time counted)						
# 4th Time (6 am)						
# 3rd Time (9 am)						
# 2nd Time (11 am)						
3:00 PM (1st time counted)						
#5th Time (6 am)						
# 4th Time (9 am)						
#3rd Time (11 am)						
#2nd Time (1 pm)						

Context for Beach Count Methods and Results

As will soon be noted, the counts found few people using the Lā'ie beach on these days. The following factors provide context for that finding which Group 70 may wish to take into account when making projections.

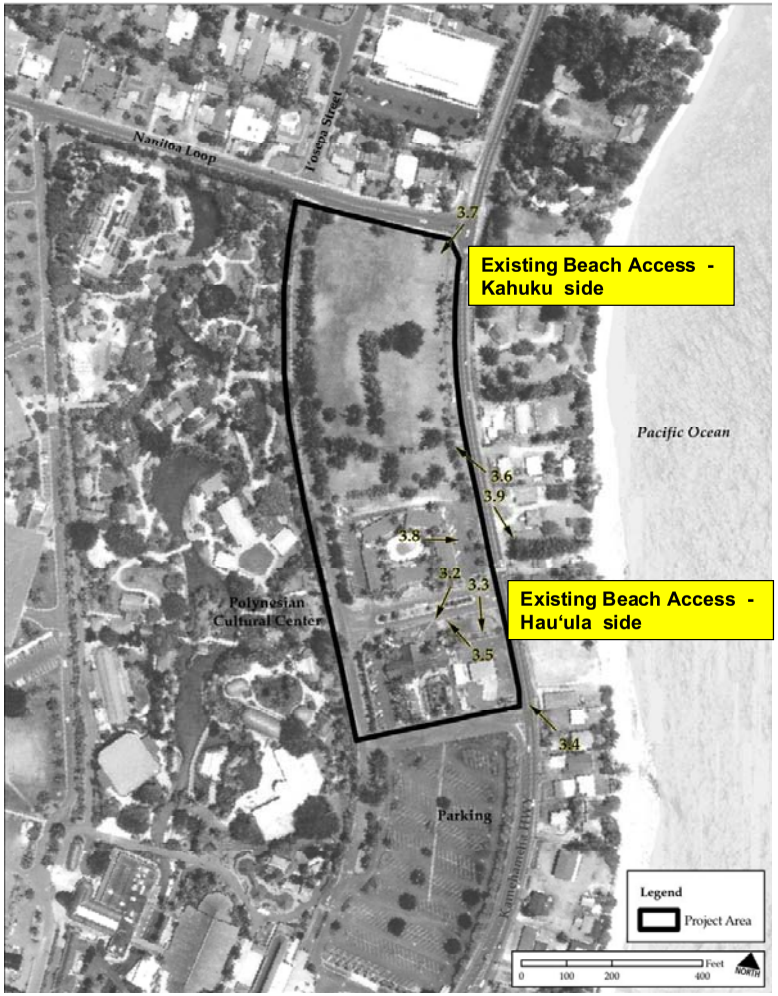
Observations by Interviewers –

- Group 70 originally instructed us to use the "Kahuku-side" access in Exhibit 2 as the northern boundary. That access is across from the current McDonalds, which would become part of the expanded Lā'ie Inn property. However, interviewers found this access had apparently been fenced off for some time, and so extended their range to the next "Kahuku-side" access north, across from the church.
- Several attributes of the southerly "Hau'ula-side" access could discourage use of the beach there by some people:
  - At high tide, there is little available sand beach at some parts.
  - The access has a sign stating, "Lā'ie Inn Private Property / Beach Access Hotel Guests Only.
  - For part of one day, a loose dog (apparently from a beachside property) was perceived as menacing and likely to bite either interviewers or beach-goers.
- While interviewers did not stay on the beach between each count, they did linger at some times. On Saturday morning around 8 a.m., they interacted with three hotel guests not included in the sunrise or 9 a.m. counts.

Observations by Lā'ie Inn General Manager – Despite efforts to speak with her earlier, we were able to connect with Ms. Bonnie Leatigaga only after the interviews had begun on Friday April 4. She told us:

- She believed hotel guests often like to view the sunrise from the beach. This is why we added a sunrise count on Saturday and the following Monday, though we did not actually find any guests there at this time.
- Occupancy is currently very low – about 35% since the beginning of the month, compared to an average of 60% to 70% over the past year. Ms. Leatigaga believed that might be due to publicity about the new hotel leading people to believe the current one has already closed.
- She estimated that about one-third of the Inn's 2007 room nights were accounted for by Hawai'i residents. With higher room rates for the new operation, that profile may change. She also noted that the new management is likely to have a significant marketing budget not available to the current management, such that occupancies might be higher.

Exhibit 2: Beach Access Information from Group 70 Environmental Assessment



Results

Detailed results for both days (counting the four Friday counts and the Monday sunrise count as a single "weekday") are shown in Exhibits 3 and 4.

(1) The beach was generally not extensively used by anyone on these days. The greatest point-in-time number observed was 13 people at 1 p.m. on Saturday. The greatest weekday number was six people at 3 p.m. on Friday.

(2) Acknowledging there may have been other beach-goers between the five counting periods, the unduplicated weekday count totaled just 17, vs. 22 for the weekend.

(3) The northern ("Kahuku side") portion of the beach was more heavily used than the southern ("Hau'ula side") portion, particularly on the weekday. There was somewhat more use of the southern portion on the weekend day, Saturday, primarily due to non-Lā'ie residents going there.

(4) Lā'ie Inn guests accounted for very few of the observed beach-goers – only three persons, all on Saturday, all at the southern portion. On an unduplicated basis, this amounts to just 8% (three out of 39) of all beach-goers during the ten counting periods. Additionally, one Lā'ie Inn employee was found at the northern end on Friday.

(5) Lā'ie residents primarily used the northern end of the beach, though in small numbers at any one time. For the observation days and counting periods, they did not share this portion of the beach with <u>any</u> Lā'ie Inn guests, though they did share with visitors staying elsewhere and a few non-Lā'ie residents.

On an unduplicated basis of total counts for the five periods, Lā'ie residents were outnumbered by non-Lā'ie-Inn visitors on the weekday by a 10:2 ratio. However, the exact opposite was the case for the weekend, when Lā'ie residents outnumbered the outside visitors by the same 10:2 ratio.

Assuming the Lā'ie Inn employee was also a Lā'ie resident, this means that – for the two days combined – Lā'ie residents comprised about half (i.e., 13 of the total unduplicated count of 27) the beach-goers at the northern part of the beach alone.

(6) For the entire beach, the combined unduplicated count of 39 beach-goers for the ten counting periods during these two days breaks down as:

- 3 Lā'ie Inn guests;
- 1 Lā'ie Inn employee (presumably also a Lā'ie Inn resident);
- 13 other Lā'ie residents, including one found on the southern end;
- 8 non-Lā'ie Hawai'i residents; and
- 14 non-Lā'ie-Inn visitors.

Exhibit 3: Weekday Day Results

Day/Date: Friday 4/4/2008 (Sunrise / 6 a.m. from Monday 4/7/08)

	Lā'ie Inn Guests			Lā'ie Inn Employees			Visitors Staying Elsewhere			Lā'ie Residents			Other Hawai'i Residents			DAY TOTALS			*Weather Conditions*
	North	South	Total	North	South	Total	North	South	Total	North	South	Total	North	South	Total	North	South	Total	
6 A.M.	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	3	0	3	clear
9:00 AM (1st time counted)	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	partly cloudy; dry, windy
11:00 AM (1st time counted)	0	0	0	0	0	0	3	0	3	0	1	1	0	0	0	3	1	4	mostly overcast; dry
1:00 PM (1st time counted)	0	0	0	1	0	1	1	2	3	0	0	0	0	0	0	2	2	4	clear; sunny
3:00 PM (1st time counted)	0	0	0	0	0	0	3	0	3	2	0	2	0	0	0	5	0	5	clear; sunny
# 2nd Time (1 p.m.)	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	1	
TOTAL (Duplicated)	0	0	0	1	0	1	11	2	13	2	1	3	0	1	1	**14**	**4**	**18**	
TOTAL (Unduplicated)	0	0	0	1	0	1	10	2	12	2	1	3	0	1	1	**13**	**4**	**17**	

Exhibit 4: Weekend Day Results

Day/Date: Saturday 4/5/2008

	Lā'ie Inn Guests			Lā'ie Inn Employees			Visitors Staying Elsewhere			Lā'ie Residents			Other Hawai'i Residents			DAY TOTALS			*Weather Conditions*
	North	South	Total	North	South	Total	North	South	Total	North	South	Total	North	South	Total	North	South	Total	
6 A.M.	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	1	dry; windy
9:00 AM (1st time counted)	0	1	1	0	0	0	1	0	1	1	0	1	1	2	3	3	3	6	partly cloudy; dry, windy
11:00 AM (1st time counted)	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	mostly overcast; dry
# 2nd Time (9 a.m.)	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	2	2	
1:00 PM (1st time counted)	0	2	2	0	0	0	1	0	1	7	0	7	0	2	2	8	4	12	clear; sunny
# 2nd Time (11 a.m.)	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	
3:00 PM (1st time counted)	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	2	0	2	clear; sunny
TOTAL (Duplicated)	0	3	3	0	0	0	2	0	2	10	0	10	2	8	10	**14**	**11**	**25**	
TOTAL (Unduplicated)	0	3	3	0	0	0	2	0	2	10	0	10	2	5	7	**14**	**8**	**22**	

Appendix H. Draft Environmental Assessment Comment Letters and Responses

AGENCIES AND PUBLIC CONTACTED

Listed below are the agencies and other parties contacted for input and comment regarding the proposed project prior to the publication of the Draft EA.

Respondents and Distribution	Received DEA	DEA Comments Received	Received FEA
State Agencies			
Department of Business, Economic Development & Tourism (DBEDT) Office of Planning	X		X
Department of Health (DOH) Environmental Planning Office		X	
Department of Land and Natural Resources (DLNR)	X	X	X
Hawaiʻi Department of Transportation (HDOT)	X		X
Office of Environmental Quality Control (OEQC)	X		X
Office of Hawaiian Affairs (OHA)	X	X	X
City and County of Honolulu			
Board of Water Supply (BWS)	X	X	X
Department of Design and Construction (DDC)	X	X	X
Department of Environmental Services (DES)	X		X
Department of Facility Maintenance (DFM)	X	X	X
Department of Planning and Permitting (DPP)	X	X	X
Department of Transportation Services (DTS)	X	X	X
Honolulu Fire Department (HFD)	X	X	X
Honolulu Police Department (HPD)	X	X	X
Koʻolau Loa Neighborhood Board No. 28	X	X	X
Elected Officials			
State House Representative, Colleen Rose Meyer	X		X
State Senator, Clayton Hee	X		X
City Council Representative, Donavan DelaCruz	X		X
Libraries			
Hawaiʻi State Library	X		X
Organizations, Individuals & Consulted Parties			
BYU – Assistant to the President		X	
BYU – Chief Information Officer		X	
BYU – Department of Student Activities and Leadership Development		X	

Respondents and Distribution	Received DEA	DEA Comments Received	Received FEA
BYU – Office of the President		X	
BYU – School of Business		X	
BYU – Vice President for Student Lift and Dean of Students		X	
Hawaiʻi Lāʻieikawai Association Inc.		X	
Mid Pacific Institute		X	
Polynesian Cultural Center		X	
Present Hawaiʻi Inc.		X	
Dee Dee Letts		X	
Delsa S. Moe		X	
Jo Ann Rhodhouse		X	
John Muaina		X	
M. Greg Gollaher and Jill L. Gollaher		X	
Moyita Saravia		X	
P. Alfred Grace		X	
Ruth Lumtiaco		X	
Sharla A. McCane, Janice A. McCane, Lipini Muraki, Jimmy Muraki		X	
Sinapati Moe		X	

LINDA LINGLE
GOVERNOR OF HAWAII

MAR - 7 2008

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

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

In reply, please refer to:
EPO-08-022

March 4, 2008

Mr. Eric Marler
Hawaii Reserves, Inc
55-510 Kamehameha Highway
Laie, HI 96762-1193

Dear Mr. Marler:

SUBJECT: Draft Environmental Assessment for Laie Inn Redevelopment
Laie, Oahu, Hawaii
TMK: (1) 5-5-006: 039 and 040

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

Clean Water Branch

The Department of Health, Clean Water Branch (CWB), has reviewed the subject document and offers these comments on your project. Please note that our review is based solely on the information provided in the subject document and its compliance with Hawaii Administrative Rules (HAR), Chapters 11-54 and 11-55. You may be responsible for fulfilling additional requirements related to our program. We recommend that you also read our standard comments on our website at http://www.hawaii.gov/health/environmental/env-planning/landuse/CWB-standardcomment.pdf.

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

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

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

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

2. You are required to obtain a National Pollutant Discharge Elimination System (NPDES) permit for discharges of wastewater, including storm water runoff, into State surface waters (HAR, Chapter 11-55). For the following types of discharges into Class A or Class 2 State waters, you may apply for NPDES general permit coverage by submitting a Notice of Intent (NOI) form:

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

   b. Treated effluent from leaking underground storage tank remedial activities.

   c. Hydrotesting water.

   d. Construction dewatering effluent.

   e. Circulation water from decorative ponds or tanks.

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

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

4. Please note that all discharges related to the project construction or operation activities, whether or not NPDES permit coverage and/or Section 401 WQC are required, must comply with the State's Water Quality Standards. Noncompliance with water quality requirements contained in HAR, Chapter 11-54, and/or permitting requirements, specified in HAR, Chapter 11-55, may be subject to penalties of $25,000 per day per violation.

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

Clean Air Branch

Control of Fugitive Dust

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

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

a) Planning the different phases of construction, focusing on minimizing the amount of dust-generating materials and activities, centralizing on-site vehicular traffic routes, and locating potential dust-generating equipment in areas of the least impact;
b) Providing an adequate water resource at the site prior to start-up of construction activities;
c) Landscaping and providing rapid covering of bare areas, including slopes, starting from the initial grading phase;
d) Minimizing dust from shoulders and access roads;
e) Providing adequate dust control measures during weekends, after hours, and prior to daily start-up of construction activities; and
f) Controlling dust from debris being hauled away from the project site.

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

If the proposed project includes renovation/demolition activities that may involve asbestos, the applicant should contact the Asbestos Section of the Indoor and Radiological Health Branch at 586-5800.

Solid and Hazardous Waste Branch

The state regulation on underground storage tank (UST), Chapter 11-281, Hawaii Administrative Rules (HAR), became effective on January 28, 2000. The state UST regulations include, among

other things, specific requirements that UST owners and operators must meet when installing and permanently closing their UST system and addressing releases from USTs.

In the event that USTs are discovered during the project, we have developed a guidance manual entitled "Technical Guidance Manual for Underground Storage Tank Closure and Release Response" (dated March 2000) to assist responsible parties and their consultants and contractors in complying with the state UST closure requirements and release response activities. In addition, the State regulations require a permit prior to the installation and operation of an UST system and that the UST system must have secondary containment. Refer to Subchapter 2 to 5 of the HAR.

Copies of the technical manual and the state regulations are found on the DOH website at (www.state.hi.us/doh/eh/shwb).

Please contact Roxanne Kwan at 586-4226 with any questions regarding these comments.

General

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

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

Sincerely,

KELVIN H. SUNADA, MANAGER
Environmental Planning Office

c: EPO
CWB
CAB
SHWB-UST
Mr. Jeffrey Overton, Group 70 International, Inc.

GROUP 70
INTERNATIONAL

SUSTAINABLE DEVELOPMENT
ARCHITECTURE
PLANNING & ENVIRONMENTAL SERVICES
INTERIOR DESIGN
ASSETS MANAGEMENT

Francis S. Oda Arch.D., FAIA, AICP
Norman G.Y. Hong AIA
Sheryl B. Seaman AIA, ASID
Hitoshi Hida AIA
Roy H. Nihei AIA CSI
James I. Nishimoto AIA
Stephen Yuen AIA
Linda C. Miki AIA
George I. Atta AICP
Charles Y. Kaneshiro AIA, LEED AP
Jeffrey H. Overton AICP, LEED AP
Christine Mendes Ruotola AICP
James L. Stone AIA, LEED AP
Paul Bierman-Lytle M. Arch., AIA, LEED AP
Katherine M. MacNeil AIA, LEED AP
Tom Young AIA

July 28, 2008

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

Subject: Lā'ie Inn Draft Environmental Assessment (EA)

Dear Mr. Sunada,

Thank you for your comment letter concerning the Lā'ie Inn Draft Environmental Assessment.

The following are offered in response to your comments:

Clean Water Branch. The project will comply with the requirements of the Clean Water Act, including the rules under HAR, Sections 11-54 and 11-55 for submission of application for general permit coverage authorized under the National Pollutant Discharge Elimination System (NPDES). The Petitioner will comply with applicable discharge requirements.

Clean Air Branch. Development activities will comply with the provisions of HAR 11-60.1-33 on Fugitive Dust. We appreciate your recommendations that can be implemented to control dust and will take them into consideration as development plans progress.

Solid and Hazardous Waste Branch. Site preparation will involve the removal of the gasoline underground storage (UST) tanks at the Chevron Station. The project will follow Federal EPA and State UST regulation provisions of HAR 11-281. The lessee shall follow "Technical Guidance Manual for Underground Storage Tank Closure Release Response."

Your comment letter and this response will be included in the Final EA. We appreciate your participation in the environmental review process. Please submit a request to our office if you would like a copy of the Final EA, or portions thereof.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

Jeffrey H. Overton, AICP, LEED AP
Principal, Chief Environmental Planner

cc: Hawaii Reserves, Inc.

925 Bethel Street • Honolulu, HI 96813-4307 • tel. 808.523.5866 • fax. 808.523.5874 • www.group70int.com

51250

LINDA LINGLE
GOVERNOR OF HAWAII

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

Department of Land and Natural Resources
State of Hawaii

RECEIVED
STATE PARKS

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

'08 FEB -6 P3:38

February 6, 2008

MEMORANDUM

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

FROM: Morris M. Atta
SUBJECT: Draft Environmental Assessment for La'ie Inn Redevelopment
LOCATION: Laie, Oahu, TMK: (1) 5-5-6:39 40
APPLICANT: City & County of Honolulu

RECEIVED
LAND DIVISION
2008 FEB 12 A 10:18
DEPT. OF LAND & NATURAL RESOURCES
STATE OF HAWAII

Transmitted for your review and comment on the above referenced document. We would appreciate your comments on this document. Please submit any comments by March 1, 2008.

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact my office at 587-0433. Thank you.

Attachments

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

Signed:
Date: 2/7/08

LINDA LINGLE
GOVERNOR OF HAWAII

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

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

RECEIVED
MAR - 6 2008
GROUP 70 INTL

March 4, 2008

Hawaii Reserves, Inc.
55-510 Kamehameha Highway
Laie, Hawaii 96762-1193

Attention: Mr. Eric Marler

Gentlemen:

Subject: Draft environmental assessment for La'ie Inn Redevelopment, Laie, Oahu, Tax Map Key: (1) 5-5-6:39, 40

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

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

Sincerely,

Charlene E. Unoki
for Morris M. Atta
Administrator

LINDA LINGLE
GOVERNOR OF HAWAII

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

RECEIVED
LAND DIVISION
2008 FEB 25 P 3:05
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

February 6, 2008

MEMORANDUM

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

FROM: for Morris M. Atta Charlene
SUBJECT: Draft Environmental Assessment for La'ie Inn Redevelopment
LOCATION: Laie, Oahu, TMK: (1) 5-5-6:39 40
APPLICANT: City & County of Honolulu

Transmitted for your review and comment on the above referenced document. We would appreciate your comments on this document. Please submit any comments by March 1, 2008.

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact my office at 587-0433. Thank you.

Attachments

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

Signed: Gail T. Kimura
Date: 2/21/08

'08 FEB 06 PM03:44 ENGINEERING

DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION

LD/MorrisAtta
Ref.: DEALaieInnRedevelopment
Oahu,598

COMMENTS

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

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

(X) Please note that the correct Flood Zone Designations for the project site, according to the Flood Insurance Rate Map (FIRM), are Zones AE and AH. The National Flood Insurance Program does regulate developments within Zones AH and AE as indicated in bold letters below.

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

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

(X) Mr. Robert Sumitomo at (808) 768-8097 or Mr. Mario Siu Li at (808) 768-8098 of the City and County of Honolulu, Department of Planning and Permitting.

( ) Mr. Kelly Gomes at (808) 961-8327 (Hilo) or Mr. Kiran Emler at (808) 327-3530 (Kona) of the County of Hawaii, Department of Public Works.

( ) Mr. Francis Cerizo at (808) 270-7771 of the County of Maui, Department of Planning.

( ) Mr. Mario Antonio at (808) 241-6620 of the County of Kauai, Department of Public Works.

( ) 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: _____

cc: [illegible] Suite A [illegible] Plantation Beach at 587-0268

July 28, 2008

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

Attn: Mr. Eric Hirano, Chief Engineer

Subject: Lā'ie Inn Draft Environmental Assessment (EA)

Dear Mr. Atta,

Thank you for your comment letter concerning the Lā'ie Inn Draft Environmental Assessment.

We acknowledge that the correct Flood Zone Designation for the project site are zones AE and AH, according to the Flood Insurance Rate Map (FIRM). While these flood zones were noted in Figure 3.12 of the Draft EA, they were incorrectly stated in Section 3.2.3, Natural Hazards. We will correct this in the Final EA.

We note that the project site is within a Special Flood Hazard Area, and thus will comply with the rules and regulations of the National Flood Insurance Program (NFIP) as presented in Title 44 of the Code of Federal Regulations (44CFR). Construction will be in accordance with the Land Use Ordinance specifications, and no habitable structures will be located within the coastal high hazard zone. Proper grading of surfaces to FIRM elevation will be done on the project site to address storm water and drainage.

Your comment letter and this response will be included in the Final EA. We appreciate your participation in the environmental review process.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

Jeffrey H. Overton, AICP, LEED AP
Principal, Chief Environmental Planner

cc: Hawaii Reserves, Inc.

GROUP 70 INTERNATIONAL
SUSTAINABLE DEVELOPMENT · ARCHITECTURE · PLANNING & ENVIRONMENTAL SERVICES · INTERIOR DESIGN · ASSETS MANAGEMENT

Francis S. Oda Arch.D., FAIA, AICP
Norman G.Y. Hong AIA
Sheryl B. Seaman AIA, ASID
Hitoshi Hida AIA
Roy H. Nikei AIA CSI
James I. Nishimoto AIA
Stephen Yuen AIA
Linda C. Miki AIA
George I. Atta AICP
Charles Y. Kaneshiro AIA, LEED AP
Jeffrey H. Overton AICP, LEED AP
Christine Mendes Ruotola AICP
James L. Stone AIA, LEED AP
Paul Bierman-Lytle M. Arch., AIA, LEED AP
Katherine M. MacNeil AIA, LEED AP
Tom Young AIA

925 Bethel Street • Honolulu, HI 96813-4307 • tel 808.523.5866 • fax 808.523.5874 • www.group70int.com

PHONE (808) 594-1888

FAX (808) 594-1865

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

MAR 13 2008

HRD08/1588B

March 10, 2008

Eric Marler
Hawai'i Reserves Inc.
55-510 Kamehameha Highway
Lā'ie, HI 96762-1193

RE: Request for comments on the Draft Environmental Assessment for the Lā'ie Inn Redevelopment, located in Lā'ie, O'ahu, TMK: 5-5-006: 39 & 40.

Dear Eric Marler,

The Office of Hawaiian Affairs (OHA) is in receipt of the above-referenced Draft Environmental Assessment (EA). Applicant Hawai'i Reserves Inc. is asking to redevelop its 49-room Lā'ie Inn into a 220-room hotel with restaurant, banquet/meeting facility and swimming pool. The project also calls for the relocation of the Lā'ie McDonald's restaurant and Chevron station from their current locations at the southern portion of the 9.7-acre project site to the northern end. OHA has reviewed this project and offers the following comments.

Generally, OHA requests more information to assist in our reviewing and commenting on proposed projects. For example, OHA had difficulty reviewing and commenting on this project because the Draft EA offers little description of the existing 49-room Lā'ie Inn. The document does not explain the current capacity of each room, what hotel amenities exist, the current occupancy rates and the current number of employees. This information is crucial for readers who are evaluating the proposed project and its potential impacts against what already exists.

Further, the Draft EA does not afford a detailed description of the planned redevelopment. Specifically, the document does not indicate the carrying capacity of the banquet/meeting room, the expected occupancy rates for the hotel, and the anticipated number of customers for the McDonald's restaurant, Chevron station, the new restaurant and the retail stores. The retail

element is barely discussed in this document; it's only briefly mentioned as a "future" feature in Table 2-1 and Figure 2.1. In addition, a hotel beach club facility is noted in the Market Analysis (Appendix A), the Lā'ie Inn Redevelopment Project Investigation of Sewer and Water Requirements (Appendix B), the Lā'ie Inn Storm Water Report (Appendix C) and the Traffic Impact Analysis Report (Appendix E), but it is not described at all in the Draft EA itself. Also, a museum (opening letter, Appendix A) and gallery (Figure 2.1) are noted briefly in this document, but neither are described in detail.

As a result, the public is left guessing about the full nature of this project and how this project will affect the special rural character of the area. Area residents are left in the dark about how many more people they can expect in their neighborhoods, on their roads and at their beaches after the proposed redevelopment. OHA looks forward to reading a full description of the entire project before the release of the Final EA.

Increased human traffic
How many more people are expected to be at the project site as a result of the redevelopment? The Draft EA does not answer this question, and this is unfortunate because even a slight increase in human traffic could potentially have significant impacts on the rural nature of the neighborhood. The project will more than quadruple the amount of rooms at the existing hotel and create a restaurant, banquet room and retail stores. The redevelopment will undoubtedly increase the number of people in the area, from employees to tourists to customers. The applicant must at least estimate the number of people who will be at the hotel after the redevelopment before it can analyze the project's impact on the neighborhood, traffic and the area's environment. Such projections are necessary to fulfill the Hawaii Revised Statutes (HRS), Chapter 343 intent of determining whether a project will have a "significant impact" upon the environment and potentially warrant a Draft Environmental Impact Statement.

