Environmental Impact Statement
Preparation Notice

Kaloko Makai

Kaloko, North Kona, Island of Hawaii

Prepared For:
SCD Kaloko Makai, LLC
c/o Stanford Carr Development, LLC

Prepared By:
Wilson Okamoto Corporation

Accepting Authority:
State Land Use Commission

December 2007

Environmental Impact Statement

Preparation Notice

Kaloko Makai

Kaloko, North Kona, Island of Hawaii

Prepared For:

SCD Kaloko Makai, LLC
c/o Stanford Carr Development, LLC
1100 Alakea Street, 27th Floor
Honolulu, Hawaii 96813

Prepared By:

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

December 2007

TABLE OF CONTENTS

Page

TABLE OF CONTENTS

TABLE OF CONTENTS

LIST OF FIGURES

TABLE OF CONTENTS

LIST OF TABLES

PREFACE

This Environmental Impact Statement Preparation Notice (EISPN) is prepared pursuant to Chapter 343, Hawaii Revised Statutes, and Title 11, Chapter 200, Hawaii Administrative Rules, Department of Health, State of Hawaii. Proposed is an applicant action by SCD Kaloko Makai, LLC to develop Kaloko Makai, an approximately 1,142 acre master planned community in Kaloko, North Kona, Island of Hawaii.

The proposed project is situated on lands within the State Land Use Conservation, Agricultural, and Urban Districts, necessitating a petition for State Land Use District Boundary Amendment. Reclassification of the Conservation and Agricultural Districts to the Urban District is being sought, and later a County of Hawaii Zone Change. In accordance with Hawaii Revised Statutes Chapter 343, privately initiated EIS documents must be accepted by the government agency empowered to issue a permit or approval for the proposed project. For Kaloko Makai, the State of Hawaii Land Use Commission is anticipated to be the accepting authority since a State Land Use District Boundary Amendment is the first approval being sought for the Kaloko Makai project. The preparation of this EISPN is triggered by the reclassification of Conservation District lands within the project area. Other possible EIS triggers include the use of State and/or County lands or funds in development of the project and possible construction of a wastewater treatment plant. Use of State and/or County lands could include, but not be limited to roadway, traffic, water, sewer, utility and drainage facilities affecting State and/or County roadways or other lands. While the specific nature of each improvement is not known at this time, the EISPN is intended to address all current and future instances involving the use of State and/or County lands or funds relating to the project.

This page intentionally left blank.

PROJECT SUMMARY

Project Name:	Kaloko Makai
Petitioner/Applicant:	SCD Kaloko Makai, LLC
Accepting Authority:	State of Hawaii Land Use Commission
Location:	Kaloko, North Kona, Island of Hawaii
Tax Map Key:	(3) 7-3-009: 017, 025, 026, and 028
Land Area:	1,142.165 acres
Recorded Fee Owner:	SCD Kaloko Makai, LLC and Kaloko Properties Corp.
Existing Use:	Vacant, undeveloped
State Land Use District:	Conservation, Agricultural, and Urban
SLUBA Petition Area:	Approximately 952.165 acres Conservation to Urban – 224.430 acres Agricultural to Urban – 727.735 acres (Subject to Boundary Interpretation)
County of Hawaii General Plan:	Urban Expansion and Conservation
Keahole to Kailua Development Plan:	Urban Expansion, Residential Village, and Golf Course
County Zoning:	Open (O) and Agricultural (A-5a) Districts

Proposed Action: 1,142 acre master planned community, consisting of 5,000 residential units, retail and commercial uses, schools, parks, open space network, and supporting infrastructure.

Impacts: The following studies will be conducted for the Draft EIS to determine the potential impacts which may result from the proposed project and identify appropriate mitigation measures:

Archaeological Inventory Survey
Cultural Impact Assessment
Botanical Survey
Faunal Survey
Traffic Impact Assessment
Ground Water Quality Assessment
Marine Water Quality Assessment
Preliminary Engineering Report
Noise Impact Analysis
Air Quality Analysis
Economic and Fiscal Impact Assessment
Social Impact Assessment

Determination: It is anticipated that the State Land Use Commission, as the accepting authority will determine that the proposed action requires the preparation of an Environmental Impact Statement, based on the significance criteria set forth in Hawaii Administrative Rules, Chapter 200, Title 11, State of Hawaii Department of Health.

Agencies Consulted In EISPN Process:

State Land Use Commission
State Department of Business, Economic Development, and Tourism, Office of State Planning

State Department of Transportation
County of Hawaii Planning Department
County of Hawaii, Department of Public Works
County of Hawaii, Department of Water Supply

Contact Person:

Alan Suwa, AICP
Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826
Telephone: (808) 946-2277
Fax: (808) 946-2253

This page intentionally left blank.

1. INTRODUCTION AND PROJECT SETTING

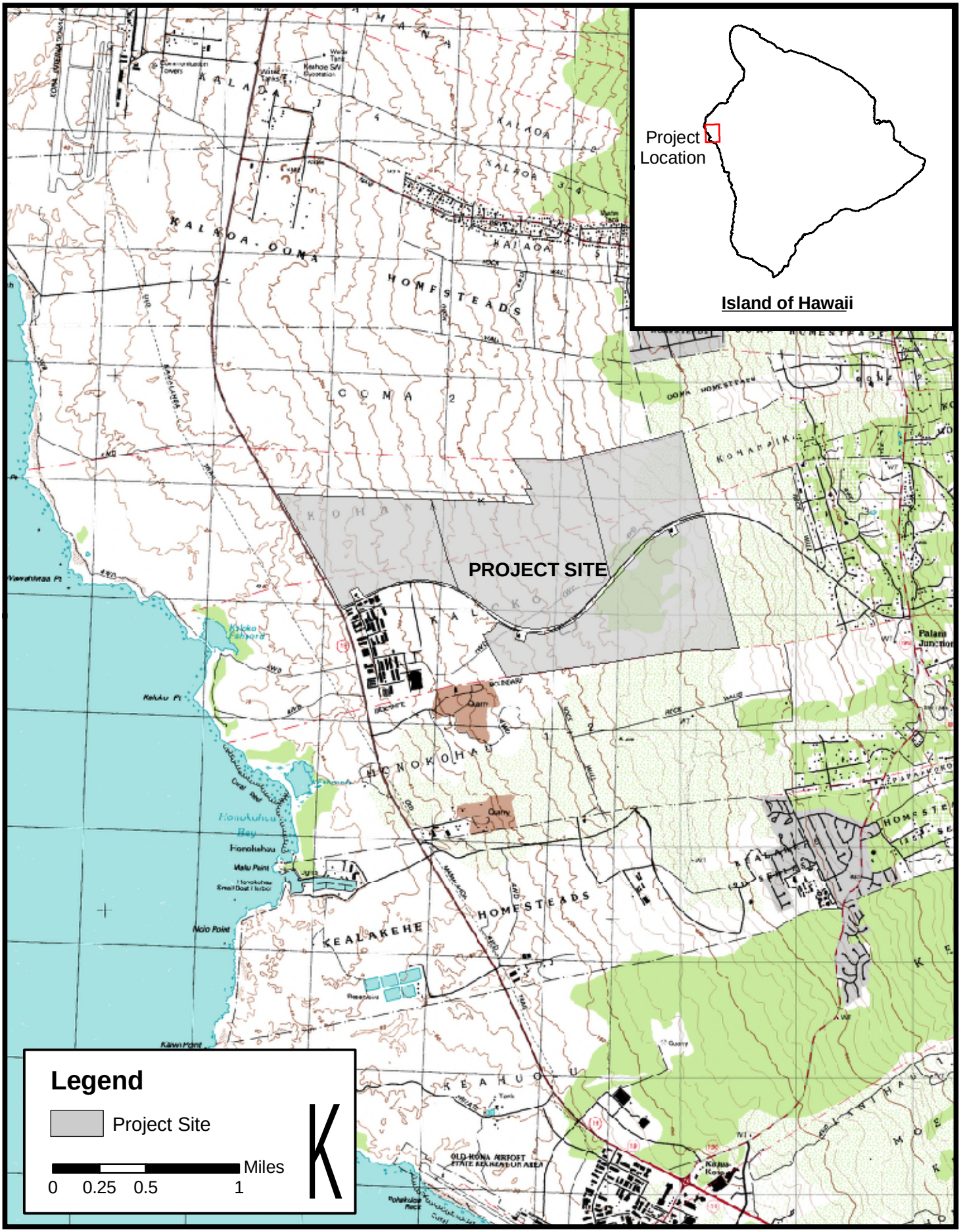
SCD Kaloko Makai, LLC proposes to develop Kaloko Makai, a residential, mixed-use development, on approximately 1,142 acres of undeveloped land in Kaloko, North Kona, Hawaii (see Figure 1-1). Kaloko Makai will be a residential community, with supporting commercial, infrastructure, educational, recreational and open space uses. Kaloko Makai will include construction of 5,000 new single- and multi-family residential units at low- and medium-densities, centralized commercial and neighborhood centers, recreational facilities (e.g. parks, trails, open spaces), an elementary school, a middle school, and associated infrastructure (e.g., new roadways, utilities, drainage, wastewater and potable water distribution systems). Affordable housing will be provided in accordance with County of Hawaii requirements.

The development is situated on lands within the State Land Use Conservation, Agricultural, and Urban Districts necessitating a State Land Use District Boundary Amendment to reclassify approximately 952 acres from Conservation and Agricultural Districts to the Urban District (see Figure 1-2 and Table 1-1), and a subsequent County of Hawaii Zone Change.

Table 1-1
Proposed SLUB Amendment

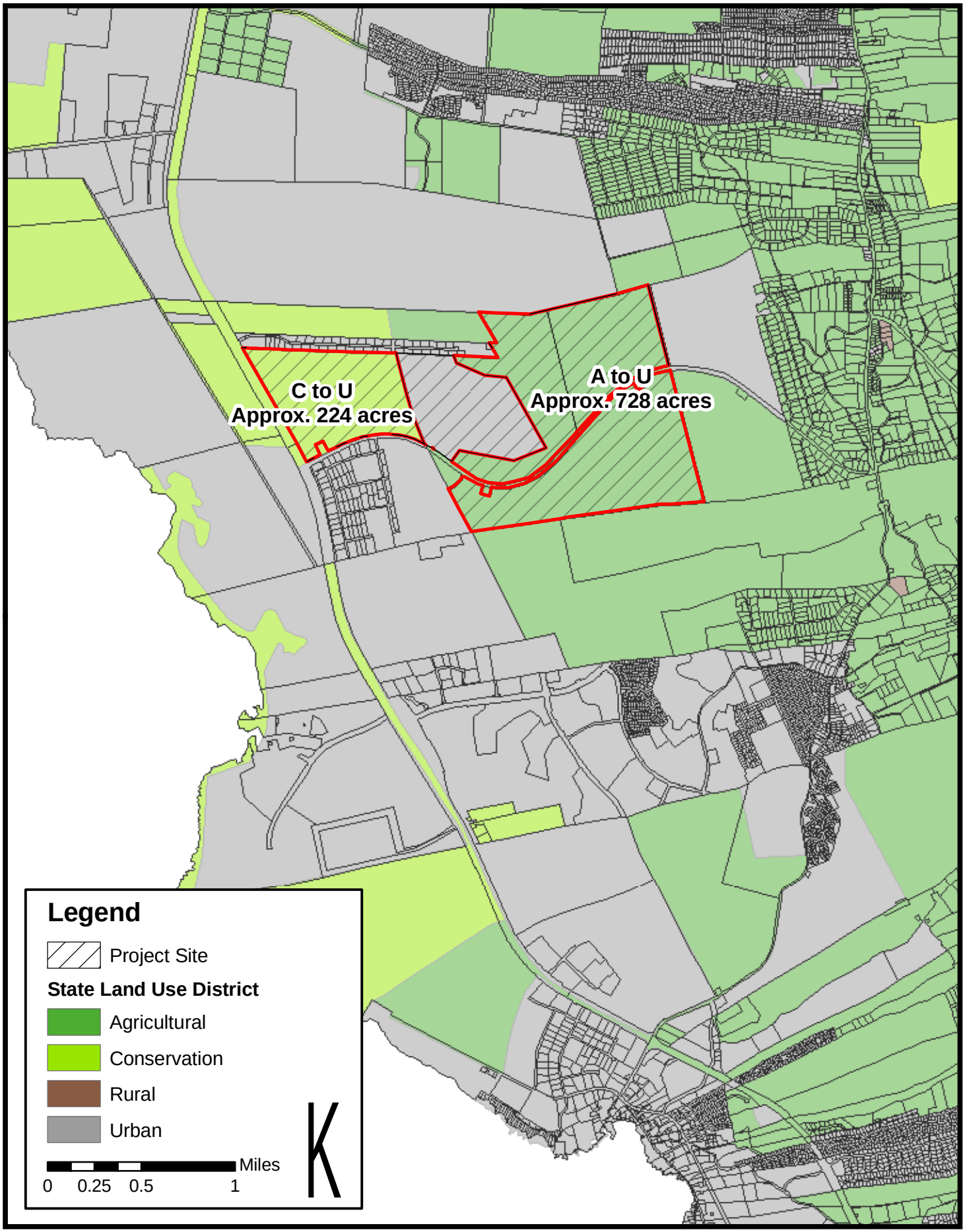
Tax Map Key	Existing SLUD	Proposed SLUB Reclassification	Acres
7-3-009: 017	Conservation	Urban	224.430
7-3-009: 025	Agricultural	Urban	170.131**
	Urban	---	---
7-3-009: 026	Agricultural	Urban	194.376
7-3-009: 028	Agricultural	Urban	363.228
		Total Petition Area	952.165

** An approximately 170.131 acre portion of TMK: 7-3-009: 025 as described in the attached metes and bounds description, to include any portion of the land described in the following metes and bounds description that is determined by the Land Use Commission to be within the Agricultural District.



WILSON OKAMOTO CORPORATION

FIGURE 1-1
Location Map
Kaloko Makai



WILSON OKAMOTO CORPORATION

FIGURE 1-2
Proposed State Land Use District Boundary Amendment Petition Area
Kaloko Makai

The preparation of an Environmental Impact Statement (EIS) is being undertaken to address the proposed reclassification of the Conservation District lands, possible use of State and/or County lands or funds in connection with development of project elements and possible construction of a wastewater treatment plant. This EISPN and the later EIS will support the Petition for State Land Use District Boundary Amendment.

1.1 Project Location

The project site is located adjacent to and north/northeast of the existing Kaloko Industrial Park in the Kaloko, North Kona District on the Island of Hawaii (as shown in Figure 1-1). The site is approximately 3 miles south of the Kona International Airport at Keahole and 3.5 miles north of the town of Kailua. It consists of approximately 1,142 acres and is identified by Tax Map Key: 7-3-009: 017, 025, 026, and 028 (see Figure 1-3). The site is located approximately one mile mauka of the coastline and lies between elevations ranging from approximately 100 feet above mean sea level (MSL) at the western end to 700 feet above MSL at the eastern end. Access to the site is from Queen Kaahumanu Highway and Hina Lani Street.

1.2 Existing and Surrounding Uses

1.2.1 Existing Use

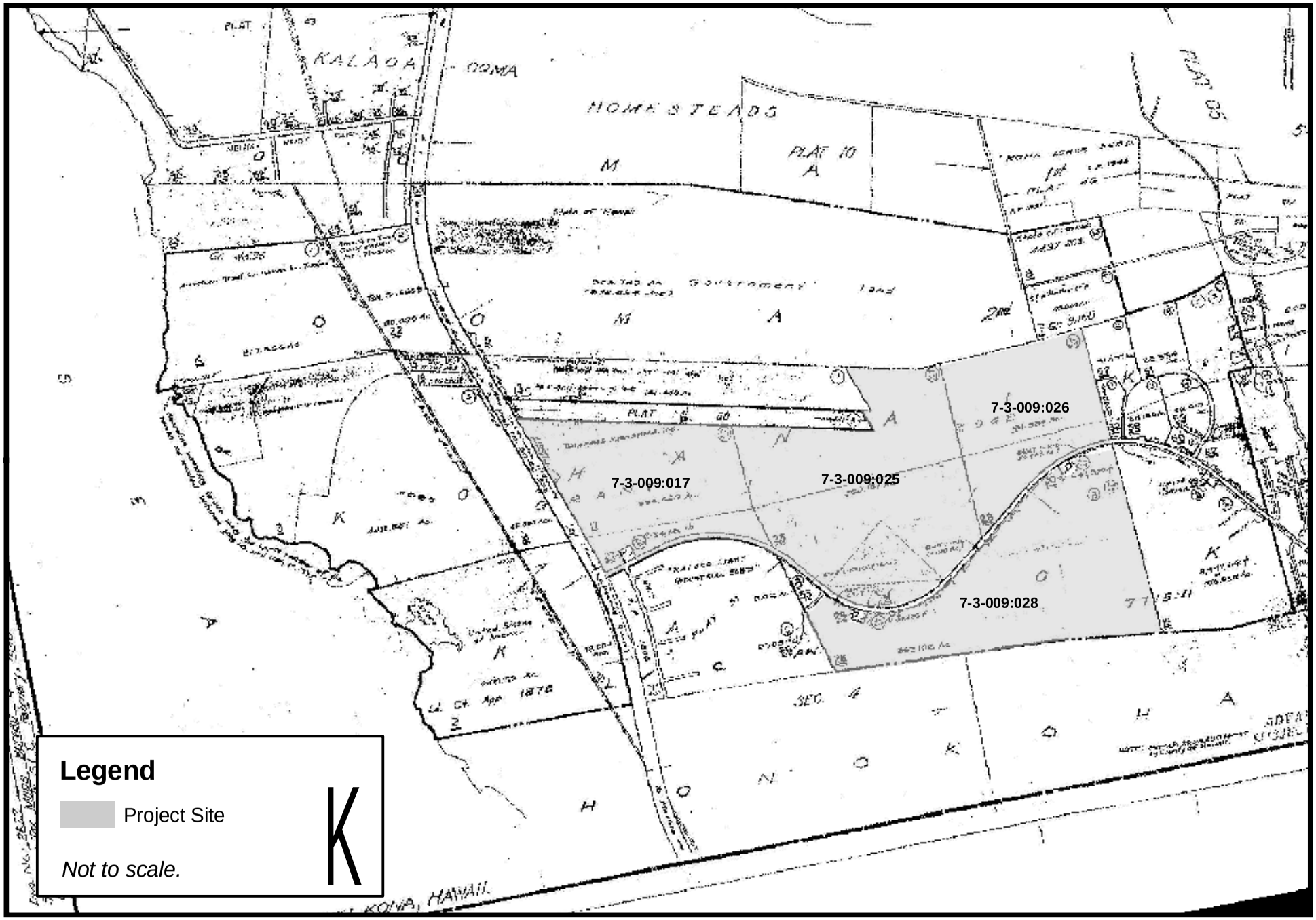
The project site is presently vacant and undeveloped. The site consists of large, barren masses of pahoehoe and aa lava and is overgrown with scrub vegetation consisting mostly of koa haole and fountain grass. The southern portion of the project site consists of an approximately 150-acre native dryland forest.

1.2.2 Surrounding Uses

The existing and proposed uses in the project vicinity are depicted in Figure 1-4 and further described below.

1.2.2.1 Existing Uses Within the Project Vicinity

The Kaloko Industrial Park is located to the south, which includes industrial and business establishments such as light manufacturing, warehousing and distribution operations, a Costco Wholesale facility and Home Depot. Quarrying operations are also located to the south.



WILSON OKAMOTO CORPORATION

FIGURE 1-3
Tax Map Key: 7-3-009: 017, 025, 026 and 028
Kaloko Makai

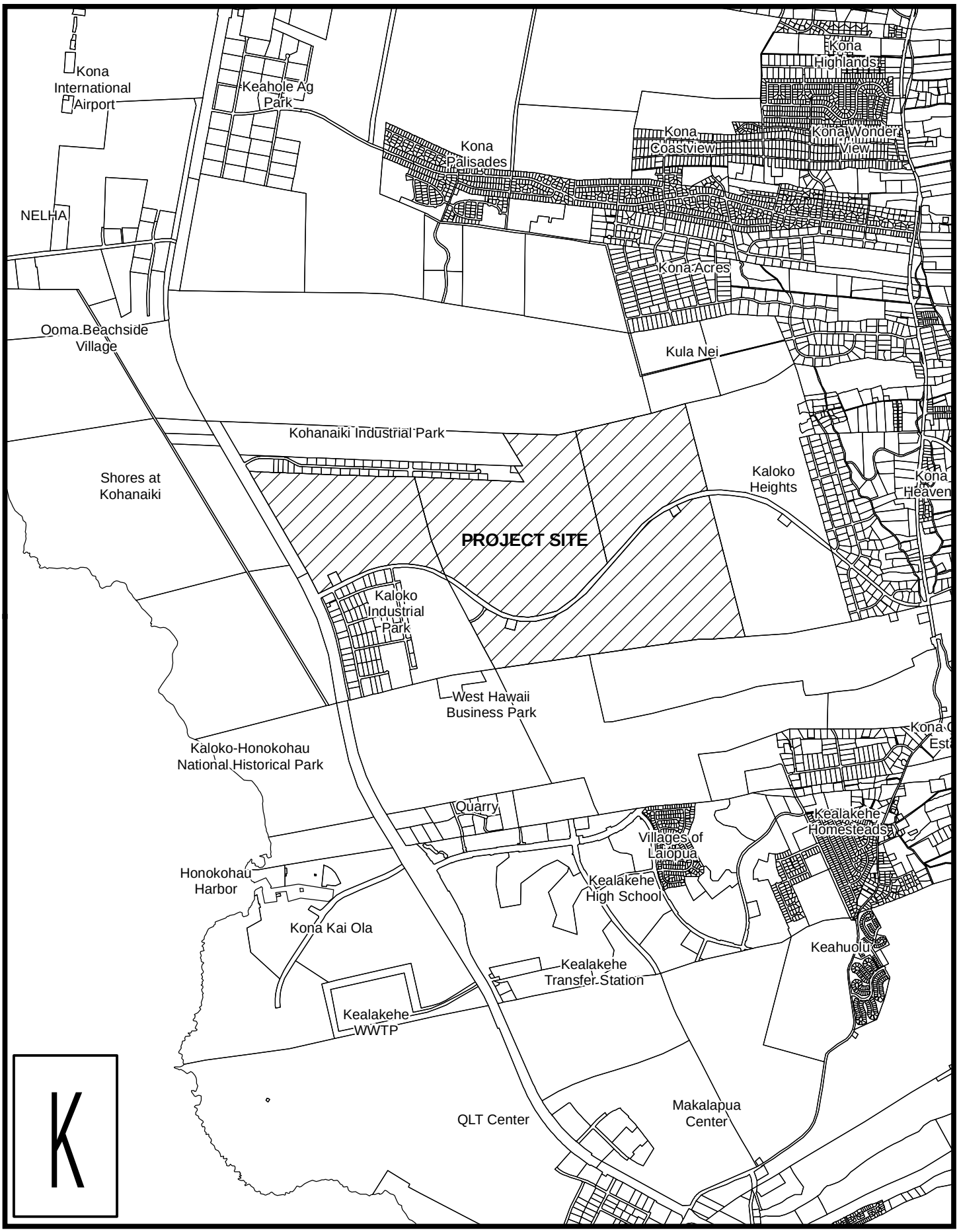


FIGURE 1-4
Existing and Proposed Uses Within the Vicinity of the Project Site
Kaloko Makai

WILSON OKAMOTO CORPORATION

West of the project site and makai of Queen Kaahumanu Highway, is the Kaloko-Honokohau National Historical Park. Administered by the U.S. National Park Service, the 1,178-acre park contains extensive natural and cultural resources, such as fishponds, wetlands and archaeological sites. Nearly all of the land has been designated a national historical landmark.