Therefore, OHA asks the applicant to provide a breakdown of the proposed hotel rooms, indicating how many studios, and one- and two-bedroom units are planned. OHA also requests information on the anticipated-occupancy rates for the proposed 220-room hotel. OHA would like to know how many people - from tourists, to employees, to retail/restaurant patrons – are anticipated at the project site throughout the day upon project completion, and how much of an increase that number is from existing occupancy rates.

Water
OHA also requests that the applicant provide information about the size of the swimming pool and the two ponds (seen in Figure 2.1), and if these water features were considered in the water requirement study in Appendix B.

Traffic
On page 3-23, the Draft EA indicates that the "proposed number of hotel rooms will more than double the existing capacity with a corresponding increase in vehicular traffic." OHA notes that the project would not only quadruple the number of hotel rooms, it would also likely increase the number of people using the site because of the expanded amenities, such as the banquet room, restaurant and retail stores. Further, because the applicant never indicates what the existing capacity of the hotel is, it remains unclear how the proposed project will "double" the "existing capacity" or what that means.

On page 3-23, the applicant indicates that 75 employees will work on the project site. However, in James E. Hallstrom Jr.'s opening letter in his Market Analysis (Appendix A) he conducted for the project, he states that there will be "some 153 full-time equivalent employment positions" at the project. The applicant should reconcile these two contradictory statements and explain how the correct figure will affect the area's traffic.

On page 3-23, the applicant also makes two contradicting statements about the impact employees will have on traffic. The applicant first states that "the [workers'] shift changes may coincide with peak commuters' traffic." In the next paragraph, however, the applicant says that "75 employees will work in three shifts that do not coincide directly with peak traffic hours." OHA requests the applicant clarify these two statements and state which employees are being described. In addition, OHA asks the applicant to verify that the traffic mitigation measures that are included in the Draft EA will alleviate traffic congestion should a conference be held at the hotel's banquet room during peak-hour traffic. Moreover, the applicant should analyze the impacts the proposed gallery will have on traffic. The applicant should also examine the cumulative effects this project will have on traffic when combined with other planned developments in the area (see "Cumulative impacts" below).

Area beaches and environment
The Draft EA states that the hotel redevelopment will have no impact on the environment and public utilities and recreation (pages 3-24 – 3-25, 4-14, 6-1, 6-2). OHA requests the applicant provide information regarding the method it used to arrive at this conclusion. We are especially curious about this conclusion when the applicant never established the increased number of people that will be in the area and at area beaches because of the redevelopment. The beach access - which is located across Kamehameha Highway from the project and pictured in Figure 3.9 - is well used by the public – many of whom are OHA beneficiaries, and rubbish can often be found near and in this access. While we are in no way blaming the litter on hotel visitors, we are simply stating that with an increase in pedestrian traffic comes the potential for an increase in litter. We therefore also ask the hotel to educate their guests about the fragility of Hawai'i's environment and the importance of protecting it, and offer mitigation measures to deal with litter.

Cumulative impacts
The cumulative impact section of the report fails to provide a comprehensive examination of the long-term effects of this particular project within the context of other proposed developments along the North Shore. This is required per Hawaii Administrative Rules § 11-200-12 (b). A number of developments are slated for Kahuku, Mokulē'ia and Pūpūkea. Moreover, the applicant itself has indicated that it plans on building affordable housing units on 900 acres of agricultural land between Lā'ie and Kahuku (*Development squeezing out Hawai'i farmland*, November 1, 2007, Honolulu Advertiser.) The applicant must take into account the effects that all of these projects combined will have on area traffic, water, wastewater, solid waste, Hawaiian cultural practices and resources and the environment. (HRS § 343-2)

Cultural resources
We request the applicant's assurances that should iwi kūpuna or Native Hawaiian cultural or traditional deposits be found during the construction of the project, work will cease, and the appropriate agencies will be contacted pursuant to applicable law.

Native plants and landscaping
In addition, OHA recommends that the applicant use native vegetation in its landscaping plan for the subject parcel. Landscaping with native plants furthers the traditional Hawaiian concept of mālama 'āina and creates a more Hawaiian sense of place.

In closing, OHA questions the applicant's anticipated determination of a Finding of No Significant Impact for the Lā'ie Inn redevelopment. The applicant needs to provide more information to the decision-making process before such a determination can be rendered. To this end, we have tried to provide the applicant with general and specific areas that would assist in this determination process.

Thank you for the opportunity to comment. If you have further questions, please contact Sterling Wong (808) 594-0248 or e-mail him at sterlingw@oha.org.

Sincerely,

Clyde W. Nāmu'o
Administrator

C: Anthony Ching
Land Use Commission
Department of Planning and Permitting
650 South King Street, 7th Floor
Honolulu, HI 96813

✓ Jeffrey H. Overton
Group 70 International, Inc.
925 Bethel Street, 5th Floor
Honolulu, HI 96813

Office of Environmental Quality Control
235 South Beretania Street, Suite 702
Honolulu, Hawaii 96813

GROUP 70
INTERNATIONAL

SUSTAINABLE DEVELOPMENT
ARCHITECTURE
PLANNING & ENVIRONMENTAL SERVICES
INTERIOR DESIGN
ASSETS MANAGEMENT

Francis S. Oda
Arch.D., FAIA, AICP
Norman G.Y. Hong
AIA
Sheryl B. Seaman
AIA, ASID
Hitoshi Hida
AIA
Roy H. Nihei
AIA CSI
James I. Nishimoto
AIA
Stephen Yuen
AIA
Linda C. Miki
AIA
George I. Atta
AICP
Charles Y. Kaneshiro
AIA, LEED AP
Jeffrey H. Overton
AICP, LEED AP
Christine Mendes Ruotola
AICP
James L. Stone
AIA, LEED AP
Paul Bierman-Lytle
M. Arch., AIA, LEED AP
Katherine M. MacNeil
AIA, LEED AP
Tom Young
AIA

July 28, 2008

Mr. Clyde W. Nāmu'o
Administrator
State of Hawai'i
Office of Hawaiian Affairs (OHA)
711 Kapiolani Blvd., Suite 500
Honolulu, HI 96813

Attn: Mr. Sterling Wong

Subject: Lā'ie Inn Draft Environmental Assessment (EA)

Dear Mr. Nāmu'o,

Thank you for your comment letter concerning the Lā'ie Inn Draft Environmental Assessment.

We appreciate OHA's detailed comments on the Draft EA and have revised necessary information, to address the concerns raised. The following are offered in response to your comments:

Description of the Planned Redevelopment. The existing Lā'ie Inn was built 45 years ago (1963). The inn is a 49-room, two story hotel surrounding a courtyard with a swimming pool. Room types consist of double-double bedrooms with a maximum capacity of five people and queen/king bedrooms having a maximum capacity of three people. Each room has a lanai on the courtyard and amenities include a refrigerator, air conditioning, wireless internet, cable television, and for king bedrooms, a microwave, iron and board. Parking is provided to guests and pets are allowed on-site. The property is classified as a motel.

It is estimated that there are 10 full-time employees who are currently employed by the inn. We have contacted the hotel regarding the occupancy information that you requested, however, the information was not provided.

The guests of the redeveloped Lā'ie Inn will typically visit for periods of less than 30 days. At full occupancy, the on-site guest population will be approximately 548. The assumed breakdown of guests is listed below:

Inn Capacity = 548 persons
• 212 rooms w/ 2 person occupancy = **424 persons**
• 8 suites w/ 3 person occupancy = **24 persons**
• Meeting Room/Banquet = 3,000 SF, occupancy at 15 SF/person = **200 persons**
(assume 50% from hotel; +**100 persons**)
• Lobby areas are accessory to rooms, therefore no additional capacity

925 Bethel Street • Honolulu, HI 96813-4307 • tel. 808.523.5866 • fax. 808.523.5874 • www.group70int.com

The anticipated occupancy rates for the hotel vary depending upon the season. Based on the Hawaii Data Book (2006 –Revised), peak tourist accommodation seasons will be the summer months (June, July, August) and during events such as BYU-Hawaiʻi graduation (June, December). The anticipated occupancy rates are 75% of the full capacity of the hotel, meeting room/banquet area and restaurant.

The anticipated capacity for the restaurant is 205 people as shown below.

Restaurant = 4,000 SF (3,000 seating, 1,000 kitchen) = **205 persons**
• Seating area = 3,000 SF at occupancy 15SF/person = **200 persons**
• Kitchen = 1,000 SF at occupancy 200SF/person = **5 persons**

The relocated McDonald's restaurant anticipates a comparable amount of customers and business activity to its current operation with a modest increase. Of the 4,200 SF area of the McDonald's restaurant, seating capacity is projected to be approximately 90 people. The carrying capacity of Chevron including the store and fueling stations will be 42 people. The future retail area will target the visitors of the Lāʻie Inn and shoppers of the McDonalds and Chevron. Likely occupants include food/drink establishments and apparel, gift and other specialty type stores. The future retail area will consist of 15,000 SF. Table 2-1 has been revised to reflect the accurate area.

We appreciate you bringing to our attention the beach club facility, museum, and gallery which are mentioned in the report appendices. As planning phases progressed for the project, redevelopment design was altered, and the beach club facility, museum, and gallery were removed. The Final EA will remove references to these facilities. This change will also be noted on cover pages of the affected Appendices.

The project description has been revised to provide more information on the Lāʻie Inn Redevelopment, providing the community, and particularly the Lāʻie area residents, additional information about the project.

Increased Human Traffic. The estimated number of people at the hotel after redevelopment is approximately 516, using an anticipated occupancy rate of 75%. This rate is a median percentage to address peak and off-peak seasons of the year, and includes the guests and employees of the hotel and restaurant. The meeting room/banquet area will be typically used on special occasions, so this is not factored into the estimated number above. The breakdown of people who will be at the hotel redevelopment is listed below:

Hotel Guests – w/ Meeting Room	**Hotel Guest – w/out Meeting Room**	**Restaurant Patrons**
75% = 436 (50% from hotel = 100)	75% = 336	75% = 150
Hotel Employees = 75 people / 3 shifts		**Restaurant Employees = 10 people/2 shifts**
• Per shift = 25 employees		• Per shift = 5 employees
• Shift Change = 50 employees on site (max)		• Shift Change = 10 employees on site (max)

A breakdown of the proposed hotel rooms are shown below and have been added to Section 2.3.1 in the Final EA. Please note that design changes have eliminated the two-bedroom hotel rooms.

Hotel Unit Type	Total No. of Type	Studio/One Bedroom
King Guestroom	63	63 Studio
Queen-Queen Guestroom	149	149 Studio
Suite A King Guestroom	4	4 One Bedroom
Suite B King Guestroom	4	4 One Bedroom
Total	**220**	**212 Studio/8 One Bedroom**

Traffic. The expected number of guests visiting the Lāʻie Inn will roughly double the number of vehicle trips associated with the hotel. Table 3-4 of the Final EA shows the existing and net increase in trips.

While there will be some impact to vehicular traffic due to the proposed project, instead of returning to Waikiki with other Polynesian Cultural Center guests, some will stay overnight at the hotel and will return the following day, when traffic is typically minimal. This will result in a reduction to the numbers of vehicles heading to town on Kamehameha Highway in the late evening hours. Additionally, local residents who want to work closer to home and avoid travel to the island's urban centers will have the chance to do so.

A traffic signal will be installed on Kamehameha Highway at Naniloa Loop to improve safety and reduce delays for existing traffic. This improvement may increase delays to through-traffic on Kamehameha Highway. Widening Kamehameha Highway to provide left-turn lanes at Naniloa Loop and at the hotel main entrance will help offset the delay. The signal will improve the safety at the Naniloa Loop intersection by providing for orderly traffic movements and a signalized pedestrian crossing. Even without the project, a traffic signal in this area would be beneficial to accommodate existing traffic needs and prepare for future island-wide growth.

The State of Hawaii Department of Transportation has commented positively on the hotel redevelopment and site design, including traffic management and the addition of the traffic signal.

Conferences held in the meeting room/banquet will be only on occasions and will rarely add to peak hour traffic as most attendees would be staying at the hotel. Private buses/vans can be rented to shuttle local attendees from urban areas. The State of Hawaiʻi Department of Transportation has commented positively on the hotel redevelopment and site design, including traffic management and the addition of a traffic signal. There is no gallery in the current plan.

Regarding clarification of the number of employees at the redevelopment, there will be 75 total employees working at the hotel in three separate shifts. The 153 full-time equivalent employment positions, listed in Appendix A, is the total number of employees on the site. This total includes the 75 forecasted for the hotel, with the remainder in the restaurant, retail, and other components. The total number of employees does not include those for the museum, which is no longer part of the project.

We take note of your comment concerning employee shift changes. The shift changes may coincide with peak commuter traffic, particularly the early to middle shift changes.

However, many of the employees will be residents of Lāʻie that will likely bike or walk to work. The bicycle and pedestrian path fronting Kamehameha Highway and the project will provide the beneficial impact of extending that path along the project site.

Water. The surface area of the swimming pool is 2,400 SF, and at an average depth of 4 ft, the volume of water would be approximately 10,000 cu/ft. The surface area of the water features is 3,000 SF and at an average depth of 1 ft, the volume of water in ponds would be approximately 3,000 cu/ft. Neither the swimming pool or ponds were included in the calculations for water demands nor sewer flows in the Lāʻie Inn Redevelopment Project Investigation of Sewer and Water Requirement report (Appendix B). The filling and draining of the pool and ponds will be intermittent, and this amount is not a component of the water demands or sewer flows.

Neither the Board of Water Supply Water System Standards nor the City Wastewater Design Standards address swimming pools or ponds.

Area Beaches and Environment. Regarding your comments on the Draft EA and statements that the hotel redevelopment will have no impact on the environment, public utilities, and recreation, we have revised the language in the document to appropriately fit each section based upon analysis of the respective subject areas. We have also estimated the number of people that will be in the area including the hotel and restaurant.

- Beaches, Parks, and Recreation Areas – While the numbers of visitors to the immediate beach area may increase, beaches are for public use. Additionally, the shoreline and beach area across from the hotel site are subject to seasonal beach changes and currents that regularly wash up marine debris and litter. Although clean up efforts conducted by the hotel staff will be arranged, this type of beach makes it likely that many visitors of the hotel may not choose to use the beach that fronts the hotel as there are many other beaches along Kamehameha Highway in Haleʻiwa and the North Shore that are more fitting for recreational enjoyment.

  John M. Knox & Associates, Inc. conducted a detailed beach count report of the Lāʻie beach (Hauʻula side access through Kauhuku side access) to assess the current use of the beach by hotel guests of the existing Lāʻie Inn (Appendix G). Their findings indicate the beach was not extensively used either on weekdays or weekends. Lāʻie Inn guests accounted for very few of the observed beach users, in fact, just eight percent (8%) of the total number.

  The Draft EA addresses Public Use and Services in Section 3.8; however, we have provided more detail regarding your specific concerns. Guests of the hotel will be encouraged to use restrooms, changing areas, and showers that are provided at the hotel area. The swimming pool will have restrooms and facilities nearby which are convenient for both swimming pool and beach patrons.

  New trash receptacles will be provided at the beach access areas to help reduce litter. Beach access will be adequate to accommodate hotel guests without the

need to cross private property. Educational material will be made available to guests, encouraging environmental stewardship and respect for private property and other surrounding areas.

- Environment and Water Quality - Construction activities will follow erosion control best management practices to protect from soil erosion and water quality degradation. Proper landscaping techniques will minimize the impacts of land alterations, reducing effects on runoff water quality.

  With the implementation of permit conditions and best management practices, impacts on water quality are not anticipated. Best management practices to control soil loss from the site include construction fencing, soil wetting, and landscaping will be initiated as soon a practical.

- Visual Resources – The redeveloped hotel will be a beautiful new addition to the community. The rural character of the area will actually be enhanced by removing the current inn, which is generic in appearance and has outlived its useful life, and replacing it with Polynesian themed facilities surrounded by lush, beautiful landscaping. The intent is to unify the hotel site and the Polynesian Cultural Center (PCC) into essentially one campus through shared Pacific Island theme while maintaining the character of the surrounding area.

  Views of the ocean are not available from Kamehameha Highway at this location. Mauka views are also not available from the highway at this location. No direct or indirect visual impacts are anticipated. The hotel redevelopment will be within the 40 feet height limit provided as required by the Land Use Ordinance.

- Cultural Resources – The Lāʻie Inn site has been altered by development activities for over a century and the archaeological investigations have found no evidence of surface or subsurface cultural sites. In the event that any previously unidentified archaeological and cultural resources are encountered during the development of the property, construction activities will stop and the contractor will immediately contact the State Historic Preservation Division in accordance with applicable regulations. We have provided additional detailed information in Section 3.5 of the Final EA.

  The project will also enhance and perpetuate the Hawaiian culture through Polynesian native landscaping and Polynesian architectural design elements including dominant steep roof forms, open air veranda, stucco walls, tapa patterns, botanical themed grille work, and use of other native themed materials.

- Economic, Social Welfare, and Public Health - The project will be beneficial to the Lāʻie residents and broader Koʻolau Loa community, and their overall quality of life. Local businesses will be positively affected, and there will be increased employment opportunities for local residents, thereby improving social welfare and public health of the area.

- Public Services – The project will have no impact on school enrollment and public library facilities. The redevelopment will provide the Lā'ie community with much needed additional meeting and gathering places, such as the restaurant and meeting/banquet facility. While there may be some impact to existing community gathering places, it is unlikely that there will be significant adverse short-term or long-term impact on services in the area.

Cumulative Impacts. Plans to expand the Turtle Bay Resort are relevant to any discussion of cumulative impacts in Ko'olau Loa. Given ongoing lawsuits and the State's interest in the resort, there is no firm timeline for these improvements, which may never be developed. The timetable for projects in Kahuku is unclear and the Lā'ie affordable housing project is on hold. The Lā'ie Inn Redevelopment will add incrementally to cumulative impacts.

Construction activity during the proposed project will generate direct employment as well as indirect and induced employment in construction-related industries. In the long-term, the Lā'ie Inn Redevelopment will require additional employees as well as additional goods and services from businesses and organizations.

Native Plants and Landscaping. While the site is currently a greenfield with some ironwood trees, the hotel redevelopment will use landscape design to create a distinctly Polynesian ambience. Extensive tropical landscaping will be incorporated into the property as shown in Figure 2.4. To the extent possible, native plant species will be included in the project landscape to further the rich cultural tradition in Lā'ie.

Your comment letter and this response will be included in the Final EA. We appreciate your participation in the environmental review process.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

Jeffrey H. Overton, AICP, LEED AP
Principal, Chief Environmental Planner

cc: Hawaii Reserves, Inc.

BOARD OF WATER SUPPLY

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

February 12, 2008

MUFI HANNEMANN, Mayor

RANDALL Y. S. CHUNG, Chairman
SAMUEL T. HATA
ALLY J. PARK
ROBERT K. CUNDIFF
MARC C. TILKER

CRAIG I. NISHIMURA, Ex-Officio
BRENNON T. MORIOKA, Ex-Officio

CLIFFORD P. LUM
Manager and Chief Engineer

DEAN A. NAKANO
Deputy Manager and Chief Engineer

Mr. Eric Marler
Executive Vice President & Chief Financial Planner
Hawaii Reserves, Incorporated (HRI)
55-510 Kamehameha Highway
Laie, Hawaii 96762-1193

Dear Mr. Marler:

Subject: The Draft Environmental Assessment for the Laie Inn Redevelopment, TMK: 5-5-6:39, 40

Thank you for the opportunity to comment on the proposed project.

We do not have a water system in this area. The 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,

KEITH S. SHIDA
Program Administrator
Customer Care Division

cc: Mr. Anthony Ching, Department of Planning & Permitting
Mr. Jeffrey Overton, Group 70 International, Inc.
Office of Environmental Quality Control

RECEIVED
FEB 14 2008
GROUP 70 INT'L

GROUP 70
INTERNATIONAL

SUSTAINABLE DEVELOPMENT
ARCHITECTURE
PLANNING & ENVIRONMENTAL SERVICES
INTERIOR DESIGN
ASSETS MANAGEMENT

Francis S. Oda
Arch.D., FAIA, AICP
Norman G.Y. Hong
AIA
Sheryl B. Seaman
AIA, ASID
Hitoshi Hida
AIA
Roy H. Nihei
AIA CSI
James I. Nishimoto
AIA
Stephen Yuen
AIA
Linda C. Miki
AIA
George I. Atta
AICP
Charles Y. Kaneshiro
AIA, LEED AP
Jeffrey H. Overton
AICP, LEED AP
Christine Mendes Ruotola
AICP
James L. Stone
AIA, LEED AP
Paul Bierman-Lytle
M. Arch., AIA, LEED AP
Katherine M. MacNeil
AIA, LEED AP
Tom Young
AIA

July 28, 2008

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

Subject: Lā'ie Inn Draft Environmental Assessment (EA)

Dear Mr. Shida,

Thank you for your comment letter concerning the Lā'ie Inn Draft Environmental Assessment.

We recognize that the Board of Water Supply does not have a water system in this area. The project will be served by the Lā'ie Water Company. There is ample capacity to serve the project with no significant effects on the resource. We also note that fire protection requirements will be coordinated with the Honolulu Fire Department's Fire Prevention Bureau as development plans progress.

Your comment letter and this response will be included in the Final EA. We appreciate your participation in the environmental review process.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

Jeffrey H. Overton, AICP, LEED AP
Principal, Chief Environmental Planner

cc: Hawaii Reserves, Inc.

925 Bethel Street • Honolulu, HI 96813-4307 • tel. 808.523.5866 • fax. 808.523.5874 • www.group70int.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) 523-4567
Web site: www.honolulu.gov

MUFI HANNEMANN
MAYOR

EUGENE C. LEE, P.E.
DIRECTOR

DEPUTY DIRECTOR

FEB 28 2008

February 27, 2008

Mr. Eric Marler, Executive Vice President
and Chief Financial Officer
Hawaii Reserves, Inc.
55-510 Kamehameha Highway
Laie, Hawaii 96762-1193

Dear Mr. Marler:

Subject: Draft Environmental Assessment
Laie Inn Redevelopment

Thank you for giving us the opportunity to comment on the above Draft Environmental Assessment.

The Department of Design and Construction has the following comments:

- It appears that the proposed redevelopment of the existing La'ie Inn will create impacts on the area's vehicular traffic patterns and the use of other City and County facilities, such as the nearby beach parks. The proposed mitigative measures that reduce the number of driveways onto Kamehameha Highway from four to two, the deep setback of the expanded resort parking from the highway, the bikeway extension, and other proposed traffic improvements sufficiently address our concerns relating to anticipated traffic impacts.

Very truly yours,

Eugene C. Lee, P.E.
Director

ECL:lt (247656)

c: Dept. of Planning and Permitting – Anthony Ching
Group 70 International, Inc. – Jeffrey Overton
DDC Facilities Division

GROUP 70
INTERNATIONAL

SUSTAINABLE DEVELOPMENT
ARCHITECTURE
PLANNING & ENVIRONMENTAL SERVICES
INTERIOR DESIGN
ASSETS MANAGEMENT

Francis S. Oda
Arch.D., FAIA, AICP
Norman G.Y. Hong
AIA
Sheryl B. Seaman
AIA, ASID
Hitoshi Hida
AIA
Roy H. Nihei
AIA CSI
James I. Nishimoto
AIA
Stephen Yuen
AIA
Linda C. Miki
AIA
George I. Atta
AICP
Charles Y. Kaneshiro
AIA, LEED AP
Jeffrey H. Overton
AICP, LEED AP
Christine Mendes Ruotola
AICP
James L. Stone
AIA, LEED AP
Paul Bierman-Lytle
M. Arch., AIA, LEED AP
Katherine M. MacNeil
AIA, LEED AP
Tom Young
AIA

July 28, 2008

Eugene C. Lee, P.E.
Director
City and County of Honolulu
Department of Design and Construction
650 South King Street, 11th Floor
Honolulu, HI 96813

Subject: Lā'ie Inn Draft Environmental Assessment (EA)

Dear Mr. Lee,

Thank you for your comment letter concerning the Lā'ie Inn Draft Environmental Assessment.

We acknowledge that this project will add traffic to the State Highway and private roadways as there are no county roadways in Lā'ie. The city beach park closest to the proposed redevelopment is Kokololio, therefore the impact on City and County facilities will be minimal. We also note your department's concurrence with the mitigative measures proposed to address impacts.

Your comment letter and this response will be included in the Final EA. We appreciate your participation in the environmental review process.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

Jeffrey H. Overton, AICP, LEED AP
Principal, Chief Environmental Planner

cc: Hawaii Reserves, Inc.

925 Bethel Street • Honolulu, HI 96813-4307 • tel. 808.523.5866 • fax. 808.523.5874 • www.group70int.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

MUFI HANNEMANN
MAYOR

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

GEORGE "KEOKI" MIYAMOTO
DEPUTY DIRECTOR

RECEIVED
MAR - 7 2008

March 3, 2008

IN REPLY REFER TO:
DRM 08-192

Mr. Eric Marler
Hawaii Reserves, Inc. (HRI)
55-510 Kamehameha Highway
Laie, Hawaii 96762-1193

Dear Mr. Marler:

Subject: Draft Environmental Assessment (DEA)
Laie Inn Redevelopment

Thank you for the opportunity to review and comment on the DEA dated January 2008 for the proposed Laie Inn Redevelopment.

We have no comments to offer as the improvements proposed in the DEA are within privately-owned properties and will have negligible impact on our facilities and operations. It is our understanding that privately-owned and maintained storm water storage facilities will be constructed within private property to detain any additional storm water runoff from the proposed impervious surface improvements and slow its release to the existing drainage systems.

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

Sincerely,

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

c: Department of Planning and Permitting - (Attn: Anthony Ching)
Group 70 International, Inc. – (Attn: Jeffrey H. Overton)

GROUP 70
INTERNATIONAL

SUSTAINABLE DEVELOPMENT
ARCHITECTURE
PLANNING & ENVIRONMENTAL SERVICES
INTERIOR DESIGN
ASSETS MANAGEMENT

Francis S. Oda
Arch.D., FAIA, AICP
Norman G.Y. Hong
AIA
Sheryl B. Seaman
AIA, ASID
Hitoshi Hida
AIA
Roy H. Nihei
AIA CSI
James I. Nishimoto
AIA
Stephen Yuen
AIA
Linda C. Miki
AIA
George I. Atta
AICP
Charles Y. Kaneshiro
AIA, LEED AP
Jeffrey H. Overton
AICP, LEED AP
Christine Mendes Ruotola
AICP
James L. Stone
AIA, LEED AP
Paul Bierman-Lytle
M. Arch., AIA, LEED AP
Katherine M. MacNeil
AIA, LEED AP
Tom Young
AIA

July 28, 2008

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

Subject: Lā'ie Inn Draft Environmental Assessment (EA)

Dear Mr. Nishimura,

Thank you for your comment letter concerning the Lā'ie Inn Draft Environmental Assessment.

We acknowledge that this project will not affect facilities or operations of the City and County of Honolulu. As you have noted, privately-owned and maintained storm water storage facilities will be constructed to control and detain the storm water runoff from proposed surface improvements. These drainage facilities will slowly release runoff to the existing drainage systems that ultimately discharge to the Pacific Ocean at Laniloa Beach.

Your comment letter and this response will be included in the Final EA. We appreciate your participation in the environmental review process.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

Jeffrey H. Overton, AICP, LEED AP
Principal, Chief Environmental Planner

cc: Hawaii Reserves, Inc.

925 Bethel Street • Honolulu, HI 96813-4307 • tel. 808.523.5866 • fax. 808.523.5874 • www.group70int.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) 527-6743
INTERNET: www.honolulu.gov • DEPT. WEB SITE: www.honoluludpp.org

MUFI HANNEMANN
MAYOR

HENRY ENG, FAICP
DIRECTOR

DAVID K. TANOUE
DEPUTY DIRECTOR

2007/ED-20(TC)

March 10, 2008

RECEIVED
MAR 14 2008
GROUP 70 INTL

Mr. Jeffrey Overton
Group 70 International, Inc.
925 Bethel Street, Fifth Floor
Honolulu, Hawaii 96813

Dear Mr. Overton:

Subject: Chapter 343, Hawaii Revised Statutes
Draft Environmental Assessment (DEA)
DPP Project Reference No. 2007/ED-20
Project: Laie Inn Redevelopment
Location: 55-435 Kamehameha Highway - Laie
Tax Map Key: 5-5-6: 39 and 40

Transmitted for your response and incorporation into the Final Environmental Assessment (EA) are comments on the Draft EA received, thus far, by the Department of Planning and Permitting (DPP). In accordance with the provisions of Chapter 343, Hawaii Revised Statutes, you must respond, in writing, to these and any other comments that were submitted during the 30-day comment period (which began with the publication of a notice of availability of the Draft EA in The Environmental Notice on February 8, 2008). The Final EA must include these comments and responses, as well as the revised text, where needed.

Also, the following are the DPP's comments on the Draft EA.

1. Ko'olau Loa Sustainable Communities Plan - The discussion on Page 4-6 regarding the consistency of the proposed La'ie Inn Redevelopment project with the Ko'olau Loa Sustainable Communities Plan is inadequate. The discussion should be expanded to discuss how the project implements the following policies, principles and guidelines:

   a. Section 3.6 - Commercial Areas Policies for Rural Regional Commercial Centers.

   b. Section 3.6.2 - General Policies for La'ie Rural Regional Commercial Center.

   c. Section 3.6.3 - Planning Principles and Guidelines for All Commercial Areas regarding - Architectural Style, Building Scale and Massing, Site Design and Access, Visual Screening, Lighting, and Signage.

   d. Section 3.6.4 - Planning Principles and Guidelines for La'ie Rural Regional Commercial Center regarding - Architectural Style, Building Scale and Massing.

e. Section 3.8.2 - Visitor Attractions regarding - General Policies, Planning Principles, and Guidelines.

2. Parking Summary – In Section 2.3.4, there is mention of a parking summary in Figure 2.1 but there is none listed in the table.

3. Off-Street Parking Requirements – There should be some discussion on whether the proposed 255 parking stalls satisfy the off-street parking requirements and whether additional parking would be required. What impact would the proposed hotel have on the existing and future parking for the Polynesian Cultural Center (PCC)?

4. Planned Development Resort (PDR) – In Section 2.5.3, there should be some discussion about how the proposed project meets the development standards for the underlining zoning - Resort District. There should also be some discussion about how the proposed project meets the conditions of approval for the PD-R (Ordinance No. 2558).

5. Parking - In Section 3.7.2, there is a statement that approximately 436 parking spaces are provided on-site. Are you referring to the existing PCC parking lot including the 90-degree parking stalls abutting PCC? There should be some discussion about how many existing parking stalls would be removed abutting PCC and whether this would be for the hotel or PCC use. We would suggest providing a parking table showing the number of existing and proposed stalls for the different areas and users.

Should you have any questions, please contact Anthony Ching of our Urban Design Branch at 768-8028.

Very truly yours,

Henry Eng, FAICP, Director
Department of Planning and Permitting

HE:pl
Encl.

Doc. 598762rev1

GROUP 70
INTERNATIONAL

SUSTAINABLE DEVELOPMENT
ARCHITECTURE
PLANNING & ENVIRONMENTAL SERVICES
INTERIOR DESIGN
ASSETS MANAGEMENT

Francis S. Oda
Arch.D., FAIA, AICP
Norman G.Y. Hong
AIA
Sheryl B. Seaman
AIA, ASID
Hitoshi Hida
AIA
Roy H. Nihei
AIA CSI
James I. Nishimoto
AIA
Stephen Yuen
AIA
Linda C. Miki
AIA
George I. Atta
AICP
Charles Y. Kaneshiro
AIA, LEED AP
Jeffrey H. Overton
AICP, LEED AP
Christine
Mendes Ruotola
AICP
James L. Stone
AIA, LEED AP
Paul Bierman-Lytle
M. Arch., AIA, LEED AP
Katherine M. MacNeil
AIA, LEED AP
Tom Young
AIA

July 28, 2008

Mr. Henry Eng, FAICP
Director
City and County of Honolulu
Department of Planning and Permitting
650 South King Street, 7th Floor
Honolulu, HI 96813

Attn: Mr. Anthony Ching

Subject: Lā'ie Inn Draft Environmental Assessment (EA)

Dear Mr. Eng,

Thank you for your comment letter concerning the Lā'ie Inn Draft Environmental Assessment.

The Final EA has been revised to provide more discussion regarding the Sustainable Communities Plan and parking. The following are offered in response to your comments:

Ko'olauLoa Sustainable Communities Plan. We have expanded Section 4.3 regarding the consistency of the proposed Laie Inn Redevelopment project with the Ko'olau Loa Sustainable Communities Plan, Guidelines for Lā'ie Rural Regional Commercial Center.

- *Section 3.6 – Commercial Areas Policies for Rural Regional Commercial Centers.*

The hotel site is recognized in the Ko'olau Loa Sustainable Communities Plan as part of the rural commercial corridor in the Lā'ie community. The site adjoins the Polynesian Cultural Center, for many years now Hawaii's number one paid attraction. The Lā'ie Inn Redevelopment, however, will essentially be a redevelopment and expansion of the existing Lā'ie Hotel. The proposed project is not a new commercial establishment. The rural character of the area will be enhanced by removing the current Inn, which is generic in appearance and has outlived its useful life. The hotel will be replaced with a new hotel, having rural architectural character and Polynesian themed facilities surrounded by rich landscaping. The existing McDonald's restaurant and Chevron station will be redeveloped at a more functional location with new and improved facilities. The redevelopment project will improve existing uses and help to revitalize the Lā'ie Community, while still serving and attracting visitors and residents from outside the community.

925 Bethel Street • Honolulu, HI 96813-4307 • tel. 808.523.5866 • fax. 808.523.5874 • www.group70int.com

- *Section 3.6.2 – General Policies for Rural Regional Commercial Center:* Lāʻie *Rural Regional Commercial Center.*

- *Introduce a rural architectural character which incorporates appropriate themes and building forms reflective of the diverse heritage of Lāʻie's residents.*
    - The project will have a rural architectural character incorporating the Polynesian theme of the PCC. The design of the hotel is intended to unify the hotel site and the adjoining PCC into essentially one campus through shared Pacific Island theming. Detailed architectural character descriptions are discussed further in Sections 3.6.3 and 3.6.5.

- *Provide for a modest expansion of the district in order to meet future resident and visitor needs associated with Lāʻie's anticipated long-term housing and employment growth, and the expansion of visitor attractions. Given its size, and potential mix of uses, Lāʻie's center has potential as a focal point for the region's shopping and services and limited expansion is appropriate in order to better serve adjoining communities as well as local residents.*
    - The hotel redevelopment will provide modest expansion of the district to meet future needs of residents and visitors of the area. While the project is not a new commercial center, it will provide expanded opportunities for long-term employment growth and additional accommodations to support visitor attractions, particularly for the PCC, BYU-Hawaiʻi, and the LDS Hawaiʻi Lāʻie Temple. The nearby Lāʻie Shopping Center provides more of a focal point for the region's shopping and services, however, the redevelopment will supply the extra support needed for the Lāʻie Community.

- *Limit uses primarily to commercial retail, business service establishments, professional offices and public uses such as a satellite city hall, library, post office, or other similar facilities, that provide services to Lāʻie and surrounding communities.*
    - The redevelopment project will offer public uses and services and to Lāʻie and surrounding communities. The hotel will provide lodging, meeting facilities, and eating establishments to visitors and residents. Students from BYU-Hawaiʻi will be provided with educational opportunities to receive joint training and certification for those who choose to major in Hotel Management. In addition, the McDonald's restaurant and Chevron service station will still be available to serve the needs of the area.

- *Section 3.6.3 – Planning Principles and Guidelines for All Commercial Areas*

Architectural Style:

- *Utilize building forms and details which reflect the region's rural character and incorporate the style and any desirable distinctive features of buildings in the community in which they are located.*
    - To ensure its compatibility with the surrounding area, urban design principals are integrated in the planning and architecture of the hotel facilities support buildings. The design of the hotel is intended to unify the hotel site and the adjoining PCC into essentially one campus through shared Pacific Island theming.

- *Encourage the use of false fronts, sloped roofs, and breaks in the roof line to reduce the apparent scale of large roof plates in commercial buildings with multiple storefronts.*
    - The hotel design character is monarchy/territorial with Polynesian themes exemplified by its pitched roofs, articulated wooden beam structure, and roof overhangs.

- *Avoid blank facades on portions of buildings visible from a street by using texture, articulation, color, windows, or other openings to create visual interest.*
    - The Polynesian architectural design elements include dominant steep roof forms, open air veranda, stucco walls, tapa patterns and botanical themed grille work.

- *Reflect a more residential scale and character in the portions of commercial buildings that are adjacent to or readily visible from residential areas, or screen them from view with landscaping.*
    - The new buildings will be one to three stories in height, designed with a Polynesian theme, with colors and materials, including screening landscaping, that will complement and enhance this rural community setting.

Building Scale and Massing:

- *Limit commercial buildings to a maximum 40 feet in height, including roof form. In general, buildings should maintain a low-rise, rural scale.*
    - The development will be consistent with the Polynesian architectural theme of PCC. Buildings will be one to three stories in height and will comply with the 40 foot height limit as specified in the zoning ordinance for this parcel, as consistent with Land Use Ordinance (LUO) provisions.

- *Avoid the use of large, continuous buildings in new commercial developments. Commercial buildings adjacent to residential areas should be designed to recognize the balance between commercial needs and residential concerns. In general, the physical composition of height, size, and massing of commercial buildings in these locations should be compatible with adjacent residential development.*

- Large continuous buildings are not planned in the redevelopment area as shown in *Figure 2.1*. Proposed architectural designs for the project balance commercial needs and fit with the area's residential community. The height of commercial buildings in this project will be typically one to three stories and will comply with the 40 foot height limit as specified by LUO zoning ordinance provisions.

Site Design and Access:

- *Provide for the general visibility from Kamehameha Highway of buildings within commercial centers, and employ adequate and appropriately designed signage at entries.*
  - Roadway views mauka toward the guest buildings and support facilities will be generally visible, but softened by generous roadside landscaping, which will serve as a buffer to the development. The design will be consistent with guidelines set forth in the Koʻolau Loa Sustainable Communities Plan. Appropriate signage will also be provided at the entry points.

- *Provide access to parking and loading areas primarily from Kamehameha Highway for the shopping areas in Kahuku and Lāʻie, and exclusively for the Rural Community Commercial Center (Hauʻula) and country store establishments that front the highway.*
  - Access roadways to parking and loading facilities are required for the project. The site currently has two driveway connections to Kamehameha Highway (Lāʻie Inn and Chevron) and a retail access road intersection (adjacent to PCC parking).

- *Employ site design practices and provide facilities which promote pedestrian, bicycle and public transit access.*
  - The community pedestrian and bicycle path is a key element in the beautification efforts for the Lāʻie community. The purpose of the pathway is to provide for a safer bicycle/pedestrian route along the highway. The path way improvements will be extended 1,100 feet along the Kamehameha Highway boundary of the hotel site. Improvements will be comparable to the existing path, including a paved curvilinear path, extensive landscaping and bollards to prevent unauthorized vehicular access.

- *Improve bus stops in front of commercial centers, including pull-out bus stop lanes and shelters for waiting passengers.*
  - Bus stops are located in both directions fronting the project site, one directly in front of the existing Lāʻie Inn and one across the highway at the intersection of Naniloa Loop.

- *Provide racks for bicycle parking at all commercial centers and locate them where they are secure and visible from entry points or other heavy circulation areas.*
  - Bicycle parking will be provided at the relocated McDonalds and new hotel within the redevelopment area.

Visual Screening, Lighting, and Signage:

- *Plant a landscape screen consisting of trees and hedges along streets fronting parking lots.*
  - A landscaped earthen berm will be installed as part of the planned bicycle/pedestrian path along Kamehameha Highway to provide privacy, highway noise reduction, and varied topographic landscape serving as a buffer to the development.

- *Provide shade trees throughout parking lots.*
  - Canopy shade trees will be used to shade the parking lots and portions of the bicycle/pedestrian path.

- *Visually screen service areas from public and residential areas.*
  - Service areas will be visually screened from public and residential areas using landscape elements that will beautify the grounds, and through project site design. Service areas and parking will be located in the mauka portion of the project site. The view from the highway will be of the landscaping elements.

- *Require indirect illumination for signage visible from residential areas.*
  - Signage will be illuminated indirectly and will be visible from residential areas as needed.

- *Section 3.6.5 – Planning Principles and Guidelines for Lāʻie Rural Regional Commercial Center – Architectural Style, Building Scale and Massing.*

Architectural Style:

- *Employ architectural design strategies, forms, and details in new building design which reduce the sense of building mass of the center. Incorporate architectural forms and details in future renovations of existing buildings which visually reduce their apparent size.*
  - The project will reduce the sense of building mass of the center through architectural design, use of open space and landscaping. The hotel redevelopment elements are scaled and sited to achieve a proper fit with the existing environment.

- *Establish a more distinctive rural architectural character for the center through the use of Polynesian themes and built forms.*
  - The redevelopment will unify this section of the commercial corridor using Pacific Island theming. The design elements will

promote the rural character of the Lāʻie community with the use of materials that will be complimentary to the Polynesian architecture of PCC.

Building Scale and Massing:

- *Maintain the existing center's low-rise building scale consistent with the character of surrounding residential development.*
    - Buildings scale and size are suitable to the vicinity. The development will be one to three stories and within the height limit set by the LUO.

- *To the extent possible, site new buildings in a manner which emphasizes a pedestrian orientation and encourages travel on foot between new and existing establishments. Future renovation, redevelopment or expansion of the Rural Regional Commercial Center should take or create opportunities to implement a primarily pedestrian-oriented, village-like setting, in contrast to its current linear form.*
    - As part of the Lāʻie Master Plan implementation, a community pedestrian and bicycle path was constructed fronting PCC along Kamehameha Highway. The hotel redevelopment project will have a beneficial effect by extending the bicycle/pedestrian path further and facilitating a more walkable community. The community pedestrian and bicycle path is a key element in beautification efforts and provides for a safer bicycle/pedestrian route along the highway.

- *Section 3.8.2 – Visitor Attractions – General Policies, Planning Principles, and Guidelines.*

- We note that most of this Section does not directly apply to the Lāʻie Inn Redevelopment project. Subsections such as Planning Principles and Guidelines apply only to the PCC as stated in the Koʻolau Loa Sustainable Communities Plan.

General Policies:

- *Plans to renew and expand facilities as necessary to maintain the viability of the Polynesian Cultural Center (PCC) should be supported. Expansion of PCC may include expanding toward Hauʻula and into the vacant resort-zoned land adjacent to the Rodeway Inn.*

  The Center, one of Oʻahu's leading visitor attractions, is unique in its primary orientation toward Pacific Island themes. To maintain its continued viability, visitor attractions like the PCC must remain constantly aware of market trends and be able to adjust on a timely basis to changing visitor interests.

- The area will be enhanced by removing the current Inn, which is generic in appearance and has outlived its useful life, and replacing it with Polynesian themed facilities surrounded by lush, beautiful landscaping. The site adjoins the PCC, for many years now Hawaii's number one paid attraction. The intent is to unify the hotel site and the PCC into essentially one campus through shared Pacific Island theming. The redeveloped hotel will offer a quality, mid-tiered product that is lacking and will be in demand. Marketing tie-ins with the PCC and other windward/North Shore activities and destinations, and service and meeting space agreements with the restaurant will help to offer a more comprehensive vacation destination. The applicant has and will continue to work with the PCC on plans for the Lāʻie Inn Redevelopment project.

Parking Summary. – The Final EA will be revised and a parking summary will be listed in Section 2.3.4. It is also attached for your reference.

Off-Street Parking Requirements. – The redeveloped hotel will have no impact on the parking for the PCC. Typically off-street and on-site parking is synonymous. On-site parking provisions of the project exceed the LUO off-street parking requirement. Please see our response below regarding Parking and the attached Parking Summary with revised Project Floor Areas (Table 2-1).

Planned Development Resort (PDR). – A Planned Development Resort (PD-R) approval was issued for the PCC and Lāʻie Inn properties in 1971 (Ordinance 4001). The PDR specifies the level of improvements allowed under a "campus" approach to planning development across these two areas. The size of the Resort-zoned area is 5.91 acres or 257,503 sf. Land Use Ordinance (LUO) allows a floor area ratio (FAR) of 1.4 for development on a lot area greater than 30,000 sf. Therefore, the allowable square footage of the development is 360,504 sf. The redevelopment planned on the Resort-zoned site will be 149,000 sf, or only 41 percent of the allowable development. The project will meet the development standards for the Resort District. Please see table below.

Resort		
Lot Width (ft)	685	Note: lot is slightly irregular dimensions are approximate
Lot Depth (ft)	375	Note: lot is slightly irregular dimensions are approximate
Lot Area (sf)	257,503	
Building Footprint (sf)	61,000	Note: includes future retail at 5,000 sf
BuildingArea Allowed/Provided	50% / 24%	
Floor Area (sf)	149,000	Note: includes future retail at 5,000 sf at resort
Maximum Density FAR Allowed	1.40	
Actual FAR	0.58	
Max Height (ft) Allowed	40	Per zoning map
Actual Height (ft)	48	Note: Additional height allowed under Sec.21-4.60(c)(1)
Height Setbacks 1ft/10ft above 30ft	22	Note: 48ft tall bldg located min ~50ft from property lines
Yard – Front (ft)	25	
Yard – Side/Rear (ft)	20	For Rear and North Side Yard, site design conforms to Sec. 21-3.100-1 (c)(2) Optional Yard Siting

The table below shows a preliminary comparison of existing and proposed use areas (sf) with PDR-7 (Ordinance 4001).

		PCC		Lā'ie Hotel			
Year	Allowed Development	Existing	Planned Expansion	Existing	Planned Expansion	Total	Allowed (Proposed Add.)
1971	289,586	18,100	40,000	23,394	102,575	184,069	105,517
2008		139,825	3,655	23,394	125,606	292,480	(2,894)

Parking. No existing parking stalls will be removed from PCC as the current design for the Lā'ie Inn Redevelopment meets the necessary parking as stated in the LUO. Previous design phases did include additional parking from the PCC to fulfill requirements. However, the number of spaces currently proposed is approximately 345, exceeding the LUO requirement of 288 spaces. Please note that future retail space will increase the proposed parking to 379 stalls and the LUO parking requirements to 339 spaces. Section 3.7.2 will be revised to reflect the current proposed parking. A parking summary is provided to show the number of proposed stalls for the different areas and revised table of proposed Project Floor Areas (Table 2-1). The existing parking in the redevelopment area and PCC is shown below.

Existing Parking for Redevelopment and PCC
• Lā'ie Inn = 46 stalls
• McDonalds = 17
• Chevron = 0 (pump area = 8)
• PCC = 484 parking stalls (48 bus parking stalls) = PCC total = 532

Your comment letter and this response will be included in the Final EA. We appreciate your participation in the environmental review process.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

Jeffrey H. Overton, AICP, LEED AP
Principal, Chief Environmental Planner

cc: Hawaii Reserves, Inc.

Attachments:
1) Parking Summary
2) (Revised) Proposed Project Floor Areas (Table 2-1).

ATTACHMENT 1

Parking Summary

Component	Parking Required (LUO)
220 Hotel rooms	220
Banquet Meeting Facility	40
Restaurant	10
McDonald's	11
Chevron	7
Total LUO Minimum	**288**
Parking Provided on Site	**345**
Retail (future)	51
Total LUO Minimum	**339**
Parking Provided on Site plus Retail (future)	**379**

ATTACHMENT 2

Project Floor Area (GSF)

Building	Floor Area Gross Square Feet (GSF)
220 Hotel rooms	135,000
Banquet Meeting Facility	5,000
Restaurant	4,000
McDonald's	4,200
Chevron	3,850
Future Retail	15,000
Total Floor Area	**167,050**

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

MUFI HANNEMANN
MAYOR

WAYNE Y. YOSHIOKA
DIRECTOR

RICHARD F. TORRES
DEPUTY DIRECTOR

APR - 9 2008

TP2/08-248082R

April 3, 2008

Mr. Eric Marler
Executive Vice President and Chief Financial Officer
Hawaii Reserves, Inc.
55-510 Kamehameha Highway
Laie, Hawaii 96762-1193

Dear Mr. Marler:

Subject: Laie Inn Redevelopment

Thank you for the February 8, 2008, letter from Group 70 International, Inc., requesting our review of and comments on the draft environmental assessment (EA) for the subject project.

We have the following comments on the project and draft EA:

1. Except for Kamehameha Highway, which is a State highway, all of the roads in the vicinity of the project are private roads.

2. The entrance road to the porte cochere for the hotel, as shown in Figure 2.1 (Page 2-3), appears to be too close to Kamehameha Highway. During times of heavy use, its proposed location may cause possible traffic problems on Kamehameha Highway.

3. The last sentence of the second paragraph of Section 2.3.4 Access, Parking and Pathways (Page 2-8) describes the locations of existing bus stops. These locations should be shown on the plans included in the EA. The EA should also discuss the impact of the project on the existing bus stops and the transit (TheBus and paratransit) system. The project

should retain the existing bus stops and provide for Americans with Disabilities Act compliant access.

4. The first paragraph on Page 2-9 discusses the number of parking spaces that will be provided on the project site. Figure 2.1 should show that number of parking spaces by parking lot. Also, the total number stated in this paragraph is not the same as the number referred to in Section 3.7.2 (Page 3-22).

5. According to the arrow in Figure 3.1 Photo Key (Page 3-2), Figure 3-2 (Page 3-3) should be a south view.

6. Section 3.7.1 Traffic discusses the access points for the project site. The number of existing driveways and proposed driveways should be clarified. Figure 2.1 (Page 2-3) shows three access points to Kamehameha Highway, including Naniloa Loop. The number of access points to Kamehameha Highway is not consistent with the Traffic Impact Assessment Report (TIAR). Page 6 of the TIAR states that there are five points of access. Section 3.7.1 should also discuss if the State Department of Transportation has approved the indicated accesses to Kamehameha Highway.

7. All pedestrian pathways, internal as well as the community pedestrian/bike path fronting the proposed project, should be designed and constructed to facilitate mobility by persons with disabilities.

8. Appendix E, TIAR, should be revised to conform to the present conceptual plan as shown on Figure 2.1 of the EA. The driveway access at McDonald's is proposed to be a right turn in/right turn out and not a right turn out only. Figure 2 is not consistent with Figure 2.1 of the EA.

9. Appropriate project notification should be provided to the area neighborhood board, as well as community residents, businesses, emergency personnel, bus personnel, etc. They should be kept apprised of the details of the proposed project and the impacts the project may have on the local street network area.

Should you have any questions regarding these comments, please contact Ms. Faith Miyamoto at 768-8350.

Very truly yours,

WAYNE Y. YOSHIOKA
Director

cc: Ms. Katherine Puana Kealoha, Interim Director
Office of Environmental Quality Control

Mr. Anthony Ching
Department of Planning and Permitting

✓ Mr. Jeffrey H. Overton, AICP, LEED-AP
Group 70 International, Inc.