To the north approximately three (3) miles from the project site is the Kona International Airport at Keahole operated by the State Department of Transportation, Airports Division. Immediately south of the Airport is the Natural Energy Laboratory of Hawaii (NELHA), a publicly-funded research facility and the Hawaii Ocean and Science Technology Park (HOST). Mauka of the Airport and Queen Kaahumanu Highway is the State-developed Keahole Agricultural Park.

The Kohanaiki Business Park, a 26-lot light industrial development, is located north of the project site.

South of the project site is West Hawaii Business Park, a proposed light industrial development. Further south of the project site and makai of Queen Kaahumanu Highway are the State Department of Transportation, Harbors Division's 450-slip Honokohau Small Boat Harbor and the County of Hawaii's Kealakehe Regional Wastewater Treatment Plant, located approximately 1.1 mile and 1.5 miles from the project site, respectively.

The State-developed Villages of Laiopua project is located approximately 1mile south of the project site. When fully developed, the project will include single- and multi family residential units, recreational facilities, community facilities, neighborhood commercial complexes, several parks, and several preserve sites.

Further south, approximately 3.5 miles from the project site, is Kailua town which is the major commercial and business hub of the region.

Mauka of the project site are a number of residential developments located in the vicinity of Mamalahoa Highway. These include Kona Palisades, Kona Acres, Kona Coastview, Kona Wonder View, and Kona Highlands to the north/northeast; Kona Heavens to the east; and,

Kealakehe Homesteads, Kona Chocho Estates, Kona Macadamia Acres, and Queen Liliuokalani Village to the southeast.

1.2.2.2 Proposed Developments Within the Project Vicinity

The vicinity surrounding the project site is largely undeveloped, with the exception of the Kaloko Industrial Park. However, a number of major new developments are either planned or have been planned for the region. Some of these planned projects are in various stages of development.

Kaloko Industrial Park Phases III and IV located south of the project site will consist of approximately 73 improved one-acre lots. Intended uses include light industrial, business and commercial uses consistent with the existing light industrial uses developed in Phases I and II.

Adjacent to and south of the project site, Lanihau Partners L.P. proposes to develop approximately 337 acres of land for development of the West Hawaii Business Park. The development will include a mixture of industrial and commercial uses which allow the retention and expansion of the existing quarry and quarry-related uses.

Further south, approximately 1.6 miles from the project site, the Queen Liliuokalani Trust is planning to develop some 546 acres near Makalapua Center. The project was granted State Land Use District reclassification from the Agricultural and Conservation Districts to the Urban District in 1991.

Northwest of the project site and makai of Queen Kaahumanu Highway, the Shores of Kohanaiki is under construction. Rutter Development is developing approximately 470 acres of land for 500-unit luxury second homes, a private golf course, and a 128-acre coastal park.

Located immediately east of the project site, Stanford Carr Development's project known as Kaloko Heights, has plans for a 409 acre residential development to include approximately 1,362 single-family and multi-family units, commercial and park development.

Also proposed is the Shopoff Group's Kula Nei project located northwest of the project site. The project is a low-density residential subdivision that will consist of 270 market and affordable residential units. The project will also include a neighborhood park, trails, greenbelts, and supporting infrastructure.

The University of Hawaii plans to develop lands north of Kona Palisades and Keahole Agricultural Park for a new West Hawaii campus, and the related, proposed mixed-use community of Palamanui.

Ooma Beachside Village, a master-planned community is being proposed on approximately 302 acres of land south of the NELHA and HOST. The proposed project will encompass a mix of land uses, including 950 to 1,200 residential single- and multi-family units; mixed use villages; open space; and parks and trails.

The Jacoby Development, Inc. and State Department of Land and Natural Resources proposes to develop Kona Kai Ola on approximately 530 acres in Kealakehe. The project site is owned by State DLNR and the State Department of Hawaiian Home Lands. The project includes a new 45-acre 800-slip marina and up to 700 hotel/time share units.

This page intentionally left blank.

2. PROJECT DESCRIPTION

2.1 Project Description

SCD Kaloko Makai, LLC proposes to develop Kaloko Makai, a residential mixed-use development, on approximately 1,142 acres of undeveloped land in Kaloko, North Kona, and Hawaii. Kaloko Makai will be a totally master planned residential community, with supporting commercial, educational, recreational, open space uses and their related infrastructure. This diverse project will entail construction of 5,000 new single- and multi-family residential units at low- and medium-densities, centralized commercial and neighborhood retail centers, an array of recreational facilities (e.g. parks, trails, open spaces), a new elementary school, a middle school, and associated infrastructure (e.g., new roadways, utilities, drainage, wastewater and potable and non-potable water distribution systems). The community development will satisfy a wide range of primary market housing needs, including the provision of affordable housing as required by the County of Hawaii. Figure 2-1 illustrates the proposed Conceptual Land Use Plan. See Table 2-1 below for proposed land use categories and acreages.

Table 2-1
Land Use Summary

Land Use Type	Estimated Area (Acres)
Low Density	310
Medium Density	320
Commercial	100
Mixed Use	20
Schools	40
Parks	65
Open Space/Dryland Forest	150
Roads/Utilities	137
Total	1,142

This page intentionally left blank.

M:\\WOA\7469-01 Kaloko Properties\EISPN\Fig 2-1 Land Use.ppt

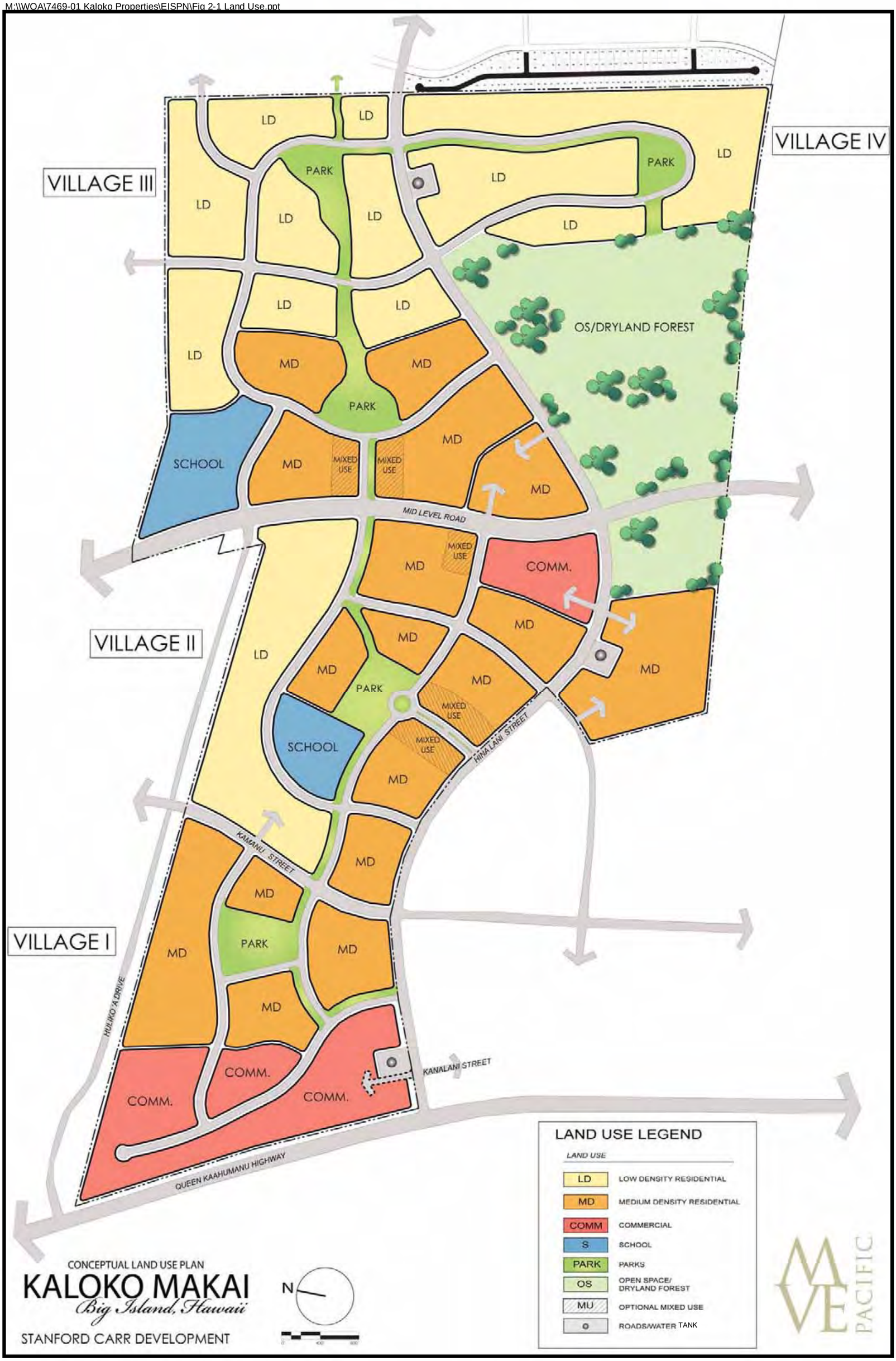


FIGURE 2-1
PROPOSED LAND USE

Major Project Components

Residential - The residential component of the community may include up to 5,000 units of varying product types serving a variety of markets. Residential zoning designations are anticipated to include single, duplex and multi-family residential, as well as residential/commercial mixed use as an option. Affordable housing will be integrated into the master plan.

Low density areas will consist of residential uses, with ancillary community and public uses, and neighborhood and convenience-type commercial uses, with an overall density up to six (6) units per acre.

Medium density areas will consist of village and neighborhood commercial uses with single family and multiple family residential that has an overall density up to thirty-five (35) units per acre.

The community design establishes four distinct villages, each offering a variety of product types and densities. An extensive network of open space and trail system proposed within and connecting the villages provides the framework for individual villages with unique yet cohesive character and identity.

Commercial – Approximately 120 acres of the proposed development will be established as commercial mixed-use areas. The project will create both community based and regional retail opportunities along with defined areas for office and commercial use. The project's location between the Airport and Kailua Town, with close proximity to existing employment centers and large, mauka residential areas, creates successful opportunities for viable transit oriented development. The community town center will provide a vibrant and unique social environment where residents and visitors can gather for civic and community activities.

Preservation/Open Space – The Kaloko Makai land plan integrates the natural features of the area, including the preservation of a historic trail (the Road to the Sea) as a neighborhood connecting pedestrian way, which starts outside of the project area and within

TMK Nos. (3) 7-3-009: 019, 057, 058, 059, 060, 061 and 062 (the Kaloko Heights project) and runs in the makai direction through the project area, and the conservation of 150 acres of a native dryland forest located on the southern portion of the project site. Open space and pedestrian links will be major components of the community plan.

Preservation of Archaeological and Cultural Sites –Significant archaeological and cultural sites, which include historic trails, will be integrated into the land plan. Archaeological and cultural sites will be protected and maintained with appropriate treatment and buffers from adjacent uses as necessary.

Public Facilities – Kaloko Makai will provide a range of amenities to serve the community. Lands will be set aside for elementary and middle schools as required by the State of Hawaii Department of Education to serve the project area. The dedication of land for active parks and recreation facilities will exceed County standards.

Infrastructure – A well connected network of internal streets will link residential areas while collector roads will access Hina Lani Street. The proposed mid-level road alignment constitutes a significant influence on the shaping of Kaloko Makai. Due to its anticipated status as a regional arterial, there will be very limited access from the mid-level road to the distinct villages within Kaloko Makai. Appropriately designed drainage, water supply, wastewater, and communications infrastructure will be necessary elements of the proposed development.

Vision Statement and Project Objectives

SCD Kaloko Makai, LLC seeks to instill a spirited sense of community throughout the 1,142 acre master planned community of Kaloko Makai. The mauka to makai orientation of the community will feature well-defined neighborhood villages, each village with its own distinct core of either retail and office, or parks and schools as a focus for nearby residents. Each neighborhood village will be woven together by a system of pedestrian scaled streets and trails connecting all of the villages to create one distinct community.

Diversity in residential land uses from single family residences to affordable multi-family homes will help to create living opportunities for everyone at Kaloko Makai. The project will define a regionally expressive, traditional Hawaiian architectural style which incorporates design elements that are human in scale, climatically appropriate and environmentally sensitive. Prominent roof massing, unique patterned details, local craftsmanship, high quality materials and finishes, will produce a simple yet humble elegance to the community's architectural expression.

Front porches will be a defining feature of Kaloko Makai which will promote neighborhood interaction and maximize the indoor-outdoor living relationships familiar to Kona style living. The rear lanais that function as both an outdoor living space and as a connection to pathways, neighbors, and community amenities, will add to the indoor-outdoor lifestyle relationship that is rooted in Island culture. Variations in building materials and landscape themes will also create dynamic streetscapes and diversity throughout the neighborhood villages.

Tree-lined residential streets provide pedestrian connectivity to neighborhood commercial centers, 150 acre dry land forest to the south, the neighborhood and community parks, the adjacent residential neighborhoods to the east and the natural trail system that winds throughout Kaloko Makai. Promoting connectivity will be one of the key design principles forming this unique place.

Much land has been set aside for parks to reinforce the natural wellbeing of the community. The open space framework forms the heart of this community and is conveniently located to all residents. Preservation of resources, particularly the historic trails, adjacent and related archeological sites, primarily located in the northeastern portion of the property, play an important role in shaping the character of this distinct place. Native Hawaiian beliefs, history, values and stories associated with these lands and the natural resources located within the trail's corridor will insure that this unique heritage will be respected and maintained.

Kaloko Makai crafts distinctive neighborhoods, housing types, parks and preserved open space, as well as schools and gathering places that will make the community appealing to

residents and visitors for years to come. The project endeavors to achieve the vision set forth by the Keahole to Kailua Development Plan more than 15 years ago which designated the area to accommodate future urban growth.

2.2 Project Need

The Keahole to Kailua Development Plan (K to K Plan) (1991) is an implementing tool for the Hawaii County General Plan. The plan was adopted by the Hawaii County Council to serve as a guide for development of infrastructure and land uses within the connection between Keahole to Kailua, with recognition of the area for major future urban growth. According to the General Plan Amendment (December 2006) the project site is designated for Urban Expansion and Conservation.

The County is currently in the process of preparing the Kona Community Development Plan (CDP) to further identify how the General Plan can be implemented to achieve the communities' vision for the Kona region. Preliminary Kona CDP maps have identified the project site as a proposed Transit Oriented Development (TOD) site, where growth will be focused (*Hawaii Island Plan Website*, http://www.hcrc.info/hawai-i-island-plan/kona). The TOD sites are proposed to consist of low-, medium-, and high density residential uses, as well as mixed-use commercial uses, centered around a transit hub along the proposed Mid-Level Road identified in the K to K Plan.

Kaloko Makai responds to the need for housing in North Kona. Currently, many residents who work in North Kona commute from outlying districts, such as Ocean View in Kau. Housing is more affordable in these outlying areas, but the disadvantage is the long commute time. More housing is needed near centers of employment. The proposed development will help fulfill these housing needs, including affordable housing, for Kona.

2.3 Preliminary Project Schedule

Development of the project is anticipated to commence with the construction of infrastructure improvements to begin immediately following the necessary land use approvals and permits. The delivery of the first residential homes is scheduled for 2011. The project proposes to develop the primary infrastructure systems necessary to accommodate substantial development within ten (10) years. Construction of residential units will be on a phased basis according to market demand.

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

3.1 Climate

The Kona region experiences a mild climate year-round. The average annual temperature is 75° (Fahrenheit), with an average high of 83°, and an average low of 67°. Median annual rainfall is approximately 25", with areas along the coast experiencing less than 10" inches of rainfall annually.

The area is largely sheltered from the predominant northeasterly tradewinds by the land masses of Mauna Loa, Mauna Kea and Hualalai, resulting in light, variable winds. The prevailing winds are southerly and westerly. During the day, a pressure gradient between the warmer land and cooler ocean waters causes warm air to be moved inland by light sea breezes. In the evening, the convection cells reverse direction as the land cools and night breezes blow out toward the warmer ocean. Typical wind velocities range between 3 to 14 knots. Relative humidity is generally stable year-round, with the daily average ranging from 71 to 77 percent.

3.2 Geology and Topography

Geology: The project site is located on the lower western slope of Hualalai, a dormant shield-type volcano. Hualalai Volcano last erupted in 1801 along its northwest rift zone, which represents the major geologic structure in the area.

The western slopes of Hualalai Volcano consist predominantly of alkalic olivine basalt flows that poured out of the northwest rift zone. Basalt flows are typically thin-bedded, dip 10 to 15 percent, and average 4 or 5 feet in thickness on the upper slopes. These flows, however, probably average 10 feet in thickness on the more gentle (2 percent) slopes near the coast. The flows consist of both pahoehoe and aa types and belong to the prehistoric member (Holocene age) of the Hualalai volcanic series.

Topography: The project site occupies an area of relatively uniform slope, ranging from 5 to 8 percent. The lowest elevation along the makai boundary of the site is approximately 100 feet above mean sea level (MSL). Along the mauka boundary, the site reaches an elevation

of about 700 feet above MSL. The site has a generally irregular surface with localized mounds and depressions throughout, as is characteristic of non-eroded lava flows.

Impacts and Mitigation Measures

No significant impacts on the geology or overall topography of the project site are anticipated during the construction and operation of the proposed project. Construction of the proposed development will involve grading, excavation and trenching of presently undeveloped areas within the project site. Since the proposed development areas contain gradually increasing slopes at the higher elevations (generally less than 8 percent), the project will require alteration of existing landforms to create more efficient land development areas.

Mass grading of the development areas will be in compliance with the County of Hawaii's grading ordinance requirements and will require National Pollutant Discharge Elimination System (NPDES) permit from the State Department of Health (DOH) for storm water construction activities, including Best Management Practices (BMPs) to minimize off-site impacts.

3.3 Soils

The U.S. Department of Agriculture Natural Resources Conservation Service (NRCS) classifies the soil in the project site as pahoehoe lava flows (rLW), aa lava flows (rLV), Kaimu extremely stone peat (rKED), and Punaluu extremely rocky peat (rPYD) (see Figure 3-1). Lava flows are considered "miscellaneous land types". Pahoehoe lava, which occurs over approximately 21 percent of the site, is characterized by a billowy, glassy surface that is relatively smooth, although the surface may be rough and broken in some areas, with hummocks and pressure domes. Approximately 37 percent of the site consists of aa lava, which is characterized by clinkery, hard, glassy pieces piled in tumbling heaps. Both of these land types have no soil covering and are virtually devoid of vegetation. The lava is very slowly permeable, although water moves rapidly through the cracks. Runoff is slow and erosion hazard is slight. Approximately 6 percent and 36 percent of the project site consists of Kaimu and Punaluu soils.

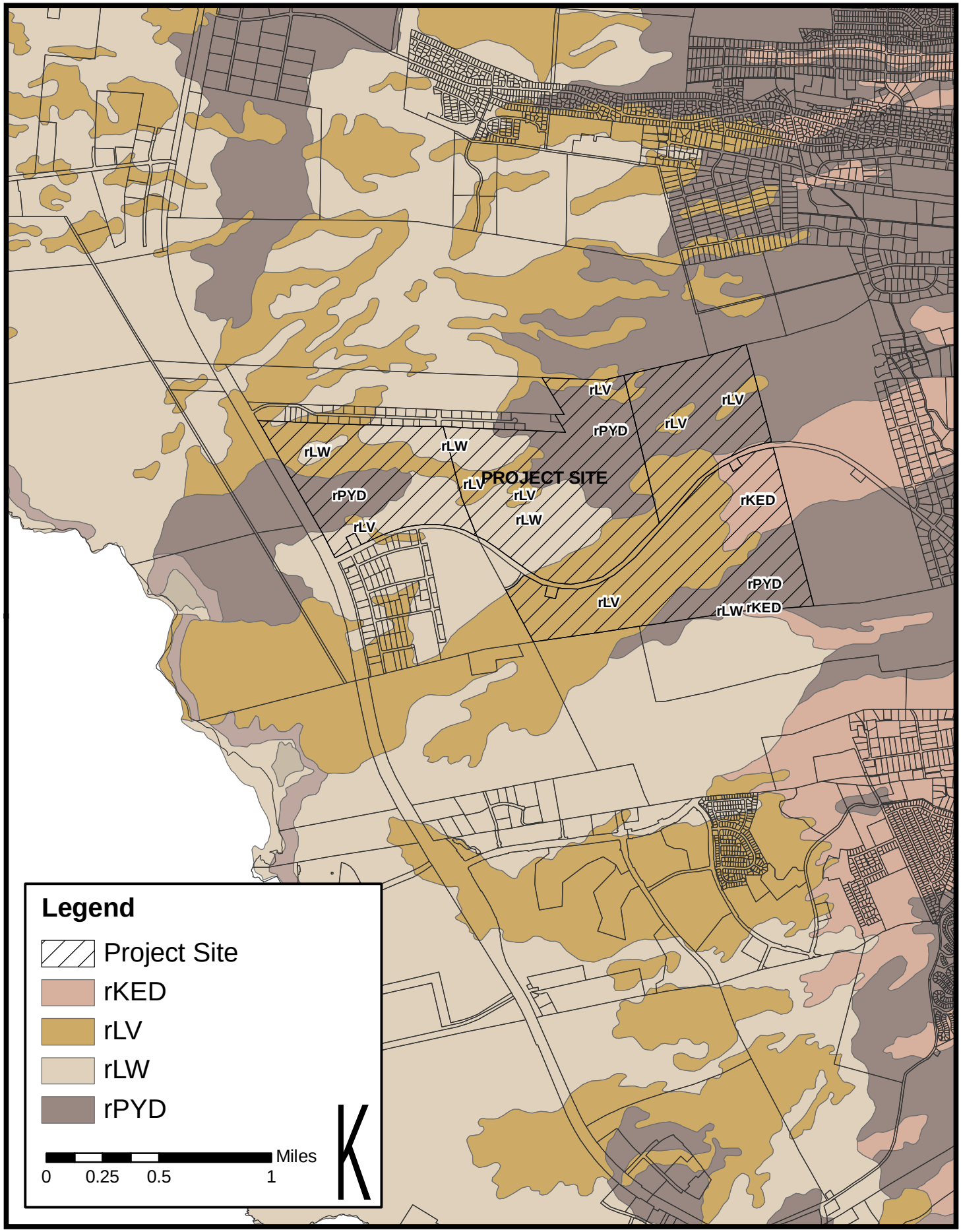


FIGURE 3-1
Soil Classification
Kaloko Makai

The soil capability class rating for both aa and pahoehoe lava is Class VIII, indicating that the soils have severe limitations that make them unsuited for cultivation and commercial plants, and restrict their non-urban use largely to pasture, woodland, wildlife, water supply, and aesthetic purposes.