GROUP 70
INTERNATIONAL

SUSTAINABLE DEVELOPMENT
ARCHITECTURE
PLANNING & ENVIRONMENTAL SERVICES
INTERIOR DESIGN
ASSETS MANAGEMENT

Francis S. Oda
Arch.D., FAIA, AICP
Norman G.Y. Hong
AIA
Sheryl B. Seaman
AIA, ASID
Hitoshi Hida
AIA
Roy H. Nihei
AIA CSI
James I. Nishimoto
AIA
Stephen Yuen
AIA
Linda C. Miki
AIA
George I. Atta
AICP
Charles Y. Kaneshiro
AIA, LEED AP
Jeffrey H. Overton
AICP, LEED AP
Christine
Mendes Ruotola
AICP
James L. Stone
AIA, LEED AP
Paul Bierman-Lytle
M. Arch., AIA, LEED AP
Katherine M. MacNeil
AIA, LEED AP
Tom Young
AIA

July 28, 2008

Wayne Y. Yoshioka
Director
City and County of Honolulu
Department of Transportation Services
650 South King Street, 3rd Floor
Honolulu, HI 96813

Subject: Lāʻie Inn Draft Environmental Assessment (EA)

Dear Mr. Yoshioka,

Thank you for your comment letter concerning the Lāʻie Inn Draft Environmental Assessment. The following are offered in response to your comments:

We acknowledge that all roads within the project vicinity are State or private roadways.

We have met with the Department of Transportation (DOT) to discuss traffic issues such as access locations to the hotel site. Your comment regarding the location of the entrance road to the porte cochere for the hotel is noted. The drive to the porte cochere is 360 feet from the turn off of Kamehameha Highway. This equates to stacking for 18 vehicles. The width of the roundabout at the porte cochere is also wide enough for through traffic. Additionally, prior to the roundabout, there are two parking entries along the drop off route. We will discuss this issue with the design team and in future meetings with DOT.

Existing bus stops have been added to the Preliminary Site Plan (Figure 2.1.) Architectural design has provided appropriate access per the American with Disabilities Act (ADA). The Lāʻie Inn Redevelopment will have a slight impact on the bus transit system going in both directions from the project site. Potential impacts include guests and visitors traveling to and from Waikiki and the airport areas, in addition to employees living within the Lāʻie region. With various transportation options available, impacts to existing bus stops and the transit system will be modest at most.

The total number of parking spaces for the hotel redevelopment has been revised with changes to project design. The current design meets the necessary parking as stated in the Land Use Ordinance (LUO). The number of spaces currently proposed is approximately 345, exceeding the LUO requirement of 288 spaces. Please note that future retail space will increase the proposed parking to 379 stalls and the LUO parking requirements to 339 spaces. Section 3.7.2 will be revised to reflect the current proposed parking and a parking summary will be listed in Section 2.3.4. A parking summary is provided to show the number of proposed stalls for the different areas and a revised table of the proposed Project Floor Areas (Table 2-1) is also provided. Figure 2.1 reflects the proposed parking discussed above.

Your comment regarding Figure 3-2 has been noted and the arrow in the Figure 3.1 (Photo Key) has been repositioned in the Final EA.

925 Bethel Street • Honolulu, HI 96813-4307 • tel. 808.523.5866 • fax. 808.523.5874 • www.group70int.com

Regarding access points for the project site, your observations are correct. The existing project site has four points of access to Kamehameha Highway. The proposed site plan (Figure 2-1) has two access points to Kamehameha Highway, plus access to Naniloa Loop. The project will eliminate two Chevron station driveways and the current Lā'ie Inn access to Kamehameha Highway. A new driveway will be added for the relocated Chevron and McDonald's area. Figure 2-1, Lā'ie Inn Site Plan, is not consistent with the traffic study (Table E-2, TIAR) because the main entrance to the Polynesian Cultural Center to the south is not shown in the site plan. Additionally, the two Chevron driveways are counted as a single driveway (Table E-2 of the traffic study). We have revised Section 3.7.1 of the Final EA to clarify the access points for the project site.

The State DOT has commented positively on the hotel redevelopment and site design. Several meetings have been held with DOT regarding traffic issues such as updated alignments and access points to the McDonalds and Chevron site. We will continue to discuss with DOT as the project moves forward. This information has been added to the Final EA in Section 3.7.1 per your request.

All pedestrian pathways, including the pedestrian/bike path fronting the proposed redevelopment will be designed and constructed per ADA standards.

Changes in the conceptual plan for driveway access to McDonalds and Chevron will not pose substantial changes to the findings of the traffic study.

Project notification to the area will be in accordance with Chapter 343, Hawaii Revised Statutes. HRI will continue open dialog with the community to ensure potential traffic impacts are addressed.

Your comment letter and this response will be included in the Final EA. We appreciate your participation in the environmental review process.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

Jeffrey H. Overton, AICP, LEED AP
Principal, Chief Environmental Planner

cc: Hawaii Reserves, Inc.

Attachments:
1) Parking Summary
2) (Revised) Proposed Project Floor Areas (Table 2-1)

ATTACHMENT 1

Parking Summary

Component	Parking Required (LUO)
220 Hotel rooms	220
Banquet Meeting Facility	40
Restaurant	10
McDonald's	11
Chevron	7
Total LUO Minimum	**288**
Parking Provided on Site	**345**
Retail (future)	51
Total LUO Minimum	**339**
Parking Provided on Site plus Retail (future)	**379**

ATTACHMENT 2

Project Floor Area (GSF)

Building	Floor Area Gross Square Feet (GSF)
220 Hotel rooms	135,000
Banquet Meeting Facility	5,000
Restaurant	4,000
McDonald's	4,200
Chevron	3,850
Future Retail	15,000
Total Floor Area	**167,050**

HONOLULU FIRE DEPARTMENT

CITY AND COUNTY OF HONOLULU

636 South Street
Honolulu, Hawaii 96813-5007
Phone: 808-723-7139 Fax: 808-723-7111 Internet: www.honolulu.gov/hfd

MUFI HANNEMANN
MAYOR

KENNETH G. SILVA
FIRE CHIEF

ALVIN K. TOMITA
DEPUTY FIRE CHIEF

February 14, 2008

Mr. Eric Marler, Executive Vice President
and Chief Financial Officer
Hawaii Reserves, Inc.
55-510 Kamehameha Highway
Laie, Hawaii 96762-1193

RECEIVED
FEB 19 2008
GROUP 70 INT'L

Dear Mr. Marler:

Subject: Draft Environmental Assessment
Laie Inn Redevelopment
Island of Oahu, District of Honolulu
Tax Map Keys: 5-5-006: 039 and 040

In response to a letter from Jeffrey H. Overton of Group 70 International, Inc. dated February 8, 2008, regarding the above-mentioned subject, the Honolulu Fire Department (HFD) reviewed the material provided and requires that the following be complied with:

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

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

   On-site fire hydrants and mains capable of supplying the required fire flow shall be provided when any portion of the facility or building is in

excess of 150 feet (45 720 mm) from a water supply on a fire apparatus access road, as measured by an approved route around the exterior of the facility or building. (1997 Uniform Fire Code, Section 903.2, as amended.)

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

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

Sincerely,

KENNETH G. SILVA
Fire Chief

KGS/SK:jl

cc: Anthony Ching, Department of Planning and Permitting
Jeffrey H. Overton, Group 70 International, Inc.

GROUP 70
INTERNATIONAL

SUSTAINABLE DEVELOPMENT
ARCHITECTURE
PLANNING & ENVIRONMENTAL SERVICES
INTERIOR DESIGN
ASSETS MANAGEMENT

Francis S. Oda
Arch.D., FAIA, AICP
Norman G.Y. Hong
AIA
Sheryl B. Seaman
AIA, ASID
Hitoshi Hida
AIA
Roy H. Nihei
AIA CSI
James I. Nishimoto
AIA
Stephen Yuen
AIA
Linda C. Miki
AIA
George I. Atta
AICP
Charles Y. Kaneshiro
AIA, LEED AP
Jeffrey H. Overton
AICP, LEED AP
Christine Mendes Ruotola
AICP
James L. Stone
AIA, LEED AP
Paul Bierman-Lytle
M. Arch., AIA, LEED AP
Katherine M. MacNeil
AIA, LEED AP
Tom Young
AIA

July 28, 2008

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

Subject: Lā'ie Inn Draft Environmental Assessment (EA)

Dear Chief Silva,

Thank you for your comment letter concerning the Lā'ie Inn Draft Environmental Assessment.

The following are offered in response to your comments:

1. During the design phase of the project, an acceptable fire apparatus access road will be constructed, pursuant to the referenced requirements of the 1997 Uniform Fire Code, Section 902.2.1.

2. During the design phase of the project, an approved water supply (including on-site fire hydrants and mains, as required) capable of supplying the required fire flow for fire protection will be provided, pursuant to the requirements of the 1997 Uniform Fire Code, Section 903.2, as amended.

3. During the design phase of the project, relevant civil and construction drawings will be submitted to the Honolulu Fire Department for review and approval.

Your comment letter and this response will be included in the Final EA. We appreciate your participation in the environmental review process.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

Jeffrey H. Overton, AICP, LEED AP
Principal, Chief Environmental Planner

cc: Hawaii Reserves, Inc.

925 Bethel Street • Honolulu, HI 96813-4307 • tel. 808.523.5866 • fax. 808.523.5874 • www.group70int.com

POLICE DEPARTMENT

CITY AND COUNTY OF HONOLULU

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

MUFI HANNEMANN
MAYOR

BOISSE P. CORREA
CHIEF

PAUL D. PUTZULU
MICHAEL D. TUCKER
DEPUTY CHIEFS

OUR REFERENCE BS-KP

February 11, 2008

RECEIVED
FEB 14 2008
GROUP 70 INT'L

Mr. Eric Marler, Executive Vice
President and Chief Financial Officer
Hawai`i Reserves, Inc.
55-510 Kamehameha Highway
Lā`ie, Hawaii 96762-1193

Dear Mr. Marler:

This is in response to a letter from Group 70 International, Inc., requesting comments on the Draft Environmental Assessment for the Lā`ie Inn Redevelopment project in Lā`ie.

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

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

Sincerely,

BOISSE P. CORREA
Chief of Police

By
DEBORA TANDAL
Acting Assistant Chief of Police
Support Services Bureau

cc: OEQC
Mr. Anthony Ching, DPP
Mr. Jeffrey H. Overton,
Group 70 International, Inc.

Serving and Protecting With Aloha

GROUP 70
INTERNATIONAL

SUSTAINABLE DEVELOPMENT
ARCHITECTURE
PLANNING & ENVIRONMENTAL SERVICES
INTERIOR DESIGN
ASSETS MANAGEMENT

Francis S. Oda
Arch.D., FAIA, AICP

Norman G.Y. Hong
AIA

Sheryl B. Seaman
AIA, ASID

Hitoshi Hida
AIA

Roy H. Nihei
AIA CSI

James I. Nishimoto
AIA

Stephen Yuen
AIA

Linda C. Miki
AIA

George I. Atta
AICP

Charles Y. Kaneshiro
AIA, LEED AP

Jeffrey H. Overton
AICP, LEED AP

Christine
Mendes Ruotola
AICP

James L. Stone
AIA, LEED AP

Paul Bierman-Lytle
M. Arch., AIA, LEED AP

Katherine M. MacNeil
AIA, LEED AP

Tom Young
AIA

July 28, 2008

Mr. Boisse P. Correa, Chief of Police
City and County of Honolulu
Police Department
801 South Beretania Street
Honolulu, HI 96813

Subject: Lā'ie Inn Draft Environmental Assessment (EA)

Dear Chief Correa,

Thank you for your comment letter concerning the Lā'ie Inn Draft Environmental Assessment.

We acknowledge that this project will not affect facilities or operations of the Honolulu Police Department.

Your comment letter and this response will be included in the Final EA. We appreciate your participation in the environmental review process.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

Jeffrey H. Overton, AICP, LEED AP
Principal, Chief Environmental Planner

cc: Hawaii Reserves, Inc.

925 Bethel Street • Honolulu, HI 96813-4307 • tel. 808.523.5866 • fax. 808.523.5874 • www.group70int.com

KOOLAULOA NEIGHBORHOOD BOARD NO. 28

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

March 13, 2008

To: Office of Environmental Quality Control

From: Dee Dee Letts, Chair

Ko'olauloa Neighborhood Board

Subject: Draft Environmental assessment, La'ie Inn Redevelopment

Because of the short time interval between receipt of the Draft EA and the deadline for submitting comment, your committee's review of the document has been a cursory one. Nevertheless, it is felt that enough information has been gathered to make a recommendation to the Board and, if adopted, to forward it to the appropriate organizations and agencies. An attempt is made to associate this committee's comments with specific sections of the Draft.

3.5.2 Cultural Resources. Almost any development faces the high probability of disturbing 'iwi kupuna. The Draft does not address the care and handling of disinterred 'iwi.

3.7.3 Potential Impacts on Highway and Parking. The Draft statement that this impact will likely more than double is correct but is misleading. Using the figures as presented, it is more than likely that the impact would more than **quadruple.** The use of traffic signals would more than likely impede rather that improve flow on Kamehameha Highway. This has been clearly seen after traffic lights were installed in Ahuimanu on Kehekili Highway.

4.0 Conformance with Plans, Policies, and Programs. The proposed redevelopment is not in conformance with the Ko'olauloa Sustainable Communities Plan, the City and County's General Plan, and the State's Windward O'ahu Regional Plan of 1978. These plans all direct that Ko'olauloa is to remain rural in nature. A plan for a development of this magnitude, and its part in the overall total of proposed developments in Ko'olauloa will destroy the rural character of the area forever. The hotel will be half the size of the Turtle Bay Hotel (which is removed from the highway) but will be an imposing structure at the present site on the highway.

5.0 Alternatives. This section is not fully developed. There is no mention of the following alternatives: Lower density resort development and Reconstruction with any change in density.

5.4 Comparative Summary of Potential Impacts. There are no supportive data that the project will meet the needs of the residents of the community. Indeed, the proposal appears to address the future benefits to the visitor operations.

Further, what is the community? The community is not only La'ie. The community is made up of all residents of Ko'olauloa, all who travel Kamehameha Highway. This is the community that is impacted.

Finally, the Hallstrom Study which is included in the index appears to be a flawed study. The opinion is that it sets faulty premises and makes faulty conclusions. It appears to completely ignore the Ko'olauloa Sustainable Communities Plan Vision and Principles.

The Ko'olauloa Neighborhood finds that the draft EA does not meet the criteria for a FONSI and that an Environmental Impact Statement is required. Motion was APPROVED unanimously. 7,0,0

Dee Dee Letts, Chair

Oahu's Neighborhood Board system – Established 1973

GROUP 70 INTERNATIONAL

SUSTAINABLE DEVELOPMENT
ARCHITECTURE
PLANNING & ENVIRONMENTAL SERVICES
INTERIOR DESIGN
ASSETS MANAGEMENT

Francis S. Oda Arch.D., FAIA, AICP
Norman G.Y. Hong AIA
Sheryl B. Seaman AIA, ASID
Hitoshi Hida AIA
Roy H. Nihei AIA CSI
James I. Nishimoto AIA
Stephen Yuen AIA
Linda C. Miki AIA
George I. Atta AICP
Charles Y. Kaneshiro AIA, LEED AP
Jeffrey H. Overton AICP, LEED AP
Christine Mendes Ruotola AICP
James L. Stone AIA, LEED AP
Paul Bierman-Lytle M. Arch., AIA, LEED AP
Katherine M. MacNeil AIA, LEED AP
Tom Young AIA

July 28, 2008

Ms. Dee Dee Letts, Chair
Ko'olau Loa NB No. 28
c/o Neighborhood Commission
530 South King Street, Room 406
Honolulu, HI 96813

Subject: Lā'ie Inn Draft Environmental Assessment (EA)

Dear Chair Letts,

Thank you for your comment letter concerning the Lā'ie Inn Draft Environmental Assessment. Although your letter was received after the Draft EA comment letter deadline, we have offered the following in response to your comments:

Archaeological and Cultural Resources. The Lā'ie Inn site has been altered by development activities for over a century and the archaeological investigations have found no evidence of surface or subsurface cultural sites. In the event that any previously unidentified archaeological and cultural resources are encountered during the development of the property, construction activities will stop and the contractor will immediately contact the State Historic Preservation Division in accordance with applicable regulations. We have provided additional detailed information in Section 3.5 of the Final EA.

Traffic. The expected number of guests visiting the Lā'ie Inn will roughly double the number of vehicle trips associated with the hotel. Table 3-4 of the Final EA shows the existing and net increase in trips.

While there will be some impact to vehicular traffic due to the proposed project, instead of returning to Waikiki with other Polynesian Cultural Center guests, some will stay overnight at the hotel and will return the following day, when traffic is typically minimal. This will result in a reduction to the numbers of vehicles heading to town on Kamehameha Highway in the late evening hours. Additionally, local residents who want to work closer to home and avoid travel to the island's urban centers will have the chance to do so.

A traffic signal will be installed on Kamehameha Highway at Naniloa Loop to improve safety and reduce delays for existing traffic. This improvement may increase delays to through-traffic on Kamehameha Highway. Widening Kamehameha Highway to provide left-turn lanes at Naniloa Loop and at the hotel main entrance will help offset the delay. The signal will improve the safety at the Naniloa Loop intersection by providing for orderly traffic movements and a signalized pedestrian crossing. Even without the project, a traffic signal in this area would be beneficial to accommodate existing traffic needs.

925 Bethel Street • Honolulu, HI 96813-4307 • tel. 808.523.5866 • fax. 808.523.5874 • www.group70int.com

The State of Hawaii Department of Transportation has commented positively on the hotel redevelopment and site design, including traffic management and the addition of the traffic signal.

Conformance with Plans, Policies, and Programs.

- Ko'olau Loa Sustainable Communities Plan - Ko'olau Loa is a rural area with various commercial and residential designations. The hotel site is located in the Ko'olau Loa Sustainable Communities Plan (SCP) as part of the commercial corridor in the Lā'ie community, where most of the business and institutional enterprises are located. The hotel site currently has the requisite Resort and Commercial zoning. The project has been scaled to fit within the zoning guidelines (see discussion in the next section, Alternatives).

Based on your comments, we have expanded Section 4.3 regarding the consistency of the proposed Lā'ie Inn Redevelopment with the Ko'olau Loa Sustainable Communities Plan, Guidelines for Lā'ie Rural Regional Commercial Center (Section 3.6). We have also addressed Section 3.8.2.1, Visitor Attractions, General Policies.

- City and County of Honolulu General Plan – Section 4.2 of the Draft EA discusses seven areas in the General Plan that pertain to the Lā'ie Inn Redevelopment. With population growth and the changing needs of visitors and residents, the project meets basic themes outlined in the General Plan, while providing redevelopment of an existing hotel to better sustain this community. The redeveloped hotel will be a beautiful addition to the area offering employment opportunities, economic activity, and support for Lā'ie and Ko'olau Loa residents.

- Windward O'ahu Regional Plan of 1978 - The Windward Oahu Regional Plan became the basis for saving scenic spaces, open space, and the rural and agricultural nature of the Windward side of the island of Oahu. The Lā'ie Inn Redevelopment will achieve this by saving greenfield areas and using the existing site for redevelopment within the commercial core of the Lā'ie community, as outlined in the SCP and City's zoning designations. Redevelopment at this location will help to maintain the area's open space, agricultural nature, and the rural character of the Windward side of O'ahu.

Alternatives. The economic viability of the Lā'ie Inn requires an increase in hotel room numbers. The only other current option nearby, the Turtle Bay Resort, offers a more remote and higher cost product that is not viable for many visitors to the PCC, BYU-Hawai'i, Lā'ie Hawai'i Temple, and guests of families living in the moku. The redeveloped hotel will offer a quality, mid-tiered product that is economically viable and aesthetically suitable for the rural character of the area. The Polynesian-themed facilities will be surrounded by lush, beautiful landscaping and will not exceed the forty feet height limit. The intent is to better unify the hotel site and the PCC into essentially one campus through shared Pacific Island theming.

A lower density development is not economically sustainable and would not be a viable alternative. The site adjoins the PCC, for many years now Hawaii's number one paid attraction. The project's goal is to achieve a balance of the business and community needs while achieving revitalization through redevelopment. The existing Resort zoning allows for roughly twice the number of rooms than planned for in the redevelopment. The size of the Resort-zoned area is 5.91 acres or 257,503 sf. Land Use Ordinance (LUO) allows a floor area ratio (FAR) of 1.4 for development on a lot area greater than 30,000 sf. Therefore, the allowable square footage of the development is 360,504 sf. The redevelopment planned on the Resort-zoned site will be 149,000 sf, or only 41 percent of the allowable development.

Reconstruction or renovation with no change in the current density would not be viable and provide no benefit to the community and surrounding businesses. The inability to accommodate visitors and community needs are current concerns with the existing hotel. Additionally, there would be no increased employment opportunities for residents of the area.

Comparative Summary of Potential Impacts. The community of Lā'ie consists of year-round residents of Lā'ie and Ko'olau Loa, and students and employees associated with BYU-Hawai'i, PCC, and the Lā'ie Hawai'i Temple. The project provides direct benefits in terms of employment, recreation, and alternative lodging for visiting friends and family members. Redevelopment of the Lā'ie Inn will strengthen the community as a whole. Unfortunately, with or without the Lā'ie Inn, the highway connecting the Windward community will continue to be most affected by the increase in traffic from major urban sources elsewhere on O'ahu.

A supplemental letter from the Hallstrom Group, included with Appendix A of the Final EA, concludes that the findings presented in the 2004 Market Study are valid and continue to support the redevelopment project. While some micro (near-term) market conditions may have changed, the fundamental macro (long-term) conditions and demand factors regarding the hotel redevelopment project are substantially unchanged.

At the time the Hallstrom study was conducted, opposition to proposed development projects appeared to be waning. Recent opposition to Turtle Bay Resort's plans for growth only serves to strengthen the conclusions the study drew to support the redevelopment of Lā'ie Inn. If the number of hotel rooms at Turtle Bay remains at status quo, the demand for more rooms in Lā'ie will only increase.

The Lā'ie Inn Redevelopment will provide significant benefits to the community while maintaining the rural nature of the area. HRI will continue open dialog with the Neighborhood Board and community to ensure that potential impacts are addressed.

Your comment letter and this response will be included in the Final EA. We appreciate your participation in the environmental review process.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

Jeffrey H. Overton, AICP, LEED AP
Principal, Chief Environmental Planner

cc: Hawaii Reserves, Inc.

1955 BYU HAWAII

Brigham Young University Hawai'i

Assistant to the President

March 10, 2008

Mr. Eric Marler - Executive Vice President & CFO
Hawaii Reserves, Inc.
55-510 Kamehameha Hwy.
Laie, HI 96762

SUPPORT OF THE LĀ'IE HOTEL

I am writing in support of the Lā'ie hotel which has been proposed to replace the currently existing hotel and have read the environmental statements provided by HRI.

We have been residents of Lā'ie for the past 24 years and have long recognized to upgrade the hotel facilities in the community. This hotel is critical for hosting BYU Hawai'i meetings, conferences, graduations, and other special events. In addition, the hotel would provide internship opportunities for our students. Guests who wish to visit the Polynesian Cultural Center will also appreciate the convenience and quality of this new facility. The current proposal would be helpful in meeting these needs and serve the residents along the North Shore. Further, it would provide much employment which is needed for many of our residents as well.

The design of the hotel is consistent with architecture that will complement those buildings at the adjoining Polynesian Cultural Center. I strongly support the improvement that this new hotel would make to the community and strongly endorse its approval.

WILLIAM G. NEAL

ab

55-220 Kulanui Street, Laie, Hawaii 96762
Phone (808) 6750-3589 · Fax: (808) 675-3329
E-mail: bill.neal@byuh.edu

GROUP 70
INTERNATIONAL

SUSTAINABLE DEVELOPMENT
ARCHITECTURE
PLANNING & ENVIRONMENTAL SERVICES
INTERIOR DESIGN
ASSETS MANAGEMENT

Francis S. Oda
Arch.D., FAIA, AICP
Norman G.Y. Hong
AIA
Sheryl B. Seaman
AIA, ASID
Hitoshi Hida
AIA
Roy H. Nihei
AIA CSI
James I. Nishimoto
AIA
Stephen Yuen
AIA
Linda C. Miki
AIA
George I. Atta
AICP
Charles Y. Kaneshiro
AIA, LEED AP
Jeffrey H. Overton
AICP, LEED AP
Christine Mendes Ruotola
AICP
James L. Stone
AIA, LEED AP
Paul Bierman-Lytle
M. Arch., AIA, LEED AP
Katherine M. MacNeil
AIA, LEED AP
Tom Young
AIA

July 28, 2008

William G. Neal, Ph.D.
BYU Hawai'i – Assistant to the President
Brigham Young University, #1971
55-220 Kulanui Street
Lā'ie, HI 96762-1294

Subject: Lā'ie Inn Draft Environmental Assessment (EA)

Dear Dr. Neal,

Thank you for your comment letter concerning the Lā'ie Inn Draft Environmental Assessment.

We appreciate your support for the proposed Lā'ie Inn Redevelopment project. We agree with you that the current Lā'ie Inn is in need of improvement and is not satisfactory to accommodate the number of guests visiting the University, the Polynesian Cultural Center (PCC), the LDS Lā'ie Hawai'i Temple, and friends and family in the community. The Lā'ie Inn Redevelopment project, including the restaurant and meeting facilities, will enable student families and visitors to enjoy these facilities at a location nearby BYU-Hawai'i and the PCC.

Regarding employment, the Lā'ie Inn Redevelopment will also support the larger local community through creating employment opportunities that currently do not exist. Local residents, who want to work closer to home without having to travel to the island's urban centers, will have the chance to do so. Students will also be able to take on employment giving them job training and certification, especially for those majoring in Hotel Management. This will be truly beneficial to both the proposed hotel and the students of BYU-H.

Finally, hotel design will compliment the existing community, promoting the cultural feel provided by the PCC and giving visitors an opportunity to enjoy a unique Polynesian experience on the North Shore.

Thank you for taking the time to share your comments. Your comment letter and this response will be included in the Final EA. We appreciate your participation in the environmental review process. Please submit a request to our office if you would like a copy of the Final EA, or portions thereof.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

Jeffrey H. Overton

Jeffrey H. Overton, AICP, LEED AP
Principal

cc: Hawaii Reserves, Inc.

925 Bethel Street • Honolulu, HI 96813-4307 • tel. 808.523.5866 • fax. 808.523.5874 • www.group70int.com

CHIEF INFORMATION OFFICER

BRIGHAM YOUNG UNIVERSITY 1955 BYU HAWAII LAIE, HAWAII

RECEIVED
MAR 1 2 2008
GROUP 70 INT'L

Eric Marler
Hawaii Reserves, Inc.
55-510 Kam. Hwy.
Laie, Hawaii, 96762

Dear Eric

This letter is to express my support and the support of the Office of the CIO, BYU Hawaii for the Laie Inn Redevelopment Project. The existence of a better-class hotel in Laie will have a huge impact to the North Shore as more affordable accommodations can be booked. Increase in occupancy will benefit the Polynesian Cultural Center visitor and well as friends of BYU Hawaii who are visiting for special events like graduations, the beginning of the academic year, etc.

I also feel that the hotel will provide much needed on-the-job experience to the BYU Hawaii students studying Hotel and Travel Management. They can increase their experience level in the trade by working in the many opportunities that the hotel will have.

In short, the Laie Inn Redevelopment Project is very much needed in support of the Laie Community.

Sincerely
Jim Nilson
Jim Nilson

BRIGHAM YOUNG UNIVERSITY HAWAII #1945 · 55-220 KULANUI STREET · LAIE, HAWAII 96762-1294
(808) 293-3735 / FAX: (808) 293-3329 · E-MAIL: nilsonj@byuh.edu

GROUP 70
INTERNATIONAL

SUSTAINABLE DEVELOPMENT
ARCHITECTURE
PLANNING & ENVIRONMENTAL SERVICES
INTERIOR DESIGN
ASSETS MANAGEMENT

Francis S. Oda
Arch.D., FAIA, AICP
Norman G.Y. Hong
AIA
Sheryl B. Seaman
AIA, ASID
Hitoshi Hida
AIA
Roy H. Nihei
AIA CSI
James I. Nishimoto
AIA
Stephen Yuen
AIA
Linda C. Miki
AIA
George I. Atta
AICP
Charles Y. Kaneshiro
AIA, LEED AP
Jeffrey H. Overton
AICP, LEED AP
Christine Mendes Ruotola
AICP
James L. Stone
AIA, LEED AP
Paul Bierman-Lytle
M. Arch., AIA, LEED AP
Katherine M. MacNeil
AIA, LEED AP
Tom Young
AIA

July 28, 2008

Mr. Jim Nilson
BYU Hawai'i – Chief Information Officer
Brigham Young University, #1971
55-220 Kulanui Street
Lā'ie, HI 96762-1294

Subject: Lā'ie Inn Draft Environmental Assessment (EA)

Dear Mr. Nilson,

Thank you for your comment letter concerning the Lā'ie Inn Draft Environmental Assessment.

We appreciate your support for the proposed Lā'ie Inn Redevelopment project. We agree with you that this redevelopment would support and positively affect the Lā'ie and North Shore communities. The creation of adequate accommodations at a location nearby BYU-Hawai'i and the Polynesian Cultural Center (PCC) will enable student families and visitors to have a lodging option that will better suit their needs.

Regarding education and on the job training, students will be able to take on employment opportunities giving them joint training and certification, especially for those majoring in Hotel Management. This will be truly beneficial to both the proposed hotel and the students of BYU-H.

Thank you for taking the time to share your comments. Your comment letter and this response will be included in the Final EA. We appreciate your participation in the environmental review process. Please submit a request to our office if you would like a copy of the Final EA, or portions thereof.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

Jeffrey H. Overton

Jeffrey H. Overton, AICP, LEED AP
Principal, Chief Environmental Planner

cc: Hawaii Reserves, Inc.

925 Bethel Street • Honolulu, HI 96813-4307 • tel. 808.523.5866 • fax. 808.523.5874 • www.group70int.com

DEPARTMENT OF
STUDENT ACTIVITIES AND
LEADERSHIP DEVELOPMENT

BYU HAWAII

RECEIVED
MAR 1 1 2008
Group 70 Intl

March 10, 2008

Jeffery H. Overton
Group 70 International Inc.
925 Bethel Street 5th Floor
Honolulu, Hawaii, 96813

Dear Jeffery H. Overton,

As Director of Student Activities and Leadership, I have many occasions to help provide accommodations for visitors to our University.

In the 2007-2008 academic year we will have brought in 10 performing groups, ranging from 2 to 18 travelers per group. We have not once put them up at the Laie Inn, as it does not meet their standards. Usually, they stay in Honolulu as that is where we can find adequate lodging at reasonable prices. We would much prefer they could stay here in Laie.

The university also hosts numerous conferences. Our own department hosted a conference in 2006 we hosted a conference of more than 100 student leaders and their advisors from colleges and universities in Hawaii. While they stayed at the Laie Inn (Honolulu was too far and Turtle Bay too expensive), they were not impressed with what was available (some from Oahu chose not to book rooms, but rather to make the commute).

Lastly, during our New Student Orientations, held four times a year, we have many parents who come out with their children. Most find other places to stay, outside of Laie, or in vacation rentals, as the local has not had room or not been recommended to them.

I support replacing the current Inn with a larger and upgraded facility. Mahalo.

David Lucero
Director
Student Activities and Leadership
lucerod@byuh.edu
808.675.3552

BRIGHAM YOUNG UNIVERSITY HAWAII • 55-220 KULANUI STREET, #1924 • LAIE, HAWAII 96762-1294
(808) 293-3552 / FAX: (808) 293-3374 • http://www.byuh.edu

GROUP 70
INTERNATIONAL

SUSTAINABLE DEVELOPMENT
ARCHITECTURE
PLANNING & ENVIRONMENTAL SERVICES
INTERIOR DESIGN
ASSETS MANAGEMENT

Francis S. Oda
Arch.D., FAIA, AICP
Norman G.Y. Hong
AIA
Sheryl B. Seaman
AIA, ASID
Hitoshi Hida
AIA
Roy H. Nihei
AIA CSI
James I. Nishimoto
AIA
Stephen Yuen
AIA
Linda C. Miki
AIA
George I. Atta
AICP
Charles Y. Kaneshiro
AIA, LEED AP
Jeffrey H. Overton
AICP, LEED AP
Christine Mendes Ruotola
AICP
James L. Stone
AIA, LEED AP
Paul Bierman-Lytle
M. Arch., AIA, LEED AP
Katherine M. MacNeil
AIA, LEED AP
Tom Young
AIA

July 28, 2008

Mr. David Lucero, Director
BYU Hawai'i – Department of Student
Activities and Leadership Development
Brigham Young University, #1971
55-220 Kulanui Street
Lā'ie, HI 96762-1294

Subject: Lā'ie Inn Draft Environmental Assessment (EA)

Dear Mr. Lucero,

Thank you for your comment letter concerning the Lā'ie Inn Draft Environmental Assessment.

We appreciate your support for the proposed Lā'ie Inn Redevelopment project. As the Director of Student Activities and Leadership, your role gives you a very clear understanding of the importance of the proposed project in helping to support the Lā'ie community. The current 49-room hotel clearly does not provide the services and lodging needed, particularly when there are events, such as performing groups and New Student Orientations. We are confident that the redevelopment will offer options more affordable than Waikiki and Turtle Bay, fitting with the needs of both visitors and area residents.

Thank you for taking the time to share your comments. Your comment letter and this response will be included in the Final EA. We appreciate your participation in the environmental review process. Please submit a request to our office if you would like a copy of the Final EA, or portions thereof.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

Jeffrey H. Overton, AICP, LEED AP
Principal, Chief Environmental Planner

cc: Hawaii Reserves, Inc.

925 Bethel Street • Honolulu, HI 96813-4307 • tel. 808.523.5866 • fax. 808.523.5874 • www.group70int.com

OFFICE OF THE PRESIDENT

BYU HAWAII

MAR - 5 2008

March 3, 2008

Mr. Jeffery H. Overton
Group 70 International Inc.
925 Bethel Street 5th Floor
Honolulu, HI 96813

Dear Jeffery,

I appreciate the opportunity to comment on the proposed Laie Inn Redevelopment. I am both personally and on behalf of the Brigham Young University Hawaii very much in favor of this proposal for a number of reasons. First, is that the current Laie Inn is totally unsatisfactory for guests coming to either the University or the PCC. As a University we have numerous student families, distinguished visitors, sports teams and colleagues who would stay nearby if there were a satisfactory hotel available. This would reduce needless traffic between both Honolulu and Turtle Bay, the major options for hotels at this point.

Second, having a stand alone moderately priced restaurant and meeting facilities nearby would also reduce the traffic on the Kam Highway both north and south of Laie, as these same guests would not have to travel on the Highway to find a place for lunches and dinners or other gatherings.

Third, as proposed, the needed functions of the gas station and the McDonalds would continue to be available to local residents who have come to rely on those services.

A fourth important benefit is that it would allow our students (over 15% of whom are from Hawaii and almost half of whom are from elsewhere in the Pacific Basin) to have access to important training and certification for those who choose to major in Hotel Management. Our faculty and staff have already held preliminary meetings with the proposed Hotel Operator, and such joint training and certification would be a great boon to our students and to the University as well as the proposed Operator.

Fifth, within the community of Laie we have many families where older couples work for both the PCC and the University to support their extended family because there are insufficient jobs in the area to employ all the local residents desiring gainful employment within close proximity. The proposed hotel and its associated amenities would add much needed employment opportunities to local residents, with part-time students completing

BRIGHAM YOUNG UNIVERSITY HAWAII #1971 · 55-220 KULANUI STREET · LAIE, HAWAII 96762-1294
(808) 675-3700 / FAX: (808) 675-3329 · wheelwrights@byuh.edu

the staffing needs. Thus without putting significant demands on the local community, meaningful employment would be provided.

Please let me know if there is additional information that I can provide or that the University can provide that would be helpful in getting this much needed redevelopment planned, approved, and built.

Sincerely,

Steven C. Wheelwright
BYU–Hawaii, President

GROUP 70
INTERNATIONAL

SUSTAINABLE DEVELOPMENT
ARCHITECTURE
PLANNING & ENVIRONMENTAL SERVICES
INTERIOR DESIGN
ASSETS MANAGEMENT

Francis S. Oda
Arch.D., FAIA, AICP

Norman G.Y. Hong
AIA

Sheryl B. Seaman
AIA, ASID

Hitoshi Hida
AIA

Roy H. Nihei
AIA CSI

James I. Nishimoto
AIA

Stephen Yuen
AIA

Linda C. Miki
AIA

George I. Atta
AICP

Charles Y. Kaneshiro
AIA, LEED AP

Jeffrey H. Overton
AICP, LEED AP

Christine
Mendes Ruotola
AICP

James L. Stone
AIA, LEED AP

Paul Bierman-Lytle
M. Arch., AIA, LEED AP

Katherine M. MacNeil
AIA, LEED AP

Tom Young
AIA

July 28, 2008

Steven C. Wheelwright, Ph.D.
BYU Hawai'i - President
Brigham Young University, #1971
55-220 Kulanui Street
Lā'ie, HI 96762-1294

Subject: Lā'ie Inn Draft Environmental Assessment (EA)

Dear Dr. Wheelwright,

Thank you for your comment letter concerning the Lā'ie Inn Draft Environmental Assessment.

We appreciate your support for the proposed Lā'ie Inn Redevelopment project. We agree with you that the current Lā'ie Inn is in need of improvement and is not satisfactory to accommodate the number of guests visiting the University, the Polynesian Cultural Center (PCC), the LDS Lā'ie Hawai'i Temple, and friends and family in the community. The Lā'ie Inn Redevelopment project, including the restaurant and meeting facilities and will enable student families and visitors to stay in a location nearby BYU-Hawai'i and the PCC thereby reducing traffic on the Highway.

As you have noted, the existing Chevron, and McDonalds will continue to be available to residents and visitors in the area. Although their location will be slightly shifted, the services provided by these establishments will still be readily accessible.

Regarding employment, the Lā'ie Inn Redevelopment will also support the larger local community through creating employment opportunities that currently do not exist. Local residents, who want to work closer to home without having to travel to the island's urban centers, will have the chance to do so. Students will also be able to take on employment giving them job training and certification, especially for those majoring in Hotel Management. We are pleased to know that your organization has already met with the hotel operator to discuss joint training and certification for students who choose to major Hotel Management. This will be truly beneficial to both the proposed hotel and the students of BYU-H.

Thank you for taking the time to share your comments. Your comment letter and this response will be included in the Final EA. We appreciate your participation in the environmental review process. Please submit a request to our office if you would like a copy of the Final EA, or portions thereof.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

Jeffrey H. Overton, AICP, LEED AP
Principal, Chief Environmental Planner

cc: Hawaii Reserves, Inc.

925 Bethel Street • Honolulu, HI 96813-4307 • tel. 808.523.5866 • fax. 808.523.5874 • www.group70int.com

SCHOOL OF BUSINESS

BYU HAWAII

RECEIVED
MAR 11 2008
GROUP 70 INT'L

10 March 2008

Eric Marler, Executive VP and CFO
Hawaii Reserves. Inc.
55-510 Kamehameha Highway
Laie, HI 96762

Dear Mr. Marler,

I have read the environmental assessment for the redevelopment of the Laie Inn and as a long-time resident of the community I fully support your plans for this site. I am employed as a professor of Hospitality and Tourism Management at BYU-Hawaii. I am also a founding member of the North Shore Destination Group. The proposed development will provide greatly-improved opportunities for my students to gain industry experience without the need to travel to Honolulu. Your plans will also, in my opinion, both beautify our community and provide new employment opportunities for residents. Needless to say, the hotel guest experience would be greatly enhanced.

I agree with your assertion that the proposed development will result in significant benefits to our community with minimal impacts on the environment. My own research of North Shore tourism and tourist behavior leads me to believe that your plan may actually reduce vehicular traffic in the area by encouraging longer stays. Such a result would improve the net economic benefit of tourism to this part of the island. For all of these reasons I approve of this plan and hope that it can be completed expeditiously.

Sincerely,

Jeff Caneen, CHA, CHE
Assoc. Professor of Hospitality

BRIGHAM YOUNG UNIVERSITY-HAWAII · 55-220 KULANUI STREET, BOX 1956 · LAIE, HAWAII 96762-1294
(808) 293-3580 / FAX: (808) 293-3582 · http://bus.byuh.edu

GROUP 70 INTERNATIONAL

SUSTAINABLE DEVELOPMENT
ARCHITECTURE
PLANNING & ENVIRONMENTAL SERVICES
INTERIOR DESIGN
ASSETS MANAGEMENT

Francis S. Oda Arch.D., FAIA, AICP
Norman G.Y. Hong AIA
Sheryl B. Seaman AIA, ASID
Hitoshi Hida AIA
Roy H. Nihei AIA CSI
James I. Nishimoto AIA
Stephen Yuen AIA
Linda C. Miki AIA
George I. Atta AICP
Charles Y. Kaneshiro AIA, LEED AP
Jeffrey H. Overton AICP, LEED AP
Christine Mendes Ruotola AICP
James L. Stone AIA, LEED AP
Paul Bierman-Lytle M. Arch., AIA, LEED AP
Katherine M. MacNeil AIA, LEED AP
Tom Young AIA

July 28, 2008

Mr. Jeff Caneen, CHA, CHE
Assoc. Professor of Hospitality
BYU Hawai'i – School of Business
Brigham Young University, #1971
55-220 Kulanui Street
Lā'ie, HI 96762-1294

Subject: Lā'ie Inn Draft Environmental Assessment (EA)

Dear Mr. Caneen,

Thank you for your comment letter concerning the Lā'ie Inn Draft Environmental Assessment.

We appreciate your support for the proposed Lā'ie Inn Redevelopment project. As an Associate Professor of Hospitality you would understand the immense benefit of having education and on the job training opportunities for students. This redevelopment would also support and make a positive impact on the Lā'ie community, providing necessary employment and economic opportunities for residents.

Tourism for this area of the island would be enhanced in a non-invasive manner, supporting and helping maintain the area's unique character. The redevelopment will offer alternatives to typical lodging in Waikiki. Visitors and hotels guests would have experiences that would encourage their return to O'ahu and the North Shore.

Regarding your comments on traffic, we agree that there will be minimal impact to vehicular traffic due to the proposed project. Instead of returning to Waikiki with other Polynesian Cultural Center guests, some will stay overnight at the hotel and will return the following day, when traffic is typically minimal. This will result in a reduction to the numbers of vehicles heading to town on Kamehameha Highway in the late evening hours. Additionally, local residents who want to work closer to home and avoid travel to the island's urban centers will have the chance to do so.

We would be very interested in reviewing your research of North Shore tourism that you mention in your letter. It will be a good resource as we move forward with the Lā'ie Inn Redevelopment project

925 Bethel Street • Honolulu, HI 96813-4307 • tel. 808.523.5866 • fax. 808.523.5874 • www.group70int.com

Your comment letter and this response will be included in the Final EA. We appreciate your participation in the environmental review process. Please submit a request to our office if you would like a copy of the Final EA, or portions thereof.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

Jeffrey H. Overton, AICP, LEED AP
Principal, Chief Executive Planner

cc: Hawaii Reserves, Inc.

VICE PRESIDENT FOR STUDENT LIFE
AND DEAN OF STUDENTS

BYU

RECEIVED
MAR 12 2008

March 7, 2008

Mr. Jeffery H. Overton
Group 70 International Inc.,
925 Bethel Street 5th Floor,
Honolulu, Hawaii 96813

Dear Mr. Overton,

I am writing in support of the Laie Inn Development Project. From my vantage point this project will have great positive impact on the lives of our little community. This new facility will provide the necessary accommodations for visitors and professionals and friends who will come to Laie to witness the significance of this very special place.

Socially, I know this facility will provide a gathering place that will encourage exchange and development of cultures. People from the entire world will come and feel the peace and develop global understanding as they interact with another in this very special place.

Economically, there is no doubt that many in our community who are now unemployed will have the opportunity to be trained and procure productive employments that will foster pride in self reliance not to mention the financial impact that visitors and professionals will have on our community and in the State of Hawaii.

Educationally, this place will be a center of learning for students from the nearby BYUH to gain practical experiences of theories they have learned in the class room. Many educational and professional conferences will be held here in this beautiful first-class facility.

I hope that the powers to be will understand our needs and grant us the opportunity to build this first-class facility that will help change the lives of those who will visit, study and work here in Laie.

Respectfully,

Isileli T. Kongaika
Dean of Students

BRIGHAM YOUNG UNIVERSITY HAWAII · 55-220 KULANUI STREET, #1976 · LAIE, HAWAII 96762-1294
kongaiki@byuh.edu · (808) 293-3799 / FAX: (808) 293-3329 · http://www.byuh.edu

GROUP 70
INTERNATIONAL

SUSTAINABLE DEVELOPMENT
ARCHITECTURE
PLANNING & ENVIRONMENTAL SERVICES
INTERIOR DESIGN
ASSETS MANAGEMENT

Francis S. Oda Arch.D., FAIA, AICP
Norman G.Y. Hong AIA
Sheryl B. Seaman AIA, ASID
Hitoshi Hida AIA
Roy H. Nihei AIA CSI
James I. Nishimoto AIA
Stephen Yuen AIA
Linda C. Miki AIA
George I. Atta AICP
Charles Y. Kaneshiro AIA, LEED AP
Jeffrey H. Overton AICP, LEED AP
Christine Mendes Ruotola AICP
James L. Stone AIA, LEED AP
Paul Bierman-Lytle M. Arch., AIA, LEED AP
Katherine M. MacNeil AIA, LEED AP
Tom Young AIA

July 28, 2008

Mr. Isileli T. Kongaika, Dean of Students
BYU Hawai'i – Vice President for
Student Life and Dean of Students
Brigham Young University, #1971
55-220 Kulanui Street
Lā'ie, HI 96762-1294

Subject: Lā'ie Inn Draft Environmental Assessment (EA)

Dear Mr. Kongaika,

Thank you for your comment letter concerning the Lā'ie Inn Draft Environmental Assessment.

We appreciate your support for the proposed Lā'ie Inn Redevelopment project and agree with you for all of the reasons you have listed – social, economic, and educational - that this project will be beneficial to the community.

The redevelopment will provide accommodations necessary to meet the needs of residents and visitors looking to stay in the Lā'ie area. Those who come to experience the "country" of the island will have enhanced experiences, giving them the opportunity to appreciate the culture and uniqueness of Lā'ie and Ko'olau Loa.

Employment opportunities will also be created by the project, supporting the larger local community. Local residents who want to work closer to home and avoid travel to the island's urban centers will have the chance to do so. Students will also be able to take on employment giving them job training and financial stability. Educational opportunities will also be available through partnerships created with the hotel and BYU-Hawai'i.

Thank you for taking the time to share your comments. Your comment letter and this response will be included in the Final EA. We appreciate your participation in the environmental review process. Please submit a request to our office if you would like a copy of the Final EA, or portions thereof.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

Jeffrey H. Overton, AICP, LEED AP
Principal, Chief Environmental Planner

cc: Hawaii Reserves, Inc.

925 Bethel Street • Honolulu, HI 96813-4307 • tel. 808.523.5866 • fax. 808.523.5874 • www.group70int.com

Hawai'i – Lā'icikawai Association, Inc.
P.O. Box 629, Ka'a'awa, Hawai'i 96730

TELEPHONE:
(808) 237-7539
FACSIMILE:
(808) 237-8962

e MAIL:
drjant@aol.com

March 7, 2008

US POSTAL SERVICE &/OR

ELECTRONIC TRANSMISSION

Office of Environmental Quality Control
State Office Tower
235 South Beretania Street
Suite 702
HONOLULU, HAWAI'I 96813

Group 70 International, Inc.
925 Bethel Street, 5th Floor
HONOLULU, HAWAI'I 96813

Re: **La'ie Inn: Draft Environmental Assessment—Application for Finding of No Significant Impact ("FONSI")**

To the above parties:

We are submitting comments on the above referenced Draft Environmental Assessment submitted by Group 70 International, Inc. on behalf of Hawai'i Reserves, Inc., La'ie, Hawai'i.

This action is mandated by the requirements of Chapter 343, Hawaii Revised Statutes ("HRS"), as amended and is covered by Hawaii Administrative Rules (HAR), Chapter 200.

The applicant seeks a Finding of No Significance Impact ("FONSI"). **We oppose that.**

A. THE PROPOSED DEVELOPMENT

Hawai'i Reserves, Inc. ("HRI") proposes to replace the existing 49 room La'ie Inn with a new 230 room hotel with amenities including a restaurant, banquet/meeting facility and swimming pool.

The Draft EA is defective in that it does not adequately identify potential impacts, evaluate their potential significance, indicate further areas of study, set forth the information "necessary to assure adequate discussion and disclosure of environmental impacts," fully and adequately disclose the larger context within which this action is embedded, adequately describe the proposed action's "technical, economic, social and environmental characteristics," or adequately identify and summarize major impacts and alternatives.

The Draft EA fails to address the following adequately or makes claims that are faulty in nature designed, apparently, to deceive and mislead rather than to inform and disclose.

1. Context:

The Draft EA fails to disclose that this project is an integral part of a larger series of inextricably intertwined developments in Lai'e in particular, and the larger Ko'olau Loa area in general. This larger context includes well known planned developments to expand the Polynesian Cultural Center, BYU-Hawaii, the establishment of a light industrial sector in Laie, development of some 1,500 housing units on land owned by HRI in Malaekahana (the Gunstock Ranch site), next to which another landowner (Malaekahana Hui West) has plans to build several hundred housing units; a site in Kahuku called 'Manager's Ridge' where its owners plan to build plus or minus one hundred housing units and loosely talked about around 700 housing units in and around lands formerly owned by Campbell Estate.

It was in this connection that I told a public meeting of close to a thousand residents of Ko'olau Loa who were invited to a "talk story" session with Governor Lingle on the evening of March 4: [1] *"Proposals by landowners in Ko'olau Loa to build plus or minus 3,000 more units in Ko'olau Loa are irresponsible and threaten further our rural lifestyle and public trust assets protected by law."*

The proposed new 228 room hotel is clearly a part of the Polynesian Cultural Center, BYU-Hawaii, Mormon Temple visitor and student traffic and HRI's related plans for continued uncapped urbanization. This violates the principle that Ko'olau Loa has long been designated a **rural** area. This is clearly stated in the 1999 Sustainability Communities Plan (now under review and is likely to further re-emphasize the rural nature of this part of O'ahu in the wake of the Governor's publicly stated policy to 'Keep the Country Country'.

Moreover, the rural nature of this part of O'ahu was emphasized in a 1978 State Report which was embraced by the City at the time. Three pages of that report are appended to this submission and marked as Appendix 'A'. This document speaks for itself.

[1] *Windward O'ahu Regional Plan,* Phillips, Brandt, Reddick and Associates, Inc., September 1978 prepared for the State Department of Planning and Economic Development.

In the flawed case for a FONSI made on behalf of the applicants great reliance is at least implicitly placed on a 68 page document prepared by the Hallstrom Group some four years ago.