Punaluu extremely rocky peat, 6 to 20 percent slope: These soils are comprised of rock outcrops over 40 to 50 percent of the surface, and medium-acid peat about 4 inches thick underlain by pahoehoe lava bedrock. The peat is permeable. The pahoehoe lava is very slowly permeable, although water moves rapidly through the cracks. Runoff is slow, and the erosion hazard is slight. These soils are rated Class VIIs soils, non-irrigated. Use of these soils is typically restricted to non-agricultural uses such as pasture or range land, and non-agricultural uses. The sub-classification "s" indicates that the soils are extremely rocky or stony.

Kaimu extremely stony peat, 6 to 20 percent slope: These soils are comprised of very dark brown extremely stony peat about 3 inches thick. It is underlain by fragmental aa lava. This soil is neutral in reaction. Permeability is rapid, runoff is slow, and the erosion hazard is slight. This soil is not suitable for cultivation. These soils are also rated Class VIIs, non-irrigated.

The *Detailed Land Classification – Island of Hawaii* prepared by the University of Hawaii Land Study Bureau (LSB), evaluates the quality or productive capacity of certain lands on the Island for selected crops and overall suitability in agricultural use. A five-class productivity rating system was established with "A" representing the highest productivity and "E" the lowest. Approximately 73 percent of the project area is rated E, the lowest productivity rating, approximately 9 percent is rated D, and the remaining is not classified (see Figure 3-2).

The Agricultural Lands of Importance in the State of Hawaii (ALISH) map, prepared by the State Department of Agriculture, classifies lands into three categories: 1) Prime Agricultural Land, which is land best suited for the production of crops because of its ability to sustain high yields with relatively little input and with the least damage to the environment; 2) Unique Agricultural Land, which is non-Prime agricultural land used for the production of

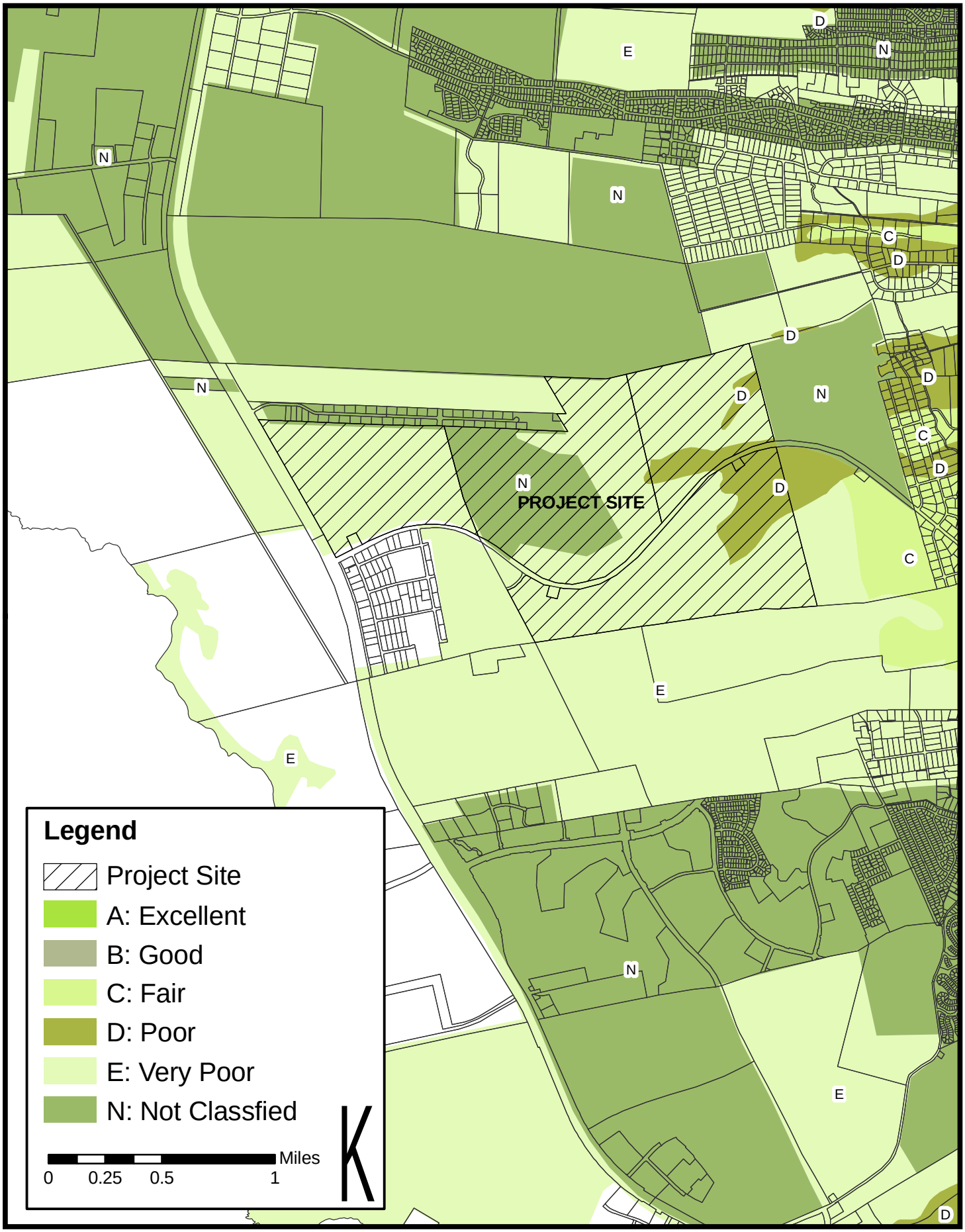


FIGURE 3-2
Overall Productivity Rating (LSB)
Kaloko Makai

specific high-value crops; and 3) Other Important Agricultural Land. Approximately 6 percent of the project site is designated "Other" and the remainder of the project site is not considered important agricultural lands (see Figure 3-3).

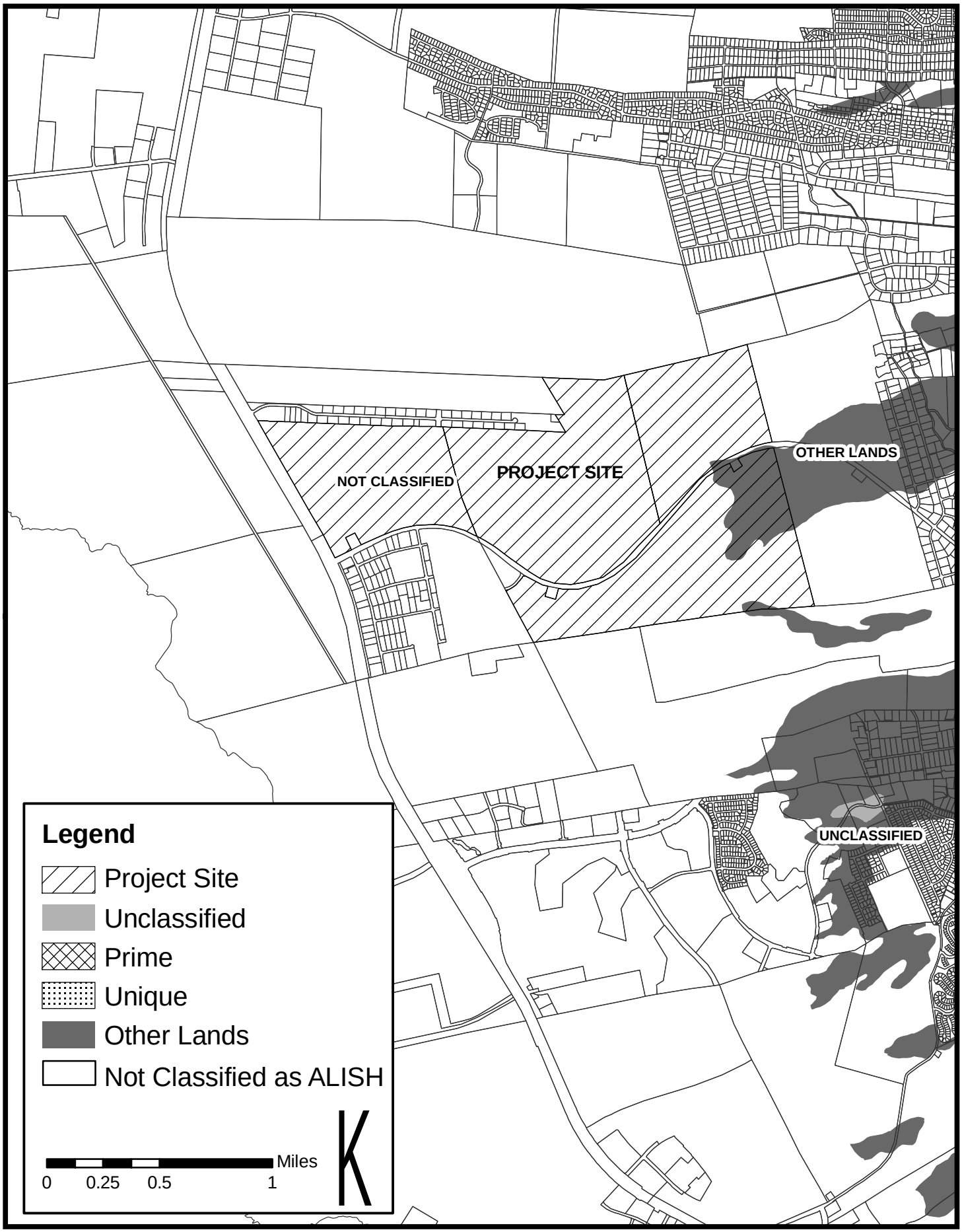
Impacts and Mitigation Measures

No significant impacts on soils within the project site are anticipated as a result of the construction of the proposed project. Appropriate erosion and sediment controls will be instituted during project grading operations and construction site work activities in compliance with the County's grading ordinance and the State DOH NPDES permit program. Mitigation measures will be instituted following site-specific assessments, incorporating structural and non-structural BMPs such as minimizing time of exposure between construction and replanting, and implementing erosion control measures such as silt fences and sediment basins. Following construction, erosion is anticipated to decrease since the soils will have been graded, built over, paved over, or landscaped.

3.4 Surface Water

The natural drainage system of the project site consists of rainfall percolating through the layers of very porous lava to the ground-water table. There are no definable streams or natural drainageways within or in the immediate vicinity of the site as the basaltic rocks of the substrata are highly permeable. There are no wetlands located within or in the immediate vicinity of the project site.

The Kaloko-Honokohau National Historical Park, located makai of the project site along the coast and separated from the site by Queen Kaahumanu Highway, contains anchialine ponds (saltwater or brackish-water ponds) and wetlands. Two principal fishponds in the Park, the Kaloko and Aimakapa fishponds, are large brackish ponds separated from the ocean by basaltic rock walls. These ponds are culturally significant as they are a prime example of traditional Hawaiian aquaculture. Water in these ponds is a mixture of seaward-flowing, low-salinity ground water, and landward-flowing seawater. Wetland areas of approximately 15 acres exist adjacent to the Aimakapa fishpond.



WILSON OKAMOTO CORPORATION

FIGURE 3-3
Agricultural Lands of Importance in the State of Hawaii (ALISH)
Kaloko Makai

Impacts and Mitigation Measures

The impacts of construction and operation of the proposed project on nearby surface and near shore coastal water will be assessed as part of the groundwater and water quality studies being prepared for the Draft EIS. Potential water quality impacts during construction of the project will be mitigated by adherence to State and County water quality regulations governing grading, excavation and stockpiling. The County's grading ordinance includes provisions related to reducing and minimizing the discharge of pollutants associated with soil disturbing activities in grading, grubbing and stockpiling. A NPDES General Permit for Storm Water Associated with Construction Activity administered by the State DOH will be required to control storm water discharges. Best Management Practices (BMPs) will be utilized in compliance with County ordinances pertaining to grading, grubbing, stockpiling, soil erosion, and sedimentation during construction. BMPs will also be considered for long term development and operation of activities occurring on the site as part of pollution prevention measures.

The project's proposed drainage system will be designed to minimize impacts to near shore coastal waters. Water quality treatment and detention basins will be built to prevent runoff and sedimentation from impacting surface water resources. Innovative and more natural ways to handle drainage improvements will be sought to comply with the County drainage standards.

3.5 Ground Water

The project site overlies the Keauhou Ground-Water Aquifer System within the Hualalai aquifer sector. Ground water occurs beneath the project site as a thin, brackish to saline basal lens in hydraulic contact with seawater at depth and at the shoreline. However, further inland, along an alignment that is generally coincident with that of Mamalahoa Highway, there is a sudden change from the brackish basal lens to high-level ground water of exceptionally good quality. This transition in ground-water regimes, which was discovered in the early 1990s, extends from Kalaoa on the north end to Honaunau on the south end. Available hydrologic and geophysical evidence is generally consistent with the concept that the high ground-water levels are associated with a buried dike complex.

The anchialine ponds located within the Kaloko-Honokohau National Historical Park makai of Queen Kaahumanu Highway lack a surface connection to the ocean, but are hydrologically connected to ground water and the ocean by a permeable aquifer. Numerous springs around the ponds supply the adjacent wetlands with brackish ground water. The fresh water component of the ground-water flow in the Park is an important component in sustaining the existing wetland and pond ecosystems which provide nesting and feeding habitat for two species of federally listed endangered waterbirds.

Impacts and Mitigation Measures

A ground water resources and marine water quality assessment will be conducted for the Draft EIS to determine the anticipated impacts of the proposed project on the groundwater resources of the area and the hydrological connection to the ocean. The proposed project will be studied as a potential source of contamination to the underlying ground water and if there are any affects of the ground water flow into the Park's wetland and pond ecosystems. Any project impacts anticipated upon water quality will be subject to natural processes that occur based on vertical travel distance of the infiltrated water and horizontal distance to the ocean.

3.6 Flood Hazard

The Flood Insurance Rate Map (FIRM) of the U.S. Federal Emergency Management Agency (FEMA) identifies the project site as lying within Zone X, areas determined to be outside the 500-year flood plain (Community Panel 155166 0692C, revised April, 02, 2004). Other FIRM panels covering the project site are identified as "Zone X".

Impacts and Mitigation Measures

The project site is not subject to coastal hazards such as tsunami inundation due to its elevation and distance from the shore. The site is also not subject to a disproportionately greater likelihood of floods resulting from heavy rainstorms due to the highly porous nature of the existing lava substrate. Construction of the proposed project is not anticipated to result in flooding of the project site or lower elevation properties.

3.7 Earthquake/Seismic Hazards

The Island of Hawaii is susceptible to seismic activities originating in fault zones under and adjacent to it. Two fault zones have been identified in the Kona region, the Kealakekua and Kaloko faults, both located in South Kona. The Uniform Building Code (UBC) prepared by the International Conference of Building Officials (ICBO), recommends that the Island of Hawaii meet the UBC standards for Seismic Zone 4. The rating system is based on a scale of 1 to 4, with a rating of 4 having the highest risk associated with seismic activity. The Hawaii County Building Code requires that all new structures be designed to resist forces to seismic Zone 4 standards.

The Uniform Building Code 1993 Edition as amended by the County Council is presently in effect for the design and construction of new buildings. It is anticipated that the County of Hawaii will adopt the International Building Code (IBC) 2006 Edition in 2008. Given the project time frame, it is likely that structures will have to conform to the requirements of the IBC 2006. Structures designed under this code must resist seismic design loads based on the seismic importance factor, seismic use group, mapped structural response accelerations, Ss and S1, seismic design category, and other factors corresponding to the specific location and characteristics of the building under consideration.

Impacts and Mitigation Measures

The proposed project site is not anticipated to be affected by the greater likelihood of natural hazards such as earthquakes. All structures will be constructed in compliance with the International Building Code (IBC).

3.8 Lava Flow Hazards

According to the volcanic hazard zones map for the Island of Hawaii prepared by the U. S. Geological Survey, the project site is in Zone 4. The zones are ranked from 1 through 9 based on the probability of coverage by lava flows, with Zone 1 being the highest hazard and Zone 9 being the lowest. The lava flow hazard for Zone 4 is attributed to Hualalai, one of three volcanoes which have been active in historic times on the Island of Hawaii. About 5 percent of the area within Zone 4 was covered by lava since 1800, and less than 15 percent of the area was covered by lava in the last 750 years. In this zone, frequency of eruptions is lower than on Kilauea and Mauna Loa and flows typically cover large areas.

Impacts and Mitigation Measures

Construction of the proposed project is not anticipated to be affected by a disproportionately greater likelihood of natural hazards such as lava flow hazards

3.9 Flora

A botanical survey of the project site was conducted by Isle Botanica (December 2006). There are three main kinds of vegetation at the project site: 1) disturbed scrub dominated by *Leucaena luecocephala (koa haole)* in combination with *Pennisetum setaceum* (fountain grass) in the lower part of the project site, and with *Kalanchoë pinnatum* (air plant) and *Panicum maximum* (Guinea grass) in the upper part; 2) disturbed scrub dominated by *Schinus terebinthifolius* (Christmas Berry); and relatively undisturbed dryland forest. Majority of the project site is comprised of the two disturbed scrub vegetation and no Federally listed endangered or threatened plant species were observed in the disturbed scrub areas.

The 150-acre native dryland forest is located within the southern portion of the project site and is one of the last dryland forests still relatively free of introduced, alien grasses and cattle. This patch of forest was home to at least four endangered plant species *'aiea* (*Nothcocestrum breviflorum*), *ma'oloa* (*Neraudia ovata*), *Cyperus faurieri,* and *hala pepe* (*Pleomele hawaiiensis*). Twenty five native species were observed within the dryland forest, eleven of them endemic to Hawaii. Four of these (three found during previous surveys only and one during this survey) are Federally listed endangered species.

Impacts and Mitigation Measures

The proposed project is not expected to have a significant adverse impact on the botanical resources of the project area as the dryland forest will be preserved. The Draft EIS will provide additional details on the protection of botanical resources found at the project site.

3.10 Fauna

A biological survey of the project site was conducted by Rana Productions (September 2006). No avian species currently listed as endangered, threatened, or proposed for listing

under either the federal or the State of Hawaii's endangered species programs were observed during the course of the survey.

The indigenous Pacific Golden Plover (*Pluvialis fulva*) was observed during the survey. A number of other introduced birds including the Indian Gray Francolin, Common Myna, Japanese White-eye, House Finch, House Sparrow, Northern Cardinal and Java Sparrow are known to frequent the area.

Mammals such as the mongoose (*Herpestes auropunctatus*), European house mouse (*Mus domesticus*), goats (*Capra h. hircus*), pigs (*Sus s. scrofa*), and feral cats (*Felis catus*) were observed while on the project site.

Impacts and Mitigation Measures

The proposed project is not expected to have a significant adverse impact on the faunal resources of the project area. The faunal survey will be included in the Draft EIS.

3.11 Archaeological and Cultural Resources

The Kona and Kohala Districts are rich in history, predating the arrival of Captain Cook at Kealakekua Bay in 1779. Subsequent to Cook's arrival, Kamehameha I in 1812 established his permanent residence and capital in Kailua. Today, many historic sites serve as reminders of early Hawaiian life and culture. Among those included on National and State Registers of Historic Places are the Imiola Church of Waikoloa, Pu'uhonua O Honaunau (City of Refuge), Ahuaaumi Heiau at Keauhou, and Kamakahonu (Residence of King Kamehameha I) at Lanihau.

Impacts and Mitigation Measures

The Kaloko Makai land plan integrates the natural features of the area, including the preservation of a historic trail (the Road to the Sea) as a neighborhood connecting pedestrian way, which starts outside of the project area and within TMK Nos. (3) 7-3-009: 019, 057, 058, 059, 060, 061 and 062 (the Kaloko Heights project) and runs in the makai direction through almost the entire project area, with a connection to the native dryland forest located on the southern portion of the project site.

An archaeological inventory survey will be conducted for the Draft EIS to determine the presence of any archaeological or historic sites or features that may be located within the project site, and to identify any mitigative measures that may be required. The survey is being conducted in accordance with current historic preservation regulatory review inventory requirements of the State Department of Land and Natural Resources (DLNR) Historic Preservation Division, as contained within Hawaii Administrative Rules, Title 13, DLNR, Subtitle 6, State Historic Preservation Rules.

A cultural impact assessment will also be conducted for the Draft EIS to assess the potential impacts of the proposed project on native Hawaiian cultural resources, practices and beliefs.

In addition to the implementation of an approved archeological preservation and mitigation program, in the event that any archaeological site is found during construction activities, all work will immediately cease pending consultation with the State Department of Land and Natural Resources Historic Preservation Division. The treatment of any remains or artifacts will be in accordance with procedures established by the Hawaii Burial Council and the State Historic Preservation Division. For any construction that may be undertaken outside of the immediate project area for off-site infrastructure, additional site-specific archaeological surveys will be conducted of the affected areas to avoid any adverse impacts.

3.12 Socio-Economic Characteristics

Population

According to the 2000 U.S. Census, the population of County of Hawai‘i was 148,677. Since then, the County’s population has increased to 171,191 persons (State DBEDT, August 2007), representing an annual average rate of increase of 2.4% since 2000. The project site is within the Kalaoa Census Designated Place (CDP), which in 2000 had a population of 6,794. Table 3-1 shows a comparison of the population of the County of Hawaii to the Kalaoa CDP.

Table 3-1
Demographic Characteristics: 2000

Subject	Kalaoa CDP		Hawaii County	
	Number	**Percent**	**Number**	**Percent**
TOTAL POPULATION	**6,794**	**100.00**	**148,677**	**100.00**
AGE				
Under 5 Years	430	6.3	9,130	6.1
5 – 17 Years	1,301	19.1	29,722	20.0
18 – 64 Years	4,456	65.6	89,706	60.3
65 Years and Over	607	8.9	20,119	13.5
Median Age (Years)	38.8	--	38.6	--
RACE (alone or in combination with other races)				
White	3,352	49.3	46,904	31.5
Black or African American	24	1.1	698	0.5
American Indian and Alaska Native	35	0.4	666	0.4
Asian	910	13.4	39,702	26.7
Native Hawaiian and Other Pacific Islander	703	10.3	16,724	11.2
Some Other Race Alone	53	0.8	1,695	1.1
Two or More Races	1,717	25.3	42,288	28.4
HOUSEHOLD (By Type)				
Total Households	2,402	100.00	52,985	100.00
Family Households (families)	1,724	71.8	36,903	69.6
Married Couple	1,389	57.8	26,828	50.6
Female Householder, No Husband Present	234	9.7	7,000	13.2
Non-Families	678	28.2	16,082	30.4
Living Alone	467	19.4	12,240	23.1
65 Years and Over	88	3.7	4,214	8.0
Average Persons Per Household	2.83	--	2.75	--
HOUSING OCCUPANCY AND TENURE				
Total Housing Units	2,541	100.00	62,674	100.00
Occupied Units	2,402	94.5	52,985	84.5
By Owner	1,611	67.1	34,175	64.5
By Renter	791	32.9	18,810	35.5
Vacant Units	139	5.5	9,689	15.5

Source: U.S. Census Bureau, Census 2000 and 2006 County of Hawaii Data Book

The project site is located within Census Tract (CT) 215.01 (also referred to as "North Kona – North"). This area is already the commercial and industrial heart of West Hawaii, serving the Airport and the needs of the visitor, agriculture, ranching, technology and other industries of the western half of the island. North Kona-North is estimated to provide 21% of the Islands employment in 2006 (Mikiko Corporation,

November 2007). However, at the current time, this center of employment supports residences for only 12% of the Island's population, leading to crowding among area households, and a tremendous amount of community into the region by persons who live in distant areas (Mikiko Corporation, November 2007).

Employment

The State of Hawaii, Department of Labor and Industrial Relations (DLIR) reports island of Hawaii unemployment averaging 3.5% in September 2007, up from 2.8% for the twelve months of 2006 (Mikiko Corporation, November 2007). Although rising slightly in recent months, Hawaii's unemployment rates have been among the lowest in the nation in recent years.

Housing

According to the 2006 Hawaii County Data Book, approximately 1,120 building permits were obtained in North Kona, of which 933 were residential permits (County of Hawaii, 2007). Sale recordations of existing homes during the first three quarters of 2007 showed a median single-family price of $408,500 and a median income price of $390,000, according to University of Hawaii Economic Research Organization (UHERO) (Mikiko Corporation, November 2007). These represent 5% and 13% declines from the corresponding periods in 2006, respectively.

Impacts and Mitigation Measures

Population and Housing: Socio-economic conditions and trends will be examined in the Draft EIS. Demographic profiles of the local community, employment, income, job generation and income projections will be studied. The proposed project is conceived in response to anticipated population growth and housing demand from Hawaii families. The project would contribute to the growth of a regional community in North Kona providing a range of housing opportunities to meet demand. The population increase in North Kona region as a result of the project will have impacts upon schools, transportation, and other governmental supported facilities and services. The Draft EIS will include a discussion of the potential impacts of the project upon the governmental supported facilities and services and the appropriate

mitigation measures, as may be required. This should include impacts on current and future public services such as police, fire, emergency, health, education, and housing which are briefly discussed also in Section 3.16.

Economy: In the short term, the project will bring about positive benefits to the local economy. This would include increased expenditures for construction, off-site infrastructure improvements, and construction-related jobs and tax revenue. In the long-term, the proposed development will accommodate new residential homes and commercial centers creating job opportunities in various sectors. There would be increases in State income and general excise tax revenue and in County property tax revenues. An economic and fiscal impact assessment will be conducted for the Draft EIS.

3.13 Air Quality

According to the State DOH, Clean Air Branch, the State of Hawaii did not exceed any federal ambient air quality standards in 2006, and is considered by the U.S. Environmental Protection Agency to be in compliance with all criteria set forth by the National Ambient Air Quality Standards (NAAQS). The State of Hawaii Department of Health (DOH) operates a network of air quality monitoring stations, but very limited data are available for the island of Hawaii, and even less for the Kona area. The closest State DOH monitoring station is located at Konawaena High School in Kealakekua, approximately 14 miles from the Project site. This station is located in a residential and agricultural area and monitors Sulfur Dioxide (SO_2).

The highest 24-hour SO_2 concentration recorded at the Kona station in 2006 was 31 micrograms per cubic meter ($\mu g/m^3$). The Hawaii State Standard level, as well as the Federal Primary Standard level, of SO_2 averaged over 24 hours is 365 $\mu g/m^3$. Thus, levels of SO_2 in the Kona area are well within Federal and State air quality standards.

Within the immediate vicinity of the project site, vehicular-related emissions in the form of carbon monoxide (CO) are generated from traffic traveling along the nearby roadways. It is likely that elevated concentrations of vehicle emissions are confined to limited areas near

the Queen Kaahumanu/Hina Lani Street intersection during periods of traffic back-up when dispersion conditions are poor.

Ambient air quality levels in the immediate project vicinity are also likely to be periodically affected by dust emissions generated from the adjacent quarry operations located south of the site, as well as the construction from the nearby development projects.

Impacts and Mitigation Measures

Potential air quality impacts during construction of the project will be mitigated by complying with the State DOH Hawaii Administrative Rules, Title 11, Chapter 60, Air Pollution. The construction contractor(s) is responsible for complying with the State DOH regulations that prohibit visible dust emissions at property boundaries. Compliance with State regulations will require adequate measures to control airborne dust by methods such as water spraying and sprinkling of loose or exposed soil or ground surface areas and dust-generating equipment, and the use of wind screens in sensitive areas during construction. As may be deemed appropriate, paving of areas early in the construction schedule will also help to control dust. Increased vehicular emissions due to disruption of traffic by construction equipment and/or commuting construction workers can be alleviated by moving the equipment and personnel to the site during off-peak hours.

Air quality in the vicinity of the project site will primarily be affected by vehicular emissions associated with additional traffic. An air quality study will be conducted in conjunction with the Draft EIS to assess project-related vehicular emissions and off-site impacts from electrical demand and solid waste disposal generated by the project, and to identify improvements to mitigate such impacts as may be required.

3.14 Noise

Ambient noise in the vicinity of the project site is predominantly attributed to vehicular traffic along Queen Kaahumanu Highway and Hina Lani Street. Another source of ambient noise is generated by the adjacent quarry operations located south of the project site.

Aircraft operations associated with Kona International Airport at Keahole approximately 3 miles to the north include fixed and rotary wing aircraft which generally overfly the vacant lands between the Airport and Queen Kaahumanu Highway, west-northwest of the project site. The project site is located outside of the Airport's 55 DNL (Day-Night Average Sound Level) noise contour (State Department of Transportation, Airports Division, December 1997). The Kona International Airport Master Plan and Part 150 Noise Compatibility Study Update is underway.

Impacts and Mitigation Measures

Existing and future noise sources that may affect the proposed project site and its surroundings include aircraft noise from Kona International Airport, traffic noise, and construction noise.

Construction noise will be unavoidable during the duration of the construction of the proposed project. Operation of construction equipment and vehicles will raise ambient noise levels in the project vicinity. Mitigation measures such as the use of properly muffled construction equipment and incorporation of State DOH construction noise limits pursuant to the provisions of the State DOH Hawaii Administrative Rules, Title 11, Chapter 46, Community Noise Control are applicable to the project.

Ambient noise levels in the vicinity of the project site will primarily be affected by increased traffic noise levels. A noise study will be conducted in conjunction with the Draft EIS to assess project-related traffic noise impacts and to identify improvements to mitigate such impacts as may be required.

3.15 Visual Resources

The primary public viewpoints of the project site include: 1) mauka views from Queen Kaahumanu Highway, 2) makai views from upper Hina Lani Street in the vicinity of Mamalahoa Highway, 3) mauka views from the Kaloko-Honokohau National Historical Park.

From Queen Kaahumanu Highway, mauka views of the project site are intermittent and limited primarily by topographical features. There are mauka view corridors from the Highway which remain between the existing industrial areas of Kaloko and Kohanaiki.

From upper Hina Lani Street in the vicinity of Mamalahoa Highway, makai views of the project site, are characterized by the expansiveness of the panoramic visual landscape.

As viewed mauka from the Kaloko-Honokohau National Historical Park in the vicinity of the coastline, the project site is partially visible due to its elevated topography. In the overall context of the broader visual landscape, the western slopes of the Hualalai Volcano with its clusters of residential developments dominate the background view, while the buildings of the existing Kaloko Industrial Park are predominant in the foreground view due to the surrounding barren landscape.

Impacts and Mitigation Measures

Development of the proposed project will alter the existing views from Queen Kaahumanu Highway from underdeveloped lands to urban forms. Most distant views of the upland slopes of Hualalai Volcano will not be impeded.

The proposed project is not expected to have a significant adverse impact on the significant vistas identified in the County General Plan (February 2005). Views of the upland areas from the Queen Kaahumanu Highway are limited by local topography and where buildings will front the Highway. The project site will provide expansive makai views of the ocean and coastline from the higher elevations and along Hina Lani Street.

3.16 Public Services and Facilities

3.16.1 Police Protection

The Kealakehe Police Station, located on Queen Kaahumanu Highway less than 2 miles south of the project site, provides service to the North and South Kona Districts. The station has a force of 45 uniformed officers, with ten patrol units assigned to each of the three watches within a 24-hour period. There is also a small substation in Captain Cook for South Kona.

Impacts and Mitigation Measures

The proposed project will require an increase in police staffing and possible expansion of existing police facilities.

3.16.2 Fire Protection

Fire protection service for the project area is provided by the Kailua-Kona Fire Station located approximately 3.6 miles to the southeast near the intersection of Palani Avenue and Queen Kaahumanu Highway. The station serves areas within a 30-miles radius extending from Keauhou to the Kona Village Resort. The station is equipped with a ladder truck, a tanker, a rescue boat, and an Emergency Medical Service (EMS) ambulance. There is also a volunteer-operated fire station along Mamalahoa Highway that provides back-up support to the Kailua-Kona Station. Other fire stations are located in South Kohala, Waikoloa, and Keauhou.

Impacts and Mitigation Measures

The proposed project will provide a water system whereby all appurtenances, hydrant spacing and fire flow requirements will meet the standards of the County of Hawaii. Access roads within the proposed project capable of supporting the County's Fire Department's fire apparatus will be designed and built in accordance with the requirements of the Fire Department.

3.16.3 Health Care Services

The project site is within the service area of the 94-bed Kona Community Hospital located in Kealakekua, approximately 11 miles to the south. Although the hospital provides for most surgical needs, specialty cases are transferred to Honolulu hospitals.

Another medical facility in the region is the North Hawaii Community Hospital in Waimea. The hospital has 50 beds and provides a full spectrum of acute care services, including a 24-hour emergency room, medical/surgical care, obstetrical/gynecological care, cardiac care, and long-term care.

Impacts and Mitigation Measures

The proposed project will increase the demand on the existing medical and emergency services in the North Kona region. There is a recognized need for an

additional ambulance unit to serve this area. The County is working with the State and private developers to provide a new hospital in the Kona area.

3.16.4 Schools

Schools servicing the project area include Kealakehe Elementary, Kealakehe Intermediate and Kealakehe High Schools located approximately two (2) miles to the southeast. The elementary school's capacity is 1,064 students, and the 2007/2008 school year enrollment is 984 students (Personal Communication and Department of Education, September 2007). Kealakehe Intermediate School, with facilities for 1,078 students, has an enrollment of 909 students. Kealakehe High School opened in 1997, and is currently has a student body numbering 1,638.

Impacts and Mitigation Measures

The proposed project will generate increased demand on student enrollment within the region. The Draft EIS will include discussion with the State Department of Education (DOE) regarding satisfying its fair-share requirements for schools and any siting requirements, as appropriate, to serve the proposed project.

3.16.5 Recreational Facilities

The Old Kona Airport State Park, located on the site of the former airport, is the only full-service active recreational park in the region. There are five baseball fields, two soccer fields, two football fields, and four tennis courts. Gym facilities include a full-sized basketball court, a multi-purpose room, and a small office.

Other State Parks located elsewhere in Kona include Kealakekua Bay Historic Park, Kekaha Kai State Park, Keolonahihi State Historic Park, and Napoopoo Beach Park. The playfields at Kealakehe High School are also within the vicinity of the project site.

County parks in the region include Disappearing (White) Sands Beach Park, Hookena Beach Park, Kahaluu Beach Park, Manini Point (Napoopoo), Milolii Beach Park, and Pahoehoe Beach Park. The Kona Community Aquatic Center, administered by the County of Hawaii, provides facilities for lap swimming, and also includes a water-play area for young children.

Tennis courts are available at Greenwell Park in Captain Cook, Higashihara Park in Keauhou, and at Kailua Playground. There are also numerous private, semi-private, and resort-owned golf courses in the area which are also open to the public.

The Honokohau Small Boat Harbor is located approximately 1.1 miles southwest of the project site on Honokohau Bay. Approximately 450 berthing slips are provided for both recreational and commercial vessels. The Harbor is administered by the State Department of Transportation (DOT), Harbors Division.

The 1,178-acre Kaloko-Honokohau National Historical Park, located west of the project site, makai of Queen Kaahumanu Highway, is administered by the National Park Service. The Park contains extensive natural and cultural resources, such as archaeological sites, wetlands and fishponds, and is designated as a national historical landmark.

Impacts and Mitigation Measures

The proposed project will increase demand for recreational facilities in the region. Both active and passive recreation parks are planned for the project which will comply with applicable County park dedication requirements. Recreation needs will be discussed in the Draft EIS in consultation with the Department of Parks and Recreation.

3.17 Infrastructure and Utilities

3.17.1 Water System

Potable water is provided by the County of Hawaii Department of Water Supply (DWS) from its North Kona Water System. The Kahaluu Well Field and Kahaluu Shaft located about nine (9) miles south of the project site are the primary sources of supply for the system. Water is transported from the Kahaluu sources through two major pipelines: the upper service line extending along Mamalahoa Highway to Kalaoa (north of Kaloko), and the lower service line extending along Kuakini and Queen Kaahumanu Highways to Kona International Airport at Keahole. The Mamalahoa route includes 12- and 8-inch diameter pipelines. The Kuakini/Queen Kaahumanu route, which starts at the Kahaluu shaft, includes a 24-inch diameter pipeline that reduces to a 20-inch line about 3.5 miles south of Kailua-Kona, to a 16-inch line at Kailua-Kona, and to a 12-inch line between the Honokohau Small

Boat Harbor and Kona International Airport at Keahole. A series of booster pumps and reservoirs provide support for transmission and storage.

In the vicinity of the project site, the main supply line on Queen Kaahumanu Highway is a 12-inch line. On Hina Lani Street, there are three (3) 1.0 MG water storage tanks located at spillway elevations of 934 feet, 650 feet, and 363 feet, and one (1) 1.0 MG control tank at 138 feet. These are connected by 16- or 20-inch water lines which extend along the length of Hina Lani Street to provide interconnection between the upper and lower service areas.

The County Department of Water Supply does not currently serve the undeveloped project site, although 3 DWS potable water reservoirs are located within the project site. The Draft EIS will discuss the potential impacts of the project and other developments in the region on DWS water system facilities.

Impacts and Mitigation Measures

The proposed project's water demand will require additional water source, storage and transmission facilities. A Preliminary Engineering Report (PER) will be prepared for the Draft EIS to determine the water demand and associated facility requirements for the proposed project. The proposed project will construct the required water system facilities which will be dedicated to the County's Department of Water Supply.

3.17.2 Wastewater System

There are no municipal sewer system serving the project site. The State Department of Health (DOH) no longer approves the use of cesspools for sewage disposal, and currently requires the installation of septic tanks and leaching fields or individual wastewater treatment systems.

The Kealakehe Wastewater Treatment Plant (KWWTP) is located approximately 1.5 miles south of the project site, makai of Queen Kaahumanu Highway and adjacent to the southern boundary of the Honokohau Small Boat Harbor. The facility is presently designed to treat approximately 5.3 million gallons per day (mgd) and is presently treating approximately 2.0 mgd of wastewater. KWWTP currently has the ability to treat wastewater to the R2 level. Currently the Swing Zone is receiving R2 water from the plant. However, there is limited

demand for the recycled water, the plant has been treating the wastewater to the R3 level and disposing the effluent in a seepage pit.

Impacts and Mitigation Measures

A PER will be prepared for the Draft EIS to determine the projected wastewater flow and explore associated facility requirements for the proposed project. It is anticipated that the project will likely connect to the County Wastewater System, but possible options include construction of a wastewater treatment plant.

3.17.3 Drainage System

There are no streams or natural drainageways in or near the project site. The surrounding area consists of barren aa and pahoehoe lava fields which are highly permeable. The natural drainage pattern consists of rainfall percolating through layers of very porous lava to the subsurface strata.

In the vicinity of the project site, the only major drainage system is located along Queen Kaahumanu Highway. An existing culvert and headwall conveys runoff from mauka areas, underneath the Highway. The drainage system along Hina Lani Street consists of roadside swales and percolating dry wells which divert runoff from the roadway.

Impacts and Mitigation Measures

A PER will be prepared for the Draft EIS to determine the drainage improvement requirements for the proposed project. In order to comply with the County's policy of no net increase in storm water runoff volume, detention/retention systems within each development area may need to be established.

3.17.4 Roadway System and Traffic

Major roadways providing access to the project site include Queen Kaahumanu Highway, Hina Lani Street, and Mamalahoa Highway (Hawaii Belt Road). Primary access to the project site is from Queen Kaahumanu Highway at its intersection with Hina Lani Street.

Queen Kaahumanu Highway is a two-way, two-lane arterial State highway extending from Kawaihae to Kailua-Kona in a north-south direction. It is the primary highway providing access along the North Kona and South Kohala coasts. A left-turn lane and right-turn lane

are provided at its signalized intersection with Hina Lani Street. Queen Kaahumanu is currently being expanded to a four (4) lane roadway in two (2) phases. Phase I of the expansion, which will involve road widening from Henry Street to Kealakehe Parkway, is currently underway and is anticipated to be completed by May 2008. Plans, Specifications & Estimates (PS & E) for Phase II of the expansion, which will involve road widening of the area from Kealakehe Parkway to Keahole Airport, is proposed to be completed before the end of 2007.

Hina Lani Street is a two-way, two-lane County collector road bisecting the project site and provides a mauka-makai connection between Queen Kaahumanu Highway and Mamalahoa Highway. The intersection of Hina Lani Street and Queen Kaahumanu Highway is signalized. Mamalahoa Highway and Hina Lani Street is also signalized.

Approximately 375 feet mauka of Queen Kaahumanu Highway, Hina Lani Street intersects with Kanalani Street, a two-way, two-lane County roadway providing north-south access through the existing Kaloko Industrial Park.

Approximately 2,000 feet mauka of Queen Kaahumanu Highway, Hina Lani Street intersects with Kamanu Street, a two-way, two-lane County roadway traversing in a north-south direction through the existing Kaloko Industrial Park.

Mamalahoa Highway is a two-way, two-lane State arterial highway that is a continuation of a "belt" road that encircles the Island of Hawaii. Mamalahoa Highway intersects with Hina Lani Street approximately three (3) miles mauka of Queen Kaahumanu Highway.

Impacts and Mitigation Measures

During construction of the proposed project, short-term traffic impacts will occur from construction vehicles such as earthmovers and heavy trucks transporting equipment and building materials. To avoid potential congestion, the movement or transport of large, slow-moving, heavy construction vehicles or equipment will be restricted during the AM and PM peak traffic hours. Flaggers or off-duty police officers will be employed to direct traffic during significant phases of construction to minimize traffic congestion.

A Traffic Impact Assessment Report (TIAR) will be prepared for the Draft EIS. The traffic impact study will analyze potential traffic impacts on the roadway system within the project vicinity resulting from the proposed development and will identify appropriate mitigation measures, as may be required. The TIAR will include an analysis of traffic counts for existing and future conditions associated with project build-out. Level of Services (LOS), circulation patterns and mitigation measures will be addressed in the TIAR.

3.17.5 Solid Waste

Hawaii County does not provide waste collection services. Private companies haul to County landfills approximately 50% of the waste generated in areas that have relatively dense residential development (Harding ESE, December 31, 2002). The remaining 50%, or possibly greater, is self-hauled. Most self-hauled waste is taken to the County's transfer stations, which are provided for disposal of waste from single-family residences. The five transfer stations in North and South Kona are located in Kailua, Keauhou, Keei, Wailea, and Milolii are transfer stations.

Solid waste from the region is disposed of at the County of Hawaii's Puu Anahulu Landfill located approximately 18 miles north of the project site. Puu Anahulu Landfill is a modern, state-of-the-art facility. As of 2002, Puu Anahulu has more than 12,000,000 cubic yards of permitted air space, which would accommodate the current waste stream from West Hawaii for about 40 years (Harding ESE, December 31, 2002). Puu Anahulu landfill is operated by County personnel with management assistance from Waste Management of Hawaii, Inc. The former Kailua (Kealakehe) Landfill is presently used as a transfer station where refuse collected from residential areas is compacted for transport to the Puu Anahulu Landfill.

Impacts and Mitigation Measures

The Draft EIS will include more information on the impact of the proposed project on landfill capacity and future solid waste disposal solutions. To reduce solid waste generation, the proposed project will incorporate waste diversion and reduction facilities into its design and recycling will be encouraged.

During construction, the proposed project will develop and implement a trash management and recycling program to minimize impacts to the local landfill.

3.17.6 Electrical and Communications Systems

Electrical System: Electrical service in the County of Hawaii is provided by the Hawaii Electric Light Company (HELCO). In the vicinity of the project site, electrical power is provided by HELCO's Keahole generating plant, which has a current generating capacity of 86 megawatts. Power to the area is supplied via a 69kV transmission line along Queen Kaahumanu Highway. Existing installations in the area are generally underground facilities except for a few overhead facilities.

Impacts and Mitigation Measures

Electrical power supply for the proposed project will be provided by the existing power grid that traverses through the project site. A preliminary electric and communications system report will be prepared for the Draft EIS. The report will include the electrical demands for the proposed project and associated improvements that will be required.

Communications System: Telephone service to the area is provided by Hawaiian TelCom from their Kailua-Kona electronic switching facilities. The area is served by trunk cables supported on HELCO's 69 kV poles mauka of Queen Kaahumanu Highway.

According to preliminary consultation with GTE Hawaiian Telephone Company, telephone service for the proposed development can be provided utilizing HELCO power poles and direct bury cables. Fiber-optic cables are available at the existing Kaloko Industrial Park and could be extended to the proposed project.

Impacts and Mitigation Measures

TelCom will be consulted with during the Draft EIS. A preliminary communications system report will be prepared for the Draft EIS and will include associated improvements required for the proposed project.

Cablevision System: Oceanic/Time-Warner Cable provides cable television service for the West Hawaii region. Cable television service is provided from their main facility located in Kailua town.