That document is replete with errors of fact and of interpretation and it is designed, I think it is fair to say, to deceive and disinform rather than to disclose information required by law. Some examples:

- p. 20: "Most analysts, and residents, consider it inevitable that population and construction levels will continue to escalate over the coming years and population goals will be exceeded." *The next two paragraphs which further qualify this remarkable statement, unsupported by any evidence other than the broad "most analysts and residents", are, taken together, as far from today's truth as you can get.*
- p. 23: "For many years the local rallying cry had been to "Keep the Country" (sic);… This opposition has abated of late as an expanding population is now seeking increased commercial and employment opportunities closer to home." *The next three paragraphs which expand on the alleged "abatement of opposition" are as far from the truth as you can get: talk to the Governor, talk to a random sample of the thousand people who were at the "talk story" session with the Governor this past Tuesday. Read recent issues of our daily papers—Honolulu Advertiser, for example, January 30, 2008, p. A-14; February 5, 2009, p. A-6; February 21, 2009, p. A-14).*
- p. 32: "With Waikiki limited to about 1,000 more lodging units, significant development elsewhere on this island will be required." *There is no discussion of carrying capacity, no recognition of long standing strictures that Ko'olau Loa is to be a rural area (or what is left of a rural area); no recognition is given to serious problems of 'sustainability' and remarkable insensitivity to the notion that as urbanization spreads it confiscates (without any compensation whatsoever) peoples' lifestyles and the rural resources that are built into that lifestyle.*

The entire Hallstrom study, besides having been done some four years ago, is basically "market opportunities" loaded and driven. Never mind that Ko'olau Loa is supposed to be a rural area (or what is left of its rural component). The illogic of their approach is this: Waikiki is running out of space for more hotel rooms. Tourist accommodation demand on O'ahu has to be met. One area where more hotels can and must be built is Ko'olauloa despite the fact that every planning document that has been put in place in the last 30 years says that ***Ko'olauloa is to remain rural***.

The applicants' approach ought to be noted: It is the time honored 'one shoe at a time' stealth approach which makes no mention of cumulative impact and the way that this is done is that there is no disclosure of "context". If you pretend that "context" does not exist then it doesn't. It is the card trickster's game: sleight of hand/sleight of mind. In a

document that the law mandates must be transparent, that must be an instrument of full disclosure, this Draft EA, to qualify for a FONSI, simply fails to make its case.

In the instant case what we have is mention only of the new 228 room hotel without saying anything about the other parts that it is designed to fit into and to be a supporting part of. The hotel is brought center stage, put on the front burner in a remarkable reversal of priorities. You are invited to look at the February 1992 (yes, ***1992!***) *La'ie Development Plan Amendments: Draft Environmental Impact Statement* in which housing for a beleaguered, affordable housing starved community, is the top priority. Now, sixteen years later, affordable housing, indeed any housing, is eviscerated from the radar screen. Not a single housing unit has been built in twenty years of constant talk. A hotel has taken the place of what was the rage 20 years ago. This is a stunning violation of the 1999 Sustainable Communities Plan.

b. **Alternatives**

As an instrument of full disclosure a Draft EA must canvass a full range of alternatives. This one does not.
A density of less than 228 rooms is not addressed. Another alternative, remodeling the existing structure, is not given any thought.
Whatever the zoning of the approximately 9.6 acres the applicants are not automatically entitled to what is a 450% increase in the number of rooms. A battered and bruised rural area such as Ko'olau Loa now is is not the place for a hotel of this magnitude. There is plenty of more than adequate hotel room accommodation a mere seven minutes away at Turtle Bay. The time has come, in the wake of plan after plan after plan that designates Ko'olau Loa as a rural area, for that to be honored. There are approximately 50 rooms there now. That should be an upper limit. No case has been made for more rooms in what the applicants' consultants are calling a "redevelopment of an existing development". Taking them at their word a redevelopment of an existing development ought to be maintained at the present level of development of 49 rooms—an incursion into a rural area where no hotel ought to have been built in the first place is enough. Anything more would simply be adding insult to injury.

c. **Other related matters:**

We invite you to re-read the comments made on our behalf in December 1991 by attorney Cynthia Thielen. Parts of those comments are relevant to this Draft EA as are the supine reply that we received from this very same consulting firm. The letter from

attorney Thielen is to be found in the February 1992 *Laie Development Plan Amendments, Draft Environmental Impact Statement.*

There is one section in what we wrote in December 1991 which is still relevant and which we raise again:

"6. Development Plan Special Provisions for Ko'olauloa

The DP Special Provisions for Ko'olauloa preserve the predominantly rural plan of the area and prevent the tourist –oriented resort and commercial activities (the Polynesian Cultural Center and Kahuku Sugar Mill) from dominating. Spcifically the DP Special provisions state: The land use pattern shown the land use map provides for the preservation of the predominantly rural character of Ko'olauloa by allowing only single family residential development and confining further tourist oriented development to the Kahuku Point-Kawela Bay area."

The next paragraph after this section should also be read for relevance to the instant case. The only hotel that belongs in this already greatly impaired rural area is the one whose only claim to continued existence, if it has any claim at all, is derived from its "grandfathered in" status and that means 49 rooms and 49 rooms only—if that. Once the existing hotel is demolished, should that happen, the applicants "right" to build any hotel at all is questionable. Another reason to deny the application for a FONSI and compel the applicants to do a full scale Environmental Impact Statement.

Pursuant to Section 11-200-15, HAR, we request to become a consulted party in any other process after this so that, if we should choose to, we would be permitted to make further written or oral comments on the environmental effects of the proposed action.

HAWAI'I – LA'IEIKAWAI ASSOCIATION, Inc.

J.M. ANTHONY, Ph.D.
Executive Director

Attachment: Appendix 'A' (US Postal Service Version Only)
Electronically transmitted version does NOT include this Appendix

DRAFTEAlaicinn.030708

APPENDIX 'A'

Source: *Windward O'ahu Regional Plan,*

Phillips, Brandt, Reddick & Associates, Inc.

for State Department of Planning &

Economic Development, September, 1978,

pp. 11-13.

depending upon the intensity of future growth demands might be required. The second concept, "rural development", was seen as the need for a "fundamental community building process, incorporating social and economic programs,"[20] in order to preserve and strengthen the existing character of rural and transitional Windward communities. Environmental and resource protection is also closely related to the second rural development concept.

From this step-by-step policy analysis in WORP, came a closely-focused set of objectives for Windward Oahu as a whole:

(1) Slow down the rate of growth of population in the area by limiting urban expansion.

(2) Direct growth to the urban areas of Kailua and Kaneohe in an equitable manner in accordance with their relationships to the prime urban center of Honolulu, as indicated in the New General Plan of the City and County of Honolulu for Oahu.

(3) Preserve and protect existing, and promote additional diversified agriculture in the Windward Region.

(4) Manage human activities in the region to recognize unique environmental qualities such as patterns of rainfall, soil conditions, natural hazards, and topography.

(5) Maintain large areas of open space to protect water supplies, prevent flash flooding, control erosion and sedimentation, and preserve the scenic and rural characteristics of the region.

(6) Acquire additional park lands in those areas appropriate for recreational, historic, or public access purposes.

(7) Preserve the rural character of the area from Waiahole to Waimea so as to maintain the community lifestyles now prevalent in the area. Recognize the role of Laie Town as a special rural area, not dependant on agriculture, but rather as a community providing unique religious, educational, and cultural functions, which are compatible with the adjoining rural areas.

(4) Capture the unearned increment of developmental values attributed to public decisions to convert non-urban lands to urban uses, through a form of capital gains "tax" emphasizing an in-kind contribution rather than a monetary contribution, which would be used to subsidize and protect conservation and resource areas;

(5) Initiate rural and agricultural development and lifestyle protections and programs including subsidies, agricultural investments, rural housing, and appropriate rural-agricultural infrastructure;

(6) Sharpen the definition of rural and agricultural settlement patterns through adoption of effective land development standards and principles to interpret and guide differing possible rural settlement patterns.

GROUP 70
INTERNATIONAL

SUSTAINABLE DEVELOPMENT
ARCHITECTURE
PLANNING & ENVIRONMENTAL SERVICES
INTERIOR DESIGN
ASSETS MANAGEMENT

Francis S. Oda
Arch.D., FAIA, AICP

Norman G.Y. Hong
AIA

Sheryl B. Seaman
AIA, ASID

Hitoshi Hida
AIA

Roy H. Nihei
AIA CSI

James I. Nishimoto
AIA

Stephen Yuen
AIA

Linda C. Miki
AIA

George I. Atta
AICP

Charles Y. Kaneshiro
AIA, LEED AP

Jeffrey H. Overton
AICP, LEED AP

Christine Mendes Ruotola
AICP

James L. Stone
AIA, LEED AP

Paul Bierman-Lytle
M. Arch., AIA, LEED AP

Katherine M. MacNeil
AIA, LEED AP

Tom Young
AIA

July 28, 2008

Jim Anthony, Ph.D.
Hawai'i Lā'ieikawai Association, Inc.
P.O. Box 629
Ka'a'awa, HI 96730

Subject: Lā'ie Inn Draft Environmental Assessment (EA)

Dear Dr. Anthony,

Thank you for your comment letter concerning the Lā'ie Inn Draft Environmental Assessment. We have revised the Draft EA to provide additional information and address concerns raised. The following are offered in response to your comments:

Context. Plans to expand the Turtle Bay Resort are relevant to any discussion of cumulative impacts in Ko'olau Loa. Given ongoing lawsuits and the State's interest in the resort, there is no firm timeline for these improvements, which for 22 years has not been and may never be developed. The timetable for projects in Kahuku is also unclear and the Lā'ie affordable housing project has been placed on hold. The Lā'ie Inn Redevelopment will add incrementally to cumulative impacts.

Like other parts of the island, Ko'olau Loa is a rural area with various commercial and residential designations. The Lā'ie Inn hotel site is recognized in the Ko'olau Loa Sustainable Communities Plan (SCP) as part of the commercial corridor in the Lā'ie community. This sector is where most of the moku's business and institutional enterprises are located, by design. The hotel site currently has the requisite Resort and B-2 zoning. The SCP Section 3.8.2.1: Visitor Attractions, General Policies calls for, "plans to renew and expand facilities as necessary to maintain the viability of the Polynesian Cultural Center (PCC) should be supported." The redevelopment will renew and expand facilities needed to support the PCC. The region's rural character will remain intact. The project is supportive of the goals and policies expressed in the 1978 Windward O'ahu Plan, as it involves redevelopment of an existing developed site verses expansion onto a greenfield location, which helps to retain rural characteristics.

Market Study. A supplemental letter from the Hallstrom Group, included with Appendix A of the Final EA, concludes that the findings presented in the 2004 Market Study are valid and continue to support the redevelopment project. While some micro (near-term) market conditions may have changed, the fundamental macro (long-term) conditions and demand factors regarding the hotel redevelopment project are substantially unchanged.

At the time the Hallstrom study was conducted, opposition to proposed development projects appeared to be waning. Recent opposition to Turtle Bay Resort's plans for growth only serves to strengthen the conclusions the study drew to support the redevelopment of Lā'ie Inn. If the number of hotel rooms at Turtle Bay remains at status quo, the demand for more rooms in Lā'ie will only increase.

Population. The City's regional population guidelines have matched closely with actual population growth in Ko'olau Loa. The upcoming 2010 census is expected to once again demonstrate this linkage.

Community. Of note, HRI has held community meetings in Lā'ie, and there has been support expressed for more jobs in the community and expanded commercial opportunities.

Affordable Housing. Affordable housing has not been built due to economic factors such as the current market and political conditions, and other nearby residential development plans. In contrast, the hotel redevelopment is feasible and economically viable.

Resort Zoning. The current Resort zoning as outlined by the Land Use Ordinance (LUO) allows for nearly twice the number of hotel rooms than proposed for the redevelopment. The size of the Resort-zoned area is 5.91 acres or 257,503 sf. LUO allows a floor area ratio (FAR) of 1.4 for development on a lot area greater than 30,000 sf. Therefore, the allowable square footage of the development is 360,504 sf. The redevelopment planned on the Resort-zoned site will be 149,000 sf, or only 41 percent of the allowable development. The scale of the proposed redevelopment is at a level that fits with the property and community sections.

Commercial Designation on Sustainable Communities Plan. The 1992 Development Plan Special Provisions for Ko'olau Loa allows for rural areas like Ko'olau Loa to have pockets of commercial enterprise specifically designated, as is the case in Lā'ie. The current SCP maintains this area as a commercial corridor.

Alternatives. The economic viability of the Lā'ie Inn requires an increase in hotel room numbers. The only other current option nearby, the Turtle Bay Resort, offers a more remote and higher cost product that is not viable for many visitors to the PCC, BYU-Hawai'i, Lā'ie Hawai'i Temple, and guests of families living in the moku. The redeveloped hotel will offer a quality, mid-tiered product that is economically viable and aesthetically suitable for the rural character of the area. The Polynesian-themed facilities will be surrounded by lush, beautiful landscaping and will not exceed the forty feet height limit. The intent is to better unify the hotel site and the PCC into essentially one campus through shared Pacific Island theming.

A lower density development is not economically sustainable and would not be a viable alternative. The site adjoins the PCC, for many years now Hawaii's number one paid attraction. The project's goal is to achieve a balance of the business and

community needs while achieving revitalization through redevelopment. The existing Resort zoning allows for roughly twice the number of rooms than planned for in the redevelopment.

Reconstruction or renovation with no change in the current density would not be viable and provide no benefit to the community and surrounding businesses. The inability to accommodate visitors and community needs are current concerns with the existing hotel. Additionally, there would be no increased employment opportunities for residents of the area.

Your comment letter and this response will be included in the Final EA. We appreciate your participation in the environmental review process.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

Jeffrey H. Overton, AICP, LEED AP
Principal, Chief Environmental Planner

cc: Hawaii Reserves, Inc.

MID-PACIFIC INSTITUTE

MAR 1 1 2008

March 10, 2008

Mr. Anthony Ching
City and County of Honolulu
Department of Planning and Permitting
650 S. King Street, 7th Floor
Honolulu, HI 96813

Dear Mr. Ching:

Re: Response to Draft Environmental Assessment for the new 220-room hotel
Laie, Hawaii

My name is Henry Howlett, Director of Facilities for Mid-Pacific Institute.

Mid-Pacific Institute is the owner of a residential property located on Kamehameha Highway, right across from the current Laie Inn, TMK #1-5-5-002-064, street address 55-411 Kamehameha Highway, Laie, 96792.

After review of the draft, we are very concerned that no attention was given to the impact this project will have to area residents, particularly beachfront properties.

According to Article 3.85, "No significant adverse short-term or long-term or direct, indirect or cumulative impact on public use and services in the vicinity is anticipated."

We are in complete disagreement with this for the following reasons:

1. If, as the report indicates, the new hotel is expecting an average of 400 guests per day, (based on 220 rooms compared to the current under utilized 49), it seems reasonable that as many as ten times the amount of people currently using the beach may use the beach on a regular basis.

2. The draft environmental assessment plan does not provide for beach access that includes:
   a. restrooms
   b. change area and showers
   c. trash receptacles
   d. a safe crossing over Kamehameha Highway
   e. security

3. The current public beach access, owned by HRI and used by the hotel, is poorly maintained and fronts an area primarily composed of shallow reef structure. Only a few areas are suited for swimming activities. This may result in congestion and loss of use for area residents.

4. The current beach is lined with privately owned homes whose owners, we understand, have not been informed of any of these improvements. Many of these homeowners are active participants in the community.

5. The shoreline and beach is subject to seasonal beach changes. At the current public access point, during certain times of the year, normal beach erosion exposes a rocky shore line, and the high water point forces beach goers to seek higher ground and into private property (see item 4.4.4).

6. The increased storm water discharge from this new elevated site does not appear to be accommodated by retention, and the discharge plan is to dump the additional water into the bay.

7. The hotel is proposing to continue using the current public beach access (see item 3.8.1). This route is adjacent to our beach home (see figure 3.9 – the house on the right of the photo is Mid-Pacific Institute's home). We regularly have beach goers walking into our yard due to significant erosion occurring along the shore line.

8. Other issues such as increased traffic, noise pollution and loss of quality of life for the area residents also need to be more thoroughly addressed.

As a result of all these issues, we feel a more suitable location for public beach access, which includes appropriate amenities, should be included. We formally request that these issues be part of your department's review process, and would like the opportunity to be a part of that process.

Thank you for your time.

Sincerely,

Henry M. Howlett
Director of Facilities and Maintenance Services
hhowlett@midpac.edu
271-8903 (cell), 973-5176 (office)

cc: Joe Rice, President, Mid-Pacific Institute
Pat Garvey, Chief Financial Officer, Mid-Pacific Institute
Eric Marler, Executive Vice President & CFO, Hawaii Reserves, Inc.
Jeffrey Overton, AICP, LEED AP, Principal/Chief Environmental Planner, Group 70 International
Eric Takamura, Director of Environmental Services Dept., City & County of Honolulu

GROUP 70
INTERNATIONAL

SUSTAINABLE DEVELOPMENT
ARCHITECTURE
PLANNING & ENVIRONMENTAL SERVICES
INTERIOR DESIGN
ASSETS MANAGEMENT

Francis S. Oda
Arch.D., FAIA, AICP
Norman G.Y. Hong
AIA
Sheryl B. Seaman
AIA, ASID
Hitoshi Hida
AIA
Roy H. Nihei
AIA CSI
James I. Nishimoto
AIA
Stephen Yuen
AIA
Linda C. Miki
AIA
George I. Atta
AICP
Charles Y. Kaneshiro
AIA, LEED AP
Jeffrey H. Overton
AICP, LEED AP
Christine Mendes Ruotola
AICP
James L. Stone
AIA, LEED AP
Paul Bierman-Lytle
M. Arch., AIA, LEED AP
Katherine M. MacNeil
AIA, LEED AP
Tom Young
AIA

July 28, 2008

Mr. Henry M. Howlett
Director of Facilities and Maintenance Services
Mid-Pacific Institute
2445 Kaala Street
Honolulu, HI 96822-2299

Subject: Lāʻie Inn Draft Environmental Assessment (EA)

Dear Mr. Howlett,

Thank you for your comment letter concerning the Lāʻie Inn Draft Environmental Assessment.

The following are offered in response to your comments:

Beach Access and Use. According to our calculations, the number of rooms being increased is about four-fold, so the expected number of guests going to the beach would, at most, be anticipated at about four times the current amount. While the numbers of visitors to the immediate beach area may increase, beaches are for public use. Additionally, the shoreline and beach area across from the hotel site are subject to seasonal beach changes and currents that regularly wash up marine debris and litter. Although clean up efforts conducted by the hotel staff will be arranged, this type of beach makes it likely that many visitors of the hotel may not choose to use the beach that fronts the hotel as there are many other beaches along Kamehameha Highway in Haleʻiwa and the North Shore that are more fitting for recreational enjoyment.

John M. Knox & Associates, Inc. conducted a detailed beach count report of the Lāʻie beach (Hauʻula side access through Kauhuku side access) to assess the current use of the beach by hotel guests of the existing Lāʻie Inn (Appendix G). Their findings indicate the beach was not extensively used either on weekdays or weekends. Lāʻie Inn guests accounted for very few of the observed beach users, in fact, just eight percent (8%) of the total number.

The Draft EA addresses Public Use and Services in Section 3.8; however, we have provided more detail regarding your specific concerns. Guests of the hotel will be encouraged to use restrooms, changing areas, and showers that are provided at the hotel area. The swimming pool will have restrooms and facilities nearby which are convenient for both swimming pool and beach patrons.

New trash receptacles will be provided at the beach access areas to help reduce litter. Beach access will be adequate to accommodate hotel guests without the need to cross private property. Educational material will be made available to guests,

encouraging environmental stewardship and respect for private property and other surrounding areas.

Finally, we have considered other beach access locations and, after careful consideration, believe that the proposed access is the most beneficial. We are open to further dialog with you and other residents to ensure that all impacts are reasonably minimized.

Community Consultation. The EA is part of the process to communicate with the public about proposed changes. Section 1.4 of the Draft EA, Agencies and Organization Consulted During the Process, discusses this subject with regard to the project. Please note that we are still in the planning phases of the project and intend to contact and work with others in the Lāʻie Community impacted by the proposed project. In addition, HRI has made substantial efforts to communicate with residents through several public meetings in the past few years, and an extensive communications effort via its website and its company newsletter – mailed to each area residence and homeowner three times a year containing updates on its projects, including the Lāʻie hotel redevelopment.

Storm Water. The project will comply with the requirements of the Clean Water Act, including the rules under HAR, Sections 11-54, 11-55 for submission of application for general permit coverage authorized under the National Pollutant Discharge Elimination System (NPDES). The Petitioner will comply with applicable discharge requirements. Engineering studies conducted for the project and surrounding area as shown in Appendix C indicate that drainage plans meet applicable requirements. The State of Hawaiʻi Department of Health's Environmental Planning Office has read the Draft EA and has not expressed any specific concerns about the project's plans and adequacy relating to storm water. However, we have clarified and provided additional information regarding plans for storm water and drainage in the Final EA.

Increased Traffic and Noise Pollution. The expected number of guests visiting the Lāʻie Inn will roughly double the number of vehicle trips associated with the hotel. Table 3-4 of the Final EA shows the existing and net increase in trips.

While there will be some impact to vehicular traffic due to the proposed project, instead of returning to Waikiki with other Polynesian Cultural Center guests, some will stay overnight at the hotel and will return the following day, when traffic is typically minimal. This will result in a reduction to the numbers of vehicles heading to town on Kamehameha Highway in the late evening hours. Additionally, some local residents who want to work closer to home and avoid travel to the island's urban centers will have the chance to do so.

A traffic signal will be installed on Kamehameha Highway at Naniloa Loop to improve safety and reduce delays for existing traffic. This improvement may increase delays to through-traffic on Kamehameha Highway. Widening

Kamehameha Highway to provide left-turn lanes at Naniloa Loop and at the hotel main entrance will help offset the delay. The signal will improve the safety at the Naniloa Loop intersection by providing for orderly traffic movements and a signalized pedestrian crossing. Even without the project, a traffic signal in this area would be beneficial to accommodate existing traffic needs.

The State of Hawai'i Department of Transportation has commented positively on the hotel redevelopment and site design, including traffic management and the addition of the traffic signal.

The primary source of noise in the project area is traffic on Kamehameha Highway. Lā'ie is a suburban community characterized by residential, business, educational, religious and resort uses. As with any construction project, equipment and activities for the project will result in short-term impacts on noise levels. Construction operations will comply with State Department of Health regulations and the City and County of Honolulu Noise Ordinance, which limit construction operations and resultant noise to daytime hours and specific maximum levels.

Your comment letter and this response will be included in the Final EA. We appreciate your participation in the environmental review process.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

Jeffrey H. Overton, AICP, LEED AP
Principal, Chief Environmental Planner

cc: Hawaii Reserves, Inc.

POLYNESIAN CULTURAL CENTER
55 370 Kamehameha Highway Laie, Hawaii 96762
Phone: 808 293 3350 Fax: 808 293 3099 orgillv@polynesia.com

March 10, 2008

Urgent Fax Correspondence
(808) 527-6743

Von D. Orgill
President & CEO

Mr. Anthony Ching
City & County of Honolulu
Department of Planning and Permitting (DPP)
650 South King Street, 7th Floor
Honolulu, HI 96813

Dear Mr. Ching,

As President and CEO of the Polynesian Cultural Center, I submit this letter of support for the construction of a new hotel in Laie replacing the existing Laie Inn.

There has been a demand for new quality accommodations in this area for many years. The Polynesian Cultural Center, along with BYU-Hawaii and the LDS Laie Hawaii Temple attract millions of visitors to this area from all over the world, many of whom would choose to stay in Laie if quality accommodations were available.

The PCC opened in 1963 and has been the number one paid tourist attraction in the state of Hawaii every year since 1977. We average around 2,500 visitors a day. Most of our guests stay in Waikiki, though a number stay at the Turtle Bay Resort and the existing Laie Inn. We receive many comments from our guests indicating that the Laie Inn is old, outdated, and desperately needs to be replaced, and that Turtle Bay is too expensive for many families. There have been a significant number who express a strong desire to have family affordable accommodations close to PCC and away from the crowds of Waikiki.

As a community member, I also see a real need for friends and family of local residents to have a more affordable quality option than is currently available.

To address the needs of PCC's guests and community members, I strongly recommend that a quality hotel with affordable rates be approved to replace the current Laie Inn. Such a project as the one being proposed would provide needed accommodations, improve the visual appeal of the community, and stimulate the flow of needed financial resources into the local community.

Your favorable consideration of this project would be very much appreciated.

Sincerely,

Von D. Orgill
President & CEO

A non-profit organization dedicated to preserving the cultural heritage of Polynesia while providing educational opportunities for students at affiliate Brigham Young University-Hawaii.

Founded in 1963 by the Church of Jesus Christ of Latter-day Saints.

Post-It® Fax Note 7671	Date 3/10/08	# of pages ▶ 2
To JEFF OVERTON, GROUP 70 ERIC MARLER, HRI	From VON ORGILL	
Co./Dept.	Co.	
Phone #	Phone # 293 3350	
Fax # 523 5874 293 6526	Fax #	

GROUP 70
INTERNATIONAL

SUSTAINABLE DEVELOPMENT
ARCHITECTURE
PLANNING & ENVIRONMENTAL SERVICES
INTERIOR DESIGN
ASSETS MANAGEMENT

Francis S. Oda
Arch.D., FAIA, AICP
Norman G.Y. Hong
AIA
Sheryl B. Seaman
AIA, ASID
Hitoshi Hida
AIA
Roy H. Nihei
AIA CSI
James I. Nishimoto
AIA
Stephen Yuen
AIA
Linda C. Miki
AIA
George I. Atta
AICP
Charles Y. Kaneshiro
AIA, LEED AP
Jeffrey H. Overton
AICP, LEED AP
Christine Mendes Ruotola
AICP
James L. Stone
AIA, LEED AP
Paul Bierman-Lytle
M. Arch., AIA, LEED AP
Katherine M. MacNeil
AIA, LEED AP
Tom Young
AIA

July 28, 2008

Mr. Von D. Orgill
President & CEO
Polynesian Cultural Center
55-370 Kamehameha Highway
Lāʻie, HI 96762

Subject: Lāʻie Inn Draft Environmental Assessment (EA)

Dear Mr. Orgill,

Thank you for your comment letter concerning the Lāʻie Inn Draft Environmental Assessment.