Impacts and Mitigation Measures

A preliminary communications and cablevision system report will be prepared for the Draft EIS. The report will include the communications and cablevision system demands for the proposed project and associated improvements that will be required.

4. PROBABLE IMPACTS AND MITIGATIVE MEASURES

Unavoidable adverse impacts may result from the development of the Kaloko Makai project. Specific studies will be conducted for the Draft EIS to investigate the potential impacts of the project, and measures will be recommended to mitigate these impacts.

The Draft EIS will discuss probable impacts, short-term and long-term, and propose mitigative measures to minimize adverse effects related to the proposed project. Short-term impacts are generally associated with construction, and prevail only for the duration of the construction period. Long-term effects are those that result from completion of the improvements, or result from on-going operations.

4.1 Short-Term Impacts

Construction-related activities create noise, increase air pollution, disrupt traffic circulation and generate dust from various construction vehicles and equipment. During grading operations, portions of the existing vegetation cover will be removed and surface soils may be subject to erosion. Implementation of best management practices (BMPs) during the construction phase will minimize such temporary conditions. The construction activities will be visible from off-site locations.

Numerous jobs will be created during the construction phase of the project. This will result in short-term positive impacts on employment within the area. There will also be substantial governmental revenues from construction expenses.

4.2 Long-Term Impacts

Following construction, traffic volumes will increase, water resources will be used, and demand on public services and facilities will rise. The protection of archaeological resources will be required in consultation with the State Historic Preservation Division (SHPD). Positive benefits to the community include an increase in employment, government revenues from sales, income and property taxes will be enhanced.

Kaloko Makai will provide a wide range of residential opportunities for professionals, middle- and low-income residents, retirees and second-home buyers who desire to work and live in the area. Kaloko Makai will provide much needed housing in the Kona area.

The Draft EIS will include an analysis of the potential impacts of the proposed project to natural and human environments.

4.3 Secondary and Cumulative Impacts

The Draft EIS will include an analysis of the potential secondary and cumulative impacts of the proposed project to natural and human environments. The proposed project is anticipated to have cumulative effects along with other planned developments upon the environment and will involve a larger commitment for larger actions. The Draft EIS will include an analysis of the potential secondary and cumulative impacts of the proposed project to the natural and human environments.

4.4 Studies

The following is a list of studies that will be conducted to analyze the potential impacts of the proposed development. The Draft EIS will summarize the analyses and findings of these studies. Copies of the studies will be included as appendices in the Draft EIS.

- Archaeological Inventory Survey
- Cultural Impact Assessment
- Botanical Survey
- Faunal Survey
- Traffic Impact Assessment
- Ground Water Quality Assessment
- Marine Water Quality Assessment
- Preliminary Engineering Report
- Noise Impact Analysis
- Air Quality Analysis
- Economic and Fiscal Impact Assessment
- Social Impacts Assessment

5. CONFORMANCE TO PLANS, POLICIES, AND CONTROLS

The project's consistency with the relevant State and County of Hawaii land use plans, policies and controls is discussed below.

5.1 State of Hawaii

5.1.1 Hawaii State Plan

The Hawaii State Plan, embodied in Chapter 226, Hawaii Revised Statutes (HRS), serves as a guide for goals, objectives, policies, and priorities for the State. The State Plan provides a basis for determining priorities, allocating limited resources, and improving coordination of State and County plans, policies, programs, projects, and regulatory activities. A discussion of the proposed project's consistency with the applicable State Plan objectives and policies listed below will be included in the Draft EIS:

> ***SEC. 226-5 Objectives and policies for population.***
> *(b)(1) Manage the population growth statewide in a manner that provides increased opportunities for Hawaii's people to pursue their physical, social, and economic aspirations while recognizing the unique needs of each county.*
>
> *(b)(2) Encourage an increase in economic activities and employment opportunities on the neighbor islands consistent with community needs and desires.*
>
> *(b)(7) Plan the development and availability of land and water resources in a coordinated manner so as to provide for the desired levels of growth in each geographic area.*
>
> ***SEC. 226-6 Objectives and policies for the economy – in general.***
> *(a)(1) Increased and diversified employment opportunities to achieve full employment, increased income and job choice, and improved living standards for Hawaii's people.*
>
> *(b)(2) Promote Hawaii as an attractive market for environmentally and socially sound investment activities that benefit Hawaii's people.*
>
> *(b)(6) Strive to achieve a level of construction activity responsive to, and consistent with, state growth objectives.*
>
> *(b)(10) Stimulate the development and expansion of economic activities which will benefit areas with substantial or expected employment problems.*
>
> *(b)(14) Promote and protect intangible resources in Hawaii, such as scenic beauty and the aloha spirit, which are vital to a healthy economy.*

SEC. 226-7 Objectives and policies for the economy – agriculture.
(a)(3) An agricultural industry that continues to constitute a dynamic and essential component of Hawaii's strategic, economic, and social well-being.

(b)(2) Encourage agriculture by making best use of natural resources.

(b)(16) Facilitate the transition of agricultural lands in economically nonfeasible agricultural production to economically viable agricultural use.

SEC. 226-7 Objectives and policies for the economy – visitor industry.
(b)(3) Improve the quality of existing visitor destination areas.

SEC. 226-10 Objectives and policies for the economy – potential growth activities.
(a) Planning for the State's economy with regard to potential growth activities shall be directed towards achievement of the objective of development and expansion of potential growth activities that serve to increase and diversify Hawaii's economic base.

(b)(6) Provide public incentives and encourage private initiative to attract new industries that best support Hawaii's social, economic, physical and environmental objectives.

SEC. 226-11 Objectives and policies for the physical environment – land-based, shoreline, and marine resources.
(a)(1) Prudent use of Hawaii's land-based, shoreline, and marine resources.

(a)(2) Effective protection of Hawaii's unique and fragile environmental resources.

(b)(1) Exercise an overall conservation ethic in the use of Hawaii's natural resources.

(b)(2) Ensure compatibility between land-based and water-based activities and natural resources and ecological systems.

(b)(3) Take into account the physical attributes of areas when planning and designing activities and facilities.

(b)(4) Manage natural resources and environs to encourage their beneficial and multiple use without generating costly or irreparable environmental damage.

(b)(6) Encourage the protection of rare or endangered plant and animal species and habitats native to Hawaii.

(b)(8) Pursue compatible relationships among activities, facilities, and natural resources.

(b)(9) Promote increased accessibility and prudent use of inland and shoreline areas for public recreational, educational, and scientific purposes.

SEC. 226-12 Objectives and policies for the physical environment – scenic, natural beauty, and historic resources.

(b)(1) Promote the preservation and restoration of significant natural and historic resources.

(b)(2) Provide incentives to maintain and enhance historic, cultural, and scenic amenities.

(b)(3) Promote the preservation of views and vistas to enhance the visual and aesthetic enjoyment of mountains, ocean, scenic landscapes, and other natural features.

(b)(4) Protect those special areas, structures, and elements that are an integral and functional part of Hawaii's ethnic and cultural heritage.

(b)(5) Encourage the design of developments and activities that complement the natural beauty of the islands.

SEC. 226-13 Objectives and policies for the physical environment – land, air and water quality.

(a)(1) Maintenance and pursuit of improved quality in Hawaii's land, air, and water resources.

(b)(3) Promote effective measures to achieve desired quality in Hawaii's surface, ground, and coastal waters.

(b)(4) Encourage actions to maintain or improve aural and air quality levels to enhance the health and well-being of Hawaii's people.

(b)(5) Reduce the threat to life and property from erosion, flooding, tsunamis, hurricanes, earthquakes, volcanic eruptions, and other natural or man-induced hazards and disasters.

(b)(6) Encourage design and construction practices that enhance the physical qualities of Hawaii's communities.

(b)(7) Encourage urban developments in close proximity to existing services and facilities.

SEC. 226-14 Objectives and policies for facility systems – general.

(b)(2) Encourage flexibility in the design and development of facility systems to promote prudent use of resources and accommodate changing public demands and priorities.

(b)(3) Ensure that required facility systems can be supported within resource capacities and at a reasonable cost to the user.

(b)(4) Pursue alternative methods of financing programs and projects and cost-saving techniques in the planning, construction, and maintenance of facility systems.

SEC. 226-15 Objectives and policies for facility systems – solid and liquid wastes.

(a)(1) Provision of adequate sewerage facilities for physical and economic activities that alleviate problems in housing, employment, mobility, and other areas.

(b)(1) Encourage the adequate development of sewerage facilities that complement planned growth.

(b)(2) Promote re-use and recycling to reduce solid and liquid wastes and employ a conservation ethic.

SEC. 226-16 Objective and policies for facility systems – water.

(a) Planning for the State's facility systems with regard to water shall be directed towards achievement of the objective of the provision of water to adequately accommodate domestic, agricultural, commercial, industrial, recreational, and other needs within resource capacities.

(b)(1) Coordinate development of land use activities with existing and potential water supply.

(b)(3) Reclaim and encourage the productive use of runoff water and wastewater discharges.

(b)(4) Assist in improving the quality, efficiency, service, and storage capabilities of water systems for domestic and agricultural use.

(b)(5) Support water supply services to areas experiencing critical water problems.

(b)(6) Promote water conservation programs and practices in government, private industry, and the general public to help ensure adequate water to meet long-term needs.

SEC. 226-17 Objective and policies for facility systems – transportation.

(b)(1) Design, program, and develop a multi-modal system in conformance with desired growth and physical development as stated in this chapter

(b)(3) Encourage a reasonable distribution of financial responsibilities for transportation among participating governmental and private parties

(b)(6) Encourage transportation systems that serve to accommodate present and future development needs of communities.

(b)(9) Encourage the development of transportation systems and programs which would assist statewide economic growth and diversification.

(b)(10) Encourage the design and development of transportation systems sensitive to the needs of affected communities and the quality of Hawaii's natural environment.

(b)(11) Encourage safe and convenient use of low-cost, energy-efficient, non-polluting means of transportation.

(b)(12) Coordinate intergovernmental land use and transportation planning activities to ensue the timely delivery of supporting transportation infrastructure in order to accommodate planned growth objectives.

SEC. 226-17 Objective and policies for facility systems – telecommunications.
(b)(3) Promote efficient management and use of existing telecommunications systems and services.

SEC. 226-19 Objectives and policies for socio-cultural advancement – housing.
(a)(1) Greater opportunities for Hawaii's people to secure reasonably priced, safe, sanitary, and livable homes, located in suitable environments that satisfactorily accommodate the needs and desires of families and individuals, through collaboration and cooperation between government and nonprofit and for-profit developers to ensure that more affordable housing is made available to very low-, low- and moderate-income segments of Hawaii's population.

(a)(2) The orderly development of residential areas sensitive to community needs and other land uses.

(a)(3) The development and provision of affordable rental housing by the State to meet the housing needs of Hawaii's people.

(b)(1) Effectively accommodate the housing needs of Hawaii's people.

(b)(2) Stimulate and promote feasible approaches that increase housing choices for low-income, moderate-income, and gap-group households.

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

(b)(5) Promote design and location of housing developments taking into account the physical setting, accessibility to public facilities and services, and other concerns of existing communities and surrounding areas.

(b)(6) Facilitate the use of available vacant, developable, and underutilized urban lands for housing.

(b)(7) Foster a variety of lifestyles traditional to Hawaii through the design and maintenance of neighborhoods that reflect the culture and values of the community.

SEC. 226-21 Objective and policies for socio-cultural advancement – education.

(b)(2) Ensure the provision of adequate and accessible educational services and facilities that are designed to meet individual and community needs.

SEC. 226-23 Objectives and policies of socio-cultural advancement – leisure.

(b)(4) Promote the recreational and educational potential of natural resources having scenic, open space, cultural, historical, geological, or biological values while ensuring that their inherent values are preserved.

(b)(6) Assure the availability of sufficient resources to provide for future cultural, artistic, and recreational needs.

SEC. 226-25 Objectives and policies of socio-cultural advancement – culture.

(a) Planning for the State's socio-cultural advancement with regard to culture shall be directed toward the achievement of the objective of enhancement of cultural identifies, traditions, values, customs, and arts of Hawaii's people.

(b)(1) Foster increased knowledge and understanding of Hawaii's ethnic and cultural heritages and history of Hawaii.

(b)(2) Support the activities and conditions to promote cultural values, customs, and arts that enrich the lifestyles of Hawaii's people and which are sensitive and responsive to family and community needs.

(b)(3) Encourage increased awareness of the effects of the proposed public and private actions on the integrity and quality of cultural and community lifestyles in Hawaii.

SEC. 226-103 Economic priority guidelines.

(a)(1)(A) Encourage investments which:

(i) Reflect long term commitments to the State

(v) Are sensitive to community needs and priorities

(e)(1) Maintain and improve water conservation programs to reduce the overall water consumption rate.

(e)(2) Encourage the improvement of irrigation technology and promote the use of nonpotable water for agricultural and landscaping purposes.

(e)(3) Increase the support for research and development of economically feasible alternative water resources.

(e)(4) Explore alternative funding sources and approaches to support future water development programs and water system improvements.

(f)(1) Encourage the development, demonstration, and commercialization of renewable energy sources.

(f)(2) Initiate, maintain, and improve energy conservation programs aimed at reducing energy waste and increasing public awareness of the need to conserve energy.

(f)(3) Provide incentives to encourage the use of energy conserving technology in residential, industrial, and other buildings.

(f)(4) Encourage the development and use of energy conserving and cost-efficient transportation systems.

SEC. 226-104 Population growth and land resources priority guidelines.

(a)(1) Encourage planning and resource management to insure that population growth rates throughout the State are consistent with available and planned resource capacities and reflect the needs and desires of Hawaii's people.

(a)(3)Ensure that adequate support services and facilities are provided to accommodate the desired distribution of future growth throughout the State.

(a)(4) Encourage major state and federal investments and services to promote economic development and private investment to the neighbor islands, as appropriate.

(b)(1) Encourage urban growth primarily to existing urban areas where adequate public facilities are already available or can be provided with reasonable public expenditures, and away from areas where other important benefits are present, such as protection of important agricultural land or preservation of lifestyles.

(b)(2) Make available marginal or non-essential agricultural lands for appropriate urban uses while maintaining agricultural lands of importance in the agricultural district.

(b)(4) Encourage restriction of new urban development in areas where water is insufficient from any source for both agricultural and domestic use.

(b)(5) In order to preserve green belts, give priority to state capital-improvement funds which encourage location of urban development within existing urban areas except where compelling public interest dictates development of a noncontiguous new urban core.

(b)(9) Direct future urban development away from critical environmental areas or impose mitigating measures so that negative impacts on the environment would be minimized.

(b)(10) Identify critical environmental areas in Hawaii to include but not be limited to the following: watershed and recharge areas; wildlife habitats (on land and in the ocean); areas with endangered species of plants and wildlife; natural streams and water bodies; scenic and recreation shoreline resources; open space and natural areas; historic and cultural sites; areas particularly sensitive to reduction in water and air quality; and scenic resources.

(b)(12) Utilize Hawaii's limited land resources wisely, providing adequate land to accommodate projected population and economic growth needs while ensuring the protection of the environment and the availability of the shoreline, conservation lands, and other limited resources for future generations.

(b)(13) Protect and enhance Hawaii's shoreline, open spaces, and scenic resources.

SEC. 226-106 Affordable housing priority guidelines.
(a)(1) Seek to use marginal or nonessential agricultural land and public land to meet housing needs of low- and moderate income and gap-group households.

(a)(2) Encourage the use of alternative construction and development methods as a means of reducing production costs.

(a)(6) Encourage public and private sector cooperation in the development of rental housing alternatives.

(a)(8) Give higher priority to the provision of quality housing that is affordable for Hawaii's residents and less priority to development of housing intended primarily for individuals outside of Hawaii.

5.1.2 State Functional Plans

State Functional Plans serve as the primary implementing vehicle for goals, objectives and policies of the Hawaii State Plan. The functional plans guide implementation of State and County actions in the following 14 areas: agriculture, transportation, conservation lands, education, tourism, water resources, energy, recreation, historic and preservation, health, housing, higher education, employment, and human services. The functional plans applicable to the proposed Kaloko Makai project, along with each plan's applicable objectives, policies, and actions will be discussed in the Draft EIS.

State Agriculture Functional Plan

Issue Area: Land and Water

Policy (H)(2) Conserve the protect important agricultural lands in accordance with the Hawaii State Constitution.

State Conservation Lands Functional Plan

Issue Area I: Inventories of Resources and Background Information and Basic Research

Policy IA(5): Conduct inventories of aquatic and terrestrial resources.

Policy IA(6): Survey important native aquatic and terrestrial ecosystems and species.

Issue Area II: Management

Policy IIB(1): Develop protection and preservation of habitats of rare and endangered wildlife and native ecosystems in Hawaii.

Policy IID(3): Develop recreational and archaeological resources on the shoreline and mauka areas.

State Education Functional Plan

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

B(1) Alternatives for Funding and Delivery: Explore alternatives for funding and delivery of educational services to improve the overall quality of education.

State Historic Preservation Functional Plan

Policy B.1: Provide timely historic property reviews which are integrated effectively into the land use regulatory system.

Policy C.2: Encourage the preservation and maintenance of historic properties through economic incentives and support.

Policy E.1: Provide support and coordination to activities involved with the collection and conservation of historic records and materials.

State Housing Functional Plan

Issue Area: Homeownership

Policy A(2): Encourage increased private sector participation in the development of affordable for-sale housing units.

Policy A(3): Ensure that (1) housing project and (2) projects which impact housing provide a fair share/adequate amount of affordable homeownership opportunities.

Issue Area: Rental Housing

Policy B(2): Encourage increased private sector participation in the development of affordable rental housing.

Policy B(3): Ensure that projects which impact housing provide affordable rental opportunities for employees.

Issue Area: Rental Housing for the Elderly and Other Special Need Groups

Policy C(7): Integrate special needs housing in new and existing neighborhoods.

State Recreation Functional Plan

Policy I-A(4:) Develop areas mauka of existing beach parks to increase their capacities to diversify and encourage activities away from the shoreline.

Policy II-A(1): Plan and develop facilities and areas that feature the natural and historic/cultural resources of Hawaii. Develop interpretive programs for these areas.

Policy II-C(1): Meet the demand for recreational opportunities in local communities.

State Transportation Functional Plan

Policy I.A.1: Increase transportation capacity and modernize transportation infrastructure in accordance with existing master plans and laws requiring accessibility for people with disabilities.

Policy I.A.2: Improve regional mobility in areas of the State experiencing rapid urban growth and road congestion.

Policy I.A.3: Promote the development of public transportation systems.

Policy I.B.1: Close the gap between where people live and work through decentralization, mixed zoning and related initiatives.

Policy I.C.1: Increase the capacity of the existing transportation infrastructure.

Policy III.A.2: Pursue private sector participation in the financing of transportation systems, developments and projects.

State Water Functional Plan

Policy B(2): Manage surface drainage areas and ground water aquifers to prevent contamination of sources of water supply.

Policy D(1): Promote the planning and development of new water supplies, giving priority support to areas experiencing critical water problems.

Policy E(2): Increase the use of treated sewage effluent and other nonpotable water for irrigation purposes.

5.1.3 State Land Use District

The State Land Use Law, Chapter 205, HRS, is intended to preserve, protect and encourage the development of lands in the State for uses which are best suited to the public health and welfare for Hawaii's people. All lands in the State are classified into four land

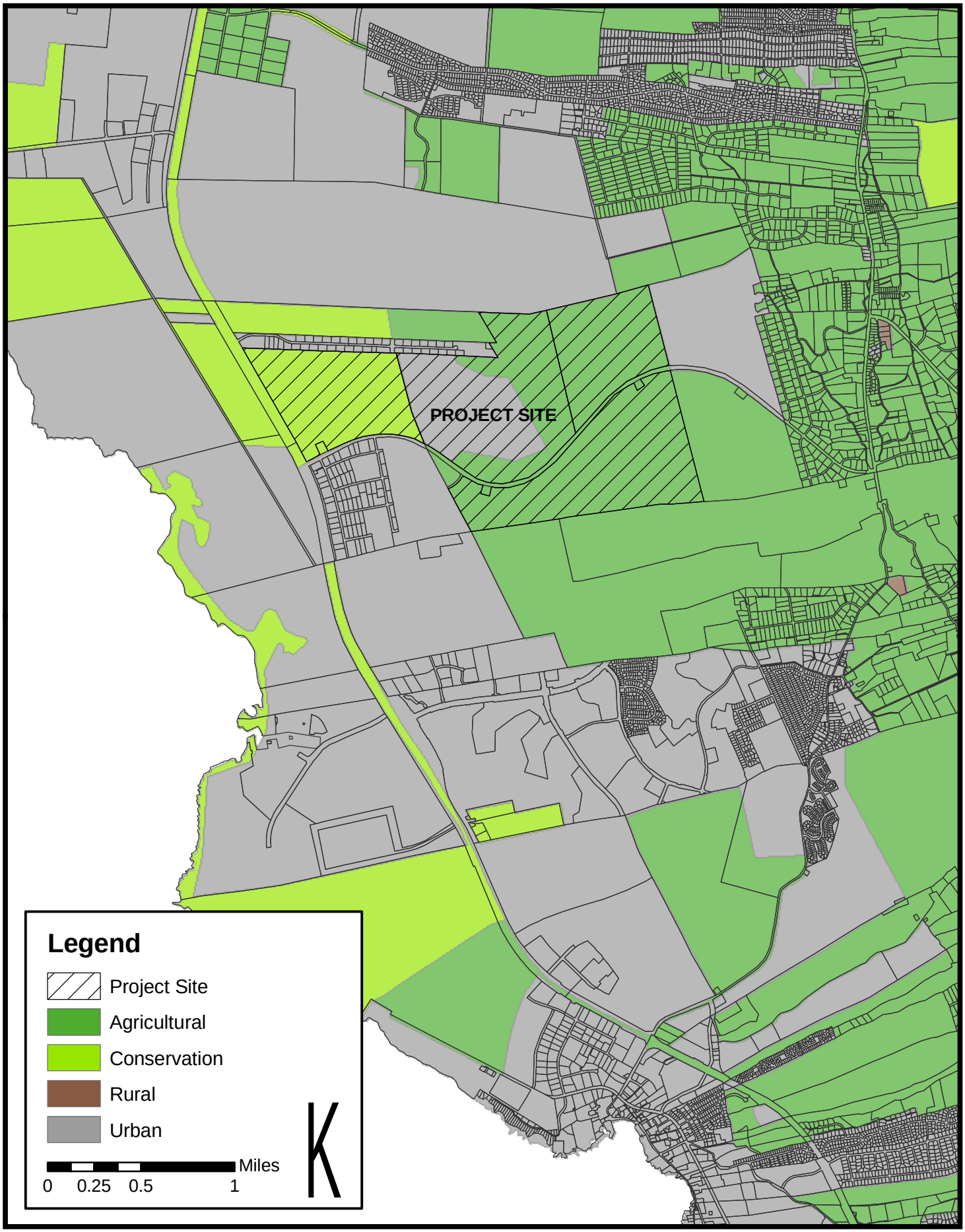
use districts by the State Land Use Commission: Urban, Agricultural, Conservation, and Rural. The project site is designated within the State Conservation, Agricultural and Urban Districts (see Figure 5-1):

- The Urban Districts includes "*lands characterized by city-like concentrations of people, structures, streets, urban level or services and other related uses*."
- Rural districts include areas of *"land composed of primarily small farms mixed with very low density residential lots, which may be shown by a minimum density of not more than once house per one-half acre and a minimum lot size of not less than one-half acre shall".*
- The Agricultural District includes lands with a "*high capacity for intensive cultivation as well as those with low capacity."*
- Conservation Districts includes areas necessary for "*(1) protecting watersheds and water sources; (2) preserving scenic and historic areas; (3) providing park lands, wilderness, and beach reserves; (4) conserving indigenous or endemic plants, forestry, fish, and wildlife; (5) preventing floods and soil erosion; (6) retaining open space areas to enhance the present or potential value of abutting or surrounding communities; (7) using areas of value for recreational purpose, other related activities, and other permitted uses not detrimental to a multi-use conservation concept."*

  Within the Conservation District, there are five subzones: Protective (P), Limited (L), Resource (R), General (G), and Special (S). Approximately 20% of the project site (Parcel 27) is located within the General subzone (see Figure 5-2). The objective of this subzone is to "*designate open space where specific conservation uses ay not be defined, but where urban use would be premature."*

  (b) The (G) subzone shall encompass:

  (1) Lands with topography, soils, climate, or other related environmental factors that may not be normally adaptable or presently needed for urban, rural, or agricultural use; and



WILSON OKAMOTO CORPORATION

FIGURE 5-1
State Land Use Districts
Kaloko Makai

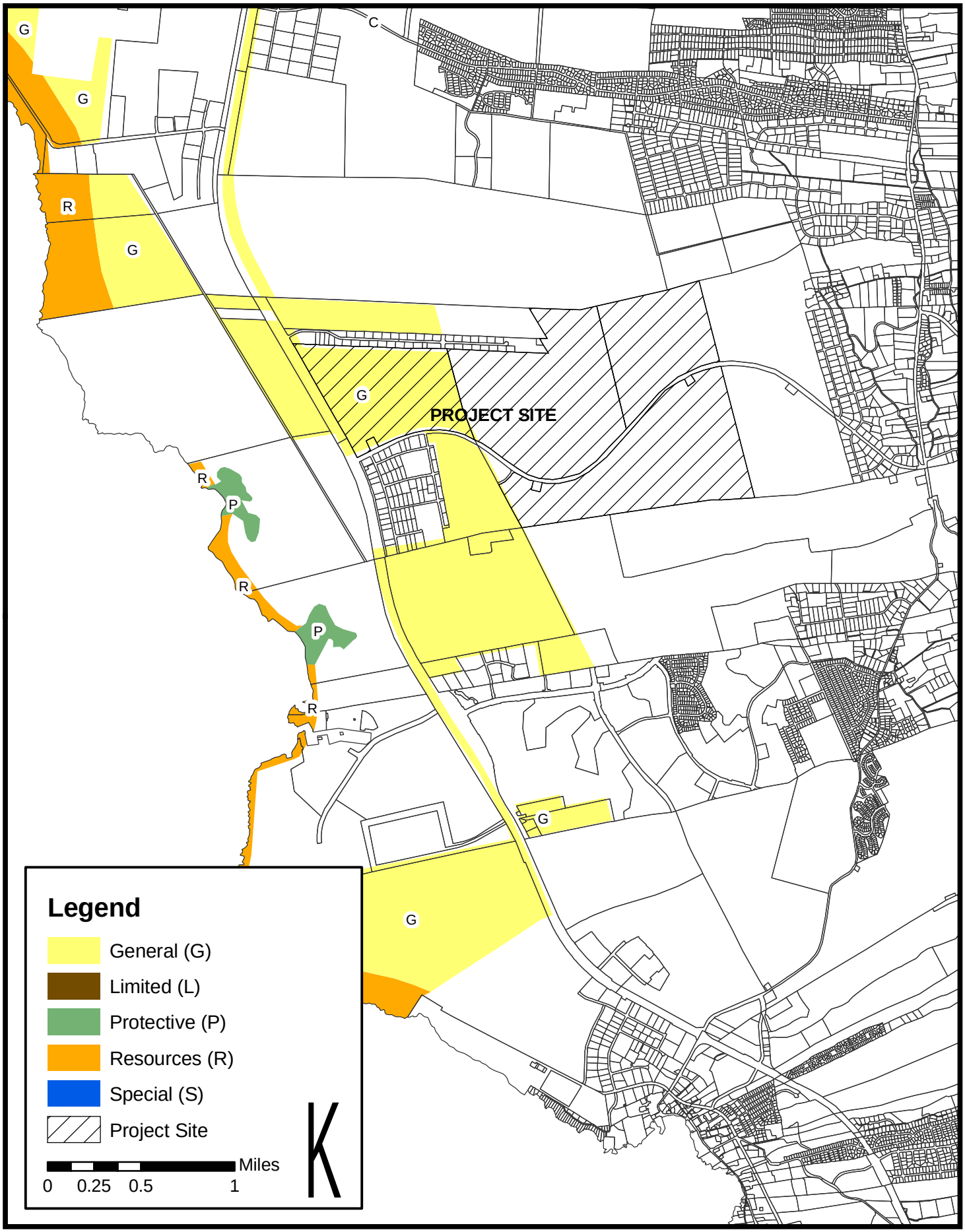


FIGURE 5-2
State Conservation District Subzones
Kaloko Makai

> *(2) Lands suitable for farming, flower gardening, operation of nurseries or orchards, grazing; including facilities accessory to these uses when the facilities are compatible with the natural physical environment.*

The proposed project will require a State Land Use District Boundary Amendment to reclassify lands designated for the State Conservation and Agricultural Districts to the State Urban District to develop the project, as shown in Figure 1-2. A petition requesting the subject reclassification has been filed with the State Land Use Commission in conjunction with this EISPN.

The State Land Use Commission, in accordance with Chapter 15-15, Hawaii Administrative Rules (HAR), must specifically consider the extent to which the proposed reclassification conforms to the applicable District standards. The standards for determining the boundaries for the Urban District include eight (8) areas which are listed below. A discussion of the conformance of the proposed reclassification to the Urban District standards will be included in the Draft EIS.

(1) It shall include lands characterized by "city-like" concentrations of people, structures, streets, urban level of services and other related land uses;

(2) It shall take into consideration the following specific factors:

(A) Proximity to centers of trading and employment except where the development would generate new centers of trading and employment;

(B) Availability of basic services such as schools, parks, wastewater systems, solid waste disposal, drainage, water, transportation systems, public utilities, and police and fire protection; and

(C) Sufficient reserve areas for foreseeable urban growth;

(3) It shall include lands with satisfactory topography, drainage, and reasonably free from the danger of any flood, tsunami, unstable soil conditions, and other adverse environmental effects;

(4) Land contiguous with existing urban areas shall be given more consideration than non-contiguous land, and particularly when indicated for future urban use on state or county general plans;

(5) It shall include lands in appropriate locations for new urban concentrations and shall give consideration to areas of urban growth as shown on the state and county general plans;

(6) It may include lands which do not conform to the standards in paragraphs (1) to (5):

(A) When surrounded by or adjacent to existing urban development; and
(B) Only when those lands represent a minor portion of this district;

(7) It shall not include lands, the urbanization of which will contribute toward scattered spot urban development, necessitating unreasonable investment in public infrastructure or support services; and

(8) It may include lands with a general slope of twenty per cent or more if the commission finds that those lands are desirable and suitable for urban purposes and that the design and construction of controls, as adopted by any federal, state, or county agency, are adequate to protect the public health, welfare and safety, and the public's interests in the aesthetic quality of the landscape.

5.1.4 Hawaii Coastal Zone Management Program

Hawaii's Coastal Zone Management (CZM) Program, established pursuant to Chapter 205A, Hawaii Revised Statutes (HRS), as amended, is administered by the State Office of Planning (OP) and provides for the beneficial use, protection and development of the State's coastal zone. The objectives and policies of the Hawaii CZM Program encompass broad concerns such as impact on recreational resources, historic and archaeological resources, coastal scenic resources and open space, coastal ecosystems, coastal hazards, and the

management of development. A discussion of the conformity of the proposed project with the applicable CZM objectives and policies will be included in the Draft EIS.

(1) Recreational Resources

Objective: Provide coastal recreational opportunities accessible to the public.

Policies

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

(i) Protecting coastal resources uniquely suited for recreational activities that cannot be provided in other areas;

(iv) Providing an adequate supply of shoreline parks and other recreational facilities suitable for public recreation;

(v) Ensuring public recreational use of county, state, and federally owned or controlled shoreline lands and waters having recreational value consistent with public safety standards and conservation of natural resources;

(vi) Adopting water quality standards and regulating point and non-point sources of pollution to protect, and where feasible, restore the recreational value of coastal waters.

(viii) Encouraging reasonable dedication of shoreline areas with recreational value for public use as part of discretionary approvals or permits by the land use commission, board of land and natural resources, county planning commissions; and crediting such dedication against the requirements of Section 46-6, HRS.

(2) Historic Resources

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

Policies:

(A) Identify and analyze significant archaeological resources;

(B) Maximize information retention through preservation of remains and artifacts or salvage operations; and

(C) Support state goals for protection, restoration, interpretation, and display of historic resources.

(3) Scenic and Open Space Resources

Objective: Protect, preserve, and where desirable, restore or improve the quality of coastal scenic and open space resources.

Policies:

(A) Identify valued scenic resources in the coastal zone management area;

(B) Ensure that new developments are compatible with their visual environment by designing and locating such developments to minimize the alteration of natural landforms and existing public views to and along the shoreline;

(C) Preserve, maintain, and, where desirable, improve and restore shoreline open space and scenic resources; and

(D) Encourage those developments which are not coastal dependent to locate in inland areas.

(4) Coastal Ecosystems

Objective: Protect valuable coastal ecosystems, including reefs, from disruption and minimize adverse impacts on all coastal ecosystems.

Policies:

(B) Preserve valuable coastal ecosystems, including reefs, 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 that reflect the tolerance of fresh water and marine ecosystems and prohibit land and water uses which violate state water quality standards.

(5) Economic Uses

Objective: Provide public or private facilities and improvements important to the State's economy in suitable locations.

Policies:

(A) Concentrate coastal dependent development in appropriate areas;

(B) Ensure that coastal dependent developments such as harbors and ports, and coastal related development such as visitor facilities and energy generating facilities, are located, designed, and constructed to minimize adverse social, visual, and environmental impacts in the coastal zone management area; and

(C) Direct the location and expansion of coastal dependent developments to areas presently designated and used for such developments and permit reasonable long-term growth at such areas, and permit coastal dependent development outside of presently designated areas when:

(i) Use of presently designated locations is not feasible;

(ii) Adverse environmental effects are minimized; and

(iii) The development is important to the State's economy.

(6) Coastal hazards

Objectives: Reduce hazard to life and property from tsunami, storm waves, stream flooding, erosion, subsidence and pollution.

Policies

(A) Develop and communicate adequate information about storm wave, tsunami, flood, erosion, subsidence, and point and nonpoint source pollution hazards;

(B) Control development in areas subject to storm wave, tsunami, flood, erosion, hurricane, wind, subsidence, and point and nonpoint pollution hazards;

(C) Ensure that developments comply with requirements of the Federal Flood Insurance Program;

(D) Prevent coastal flooding from inland projects; and

(E) Develop a coastal point and nonpoint source pollution control program.

(7) Managing Development

Objective: Improve the development review process, communication and public participation in the management of coastal resource and hazards.

Policies:

(B) Facilitate timely processing of applications for development permits and resolve overlapping of conflicting permit requirements; and

(C) *Communicate the potential short and long-term impacts of proposed significant coastal developments early in their life-cycle and in terms understandable to the public to facilitate public participation in the planning and review process.*

(10) Marine Resources

Objective: Implement the State's ocean resources management plan.

Policies:

(A) Exercise an overall conservation ethic, and practice stewardship in the protection, use, and development of marine and coastal resources;

(E) Promote research, study, and understanding of ocean processes, marine life, and other ocean resources in order to acquire and inventory information necessary to understand how ocean development activities relate to and impact upon ocean and coastal resources; and

(F) Encourage research and development of new, innovative technologies for exploring, using, or protecting marine and coastal resources.

5.2 County of Hawaii

5.2.1 County of Hawaii General Plan

The County of Hawaii General Plan was adopted by the Hawaii County Council in February 2005 (amended in December 2006). The Plan contains goals, policies and standards to guide the development of the County in 13 areas: economic, energy, environmental quality, flood control and drainage, historic sites, natural beauty, natural resources and shoreline, housing, public facilities, public utilities, recreation, transportation, and land use. The goals, policies, and standards related to the proposed project will be further discussed in the Draft EIS:

Economic

Goals:

(a) Provide residents with opportunities to improve their quality of life through economic development that enhances the County's natural and social environments.

(b) Economic development and improvement shall be in balance with the physical, social, and cultural environments of the island of Hawaii

(c) Strive for diversity and stability in the economic system.

(d) Provide an economic environment that allows new, expanded, or improved economic opportunities that are compatible with the County's cultural, natural and social environment.

(e) Strive for an economic climate that provides its residents an opportunity for choice of occupation.

Policies

(d) Require a study of the significant cultural, social, and physical impacts of large developments prior to approval.

(h) The land, water, air, and people shall be considered as essential resources for present and future generations and should be protected and enhanced through the use of economic incentives.

(p) Identify the needs of the business community and take actions that are necessary to improve the business climate.

(s)

(x) Encourage the health/wellness industry.

Courses of Action for North Kona

(f) Recognize the natural beauty of the area as a major economic and social asset. This resource should be protected through appropriate review processes when development is proposed.

ENERGY

Goals

(a) Strive towards energy self-sufficiency.

(b) Establish the Big Island as a demonstration community for the development and use of natural energy resources.

Policies

(a) Encourage the development of alternate energy resources.

(e) Ensure a proper balance between the development of alternative energy resources and the preservation of environmental fitness and ecologically significant areas.

(n) Encourage energy saving design in the construction of buildings.

ENVIRONMENTAL QUALITY

Goals:

(a) Define the most desirable use of land within the County that achieves an ecological balance providing residents and visitors the quality of life and an environment in which the natural resources of the island are viable and sustainable.

(b) Maintain and, if feasible, improve the existing environmental quality of the island.

(c) Control pollution.

Policies

(a) Take positive action to further maintain the quality of the environment.

FLOODING AND OTHER NATURAL HAZARDS

Goals:

(b) Prevent damage to man-made improvements.

(c) Control pollution.

(e) Reduce surface water and sediment runoff.

(f) Maximize soil and water conservation.

Policies:

(d) Any development within the Federal Emergency Management Agency designated flood plain must be in compliance with Chapter 27.

(g) Development-generated runoff shall be disposed of in a manner acceptable to the Department of Public Works and in compliance with all State and Federal laws.

(j) The County and the private sector shall be responsible for maintaining and improving existing drainage systems and constructing new drainage facilities.

(m) Encourage grassed shoulder and swale roadway design where climate and grade are conducive.

(n) Develop drainage master plans from a watershed perspective that considers non-structural alternatives, minimizes channelization, protects wetlands that serve drainage functions, coordinates the regulation of construction and agricultural operation, and encourages the establishment of floodplains as public green ways.

(q) Consider natural hazards in all land use planning and permitting.

Courses of Action for North Kona:

(b) Establish and maintain appropriate vegetative cover in high rainfall, sediment, and debris producing areas.

(c) Encourage the use of natural drainageways as greenways in the development of the region.

HISTORIC SITES

Goals:

(a) Protect, restore, and enhance the sites, buildings, and objects of significant historical and cultural importance to Hawaii.

(b) Appropriate access to significant historic sites, buildings, and objects of public interest should be made available.

(c) Enhance the understanding of man's place on the landscape of understanding the system of ahupuaa.

Policies:

(c) Require both public and private developers of land to provide historical and archaeological surveys and cultural assessments, where appropriate, prior to the clearing or development of land when there are indications that the land under consideration has historical significance.

(f) Encourage the restoration of significant sites on private lands.

(g) Collect and distribute historic sites information of public interest and keep an inventory of sites.

(o) Recognize the importance of certain natural features in Hawaiian culture by incorporating the concept of "cultural landscapes" in land use planning.

NATURAL BEAUTY

Goals:

(a) Protect, preserve and enhance the quality of areas endowed with natural beauty, including the quality of coastal scenic resources.

(b) Protect scenic vistas and view planes from becoming obstructed.

(c) Maximize opportunities for present and future generations to appreciate and enjoy natural and scenic beauty.

Policies

(a) Increase public pedestrian access opportunities to scenic places and vistas.

(d) Access easement to public or private lands that have natural or scenic value shall be provided or acquired for the public.

(e) Develop standard criteria for natural and scenic beauty as part of the design plans.

(f) Consider structural setback from major thoroughfares and highways and establish development and design guidelines to protect important viewplanes.

(h) Protect the views of areas endowed with natural beauty by carefully considering the effects of proposed construction during all land use reviews.

(i) Do not allow incompatible construction in areas of natural beauty.

NATURAL RESOURCES AND SHORELINE

Goals

(a) Protect and conserve the natural resources from undue exploitation, encroachment and damage.

(b) Provide opportunities for recreational, economic, and educational needs without despoiling or endangering natural resources.

(c) Protect and promote the prudent use of Hawaii's unique, fragile, and significant environmental and natural resources.

(d) Protect rare or endangered species and habitats native to Hawaii.

(e) Protect and effectively manage Hawaii's open space, watersheds, shoreline, and natural areas.

(f) Ensure that alterations to existing land forms, vegetation, and construction of structures cause minimum adverse effect to water resources, and scenic and recreational amenities and minimum danger of floods, landslides, erosion, siltations, or failure in the event of an earthquake.

Policies

(a) Require users of natural resources to conduct their activities in a manner that avoids or minimizes adverse effects on the environment.

(h) Encourage public and private agencies to manage the natural resources in a manner that avoids or minimizes adverse effects on the environment and depletion of energy and natural resources to the fullest extent.

(i) Encourage an overall conservation ethic in the use of Hawaii's resources by protecting, preserving, and conserving the critical and significant natural resources of the County of Hawaii.

(j) Encourage the protection of watersheds, forest, brush, and grassland from destructive agents and uses.

(n) The installation of utility facilities, highways, and related public improvements in natural and wildland areas should avoid the contamination or despoilment of natural resources where feasible by design review, conservation principles, and by mutual agreement between the County and affected agencies.

(p) Encourage the use of native plants for screening and landscaping.

(r) Ensure public access provided to the shoreline, public trails and hunting areas, including free public parking where appropriate.

(s) Establish a system of pedestrian access trails to places of scenic, historic, cultural, natural, or recreational values.

(t) Preserve and protect significant lava tube caves.

HOUSING

Goals:

(a) Attain safe, sanitary, and livable housing for the residents of the County of Hawaii.

(b) Attain a diversity of socio-economic housing mix throughout the different parts of the County.

(c) Maintain a housing supply that allows a variety of choices.

(d) Create viable communities with affordable housing and suitable living environments.

(f) Seek sufficient production of new affordable rental and fee-simple housing in the County in a variety of sizes to satisfactorily accommodate the needs and desires of families and individuals.
(g) Ensure that housing is available to all persons regardless of age, sex, marital status, ethnic background and income.
(h) Make affordable housing available in reasonable proximity to employment centers.
(i) Encourage and expand home ownership opportunities for residents.

Policies:
(a) Encourage a volume of construction and rehabilitation of housing sufficient to meet growth needs and correct existing deficiencies.
(k) Increase rental opportunities and choices in terms of quality, cost, amenity, style and size of housing, especially for low and moderate income households.
(t) Ensure that adequate infrastructure is available in appropriate locations to support the timely development of affordable housing.
(v) Work with, encourage and support private sector efforts in the provision of affordable housing.
(x) Vacant lands in urban areas and urban expansion areas should be made available for residential uses before additional agricultural lands are converted into residential uses.
(y) Aid and encourage the development of a wide variety of housing to achieve a diversity of socio-economic housing mix.

Courses of Action for North Kona:
(a) Encourage the use of innovative types of housing developments, such as a cluster and planned unit developments that take advantage of the steep topographic conditions.
(b) Require developments that create a demand for employees housing provide for that need.
(c) Increase affordable housing opportunities in the Kailua-Kona area.

PUBLIC FACILITIES

Goals:
(a) Encourage the provision of public facilities that effectively service the community and visitor needs and seek ways of improving public service through better and more functional facilities in keeping with the environmental and aesthetic concerns of the community.

Policies:
(b) Coordinate with appropriate State agencies for the provision of public facilities to serve the needs of the community.

PUBLIC FACILITIES – EDUCATION

Policies
(a) Encourage continuous joint pre-planning of schools with Department of Education and University of Hawaii to ensure coordination with roads, water, and other support facilities and considerations such as traffic and safety, and access for vehicle,

bicycle, and pedestrian. Encourage master planning of present and proposed public and private institutions.

Courses of Action for North Kona:

(b) Encourage the State Department of Education to add facilities as the need arises.

PUBLIC FACILITIES – HEALTH AND SANITATION

Policies:

(e) Encourage the establishment or expansion of community health centers and rural health clinics.

(f) Continue to encourage programs such as recycling to reduce the flow of refuse deposited in landfills.

(h) Encourage the full development and implementation of a green waste recycling program.

PUBLIC UTILITIES

Goals:

(a) Ensure that properly regulated, adequate, efficient and dependable public and private utility services are available to users.

(b) Maximize efficiency and economy in the provision of public utility services.

(c) Design public utility facilities to fit into their surroundings or concealed from public view.

Policies:

(a) Public utility facilities shall be designed to complement adjacent land uses and shall be operated to minimize pollution or disturbance.

(b) Provide utilities and service facilities that minimize total cost to the public and effectively service the needs of the community.

(c) Utility facilities shall be designed to minimize conflict with the natural environment and natural resources.

(e) Encourage the clustering of developments in order to reduce the cost of providing utilities.

PUBLIC UTILITIES – WATER

Policies:

(a) Water system improvements shall correlate with the County's desired land use development pattern.

(b) All water systems shall be designed and built to Department of Water Supply standards.

(d) Water sources shall be adequately protected to prevent depletion and contamination from natural and man-made occurrences or events.

(f) A coordinated effort by County, State and private interests shall be developed to identify sources of additional water supply and be implemented to ensure the development of sufficient quantities of water for existing and future needs of high growth areas and agricultural production.