We appreciate your support for the proposed Lāʻie Inn Redevelopment project. With the large number of daily visitors to the Polynesian Cultural Center, we agree with you that this project would help to provide more suitable accommodations for those who would like to stay in the Lāʻie area. The current Lāʻie Inn is in need of improvements and is inadequate to provide quality services for not only guests of the PCC, but also for BYU-Hawaiʻi student families and visitors to the LDS Lāʻie Hawaiʻi Temple. We believe that our proposed project will provide better opportunities for the community as well as for visitors desiring a travel experience destination outside of Waikiki.

The proposed redevelopment will provide economic stimulus to the area, helping to provide employment opportunities and increased business to local organizations.

Your comment letter and this response will be included in the Final EA. We appreciate your participation in the environmental review process. Please submit a request to our office if you would like a copy of the Final EA, or portions thereof.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

Jeffrey H. Overton, AICP
Principal, Chief Environmental Planner

cc: Hawaii Reserves, Inc.

925 Bethel Street • Honolulu, HI 96813-4307 • tel. 808.523.5866 • fax. 808.523.5874 • www.group70int.com

March 13, 2008

RECEIVED
'08 MAR 24 P3:29
DEPT OF PLANNING AND PERMITTING
CITY & COUNTY OF HONOLU

Mr. Anthony Ching
City and County of Honolulu
Department of Planning and Permitting (DPP)
650 South King Street, 7th Floor,
Honolulu, Hawaii, 96813.

Re: Laie Inn.

Dear Mr. Ching,

I have been a resident of Laie for the past 26 years. My wife and I met at BYU Hawaii and we have 6 children, they all attended Laie Elementary, and are now students at Kahuku High School and BYU Hawaii. I am in full support of the redevelopment of the Laie Inn as noted in the Environment Assessment submitted by Hawaii Reserves Inc. (HRI)

I have a private business that employ over 80 employees; 40 of our workers live in the Koolauloa communities. Our company, Present Hawaii, Inc, provides tour and travel support services for over 50 mainland travel companies. In 2008 we will handle travel arrangements for over 6,000 students traveling to Hawaii to participate in Music Festivals, Parades, Sports Camps and Graduation trips. We book most of our accommodations with Sheraton Hotels and we are one of their biggest local vendors accounting for close to a million dollars in room revenue this year. We are excited about the possibility of moving some of our groups to the country side of Oahu, to participate in exchange programs that would include the Polynesian Cultural Center, the new Laie Inn, Kahuku High School and BYU Hawaii.

Three years ago, we relocated our office from the Century Center in Waikiki to the Hauula Kai Shopping Center, thus relocating 40 of our employees, cutting down their travel time from over 60 minutes to Honolulu to less then 10 minutes to Hauula. We signed a 5 year lease with the Weinberg Foundation, which owns the Hauula Kai Shopping Center. When we open our office in 2005, the shopping center only had one tenant, the US post office, now there are now 8 tenants, Tamura's grocery store, Domino's pizza, a flower shop, Koolau Business Center, Women and Children center, local eatery (Papa Ole), health and wellness center and of course the US post office. The Hauula Kai Shopping Center was a ghost town 4 years ago, and now it helps to drive economic efforts in Hauula.

The Laie Inn, needs this type of revitalization and the benefits to our community are many, as I have seen them for myself in Hauula. This proposal is being put forth by a company (HRI) that knows our community and has been a member of our community for many years and I am proud to say it is managed and operated by residents from the Koolauloa area. I applaud the efforts of HRI to expand the Laie Inn from 45 rooms to

220 rooms. This would greatly add to efforts by the local community and local businesses such as HRI to add to the sustainability and economic stability of our community.

Sincerely,

Moa Mahe
President/CEO
Present Hawaii, Inc.
54-316 Kam Highway
Hauula, HI
96717

www.AlohaTopTen.com

GROUP 70
INTERNATIONAL

SUSTAINABLE DEVELOPMENT
ARCHITECTURE
PLANNING & ENVIRONMENTAL SERVICES
INTERIOR DESIGN
ASSETS MANAGEMENT

Francis S. Oda
Arch.D., FAIA, AICP
Norman G.Y. Hong
AIA
Sheryl B. Seaman
AIA, ASID
Hitoshi Hida
AIA
Roy H. Nihei
AIA CSI
James I. Nishimoto
AIA
Stephen Yuen
AIA
Linda C. Miki
AIA
George I. Atta
AICP
Charles Y. Kaneshiro
AIA, LEED AP
Jeffrey H. Overton
AICP, LEED AP
Christine
Mendes Ruotola
AICP
James L. Stone
AIA, LEED AP
Paul Bierman-Lytle
M. Arch., AIA, LEED AP
Katherine M. MacNeil
AIA, LEED AP
Tom Young
AIA

July 28,2008

Moa Mahe
President/CEO
Present Hawaii, Inc.
54-316 Kamehameha Hwy.
Hau'ula, HI 96817

Subject: Lā'ie Inn Draft Environmental Assessment (EA)

Dear Moa,

Thank you for your comment letter concerning the Lā'ie Inn Draft Environmental Assessment.

As the President and CEO of your company, which provides tour and travel support services, you understand the importance of the proposed project in helping to support and revitalize the Lā'ie community and Ko'olau Loa. The redevelopment will offer alternatives to typical lodging at Waikiki, offering visitors and hotel guests enhanced experiences, such as the opportunity to participate in exchange programs offered by your company's services.

The proposed redevelopment will provide economic stimulus to the area, helping to increase business to local organizations and provide employment opportunities that currently do not exist. Local residents, who want to work closer to home without having to travel to the island's urban centers, will have the chance to do so. Present Hawaii, Inc. is a prime example of this, as half of your staff lives in communities in the Ko'olau Loa area.

We appreciate the support of local community members and businesses such as yours and look forward to helping make Lā'ie a better place for all residents and visitors.

Your comment letter and this response will be included in the Final EA. We appreciate your participation in the environmental review process. Please submit a request to our office if you would like a copy of the Final EA, or portions thereof.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

Jeffrey H. Overton, AICP, LEED AP
Principal, Chief Environmental Planner

cc: Hawaii Reserves, Inc.

925 Bethel Street • Honolulu, HI 96813-4307 • tel. 808.523.5866 • fax. 808.523.5874 • www.group70int.com

March 10, 2008

TO: Jeff Overton

FR: Dee Dee Letts

RE: La`ie Inn Redevelopment Environmental Assessment

This letter is being written in a personal capacity as the Ko`olauloa Neighborhood Board which I chair has not had time to take a formal position. The EA arrived after our last meeting and our next meeting is this Thursday the 13th which is past the comment deadline. I discussed an extension with you on the phone and you indicated that such a request would probably not be granted. Nevertheless at the request of the Planning and Land Use Chair for the Board I respectfully request an extension until April 14, 2008 to give the Board adequate time to review the document. If this is not agreeable then I hope you will accept whatever comments the Board has to forward in the near future.

Please at this time accept my comments for the record.

Due to the fact that all recent construction projects in the Ko`olauloa area have disturbed `iwi kupuna and the fact that your EA does not deal with the question of disturbance and subsequent treatment of `iwi disturbed or the cultural questions attended to these issues I feel that the document is severely flawed. The need to adequately address and deal with this issue should be foremost in the mind of a company that wants to design in keeping with the Polynesian cultures in the area.

I also have concerns about the traffic impacts that would result with the placing of a traffic light in the area. Although the light is stated to be needed to relieve traffic congestion our experience is that these lights cause congestion for through travelers. If the project goes forward is HRI agreeing to pay for all traffic improvements noted in the plan or are they looking for the tax payer to fund these improvements?

And my final point is that there was no consideration of alternatives for redevelopment of the Inn at a smaller size or at its current size. Therefore the report provides no information one can use to assess what room number is economically viable or appropriate for the rural character of the area.

I feel that the information missing from the EA should make it ineligible for a FONSI determination.

I will forward you comments from the Board as soon as I have any and again ask that you consider granting a comment extension. Mahalo

GROUP 70
INTERNATIONAL

SUSTAINABLE DEVELOPMENT
ARCHITECTURE
PLANNING & ENVIRONMENTAL SERVICES
INTERIOR DESIGN
ASSETS MANAGEMENT

Francis S. Oda
Arch.D., FAIA, AICP
Norman G.Y. Hong
AIA
Sheryl B. Seaman
AIA, ASID
Hitoshi Hida
AIA
Roy H. Nihei
AIA CSI
James I. Nishimoto
AIA
Stephen Yuen
AIA
Linda C. Miki
AIA
George I. Atta
AICP
Charles Y. Kaneshiro
AIA, LEED AP
Jeffrey H. Overton
AICP, LEED AP
Christine
Mendes Ruotola
AICP
James L. Stone
AIA, LEED AP
Paul Bierman-Lytle
M. Arch., AIA, LEED AP
Katherine M. MacNeil
AIA, LEED AP
Tom Young
AIA

July 28, 2008

Ms. Dee Dee Letts
P.O. Box 524
Ka'a'awa, HI 96730

Subject: Lā'ie Inn Draft Environmental Assessment (EA)

Dear Ms. Letts,

Thank you for your comment letter concerning the Lā'ie Inn Draft Environmental Assessment. The following are offered in response to your comments:

Archaeological and Cultural Resources. We understand your concern for the potential for the project to disturb iwi kupuna, particularly as has been witnessed recently at construction projects in the Ko'olau Loa area. The EA discusses the archaeology study and cultural impact survey conducted in Section 3.5; however, we have provided more detailed information in the Final EA. Minimal cultural impacts are anticipated for the project as the Lā'ie Inn site has been altered by development activities for over a century and the archaeological investigations have found no evidence of surface or subsurface cultural sites. In the event that any previously unidentified archaeological and cultural resources are encountered during the development of the property, construction activities will stop and the contractor will immediately contact the State Historic Preservation Division in accordance with applicable regulations. We have provided additional detailed information in Section 3.5 of the Final EA.

Traffic. The expected number of guests visiting the Lā'ie Inn will roughly double the number of vehicle trips associated with the hotel. Table 3-4 of the Final EA shows the existing and net increase in trips.

While there will be some impact to vehicular traffic due to the proposed project, instead of returning to Waikiki with other Polynesian Cultural Center guests, some will stay overnight at the hotel and will return the following day, when traffic is typically minimal. This will result in a reduction to the numbers of vehicles heading to town on Kamehameha Highway in the late evening hours. Additionally, local residents who want to work closer to home and avoid travel to the island's urban centers will have the chance to do so.

A traffic signal will be installed on Kamehameha Highway at Naniloa Loop to improve safety and reduce delays for existing traffic. This improvement may increase delays to through-traffic on Kamehameha Highway. Widening Kamehameha Highway to provide left-turn lanes at Naniloa Loop and at the hotel main enterance will help offset the delay. The signal will improve the safety at the Naniloa Loop intersection by providing for orderly traffic movements and a signalized pedestrian crossing. Even without the project, a traffic signal in this area would be beneficial to accommodate existing traffic needs.

925 Bethel Street • Honolulu, HI 96813-4307 • tel. 808.523.5866 • fax. 808.523.5874 • www.group70int.com

The State of Hawaii Department of Transportation has commented positively on the hotel redevelopment and site design, including traffic management and the addition of the traffic signal.

Alternatives. The economic viability of the Lāʻie Inn requires an increase in hotel room numbers. The only other current option nearby, the Turtle Bay Resort, offers a more remote and higher cost product that is not viable for many visitors to the PCC, BYU-Hawaiʻi, Lāʻie Hawaiʻi Temple, and guests of families living in the moku. The redeveloped hotel will offer a quality, mid-tiered product that is economically viable and aesthetically suitable for the rural character of the area. The Polynesian-themed facilities will be surrounded by lush, beautiful landscaping and will not exceed the forty feet height limit. The intent is to better unify the hotel site and the PCC into essentially one campus through shared Pacific Island theming.

A lower density development is not economically sustainable and would not be a viable alternative. The site adjoins the PCC, for many years now Hawaii's number one paid attraction. The project's goal is to achieve a balance of the business and community needs while achieving revitalization through redevelopment. The existing Resort zoning allows for roughly twice the number of rooms than planned for in the redevelopment. The size of the Resort-zoned area is 5.91 acres or 257,503 sf. Land Use Ordinance (LUO) allows a floor area ratio (FAR) of 1.4 for development on a lot area greater than 30,000 sf. Therefore, the allowable square footage of the development is 360,504 sf. The redevelopment planned on the Resort-zoned site will be 149,000 sf, or only 41 percent of the allowable development.

Reconstruction or renovation with no change in the current density would not be viable and provide no added benefit to the community and surrounding businesses. The inability to accommodate visitors and community needs are current concerns with the existing hotel. Additionally, there would be no increased employment opportunities for residents of the area.

The Lāʻie Inn Redevelopment will provide substantial benefits to the community with minor impacts to the surrounding environment. HRI will continue open dialog with the community to ensure that impacts are reasonably minimized.

Your comment letter and this response will be included in the Final EA. We appreciate your participation in the environmental review process. Please submit a request to our office if you would like a copy of the Final EA, or portions thereof.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

Jeffrey H. Overton, AICP, LEED AP
Principal, Chief Environmental Planner

cc: Hawaii Reserves, Inc.

FAX LETTER

Fax Number: 527-6743

March 7, 2008

Anthony Ching
City and County of Honolulu
Dept. of Planning and Permitting (DPP)
650 South King Street, 7th Floor
Honolulu, HI 96813

Dear Mr. Ching,

I am a 30 year resident of Laie who has enjoyed living and working here too at the Polynesian Cultural Center – close to home and away from the noise and congestion of Honolulu . Part of that enjoyment comes from being able to have the needed amenities for survival and comfort right here in our community. This includes a small hotel that has outlived its "glory years" and needs to be replaced for safety, health and growth reasons.

I am in full support of the proposed hotel project to replace the existing Laie Inn so that visiting friends and family can have comfortable, clean and affordable accommodations nearby. Turtle Bay is not an affordable option for us. Many homes in the Laie, Hauula and Kahuku area already have two to three families living in one home because of the lack of affordable housing, and there's no room for visiting guests in our homes.

Laie is a popular destination for family reunions, youth gatherings, friends and family who come to attend BYUH and Kahuku graduations, sporting events, weddings, funerals and conferences and we need nearby accommodations for them. There are also price-conscious tourists who don't want to stay in Waikiki and come out to visit the Polynesian Cultural Center and North Shore. Many of those visitors are families who just want basic accommodations and not the extra luxuries that are priced into Turtle Bay's rates. The new hotel project will be able to address all the needs of price-conscious locals and visitors.

We need this hotel and we need your support. Please grant us that support.

A sincere mahalo,

Delsa S. Moe
55-706 E Wahinepee Street
Laie, HI 96762

GROUP 70
INTERNATIONAL

SUSTAINABLE DEVELOPMENT
ARCHITECTURE
PLANNING & ENVIRONMENTAL SERVICES
INTERIOR DESIGN
ASSETS MANAGEMENT

Francis S. Oda
Arch.D., FAIA, AICP
Norman G.Y. Hong
AIA
Sheryl B. Seaman
AIA, ASID
Hitoshi Hida
AIA
Roy H. Nihei
AIA CSI
James I. Nishimoto
AIA
Stephen Yuen
AIA
Linda C. Miki
AIA
George I. Atta
AICP
Charles Y. Kaneshiro
AIA, LEED AP
Jeffrey H. Overton
AICP, LEED AP
Christine Mendes Ruotola
AICP
James L. Stone
AIA, LEED AP
Paul Bierman-Lytle
M. Arch., AIA, LEED AP
Katherine M. MacNeil
AIA, LEED AP
Tom Young
AIA

July 28, 2008

Delsa Moe
55-706 E Wahinepee Street
Lāʻie, HI 96817

Subject: Lāʻie Inn Draft Environmental Assessment (EA)

Dear Delsa,

Thank you for your comment letter concerning the Lāʻie Inn Draft Environmental Assessment.

We appreciate your support for the proposed Lāʻie Inn Redevelopment project. The rural character of the area will be enhanced by removing the current inn, which is generic in appearance and has outlived its useful life, and replacing it with Polynesian themed facilities surrounded by lush, beautiful landscaping. We agree with you that the current Lāʻie Inn is in need of improvement and is not satisfactory to accommodate the number of guests visiting the University, the Polynesian Cultural Center (PCC), the LDS Lāʻie Hawaiʻi Temple, and friends and family in the community. We are confident that the redevelopment will offer options more affordable than Waikiki and Turtle Bay, fitting the needs of both visitors and area residents.

Thank you for taking the time to share your comments. Your comment letter and this response will be included in the Final EA. We appreciate your participation in the environmental review process. Please submit a request to our office if you would like a copy of the Final EA, or portions thereof.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

Jeffrey H. Overton, AICP, LEED AP
Principal, Chief Environmental Planner

cc: Hawaii Reserves, Inc.

925 Bethel Street • Honolulu, HI 96813-4307 • tel. 808.523.5866 • fax. 808.523.5874 • www.group70int.com

March 7, 2008

MAR 1 1 2008

Mr. Jeffery H. Overton
Group 70 International Inc.
925 Bethel Street 5th Floor
Honolulu, HI 96813

Dear Mr. Overton,

I appreciate the opportunity to comment on the proposed Laie Inn Redevelopment. I am both personally and on behalf of the Brigham Young University Hawaii very much in favor of this proposal for a number of reasons. First, the current Laie Inn is totally unsatisfactory for guests coming to either the University or the PCC. This would reduce needless traffic between Honolulu and Turtle Bay, the major options for hotels at this point.

Second, having a stand alone moderately priced restaurant would also reduce the traffic on the Kam Highway both north and south of Laie.

Third, as proposed, the needed functions of the gas station and the McDonalds would continue to be available to local residents who have come to rely on those services.

A fourth important benefit is that it would allow our students to have access to important training and certification for those who choose to major in Hotel Management.

Fifth, within the community of Laie we have many families where older couples work for both the PCC and the University to support their extended family because there are insufficient jobs in the area to employ all the local residents desiring gainful employment within close proximity. The proposed hotel and its associated amenities would add much needed employment opportunities to local residents, with part-time students completing the staffing needs. Thus without putting significant demands on the local community, meaningful employment would be provided.

Sincerely,

Jo Ann Rhodehouse
55-479A Moana Street
Laie, HI 96762

GROUP 70
INTERNATIONAL

SUSTAINABLE DEVELOPMENT
ARCHITECTURE
PLANNING & ENVIRONMENTAL SERVICES
INTERIOR DESIGN
ASSETS MANAGEMENT

Francis S. Oda
Arch.D., FAIA, AICP
Norman G.Y. Hong
AIA
Sheryl B. Seaman
AIA, ASID
Hitoshi Hida
AIA
Roy H. Nihei
AIA CSI
James I. Nishimoto
AIA
Stephen Yuen
AIA
Linda C. Miki
AIA
George I. Atta
AICP
Charles Y. Kaneshiro
AIA, LEED AP
Jeffrey H. Overton
AICP, LEED AP
Christine Mendes Ruotola
AICP
James L. Stone
AIA, LEED AP
Paul Bierman-Lytle
M. Arch., AIA, LEED AP
Katherine M. MacNeil
AIA, LEED AP
Tom Young
AIA

July 28, 2008

Ms. Jo Ann Rhodehouse
55-479A Moana Street
Lāʻie, HI 96817

Subject: Lāʻie Inn Draft Environmental Assessment (EA)

Dear Ms. Rhondehouse,

Thank you for your comment letter concerning the Lāʻie Inn Draft Environmental Assessment.

We appreciate your support for the proposed Lāʻie Inn Redevelopment project. We agree with you that the current Lāʻie Inn is in need of improvement and is not satisfactory to accommodate the number of guests visiting the University, the Polynesian Cultural Center (PCC), the LDS Lāʻie Hawaiʻi Temple, and friends and family in the community. The Lāʻie Inn Redevelopment project, including the restaurant and meeting facilities, will enable student families and visitors to enjoy these facilities at a location nearby BYU-Hawaiʻi and the PCC.

As you have noted, the existing Chevron, and McDonalds will continue to be available to residents and visitors in the area. Although their present location will be slightly shifted, their services will be retained and improved for the future.

Regarding employment, the Lāʻie Inn Redevelopment will also support the larger local community through creating employment opportunities that currently do not exist. Local residents, who want to work closer to home without having to travel to the island's urban centers, will have the chance to do so. Students will also be able to take on employment giving them job training and certification, especially for those majoring in Hotel Management. This will be truly beneficial to both the proposed hotel and the students of BYU-H.

Your comment letter and this response will be included in the Final EA. We appreciate your participation in the environmental review process. Please submit a request to our office if you would like a copy of the Final EA, or portions thereof.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

Jeffrey H. Overton, AICP, LEED AP
Principal, Chief Environmental Planner

cc: Hawaii Reserves, Inc.

925 Bethel Street • Honolulu, HI 96813-4307 • tel. 808.523.5866 • fax. 808.523.5874 • www.group70int.com

March 7, 2008

Anthony Ching
City & County of Honolulu,
Dept. of Planning & Permitting (DPP)
650 South King Street 7th Floor,
Honolulu, Hawaii, 96813
527-6743 Fax
768-8028 Phone

Re: Draft Environmental Assessment (EA) for the redevelopment of the Laie Inn.

I am writing to express my support of the Environmental Assessment (EA) for the redevelopment of Laie Inn. As a member of the Laie community of over thirty (30) years a support for this redevelopment will strengthen the capability and opportunity for economic self-reliance.

I am appreciative for Brigham Young University Hawaii and Polynesian Cultural Center, major bookends within this community whom for some fifty years plus contributed and continue to contribute to the well-being of this community through employment and community support.

The current accommodations at Laie Inn is in my personal assessment wanting. In order to accommodate close to one million visitors at the Polynesian Cultural Center requires a facility which will encompass the beauty of the community and support economic stability.

Though these operations are owned by the LDS Church, we as community cannot continue to depend upon the church, but turn to our city & county staff members requesting support for equal representation under the law, as a taxpaying citizen.

Thus, I lend my full support of this action requested by Hawaii Reserves Incorporated.

Sincerely,

John Muaina
55-469 Iosepa Street
Laie, Hawaii 96762
Laie Community Member

GROUP 70
INTERNATIONAL

SUSTAINABLE DEVELOPMENT
ARCHITECTURE
PLANNING & ENVIRONMENTAL SERVICES
INTERIOR DESIGN
ASSETS MANAGEMENT

Francis S. Oda
Arch.D., FAIA, AICP
Norman G.Y. Hong
AIA
Sheryl B. Seaman
AIA, ASID
Hitoshi Hida
AIA
Roy H. Nihei
AIA CSI
James I. Nishimoto
AIA
Stephen Yuen
AIA
Linda C. Miki
AIA
George I. Atta
AICP
Charles Y. Kaneshiro
AIA, LEED AP
Jeffrey H. Overton
AICP, LEED AP
Christine Mendes Ruotola
AICP
James L. Stone
AIA, LEED AP
Paul Bierman-Lytle
M. Arch., AIA, LEED AP
Katherine M. MacNeil
AIA, LEED AP
Tom Young
AIA

July 28, 2008

Mr. John Muaina
55-469 Iosepa Street
Lā'ie, HI 96817

Subject: Lā'ie Inn Draft Environmental Assessment (EA)

Dear Mr. Muaina,

Thank you for your comment letter concerning the Lā'ie Inn Draft Environmental Assessment.

As a member of the Laie community for over 30 years, we appreciate your support for the proposed Lā'ie Inn Redevelopment project. We agree with you that this redevelopment would support and make a positive impact on the Lā'ie community, enabling economic self-sufficiency and success.

The site adjoins the Polynesian Cultural Center (PCC), for many years now, Hawai'i's number one paid attraction. Having adequate accommodations in a location nearby will enable residents and visitors to have more options that will better suit their needs. The intent is to unify the hotel site and the PCC into essentially one campus through shared Pacific Island theming. The redevelopment will be a first class hotel that will lift the community aesthetically, providing long-term benefits for the Lā'ie area and residents such as you.

Your comment letter and this response will be included in the Final EA. We appreciate your participation in the environmental review process. Please submit a request to our office if you would like a copy of the Final EA, or portions thereof.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

Jeffrey H. Overton, AICP, LEED AP
Principal, Chief Environmental Planner

cc: Hawaii Reserves, Inc.

925 Bethel Street • Honolulu, HI 96813-4307 • tel. 808.523.5866 • fax. 808.523.5874 • www.group70int.com

March 8, 2008

Anthony Ching
Honolulu City and County
Department of Planning and Permitting
650 South King Street 7th Floor,
Honolulu, Hawaii,
Fax: 527-6743

Dear Mr. Ching,

We are writing to express support for approval for redevelopment of the existing Laie Inn. Being a north shore resident, we are very much in favor of upgrading the hotel and expanding its capacity for the following reasons:

- Shortage of Affordable Hotel Rooms on the North Shore -- there exists a serious shortage of affordable hotel rooms on the North Shore that are available for visiting families and friends to the residents in this area. Because of this shortage, many family stay in Honolulu and are required to drive over an hour each way on a daily basis to visit the North Shore. This contributes to an already serious congestion problem we see on the Kamehameha highway.
- Local Employment -- the hotel will provide much needed employment for residents closer to home. Again, having a strong local employment base will result in conserving energy, time and traffic congestion into Honolulu.
- Renewal of an ageing facility -- the existing Laie inn is just plain old and not well kept. I have had family stay and they always emerge with stories of less than favorable accommodations. This experience taints their whole experience in Hawaii. We think it is time to put our best foot forward and approve the hotel.

Thank you for your consideration. We hope that the city government can quickly approve this project to show their support for the economic and environmental needs of the North Shore.