(g) The fire prevention systems shall be coordinated with water distribution systems in order to ensure water supplies for fire protection purposes.
(k) Promote the use of groundwater sources to meet State Department of Health water quality standards.
(n) Develop and adopt a water master plan that will consider water yield, present and future demand, alternative sources of water, guidelines and policies for the issuing of water commitments.

Courses of Action for North Kona:
(a) Continue to pursue groundwater source investigation, exploration and development in areas that would provide for anticipated growth and an efficient and economic system operation.
(b) Continue to evaluate growth conditions to coordinate improvements as required to existing water system in accordance with the North Kona Water System Master Plan.

PUBLIC UTILITIES – TELECOMMUNICATIONS

Policies:
(a) Encourage underground telephone lines where they are economically and technically feasible.
(d) Work closely with the telephone company to provide all users with efficient service.

PUBLIC UTILITIES – ELECTRICITY

Policies:
(a) Power distribution shall be placed underground when and where practical. Encourage developers of new urban areas to place utilities underground.
(b) Route selection of high voltage transmission lines should include consideration for setbacks from major thoroughfares and residential areas. Where feasible, delineate energy corridors for such high voltage transmission lines.

PUBLIC UTILITEIS – GAS

Policies:
(a) Gas storage facilities shall be located to minimize danger to commercial and residential areas.

PUBLIC UTILITIES – SEWER

Policies:
(b) Private systems shall be installed by land developers for major resort and other developments along shorelines and sensitive higher inland areas, except where connection to nearby treatment facilities is feasible and compatible with the County's long-range plans, and in conformance with State and County requirements.
(e) Plans for wastewater reclamation and reuse for irrigation and biosolids composting shall be utilized where feasible and needed.
(f) Require major developments to connect to existing sewer treatment facilities or build their own.

Courses of Action for North Kona:

(a) Expand the existing sewer collection system.

RECREATION

Goals:

(a) Provide a wide variety of recreational opportunities for the residents and visitors of the County.

(b) Maintain the natural beauty of recreation areas.

(c) Provide a diversity of environments for active and passive pursuits.

Policies:

(a) Strive to equitably allocate facility-based parks among the districts relative to population, with pubic input to determine the locations and types of facilities.

(c) Recreational facilities shall reflect the natural, historic, and cultural character of the area.

(d) The use of land adjoining recreation areas shall be compatible with community values, physical resources, and recreation potential.

(g) Facilities for compatible uses shall be provided.

(h) Provide facilities and a broad recreational program for all age groups, with special considerations for the handicapped, the elderly, and young children.

(i) Coordinate recreational programs and facilities with governmental and private agencies and organizations. Innovative ideas for improving recreational facilities and opportunities shall be considered.

(m) Develop a network of pedestrian access trails to places of scenic, historic, natural or recreational values. This system of trails shall provide, at a minimum, an islandwide route connecting major parks and destinations.

(n) Establish a program to inventory ancient trails, cart roads and old government roads on the island in coordination with appropriate State agencies.

(o) Develop facilities and safe pathway systems for walking, jogging, and biking activities.

Courses of Action for North Kona:

(a) Encourage the development of community and district recreational facilities, a gymnasium and community center with each access for residents.

(k) Encourage the development of historic trails.

TRANSPORTATION

Goals:

(a) Provide transportation system whereby people and goods can more efficiently, safely, comfortably and economically.

Policies:

(c) The improvement of transportation service shall be encouraged.

(d) Consider the provision of adequate transportation systems to enhance the economic viability of a given area.

TRANSPORTATION – ROADWAYS

Goals:

(a) Provide a system of roadways for the safe, efficient and comfortable movement of people and goods.

(b) Provide an integrated State and County transportation system so that all new major routes will complement and encourage proposed land use policies.

Policies:

(a) Encourage the programmed improvement of existing roadways by both public and private sectors.

(b) Investigate various methods of funding road improvements, including private sector participation, to meet the growing transportation needs of the island.

(e) Coordinate with appropriate Federal and State agencies for the funding of transportation project for areas of anticipated growth.

(f) Consider the development of alternative means of transportation, such as mass transit, bicycle and pedestrian systems, as a means to increase arterial capacity.

(g) There shall be coordinated planning of Federal, State, and County street systems to meet program goals of the other elements such as historic, recreational, environmental quality and land use.

(h) Provisions for on-street parking shall be incorporated into the design of street systems.

(i) Encourage the State Department of Transportation to establish special scenic routes within and between communities.

(j) Transportation and drainage systems shall be integrated where feasible.

(j) Adopt street design standards that accommodate, where appropriate, flexibility in the design of streets to preserve the rural character of an area and encourage a pedestrian friendly design, including landscaping and planted medians.

(n) Encourage the development of walkways, jogging, and bicycle paths within designated areas of the community.

(o) Explore means and opportunities to enhance the shared use of the island's roadways by pedestrians and bicyclists, in coordination with appropriate government agencies and organizations.

Courses of Action for North Kona:

(a) Develop a roadway network circulation plan in cooperation with State Department of Transportation and affected communities. Upon adoption of the plan, the plan recommendations shall be incorporated on the zone district maps.

(b) Encourage the State to widen Queen Kaahumanu Highway as necessary to accommodate increases in traffic flows, in particular between Kona International Airport at Keahole and Kailua-Kona.

(e) Construct the following north-south collector roadways from Palani Drive and extending north to the proposed University Drive: 1) Ane Keohokalole Highway (Mid-Level Road); 2) Keanalehu (Waena Drive); and 3) Kealakaa Street.

(g) Widen Hina Lani Drive to four lanes between the Queen Kaahumanu Highway to the proposed Ane Keohokalole Highway.

(m) Support the installation of suitable bikeways and/or jogging paths.

TRANSPORTATION – MASS TRANSIT

Goals:

(a) Provide residents with a variety of public transportation systems that are affordable, efficient, accessible, safe, environmentally friendly, and reliable.

Policies:

(a) Improve the integration of transportation and land use planning in order to optimize the use, efficiency, and accessibility of existing and proposed mass transportation systems.

(c) Incorporate, where appropriate, bicycle routes, lanes, and paths within road rights-of-way in conformance with the Bikeway Plan for the County of Hawaii.

LAND USE

Goals:

(a) Designate and allocate land uses in appropriate proportion and mix and in keeping with the social, cultural, and physical environments of the County.

(c) Protect and preserve forest, water, natural and scientific reserves and open areas.

Policies:

(a) Zone urban-types of uses in areas with ease of access to community services and employment centers and with adequate public utilities and facilities.

(b) Promote and encourage the rehabilitation and use of urban areas that are serviced by basic community facilities and utilities.

(c) Allocate appropriate requested zoning in accordance with the existing or projected needs of neighborhood, community, region and County.

(e) Incorporate innovations such as the "zone of mix" and mixed use zones" into the Zoning Code.

(f) Encourage the development and maintenance of communities meeting the needs of its residents in balance with the physical and social environment.

(j) Encourage urban development within existing zoned areas already served by basic infrastructure, or close to such areas, instead of scattered development.

LAND USE – AGRICULTURE

Goals:

(d) Agricultural land may be used as one form of open space or green belt.

(f) In order to minimize the potential conflicts between agricultural and non-agricultural uses, standards and guidelines for the establishment of well defined buffer areas as part of new, non-agricultural development that are located adjacent to important agricultural lands shall be developed.

Courses of Action for North Kona:

(c) Encourage buffer zones or compatible uses between agricultural land and adjacent uses of land.

LAND USE – COMMERCIAL

Goals:

(a) Provide for commercial developments that maximize convenience to users.

(b) Provide commercial developments that complement the overall pattern of transportation and land usage within the island's regions, communities, and neighborhoods.

Policies:

(b) Commercial facilities shall be developed in areas adequately served by necessary services, such as water, utilities, sewers, and transportation systems. Should such services not be available, the development of more intensive uses should be in concert with a localized program of public and private capital improvements to meet the expected increased needs.

(c) Distribution of commercial areas shall meet the demands of neighborhoods, community and regional needs.

(e) Encourage the concentration of commercial uses within and surrounding a central core area.

(f) The development of commercial facilities should be designed to fit into the locale with minimal intrusion while providing the desired services. Appropriate infrastructure and design concerns shall be incorporated into the review of such developments.

(h) Require developers to provide basic infrastructure necessary for development.

(i) Encourage commercial areas to develop on an axis perpendicular to the highway.

LAND USE – INDUSTRIAL

Goals:

(a) Designate and allocate industrial areas in appropriate proportions and in keeping with the social, cultural, and physical environments of the County.

Policies:

(d) Improve the aesthetic quality of industrial sites and protect amenities of adjacent areas by requiring landscaping, open spaces, buffer zones, and design guidelines.

(g) Industrial-commercial mixed used districts shall be provided in appropriate locations.

(h) Require developers to provide basic infrastructure necessary for development.

Courses of Action for North Kona:

(d) Industrial – commercial mixed use districts may be provided in appropriate locations.

LAND USE – MULTIPLE RESIDENTIAL

Goals:

(a) To provide for multiple residential developments that maximize convenience for its occupants.

(b) To provide for suitable living environments that accommodate the physical, social and economic needs for the island residents.

(c) To enhance the overall quality of life in our residential communities.

Policies:

(a) Appropriately zoned lands shall be allocated as the demand for multiple residential dwellings increases. These areas shall be allocated with respect to places of employment, shopping facilities, educational, recreational and cultural facilities, and public facilities and utilities.

(b) Incorporate reasonable flexibility in applicable codes and ordinances to achieve a diversity of socio-economic housing mix.

(c) Encourage flexibility in the design of residential sites, buildings and related facilities to achieve a diversity of socio-economic housing mix.

(f) Applicable codes and ordinances shall be reviewed and amended as necessary to include consideration for urban design, and aesthetic quality through landscaping, open space, and buffer areas.

(g) Support the rezoning of those multiple residentially zoned lands that are used for other purposes to a more appropriate zoning designation.

(h) Require developers to provide basic infrastructure necessary for development.

Courses of Action for North Kona:

(a) Re-evaluation of existing zoned areas and re-allocation of lands in appropriate locations shall be undertaking.

(b) Appropriately zoned lands shall be allocated as the need for multiple residential development increases.

LAND USE – SINGLE-FAMILY RESIDENTIAL

Goals:

(a) To maximize choices of single-family residential lots and/or housing for residents of the County.

(b) To ensure compatible uses within and adjacent to single-family residential zones areas.

(d) To provide single-family residential areas conveniently located to public and private services, shopping, other community activities and convenient access to employment centers that takes natural beauty into consideration.

(e) To enhance the overall quality of life in our residential communities.

Policies:

(a)

(b) Encourage innovative uses of land with respect to geologic and topographic conditions through the use of residential cluster and planned unit development.

(c) Encourage and coordinate with the State in providing fee simple and leasehold single-family residential lots to the residents through State and/or County Housing Programs.

(d) Incorporate reasonable flexibility in codes and ordinances to achieve a diversity of socio-economic housing mix and to permit aesthetic balance between single-family residential structures and open spaces.

(e) Re-evaluate existing undeveloped single-family residential zoned areas and reallocate zoned lands in appropriate locations.

(f) Designate and allocate single-family residential zoned lands at varying densities for future use in accordance with the needs of the communities and the stated goals, policies, and standards.

(i) Require developers to provide basic infrastructure necessary for development.

Courses of Action for North Kona:
(a) Encourage the development of appropriately located and serviced privately-held and State-owned lands for houselots.
(b) Improve and develop roadways, water and sewerage systems, and other basic facilities necessary to encourage development of lands suitable for residential use.
(c) Encourage the concentration of residential structures to avoid strip residential development.
(d) Encourage the use of more innovative types of housing development, such as zones of mix and cluster and planned unit developments.

LAND USE – OPEN SPACE

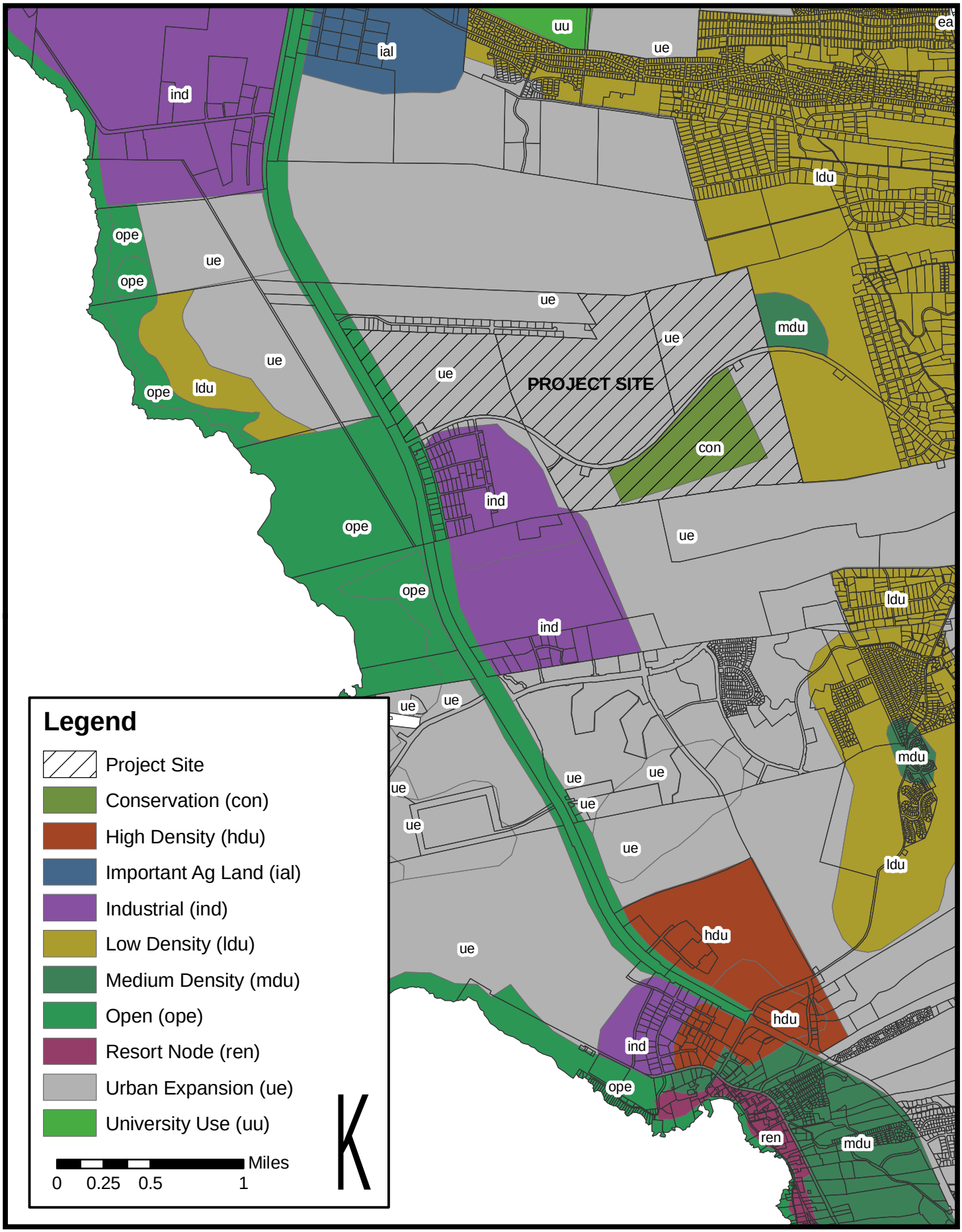
Goals:
(a) Provide and protect open space for the social, environmental, and economic well-being of the County of Hawaii and its residents.
(b) Protect designated natural areas.

Policies:
(a) Open Space shall reflect and be in keeping with the goals, policies, and standards set forth in the other elements of the General Plan.
(b) Open Space in urban areas shall be established and provided through zoning and subdivision regulations.
(c) Encourage the identification, evaluation, and designation of natural areas.
(d) Zoning, subdivision and other applicable ordinances shall provide for and protect open space areas.

5.2.1.1 General Plan Land Use Pattern Allocation Guide Map

The General Plan Land Use Pattern Allocation Guide Map (LUPAG) delineates broad-brush boundaries that are graphic expressions of the General Plan policies, particularly those relating to land uses. The land use pattern is a broad, flexible design intended to guide the direction and quality of future developments in a coordinated and rational manner. These maps delineate a number of land use categories for each area.

The LUPAG Map designates the project site as Urban Expansion and Conservation (see Figure 5-3).



WILSON OKAMOTO CORPORATION

FIGURE 5-3
County General Plan Land Use Pattern Allocation Guide (LUPAG)
Kaloko Makai

5.2.2 Keahole to Kailua Development Plan

The Keahole to Kailua Development Plan (K to K Plan), prepared by the County of Hawaii Planning Department, was adopted by resolution by the Hawaii County Council in April 1991. The Development Plan is intended to serve as an implementing tool for the County General Plan and be a flexible guide for the future growth and development of the area. The Keahole to Kailua Development Plan encompasses an area of approximately 17,000 acres in the North Kona District extending from the Kau ahupuaa to the north, Mamalahoa Highway to the east, Palani Road and Kailua Village to the south, and the shoreline to the west. The overall goal established for the Development Plan is as follows:

> "To develop a mixed residential, commercial, resort, industrial and recreational community, with approximately 8,000 or more residential units, in a functional, attractive, and financially viable manner. The community will include appropriate shoreline uses, public facilities, and infrastructure and will be built out over the next 20 years."

Within the Development Plan's project area, the project site is designated on the Land Use Plan for "Urban Expansion, Residential Village, and Golf Course". "Urban Expansion" denotes the land's general suitability for urban development, although no specific urban uses have been recommended in the Plan. The residential villages depicted in the Land Use Plan would have a distinctive village center, neighborhood parks, and some kind of public school. The proposed project is consistent with the Development Plan designations for the project site.

The Keahole to Kailua Development Plan also includes a network of major arterial and collector roads that will form the overall framework for the future development of the area. The Development Plan proposes an arterial roadway, also known as the Mid-Level Road, running parallel to Queen Kaahumanu Highway from Kealakehe Drive to Hina Lani Street through the project site. The Development Plan, however, acknowledges the potential shifting and changing of roadway alignments as actual development occurs in the future.

The intent of this parallel roadway is to facilitate traffic circulation between the Urban Expansion areas to the north and south, keeping local traffic off of Queen Kaahumanu Highway.

5.2.3 Kona Community Development Plan

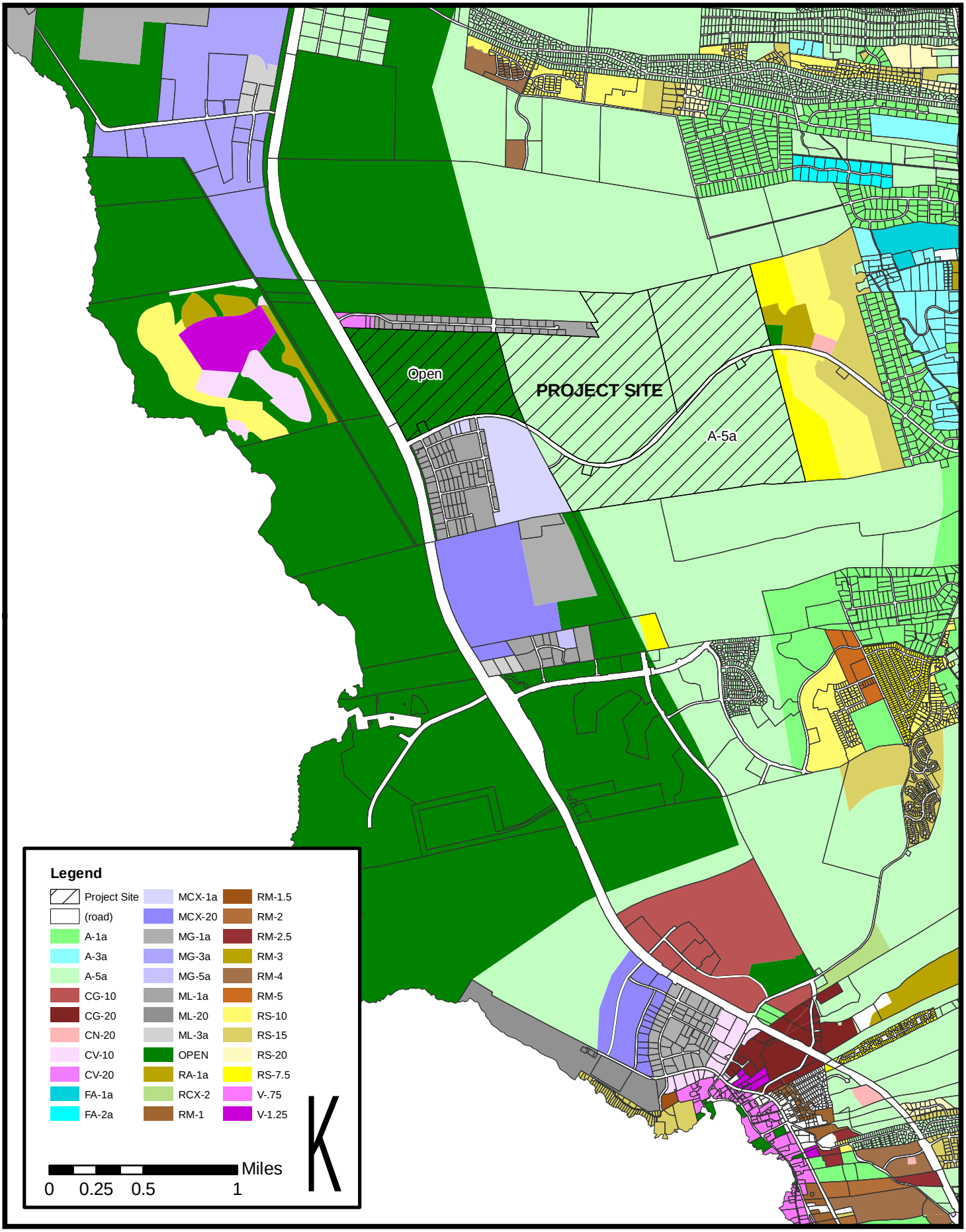
The County of Hawaii General Plan requires that community development plans be adopted by the County Council for each judicial district in the County. The Kona Community Development Plan (CDP) is intended to be the first of the new plans and will serve as a model for the remaining districts. It is intended to provide detail to the elements presented in the General Plan and emphasize those elements most relevant to the issues and conditions of the specific area plan.

The County is currently in the process of preparing the Kona Community Development Plan (CDP) to further identify how the General Plan can be implemented to achieve the communities' vision for the Kona region. Portions of the CDP report have been drafted and submitted to the Kona CDP Steering Committee for their review. Preliminary Kona CDP maps have identified the project site as a proposed Transit Oriented Development (TOD) site, where growth will be focused. The TOD sites are proposed to consist of low-, medium-, and high density residential uses, as well as mixed-use commercial uses, centered around a transit hub along the proposed Mid-Level Road identified in the K to K Plan. These preliminary drafts are still in draft form and have not been approved by the Kona CDP Steering Committee.