Respectfully,

M. Greg Gollaher
55-463 Naniloa Loop
Laie, Hawaii

Jill L. Gollaher

GROUP 70
INTERNATIONAL

SUSTAINABLE DEVELOPMENT
ARCHITECTURE
PLANNING & ENVIRONMENTAL SERVICES
INTERIOR DESIGN
ASSETS MANAGEMENT

Francis S. Oda Arch.D., FAIA, AICP
Norman G.Y. Hong AIA
Sheryl B. Seaman AIA, ASID
Hitoshi Hida AIA
Roy H. Nihei AIA CSI
James I. Nishimoto AIA
Stephen Yuen AIA
Linda C. Miki AIA
George I. Atta AICP
Charles Y. Kaneshiro AIA, LEED AP
Jeffrey H. Overton AICP, LEED AP
Christine Mendes Ruotola AICP
James L. Stone AIA, LEED AP
Paul Bierman-Lytle M. Arch., AIA, LEED AP
Katherine M. MacNeil AIA, LEED AP
Tom Young AIA

July 28, 2008

Mr. Greg Gollaher
Ms. Jill L. Gollaher
55-463 Naniloa Loop
Lā'ie, HI 96817

Subject: Lā'ie Inn Draft Environmental Assessment (EA)

Dear Greg and Jill,

Thank you for your comment letter concerning the Lā'ie Inn Draft Environmental Assessment.

We appreciate your support for the proposed Lā'ie Inn Redevelopment project. We agree with you that the current Lā'ie Inn is not satisfactory to accommodate the number of guests visiting the area. As you mention in your letter, it is very inconvenient for visiting families and friends to have to find lodging in Honolulu, requiring them to drive far away. This needless travel adds to personal frustrations and traffic congestion to Kamehameha Highway. Having adequate accommodations in a location nearby Lā'ie and the North Shore area will enable residents and visitors to have more options that will better suit their needs.

Regarding employment, the redevelopment will also support the larger local community through creating employment opportunities that currently do not exist. Local residents who want to work closer to home will have the chance to do so without having to travel to the island's urban centers.

The rural character of the area will be enhanced by removing the current inn, which is generic in appearance and has outlived its useful life, and by replacing it with a hotel that will lift the community aesthetically. Visitors and hotels guests would have experiences that would encourage their return to O'ahu and the North Shore.

For all of the reasons you have mentioned in your letter, we agree with you that this redevelopment would support and make a positive impact on the area.

Your comment letter and this response will be included in the Final EA. We appreciate your participation in the environmental review process. Please submit a request to our office if you would like a copy of the Final EA, or portions thereof.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

Jeffrey H. Overton, AICP, LEED AP
Principal, Chief Environmental Planner

cc: Hawaii Reserves, Inc.

925 Bethel Street • Honolulu, HI 96813-4307 • tel. 808.523.5866 • fax. 808.523.5874 • www.group70int.com

RECEIVED
'08 MAR 10 A11:49
DEPT OF PLANNING AND PERMITTING CITY & COUNTY OF HONOLU

March 7, 2008

Department of Planning & Permitting

Dear People,

I am strongly concerned about the Laie Inn Expansion to 220 rooms.

My main concern is the added traffic on our 2 lane road.

I also have concerns about water.

If the size of the project was set many years ago, well, that was then, this is now! Many years ago there wasn't as much traffic or homes as there are now.

Thank you for considering the needs of the community as a whole.

Sincerely, Mojith Saravia

P.S. In the future it would be helpful if Save paper, stamps + time to be able to comment via a website. M.S.

GROUP 70
INTERNATIONAL

SUSTAINABLE DEVELOPMENT
ARCHITECTURE
PLANNING & ENVIRONMENTAL SERVICES
INTERIOR DESIGN
ASSETS MANAGEMENT

Francis S. Oda
Arch.D., FAIA, AICP
Norman G.Y. Hong
AIA
Sheryl B. Seaman
AIA, ASID
Hitoshi Hida
AIA
Roy H. Nihei
AIA CSI
James I. Nishimoto
AIA
Stephen Yuen
AIA
Linda C. Miki
AIA
George I. Atta
AICP
Charles Y. Kaneshiro
AIA, LEED AP
Jeffrey H. Overton
AICP, LEED AP
Christine Mendes Ruotola
AICP
James L. Stone
AIA, LEED AP
Paul Bierman-Lytle
M. Arch., AIA, LEED AP
Katherine M. MacNeil
AIA, LEED AP
Tom Young
AIA

July 28, 2008

Ms. Moyita Saravia
No Address

Subject: Lāʻie Inn Draft Environmental Assessment (EA)

Dear Ms. Saravia,

Thank you for your comment letter concerning the Lāʻie Inn Draft Environmental Assessment.

Visual Impacts and Size. We understand your concern for the rural character of the Lāʻie area; however, like other parts of the island, Koʻolau Loa is a rural area with various commercial and residential designations. The hotel site is recognized in the Koʻolau Loa Sustainable Communities Plan (SCP) as part of the commercial corridor in the Lāʻie community, where most of the moku's business and institutional enterprises are located, by design. The hotel site currently has the requisite Resort and B-2 zoning. The SCP Section 3.8.2.1: Visitor Attractions, General Policies calls for, "plans to renew and expand facilities as necessary to maintain the viability of the Polynesian Cultural Center (PCC) should be supported." The redevelopment will renew and expand facilities needed to support the PCC. The region's rural character will remain intact. The project is supportive of the goals and policies expressed in the 1978 Windward Oʻahu Plan, as it involves redevelopment of an existing developed site, which helps to retain rural characteristics.

The redeveloped hotel will be a beautiful new addition to the community. The rural character of the area will actually be enhanced by removing the current inn, which is generic in appearance and has outlived its useful life, and replacing it with Polynesian themed facilities surrounded by lush, beautiful landscaping. Redevelopment of the Lāʻie Inn will comply with the 40 foot height limit as specified in the zoning ordinance for this parcel, as consistent with Land Use Ordinance provisions. The intent is to unify the hotel site and the Polynesian Cultural Center (PCC) into essentially one campus through shared Pacific Island theming while maintaining the character of the surrounding area.

Traffic. The expected number of guests visiting the Lāʻie Inn will roughly double the number of vehicle trips associated with the hotel. Table 3-4 of the Final EA shows the existing and net increase in trips.

While there will be some impact to vehicular traffic due to the proposed project, instead of returning to Waikiki with other Polynesian Cultural Center guests, some will stay overnight at the hotel and will return the following day, when traffic is typically minimal. This will result in a reduction to the numbers of vehicles heading to town on Kamehameha Highway in the late evening hours. Additionally,

local residents who want to work closer to home and avoid travel to the island's urban centers will have the chance to do so.

A traffic signal will be installed on Kamehameha Highway at Naniloa Loop to improve safety and reduce delays for existing traffic. This improvement may increase delays to through-traffic on Kamehameha Highway. Widening Kamehameha Highway to provide left-turn lanes at Naniloa Loop and at Laniloa Street will help offset the delay. The signal will improve the safety at the Naniloa Loop intersection by providing for orderly traffic movements and a signalized pedestrian crossing. Even without the project, a traffic signal in this area would be beneficial to accommodate existing traffic needs.

The State of Hawaii Department of Transportation has commented positively on the hotel redevelopment and site design, including traffic management and the addition of the traffic signal.

Water. The project will be served by the Lāʻie Water Company. There is ample capacity to serve the project with no significant effects on the resource. The increase in water due to the expanded number of guests at this site will be approximately 88,700 gallons per day (gpd), with a maximum day flow of 133,050 gpd as discussed in *Appendix B* of the Draft EA. This accounts for a net increase of seven percent (7%) in the current daily system flow of 1.27 million gpd.

The project will also include water conservation methods such as low flow fixtures and water efficient landscape. No significant adverse short-term or long-term impact; or direct, indirect or cumulative impact on surface water is anticipated with the implementation of permit conditions and best management practices.

Your comment letter and this response will be included in the Final EA. We appreciate your participation in the environmental review process. Please submit a request to our office if you would like a copy of the Final EA, or portions thereof.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

Jeffrey H. Overton, AICP, LEED AP
Principal, Chief Environmental Planner

cc: Hawaii Reserves, Inc.

March 7, 2008

Mr. Anthony Ching
City & County of Honolulu
Department of Planning and Permitting (DPP)
650 South King Street, 7th Floor,
Honolulu, Hawaii, 96813

Re: Laie Inn Environmental Assessment

Dear Mr. Ching,

As a resident of Laie for the past 22 years and an employee of the Polynesian Cultural Center, I want you to know that I fully support the redevelopment of the Laie Inn as outlined in the Environmental Assessment submitted by Hawaii Reserves Inc. (HRI).

There may be some who express concern that increasing the Laie Inn room count from 45 to 220 rooms will diminish our quality of life. I would say the exact opposite is far more likely. Here's what we know will happen, an increase in hotel guests will drive up patronage at many of our local businesses thereby increasing employment opportunities, resulting in less people on our overcrowded highways for 2-3 hours a day trying to get to and from their current jobs. Will the additional hotel guests clog up our roads? No more than staying in Waikiki and deciding to drive around the island for the day would. Will they hog all the good beach spots? You would have to add a lot more rooms than what is being proposed for that to be an issue.

My "day job" is overseeing the sales and marketing efforts for the Polynesian Cultural Center. I have been engaged in this work, at one level or another, for the past 20 years. I have also had the opportunity to interact very closely with various components of the local tourism industry, including hotels, transportation services and airlines. I have also had the opportunity to serve on numerous travel-related boards. All of my experience tells me the redevelopment of Laie Inn will be a good thing not only for the PCC and BYUH, but most importantly for our community.

I urge you to support the proposal as it has been submitted by HRI.

Sincerely,

P. Alfred Grace
55-507 Naniloa Loop,
Laie, Hawaii 96762

GROUP 70
INTERNATIONAL

SUSTAINABLE DEVELOPMENT
ARCHITECTURE
PLANNING & ENVIRONMENTAL SERVICES
INTERIOR DESIGN
ASSETS MANAGEMENT

Francis S. Oda Arch.D., FAIA, AICP
Norman G.Y. Hong AIA
Sheryl B. Seaman AIA, ASID
Hitoshi Hida AIA
Roy H. Nihei AIA CSI
James I. Nishimoto AIA
Stephen Yuen AIA
Linda C. Miki AIA
George I. Atta AICP
Charles Y. Kaneshiro AIA, LEED AP
Jeffrey H. Overton AICP, LEED AP
Christine Mendes Ruotola AICP
James L. Stone AIA, LEED AP
Paul Bierman-Lytle M. Arch., AIA, LEED AP
Katherine M. MacNeil AIA, LEED AP
Tom Young AIA

July 28, 2008

Mr. P. Alfred Grace
55-507 Niniloa Loop
Lāʻie, HI 96762

Subject: Lāʻie Inn Draft Environmental Assessment (EA)

Dear Mr. Grace,

Thank you for your comment letter concerning the Lāʻie Inn Draft Environmental Assessment.

We appreciate your support for the proposed Lāʻie Inn Redevelopment project. We agree with you that this project would be beneficial to the Lāʻie community and overall quality of life. Local businesses will be positively affected and there will be increased employment opportunities for local residents. Traffic on the highway will be affected slightly, however, local residents who would like the opportunity to work closer to home will have the ability to do so, thereby eliminating the need to travel to the island's urban centers.

We appreciate the support of local community members such as you and look forward to helping make Lāʻie a better place for all residents and visitors.

Your comment letter and this response will be included in the Final EA. We appreciate your participation in the environmental review process. Please submit a request to our office if you would like a copy of the Final EA, or portions thereof.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

Jeffrey H. Overton, AICP, LEED AP
Principal, Chief Environmental Planner

cc: Hawaii Reserves, Inc.

925 Bethel Street • Honolulu, HI 96813-4307 • tel. 808.523.5866 • fax. 808.523.5874 • www.group70int.com

Mr. Eric Marler
Executive Vice President & CFO
Hawaii Reserves, Inc.
55-510 Kamehameha Highway
Laie, HI 96762

February 23, 2008

RECEIVED
MAR - 3 2008

Dear Mr. Marler:

As a professional who has worked for many years with the tourism industry, I can see the positive contribution to be made by a hotel that can support visitors to BYU and the PCC, attendees of special events, parents of students and business people.

Personally, as a businessperson who, from time to time, has occasion to visit the North Shore, I would find it of great convenience to have a small, reasonably priced hotel to offer accommodations and eliminate the need for a late evening return to town.

Clearly, an improved and enlarged hotel would also offer expanded employment opportunities that are sorely needed in the North Shore area.

Because the size, scale and design of the hotel are in keeping with the small-town atmosphere of Laie and will complement the cultural theme of the PCC, I believe this will be an appropriate and beneficial asset to the community.

Sincerely,

Ruth Limtiaco

Ruth Limtiaco

Cc: Anthony Ching
City & County of Honolulu
Dept of Planning & Permitting
650 South King Street, 7th Floor
Honolulu, HI 96813

Jeffery H. Overton
Group 70 International Inc.
925 Bethel Street, 5th Floor
Honolulu, HI 96813

GROUP 70
INTERNATIONAL

SUSTAINABLE DEVELOPMENT
ARCHITECTURE
PLANNING & ENVIRONMENTAL SERVICES
INTERIOR DESIGN
ASSETS MANAGEMENT

Francis S. Oda
Arch.D., FAIA, AICP

Norman G.Y. Hong
AIA

Sheryl B. Seaman
AIA, ASID

Hitoshi Hida
AIA

Roy H. Nihei
AIA CSI

James I. Nishimoto
AIA

Stephen Yuen
AIA

Linda C. Miki
AIA

George I. Atta
AICP

Charles Y. Kaneshiro
AIA, LEED AP

Jeffrey H. Overton
AICP, LEED AP

Christine
Mendes Ruotola
AICP

James L. Stone
AIA, LEED AP

Paul Bierman-Lytle
M. Arch., AIA, LEED AP

Katherine M. MacNeil
AIA, LEED AP

Tom Young
AIA

July 28, 2008

Ms. Ruth Limtiaco
c/o The Limtiaco Company
928 Nuuanu Avenue, Suite 400
Honolulu, HI 96817

Subject: Lāʻie Inn Draft Environmental Assessment (EA)

Dear Ms. Limtiaco,

Thank you for your comment letter concerning the Lāʻie Inn Draft Environmental Assessment.

We appreciate your support for the proposed Lāʻie Inn Redevelopment project. We agree with you that this redevelopment would make a positive contribution by accommodating visitors of the BYU-Hawaiʻi campus and Polynesian Cultural Center (PCC). Student families and guests would be provided with a more convenient option to stay nearby, eliminating needless travel on the highway. Also, hotel design will compliment the existing community, promoting the cultural feel provided by the PCC and giving visitors a unique experience.

Finally, the proposed Lāʻie Inn project would provide employment opportunities to the community allowing residents to work near home without having to travel to the island's urban centers.

Thank you for taking the time to share your comments with us. Your comment letter and this response will be included in the Final EA. We appreciate your participation in the environmental review process. Please submit a request to our office if you would like a copy of the Final EA, or portions thereof.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

Jeffrey H. Overton

Jeffrey H. Overton, AICP
Principal, Chief Environmental Planner

cc: Hawaii Reserves, Inc.

925 Bethel Street • Honolulu, HI 96813-4307 • tel. 808.523.5866 • fax. 808.523.5874 • www.group70int.com

March 7, 2008
City and County of Honolulu
Department of Planning and Permitting
650 S. King Street, 7th floor
Honolulu, Hi. 96813

RECEIVED
'08 MAR 12 A10:47
DEPT OF PLANNING AND PERMITTING CITY & COUNTY OF HONOLU

To Anthony Ching,

Back in the 1950's my grandfather and grandmother bought this land because it allowed them to leave the chaos of the city behind them, a place to fish, a place to make memories and raise their family.

Since then, much growth has occurred: with the Polynesian Cultural Center across the street and a shopping center down the road. Although, PCC has provided many jobs for people who live in this area, it has also provided traffic congestion. I know between 9:00pm-9:30pm, I can not travel in or out of my driveway but it is something I have learned to deal with. The shopping center down the road… well, it is down the road and has provided us with the convenience of necessity items.

I am open to change and know that it is inevitable but having a 220 room hotel across the street from my house would destroy the remaining country atmosphere. I am opposed as also others who this letter represents to the expansion of the Laie roadway inn. I feel having a quaint motel-ish complex is more suitable to our area because it allows the customer with a place to stay while maintaining the country surroundings.

By expanding, the area we will see a growth of traffic which is already a problem, we will see large populations of people transitioning in and out of the hotel, we may see more burglaries, theft and crime because of the population growth which will have access to the beach and to properties along the beach. Then, with a higher population having access to the beach, we will see a growth in environmental damages: more waste in the ocean and on the beaches which will affect the ocean life, higher population of people upsetting the natural environment and balance of nature (because currently, the beach is somewhat secluded because only those who use the beach must go through private property or an accessible right of way- there is only one along that strip of beach).

My grandfather and grandmother bought this property so that their children could be raised here and there children could be raised here and so forth and so on. I have lived here all my life. It is my home, it is a place where my grandfather fished and I watched as a little girl, it is where we have had 9 luaus, it is where our neighbors are family, no question, it is where my uncles play music together, laughing and singing, it is where my dad is scattered and so now you know why I love this place so much. I hope you can also understand that a building so tall and large is invasive and keep Laie, at least part of it, free of over development.

Thank you!

Sincerely,
Sharla A. McCane
Sharla A. McCane

Janice A. McCane - landowner
Lipini Muraki - landowner
Jimmy T. Muraki - landowner

GROUP 70
INTERNATIONAL

SUSTAINABLE DEVELOPMENT
ARCHITECTURE
PLANNING & ENVIRONMENTAL SERVICES
INTERIOR DESIGN
ASSETS MANAGEMENT

Francis S. Oda
Arch.D., FAIA, AICP
Norman G.Y. Hong
AIA
Sheryl B. Seaman
AIA, ASID
Hitoshi Hida
AIA
Roy H. Nihei
AIA CSI
James I. Nishimoto
AIA
Stephen Yuen
AIA
Linda C. Miki
AIA
George I. Atta
AICP
Charles Y. Kaneshiro
AIA, LEED AP
Jeffrey H. Overton
AICP, LEED AP
Christine Mendes Ruotola
AICP
James L. Stone
AIA, LEED AP
Paul Bierman-Lytle
M. Arch., AIA, LEED AP
Katherine M. MacNeil
AIA, LEED AP
Tom Young
AIA

July 28, 2008

Ms. Sharla M. McCane
Ms. Janice A. McCane
Ms. Lipini Muraki
Mr. Jimmy Muraki
No Address

Subject: Lā'ie Inn Draft Environmental Assessment (EA)

Aloha,

Thank you for your comment letter concerning the Lā'ie Inn Draft Environmental Assessment.

Visual Impacts and Size. We appreciate your concern for the rural character of the Lā'ie area; however, like other parts of the island, Ko'olau Loa is a rural area with various commercial and residential designations. The hotel site is recognized in the Ko'olau Loa Sustainable Communities Plan (SCP) as part of the commercial corridor in the Lā'ie community, where most of the moku's business and institutional enterprises are located, by design. The hotel site currently has the requisite Resort and B-2 zoning. The SCP Section 3.8.2.1: Visitor Attractions, General Policies calls for, "plans to renew and expand facilities as necessary to maintain the viability of the Polynesian Cultural Center (PCC) should be supported." The redevelopment will renew and expand facilities needed to support the PCC. The region's rural character will remain intact. The project is supportive of the goals and policies expressed in the 1978 Windward O'ahu Plan, as it involves redevelopment of an existing developed site, which helps to retain rural characteristics.

The redeveloped hotel will be a beautiful new addition to the community. The rural character of the area will actually be enhanced by removing the current inn, which is generic in appearance and has outlived its useful life, and replacing it with Polynesian themed facilities surrounded by lush, beautiful landscaping. Redevelopment of the Lā'ie Inn will comply with the 40 foot height limit as specified in the zoning ordinance for this parcel, as consistent with Land Use Ordinance provisions. The intent is to unify the hotel site and the Polynesian Cultural Center (PCC) into essentially one campus through shared Pacific Island theming while maintaining the character of the surrounding area.

Traffic. The expected number of guests visiting the Lā'ie Inn will roughly double the number of vehicle trips associated with the hotel. Table 3-4 of the Final EA shows the existing and net increase in trips.

While there will be some impact to vehicular traffic due to the proposed project, instead of returning to Waikiki with other Polynesian Cultural Center guests, some

will stay overnight at the hotel and will return the following day, when traffic is typically minimal. This will result in a reduction to the numbers of vehicles heading to town on Kamehameha Highway in the late evening hours. Additionally, local residents who want to work closer to home and avoid travel to the island's urban centers will have the chance to do so.

A traffic signal will be installed on Kamehameha Highway at Naniloa Loop to improve safety and reduce delays for existing traffic. This improvement may increase delays to through-traffic on Kamehameha Highway. Widening Kamehameha Highway to provide left-turn lanes at Naniloa Loop and at the hotel main entrance will help offset the delay. The signal will improve the safety at the Naniloa Loop intersection by providing for orderly traffic movements and a signalized pedestrian crossing. Even without the project, a traffic signal in this area would be beneficial to accommodate existing traffic needs.

The State of Hawaii Department of Transportation has commented positively on the hotel redevelopment and site design, including traffic management and the addition of the traffic signal.

Beach Access and Use. While the numbers of visitors to the immediate beach area may increase, beaches are for public use. Additionally, the shoreline and beach area across from the hotel site are subject to seasonal beach changes and currents that regularly wash up marine debris and litter. Although clean up efforts conducted by the hotel staff will be arranged, this type of beach makes it likely that many visitors of the hotel may not choose to use the beach that fronts the hotel as there are many other beaches along Kamehameha Highway in Hale'iwa and the North Shore that are more fitting for recreational enjoyment.

John M. Knox & Associates, Inc. conducted a detailed beach count report of the Lā'ie beach (Hau'ula side access through Kauhuku side access) to assess the current use of the beach by hotel guests of the existing Lā'ie Inn (Appendix G). Their findings indicate the beach was not extensively used either on weekdays or weekends. Lā'ie Inn guests accounted for very few of the observed beach users, in fact, just eight percent (8%) of the total number.

The Draft EA addresses Public Use and Services in Section 3.8; however, we have provided more detail regarding your specific concerns. Guests of the hotel will be encouraged to use restrooms, changing areas, and showers that are provided at the hotel area. The swimming pool will have restrooms and facilities nearby which are convenient for both swimming pool and beach patrons.

New trash receptacles will be provided at the beach access areas to help reduce litter. Beach access will be adequate to accommodate hotel guests without the need to cross private property. Educational material will be made available to guests, encouraging environmental stewardship and respect for private property and other surrounding areas.

Finally, we have considered other beach access locations and, after careful consideration, believe that the proposed access is the most beneficial. We are open to further dialog with you and other residents to ensure that all impacts are reasonably minimized.

Thank you for taking the time to share your memories and personal experiences. It is clear that like many Lā'ie residents, you have a strong love for the community. While change may sometimes be difficult, appropriate planning practices can be taken to ensure development is balanced and fits with the area's needs. We are open to further dialog with you and other residents to ensure that all impacts are reasonably minimized.

Your comment letter and this response will be included in the Final EA. We appreciate your participation in the environmental review process. Please submit a request to our office if you would like a copy of the Final EA, or portions thereof.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

Jeffrey H. Overton, AICP, LEED AP
Principal, Chief Environmental Planner

cc: Hawaii Reserves, Inc.

FAX LETTER

Fax Number: 527-6743

March 7, 2008

Anthony Ching
City and County of Honolulu
Dept. of Planning and Permitting (DPP)
650 South King Street, 7th Floor
Honolulu, HI 96813

Dear Mr. Ching,

Please support the new hotel project planned for Laie next to the Polynesian Cultural Center.

Our community needs a new and bigger hotel to handle all our needs. Many times, the Laie Inn is booked up because of BYUH or church events or even family reunions and there are not enough rooms for everyone.

The current hotel is old and run down and needs to be replaced soon with a hotel for our visitors who are looking for something cheaper than Turtle Bay. Turtle Bay is good for those with money but we need something for other markets with less money or big families.

Please give us your support.

Sincerely,

Sinapati Moe

Sinapati Moe
55-706 E Wahinepee Street
Laie, HI 96762

GROUP 70 INTERNATIONAL

SUSTAINABLE DEVELOPMENT
ARCHITECTURE
PLANNING & ENVIRONMENTAL SERVICES
INTERIOR DESIGN
ASSETS MANAGEMENT

Francis S. Oda
Arch.D., FAIA, AICP

Norman G.Y. Hong
AIA

Sheryl B. Seaman
AIA, ASID

Hitoshi Hida
AIA

Roy H. Nihei
AIA CSI

James I. Nishimoto
AIA

Stephen Yuen
AIA

Linda C. Miki
AIA

George I. Atta
AICP

Charles Y. Kaneshiro
AIA, LEED AP

Jeffrey H. Overton
AICP, LEED AP

Christine
Mendes Ruotola
AICP

James L. Stone
AIA, LEED AP

Paul Bierman-Lytle
M. Arch., AIA, LEED AP

Katherine M. MacNeil
AIA, LEED AP

Tom Young
AIA

July 28, 2008

Sinapati Moe
55-706 E Wahinepee Street
Lāʻie, HI 96817

Subject: Lāʻie Inn Draft Environmental Assessment (EA)

Dear Sinapati,

Thank you for your comment letter concerning the Lāʻie Inn Draft Environmental Assessment.

We appreciate your support for the proposed Lāʻie Inn Redevelopment project. We agree with you that the current Lāʻie Inn is not satisfactory to accommodate the number of guests visiting BYU-Hawaiʻi, the Polynesian Cultural Center (PCC), the LDS Hawaiʻi Temple, and local family and friends. The current 49 room hotel does not provide the services and lodging needed, particularly when there are events in the area. We believe the redevelopment will offer better options to Waikiki and Turtle Bay experiences while beautifying the Lāʻie Community.

Your comment letter and this response will be included in the Final EA. We appreciate your participation in the environmental review process. Please submit a request to our office if you would like a copy of the Final EA, or portions thereof.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

Jeffrey H. Overton

Jeffrey H. Overton, AICP, LEED AP
Principal, Chief Environmental Planner

cc: Hawaii Reserves, Inc.

925 Bethel Street • Honolulu, HI 96813-4307 • tel. 808.523.5866 • fax. 808.523.5874 • www.group70int.com