5.2.4 County of Hawaii Zoning

The Hawaii County Zoning Code, as contained in Chapter 25 of the Hawaii County Code, regulates the use of lands within the State Urban, Agricultural and Rural Districts. The project site is zoned Open and Agricultural (A-5a) District according to the Hawaii County Zoning Code (see Figure 5-4).

The land uses proposed for the project site are not consistent with the permitted uses of Open and Agriculture (A-5a). A zone change will be requested to reclassify the project site from Open and A-5a Districts to Project District (PD). Project Districts are intended to provide for a flexible planning approach. Permitted uses generally include those permitted in the Single Family Residential Districts (RS), Double-Family Residential Districts (RD),



WILSON OKAMOTO CORPORATION

FIGURE 5-4
County Zoning
Kaloko Makai

Multi-Family Residential Districts (RM), Residential-Commercial Mixed Use Districts (RCX), Neighborhood Commercial Districts (CN), General Commercial Districts (CG), Village Commercial Districts (CV) or Resort-Hotel Districts (V).

5.2.5 County of Hawaii Special Management Area

The Coastal Zone Management Act contains the general objectives and policies upon which all counties within the State have structured specific legislation, which created Special Management Areas (SMA). Any development located within the SMA requires a SMA Use Permit, which is administered by the County of Hawaii Planning Department.

The project site is located outside the boundaries of the County of Hawaii's SMA and is therefore not subject to the SMA Use Permit (see Figure 5-5).

5.3 Required Permits and Approvals

The following is a list of permits and approvals which may be required prior to construction and operation of the proposed project.

State of Hawaii

Land Use Commission

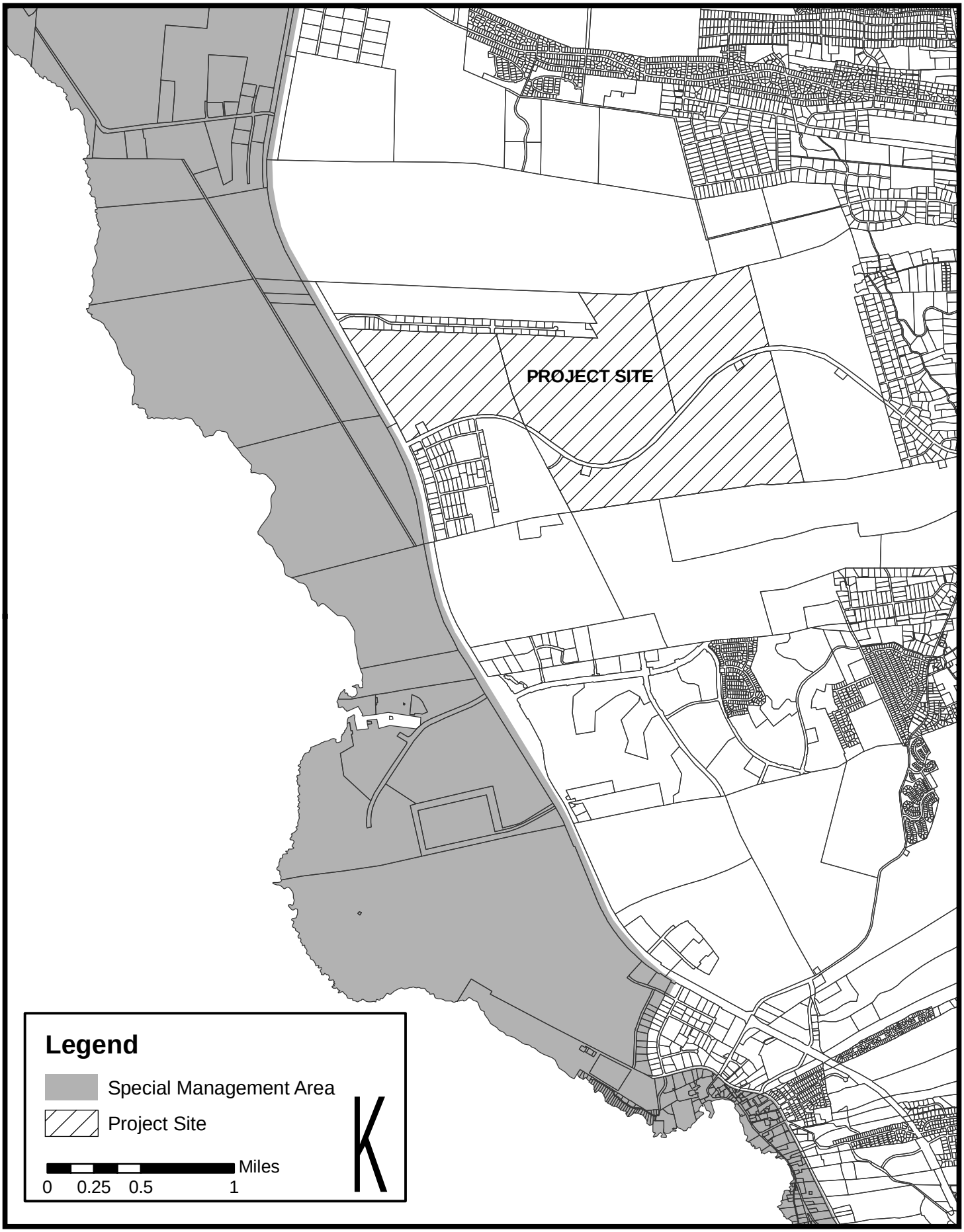
- State Land Use District Boundary Amendment
- Environmental Impact Statement

Department of Health

- National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Associated with Construction Activity
- Noise Permits
- Air Quality Permits

Department of Land and Natural Resources Historic Preservation Division

- Chapter 6E, HRS Historic Preservation



WILSON OKAMOTO CORPORATION

FIGURE 5-5
Special Management Area

Kaloko Makai

County of Hawaii

Planning Department

- Zone Change
- Subdivision
- Plan Approval

Department of Public Works

- Grading, Grubbing and Stockpiling Permits

Other

Utility Companies

- Utility Service Requirements
- Permit Regarding Work on Utility Lines

This page intentionally left blank.

6. ALTERNATIVES TO THE PROPOSED ACTION

6.1 No Action Alternative

Under the No Action alternative, the project site would remain in its natural state for an undetermined period of time. This alternative suggests that urbanization of the area would be postponed. This would not be consistent with State and County governmental policies of establishing new residential and employment opportunities and would not create the overall positive economic impacts to the area. This alternative would also not be consistent with the County of Hawaii General Plan (as amended in December 2006), which designates a large portion of the project site for Urban Expansion, nor would it improve the current housing market. Housing opportunities would be reduced, as less land would be available for development of residential uses. Furthermore, job opportunities and tax revenues would be reduced. The property would not be put to a higher economic use, which contributes to a larger tax base for the County of Hawaii.

The No Action alternative would deprive the community of the benefit of the planned north-south collector roads being developed through the project at no cost to the County such as the Kamanu Street extension at the makai end, the Mid-Level Road (Ane Keohakalole Highway) near the middle, and potentially, the Kealakaa Street Extension at the extreme mauka end.

6.2 Agricultural Alternative

Under this alternative, the entire project area would be subject to current Agricultural zoned uses with efforts made to develop the vacant, open space lands for such uses the next 20 to 30 years. Poor soil productivity, however, has restricted historical use of the site for agricultural production and would most likely preclude future agricultural activities due to pressures and proximity to urban development. In addition, there is also no significant source of low cost agricultural water needed to support agricultural operations. In any case, retention of the site in agriculture would result in greater development pressure for housing in areas identified elsewhere on lands more suitable for agriculture and preservation of rural lands. There are ample lands available for diversified agriculture, due to the availability of former sugar cane lands.

6.3 Alternative Land Uses for the Site

The project site is identified in the County of Hawaii General Plan (as amended in December 2006) for Urban Expansion. Land uses categories for this designation accommodate a wide range of alternative uses that could be implemented under this category which includes a mix of high density, medium density, low density, industrial, industrial–commercial, and/or open space designations. Previous development proposals considered these types of uses densities in various combinations and densities. In 1985, about 190 acres within the project area received State Urban District reclassification for a stand alone golf course to serve the community but was never developed. Subsequent planning efforts involved master plans for all parcels within the entire project area as well as individual parcels, but none have been implemented. Meanwhile, historical growth of the area has centered on increasing industrial and commercial development in the region. While the proximity to existing resort areas, harbor and airport facilities, may indicate a need for alternatives with more intensive uses, these types of uses result in greater impacts upon the community. The development of surrounding areas indicates a trend toward residential development to support these more intensive uses and to create more infill development amid increasing concerns over infrastructure and the environment. The proposed use for residential units (that will comprise a majority of the project) will meet the demand for housing at all levels of affordability, and will result in lesser impacts than the predominantly light industrial/ commercial developments occurring to the south of Hina Lani Street.

6.4 Alternative Site Layouts

Several alternative site layouts were considered while formulating the current land plan for the project. The trends toward concepts such as “smart growth” and “sustainability” were contemplated by the project’s planners and incorporated into the plan, focusing on community quality of life. The resulting land use plan and program creates a series of compact villages that are linked, each featuring a walkable mixed residential community, incorporating recreational, neighborhood commercial and educational uses. The compact nature and higher density of these villages creates a strong sense of place and will preserve open space, prevent sprawl, capitalize on infrastructure investments, reduce infrastructure maintenance costs, and improve the viability of neighborhood commercial uses. The plan accommodates the north-south collector roads planned by the County to improve circulation

for the entire region. Further refinements to the plan are possible as the project undergoes subsequent review and evaluation during the EIS process.

6.5 Other Alternatives

The Draft EIS will also examine whether postponing the project pending further technical studies may be deemed warranted. While the EIS process may reveal unresolved issues, this same environmental review and the entitlements process are the mechanisms by which these issues can be addressed and resolved through continued consultation rather than postponing the project.

The Draft EIS will also look at alternative locations for the project. There are many attributes of the project site that make it suitable for the proposed development. These attributes include 1) its location adjacent to a major planned mixed-use developments and near existing communities, 2) the availability of infrastructure, 3) the absence of sensitive environmental areas and physical constraints to development, 4) its location in a region with a strong demand for residential use, and 5) its location as a growth center within the Kailua to Keahole Plan and as proposed by the Draft Kona Community Development Plan. While it is hypothetically possible that the project could be developed elsewhere, it is unlikely that the developer would be able to find a site that possesses all of the favorable attributes of the proposed project site, which would ultimately lead to a less desirable project.

This page intentionally left blank.

7. ANTICIPATED DETERMINATION

The State Land Use Commission as the accepting authority, has determined that the proposed action requires the preparation of an Environmental Impact Statement, based on the significance criteria set forth in Section 200, Title 11, State of Hawaii Department of Health Rules. The reasons supporting this determination are described below according to these significance criteria:

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

Development of the proposed project will require an irrevocable commitment of land resources upon urbanization. However, the project site is on lands which are unsuitable for agriculture and which have no significant natural resource values, except for the native dryland forest. The native dryland forest located on the southern portion of the project site will be preserved. Majority of the project site has been identified as an area for urban expansion according to the County of Hawaii General Plan LUPAG (as amended in December 2006) described in Section 5.2.1.1.

An archaeological inventory survey will be conducted for the Draft EIS to determine the presence of any archaeological or historic sites or features that may be located within the project site, and to identify any mitigative measures that may be required.

A cultural impact assessment will be conducted for the Draft EIS to assess the potential impacts of the proposed project on native Hawaiian cultural resources, practices and beliefs.

A flora and fauna study is being prepared and will include recommendations for protection of biologically significant sites.

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

The proposed project will commit the project site to the proposed use over the long-term. Beneficial use of the project site would not be curtailed since the proposed

project is an appropriate use for the site consistent with State and County land use plans.

The Kaloko Makai project intends to increase the range of beneficial uses of the environment for the community. This project will provide increased housing opportunities, employment, and recreational uses.

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

The proposed project is consistent with most of the environmental policies, goals and guidelines set forth in Chapter 344, Hawaii Revised Statutes (HRS). Any conflicts will be discussed further in the Draft EIS. Topography, soils, natural hazards, views, air and water quality, and other physical attributes of the land will be considered during site planning and design of structures.

Natural and cultural resources will be protected to the extent possible. Applicable County, State, and Federal regulations related to environmental quality will be followed.

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

The proposed development will result in short- and long-term beneficial socio-economic impacts. Construction and total build-out of the project's estimated 5,000 units will provide much needed housing. The proposed project will provide short-term construction jobs and long-term jobs in the commercial, retail, and service sectors. A detailed analysis of economic and social impacts will be provided in the Draft EIS.

(5) Substantially affects public health;

The impact of the proposed development on public health is expected to be positive. The design of the community and proposed uses will provide opportunities to be located close to health services. The pedestrian orientation and recreational

opportunities encourages healthy lifestyles. Potential effects to public health will be further discussed in the Draft EIS.

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

The proposed development will increase population in the area. Services are being planned to support the population needs, including housing, education, transportation, utilities, and recreational opportunities. Secondary impacts will be further evaluated in the Draft EIS.

(7) Involves a substantial degradation of environmental quality;

With the possible exception of water quality, the proposed project is not expected to involve a substantial degradation of environmental quality. An assessment to determine the potential ground water effects on and contribution of surface flow that may enter the pond and marine environment within the Kaloko-Honokohau National Historical Park and nearshore areas as a result of the construction and operation of the proposed project will be conducted for the Draft EIS. The assessment will also identify associated mitigative measures, as may be required, to minimize any potential impacts to the pond and marine environment.

Natural and cultural resources will be protected to the extent possible. Applicable County, State, and Federal regulations related to environmental quality will be followed.

A native dryland forest located on the southern portion of the project site will be preserved and incorporated into the design of the development. A flora and fauna study will include recommendations for protection of biological resources, if applicable. These items will be studied further and protected or enhanced as appropriate.

The project will follow sustainable design guidelines where practicable to reduce the impacts on the environment. The concept calls for a mixed-use, integrated

community where residents will be able to obtain many of their basic necessities within the area and thus minimize the use of automobiles. This will also reduce impacts to traffic conditions, energy, environmental noise and air quality.

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

The proposed project is anticipated to have considerable cumulative effects along with other planned developments upon the environment and will involve a larger commitment for larger actions. The Draft EIS will include an analysis of the potential secondary and cumulative impacts of the proposed project to natural and human environments.

An assessment to determine the potential ground water effects on and contribution of surface flow that may enter the pond and marine environment within the Kaloko-Honokohau National Historical Park and nearshore areas as a result of the construction and operation of the proposed project will be conducted for the Draft EIS. The assessment will also identify associated mitigative measures, as may be required, to minimize any potential impacts to the pond and marine environment.

The proposed project will add traffic, use water, create waste and increase the need for public services, all manageable effects of a well planned development. The nature of the project's plans and programs will help ensure that the impacts to the environment will be minimized and positive benefits enhanced.

Positive benefits from the proposed project include accommodation of housing needs, creation of additional jobs, protection of resources, access to recreational resources, and improvements to the local infrastructure, i.e. roadways and water systems.

Efforts to address the cumulative impacts of the project will be discussed in the Draft EIS. Mitigation measures include strategies to conserve the archaeological, biological, and cultural resources within the project area.

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

A native dryland forest located on the southern portion of the project site will be preserved and incorporated into the design of the development. Botanical and faunal surveys of the project site will be conducted for the Draft EIS to document floral and faunal species that occur within the site and to determine the presence of any proposed or listed threatened or endangered species. The surveys will also identify associated mitigative measures, as may be required, to minimize any potential impacts on flora and fauna species.

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

The most noticeable impacts are expected to occur during construction and are short-term. Noise, water, and air quality studies projecting future impacts will be conducted in the Draft EIS.

In general, the drainage system will be designed to avoid negative impacts to surface or ground water resources, and to improve surface water run-off quality from the project site. Drainage improvements will be discussed in the Draft EIS.

An assessment to determine the potential ground water effects on and contribution of surface flow that may enter the pond and marine environment within the Kaloko-Honokohau National Historical Park and nearshore areas as a result of the construction and operation of the proposed project will be conducted for the Draft EIS. The assessment will also identify associated mitigative measures, as may be required, to minimize any potential impacts to the pond and marine environment.

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

The project site is located within Zone X, areas determined to be outside the 500-year flood plain according to the FEMA FIRM (Community Panel 155166 0692C,

revised April, 02, 2004), and is not subject to coastal hazards such as tsunami inundation. All structures will be constructed in compliance with the International Building Code (IBC).

An assessment to determine the potential ground water effects on and contribution of surface flow that may enter the pond and marine environment within the Kaloko-Honokohau National Historical Park and nearshore areas as a result of the construction and operation of the proposed project will be conducted for the Draft EIS. The assessment will also identify associated mitigative measures, as may be required, to minimize any potential impacts to the pond and marine environment.

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

The proposed development will alter existing mauka vistas and views.

Design guidelines will ensure that the development integrates well with the land and climate. Site planning will create setbacks and buffers to soften the impact of the development on the landscape, while buildings will be designed to be complimentary and compatible with the site. Further, landscaping will incorporate existing landforms, native and other plant species that are compatible with the climate of the region. A view analysis will be conducted for the Draft EIS.

(13) Requires substantial energy consumption.

The proposed development will require short-term energy consumption for construction. Housing and commercial/retail activities will increase demand on utilities, including roadways, electricity, water and sewer systems. However, sustainable design criteria and guidelines will be established and implemented to promote sustainable practices that reduce waste, conserve energy and increase efficiency.

8. CONSULTATION

8.1 Agencies and Parties Consulted In Preparation of EISPN

The following agencies and parties were consulted during the pre-assessment phase of the EIS Preparation Notice.

State Land Use Commission
State Department of Business, Economic Development, and Tourism, Office of State Planning
State Department of Transportation
County of Hawaii Planning Department
County of Hawaii, Department of Public Works
County of Hawaii, Department of Water Supply

8.2 Agencies and Parties To Be Consulted In Preparation of the DEIS.

The following agencies and parties will be sent a copy of the EISPN.

Federal

U.S. Army Corps of Engineers
U.S. Fish and Wildlife Service
U.S. Geological Survey
U.S. Department of Agriculture Natural Resources Conservation Service
U.S. Department of the Interior Kaloko-Honokohau National Historical Park

State of Hawaii

Department of Business Economic Development & Tourism (DBED&T) Land Use Commission
DBED&T Office of Planning
DBED&T Housing and Community Development Corporation of Hawaii
DBED&T Energy, Resources and Technology Division

Department of Land and Natural Resources (DLNR) Land Division
DLNR Historic Preservation Division
Department of Health (DOH) Environmental Planning Office
DOH Office of Environmental Quality Control
Department of Education
Department of Transportation
Office of Hawaiian Affairs
Department of Agriculture
Department of Defense
Department of Hawaiian Home Lands
University of Hawaii at Manoa (UHM) Environmental Center

County of Hawaii

Office of the Mayor
Planning Department
Department of Water Supply
Department of Public Works
Department of Parks and Recreation
Civil Defense Agency
Police Department
Fire Department

Elected Officials

Councilmember Brenda Ford, District 7
Councilmember Angel Pilago, District 8
Senator Paul Whalen, District 3
Representative Josh Green, M.D., District 6
Representative Robert Herkes, District 5

Public Utility Agencies

Hawaii Electric Light Company
Hawaiian TelCom
Oceanic/Time-Warner Cable

Organizations

Hawaii Leeward Planning Conference
Kona Hawaiian Civic Club
Kona Outdoor Circle
Kona-Kohala Chamber of Commerce
Na Kokua Kaloko-Honokohau
Moku Loa Group, Sierra Club, Hawaii Chapter

This page intentionally left blank.

9. REFERENCES

Belt Collins. *Final Environmental Impact Statement for Kula Nei Project*. Prepared for The Shopoff Group. September 2007.

County of Hawaii. *The General Plan Hawaii County*. February 2005.

County of Hawaii. *2006 County of Hawaii Data Book*. November 2007. http://www.hawaii-county.com/databook_current/dbooktoc.htm

County of Hawaii. Multi-*Hazard Mitigation Plan: County of Hawaii*. February 2005.

County of Hawaii. *Hawaii Island Plan Website.* November 2007, http://www.hcrc.info/hawai-i-island-plan/kona

George A.L. Yuen & Associates, Inc. *State Water Resources Protection Plan, Volumes I and II*. Prepared for the State of Hawaii Department of Land and Natural Resources, Commission on Water Resource Management. Review Draft, March 1992.

Harding ESE*. Update to the Integrated Solid Waste Management Plan for the County of* Hawaii. December 31, 2002.

Keahole Associates, Inc. and Y. Ebisu & Associates. *Kona international Airport at Keahole FAR Part 150 Noise Compatibility Program*. Prepared for the State of Hawaii Department of Transportation, Airports Division. December 1997.

Keahole Associates, Inc. *Kona international Airport at Keahole Master Plan Update, Final Submittal*. Prepared for the State of Hawaii Department of Transportation, Airports Division. November 1998.

Meeker, Heidi. State Department of Education. Personal Communication, November 29, 2007.

Mikiko Corporation, *Draft Market Assessment for Kaloko Makai*, November 2007.

Oceanit. *Kona Kai Ola Final Environmental Impact Statement, Volume I*. Prepared for Jacoby Development and Hawaii State Department of Land and Natural Resources. July 2007.

PBR Hawaii. *Ooma Beachside Village Environmental Impact Statement Preparation Notice*. Prepared for State of Hawaii Land Use Commission and North Kona Village, LLC. April 2007.

R.M. Towill Corporation. *Keahole to Kailua Development Plan*. Prepared for the County of Hawaii Planning Department. April 1991.

SSFM International. *North Kona Improvement District Project Sewer Master Plan Summary Report*. Prepared for County of Hawaii Department of Environmental Management. October 2006.

State of Hawaii Department of Business, Economic Development and Tourism. *2006 The State of Hawaii Data Book A Statistical Abstract*. August 2007.

State of Hawaii Department of Hawaiian Home Lands, *Kealakehe/Laiopua Regional Plan.* October 2007.

State of Hawaii. *The Hawaii State Functional Plans*. 1989-1991.

U.S. Census Bureau American FactFinder:
http://factfinder.census.gov/home/saff/main.html?_lang=en&_ts=

Wilson Okamoto Corporation. *Environmental Impact Assessment for Kaloko Industrial Park Phases III and IV*. Prepared for TSA International, Limited. October 2000.

Source for Figures:

Hawaii Statewide GIS Program: http://www.hawaii.gov/dbedt/gis/download.htm

Office of Conservation and Coastal Lands, State Department of Land and Natural Resources: http://www.hawaii.gov/dlnr/occl/subzone.php

This page intentionally left blank.

1907 S BERETANIA STREET, SUITE 400
HONOLULU, HAWAII 96826
PH (808) 946-2277 FX (808) 946-2253
wilsonokamoto.com